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TfNSW

SMWSA – Enabling Works at Badgerys Creek Road Area and Aerotropolis

CONTRACT No. 21.0000139278.1275

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Revision: 9

7 JANUARY 2022

**DOCUMENT IS NOT CONTROLLED WHEN ACCESSED OUTSIDE OF
ABERGELDIE'S INTEGRATED MANAGEMENT SYSTEM (AIMS)**



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1.3 DEFINITIONS

AAR	Aerotropolis Access Road
CEMP	Construction Environmental Management Plan
CMP	Contract Management Plan
CTMP	Construction Traffic Management Plan
PMP	Pedestrian Movement Plan(s)
RASS	Radar activated speed sign(s)
TfNSW	Transport for NSW
CJP	Regional Traffic Operations
ROL	Road Occupancy Licence(s)
SZA	Speed Zone Authorisation
TCP	Traffic Control Plan(s)
TGS	Traffic Guidance Scheme
TCAWS	TfNSW Traffic Control at Work Sites Manual
TMC	Transport Management Centre
TTLG	Traffic and Transport Liaison Group
TCG	Traffic Control Group
TMP	Traffic Management Plan(s)
VMP	Vehicle Movement Plan(s)
VMS	Variable message sign(s)
CJP	TfNSW – Customer Journey Planning - Operations
DPIE	Department of Planning Industry and Environment
WHSMMP	Work, Health and Safety Management Plan
WSA	Western Sydney Airport
MCoA	Minister's Conditions of Approvals
ER	Environmental Representative
WPCA	Western Parkland City Authority
RSA	Road Safety Audit
OSOM	Over Size and Over Mass

COMPLIANCE MATRIX

The following compliance matrix demonstrates the alignment of this management plan fulfilling the requirements clause 2.2.3 of the G10 specification.

ITEM	REQUIREMENT	REFERENCE IN THIS DOCUMENT
(1)	Details of any traffic staging arrangements, Traffic Staging Plans and time periods associated with each stage	Section 7, and Appendix A (traffic staging drawings in development)
(2)	Traffic Control Plans	Section 8 & 13.6, and Appendix B (TCP's in development)
(3)	Vehicle Movement Plans	Section 6, 13.7 & Appendix C
(4)	Pedestrian Movement Plans	Section 13.8
(5)	Provision of access to adjoining properties, side roads affected by the construction and relocated bus stops	Section 6.8, 10.4
(6)	Copies of any ROL (refer Clause 2.2) and approvals from other relevant authorities obtained.	Section 11
(7)	Design drawings for any temporary roadways and detours	N/A
(8)	Traffic Incident Management Plan.	Section 16 and Appendix G
(9)	Evidence of co-ordination and consultation with key stakeholders (TMC, CJP, local councils, emergency services, bus companies, etc.)	Currently in process
(10)	Requirements and methods to consult and inform the local community of impacts on the local road network including pedestrian and cyclist routes and proposed changes to bus stop locations during construction	Section 4.1, 6.10, 15.
(11)	Details of roads that are to be excluded from use by construction traffic i.e. roads with load limits, quiet residential streets or access/turn restricted streets.	Section 6.2
(12)	Expected impacts to traffic and transport and mitigation measures to be implemented to minimise road user delays.	Section 6 and Section 7.1 – 7.4
(13)	Access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads.	Section 6, Appendix A & C
(14)	Monitoring, review and amendment mechanisms	Section 14, 17

Title	SMWSA – Enabling Works at Badgerys Creek Road Area and Aerotropolis Construction Traffic Management Plan (CTMP)
Approved on behalf of Transport for NSW	[Insert name of TfNSW project manager]
Signed	
Dated	
Approved on behalf of Abergeldie by	[Insert name of Construction Contractor Project Director]
Signed	
Dated	

2 DOCUMENT CONTROL

2.1 APPROVAL

FUNCTION	POSITION	NAME	SIGNATURE	DATE
Prepared by	Traffic Manager	Louis Peau		07/01/2022
Reviewed by	Abergeldie Project Manager	Brent Knight		07/01/2022
Approved by	Abergeldie Project Director	Dmitri Khomoutov		07/01/2022

2.2 DOCUMENT REVISION STATUS

Each page of this document bears a document number and revision date. When revisions to the document are issued, the following table will be updated to show the most recent revision level. The revised document will be forwarded to the holders of controlled copies. Recipients are responsible for destroying or marking “superseded” on the previous revision.

REVISION DATE	AMENDMENT DESCRIPTION
6/10/2021	Initial version - Issued for TfNSW review
28/10/2021	Second version – TfNSW comments addressed
02/11/2021	Third version – Includes 60km/hr road work speed zone proposal at the AAR.
9/11/2021	Fourth version – Includes site VMP, incorporates traffic designs and addresses Abergeldie comments
30/11/2021	Fifth version – addresses CJP, TfNSW & stakeholder comments
02/12/2021	Sixth version – addresses Liverpool City Council Comments
15/12/2021	Seventh version – addresses TfNSW comments
21/12/2021	Eighth version – addresses WCPA comments
07/01/2022	Ninth version – updated swept paths at Elizabeth Drive / Badgerys Creek Road incorporated

Any changes within this document that modify either the scope or intent of the original document are highlighted in the right margin by a vertical bar (|).

Where review and revision is deemed warranted, i.e. such as comments received from the Client, or where necessary to reflect changes in contractual or Project requirements, or as a result of an incident then these revisions shall be reviewed by the respective Project Manager and approved by the Construction Manager.

2.3 DISTRIBUTION (CONTROLLED COPIES)

COPY #	ISSUED TO	COMPANY / POSITION	DATE
1	Eduardo Forcadilla	TfNSW – Principal's Representative	6/10/2021
2	Eduardo Forcadilla	TfNSW – Principal's Representative	29/10/2021
3	Eduardo Forcadilla	TfNSW – Principal's Representative	02/11/2021
4	Eduardo Forcadilla	TfNSW – Principal's Representative	09/11/2021
5	Eduardo Forcadilla	TfNSW – Principal's Representative	30/11/2021
6	Eduardo Forcadilla	TfNSW – Principal's Representative	02/12/2021
7	Eduardo Forcadilla	TfNSW – Principal's Representative	15/12/2021
8	Eduardo Forcadilla	TfNSW – Principal's Representative	21/12/2021
9	Eduardo Forcadilla	TfNSW – Principal's Representative	07/01/2022

3 INTRODUCTION

3.1 DESCRIPTION OF PROPOSED WORKS

Transport for NSW has commissioned the construction of new intersections & road alignments from Badgerys Creek Road to provide access to the Sydney Metro – Western Sydney Airport Aerotropolis Metro Station for future use during the construction of the station and to facilitate public access when the metro station is operational.

To facilitate these works TfNSW has engaged Abergeldie Complex Infrastructure to construct these new intersections and road alignments as part of the Enabling Works at Badgerys Creek Road Area and Aerotropolis.

The construction scope for the SMWSA Enabling Works at Badgerys Creek Road area and Aerotropolis Contract consists of two different project sites as follows:

- Badgerys Creek Road Area, Upgrade of Pitt Street, Longleys Road, construction of Link Road and Elizabeth Drive roundabout fourth leg; and –
- Aerotropolis Access Road and Derwent Road Access Upgrade.

Key features at each location include:

- Roadworks at Badgerys Creek Road Area:
 - Construction of an additional fourth leg on the roundabout to the existing 3-leg roundabout at the intersection of Badgerys Creek Road and Elizabeth Drive including all associated civil works identified within the Drawings;
 - Road widening and modification to Pitt Street and Longleys Road to suit two-way heavy vehicle movements with total road length being modified approximately 1,362m including all associated earthworks, clearing, utility adjustments, civil road works and finishing works;
 - Construction of 'Link Road', a 400m road connecting Pitt Street and Longleys Road including all associated clearing, earthworks, utility adjustments, civil road works and finishing works;
 - Upgrade to existing Badgerys Creek Road and Longleys Road intersection to suit left in/ left out movements; and
 - Adjustment and relocation of utilities impacted by the roadworks.

- Aerotropolis Access Road and Derwent Road:
 - Construction of a new roundabout at the intersection of Badgerys Creek Road and the proposed Aerotropolis Access Road;
 - Construction of the new Aerotropolis Access road including new utilities, stormwater drainage, pavement works and finishing works;
 - Construction and modification of the access road into 40 Derwent Road; and
 - Adjustment and relocation of utilities affected by the roadworks.

3.2 PURPOSE

This Construction Traffic Management Plan will document Abergeldie Complex Infrastructures compliance with the traffic management and road safety requirements of the Contract to the satisfaction of TfNSW and all other relevant stakeholders and authorities.

In addition, this plan provides information on how the project will be constructed around traffic through the staging methodology described in section 7 of this document. The traffic staging methodology has been developed to achieve three key objectives during the project delivery phase. These are:

- Minimise the impact of construction works on the road user;
- Early completion of local road improvements; and
- Simplicity and flexibility of traffic/construction staging.

This CTMP is developed to address the G10 requirements and provide a single operational reference for Abergeldie staff. The G10 requirement to manage impacts on the road network and local traffic movements as a result of construction activity are contained in this Plan. Subordinate TMP's with detailed traffic staging descriptions and drawings are explained in section 7 below. The CTMP will provide an overview of the sequence and extent of temporary traffic diversions and intersection layouts planned for the construction of the Works from start to completion, highlighting crucial control elements that will be implemented to maintain safe thoroughfare and connectivity around the construction site. An overview of proposed geometry and control strategies for the guidance of all road users, in particular vulnerable groups (cyclists and pedestrians) is provided.

This CTMP is also an Operational Manual for the Construction Team during the delivery of the project and will facilitate safe construction with minimal impacts on the road user and road network. Abergeldie will manage traffic during the construction works, particularly identifying the location, nature and duration of work activities, their impact on the roadway, all road users, and the control strategies implemented to mitigate these impacts. Service will be maintained at intersections and mid-blocks throughout the project.

Abergeldie will review and address the interaction between construction traffic and the public and will develop Vehicle Movement Plans (VMPs) for each construction site. These will highlight preferred travel paths for vehicles entering, leaving or crossing the through traffic stream. Abergeldie will ensure that construction traffic causes minimal disruption to traffic flow, particularly during high volume periods by implementing traffic management strategies which comply with:

- Project Specific TfNSW QA Specification G10 – Traffic Management;
- AS1742 Parts 1, 2 and 3;
- AUSTROADS Design Guides, in particular 'Part 6 – Roadside Design Safety and Barriers'; and
- TfNSW, Traffic Control at Worksites Manual Ver 6.

3.3 PLAN OBJECTIVES

- Abergeldie will undertake all works in strict accordance with the requirements of all TfNSW approved traffic management plans as per the obligations under the Contract, in particular, TfNSW Specification G10. Abergeldie will keep all affected stakeholders informed of all

intended changes to traffic conditions as per its requirements under the provisions of the Community Engagement Strategy.

- The CTMP will ensure that:
- There is continuous, safe and efficient traffic movement;
- The traffic capacity of the state and local road network is maintained;
- There is timely, comprehensive dissemination of information to the community;
- Construction staging and changes to traffic management are seamless;
- Abergeldie operates a traffic operations, maintenance and incident management capability to ensure compliance with G10 requirements;
- Abergeldie adopts a cooperative and client-focused approach to its resources; and
- To work cooperatively with adjacent projects to provide the safest and most efficient outcome for the community.

3.4 LOCATION OF THE PROJECT

The SMWSA Enabling Works at Badgerys Creek Area and Aerotropolis is located on Badgerys Creek Road & Derwent Road. The various construction areas are shown below:



Figure 1 - Aerial view of the SMWSA enabling works construction zones.

3.5 SAFETY & AMENITY OF THE ROAD NETWORK

- It is a strategic goal of Abergeldie to maintain the performance of the road network and foster a positive customer experience during all road construction activities. This is achieved by intelligently identifying all potential impacts, planning “best practice” traffic management schemes to negate or minimise these impacts and allocating sufficient resources to facilitate those mitigations. Abergeldie has successfully delivered projects for TfNSW with similar challenges, such as working adjacent to large volumes of live traffic, maintaining traffic flow, pedestrian and cyclist management, and maintaining property owner and pedestrian access.
- Abergeldie will adopt a collaborative approach to meeting the goals of TfNSW, CJP, TMC and WSA. The placement of experienced, trained staff will enable Abergeldie to develop strategies, monitor systems and implement controls which promote the free-flow of traffic, particularly during peak periods. The CTMP for the project will optimise the effectiveness of traffic staging. This will reduce the number of temporary realignments, minimising the impact on the road network.
- Stakeholders including road users, residents and businesses will remain informed of pending changes with concise, timely and targeted notifications. Through intelligent planning and design we will identify any impact on the network caused by the location, nature or duration of work activities. Best practice control measures will then be implemented to avoid or mitigate these impacts and maintain the level of service at all intersections and mid-blocks throughout the project. The Abergeldie strategy combines contemporary road safety and traffic management principles to ensure the safety and amenity of all road users and the public.
- Abergeldie will apply the following key road safety and traffic management principles to manage the safety and amenity of all road users and the public:
- Ensuring potentially affected pedestrians, cyclists, road users, landowners and businesses are identified during the design and construction planning phase;
- Isolating work areas from traffic flows, through appropriate site planning, choice of construction methodologies and clear delineation of worksites;
- Installing traffic controls that effectively warn, inform and guide motorists and that comply with TfNSW requirements and the Australian Standards;
- Plan and stage all works effectively to minimise road occupancy where possible and reduce conflict points on the existing road network;
- Maximise working opportunity on the roads. Works will be sequenced so that the works can be carried out behind traffic barriers as much as feasibly possible;
- Implement traffic control operations that minimise delays to road users taking into consideration traffic volumes including peak times of the day, seasonal traffic and impacts from school traffic;
- Minimise driver confusion by ensuring clear and concise traffic management schemes and by using existing and new communication networks to advise commuters and the general public of upcoming changes on the road network;
- Construction staging will be designed such that traffic lane widths are in accordance with TfNSW requirements and any temporary pavement designs will be designed for the approved traffic speed;
- Roadwork speed limits will be implemented for worksite and public safety purposes;
- Effective planning of all construction vehicle movements including the provision of safe ingress and egress points at the interfaces with the existing road network;

- Limit obstructions and restrictions on the existing road network, and when necessary, provide alternate routes to maintain access for the local community and businesses;
- Coordinate and effectively communicate changed traffic conditions with members of the Traffic Control Group (TTLG) in particular WSA, CJP / TMC, TfNSW, NSW Police, NSW Fire & Rescue, Ambulance Service of NSW, NSW State Emergency Service, Bus Providers and Local Councils;
- Develop a regime to monitor the impacts of traffic changes and respond to any identified road user and public safety and amenity issues;
- Out of hours' works occupying the road will be necessary to perform critical works such as tie-ins, roundabout and intersection works, which will be carried out once necessary community consultation has occurred, and the Environment Protection Licence requirements have been addressed; and
- Where critical, out of hours' works will be planned on an hourly basis to monitor progress of works during the shift to ensure the road is left in a safe condition and in accordance with the Road Occupancy Licence (ROL);
- Abergeldie aims to facilitate construction of the new alignments clear of traffic where possible by minimising the interface with the travelling public.
- This proposal has significant safety and programme benefits such as:
 - It clearly delineates the works from the existing traffic providing increased separation, increasing the safety of both the travelling public and construction staff;
 - It significantly improves the construction traffic staging and avoids extended diversions for motorists on Badgerys Creek Road; and
 - It provides increased working width for construction staff significantly increasing worker safety around heavy plant, especially paving equipment;
- Abergeldie believes its proposed staging incorporates significant safety in design innovation and demonstrates a genuine commitment to eliminating safety risks in the design stage of the project and provides a clear and robust outcome for all Stakeholders.

3.6 TRAFFIC PROCEDURE

- As displayed in the diagram below, traffic management arrangements and procedures for the project will be documented in the following key levels shown in Figure 2 below. See Section 12 – Traffic Management Documents for details.

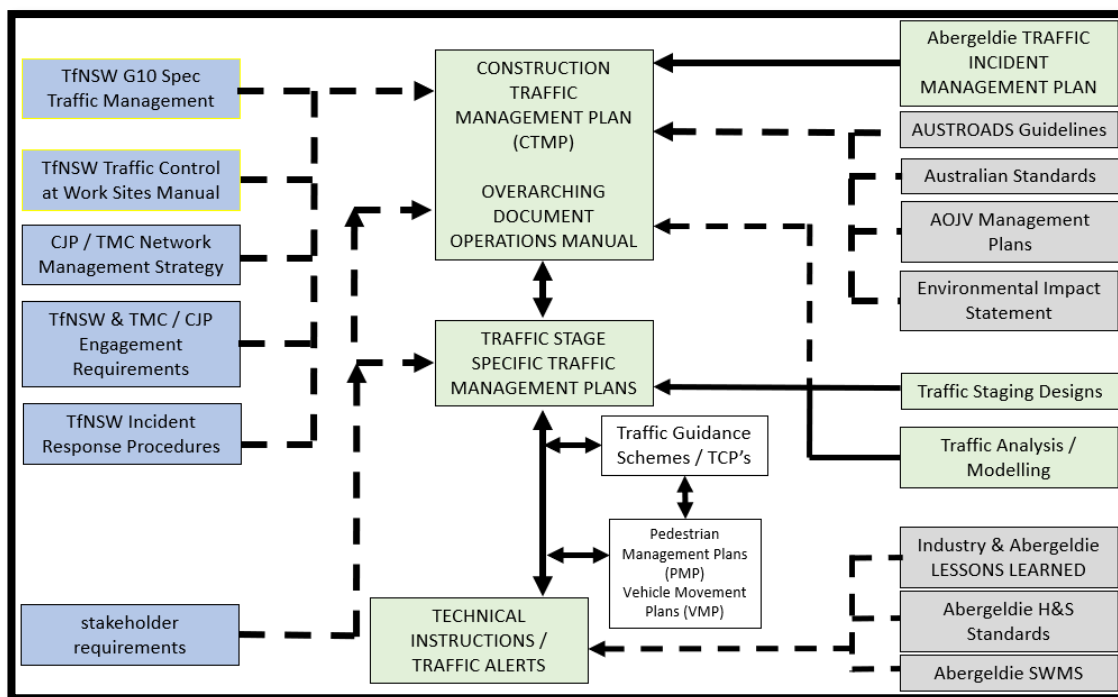


Figure 2 - Abergeldie traffic document hierarchy flowchart.

3.7 MECHANISM FOR MONITORING THE PERFORMANCE OF THIS PLAN

Abergeldie will monitor operational compliance with this Plan and the obligations contained within it. The Abergeldie Project Traffic Manager (TM) will conduct a monthly review of the projects' operational practices versus the administrative controls contained in this document.

If required, amendments will be made to this plan to address changed conditions, circumstances or procedures. The new revised document will be submitted to TfNSW for review, feedback and approval of the changes.

4 PROJECT ROLES & RESPONSIBILITIES

All traffic management will be undertaken by accredited designers, experienced managers and qualified controllers. Traffic management controls implemented across the Project will be monitored 24 hours per day 7 days per week for the duration of construction. The responsibilities for personnel attached to each of the key positions are listed below.

4.1 TRAFFIC MANAGER

The Traffic Manager will perform the role of the *Traffic Control Site Manager*.

The Traffic Manager is responsible for the long and short-term temporary Traffic Management of the Project. The TM will be qualified, as a minimum in the "TfNSW Prepare a Work Zone Traffic Management Plan" course, hold tertiary qualifications in traffic or transport related fields acceptable to TfNSW and have a minimum of 5 years recent experience in traffic management on TfNSW road construction sites of equivalent scale and complexity, including detailed exposure to and development of staging on major TfNSW civil construction works. The Traffic Manager must also be highly skilled and experienced in liaison with TMC.

In addition, the TM will:

- Enforce the G10 requirements;
- Oversee the projects compliance with the provisions of this document (CTMP) and ensure the traffic management objectives of the project are achieved;

- Communicate with stakeholders regarding traffic matters in conjunction with the Communications & Community Liaison Representative (CCLR);
- Prepare, implement, monitor and review all staging TMP's;
- Prepare TCPs, VMPs, ROLs, SZAs and associated Hold Points for approval;
- Chair traffic-related meetings (TTLG and TCG);
- Communicate with adjoining contracts to coordinate traffic requirements;
- Obtain all necessary approvals and ROL's for the TCP's as necessary;
- be responsible for the implementation of ROL's and must continuously monitor the implementation and operation of all road occupancies to ensure that they are compliant with the ROLs, including;
- monitor and quantify the duration of any traffic delays;
- monitor, measure and record traffic queue lengths during ROL operation, including the maximum traffic queue lengths in each direction and the total occupancy or traffic stoppage times;
- maintain and adjust traffic control measures and devices to assist prevailing traffic flows, minimise lane and shoulder occupancies and any lost traffic flow capacity and minimise traffic delay durations and queuing;
- monitor over-dimension heavy vehicle movements; and
- Maintain close liaison with the Project Manager (PM) and construction teams regarding the programming of work activities which impact traffic.

4.2 SITE SUPERINTENDENT & SUPERVISOR

Abergeldie will provide the resource requirements relating to the traffic management field crews (including incident assistance) and the routine management of traffic control facilities and maintenance of Temporary Works.

The Site Superintendent & Supervisor responsibilities during construction are as follows:

- Comply with G10 requirements;
- Implement and monitor TMP's with guidance from the TM;
- Coordinate field resources and ensure that traffic management requirements are adhered to at all times;
- Ensure the procedures and site rules associated with traffic management are monitored and controlled;
- Ensure all personnel undertaking work activities associated with traffic management are appropriately qualified and competent to perform their duties;
- Coordinate and supervise sub-contractors deployed for TMP implementation;
- Manage Traffic Controllers at all work sites, including maintenance.
- Report to the Traffic Manager and be responsible for operational and traffic maintenance field resources and crews;
- Ensure that traffic control facilities are maintained and monitored throughout the Works;
- Work cooperatively with other incident response or emergency services when required;
- Ensure all appropriate procedures are implemented during a planned traffic switch;
- Be available to receive regular briefings on the implementation of the CTMP and toolbox meetings;
- Participate in the development of work procedures relating to Traffic Management and Incident Response Plans;
- Respond to incidents on the road network affected by the construction works taking advice from the Emergency Responders and TfNSW;
- Ensure adequate resources are available and used to carry out Temporary Works in accordance with the program; and
- Provide traffic management support services to the Construction Manager where required.

4.3 TRAFFIC FIELD CREWS

Personnel will be allocated to provide the following functions during the construction period:

- Project-wide traffic control duties (not related to a specific area or zone);
- Assist the construction team to undertake their duties to the satisfaction of the CTMP;
- Undertake routine and periodic maintenance of traffic management and control facilities;
- Undertake the reporting and auditing requirements of the TfNSW Traffic Control at Worksites manual; and
- Respond and attend to unplanned incidents across the project.

5 REPORTING TO TfNSW

Abergeldie must report to TfNSW, the Traffic and Transport Liaison Group, and other stakeholders on all traffic and transport management issues as they relate to the Contractor's work, including performance measured against specified targets and objectives. The reports will be issued on a monthly, weekly and immediate basis as noted below.

Traffic issues or non-compliances with the CTMP will be reported to TfNSW through the Construction Compliance reports.

5.1 MONTHLY REPORTS

Abergeldie will report to TfNSW and other relevant stakeholders on all traffic and transport management issues on the road networks and traffic and transport operations that relate to the Works including performance measured against specified targets and objectives.

A monthly report will be submitted to TfNSW that includes a summary of:

- Current and upcoming key issues, including those identified by TfNSW and other relevant stakeholders, and the proposed measures to address these issues;
- Recent and proposed changes to traffic management and their impacts on the operation of the road network and traffic systems;
- Media or community information released and proposed to be released;
- A log of traffic incidents and type on and in the vicinity of the construction site and traffic management works, including cumulative totals;
- Traffic staging program/scheduling for the Works, including the current status of all construction stages and impacts on traffic management and approved road occupancy licences;
- Results of both internal and external independent quality audits of traffic management and control devices; and
- Community and media comments and complaints and Abergeldie's response to these comments and complaints.

5.2 WEEKLY REPORTS

The Abergeldie TM will provide a schedule of road occupancy activities to the TfNSW Representative on a weekly basis running from Monday to Sunday. The forecast schedule will contain full details on locations and timing of all proposed road occupancies for the following week and be submitted by 9.00 am each Thursday of the preceding week.

In addition, a 6-week forecast of proposed road occupancies will be provided to TMC, CJP & TfNSW.

5.3 IMMEDIATE REPORTS

The TM will immediately report to the TfNSW representative and the TMC on any unplanned incidents having a negative impact of the regular traffic flow on the surrounding road network.

6 CONSTRUCTION TRAFFIC

6.1 ABERGELDIE PROJECT SITE COMPOUND

The project site compound will be located at 215 Badgerys Creek Road within the Aerotropolis Construction site boundary.

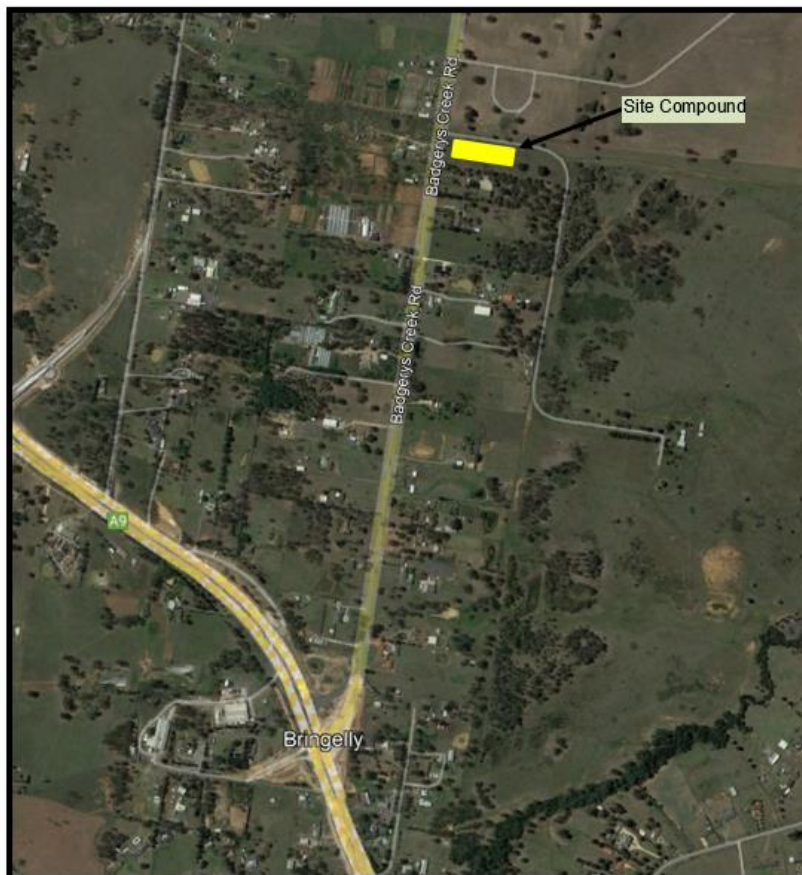


Figure 3 – Abergeldie primary site compound location

6.2 SITE VEHICLE MOVEMENTS

Anticipated construction traffic volumes between 6:00 am and 9:00 am have been considered and indicate that haulage trucks are expected to start arriving up to an hour after the expected staff arrivals. The majority of the construction staff are expected to arrive before 7:00 am and the haulage trucks are expected to start arriving around 7:30 am. In addition, during staff arrivals, background traffic is expected to be less than the assessed network peak. Based on this and the proposed hours of work, it is expected that only 50 per cent of the construction personnel would travel to/from the construction sites during the assessed peak hours. It is further expected that no staff would exit the site during the morning peak hour or enter the site during the evening peak hour.

The peak hours for the construction scenarios are consistent with those identified in the EIS base year assessment: 7:30 am to 8:30 am for the morning peak hour and 4:30 pm to 5:30 pm for the evening peak hour. For light deliveries and heavy vehicles accessing the construction sites, it is assumed that these movements would likely be equally distributed throughout the shift hours for the respective sites. All light deliveries and heavy vehicle movements are assumed to enter and exit the site during the same hour.

In summary, It is anticipated that the increase of traffic as a consequence of the SWMSA Enabling Works will have minimal effect the performance of the existing road network. Anticipated

construction traffic volumes are less than those stated in the EIS. Abergeldie will endeavour to minimise heavy vehicle movements during peak periods to reduce the impact on the existing network. Table 1 reveals the typical traffic volumes at the various construction areas related to the project.

Site Location	Vehicle Type	AM Peak (7.00am-9.00am)			PM Peak (4.00pm-6.00pm)		
	Description	IN	OUT	Total	IN	OUT	Total
Aerotropolis Access Road / Compound	Staff (LV)	30	0	30	0	30	30
	Deliveries (LV)	5	5	10	5	5	10
	HV	10	10	20	10	10	20
Pitt Street / Longleys Road	Staff (LV)	5	0	5	0	5	5
	Deliveries (LV)	2	2	4	2	2	4
	HV	20	20	40	20	20	40
Badgerys Creek / Elizabeth Drive	Staff (LV)	5	0	5	0	5	5
	Deliveries (LV)	2	2	4	2	2	4
	HV	10	10	20	10	10	20
Derwent Road Services Facility	Staff (LV)	5	0	5	0	5	5
	Deliveries (LV)	1	1	2	1	1	2
	HV	4	4	8	4	4	8

Table 1 - Anticipated site vehicle volumes (Badgerys Creek Road Compound)

Abergeldie's strategy is to utilise the existing State and Regional Road network, existing roundabout facilities and signalised intersections to access & egress the various work areas. The proposed travel routes are consistent with the EIS. The traffic staging strategy (presented in section 7 of this document) reveals the proposed turn movements at each access gate. All local roads except Derwent Road are excluded from use by construction vehicles. The following diagram reveals the proposed routes to access each site. The Site VMP can be observed in Appendix C.

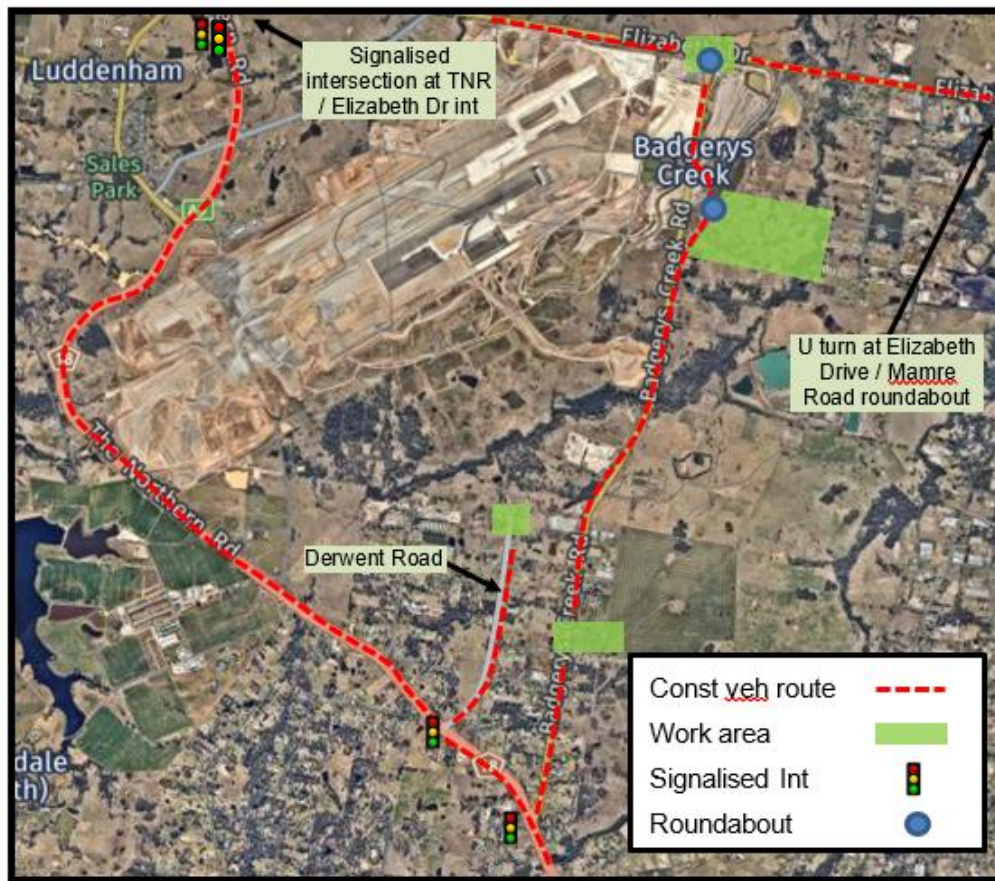


Figure 4 – SWMSA Enabling Works VMP

Driver Code of Conduct

Abergeldie is aware of the potential impacts of construction related traffic on the local community. As a consequence to minimise the associated impacts, Abergeldie requires all drivers to comply with the Drivers Code of Conduct. This can be viewed in appendix I.

6.3 VEHICLE MOVEMENT PLANS

Site specific VMP's will be developed by the TM for every active site compound and site gate. Wherever practicable, 'left in, left out' (LILO) movements only will be permitted to and from Abergeldie work sites. Where LILO is not practicable, additional controls will be implemented to manage the safe access and egress from the site gate. These controls may include, but are not limited to:

- Traffic Signals,
- Traffic Controller (Gatekeeper)
- Controlled crossing points,
- Advice and directional signage.
- Each individual VMP will nominate the following information:
- Site gate / Compound I.D. (alpha-numeric),
- UHF Channel,
- Preferred approach and departure routes,
- Any additional 'Road Rules' instruction relevant for the particular road,
- The necessity for additional Traffic Control for specific vehicle or plant deliveries.

6.4 SITE ACCESS & EGRESS

In accordance with section 1.4.7 of the G10, Abergeldie will provide suitable intersections for vehicles entering or leaving the various work sites, areas provided for local road works, and at junctions where the traffic volumes are increased as a result of the work.

Abergeldie will maintain the capacities of all intersections with the existing roads and any replacement intersections that are a part of temporary works being used by existing road traffic, as a minimum, at the levels that existed at the original intersections prior to the commencement of construction for the duration of the works.

Abergeldie will design and construct all construction entry and exit gates to facilitate the safe movement of construction vehicles, whilst minimising the impact to traffic flow on either Bringelly Road or The Northern Road.

Abergeldie will ensure that access is maintained at all times for WPCA at the Aerotropolis Access Road.

6.5 GATE SIGN SEQUENCE

Abergeldie will install the following signs on approach to access and egress points. Sign spacing will be determined by the speed zone (dimension D) as per the Traffic Control at Work Sites Manual.

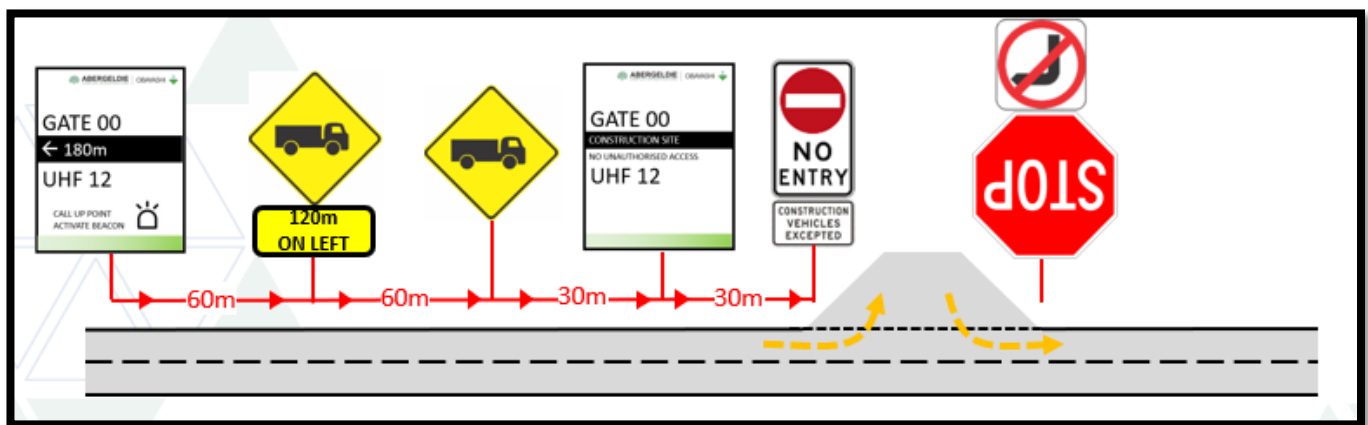


Figure 5 – Abergeldie generic gate sign sequence

6.6 OVER-DIMENSIONAL LOADS

From time-to-time Abergeldie may receive deliveries of large construction materials which will require the use of over-sized transportation to and from the work site. At all times, Abergeldie will comply with the requirements of the National Heavy Vehicle Regulator (NHVR). Abergeldie will prepare and comply with Safe Work Method Statements (SWMS) to ensure that work methods address:

- Accurately and safely weighing or measuring the vehicle load;
- Safely restraining loads;
- Providing reliable evidence to calculate the weight or measurement of the vehicle or load;
- Ensuring that weather conditions or the positioning of the load and/or vehicle does not breach the Road Transport (Mass, Loading and Access) Regulation 2005 or the Road Transport (Vehicle Registration) Regulation 2007;
- Exercising supervision or control of others involved in the loading of vehicles;
- Provide information, instruction, training and supervision to employees; and

- Ensuring compliance with the requirements of the Road Traffic (Heavy Vehicle Driver Fatigue) Regulations 2008.

All loads will be moved within the time conditions stipulated with the necessary pilot and escort vehicles and documentation. Abergeldie engineering staff and site supervisors responsible for the ordering of these deliveries will check that haulage contractors are operating in compliance with these conditions.

Abergeldie is aware that neighbouring projects are also upgrading the road network. Abergeldie will coordinate any project required OSOM movements with adjacent projects to ensure the proposed route is clear still suitable for use.

6.7 CONSTRUCTION SITE / PUBLIC ROAD INTERFACE

Abergeldie will install, maintain and utilise cattle grids (where appropriate) and provide adequate controls to ensure that no mud, dirt or other material is deposited onto any road which is open to the public.

6.8 ACCESS TO PROPERTIES & LOCAL ROADS

In accordance with section 1.4.3 of the G10 Abergeldie will:

- Undertake early and ongoing consultation and communication with adjoining property occupiers to identify potential impacts of the proposed traffic management arrangements on adjoining property occupiers; develop, and implement management strategies to avoid or mitigate these impacts;
- At all times, maintain safe and suitable access for vehicles, pedestrians and livestock to adjoining properties and side roads affected by the road construction;
- Not commence any work affecting access to adjoining properties and use of side roads without providing an adequate alternative access, to the satisfaction of TfNSW;
- Bear responsibility for all liaison with the owners and/or occupiers of affected properties and businesses, including notification prior to commencing the construction of property accesses and joint determination with owners, occupiers and/or business operators of any temporary arrangements to be made during work on property accesses;
- Implement additional fencing, signposting (including variable message signs where appropriate), provide alternate access arrangements for any visitors, customers and delivery vehicles to adjoining property occupiers and communicate these changes to adjoining property occupiers;
- Make provision within TMP's for the requirements of properties along and adjacent to the Works which require access by buses, semi-trailers, heavy vehicles, long vehicles or other specific requirements;
- Make weather-suitable provision for non-construction vehicles to cross the "work zone" in order to access properties;
- Maintain existing parking arrangements (whether currently formalised or not) at all bus stops;
- Make necessary arrangements with the adjoining properties and the appropriate organisations to ensure the continuity of garbage collection and mail delivery for the duration of the Contract for the adjoining properties;
- Ensure that all services to households and businesses are maintained at all times during the project; and
- Ensure that all construction workers/drivers are made aware of the access arrangements, and they take special care to ensure that any private vehicles are given due care and attention. This also relates to construction vehicles passing each property access (such as earthworks haulage vehicles, material deliveries, grading operations, compaction equipment, etc.).

The Communications & Community Liaison Manager will:

- Contact affected property owners four (4) weeks prior to the commencement of any construction works that will affect property or business accesses (as per the requirements of TfNSW G36) in company with a TfNSW Representative;
- Hold discussions with the property owner(s), occupiers and/or business owners advising them of the extent of the construction works, the timing of the works affecting the access, what mitigation measures will be put in place and what (if any) special arrangements the property owner/ occupier requires.
- Obtain their in-writing concurrence for the access arrangements;
- Contact the property owner/ occupier 48 hours prior to the construction works commencing and liaise at least once a week with the property owner during the period that construction is affecting the ingress/egress to the property;

6.9 PARKING MANAGEMENT

Abergeldie will provide sufficient car parking facilities within all of its work areas to house all vehicles that require long term and visitor access to each site. The bulk of this car parking storage will be within the main site compound.

Abergeldie will not permit, nor should it require any on-street parking on local roads around work areas. All work-related vehicles will park in the on-site car parking facilities provided. Only work vehicles, visitors and sub-contractors will enter or leave the compounds. There will be no on street parking at or near work compounds permitted for staff. Abergeldie expects to generate negligible impact on the existing street parking allowances.

6.10 COMMUNICATION OF PARKING IMPACTS

If Abergeldie perceives it will impact the existing street parking provisions in any area, it will communicate these impacts through the 'Community Communications Strategy'. In addition, these impacts will be raised at relevant stakeholder meetings to seek feedback and provide explanation to all stakeholders.

7 TRAFFIC STAGING

7.1 STAGING METHODOLOGY – OVERVIEW

The Traffic Management and Staging Plans are the basis for the overall traffic management on the project, from these plans the various detailed site-specific Traffic Control Plans, Vehicle Movement Plans & Pedestrian Movement Plans shall be developed.

In order to maintain safety and amenity of road users and the public and safety of the construction team, the traffic staging has been developed to achieve two key objectives during the project delivery phase. These are:

- Minimal interaction with existing highway traffic to maintain continuous, safe and efficient movement of traffic;
- Simplicity and flexibility of traffic/construction staging.

Traffic staging designs are currently being completed. The designs will be developed in consultation with TfNSW & TMC.

7.2 LEAST POSSIBLE DISRUPTION

Abergeldie has planned the staging of construction activities in accordance with section 1.4.1 of the G10 to "cause the least possible disruption to the traffic flow and to access to adjacent properties". This staging will undergo both internal and external examination before being submitted to TfNSW for the necessary approval to commence the temporary traffic arrangements.

Abergeldie will liaise with TfNSW, WSA, CJP, TMC and other regulatory authorities when planning and implementing traffic management proposals. Refer to section 14.1 of this document for more detail.

Abergeldie will notify each of the emergency services such as police, ambulance and fire when access may be significantly impeded for any period of time.

7.3 SAFETY IN DESIGN (SID) PRINCIPLES

Abergeldie has developed all temporary alignments including site gates as mitigating contributors to the 'errant vehicle management rationale' philosophy specified through the Austroads suite of design guidelines.

- Staging has been designed to comply with:
- Approaching sight stopping distance,
- Mutual merging sight distances,
- Lateral merge or diverge lengths,
- Acceleration and deceleration characteristics of site vehicles,
- Road geometry, and
- Ambient road conditions.

As per G10 section 4.2, an independent road safety audit shall be conducted before the operation of any long-term traffic changes to ensure traffic movements, lane configurations, barriers, line marking, and signage will operate safely and conform to the necessary design standards.

Swept Paths

These turning arcs are relevant to vehicle movements to and from sites without impacting additional lanes or opposing traffic.

- The turning radii for a Hilux-type utility entering or leaving site at 10km/h = **12m**;
- The turning radii for a work truck entering or leaving site at 10km/h = **13.5m**; and
- The turning radii for a truck & dog combination entering or leaving site at 10km/h = **15m**.

Vehicle Type	Speed	Turning Radius
Passenger Vehicle, Normal Car, Utility 5.2 m length	5 km/h 15 km/h 20 km/h	6.3 m
Service Vehicle, Light Truck 8.8 m length	5 km/h 15 km/h 20 km/h	9.0 m 15.0 m 20.0 m
Single Unit Truck, bus, medium truck, flatbed, bogie 12.5 m length	5 km/h 15 km/h 20 km/h	12.5 m 15.0 m 20.0 m
Articulated truck, prime mover, semi-trailer, truck and dog combination 19 m length	5 km/h 15 km/h 20 km/h 30 km/h	12.5 m 15.0 m 20.0 m 30.0 m
B Double, prime mover and long semi-trailer 25 m length	5 km/h 15 km/h 20 km/h 30 km/h	12.5 m 15.0 m 20.0 m 30.0 m

Table 2 – Swept Paths

Refer to Appendix A for swept paths at key areas where construction is planned.

Lane Widths

Abergeldie may reduce the lane widths during the implementation of temporary stages to suit proposed long term speed reductions and road geometry. However, Abergeldie will not reduce the lane width below 3.0 m, or the current arrangement (whichever is less), in areas where horizontal curves smaller than a 250m radius exist. Written risk assessments will be developed for all lane or edge clearances that do not conform to the AS1742.3 standard, unless specifically allowed under the contract.

7.4 SIMPLICITY & FLEXIBILITY OF TRAFFIC STAGING

Another objective of the staging of the Works is to keep the sequence of traffic switches as simple as possible while maintaining flexibility to adapt to unforeseen circumstances during the course of the construction program.

Abergeldie has developed a design that takes into account the construction staging plans as well as placing an emphasis on providing a safe and effective traffic staging solution. The design along with the construction staging and methodology has been planned to cause the least possible disruption to traffic.

The SMWSA enabling works at Badgerys Creek Road area and Aerotropolis has been split into 4 main sites. Each site will contain a number of substages to facilitate minor adjustments to intersections and resident / business access. The current configuration of lanes on Badgerys Creek Road, single lane north bound and single lane southbound, shall be maintain throughout all stages of construction. There are no overtaking lanes on Badgerys Creek Road.

7.5 LONG TERM TRAFFIC STAGING PLANS

Abergeldie will manage all long-term traffic strategies in compliance with the CTMP, relevant traffic standards and to the satisfaction of the relevant stakeholders. This TMP introduces the following strategy as shown in the long-term traffic staging plans listed below (Refer to Appendix A for the drawings):

Long Term Traffic Staging Plan Description		
Location	Drawing No.	Description
Elizabeth Drive / Badgerys Creek Road Northern Link (Stage 1)	WSAE0-CN-DRG-Combined Rev 3	Stage 1 long term temporary traffic arrangement
Pitt Street & Longleys Road construction (Stage 1)		
Aerotropolis Roundabout at Badgerys Creek Road (Stage 1)		
Derwent Road service facility access (Stage 1)		

Table 3 - Long term temporary staging drawings included in this CTMP

It should be noted that Stage 1 designs for each work area have been included in this CTMP. The subsequent traffic stages have been excluded as they are currently in development. The subsequent traffic staging drawings be presented & incorporated in subsequent sub-plans. However, the entire traffic staging strategy is explained in Sections 7.6 to 7.11. It should also be noted that the strategy will be adjusted as required.

7.6 BADGERYS CREEK ROAD / ELIZABETH DRIVE NORTHERN LINK (MCB01)

A new link access is proposed as part of these works. Abergeldie propose to construct this new roundabout link by implementing a long-term closure of the outer lane at the existing roundabout. Access into this work area will be facilitated on the eastern leg of the roundabout in the eastbound direction. Installation of safety barriers will isolate the work area and provide adequate protection for the work zone.

All works will be protected with TfNSW accepted safety barriers for the applicable speed zone (which is 60km/hr in this area). It is anticipated that this traffic arrangement will be in place for 6 weeks to allow full completion of the new access.

A swept path analysis has been conducted to reveal that heavy vehicle movements through the roundabout are not affected by the closed auxiliary lane. Appendix A shows swept paths for both semi-trailers & B double vehicles at typical turn speeds of 15km/hr.

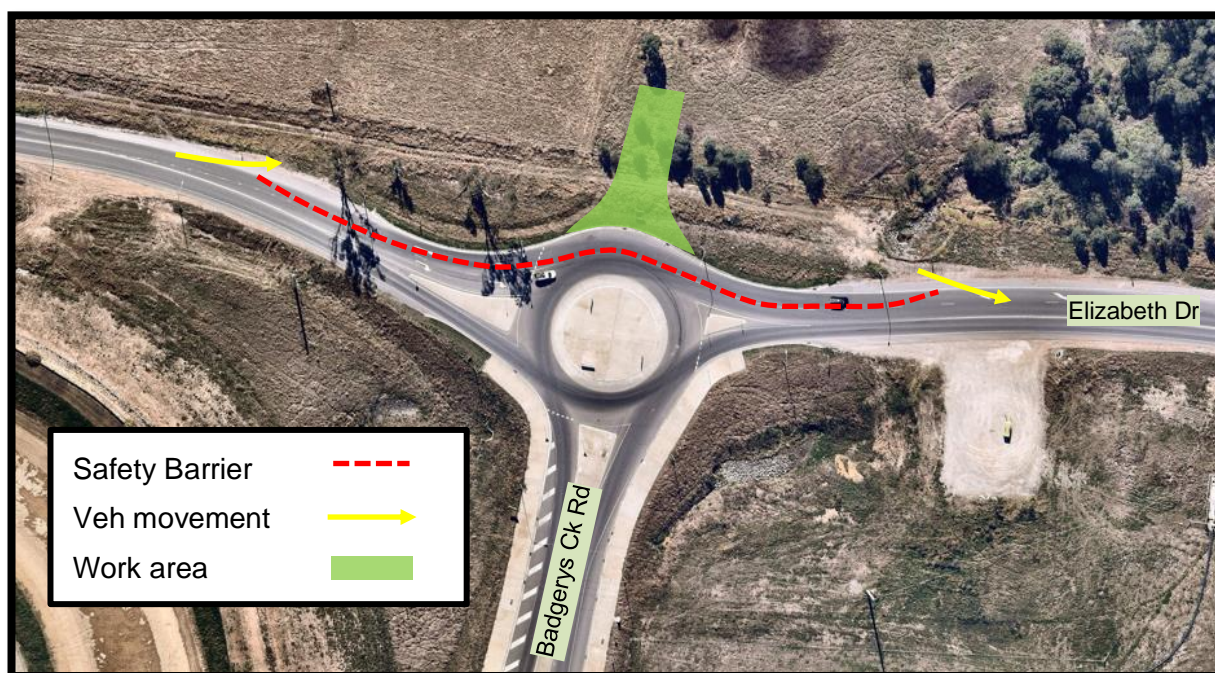


Figure 6 – Badgerys Creek Rd / Elizabeth Dr northern link construction staging

Traffic Modelling

A SIDRA analysis was conducted to verify the potential impacts caused by the closure of the outer lane at the Badgerys Creek Road & Elizabeth Drive intersection. Traffic counts taken in late 2019 were analysed with the conservative assumption of a 5% increase in traffic volumes per year since the data was collected. The SIDRA analysis reveals that with the closure of the auxiliary lane, the roundabout operates at a level of service (LoS) A during both AM & PM peak periods. Therefore, it is anticipated that this long term lane closure will perform satisfactorily.

For more information refer to Appendix H which reveals the SIDRA analysis performed at this intersection

7.7 PITT STREET CONSTRUCTION

All construction will be carried out off-line within WSA land where public motorists are prohibited from entering. Therefore, no specific traffic staging will be provided other than a long-term signage plan to advise motorists of truck movements at the Pitt Street / Badgerys Creek Road Access.



Figure 7 – Badgerys Creek Rd / Pitt Street construction

7.8 LONGLEYS AVE / BADGERYS CREEK INTERSECTION

Stage 1

- Install barriers along existing SB shoulder
- Construct left turn access & egress slip lanes



Figure 8 – Badgerys Creek Rd / Longleys Ave Stage 1 Construction

Stage 2

- Badgerys Creek Road weekend closure (8pm Friday to 5am Monday) – localised detour via The Northern Road & Elizabeth Drive.
- Remove barriers and construct remaining permanent pavement
- Open road upon completion
- The road will be closed to public traffic; however access will be provided for residents and WSA traffic.

7.9 AEROTROPOLIS ROUNDABOUT AT BADGERYS CREEK ROAD

Speed Zone Proposal

As part of this proposal, Abergeldie proposes to implement a long term temporary 60km/hr road work speed zone between The Northern Road and the start of the existing 60km/hr speed zone on Badgerys Creek Road (3.9km north of The Northern Road). The intent of speed zone reduction on Badgerys Creek Road is to influence positive driver behaviour and improve safety for both public motorists and construction workers at the Aerotropolis Access Road (AAR).

Abergeldie have investigated the possibility of only reducing the speed adjacent to the work area at the AAR, however the remaining 80km/hr zones would not comply with the RMS Speed Zone Guidelines which prescribes a minimum 80km/hr zone length of 2 kilometres. Further to this, the frequent changing of speed zones may increase the risk of motorists noncompliance with the 60km/hr road work speed zone around the AAR and therefore increase the risk of potential incidents occurring.

Long term temporary signage will be installed as per AS1742 & the Traffic Control at Work Sites Manual to provide motorists with adequate notification of the changed speed zone. Abergeldie will monitor the performance of this speed zone throughout its implementation. Section 9.9 explains Abergeldie's strategy to implement road work speed limits. Figure 9 explains the extent of the proposed speed reduction on Badgerys Creek Road. The speed zone reduction has also been included within the traffic staging designs in Appendix A.

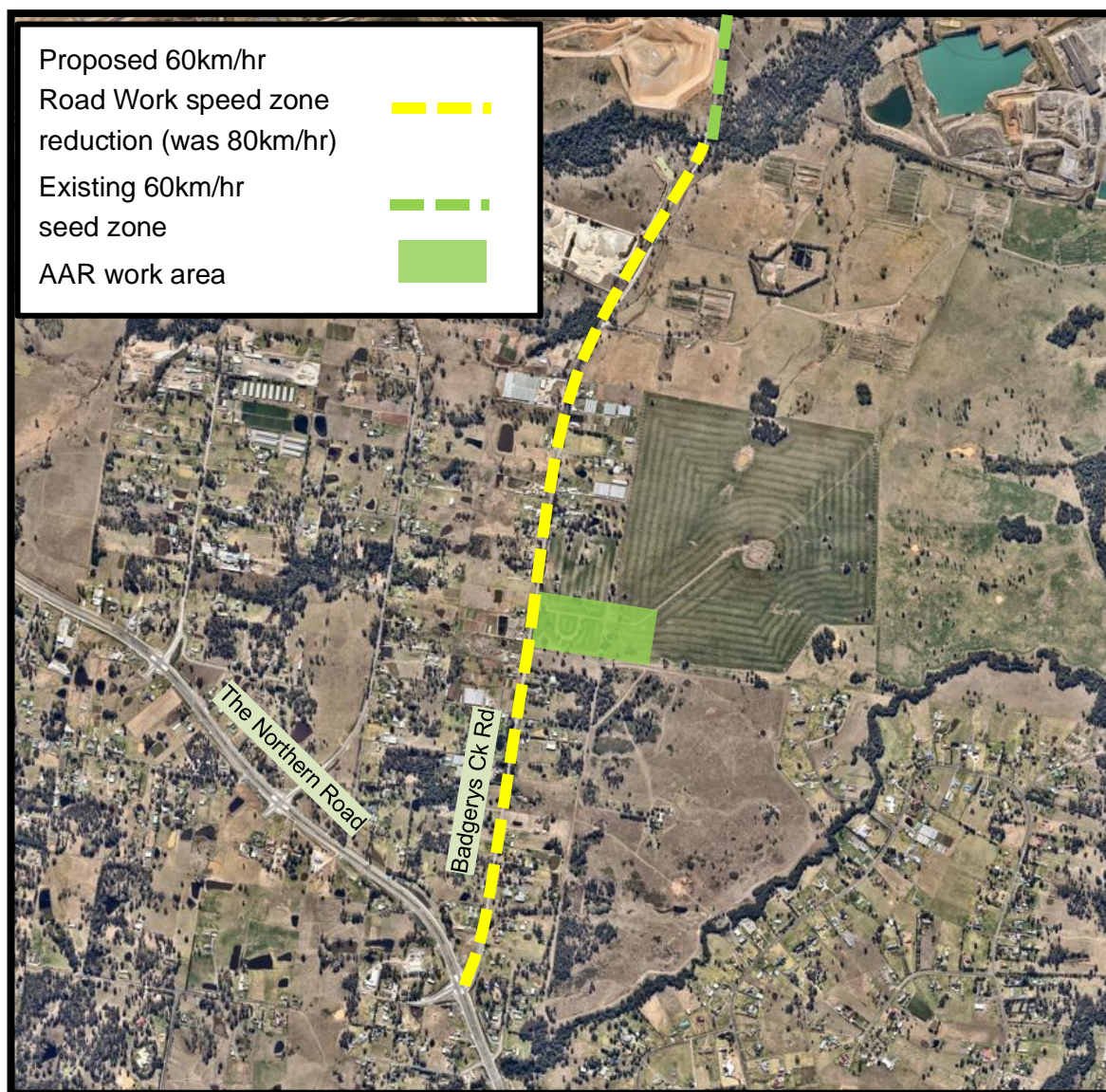


Figure 9 - Proposed 60km/hr road work speed zone on Badgerys Creek Road near the AAR

Stage 1

- Construct south-eastern section of the permanent roundabout
 - Access to the compound maintained via the existing access



Figure 10 – Badgerys Creek Rd / Aerotropolis Roundabout Stage 1 Construction

Stage 2

- Construct the north-eastern section of the permanent roundabout
 - Access to the compound maintained via the south-eastern section of the roundabout

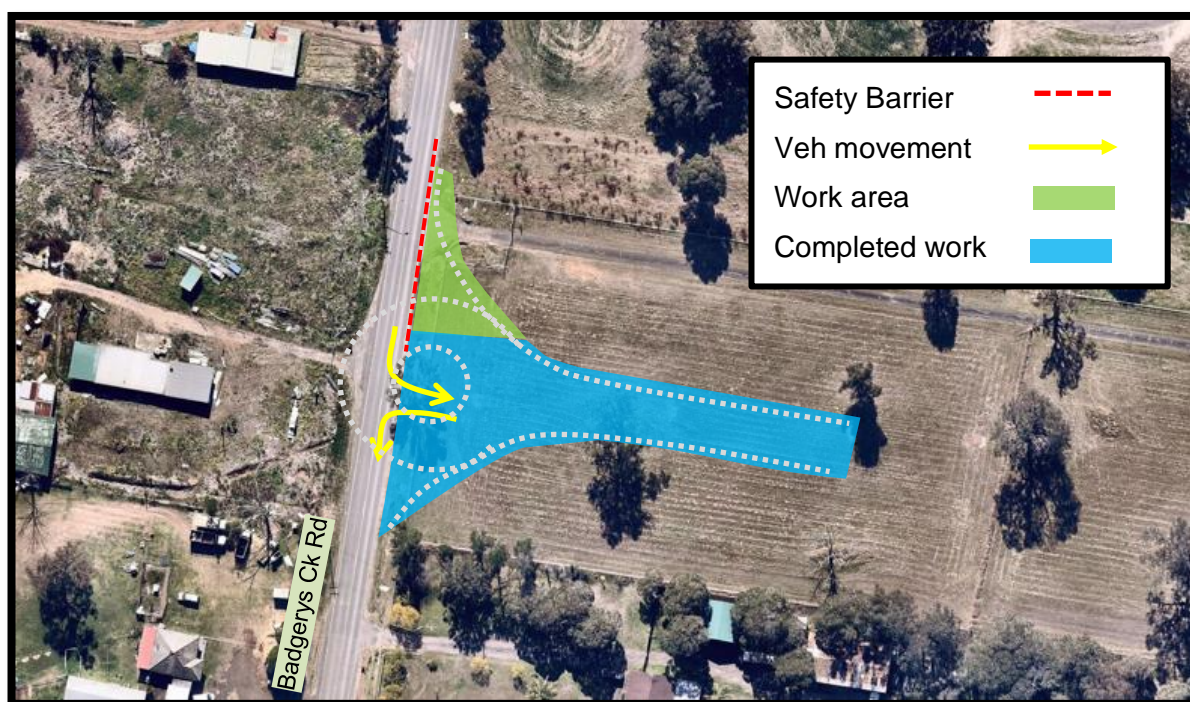
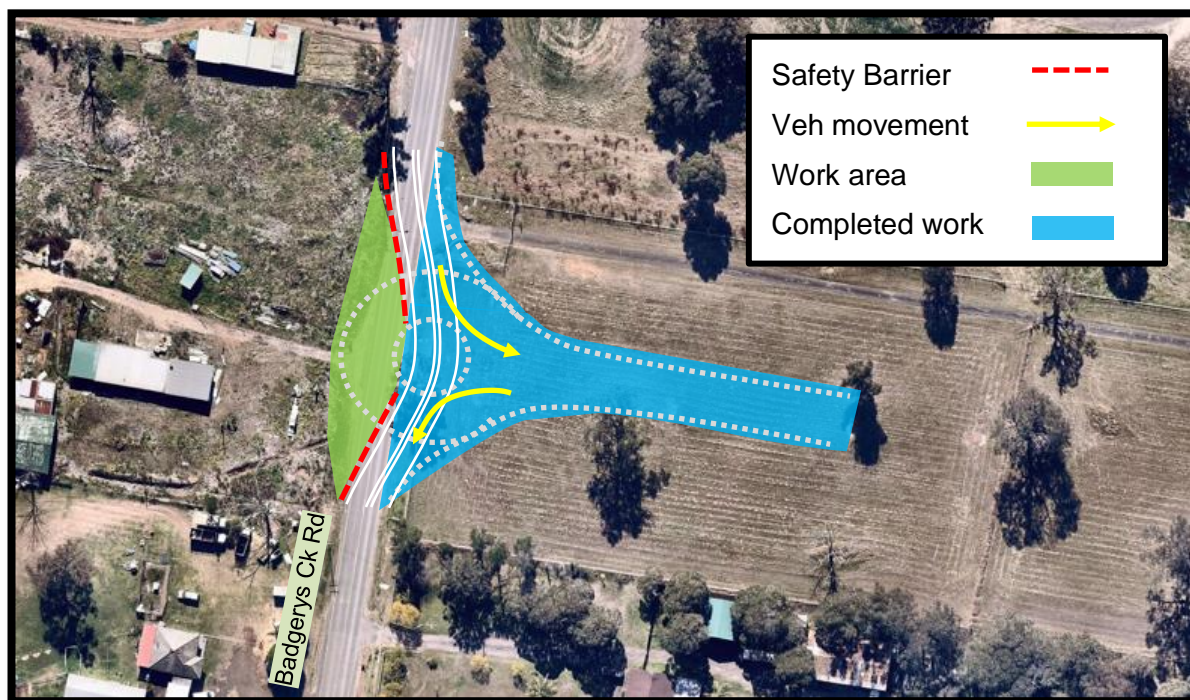


Figure 11 – Badgerys Creek Rd / Aerotropolis Roundabout Stage 2 Construction

Stage 3

- Construct the western pavement, stormwater facilities & kerb
- Traffic diverted through the new roundabout on temporary pavement



Stage 4

- Badgerys Creek Road weekend closure (8pm Friday to 5am Monday) – localised detour via The Northern Road & Elizabeth Drive.
 - The road will be closed to public traffic; however access will be provided for residents and WSA traffic.
- Remove all barriers and construct final pavements, high-early strength pavement & annulus.
- Open to traffic

7.10 DERWENT ROAD

Stage 1

- Construct eastern pavement
- Long term one lane / two-way operation & speed reduction



Figure 13 – Derwent Road access construction - Stage 1

Stage 2

- Construct western pavement on Derwent Road & half of the service facility access
- Access to all properties maintained

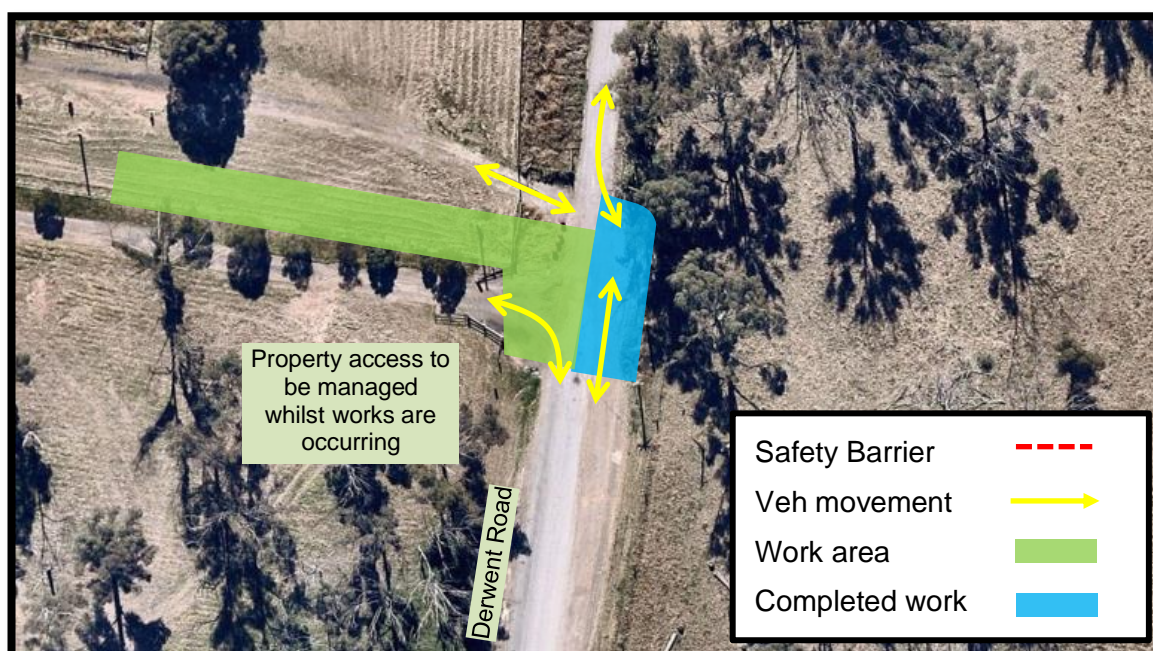


Figure 14 - Derwent Road access construction - Stage 2

Stage 3

- Construct 2nd half of the service facility access

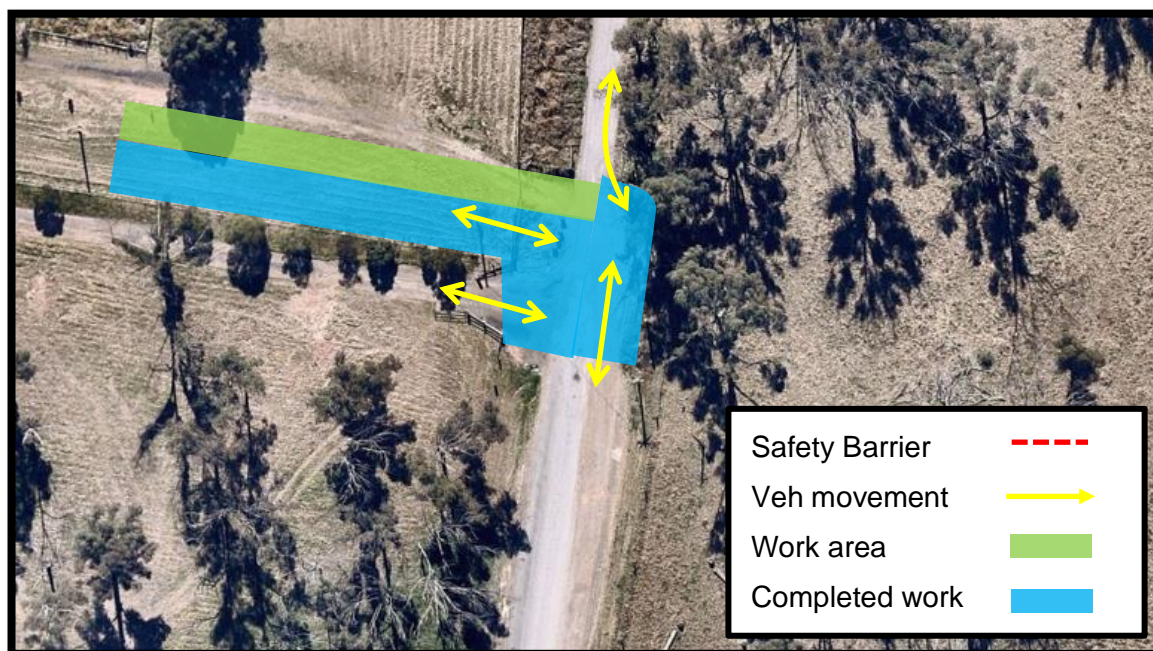


Figure 15 – Derwent Road access construction - Stage 3

7.11 BADGERYS CREEK ROAD CLOSURE

A part of the construction staging strategy, Abergeldie proposes to carry out a series of weekend closures of Badgerys Creek Road (between 8pm Friday to 5am Monday). This strategy will allow for safe elimination of the construction zone and public interface. The staging strategy has been devised to maximise the opportunity to carry out offline work safely and reduce exposure to the live carriageway by reducing the amount of short-term traffic control required.

These proposed closures will be workshopped with TfNSW, TMC / CJP, WSA & Council in order to obtain the relevant approvals. The road will be closed to public traffic; however access will be provided for residents and WSA traffic.

Refer to the images below for distance of the detour and additional travel times when the closure is implemented.

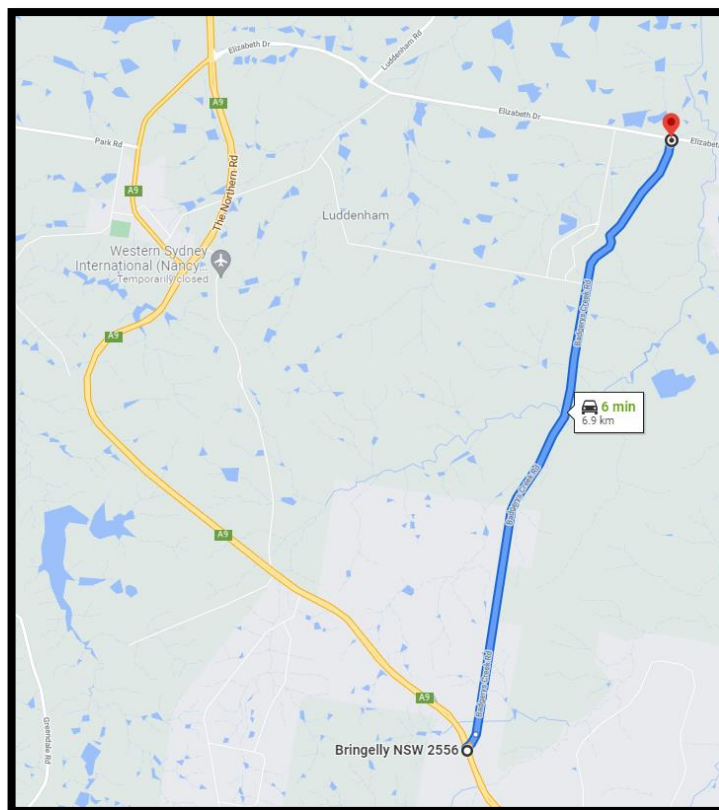


Figure 16 – Existing travel time (6 mins / 6.9km) – Badgerys Creek Road

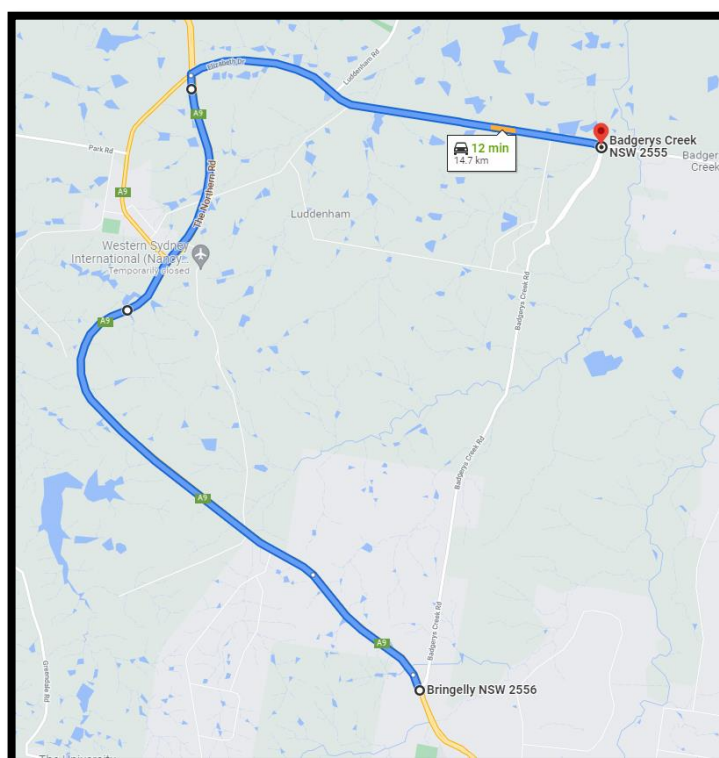


Figure 17 – Travel time when detour is in place (12mins / 14.7km) – The Northern Road / Elizabeth Drive

The Traffic Manager will frequently communication with the Communications & Community Liaison Manager regarding these proposed weekend closures of Badgerys Creek Road. These communications will allow for a number of notifications to be distributed, including:

- Letters to stakeholders;
- Local news advertisements / electronic advertisements; and
- Continued consultation with affected residents

The timing & duration of these proposed closures will become clearer as the project progresses. Discussions with TfNSW and relevant stakeholders will be completed in a timely manner to ensure minimum notification periods are met.

8 SHORT TERM – TRAFFIC CONTROL

See Appendix B for the TCP(s) to be installed which will enable implementation of the long-term traffic staging designs explained in Section 7.5. The required TCP(s) are listed below:

Long Term Traffic Staging Plan Description		
TCP No.	Type of Road Occupancy	Location
ABG-SYM-TGS-1001-00	Lane Closure – Barrier Installation	Badgerys Creek AAR
ABG-SYM-TGS-1002-00	Lane Closure – Barrier Installation	Badgerys Creek Road / Longleys Road
ABG-SYM-TGS-1003-01	Lane Closure – Barrier Installation	Badgerys Creek Road / Elizabeth Drive Roundabout
ABG-SYM-TGS-1004-00	Intermittent Stoppages	Derwent Road
ABG-SYM-TGS-G001-00	Generic Shoulder Closure – Long term sign installation	Site Wide

Table 4 – List of TCP's to be installed

9 TRAFFIC CONTROLS, SIGNS & DEVICES

9.1 TRAFFIC CONTROLLERS (TC)

Abergeldie will engage a 'top tier' Traffic Control sub-contractor(s) which meets the following pre-qualification minimum professional requirements:

- RMS Category G approved;
- Current approved Enterprise Bargaining Agreement;
- Quality, Environmental and WH&S Systems in place;
- Currently Insured;
- Workers Compensation;
- Public Liability;
- Fleet; and
- Professional Indemnity.

9.2 QUALIFICATION OF TC

All Traffic Controllers (TC) deployed on the Project will comply with G10 requirement 1.7 and hold a relevant RMS qualification as shown in the table below.

Traffic Control Roles	RMS Traffic Control Training Course
Control traffic using 'Stop/Slow' bat	Traffic Controller (previously referred to as Blue Card)

Set up and work with TCP drawn by others	Implement TCP's (previously referred to as Yellow Card)
Design new traffic management plans for roadworks, produce major upgrades of standard plans and/or Inspect TCP's on any road construction site	Prepare a Work Zone Traffic Management Plan (previously referred to as Red Card and Orange Cards)

Table 5 – Traffic Control Qualifications

Abergeldie will ensure that all persons who are required to perform the duties of a traffic controller undertake training in the following relevant training package(s) and are examined and certified as competent to perform their respective traffic controller duties:

Their actions will be in compliance with the TCAWS Manual, the site-specific TCP/TGS and ROL/SZA issued for that site. They will carry their qualification card on their person at all times when controlling traffic.

The location of traffic controllers will be identified in each TCP/TGS. Each TCP/TGS will contain notes in relation to the obligations of the traffic controller and tasks that they are required to undertake as part of the traffic control. This includes tasks such as monitoring of traffic queues, side roads and pedestrian movements.

9.3 SPACING OF TRAFFIC CONTROLLERS

Traffic controllers located on each of the approaches to the road occupancy closest to the road occupancy, and within the road occupancy itself, will be positioned no greater than 400 metres apart except where approved in accordance with the conditions of the ROL.

9.4 PROPOSED TC – G10 COMPLIANCE

Prior to the commencement of any work on the Construction Site involving controlling and directing traffic, Abergeldie will submit to the RMS the names of proposed Traffic Controllers and the registration numbers and expiry dates of their Cards. Submission of these details constitutes a **Hold Point**.

9.5 SIGNAGE - REGULATORY, ADVICE & GUIDANCE

During the construction of the Works, there will be impacts on the existing road network information and distance information signage. Consideration will be given to ensuring that existing road information and distance information signage is kept relevant at all times and consistent with the changed traffic conditions.

Signage associated with property access, local community access and businesses will be considered during the detailed design and implementation of temporary traffic management schemes and any impacts addressed to ensure the appropriate information for road users is effectively communicated at all times.

Information signage and advance warning signage will be designed for all changes to the road network and traffic conditions in accordance with:

- TCAWS Manual Ver 6;
- AS 1742.3 and 1743 Road Sign Specifications;
- AS 1742.1-15;
- AS 1743 Road Signs – Specifications;
- TfNSW Signs Index Database;
- AUSTROADS' Guide to Traffic Engineering Practice, Parts 1-15.

9.6 LOCATION OF SIGNS

All signs installed in the shoulder or verge, within the clear zone, will be frangible. Abergeldie will endeavour to keep road verges as free as practicable of signs and furniture. Any non-frangible road furniture, sign posting or devices which is placed within the clear zone will be protected by an approved safety barrier treatment.

9.7 ADVICE SIGNAGE – COMMUNITY INFORMATION

The early implementation of directional signposting and driver information signposting, to provide advance warning of changes to traffic conditions, is a key element in Abergeldie strategy to minimise disruption to traffic.

To complement the Community Liaison Strategy and comply with the requirements of TfNSW, Abergeldie will:

- Post temporary large static driver advisory signs at least 1 week prior to the implementation date for changes to the road network or traffic systems,
- Provide temporary large static directional signage to guide motorists seeking businesses or other properties which may be affected by construction works on an ad-hoc basis before the implementation date for changes to the road network or traffic systems,
- Provide notices and signposting at pedestrian and cycle crossings detailing changes at least 10 days before the implementation of those changes,
- Provide VMS advertising changes to alignments, intersections 10 days before the implementation of those changes.

9.8 TMP SIGNAGE

The following management process will be used when designing signage requirements for the Works:

- Identify any impacts on existing signs;
- Obtain TfNSW approval for the general advance warning signage strategy for the various work areas and implement at the commencement of construction;
- Ensure consistency of new signs/temporary signs and existing signs on the road network; and
- Utilise VMS messages along the project area for a 10-day period leading up to the commencement of construction then remove and identify and rectify any inconsistencies/defects through regular inspections.

Signage plans for the Works will be developed and included as attachments in the site specific TMPs.

The Abergeldie Traffic Manager will be responsible for overall management of traffic operations and monitoring functions, and safe and efficient day to day management and control of traffic and traffic movements on the road network, including reinstatement of existing signage where required. The design, manufacture and installation will be in accordance with AS1742.

9.9 ROADWORK SPEED LIMITS

Temporary roadwork speed limits are one of many traffic controls that Abergeldie will implement to manage the speed of traffic approaching and passing through a work site. Abergeldie is conscious of the potential for speed reductions over long distances, to have negative impacts on road user travel times.

Abergeldie will implement Roadwork Speed Zones logically, credibly and capable of being enforced by NSW Police. When considering the use of a roadwork speed zones, Abergeldie will:

- Ensure they are clearly visible and capable of being enforced;
- Position speed signs away from other traffic control signs and devices;
- Ensure they are used only while road works are in progress or the lower speed road conditions exist.

Pursuant to AS1742.3 and the TCAWS Manual, in order to maintain the current speed limits through some of the work zones, the use of safety barriers will be required to protect work and workers. See section 9.11 below.

When working adjacent to traffic on local roads the speed limit selection will be based on the following criteria:

- Degree of vehicular and pedestrian conflicts;
- Type and extent of the work and
- Characteristics of the road and proximity of workers to passing traffic.

9.10 REGULATION OF TEMPORARY SPEED ZONES

Abergeldie will implement the following strategies to enforce any speed limits which are reduced as part of long-term traffic management strategies (TMP's):

- If required, involve police presence to enforce speed. The Traffic Manager should contact the Police Traffic Coordinator at an early stage of the Project. Enforcement might include marked police vehicles patrolling the construction site and/or the inclusion of a stationary marked police vehicle with an operating flashing blue light positioned within the construction area or, provision of police enforcement facilities.
- If required, use of portable Variable Message Signs / Radar Activated Speed Signs to enhance advanced warning sign posting and provide changed traffic condition information to road users.

9.11 SAFETY BARRIER SYSTEMS

Abergeldie will employ the JJ hook barrier system and use sloped end treatments or absorb 350 end treatments. Abergeldie will only deploy safety barriers of a type currently approved by the TfNSW for use on state & local roads relevant to the speed environment and the crash test Level (TL). See TfNSW Acceptance link (<https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/approved-products-materials/safety-barriers/temporary.html>) for current temporary barriers approved on NSW roads.

In addition, any Safety Barrier System installed on the Project will be compliant with:

- AS 3845;
- AS 1742.3;
- TCWS;
- AUSTROADS: Guide to Road Design, Part 6 Roadside design, safety and barriers; and
- The manufacturer guidelines.

In compliance with the G10 Abergeldie will not use safety barriers or safety barrier systems for delineation as a substitute for line-marking. Safety barriers deployment locations are included in the traffic staging drawings provided in Appendix A of this CTMP.

9.12 PAVEMENT MARKING

Abergeldie will engage a 'top tier' Line-marking sub-contractor(s) which meets the following pre-qualification minimum professional requirements:

- TfNSW Category G approved,
- ISO AS/NZS 4801:2001 Compliant,

- Member of the Paint Contractors Certification Program (PCCP),
- Safe Work Method Statements (SWMS),
- Current approved Enterprise Bargaining Agreement,
- Quality, Environmental and WH&S Systems in place, and
- Currently Insured -
- Workers Compensation,
- Public & Products Liability,
- Fleet,
- Professional Indemnity.

Abergeldie will apply pavement marking in compliance with AS2009, The RMS Delineation Manual sections 3 to 15 and AS 1742. Redundant lines will be permanently removed to negate ambiguous alignments in wet conditions or direct sun light.

9.13 LANE WIDTHS

Abergeldie will reduce the lane widths during the implementation of temporary stages in conjunction with speed reductions mindful of traffic volumes to best address the requirements of construction activities and tidal traffic flows.

On straight sections of road, lanes and shoulders will be reduced in width to the AUSTROADS minimums. However, Abergeldie will not reduce the lane width below 3m, or the current arrangement (whichever is less), in areas where turning movements are expected.

9.14 VARIABLE MESSAGE BOARDS (VMS)

Although not required under G10 A1, Abergeldie may be required to deploy portable VMS signs to corroborate TMP and community notifications. If required, these will be installed at prominent locations on the approach to and through the Project as agreed with the WSA, TfNSW & TMC/CJP. VMS messages will not be deployed until they are approved by TfNSW.

The temporary VMS will be portable, trailer mounted capable of displaying up to three screens, with three lines and eight characters per line. They will be remotely operated and capable of being synchronized with the TMC VMS network. Abergeldie will be able to uplift, relocate or remove these VMS within two hours of being requested by TfNSW.

These VMS will be controlled remotely to enable immediate changes to the messaging. For major works and as required by the conditions of a ROL, the VMS will be installed at least one week prior to the day of the implementation of the works to provide advance notification to all road users of the future road occupancy.

Each portable VMS will be located strategically to target traffic using Badgerys Creek Road and arterial connectors around the project boundaries. The position of each board will consider the specific geography of the road, the impacts on residents and businesses and will avoid conflicts with existing static or electronic signage.

9.15 MESSAGES TO DISPLAYED

Abergeldie will develop advance messaging in collaboration with TfNSW. These will be detailed in site/stage specific TMP's or an alternative communication method (email or meeting) with a minimum of 5 days review time as per G10 section 3.3.3.

10 VULNERABLE ROAD USERS

10.1 PEDESTRIANS

Abergeldie do not anticipate pedestrian movements on Badgerys Creek Road, Elizabeth Drive and Derwent Road as no formal pedestrian facilities exist. However, Abergeldie will maintain all

current formal and informal pedestrian connectivity and functionality provided within and directly adjacent to the project area by preserving existing connections or providing alternative connections.

The effectiveness of these provisions will be monitored and adjusted as required, in consultation with TfNSW.

Abergeldie will manage the pedestrian desire lines with temporary footpaths that comply with the requirements of AUSTRROADS Guide to Road Design Part 6A: Pedestrians and Cycle Paths and AS1742.3. Prior to work commencing on State and local roads, where the pedestrian access may be affected, Abergeldie will provide alternate pedestrian access routes that are clearly signed and delineated.

Alternate routes made available will aim to minimise inconvenience to pedestrians with the primary goal of maintaining clear space between pedestrians and active work areas. This will be addressed in site specific TCP's / TGS' prior to the construction activities commencing.

As part of this CTMP, Abergeldie will implement the following measures when providing alternate pedestrian routes in order to minimise impacts on mobility impaired pedestrians:

- Clearly define temporary pedestrian path arrangements by using appropriate signage;
- maintain a smooth, even surface on all temporary pedestrian paths;
- conduct regular inspections to maintain pedestrian paths free of trip hazards; and

10.2 FOOTPATH REQUIREMENTS

In accordance with the G10, Abergeldie will ensure that adequate provision is made to accommodate existing pedestrian movements around the various work areas. Including Badgerys Creek Road, Elizabeth Drive and Derwent Road and all intersecting streets affected by the Works.

As a minimum, Abergeldie will provide:

- A fit for purpose, all weather sealed path as per TCAWS section 4.4.2 (Pedestrians)
- Signage for pedestrians for any route changes; and
- Ensure appropriate cleanliness of all pedestrian and cyclist paths at all times.

Pedestrians must not be directed to travel between any safety barrier system and live traffic.

10.3 CYCLISTS

Abergeldie will maintain all current formal and informal cyclist connectivity and functionality provided within and directly adjacent to the project area by preserving the existing facilities or providing upgraded alternative facilities. Abergeldie will manage the cyclist desire lines with temporary routes that comply with the requirements of TCAWS section 4.4.3, AS1742 Part 9 – Bicycle Facilities, AUSTRROADS Guide to Traffic Management Part 10 and AS1743 – Road Signs Specifications.

Cyclist volumes on the local roads within the project boundary are low and dedicated cyclist facilities are generally provided outside the work sites. Where practical, Abergeldie proposes to maintain all existing cyclist routes. Where alternate routes are implemented, they will be appropriately signed and marked and should only be in place for the short duration.

In addition to the footpath requirements stated above (section 6.1.1) Abergeldie recognise that cyclist activity exists on Badgerys Creek Road and will at least consummate conditions with those existing prior to construction.

Where possible, Abergeldie will implement the following provisions for cyclists:

- Provide sufficient signage to inform cyclists of any changed traffic conditions;
- Provide appropriate shoulders for cyclists in front of any temporary barriers if alternative provisions are not provided;

- Ensure appropriate surface and cleanliness of shoulders in front of barriers for the safe passage of cyclists at all times; and
- Install all signposting, bollards and barriers wherever necessary with particular attention to signposting at intersections in advance of changes to traffic conditions.

10.4 PUBLIC TRANSPORTATION

It is not anticipated that these works will affect the existing bus stop facilities. However, Abergeldie will strive to minimise disruption to the current level of bus and taxi services. Local bus service and taxi companies will continue to be consulted during the construction period to minimise disruption to services via the consultation process.

Bus Routes

Busways Route 801 operates a service on Monday to Friday between 07:15am to 08:45am and 16:10pm to 18:58pm at approximate 1-hour intervals along the northern section of Badgerys Creek Road. See Appendix D of this CTMP for route map and timetable.

Abergeldie will advise the bus companies of construction activities that will directly affect their bus routes. Prior to such advice being released, provide for TfNSW approval a copy, at least three weeks prior to release, of any intended correspondence to the bus companies.

Abergeldie will ensure that all traffic staging can adequately cater for bus turning movements.

10.5 HEAVY VEHICLES & FREIGHT INDUSTRY

Badgerys Creek Road & Derwent Road are not nominated routes for Over Size and Over Mass vehicles. The Northern Road & Elizabeth Drive are the main freight route in Southwest Sydney. It is essential that heavy vehicle delay is considered and minimized (particularly on Elizabeth Drive) during construction activity. Heavy vehicles using these roads are not restricted to any tidal pattern. Heavy vehicles volumes remain consistent during the day.

Heavy vehicle movement can be facilitated by:

- considering heavy vehicle and over-dimension load requirements when preparing temporary works drawings and Traffic Control Plans (adopting designs, that provide a minimum lane width of 3.2 m, and can accommodate the turning movements/lateral shift of a B-Double heavy vehicle 26 m in length);
- minimising major traffic control operations at night and during tidal peaks so as not to disrupt night freight movements;
- limiting obstructions and restrictions on the carriageways, and when required providing alternative routes to maintain access for transport operators including over-dimension load movements;
- Traffic Controllers coordinating the movement of over-dimension vehicles through work sites;
- Notifying the TMC of any obstructions that may impact on over-dimension load vehicle movements.
- Provide appropriate and updated information to truck industry to minimise traffic delays and avoid critical roadwork's operations.
- Special consideration will be taken when planning night works.
- Abergeldie will aim to create no disruptions to night freight movements.

10.6 KEY STAKEHOLDERS

The CTMP will be developed in consultation with the following key stakeholders -

- Liverpool City Council (Road authority)
- TfNSW

- Customer Journey Planning (CJP)
- Transport Management Centre (TMC)
- Greater Sydney Planning & Programs.
- WSA
- Utility providers (Telstra, Endeavour Energy & Sydney Water)

11 ROAD OCCUPANCIES

All short-term road occupancy of any impact will be subject to the normal TfNSW ROL application and approval process explained in below.

For the purposes of this document:

“Free flow of traffic” means unimpeded traffic flow conditions on Badgerys Creek & affected side roads prior to the commencement of any Abergeldie work.

“Road Occupancy” means any part of Abergeldie work that will or is likely to delay, including obstruct, restrict, close, interfere with, slow or stop, the free flow of traffic on any lane or shoulder in the vicinity of the various work zones, or any temporary alignments being used by public traffic or on any part of the Works opened to traffic. Road occupancies include, but are not limited to:

- Shoulder occupancies and/or closures;
- Lane occupancies and/or closures;
- Any occupation of the Construction Site by Abergeldie labour, sub-contractors, equipment or plant that requires a traffic control plan under the provisions of TfNSW G10; and
- Any other event that causes delays to the free traffic flows.

The duration of a **“traffic delay”** is the total period of time during which the free flow of traffic is obstructed, restricted, closed, interfered with, slowed or stopped and includes the time taken to clear all stopped, slowed and queued traffic and return to free flow of traffic conditions.

11.1 ROAD OCCUPANCY LICENCE (ROL)

A copy of any Road Occupancy Licence (ROL) will be available:

- At the location of the relevant road occupancy; and
- At all times when any activity associated with the ROL is taking place.

Abergeldie will make available to TfNSW Representative or TfNSW Surveillance Officers, upon their requests and at the location of the road occupancy, a copy of the ROL.

All Abergeldie personnel involved in the work associated with the ROL must be:

- Inducted in and made familiar with the ROL terms, conditions and requirements prior to the implementation of the road occupancy or their deployment in this element of the Contractor’s Work; and
- Regularly re-trained on the ROL terms, conditions and requirements throughout the period of the road occupancy.

Notwithstanding any ROL granted by TMC for any lane or shoulder closure, (where possible) Abergeldie will co-operate with TfNSW and other authorities, such as the Police or State Emergency Services, to facilitate traffic flows on the roadway through the Site. TfNSW may at any time direct Abergeldie to temporarily cease work and re-open any closed lane or shoulder. They may also direct Abergeldie to cease work and divert resources to assist with emergencies. Abergeldie will keep a copy of the ROL on site at all times when the licence is in operation.

Abergeldie will prepare and submit all ROL applications to the TMC.

The TMC grants, varies and revokes all ROLs. The TMC will review the ROL applications and will be responsible for their approval. The granting or varying of a ROL does not:

- Constitute approval by the TMC of any actions that relate to traffic safety, work health and safety or environmental issues and management;
- Relieve Abergeldie or any person of their responsibility for compliance with legislation, regulations or established operational procedures; or
- Change any management accountability or responsibility.

As per G10 1.4.1, once an ROL is granted, Abergeldie will submit a copy of the approved ROL to WSA & TfNSW.

Additionally, an ROL will be obtained from the TMC in all instances where a lane closure is required or reduction in the speed limit to complete the above works.

No work will be carried out that will affect traffic during long weekends, school holidays and public holidays. This period will include the Friday before the school holidays and the Monday following the school holidays.

11.2 ROAD OCCUPANCY FEES

In accordance with section 2.1.2 and Appendix A3 of the G10, Abergeldie is not required to pay Road Occupancy Fees.

11.3 COUNCIL ROAD OCCUPANCY APPROVALS

Abergeldie will maintain access to property entrances adjoining the Works and local traffic throughout the project. This includes temporary ramps for local traffic and access to side streets where necessary.

Local road access shall be maintained with full accessibility of the original configuration until the full functionality of the final configuration can be provided. Abergeldie will not undertake any local road access restrictions, property restrictions and/or closures without the prior approval of the TfNSW and Liverpool City Council Authorised Persons.

The Liverpool City Council contact details are:

- Charles Wiafe – Manager, Traffic & Transport Management – (02) 8711 7452

Council Permits

Abergeldie will obtain concurrence of the Liverpool City Council as required prior to the installation of temporary traffic controls/devices and/or occupying the local road network. The Abergeldie submission / discussion to Council will include:

- brief details of the works to be undertaken;
- any relevant design drawings of the works;
- program of the works;
- copies of TCP's / TGS';
- if applicable, details of Speed Zone amendments sought; and
- Contact details of a construction Site Representative.
- Traffic modelling, if required.

Whilst Council may be the road authority to approve and issue road occupancy permits on council roads, all works relating to the Project must include approval from TMC.

11.4 MAJOR IMPACTS

Abergeldie may implement major impact works (contraflows, detours etc) during the construction period.

Abergeldie will undertake the following prior to the commencement of 'major Impact Works':

- All necessary approvals to undertake night work have been obtained; and

- Hold a meeting with the relevant parties at least 2 weeks prior to implementing the restrictions, to discuss the detailed traffic management arrangements.

Abergeldie will submit a TMP to TfNSW, which will comply with the requirements as listed below. Proposed side road closures and associated detours shall meet the following criteria:

- Are suitable for predicted traffic volumes i.e. do not cause unnecessary congestion or bottlenecks on other roads.
- Are signed in accordance with the relevant Australian Standards.
- Are supported by public notices and advance warning signs placed in positions that will enable drivers to take evasive measures to avoid road closures.

Proposed detours and responses addressing the above criteria shall be outlined in the TMP and clarified / agreed with relevant stakeholders a minimum of 2 weeks before the detour is to take effect. Emergency services shall be fully informed of these closures and detours.

12 ROAD MAINTENANCE

Abergeldie will:

- Regularly monitor the condition of any existing trafficked pavement within the Project boundaries;
- Regularly monitor the condition of the road corridor and identify hazards to road users.

In the event that such defects or hazards are identified, Abergeldie will:

- Repair the defect or hazard immediately, if the defect or hazard is a result of Abergeldie construction activity, or
- Notify the TfNSW Project Manager.

Abergeldie will ensure that only appropriately trained and skilled personnel are engaged on all maintenance and repair activities.

12.1 PRE-CONSTRUCTION CONDITION SURVEY

A Road Dilapidation Report will be carried out prior to the commencement of any construction activity, undertake a pre-construction survey of all roads in the vicinity of the work site (See TfNSW G1, Clause 12).

These pre-construction survey reports must provide a series of reference points to permit detection of any damage that may be caused by construction activities. The reports must include photographs, sketches and narrative descriptions of the existing condition of facilities (including but not limited to road furniture, drainage, existing utilities, pavement condition, etc.).

Provide a copy of the survey to the Principal and any other relevant stakeholder.

13 TRAFFIC MANAGEMENT DOCUMENTS

13.1 CONSTRUCTION TRAFFIC MANAGEMENT PLAN (CTMP)

This CTMP is Abergeldie Traffic Operations Manual for the project which represents a broad traffic impact statement. It explains the management of the road environment within and around the project boundaries for the entire time the project has a presence on those roads. Each control strategy is implemented in compliance with NSW legislation and TfNSW technical requirements.

13.2 TRAFFIC MANAGEMENT PLAN (STAGE SPECIFIC TMP)

Stage specific Traffic Management Plans (TMP) conforming to AS 1742.3 and the TfNSW Traffic Control at Worksites Manual will be developed for the works. These plans will be submitted throughout the duration of the project to explain traffic arrangements for future traffic stages that

aren't captured as part of this CTMP. These plans will contain additional written details describing the nature of the works. TMP's are prepared by following a risk management process considering all essential strategies in an ordered way. TMP's are developed with the following priorities in mind:

- Safety of workers,
- Safety and convenience of road users, and
- Maintain traffic flow.

The TMP(s) will be prepared by the Abergeldie Traffic Manager and submitted to TfNSW for consideration and approval.

13.3 TMP DEVELOPMENT TIME-LINE

The Abergeldie Traffic Manager will prepare TMP's and submit them according to the requirements stipulated in the G10.

30 Working Days from Event:

The Traffic Manager will nominate the preferred 'Event Date' and table a preliminary TMP to TfNSW with a full written component and conceptual representation of the temporary design drawings.

These drawings may be conceptual in nature but must clearly explain the proposed alignment changes and positions of control treatments including, signage, pavement marking and barrier safety treatments in sufficient detail to generate an accurate communications strategy.

This design does not need to be independently road safety audited at this stage. In addition, any short-term TCP's / TGS' designed to facilitate major road occupations like detours and side tracks should be proposed at this time.

20 Working Days from Event:

The Traffic Manager will submit the revised TMP to TfNSW with a full written component and draft Traffic Staging Drawings at approximately 85% design.

- A run-sheet nominating the program of activities on the 'Event' shift will be presented in draft format. Similarly, the Communications strategy including VMS placement and messaging will be submitted and discussed.
- The key design elements of the 85% design should provide the Community and Stakeholder Manager with sufficient information to finalise media broadcasts.
- At this time the TCP's will be complete and ready for ROL applications.
- The 'Event Date' should be confirmed at this time.

10 Working Days from Event:

It is expected that TfNSW will have provided sufficient feedback to the Traffic Staging Drawings and the TMP document to enable the completion of these designs to 100%. They will then be re-submitted inclusive of any recommended changes with design verification and road safety audits, if applicable. In addition, all minor TCP's enabling single/dual lane closures will be included in the TMP as well as applied for through the OPLINC system.

At this time the Traffic Manager will also provide a copy of the approved ROL enabling the installation of TCP's required to implement the TMP, to the Community and Stakeholder Manager for Out of Hour Notifications. It is expected that these meetings will be part of a routine process including the Community & Stakeholder Engagement personnel from Abergeldie and TfNSW.

13.4 STAGE SPECIFIC TMP INCLUSIONS

The Stage Specific TMP(s) (which are separate to this document as per section 12.1) will include a set of long-term TCP drawings in of the document. These drawings will be to scale and provide exact geographical references for:

- Work Zone,
- Line marking changes
- New signage
- Safety Barrier placement
- Site gates
- Portable VMS positions

The TMP written document itself will be a detailed site-specific explanation which addresses the key traffic management issues listed below.

- Scope of works (brief explanation);
- Location of the TMP;
- Proposed timing and duration;
- Traffic Control Measures (Long Term staging drawings explained);
- Impact of TMP on Network Performance;
- Impact of TMP on Pedestrians / Cyclists;
- Impact of TMP on Public Transport;
- Community / Advertising / Consultation;
- Property Access;
- Parking;
- Events;
- Emergency Services;
- Contacts – Responsible persons (on site); and
- The following appendices;
 - Appendix A - Traffic Staging Drawings;
 - Appendix B – Relevant TCP's;
 - Appendix C – Vehicle Movement Plans (including measures to reduce HV usage of local roads); and
 - Appendix D – Pedestrian Movement Plans;
 - Appendix E – TfNSW comments / Feedback

13.5 TRAFFIC STAGING DRAWINGS

The associated TMP(s) will include a set of long-term Traffic Staging Drawings as an appendix to the TMP document. These drawings will conform to Austroads Road Designs Guides. Abergeldie will engage a suitably qualified TTM designer, approved by TfNSW with experience in designing roads to TfNSW standards, to prepare these drawings.

13.6 TRAFFIC CONTROL PLAN (TCP) OR TRAFFIC GUIDANCE SCHEME (TGS)

Traffic Control Plans are currently being developed and will be submitted once they are prepared.

A TCP / TGS is a diagram showing signs and devices arranged to warn traffic and guide it around, past or, if necessary, through a work site or temporary hazard. It will comply with the TCAWS Manual.

TCP's are diagrams that illustrate the signs and devices that will be installed to warn traffic, pedestrians and cyclist around or past, or if necessary, through the work site. These plans will address the specific control measures required to safely work on the road during a single shift period. In accordance with section 2.4.4 of the G10, the TCP shall include:

- Types and locations of permanent regulatory (R series) and warning (W series) signs;
- Types and locations of temporary signs (T series) including advance warning signs and VMS;
- Locations of permanent and temporary traffic signals;
- Locations of any required Traffic Controllers;
- Locations and lengths of taper and safety buffer areas;
- Locations of safety barrier systems including end terminals;
- Pedestrians and cyclists paths;
- Locations of entry and exit gates to work areas, individually numbered and signposted;
- Details of access to adjoining properties, car parking areas, and side roads;
- Pavement marking details, including types of delineation required, turning arrows, stop/holding lines and other road markings, types and positions of raised pavement markers and other delineation devices; and
- Location of temporary lighting, if required.

These plans will be used to corroborate applications for Road closure/ part closure Permits. A TCP can only be prepared by a person who has undertaken and passed the TfNSW Prepare Work Zone Traffic Management Plan training course and holds a current accreditation.

13.7 VEHICLE MOVEMENT PLANS

Where applicable, Abergeldie will provide a VMP together with the TCP, showing the preferred travel paths for work vehicles entering, leaving or crossing the through traffic stream during the single shift of operation.

The VMP will clearly show vehicle entry and exit points into the work areas and indicate clearly that these are the only points where interface with the through traffic is permitted. A VMP may be combined with or superimposed on a TCP.

For long term vehicle movements, particularly heavy vehicles, Abergeldie will attach a VMP as an appendix to the TMP submission. This VMP will show the daily routes to and from the work site avoiding small council roads where practicable.

13.8 PEDESTRIAN MOVEMENT PLANS

Where applicable, Abergeldie will provide a PMP with TCP's, showing the allocated travel paths for workers or pedestrians around or through the Site, including all signs and devices used to guide the workers or pedestrians.

13.9 PREPARATION & IMPLEMENTATION OF TMPs & TCPS

Numerous short-term TCP's and semi-permanent TMP's will be developed to facilitate the works. TCP's and TMPs will be prepared in accordance with all of the Project documentation.

Abergeldie has developed a robust and comprehensive process for the design, preparation, implementing, inspecting and auditing of temporary traffic control measures. The process includes a number of checks/audits to ensure that the TMPs are both designed and implemented correctly and meet all project requirements.

The requirement for temporary traffic control will be identified by the Traffic Manager in consultation with the requesting construction unit.

The Traffic Manager will then work closely with the relevant construction area engineers, designers, community consultation personnel and external specialist traffic management consultants (if required) to develop the TMP.

TMPs will be then designed approved and implemented. All TMPs will be prepared by the Traffic Manager. Traffic Staging Drawings will be used as a "base" for long term TCPs. TMPs for local

roads will be developed to suit construction and stakeholder requirements. All TCPs and TMP layout drawings will be prepared and certified by the appropriate personnel.

Particular TMP proposals may require traffic engineering analysis e.g. intersection alterations or road closures. When required, the traffic analysis and modelling to confirm that both the proposed and finalised traffic control measures are viable will be conducted.

Regular monitoring and audits of the implemented TMPs will be undertaken at the direction of the Traffic Manager pursuant to the audit protocols of this document.

The finalised TMP will be reviewed and signed by the TfNSW Traffic Representative before being submitted to the relevant approval authorities. Once these signature(s) have been received and the TMP checked, the TfNSW Traffic Representative will release the Hold Point. Implementation of the TMP can then proceed.

14 INSPECTIONS & MONITORING

The requirement to inspect traffic control is stipulated in Section 6 of the TfNSW Traffic Control at Worksites Manual and Appendix A of Australian Standard 1742.3. There are three main types of inspection:

- Pre-start and pre-closedown inspections of short-term traffic control.
- Weekly inspections of long-term traffic control.
- Night inspections of long-term traffic control.

The Abergeldie Traffic Control inspection checklist will be used for the inspections (Appendix E of this CTMP).

The responsibility and frequency of inspections is clearly stipulated in Section 6.1 of the Traffic Control at Worksites Manual and is summarised below:

Inspection	Frequency
Pre-start and pre closedown	Daily observational monitoring of Before work starts, regularly through the shift and prior to closing down will be undertaken by the project team and any notes will be recorded in the site diary.
Weekly Inspections	On the day the work begins and TfNSW “Traffic Control at Worksites Manual of the Environmental Inspection Checklist
Night inspections	At least once during the first week and at least every 2 months recorded on the checklist in the TfNSW’s “Traffic Control at Worksites Manual

Table 6 – Summary of Traffic Control Inspections

Any non-conformances will be recorded on Rapid and will remain open until the issue has been resolved.

14.1 ROAD SAFETY AUDITS

A road safety audit of the designs in Appendix A & B have been the subject of a desktop RSA. A copy of the RSA report can be found in Appendix G of this CTMP.

A road safety audit is a formal examination of an existing or future road project, in which an independent, qualified auditor, reports on the project’s crash potential and safety performance. The auditor should be independent auditor currently registered on the NSW Register of road safety auditors.

The Road Safety Audit Team will:

- Comprise a lead auditor registered at Level 3 certification;
- A team member registered at Level 2 certification or higher;
- Both of whom must be listed on the NSW Centre for Road Safety's Register of Road Safety Auditors; and
- Perform audits in compliance with the requirements in the NSW Centre for Road Safety publication "Guidelines for Road Safety Audit Practices" and AGRS06 "*Austrroads Guide to Road Safety Part 6: Road Safety Audit*".

As per G10 CI 4.2, Abergeldie will commission road safety audits of proposed TMP's. These audits will focus on identifying any deficiencies, and or safety hazards, regardless of current practice, standards or operations, to enable Abergeldie to implement corrective solutions.

These audits will be conducted in accordance with the practices outlined in AUSTROADS Guide to Road Safety Part 6A (Implementing Road Safety Audits).

The objectives of road safety audits are:

- To provide an independent assessment of the design from a road safety perspective;
- To review the existing road environment and identify any safety related issues;
- To look beyond the project limits and consider the effects in transition areas any proposed design changes will have on the existing built environment;
- To identify potential safety problems of a particular design or section of road; and
- To ensure that measures to eliminate or reduce the problems are considered fully by the asset owner.

Independent Road Safety Audits (RSA) will be undertaken within 48 hours of any temporary realignment implemented by an approved TMP and submitted to Abergeldie, the Principal and Independent Verifier within one week. Project wide Road Safety Audits will be conducted frequently by an independent qualified RSA auditor in company with the Traffic Manager.

14.2 CORRECTIVE ACTIONS

Deficiencies identified during audits and site inspections will be discussed with relevant construction units and / or Traffic Team Field resources. Where possible, Abergeldie will aim to rectify the deficiency immediately.

Audit results requiring follow-up actions will be raised as either an observation or a non-conformance. Any identified actions will be assessed against a safety matrix to nominate the probable consequence and likelihood of any risk identified. High risks issues will be addressed immediately.

Any proposed changes to current TMPs will be initiated by the Traffic Manager after consultation with construction personnel. Corrective actions will be undertaken at the next available safe opportunity. Interim risk management will be implemented if necessary and may include warning signage, VMS messaging and public broadcasts in consultation with the Community and Stakeholder Management Team.

15 COMMUNICATION STRATEGY

Abergeldie will liaise with all stakeholders throughout the project in accordance with the Community Communication Strategy (refer Appendix F of this CTMP).

15.1 TRAFFIC & TRANSPORT COMMUNICATIONS

The Traffic Manager will ensure adequate consultation is carried out with all affected stakeholders. Typically, those included within a TCG & TTLG forum will be consulted of proposed traffic changes & project updates. G10 does not specify the need to create a specific TCG or TTLG forum for this particular project. Nevertheless, the Traffic Manager will ensure affected stakeholders are consulted on the traffic strategies presented.

The Traffic Manager will provide a forum for discussion of all traffic and transport and road safety matters associated with the project, including:

- Construction staging, current and proposed;
- Traffic operations, including changes in traffic alignments, work area's and parking restrictions, if any;
- Community feedback and identified issues, comments;
- Impacts on public transport;
- Pedestrian and cyclists impacts; and
- Proposed communication strategies for future works and actions.

Abergeldie recognises the importance of consulting with the various stakeholders in an effort to minimise the impacts during the construction phase. During the development of temporary traffic management arrangements, the following stakeholders will, be consulted as appropriate:

- TfNSW
- TMC / CJP
- Liverpool City Council
- WSA
- Emergency Services
- Bus and/or Coach Association(s)
- Bicycle User Groups (BUG)
- Pedestrian groups
- Special Events committees
- Adjacent major infrastructure projects

16 INCIDENT MANAGEMENT PLAN

Abergeldie will provide traffic control by qualified traffic controllers for emergencies such as crashes and spillages along the work corridor. Where the New South Wales Police Force, Emergency Services, TfNSW and TMC are controlling an incident, the Project team shall comply with their requirements and instructions.

Traffic Control at Worksites Manual version 6 outlines in Section 5.3.1 the content and requirement of a Traffic Incident Plan (TIP). This plan will outline the processes required to be undertaken and associated responsibilities of staff to address incidents if and when they happen within the worksite, and on the road.

The following summarises the purpose and scope of this document

- Names and contact information for responsible persons on the project;
- Contact details of the person responsible for the works, stakeholders, TMC, police, emergency services;
- Procedure to be followed in the event of a traffic incident at the site;
- List of plant that will be available for moving portable concrete safety barriers (if in use on-site);
- Procedure for carrying out investigations of traffic incidents involving members of the public or workers, including;
 - Checking that the traffic measures in place in accordance with the TMP and ROL conditions
 - Carrying out a “drive through” and video recording of the roadway, including the location where the incident has taken place;
- Information required for initial notification to the person responsible for the works and where necessary other stakeholders;
- Format for reporting and communication of the results of the traffic incident investigations and lessons learned.

16.1 DEFINITIONS

TERM	DEFINITION
Incident	Any abnormal event which prevents the subject road and all connecting roads within the Project boundary from being open to the public for the safe continuous and efficient thoroughfare of road users. Further, an “Incident” requires an urgent response to: <ul style="list-style-type: none"> • Protect or repair the road, property or persons, • Provide access for Emergency Vehicles and/or traffic control, • Prevent any occurrence which may cause damage to the road or compromise the safety of persons or property.
Emergency	An event due to an actual or imminent occurrence (such as fire, collision, explosion, terrorist act, flood, storm, earthquake, epidemic or act of war) which: <ul style="list-style-type: none"> • Endangers or threatens to endanger the safety or health of any persons, • Destroys or damages or threatens to destroy or damage, any property.
Emergency Services	Includes the New South Wales Police Service, Fire & Rescue New South Wales (FRNSW), New South Wales Ambulance Service and State Emergency Services;

Table 7 - Roles & Responsibilities

16.2 STRATEGY

Role of Abergeldie

The occurrence of incidents, both planned and unplanned, on within the project boundaries may have negative impacts on the surrounding road network.

Abergeldie will:

- Take an active support role in the reporting of incidents occurring within the project boundary,
- Inform the TMC of incidents detected on the road and provide on-going situational reports until that incident is resolved,
- Provide close support to the Emergency Services, including traffic control on the approach to and at the incident.

Role of Abergeldie Site Traffic Representative

The Abergeldie Site Traffic Representative will:

- Maintain a record of all incidents that Abergeldie observe, report and provide assistance to within the Project boundary,
- Determine trends, identify concerning issues and monitor effective progress of the TIP,
- Provide monthly update briefings to the relevant stakeholders on the progress of the TIP and incidents generally,
- Maintain on-going communication with the TMC and the Principal regarding traffic matters;
- Review the TIP and relevant site specific TMP following incidents;

- Manage the deployment of project resources to assist in managing and clearing incidents.

Legislation

Abergeldie does not have legal authority to stop a vehicle (except as a Traffic Controller as part of a Traffic Guidance Scheme), nor to inspect, detain or compel it to be towed. On occasions Abergeldie may request the Police (or TMC/CJP) to manage the clearance of the road and removal of un-driveable vehicles which are in a hazardous position or would otherwise impact the safe movement of construction vehicles to and from site.

16.3 INCIDENT RESPONSE

Abergeldie will assist with the management of incidents on the road network within and adjacent to the site.

Incident Types

INCIDENT CODE	DESCRIPTION
01	Motor Vehicle Crash (All DCA codes)
02	Parked Vehicle (obstructing thoroughfare) driver present
03	Vehicle Fire
04	Abandoned / Unattended Vehicle
05	On-coming vehicle
06	Animal on carriageway
07	Carriageway closure (un-planned)
08	Debris or spill on carriageway
09	Congestion
10	Pedestrian on carriageway
11	Damage of Traffic System / Sign
12	Discharge of missile (object projected onto carriageway)
13	Civil Unrest (March / Protest on carriageway)
14	Bomb threat
15	Terrorist threat / action

Table 8 - Incident Types (Code and Description)

Definition for Coding Accidents (DCA)

All crashes will be recorded with the relevant DCA code. The 'at fault' vehicle will be nominated as vehicle 1 or unit 1 in all reports. A 3-digit code will be entered in the box denoted on the relevant form, determined by the matrix in Figure 1, below.

	0	1	2	3	4	5	6	7	8	9
	PEDESTRIAN on foot, in toy / pram	INTERSECTION VEHICLES FROM ADJACENT APPROACHES	VEHICLES FROM OPPOSING DIRECTIONS	VEHICLES FROM SAME DIRECTION	MANOEUVRING	OVERTAKING	ON PATH	OFF PATH, ON STRAIGHT	OFF PATH, ON CURVE	PASSENGERS & MISCELLANEOUS
00	OTHER 000	OTHER 100	OTHER 200	OTHER 300	OTHER 400	OTHER 500	OTHER 600	OTHER 700	OTHER 800	OTHER 900
01	NEAR SIDE 001	CROSS TRAFFIC 101	HEAD ON (not overtaking) 201	REAR END 301	LEAVING PARKING 401	HEAD ON (not side swipe) 501	PARKED 601	OFF CARRIAGEWAY TO LEFT 701	OFF CARRIAGEWAY ON RIGHT BEND 801	FELL IN / FROM VEHICLE 901
02	EMERGING 002	RIGHT-THRU FROM LEFT 102	RIGHT-THRU 202	REAR LEFT 302	ENTERING PARKING 402	OUT OF CONTROL 502	DOUBLE PARKED 602	OFF CARRIAGEWAY TO RIGHT 702	OFF CARRIAGEWAY ON LEFT BEND 802	STRUCK WHILE BOARDING OR ALIGHTING 902
03	FAR SIDE 003	LEFT-THRU FROM RIGHT 103	RIGHT-LEFT 203	REAR RIGHT 303	PARKING VEHICLES ONLY 403	PULLING OUT 503	ACCIDENT OR BROKEN DOWN 603	LEFT OFF CARRIAGEWAY INTO OBJECT 703	OFF CARRIAGEWAY ON RIGHT BEND INTO OBJECT 803	STRUCK TRAIN / AEROPLANE 903
04	PLAYING, WORKING LYING, STANDING ON CARRIAGEWAY 004	RIGHT-THRU FROM RIGHT 104	RIGHT-RIGHT 204	U-TURN 304	REVERSING 404	CUTTING IN 504	VEHICLE DOOR 604	RIGHT OFF CARRIAGEWAY INTO OBJECT 704	OFF CARRIAGEWAY ON LEFT BEND INTO OBJECT 804	
05	WALKING WITH TRAFFIC 005	TWO RIGHT TURNING 105	LEFT-THRU 205	LANE SIDE SWIPE 305	REVERSING INTO FIXED OBJECT 405	PULLING OUT REAR END 505	PERMANENT OBSTRUCTION ON CARRIAGEWAY 605	OUT OF CONTROL ON CARRIAGEWAY 705	OUT OF CONTROL ON CARRIAGEWAY 805	
06	FACING TRAFFIC 006	RIGHT-LEFT FROM RIGHT 106	LEFT-LEFT 206	LANE CHANGE RIGHT 306	EMERGING FROM DRIVEWAY 406	OVERTAKING RIGHT TURN 506	TEMPORARY ROADWORKS 606	LEFT TURN 706		PARKED VEHICLE RAN AWAY 906
07	DRIVEWAY 007	LEFT-THRU FROM LEFT 107	U-TURN 207	LANE CHANGE LEFT 307	EMERGING FROM LOADING BAY 407		STRUCK OBJECT ON CARRIAGEWAY 607	RIGHT TURN 707		UNKNOWN 907
08	ON FOOTWAY/ MEDIAN 008	RIGHT-LEFT FROM LEFT 108		RIGHT TURN SIDE SWIPE 308	FROM FOOTWAY 408			MOUNTS TRAFFIC ISLAND 708	MOUNTS TRAFFIC ISLAND 808	
09		TWO LEFT TURNING 109		LEFT TURN SIDE SWIPE 309	U-TURN INTO FIXED OBJECT 409		ANIMAL (not ridden) 609	OFF END OF ROAD/ T-INTERSECTION 709		
10				PULLING OUT (LANE CHANGE) 310			LOAD OR MISSILE STRUCK VEHICLE 610			

Figure 18 - DCA Codes

16.4 RESOURCES

Abergeldie may deploy the following physical resources to affect this strategy:

- VMS;
- Traffic Control;
- Exclusion barriers
- Signage
- Excavators and other plant and equipment
- Portable traffic signals
- Lighting towers
- Environmental spill kits
- First aid kits (including medical defibrillator)
- UHF communication radios

Incident Messaging (VMS)

Abergeldie may have portable VMS boards/trailers positioned as part of continuing traffic management. If so, these boards will be strategically placed to advise motorists of the changing alignments and upcoming traffic staging. These VMS boards will be used to compliment the Traffic Incident Plan. The changing of portable VMS boards to manage incidents will be done in consultation with TfNSW site representatives or the TMC. The Abergeldie Site Traffic Representative will change the messaging of these portable boards once approved by TfNSW or the TMC. This approval is likely to occur over the phone at the time of incidents occurring. The VMS message format shall conform to the standard messages provided in the:

- RTA VMS Guidelines (TDT 2005/02b) and,
- Traffic Control at Worksites Manual Version 6

Traffic Control

Abergeldie will frequently deploy traffic control resources on the roads within the project boundary during approved ROL periods to facilitate construction works. If / when an incident occurs, these resources may be re-deployed to assist the management of diversion routes or the incident site. The Site Traffic Representative or Site Foreman will coordinate the deployment of resources to meet the needs of the TMC or TfNSW.

16.5 ACTIONS

Incident Identified

If a Abergeldie employee observes an incident within the project boundary, that person will immediately notify the Site Traffic Representative. This notification will include the following details:

- Time observed;
- Place, including direction of travel and lane position;
- Type of incident;
- Estimate of severity to determine Emergency Service requirements;
- Impacts on the road upstream approaching the incident;

Notifications

The Site Traffic Representative will:

- Immediately contact the TMC/CJP or TfNSW Site Traffic Representative and repeat the information received from the ABERGELDIE personnel on site;
- Contact available on-site traffic resources, this may include a Traffic Foreman where available to be deployed to assist manage the traffic;
- Notify the Project Director; and
- Record details on a Form – Traffic Incident Report

16.6 ABERGELDIE RESPONSE

The TMC/TfNSW or CJP may direct Abergeldie to take action to assist the management of the incident. If directed, Abergeldie will:

- Modify VMS messaging;
- Deploy Traffic Control resources to assist with scene containment or diversion routes.
- Utilise resources that are available to provide response to incidents with the aim to make the incident scene safe and prevent further harm to persons or property.
- Portable concrete and steel barriers are to be moved with available equipment when necessary.
- Excess portable barriers will be stored locally for replacement should any be damaged due to vehicle impact.
- On arrival of Emergency Services the scene will be handed over to the relevant authority, and ABERGELDIE will provide assistance as requested from the responsible agency.
- Apply and maintain communication protocols, particularly between construction site staff and TfNSW, CJP and/or local council representatives.

Major Incident Causing Detour

In the event of a major incident which causes a diversion of traffic via the Golden Highway or New England Highway, works will be halted that would potentially cause delay to increased traffic volumes.

Where notified by the TMC or the Principal, VMS messaging will be updated on request to assist in communication or notification of any delays or impacts to motorists journeys.

Any changes implemented will remain in place until the closure is removed, and incident cleared (or at the direction of the Principal or emergency services).

Report

The Site Traffic Representative will record all the relevant details within 24 hours. The Site Traffic Representative will also record with photo and/or video the approach to and departure from the incident site where the incident falls within the temporary site traffic controls. The records of the incident and photos are to be incorporated into the Traffic Incident Report and the video file saved for internal records.

A copy of the Traffic Incident Report form and any relevant additional photographs, witness versions etc, will be forwarded to the Project Manager and the TfNSW Project traffic representative within 7 days.

Incidents will be discussed with CJP or Principal where there is contributing construction factors or elements may have been a factor. Any lessons learned or actions as a result of the discussion will be provided to the Abergeldie NSW Traffic Manager for review and where appropriate broadcast as a lesson learned to all site traffic representatives including those on other Abergeldie projects.

The inevitable nature of emergencies and their potentially significant social, economic and environmental consequences is acknowledged, and relevant state acts and legislation have been enacted to controlling these situations. The relevant acts identify agencies primarily responsible for controlling particular hazards/emergencies. Such agencies are detailed in Table 9 below.

Event	Agency
Law Enforcement / Emergencies	Police
Fire	Fire Brigades / (e.g.) Rural Fire Service
Hazardous Materials:	Fire Brigades
Flood	State Emergency Service
Storm and Tempest	State Emergency Service
Traffic	Transport Management Centre (TMC)

Table 9 – Emergency Agencies

17 REVIEW OF CTMP

As per G10 2.2.5, Abergeldie will undertake monthly reviews of the CTMP to ensure it is reflective of the updated traffic management requirements of the project.

The submission of Traffic Control plans, Traffic Staging plans, Vehicle movement plans, ROLs and other associated documents required by the G10 will be submitted or Principal review prior to any works which will alter the previously approved traffic management arrangements.

The continual improvement process will:

- At least monthly (or as incidents / non-conformances occur):
 - Determine the root cause or causes of non-conformances and deficiencies.
 - Develop and implement a plan of corrective and preventative action to address non-conformances and deficiencies.
 - Verify the effectiveness of the corrective and preventative actions.

Outcomes of these reviews shall be documented and retained for the duration of the project.

Any updates of the CTMP as part of its review will be firstly approved by TfNSW prior to implementation of the amended document.

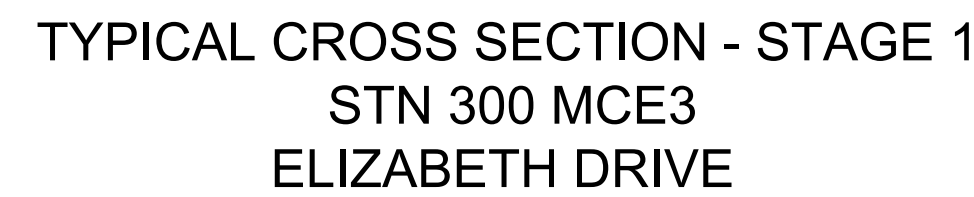
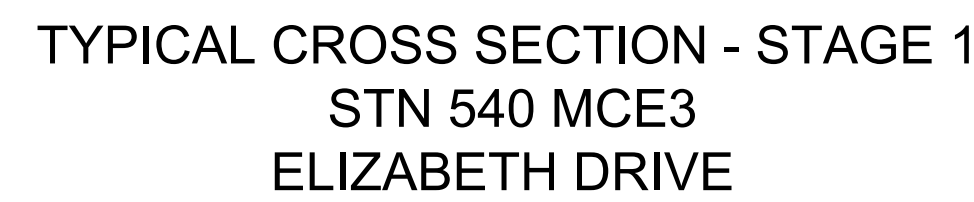
18 Key Contacts

Contact	Position	Mobile No.
Brent Knight	Project Manager	0428 271 521
Zac Simpson	Construction Supervisor	0438 200 219
Louis Peau	Traffic Manager	0401 511 877
Ari Kalamotas	Interface Manager	0437 892 397

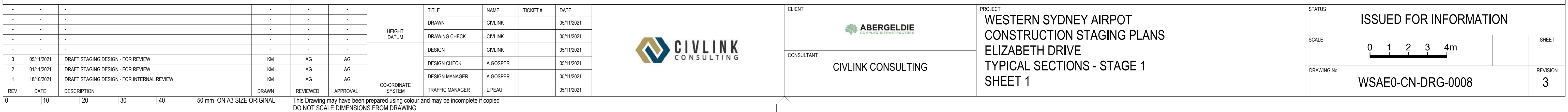
Table 10 - List of key contacts

19 APPENDIX A – TRAFFIC STAGING PLANS

Long Term Traffic Staging Plan Description		
Location	Drawing No.	Description
Elizabeth Drive / Badgerys Creek Road Northern Link (Stage 1)		
Pitt Street & Longleys Road construction (Stage 1)	WSAE0-CN-DRG-Combined Rev 3	Stage 1 long term temporary traffic arrangement
Aerotropolis Roundabout at Badgerys Creek Road (Stage 1)		
Derwent Road service facility access (Stage 1)		



NOT FOR CONSTRUCTION



CAMDEN & LIVERPOOL COUNCIL

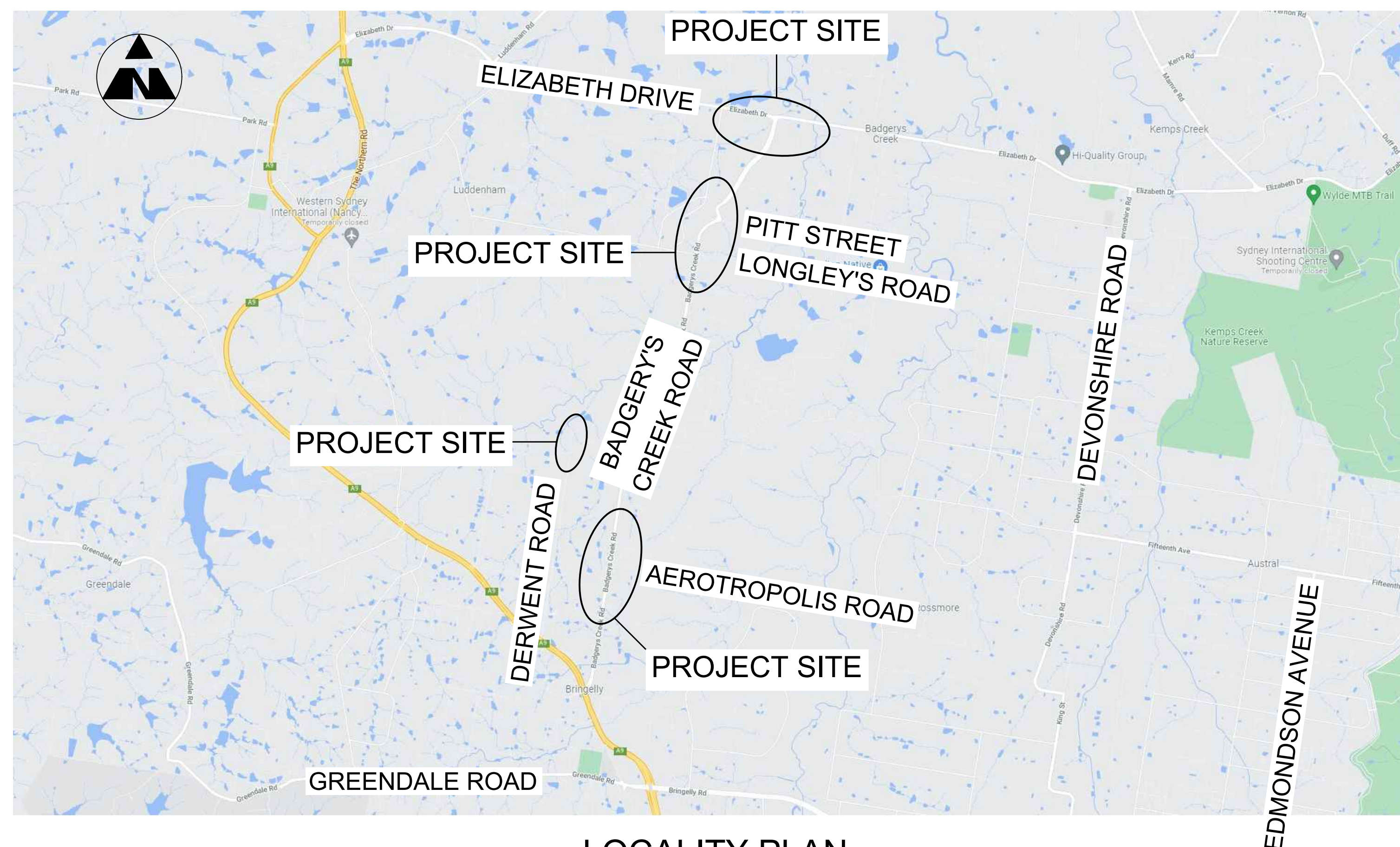
ELIZABETH DRIVE

AND BADGERY'S CREEK ROAD

UPGRADE



COVER SHEET

TW01-CS1



LOCALITY PLAN
NOT TO SCALE


NOT FOR CONSTRUCTION


						HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CONSULTANT CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS ELIZABETH DRIVE COVER SHEET	STATUS ISSUED FOR INFORMATION	
-	-	-	-	-	-		DRAWN	CIVLINK		05/11/2021				SCALE	SHEET
-	-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021					
-	-	-	-	-	-		DESIGN	CIVLINK		05/11/2021					
-	-	-	-	-	-		DESIGN CHECK	A.GOSPER		05/11/2021					
3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG	CO-ORDINATE SYSTEM	DESIGN CHECK	A.GOSPER		05/11/2021				DRAWING No WSAE0-DRG-0001	REVISION 3
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG		DESIGN MANAGER	A.GOSPER		05/11/2021					
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW	KM	AG	AG		TRAFFIC MANAGER	L.PEAU		05/11/2021					
REV	DATE	DESCRIPTION													
0															

SHEET NO.	TITLE
WSAE0-CN-DRG-0001	TEMPORARY WORKS AND TRAFFIC STAGING - COVER SHEET
WSAE0-CN-DRG-0002	TEMPORARY WORKS AND TRAFFIC STAGING - DRAWING INDEX
WSAE0-CN-DRG-0003	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL NOTES
WSAE0-CN-DRG-0004	TEMPORARY WORKS AND TRAFFIC STAGING - LEGEND
WSAE0-CN-DRG-0005	TEMPORARY WORKS AND TRAFFIC STAGING - DRAINAGE DETAILS
WSAE0-CN-DRG-0006	TEMPORARY WORKS AND TRAFFIC STAGING - PAVEMENT DETAILS
WSAE0-CN-DRG-0007	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL DETAILS
WSAE0-CN-DRG-0008	TEMPORARY WORKS AND TRAFFIC STAGING - TYPICAL SECTIONS - STAGE 1 SHEET 1
WSAE0-CN-DRG-0009	TEMPORARY WORKS AND TRAFFIC STAGING - TYPICAL SECTIONS - STAGE 1 SHEET 2
	ELIZABETH DRIVE
WSAE0-CN-DRG-1001	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1
WSAE0-CN-DRG-1002	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 2
WSAE0-CN-DRG-1003	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 3
WSAE0-CN-DRG-1011	TEMPORARY WORKS AND TRAFFIC STAGING - LONGITUDINAL SECTIONS MCE3 SHEET 1
WSAE0-CN-DRG-1021	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 1
WSAE0-CN-DRG-1022	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 2
WSAE0-CN-DRG-1023	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 3
WSAE0-CN-DRG-1024	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 4
	LONGLEY'S ROAD AND PITT STREET
WSAE0-CN-DRG-1101	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1
WSAE0-CN-DRG-1102	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 2
WSAE0-CN-DRG-1103	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 3
WSAE0-CN-DRG-1111	TEMPORARY WORKS AND TRAFFIC STAGING - LONGITUDINAL SECTIONS MCE4 SHEET 1
WSAE0-CN-DRG-1121	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE4 SHEET 1
WSAE0-CN-DRG-1122	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE4 SHEET 2
	AEROTROPOLIS ROAD
WSAE0-CN-DRG-1201	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1
WSAE0-CN-DRG-1202	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 2
WSAE0-CN-DRG-1211	TEMPORARY WORKS AND TRAFFIC STAGING - LONGITUDINAL SECTIONS MCE5 SHEET 1
WSAE0-CN-DRG-1221	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE5 SHEET 1
WSAE0-CN-DRG-1222	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE5 SHEET 2
	DERWENT ROAD
WSAE0-CN-DRG-1301	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1

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3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG	
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG	
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW	KM	AG	AG	
REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL	

TITLE	NAME	TICKET #	DATE
DRAWN	CIVLINK		05/11/2021
DRAWING CHECK	CIVLINK		05/11/2021
DESIGN	CIVLINK		05/11/2021
DESIGN CHECK	A.GOSPER		05/11/2021
DESIGN MANAGER	A.GOSPER		05/11/2021
TRAFFIC MANAGER	L.PEAU		05/11/2021



CLIENT	
CONSULTANT	CIVLINK CONSULTING

PROJECT	WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS ELIZABETH DRIVE DRAWING INDEX
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STATUS	ISSUED FOR INFORMATION	
SCALE		SHEET
DRAWING No	WSAE0-CN-DRG-0002	REVISION 3

GENERAL NOTES

1. THE CONSTRUCTION TEAM IS RESPONSIBLE FOR CONFIRMING THE EXACT LOCATION OF ALL EXISTING AND RELOCATED PUBLIC UTILITY PLANT (PUP) PRIOR TO COMMENCEMENT OF ANY WORKS. THE CONSTRUCTION TEAM SHALL CARRY OUT THE ROADWORKS IN SUCH A MANNER TO AVOID ANY DAMAGE TO EXISTING PUP.
2. THE EXISTING SERVICES INFORMATION SHOWN ON THE DRAWINGS HAS BEEN COMPILED FROM SURVEY INFORMATION AND INFORMATION SUPPLIED BY THE CONTRACTOR.
3. THE CONSTRUCTION TEAM SHALL ENSURE THAT MEDIANS, TEMPORARY PAVEMENTS, CROSSTOVERS AND RAMPS ARE KEPT FREE DRAINING DURING THEIR CONSTRUCTION AND USE.
4. ALL PORTABLE SAFETY BARRIER UNITS ARE TO BE FLARED OUTSIDE THE CLEAR ZONE IN ACCORDANCE WITH RMS REQUIREMENTS FOR THE SPECIFIC SAFETY BARRIER TYPE. ALL SAFETY BARRIER UNITS SHALL HAVE AN END TREATMENT WHICH SATISFIES RMS STANDARDS.
5. ALL PORTABLE SAFETY BARRIER UNITS USED MUST BE LISTED IN RMS ACCEPTANCE DOCUMENTATION AND ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION OR RMS SPECIFICATIONS, WHICHEVER IS HIGHER. WHERE WATER FILLED BARRIERS ARE SPECIFIED AND ARE INTENDED TO ACT AS A CONTAINMENT SYSTEM, THEY SHALL BE FILLED WITH WATER, AS PER THE MANUFACTURER'S SPECIFICATIONS.
6. THE CONSTRUCTION TEAM IS TO ENSURE WORKERS DO NOT ENTER WITHIN THE MANUFACTURER'S SPECIFIED DEFLECTION ZONE BEHIND ANY SPECIFIED BARRIER.
7. THE CONSTRUCTION TEAM SHALL ASSESS AND MANAGE APPROPRIATELY THE INTERFACE BETWEEN ALL ROAD USERS (PEDESTRIANS, CYCLISTS AND MOTORISTS) AND THE SITE OPERATIONS INCLUDING ACCESS AND EGRESS.
8. ADEQUATE VERGE WIDTH BEHIND ALL PORTABLE SAFETY BARRIERS IS TO BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS TO ALLOW SAFE DEFLECTION SHOULD THEY BE STRUCK.
9. TRAFFIC CONTROL IS TO BE IN ACCORDANCE WITH THE RMS TRAFFIC CONTROL AT WORK SITES MANUAL AND AS1742.3.
10. ALL SIGNS, EXCLUDING SPEED SIGNS, ARE TO BE SIZE "B" WITH CLASS 1 RETROREFLECTIVE SHEETING UNLESS OTHERWISE SPECIFIED AS PER AS1742.2 APPENDIX B.
11. ROADWORKS SPEED LIMIT SIGNS MUST BE A MINIMUM TYPE 'C' SIZE SIGNS DUPLICATED ON BOTH SIDES OF THE CARRIAGEWAY AT ANY CHANGES OF SPEED LIMITS AND AT REPEATER LOCATIONS. THE SIGNS MUST BE SUPPORTED ON TWO POSTS.
12. EXISTING SIGNAGE CONFLICTING WITH THIS TEMPORARY TRAFFIC WORKS PLAN ARE TO BE COVERED OR REMOVED. PARTICULAR ATTENTION SHALL BE GIVEN TO SIGNAGE ASSOCIATED WITH SPEED CONTROL AND CHANGES IN CARRIAGEWAY WIDTH, SUCH AS OVERTAKING LANES.
13. SIGN LOCATIONS SHOWN ON THE PLANS ARE INDICATIVE ONLY.
14. LONGITUDINAL PLACEMENT OF SIGNAGE SHALL BE IN ACCORDANCE WITH AS1742.2 APPENDIX D, CLAUSE D2.2 AND TABLE D.1.
15. LATERAL PLACEMENT AND HEIGHT OF SIGNAGE SHALL BE IN ACCORDANCE WITH AS1742.2 APPENDIX D, CLAUSE D2.3
16. REDUNDANT PAVEMENT MARKINGS ARE TO BE REMOVED IN ACCORDANCE WITH RMS SPECIFICATION R141 C13.5.
17. INTERSECTION AND DIRECTION SIGNS SHALL BE RELOCATED WHERE NECESSARY TO BE VISIBLE AT ALL TIMES.
18. ALL CONSTRUCTION SHALL COMPLY WITH THE RELEVANT CURRENT WORKPLACE HEALTH AND SAFETY LEGISLATION.
19. SITE ACCESS GATES ARE TO BE CLOSED AFTER HOURS OR WHEN NOT IN USE.
20. REFLECTIVE DELINEATORS (RRPMS) ARE TO BE INSTALLED ON ALL NEW PAVEMENT MARKINGS AND TEMPORARY BARRIERS IN ACCORDANCE WITH RMS DELINEATION MANUAL SECTION 16.
21. FOR CLEARING REQUIREMENTS REFER TO THE GENERAL ARRANGEMENT DRAWINGS.
22. VERGE TREATMENT FOR BARRIER INSTALLATION WHERE WIDENING WILL NOT BE TRAFFICKED MAY BE REMOVED IF AGREED BY RMS AND IF EXISTING FORMATION CONDITIONS ARE SUITABLE FOR BARRIER PLACEMENT.
23. EXISTING DRAINAGE IS TO REMAIN WHERE POSSIBLE WHILE PERMANENT DRAINAGE INFRASTRUCTURE IS CONSTRUCTED. AREAS OUTSIDE THE TEMPORARY ALIGNMENT THAT ARE PART OF THE CONSTRUCTION SITE(S) WILL HAVE THEIR SURFACE WATER AND SUB-SURFACE WATER MANAGED BY THE CONSTRUCTION TEAM.
24. ALL BATTERS TO BE HYDRO MULCHED UNLESS NOTED OTHERWISE.
25. INSTALLATION AND PLACEMENT OF GUIDEPOSTS SHALL BE IN ACCORDANCE WITH RMS DELINEATION MANUAL, SECTION 16.

SPECIFICATIONS

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FOLLOWING SPECIFICATION LIST WHERE APPLICABLE.

ROADWORKS SPECIFICATION

RMS G10	TRAFFIC MANAGEMENT
RMS R11	STORMWATER DRAINAGE
RMS R15	KERBS & GUTTERS
RMS R16	PRECAST REINFORCED CONCRETE BOX CULVERTS
RMS R23	PLASTIC FLEXIBLE PIPES
RMS R24	PRECAST CONCRETE ARCHES
RMS R31	VERTICAL WICK DRAINS
RMS R33	TRENCH DRAINS
RMS R37	INTRA-PAVEMENT DETAILS
RMS R38	EDGE DRAINS
RMS R40	HORIZONTAL DRAINS
RMS R44	EARTHWORKS (CUT, FILL, IMPORTED FILL AND IMPORTED SELECTED MATERIAL)
RMS R49	CONSTRUCTION OF VERGES
RMS R50	STABILISATION OF EARTHWORKS
RMS R53	CONCRETE (FOR GENERAL USE) MORTAR AND GROUT
RMS R55	ROCK FILLED GABION AND MATTRESSES
RMS R57	DESIGN OF REINFORCED SOIL WALLS
RMS R58	CONSTRUCTION OF REINFORCED SOIL WALLS (CONTRACTORS DESIGN)
RMS R63	GEOTEXTILES (SEPARATION AND FILTRATION)
RMS R64	SOIL NAILING
RMS R67	HIGH STRENGTH GEOSYNTHETIC REINFORCEMENT
RMS R68	SHOTCRETE WORKS WITHOUT STEEL FIBRES
RMS R71	UNBOUND AND MODIFIED PAVEMENT COURSE
RMS R73	CONSTRUCTION OF PLANT MIXED HEAVILY BOUND PAVEMENT COURSE
RMS R75	IN SITU PAVEMENT STABILISATION USING SLOW SETTING BINDERS
RMS R82	LEAN-MIX CONCRETE SUBBASE
RMS R83	CONCRETE PAVEMENT BASE
RMS R106	SPRAYED BITUMINOUS SURFACING (WITH CUTBACK BITUMEN)
RMS R107	SPRAYED BITUMINOUS SURFACING (WITH POLYMER MODIFIED BINDER)
RMS R109	BITUMINOUS SLURRY SURFACING
RMS R110	COLOURED SURFACE COATINGS FOR BUS LANES AND CYCLEWAYS
RMS R111	SPRAYED BITUMINOUS SURFACING (WITH BITUMEN EMULSION)
RMS R116	HEAVY DUTY DENSE GRADED ASPHALT
RMS R119	OPEN GRADED ASPHALT
RMS R121	STONE MASTIC ASPHALT
RMS R123	THIN OPEN GRADED ASPHALT SURFACING
RMS R131	GUIDE POSTS
RMS R132	SAFETY BARRIER SYSTEMS
RMS R141	PAVEMENT MARKING
RMS R142	RAISED PAVEMENT MARKING
RMS R143	SIGN POSTING
RMS R145	PAVEMENT MARKING (PERFORMANCE BASED)
RMS R151	STREET LIGHTING
RMS R152	ROADSIDE EMERGENCY TELEPHONE PILLARS
RMS R155	DESIGN AND CONSTRUCTION OF UNDERGROUND CABLEWAYS
RMS R173	GENERAL CONCRETE PAVING
RMS R178	VEGETATION
RMS R179	LANDSCAPE PLANTING
RMS R201	FENCING
TSI-SP-003	COMMUNICATIONS PROTOCOL FOR ROADSIDE DEVICES
TSI-SP-008	GENERAL REQUIREMENTS FOR THE DESIGN, INSTALLATION, COMMISSIONING AND MAINTENANCE OF VARIABLE MESSAGE SIGNS
TSI-SP-017-DCM	SPECIFICATION FOR THE CONSTRUCTION OF UNDERGROUND CABLEWAYS

2. ALL CONSTRUCTION MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR THE WORKS TOGETHER WITH THE REQUIREMENT OF ALL RELEVANT CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF ALL STATUTORY AUTHORITIES WHERE APPLICABLE.
3. THE MAINTENANCE FOR TEMPORARY TRAFFIC WORKS IS TO BE IN ACCORDANCE RMS G10.

MATERIALS SPECIFICATION

RMS 3051	GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS
RMS 3071	SELECTED MATERIAL IN FORMATION LAYERS
RMS 3151	COVER AGGREGATE FOR SPRAYED BITUMINOUS SURFACING
RMS 3152	AGGREGATES FOR ASPHALT
RMS 3153	RECLAIMED ASPHALT PAVEMENT MATERIAL
RMS 3204	PREFORMED JOINT FILLERS FOR CONCRETE ROAD PAVEMENTS AND STRUCTURES
RMS 3211	CEMENTS, BINDERS AND FILLERS
RMS 3222	NO-FINES CONCRETE (FOR SUBSURFACE DRAINAGE)
RMS 3252	POLYMER MODIFIED BINDER FOR PAVEMENTS
RMS 3253	BITUMEN FOR PAVEMENTS
RMS 3254	BITUMEN EMULSION
RMS 3256	COMMUNUTED SCRAP RUBBER
RMS 3258	AGGREGATE PRECOATING AGENT (BITUMEN CLASSES 170 AND 320)
RMS 3259	BITUMEN ADHESION AGENT (BITUMEN CLASSES 170 AND 320)
RMS 3261	CUTBACK BITUMEN
RMS 3266	COLDMIX ASPHALT
RMS 3268	AGGREGATE PRECOATING AGENT (POLYMER MODIFIED BITUMEN)
RMS 3269	BITUMEN ADHESION AGENT (POLYMER MODIFIED BITUMEN)
RMS 3351	ROAD MARKING PAINT
RMS 3352	FLUORESCENT PLASTIC TRAFFIC CONES
RMS 3353	GLASS BEADS
RMS 3354	ADHESIVES FOR RAISED PAVEMENT MARKER INSTALLATION
RMS 3356	WATERBORNE ROAD MARKING PAINT
RMS 3357	THERMOPLASTIC ROAD MARKING MATERIAL
RMS 3359	PROFILE THERMOPLASTIC ROAD MARKING MATERIAL
RMS 3360	TWO PART COLD APPLIED ROAD MARKING MATERIAL
RMS 3368	SKID RESISTANT FRICTION COATING FOR TEMPORARY STEEL ROAD PLATES
RMS 3385	BARRIER BOARDS
RMS 3400	MANUFACTURE AND DELIVERY OF ROAD SIGNS
RMS 3411	SUPPLY OF GUIDE POSTS - TIMBER
RMS 3412	SUPPLY OF GUIDE POSTS - NON-TIMBER
RMS 3552	SUBSURFACE DRAINAGE PIPE (CORRUGATED PERFORATED AND NON-PERFORATED PLASTIC
RMS 3553	SEAMLESS TUBULAR FILTER FABRIC
RMS 3555	SUBSURFACE DRAINAGE PIPE (SLOTTED AND UNSLOTTED FIBRE-REINFORCED CONCRETE)
RMS 3556	RIGID STRIP FILTER DRAINS
RMS 3557	FLEXIBLE STRIP FILTER DRAINS
RMS 3580	AGGREGATE FILTER MATERIALS FOR SUBSURFACE DRAINAGE
RMS 3651	PAINTS AND THINNERS FOR STEELWORK
RMS 3851	STEEL TAPERED LIGHTING COLUMNS
RMS P3074A	DESIGN, SUPPLY AND DELIVERY OF SOLAR POWERED, TRAILER MOUNTED, VARIABLE MESSAGE SIGNS (VMS)

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3

05/11/2021

DRAFT STAGING DESIGN - FOR REVIEW

KM

AG

AG

2

01/11/2021

DRAFT STAGING DESIGN - FOR REVIEW

KM

AG

AG

1

18/10/2021

DRAFT STAGING DESIGN - FOR INTERNAL REVIEW

KM

AG

AG

REV

DATE

DESCRIPTION

DRAWN

REVIEWED

APPROVAL

HEIGHT DATUM

CO-ORDINATE SYSTEM

TITLE

NAME

TICKET #

DATE

CIVLINK CONSULTING

TRAFFIC MANAGER

L.PEAU

05/11/2021

CLIENT

ABERGELDIE

CONSULTING

CONSULTANT

CIVLINK CONSULTING

PROJECT

WESTERN SYDNEY AIRPORT
CONSTRUCTION STAGING PLANS
ELIZABETH DRIVE
GENERAL NOTES

STATUS

ISSUED FOR INFORMATION

SCALE

SHEET

DRAWING No

WSAE0-CN-DRG-0003

REVISION

3

0

10

20

30

40

50 mm: ON A3 SIZE ORIGINAL

This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

NOT FOR CONSTRUCTION

SURVEY LEGEND

GENERAL

	BRIDGE PIER COLUMN POINT
	BUILDING FLOOR LEVEL
	RETAINING WALL
	STAIRS
	FENCE
	FENCE POST GUIDE POST
	GATE
	HEADSTONE
	LARGE SIGN
	MAILBOX
	PUMP
	SIGN POST
	SIGN POST DOUBLE SIDED
	HAZARDOUS SITE
	BOUNDARY PEG
	DUMPY PEG
	SPIKE
	BORE HOLE
	TEST PIT
	UNDERGROUND TANK POINT
	TOP OF RAIL
	GUARD FENCE
	MX SURVEY MARK
	PEG
	PM, SSM OR CONTROL MARK
	EDGE OF GARDEN
	TREE TRUNK
	TREE FOLIAGE
	UNIDENTIFIED POLE
	UNIDENTIFIED SERVICE
	EXISTING STREET LIGHTING

DRAINAGE

	BATTER DRAIN
	DISH DRAIN
	TABLE DRAIN
	DRAINAGE PIT
	JUNCTION MANHOLE
	GULLY PIT
	HEADWALL
	INVERT LEVEL AND SIZE
	SUBSOIL DRAIN OUTLET
	KERB INLET
	OBVERT LEVEL
	PIPE AND SIZE
	SUBSOIL FLUSH JOINT
	CONCRETE JUNCTION BOX
	WATER COURSE
	WATER LEVEL POINT

DESIGN LEGEND

PROPOSED UTILITIES

	ELECTRICAL (MAJOR UNDERGROUND)
	ELECTRICAL (MINOR UNDERGROUND)
	ELECTRICAL (MAJOR OVERHEAD)
	ELECTRICAL (MINOR OVERHEAD)
	TELSTRA - TELEPHONE
	TELSTRA - FIBRE OPTIC
	WATER MAIN
	SEWER MAIN

EXISTING UTILITIES TO BE REMOVED

	DIGITISED - LV ELECTRICAL
	DIGITISED - 11kV ELECTRICAL
	DIGITISED - 33kV ELECTRICAL
	DIGITISED - 66kV ELECTRICAL
	DIGITISED - COMMUNICATIONS
	DIGITISED - FIBRE OPTIC
	DIGITISED - WATER MAIN
	DIGITISED - SEWER MAIN
	SURVEYED - ELECTRICAL (OVERHEAD)
	SURVEYED - ELECTRICAL (UNDERGROUND)
	SURVEYED - COMMUNICATIONS
	SURVEYED - WATER MAIN
	AS BUILT - ELECTRICAL
	AS BUILT - FIBRE OPTIC
	AS BUILT - TELSTRA
	AS BUILT - WATER

EXISTING UTILITIES TO BE RETAINED

	DIGITISED - LV ELECTRICAL
	DIGITISED - 11kV ELECTRICAL
	DIGITISED - 33kV ELECTRICAL
	DIGITISED - 66kV ELECTRICAL
	DIGITISED - 132kV TRANSGRID ELECTRICAL
	DIGITISED - COMMUNICATIONS
	DIGITISED - FIBRE OPTIC
	DIGITISED - WATER MAIN
	DIGITISED - SEWER MAIN
	SURVEYED - ELECTRICAL (OVERHEAD)
	SURVEYED - ELECTRICAL (UNDERGROUND)
	SURVEYED - COMMUNICATIONS
	SURVEYED - WATER MAIN
	AS BUILT - ELECTRICAL
	AS BUILT - FIBRE OPTIC
	AS BUILT - TELSTRA
	AS BUILT - WATER

SERVICE CONFLICTS

	TELSTRA
	ELECTRICITY
	WATER
	GAS
	SEWER

PROPERTY

	PROJECT BOUNDARY
	EXISTING TITLE BOUNDARY
	DESIGN CLEARING BOUNDARY

CROSS SECTIONS

	FINAL DESIGN
	TEMPORARY WORKS CURRENT STAGE DESIGN
	TEMPORARY WORKS PREVIOUS STAGE DESIGN
	TEMPORARY WORKS NEXT STAGE DESIGN
	EXISTING SURFACE

DESIGN LEGEND

GENERAL

	TEMPORARY WORKS CONTROL LINE, TP & CHAINAGE MARK
	PERMANENT ROAD GEOMETRY
	WIRE ROPE SAFETY BARRIER
	G4 SAFETY BARRIER
	EDGE OF PAVEMENT
	RETAINING WALL (BY OTHERS)
	PORTABLE CONCRETE BARRIER
	WATERFILLED BARRIER
	TEMPORARY CONCRETE BARRIER END TERMINAL (ABSORB 350 OR RMS APPROVED EQUIVALENT)
	TEMPORARY CONSTRUCTION PARAWEB FENCING
	EXISTING PAVEMENT
	PROPOSED PAVEMENT (TYPE T1)
	PROPOSED PAVEMENT (TYPE T2)
	PROPOSED PAVEMENT (TYPE T3)
	SHOTCRETE, 100mm THICK 20MPa/20
	TEMPORARY LIGHTING (INDICATIVE LOCATION ONLY)

DRAINAGE LEGEND

	DRAIN / CATCH DRAIN (AS SPECIFIED)
	INTERFACE DRAIN
	TRENCH DRAIN
	CULVERT - TRANSVERSE
	CULVERT - LONGITUDINAL (Ø450 UNO)
	GULLY INLET
	INTERFACE DRAIN END CAP
	INTERFACE DRAIN OUTLET
	ACCESS CHAMBER
	HEADWALL/WINGWALL
	SCOUR PROTECTION (ROCK PROTECTION)
	STRAW BALE

TYPICAL LABEL DESCRIPTIONS

(AS SPECIFIED ON PLAN)

LONGITUDINAL STORMWATER STRUCTURE LABEL
DENOTES STRUCTURE NUMBER

	"1" DENOTES STRUCTURE NUMBER
	"A" DENOTES LINE NUMBER

Culvert 5E
DRAIN TAG
TYPE OF DRAIN

	"D" DENOTES DRAIN DEPTH (M)
	"S" DENOTES DRAIN SIDE SLOPE (1V:SH)
	"W" DENOTES DRAIN BASE WIDTH (M)



	"L" DENOTES SCOUR PROTECTION LENGTH (M)
	"W2" DENOTES SCOUR PROTECTION MAX WIDTH (M)
	"W1" DENOTES SCOUR PROTECTION WIDTH AT HEADWALL (M)

SIGNS & LINEMARKING LEGEND

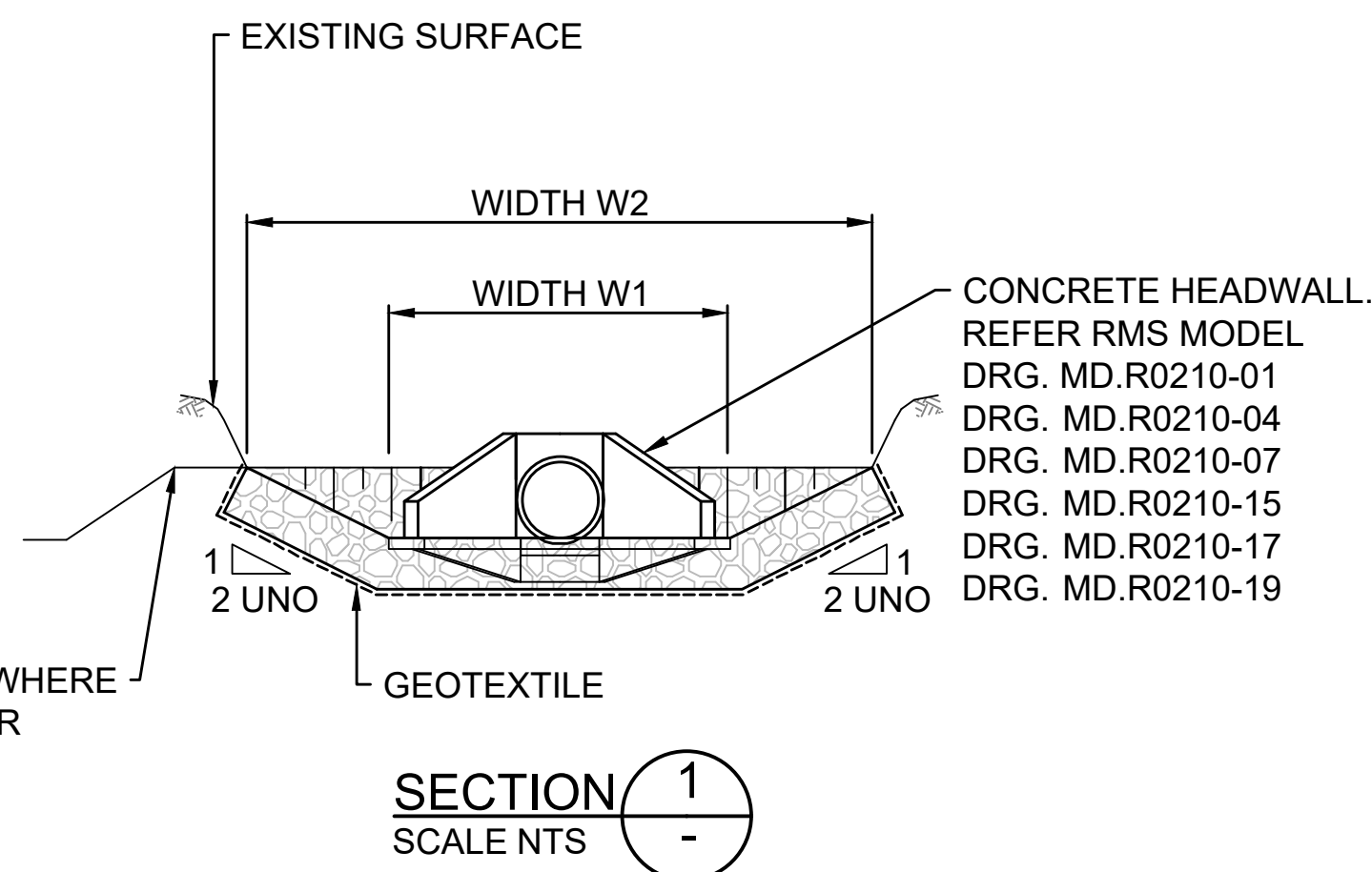
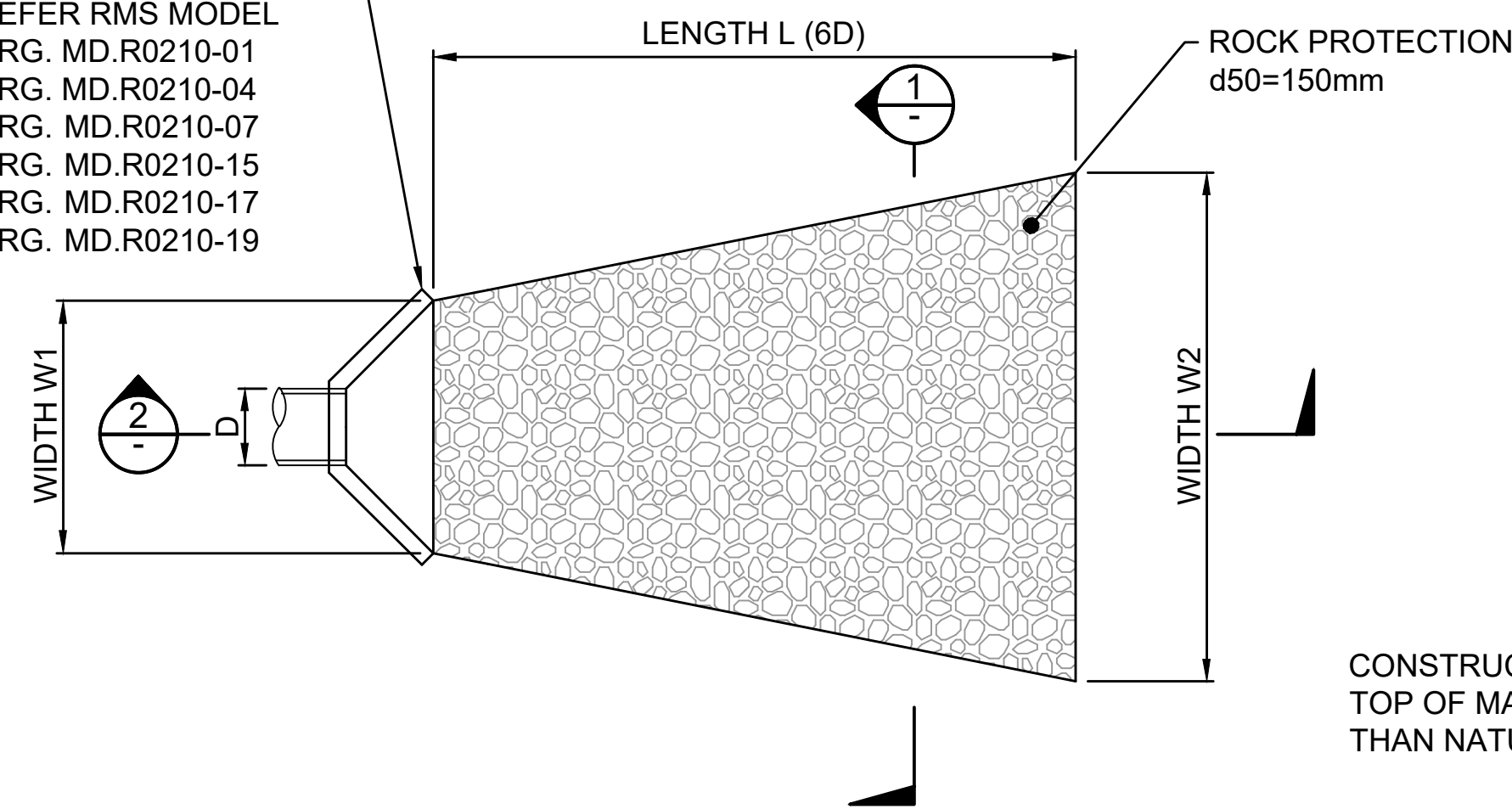
	NEW SIGN FACE
	EXISTING SIGN FACE
	EXISTING SIGN TO BE REMOVED OR COVERPLATE REQUIRED
	SIGN TO BE TEMPORARILY COVERED
	EXISTING SIGN AND POST TO BE REMOVED
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE RELOCATED
	NEW POSITION OF RELOCATED SIGN AND POST
	NEW SIGN FACE INSTALLED ON EXISTING POST
	NEW SIGN FACE INSTALLED ON NEW POST
	NEW PERMANENT SIGN FACE INSTALLED ON PERMANENT POST
	ROAD EDGE GUIDE POST
	FRANGIBLE BOLLARD
	BARRIER BOARD
	DIVIDING BARRIER LINE (BB)
	ENHANCED DIVIDING BARRIER LINE (BB1)
	CONTINUITY LINE (C1)
	LEFT HAND EDGE LINE (E1)
	LEFT HAND EDGE LINE - MOTORWAY (E2)
	RIGHT HAND EDGE LINE (E3)
	OUTLINE OF TRAFFIC ISLAND (E4)
	OUTLINE OF PAINTED MEDIAN (E5)
	BROKEN LANE LINE (L1)
	UNBROKEN LANE LINE (L3)
	DIVIDING SEPARATION LINE (S1)
	GIVE WAY LINE (TB)
	STOP LINE (TF)
	PAVEMENT ARROW (RA2(L))
	PAVEMENT ARROW (RA2(R))
	PAVEMENT ARROW (RA5(L))
	PAVEMENT ARROW (RA5(R))
	PAVEMENT ARROW (SA1)
	PAVEMENT ARROW (RA1)
	SITE ENTRY / EXIT CHEVRON MARKERS

	TYPES OF DRAIN (C) DENOTES CONCRETE (V) DENOTES VEGETATED (R) DENOTES ROCK PROTECTION (G) DENOTES GEOTEXTILE LINED FOR DRAIN TYPES REFER TO TYPICAL DRAINAGE DETAILS DRAWINGS
	DENOTES DRAINAGE STRUCTURE, NETWORK AND LINE NUMBERS
	DENOTES CATCHMENT AREA

NOT FOR CONSTRUCTION

-	-	-	-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT 	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS ELIZABETH DRIVE LEGEND	STATUS ISSUED FOR INFORMATION		
-	-	-	-	-	-		DRAWN	CIVILINK		05/11/2021				SCALE		SHEET
-	-	-	-	-	-		DRAWING CHECK	CIVILINK		05/11/2021						
-	-	-	-	-	-		DESIGN	CIVILINK		05/11/2021						
-	-	-	-	-	-		DESIGN CHECK	A.GOSPER		05/11/2021						
3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG	CO-ORDINATE SYSTEM	DESIGN MANAGER	A.GOSPER		05/11/2021		DRAWING No		REVISION		
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG		TRAFFIC MANAGER	L.PEAU		05/11/2021		WSAE0-CN-DRG-0004		3		
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW	KM	AG	AG											
REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL											

CONCRETE HEADWALL.
REFER RMS MODEL
DRG. MD.R0210-01
DRG. MD.R0210-04
DRG. MD.R0210-07
DRG. MD.R0210-15
DRG. MD.R0210-17
DRG. MD.R0210-19



LEGEND

DRAIN TAG TYPE OF DRAIN

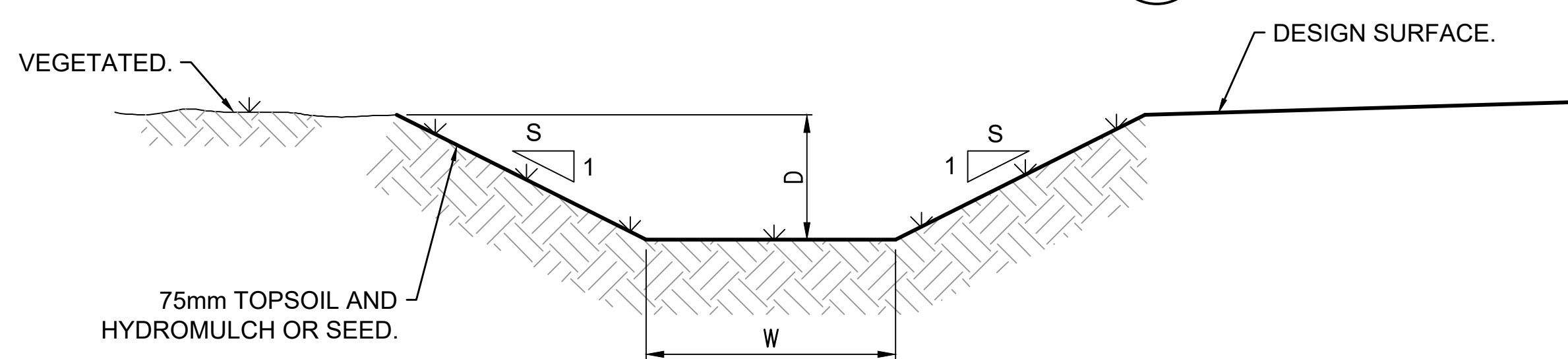
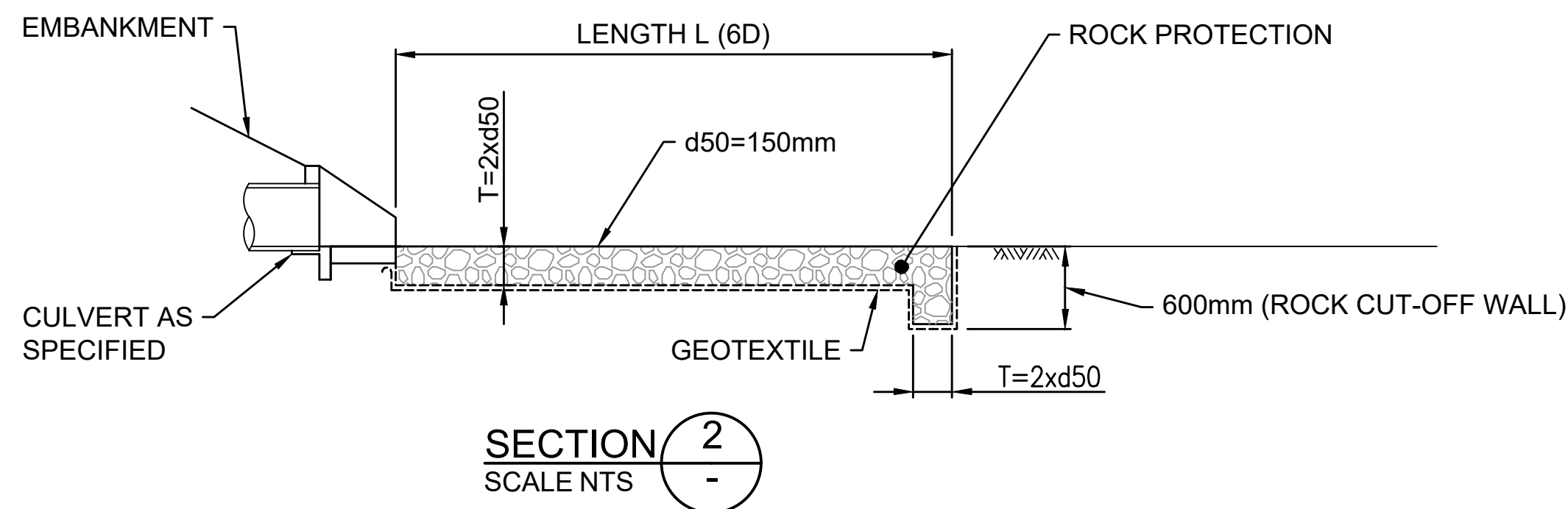
Type 1(R)		
W=2.0	S=2.0	D=0.5

"D" DENOTES DRAIN DEPTH (M)
"S" DENOTES DRAIN SIDE SLOPE (1:S)
"W" DENOTES DRAIN BASE WIDTH (M)

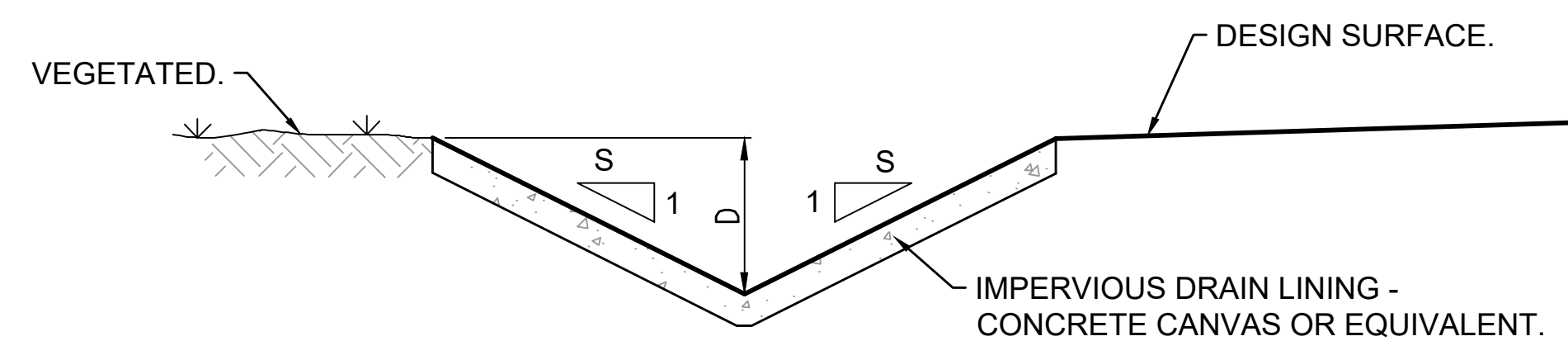
SCOUR TAG

SCOUR PROTECTION		
W1=2.0	W2=2.0	L=10

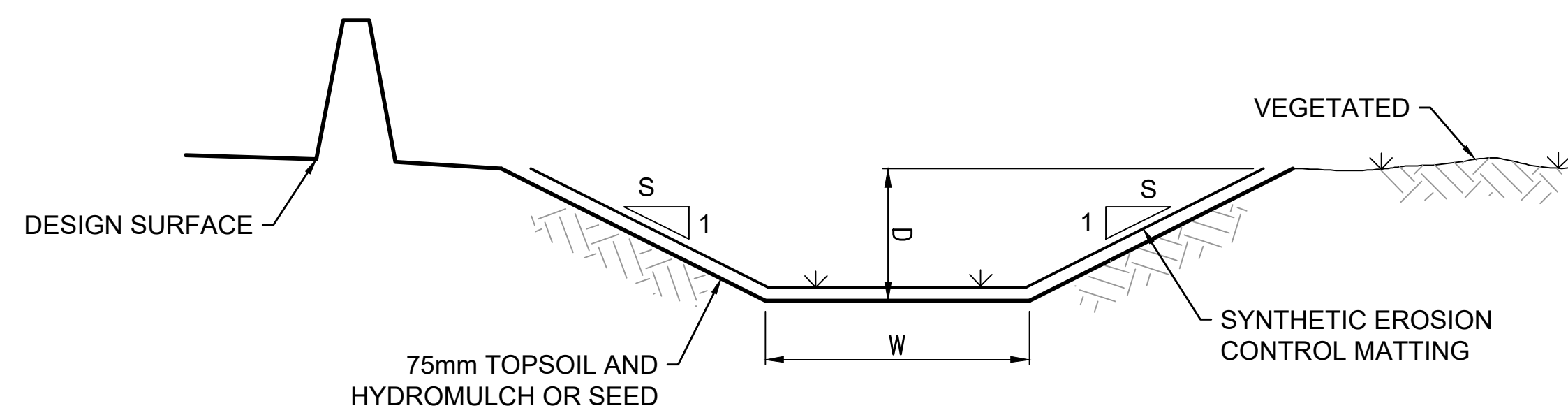
"L" DENOTES SCOUR LENGTH (M)
"W2" DENOTES SCOUR MAX WIDTH (M)
"W1" DENOTES SCOUR WIDTH AT HEADWALL (M)



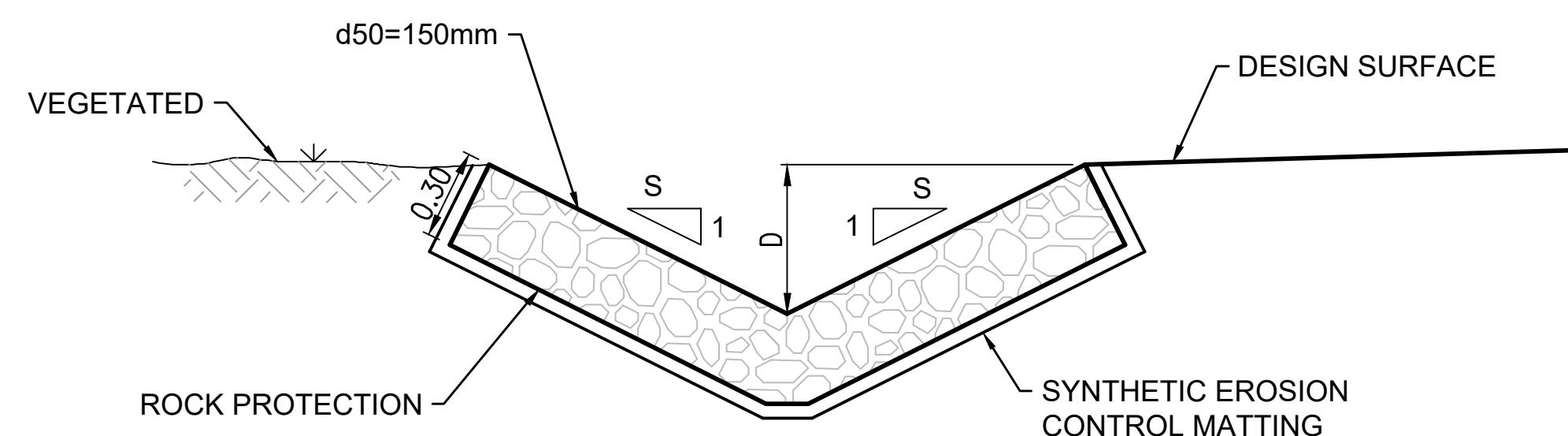
TD01 TYPICAL DETAIL
HYDROMULCHED LINED DRAIN TYPE 1(V)



TD02 TYPICAL DETAIL
CONCRETE LINED V-DRAIN TYPE 1(C)



TD03 TYPICAL DETAIL
LINED DRAIN TYPE 1(M)



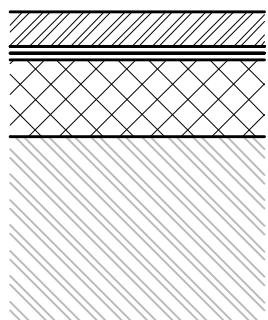
TD04 TYPICAL DETAIL
ROCK LINED DRAIN TYPE 1(R)

- NOTES:
1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 3. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 4. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 5. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

NOT FOR CONSTRUCTION

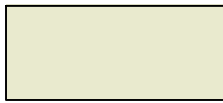
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 100mm DGB20
UNSEALED SUBGRADE (CBR ≥ 3%)

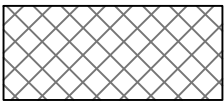
 50mm AC14 (AR450 BINDER)
BITUMEN TACK COAT, 0.2l/m² (CL170)
100mm (NOM, VARIES) AC20 (AR450)
CORRECTOR COURSE

PERMANENT PAVEMENT

 T1 TYPICAL DETAIL
TEMPORARY PAVEMENT - TYPE T1



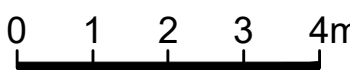


 T2 TYPICAL DETAIL
TEMPORARY PAVEMENT - TYPE T2



- NOTES:
- 1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 - 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 - 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 - 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 - 4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

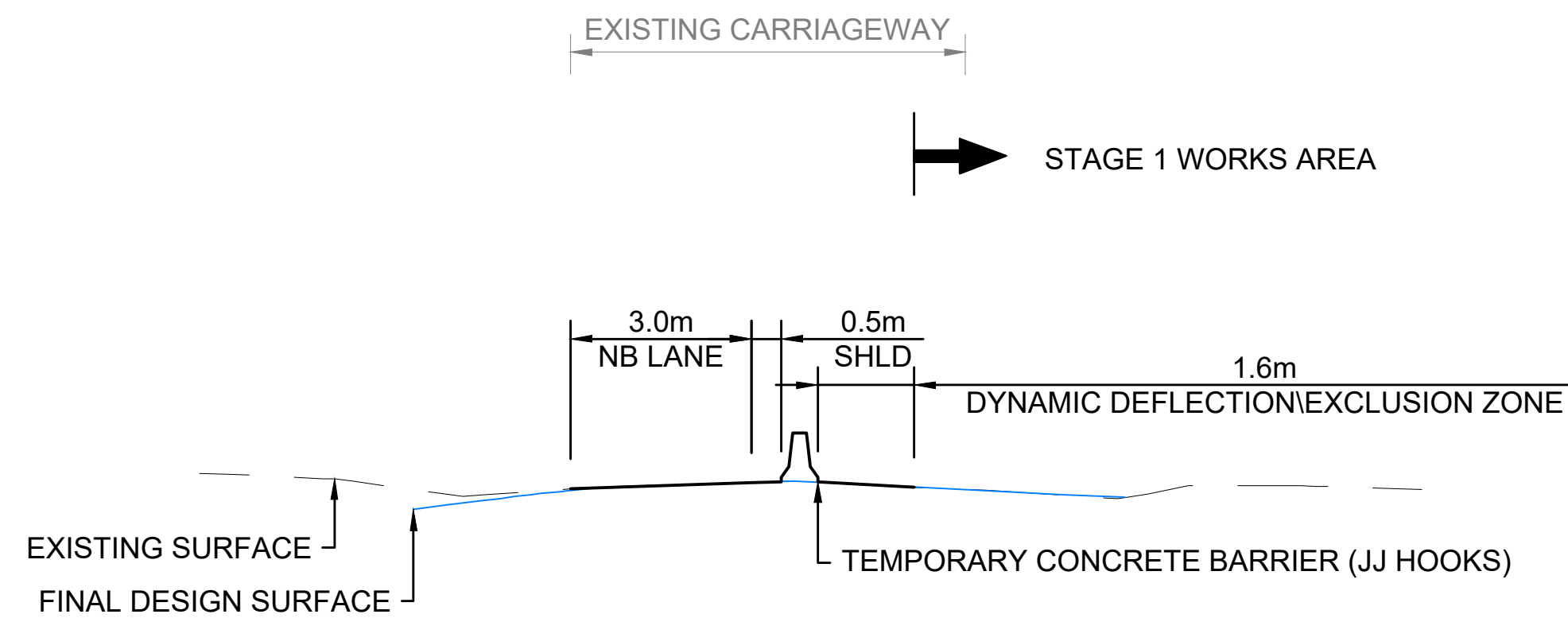
NOT FOR CONSTRUCTION

-	-	-	-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS ELIZABETH DRIVE PAVEMENT DETAILS	STATUS ISSUED FOR INFORMATION	
-	-	-	-	-	-		DRAWN	CIVLINK		05/11/2021					SHEET
-	-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021					
-	-	-	-	-	-		DESIGN	CIVLINK		05/11/2021					
3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW			KM	AG	AG	CO-ORDINATE SYSTEM	DESIGN CHECK	A.GOSPER	05/11/2021				
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW			KM	AG	AG		DESIGN MANAGER	A.GOSPER	05/11/2021				
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW			KM	AG	AG		TRAFFIC MANAGER	L.PEAU	05/11/2021				
REV	DATE	DESCRIPTION			DRAWN	REVIEWED	APPROVAL								

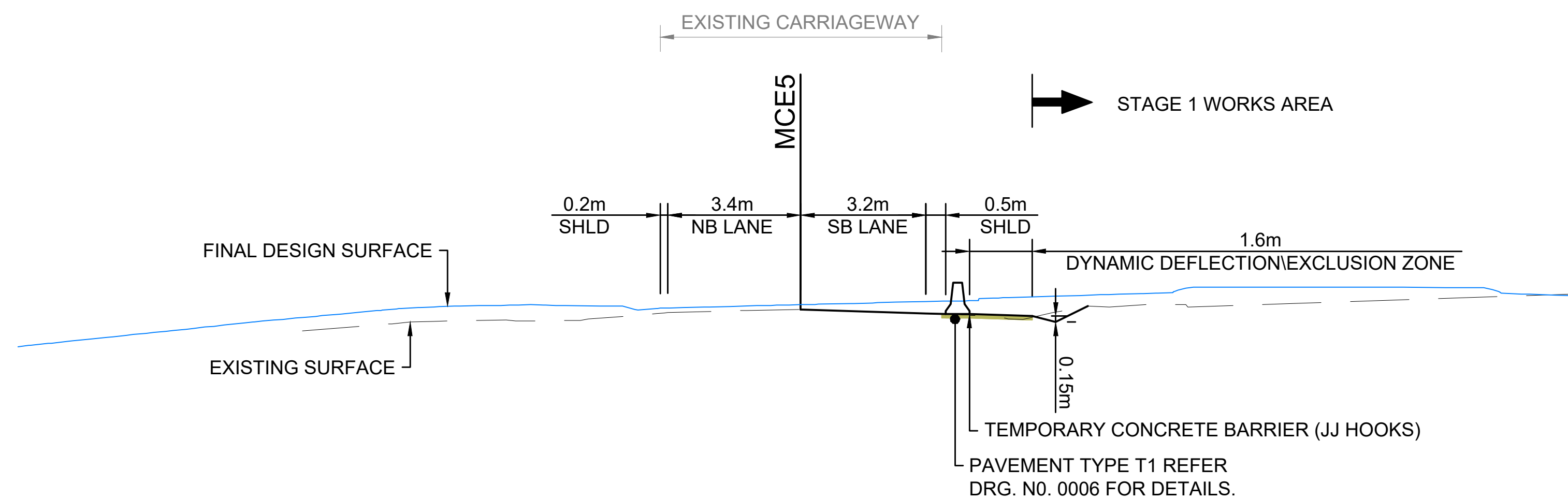
010203040

50 mm ON A3 SIZE ORIGINAL

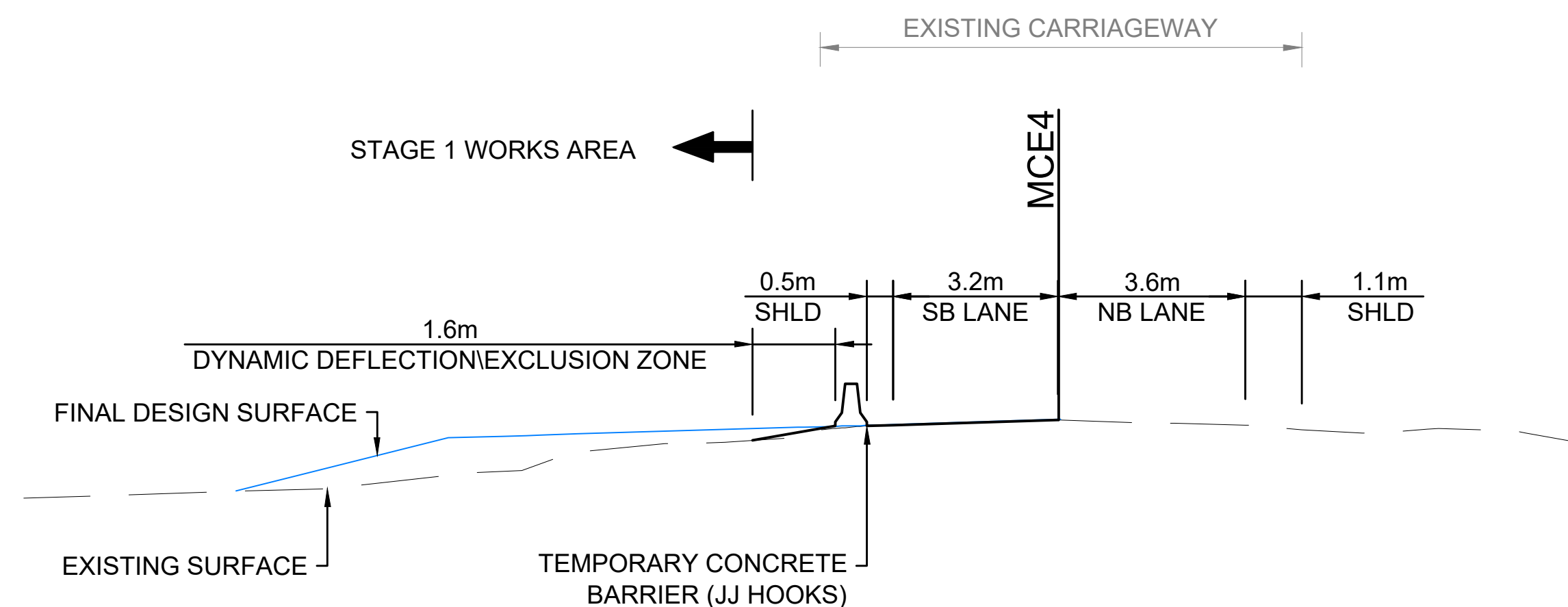
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TYPICAL CROSS SECTION - STAGE 1
STN 0
DERWENT ROAD



TYPICAL CROSS SECTION - STAGE 1
STN 60 MCE5
AEROTROPOLIS ACCESS ROAD






TYPICAL CROSS SECTION - STAGE 1
STN 100 MCE4
LONGLEY'S ROAD



UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

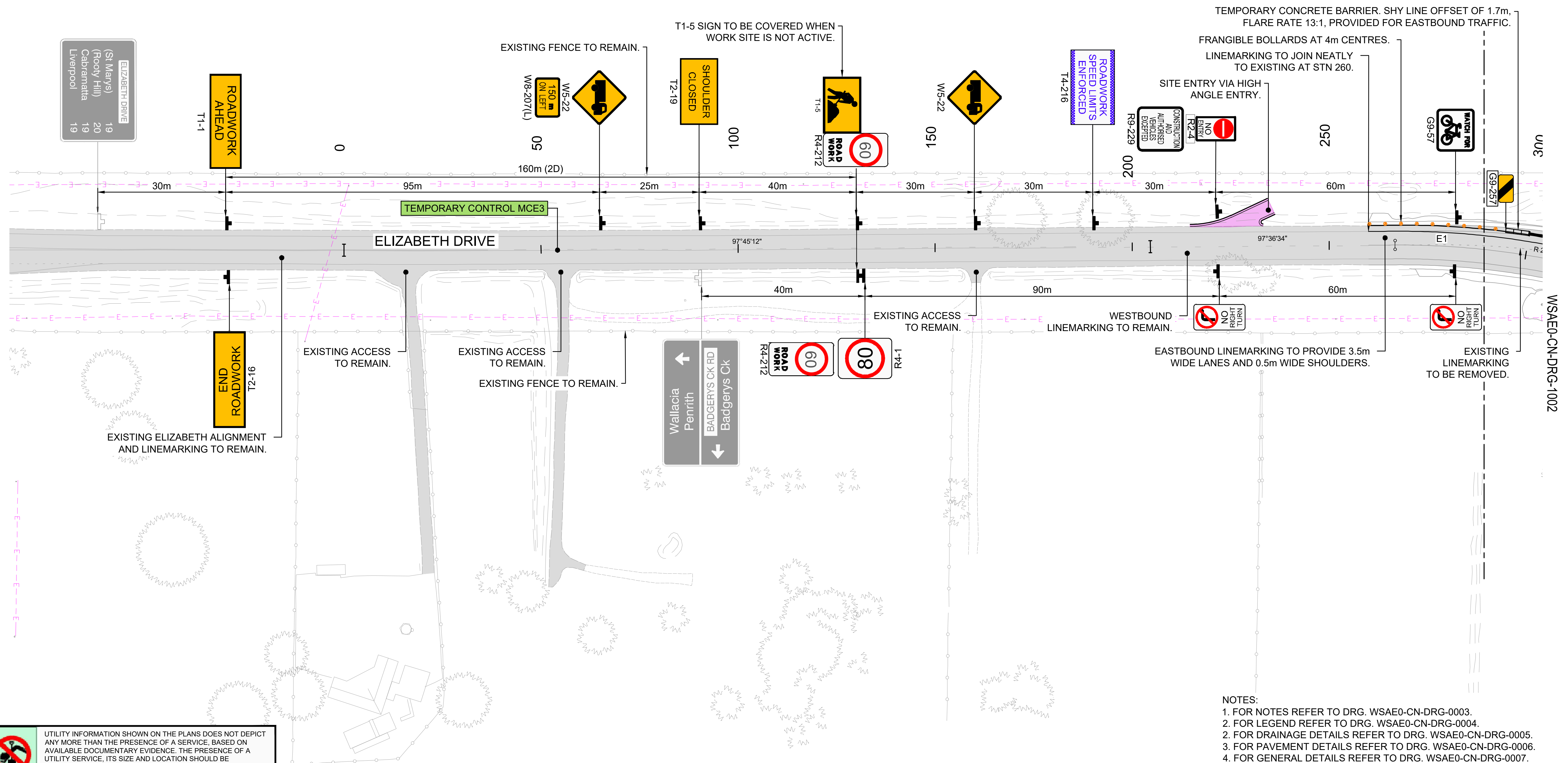
- NOTES:
1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.
 4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0008.

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-						-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS ELIZABETH DRIVE TYPICAL SECTIONS - STAGE 1 SHEET 2	STATUS ISSUED FOR INFORMATION		
-						-	-	-		DRAWN	CIVLINK		05/11/2021				SCALE 		SHEET
-						-	-	-		DRAWING CHECK	CIVLINK		05/11/2021						
-						-	-	-		DESIGN	CIVLINK		05/11/2021						
-						-	-	-		DESIGN CHECK	A.GOSPER		05/11/2021						
3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG	CO-ORDINATE SYSTEM	DESIGN CHECK	A.GOSPER		05/11/2021	TRAFFIC MANAGER L.PEAU	DRAWING No WSAE0-CN-DRG-0009 REVISION 3							
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG		DESIGN MANAGER	A.GOSPER		05/11/2021									
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW	KM	AG	AG														
REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL														

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EXISTING AND PERMANENT SIGNAGE DETAILS UNKNOWN. ALL PERMANENT SIGNAGE TO BE INSTALLED. ANY EXISTING AND PERMANENT SIGNAGE NOT IN ACCORDANCE WITH THIS TEMPORARY TRAFFIC GUIDANCE SCHEME TO BE COVERED.



NOTES:

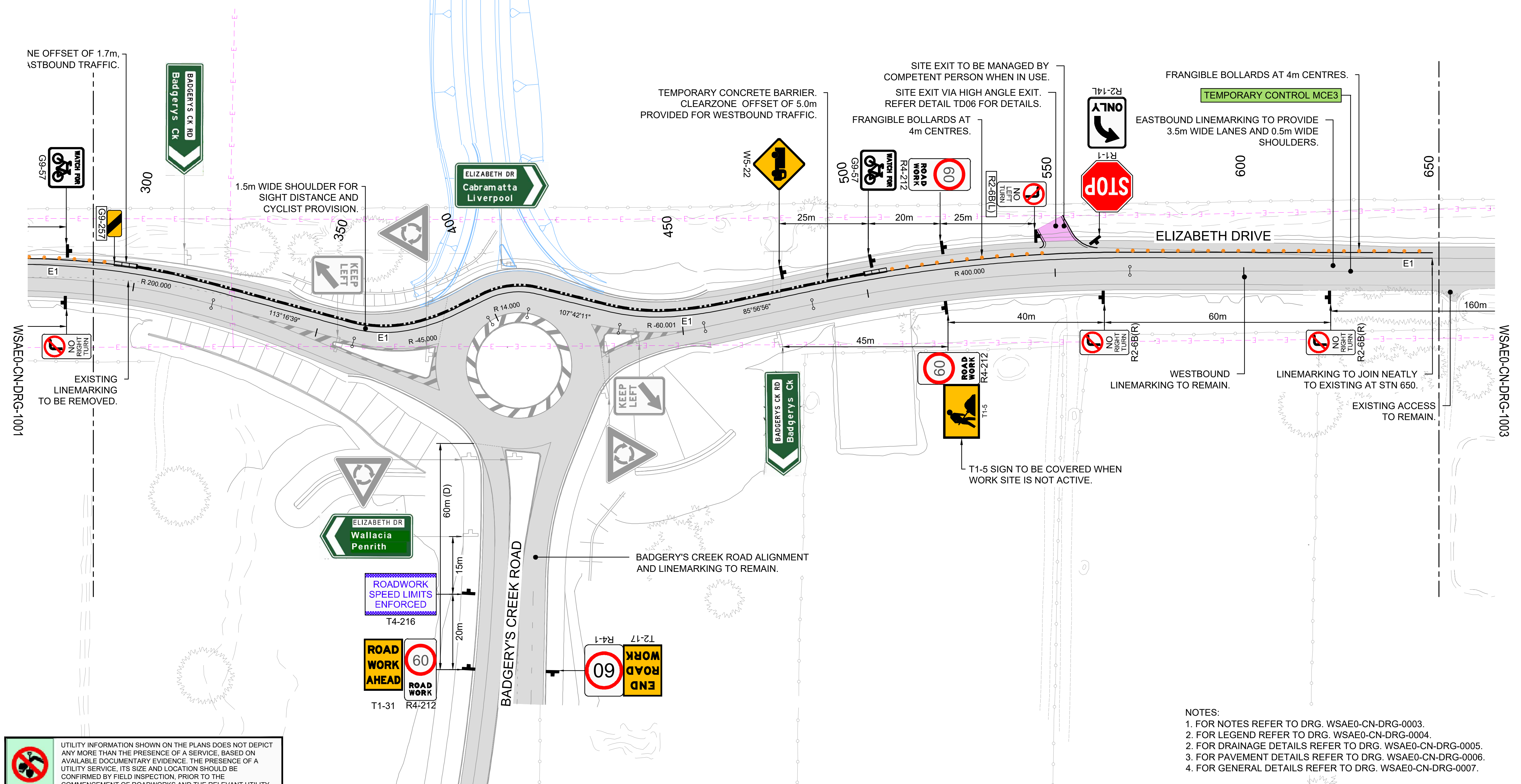
1. FOR NOTES REFER TO DRG. WSAEO-CN-DRG-0003.
2. FOR LEGEND REFER TO DRG. WSAEO-CN-DRG-0004.
2. FOR DRAINAGE DETAILS REFER TO DRG. WSAEO-CN-DRG-0005.
3. FOR PAVEMENT DETAILS REFER TO DRG. WSAEO-CN-DRG-0006.
4. FOR GENERAL DETAILS REFER TO DRG. WSAEO-CN-DRG-0007.

NOT FOR CONSTRUCTION

[illegible]

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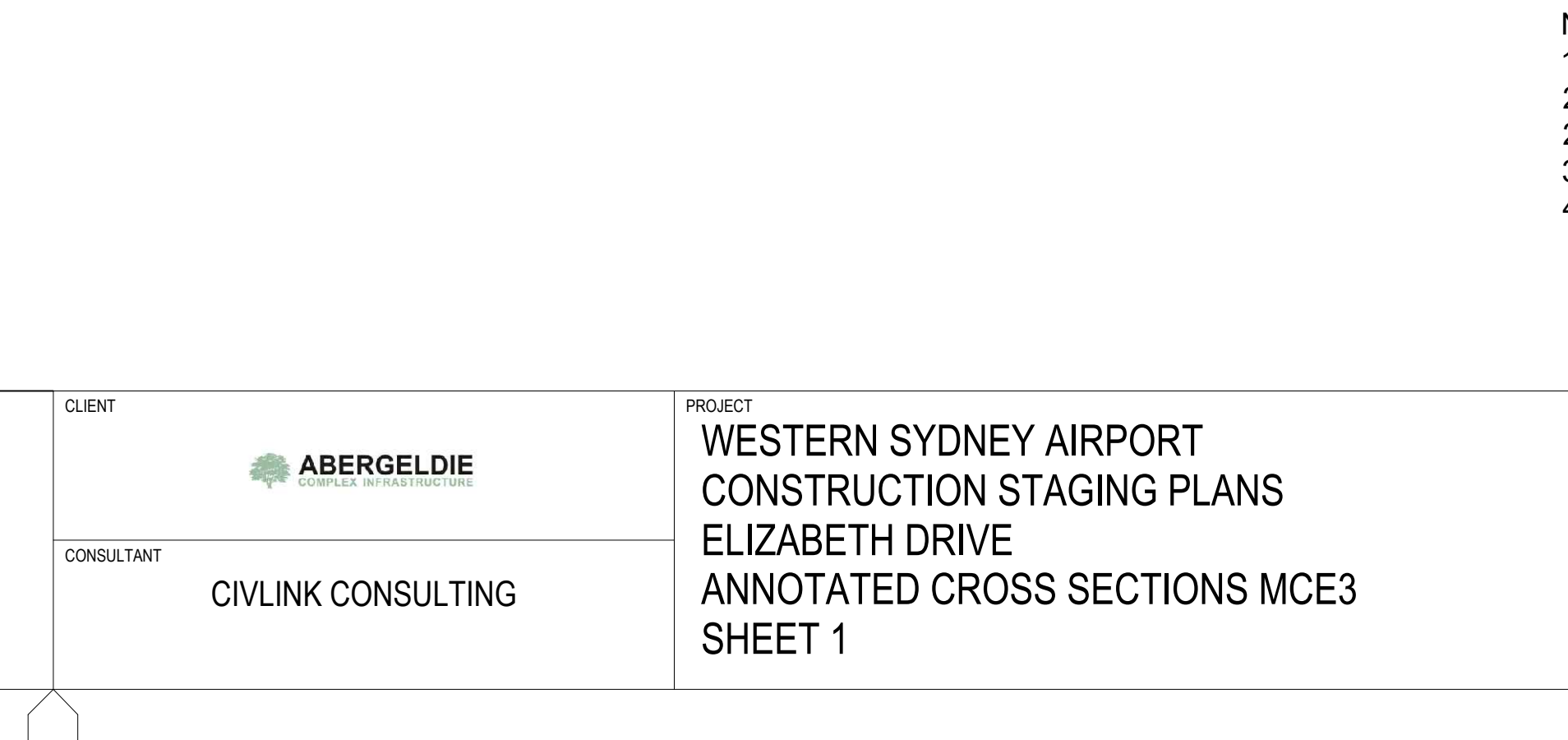
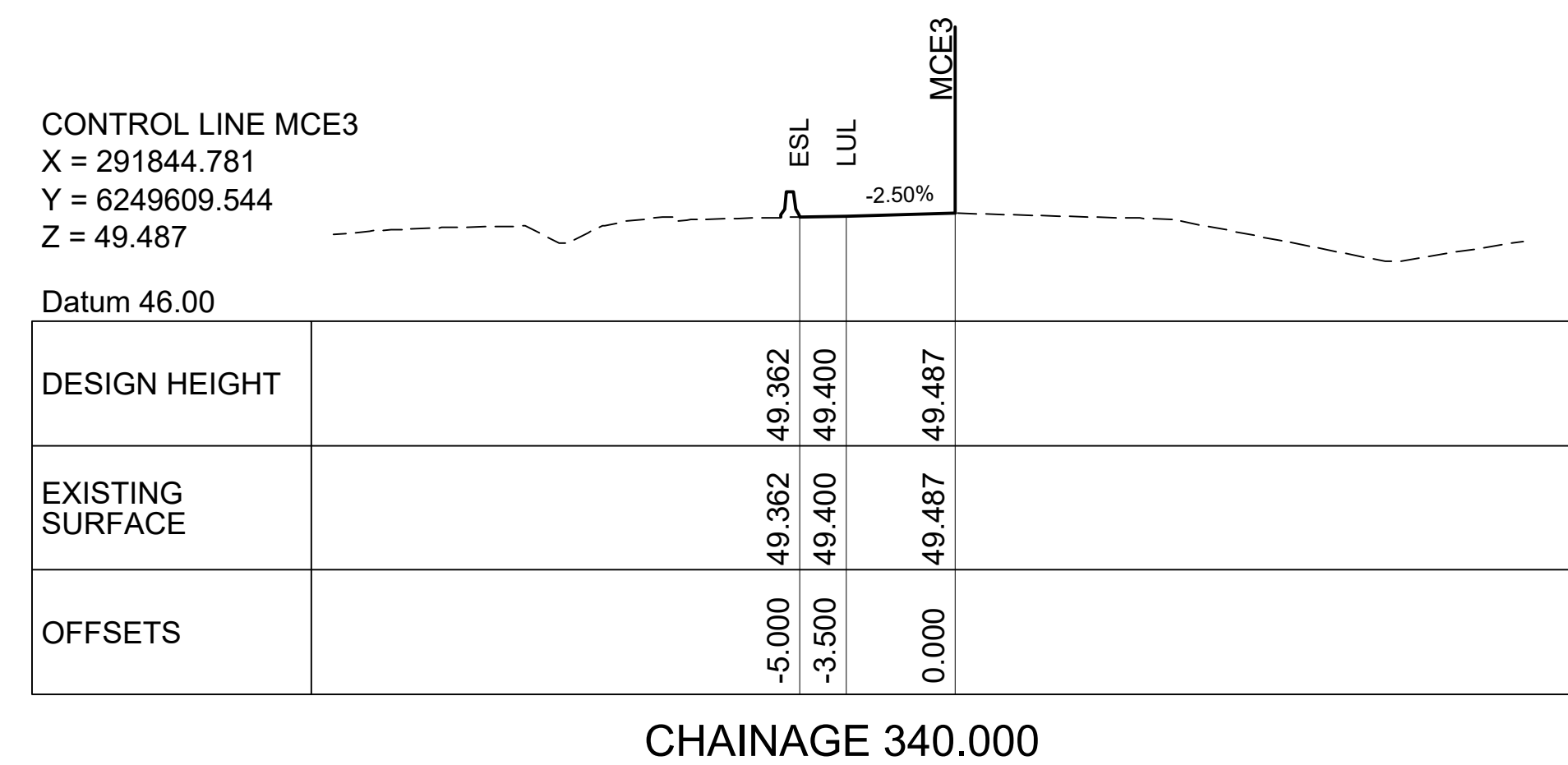
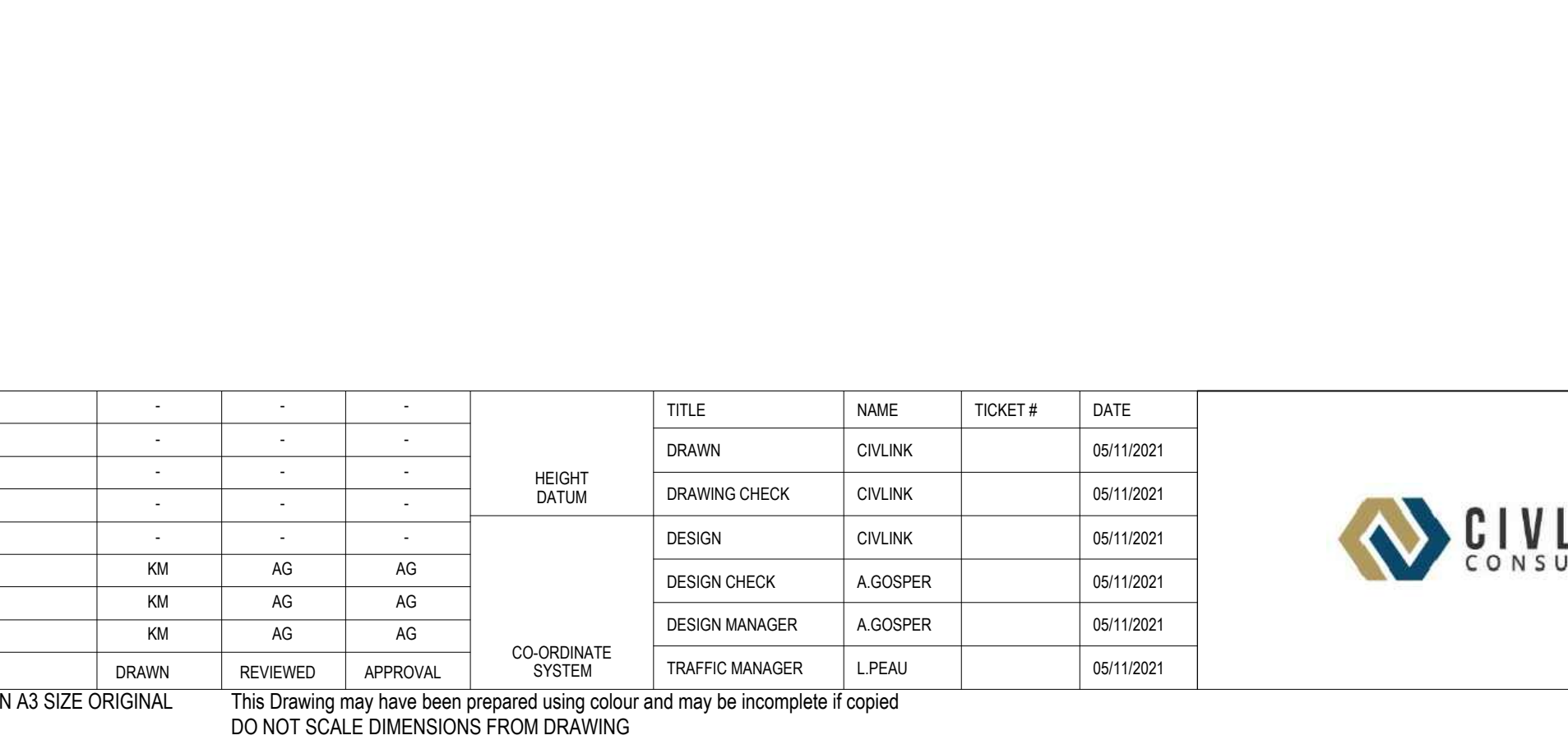
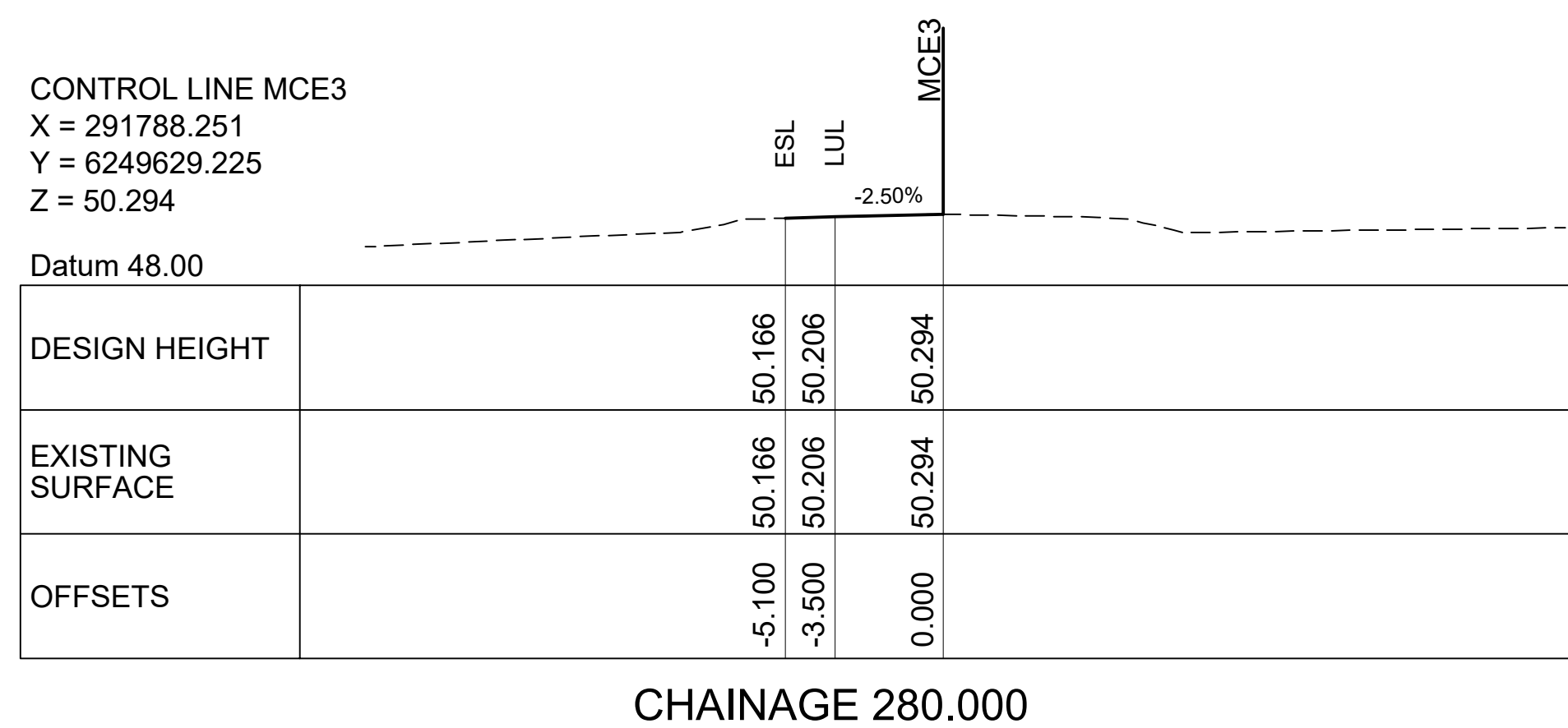


NOTES:

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4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

NOT FOR CONSTRUCTION

<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						HEIGHT DATUM		TITLE		NAME	TICKET #	DATE	<div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>CIVLINK CONSULTING</div>	CLIENT	<div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>ABERGELDIE</div>	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS ELIZABETH DRIVE - STAGE 1 SHEET 2	STATUS ISSUED FOR INFORMATION	
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						DRAWN		CIVILINK		05/11/2021	SCALE	<div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>05 10 15 20m</div>						SHEET
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						DRAWING CHECK		CIVILINK		05/11/2021								
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						DESIGN		CIVILINK		05/11/2021	CONSULTANT	CIVILINK CONSULTING		DRAWING No				REVISION
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						DESIGN CHECK		A.GOSPER		05/11/2021								
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						DESIGN MANAGER		A.GOSPER		05/11/2021								
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						TRAFFIC MANAGER		L.PEAU		05/11/2021								
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						CO-ORDINATE												
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						DRAWN	REVIEWED	APPROVAL										
<div><div></div><div></div><div></div><div></div><div></div><div></div></div>						<div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>0 10 20 30 40 50 mm ON A3 SIZE ORIGINAL</div> <div>This Drawing may have been prepared using colour and may be incomplete if copied DO NOT SCALE DIMENSIONS FROM DRAWING.</div>												



- NOTES:
1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

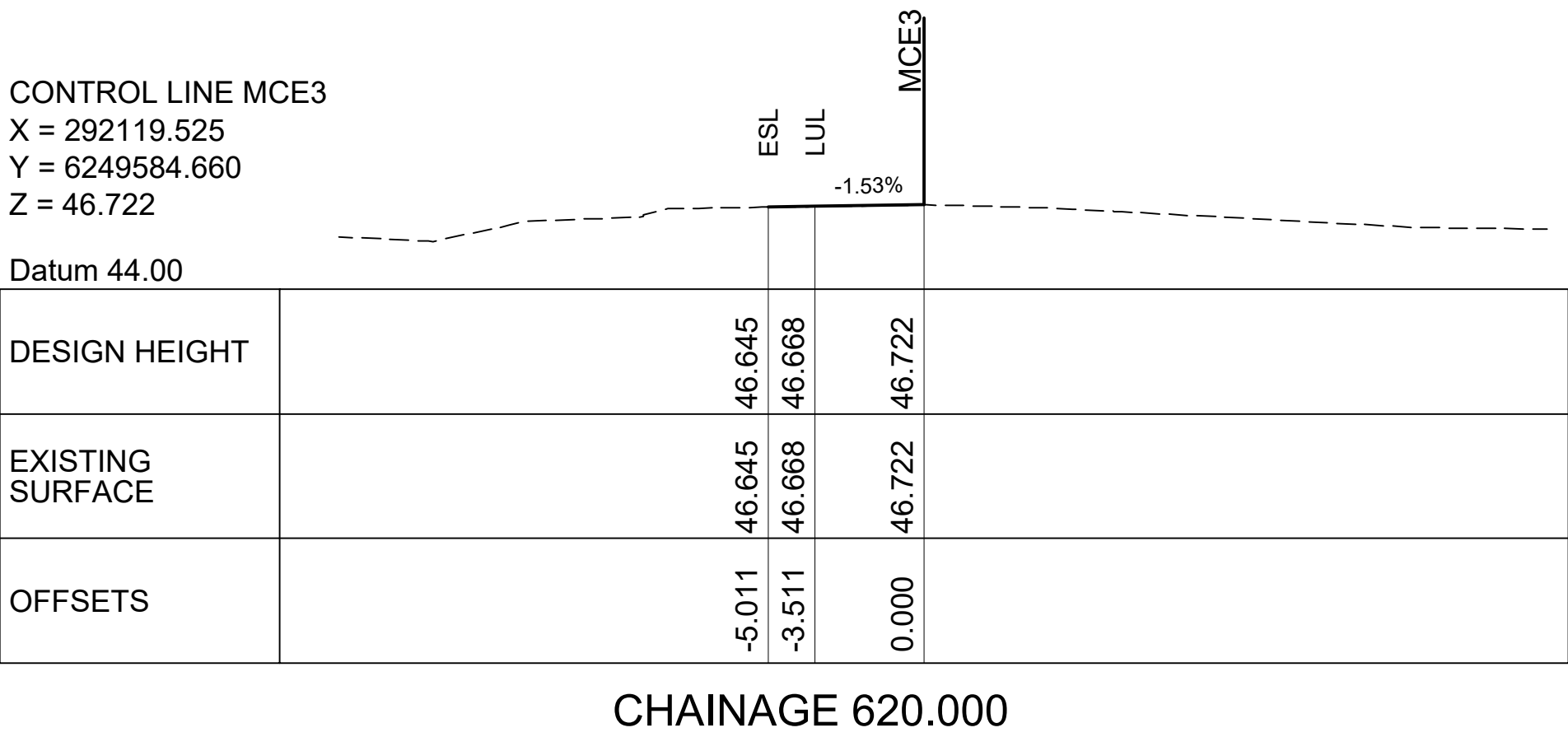
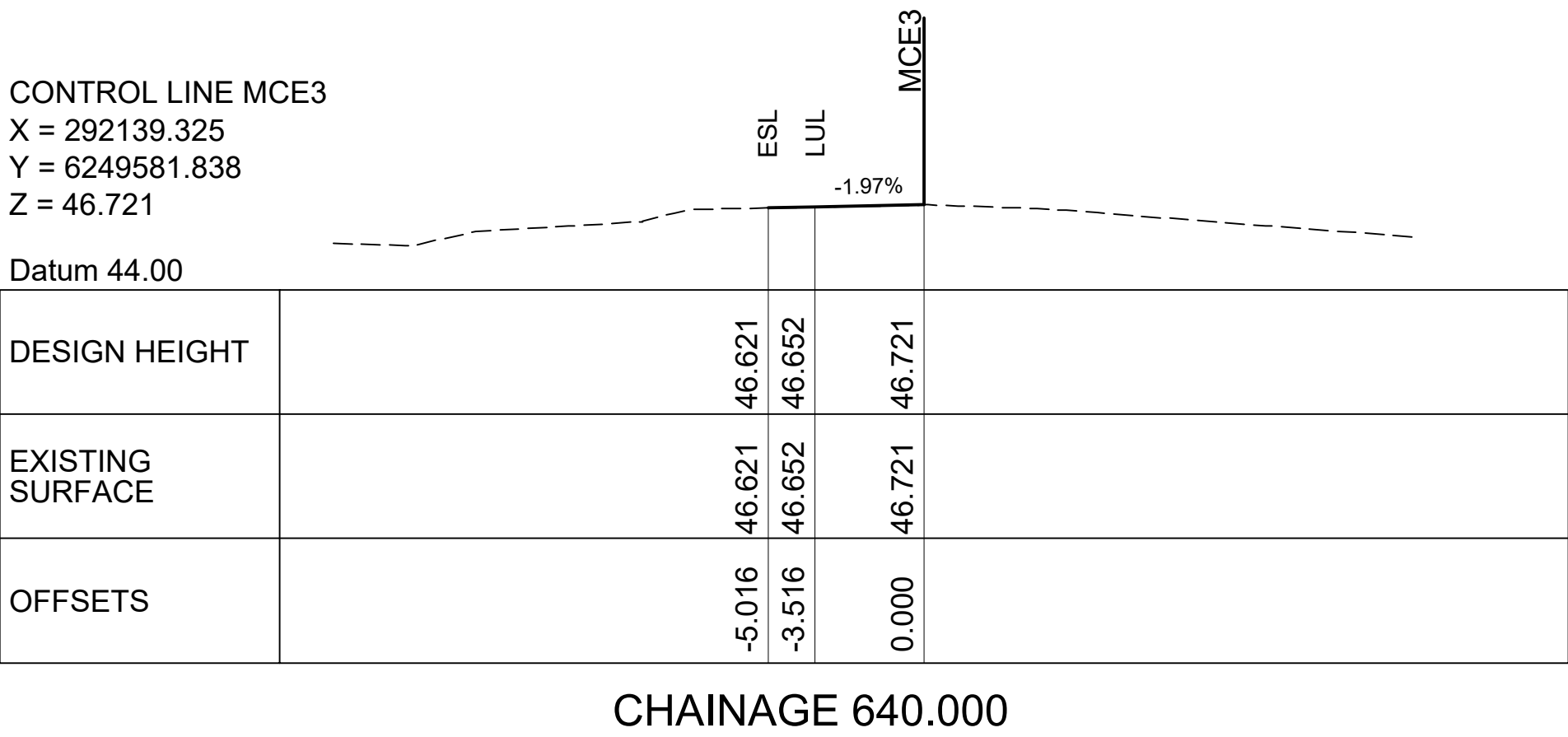
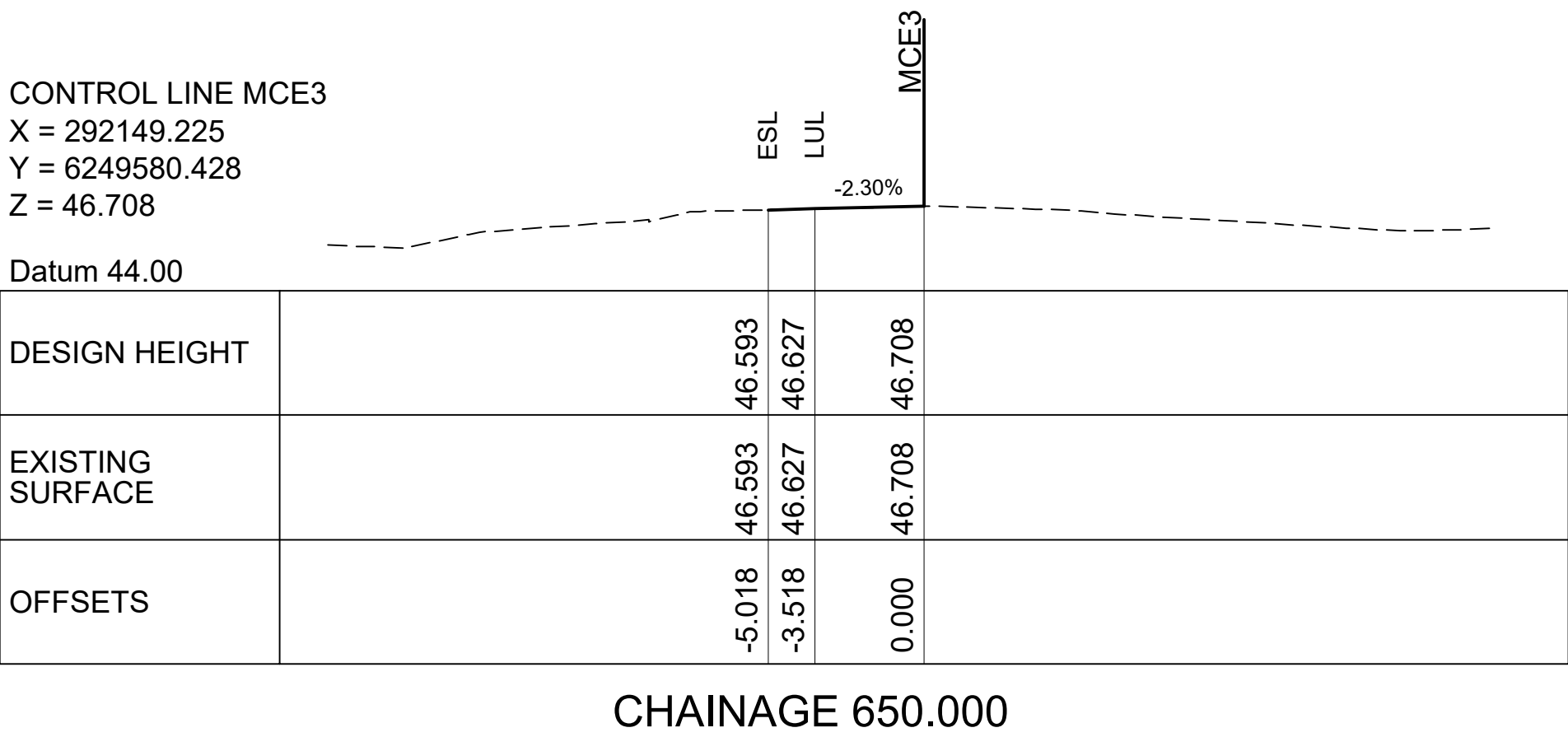
NOT FOR CONSTRUCTION

[illegible]



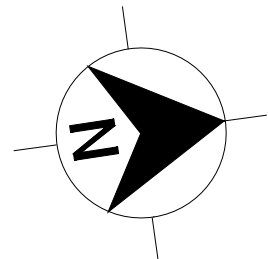
- NOT FOR CONSTRUCTION

0 10 20 30 40 50 mm ON A3 SIZE ORIGINAL This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

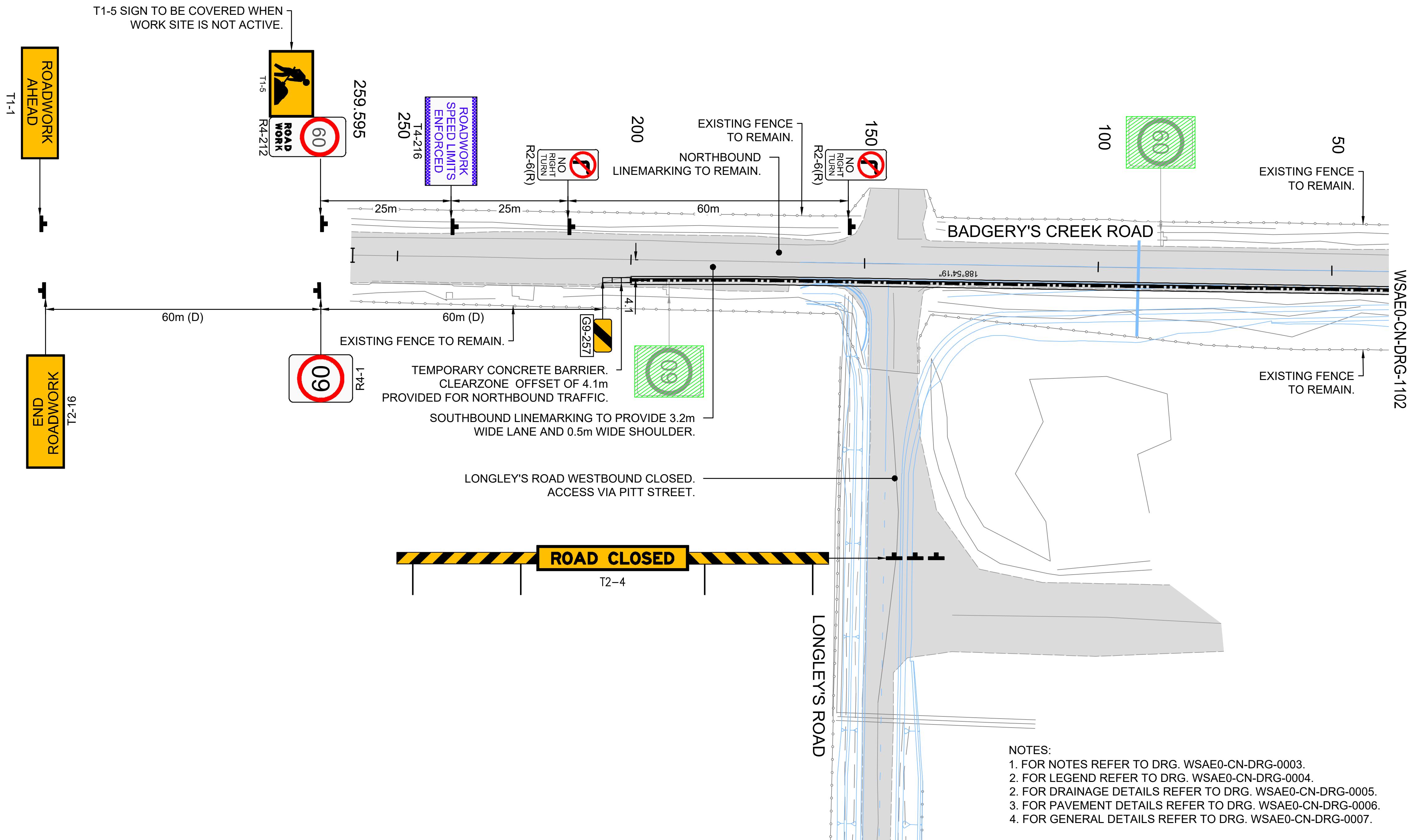


- NOTES:
- 1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 - 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 - 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 - 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 - 4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.


NOT FOR CONSTRUCTION



EXISTING SIGNAGE UNKNOWN. ALL EXISTING SIGNAGE TO REMAIN. ANY EXISTING SIGNAGE NOT IN ACCORDANCE WITH THIS TEMPORARY TRAFFIC GUIDANCE SCHEME TO BE COVERED.







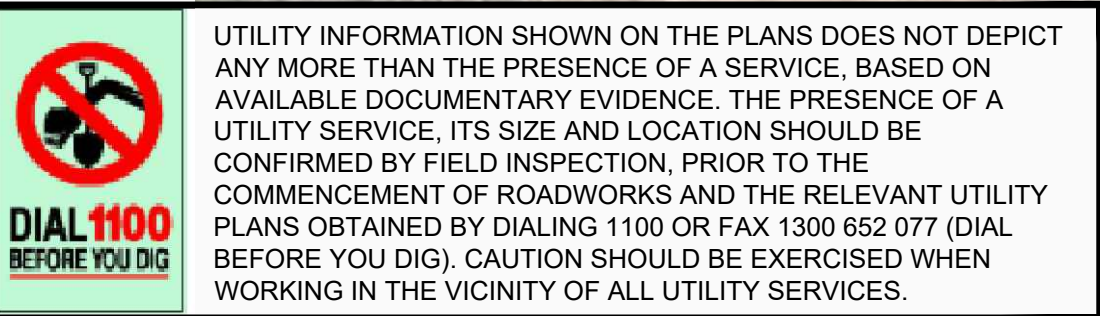
- NOTES:
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 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
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NOT FOR CONSTRUCTION

		-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CONSULTANT CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS LONGLEY'S ROAD - STAGE 1 SHEET 1	STATUS	ISSUED FOR INFORMATION	
-	-	-	-	-		DRAWN	CIVLINK		05/11/2021				SCALE <div><div></div><div>05101520m</div></div>	SHEET	
-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021						
-	-	-	-	-		DESIGN	CIVLINK		05/11/2021						
-	-	-	-	-		DESIGN CHECK	A.GOSPER		05/11/2021						
3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG	COORD SYS	DESIGN MANAGER	A.GOSPER	05/11/2021		CLIENT  CONSULTANT CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS LONGLEY'S ROAD - STAGE 1 SHEET 1	DRAWING No WSAE0-CN-DRG-1101	REVISION 3	
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW	KM	AG	AG		TRAFFIC MANAGER	L.PEAU	05/11/2021						
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW	KM	AG	AG										
REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL	CO-ORDINATE SYSTEM									
This Drawing may have been prepared using colour and may be incomplete if copied DO NOT SCALE DIMENSIONS FROM DRAWING															

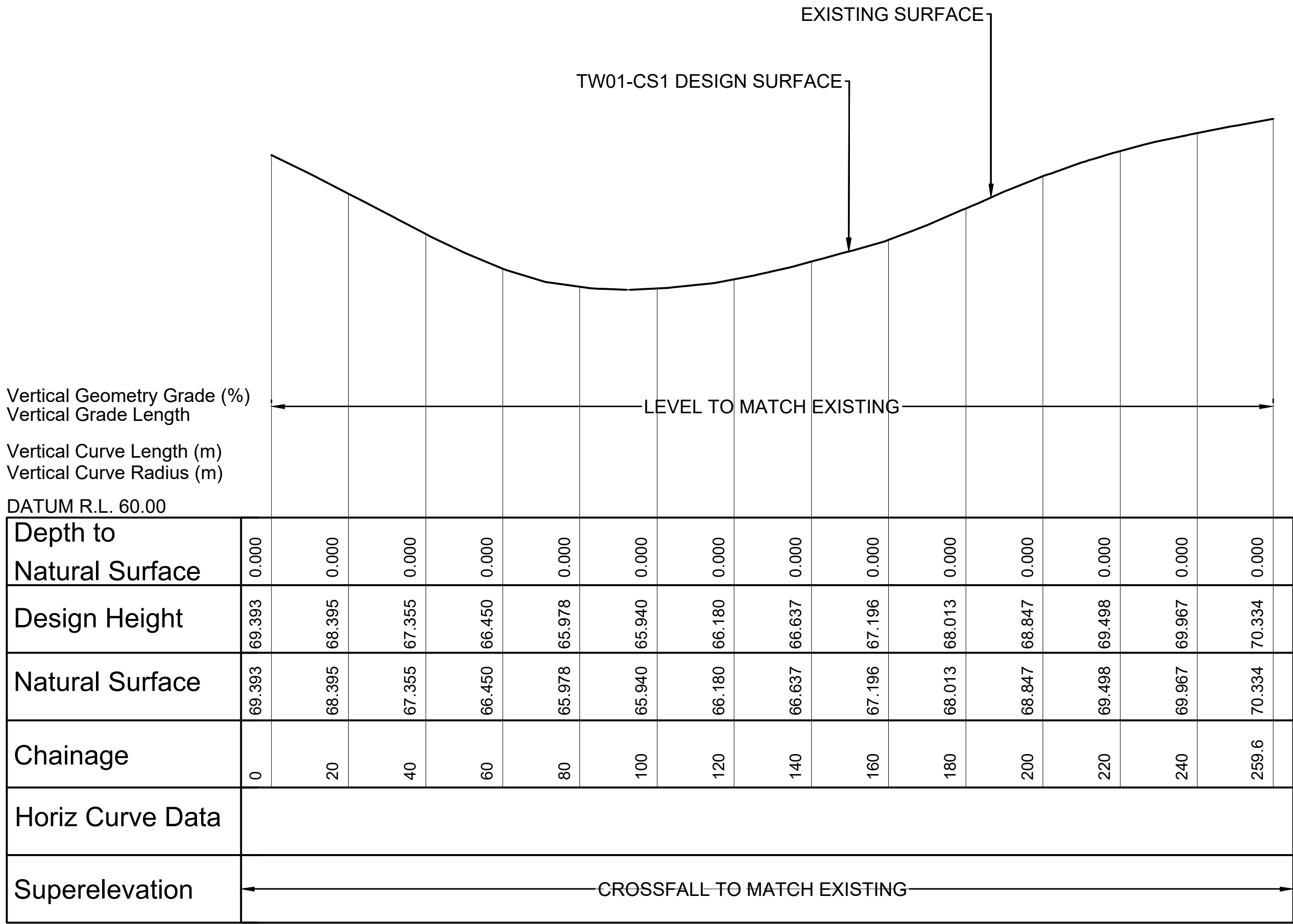


NOTES:

1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

[illegible]

This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING



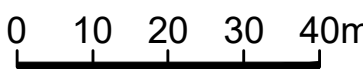


HORIZONTAL SCALE 1:1000
VERTICAL SCALE 1:100

LONGITUDINAL SECTION - MCE4

- NOTES:
- 1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 - 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 - 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 - 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 - 4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

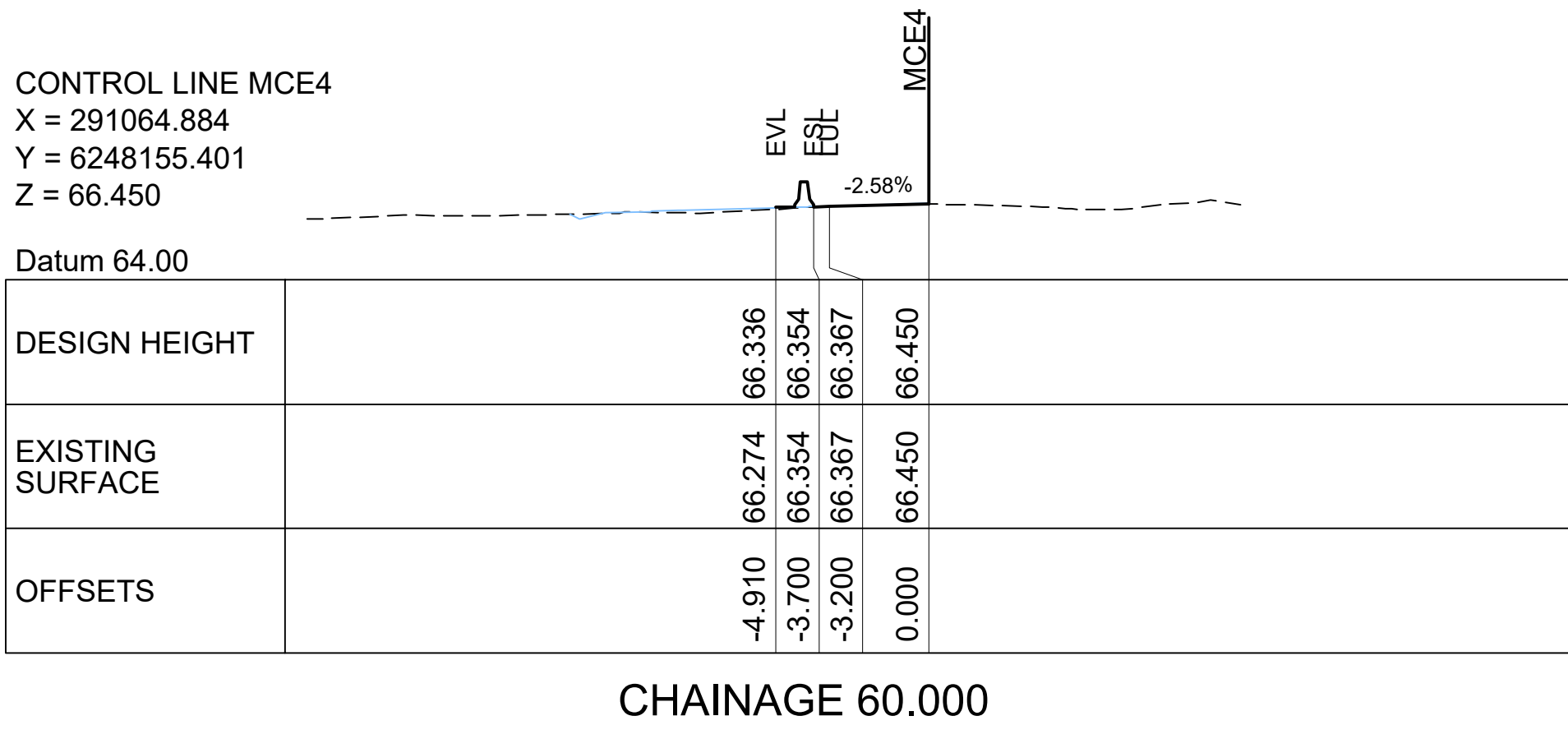
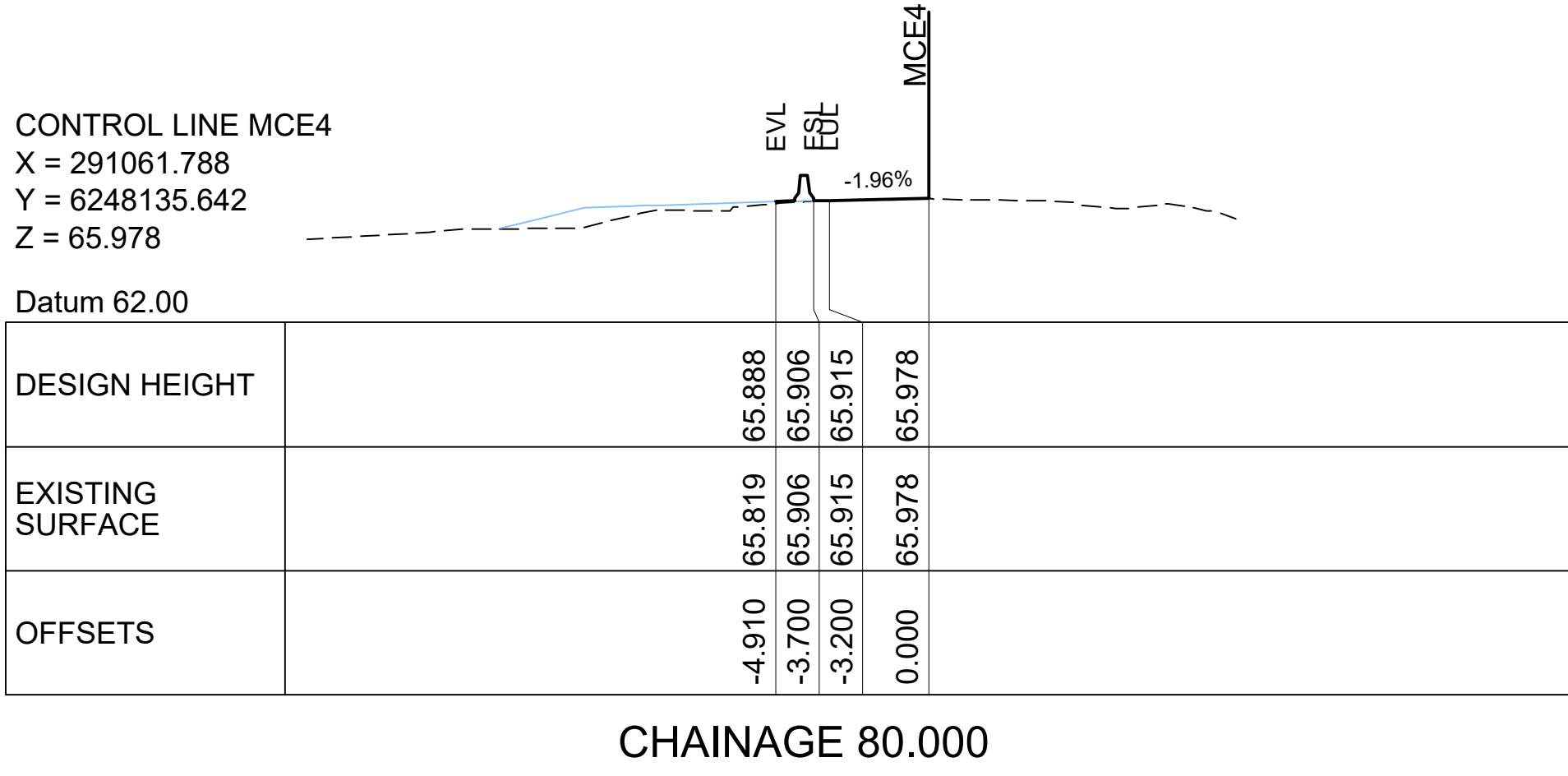
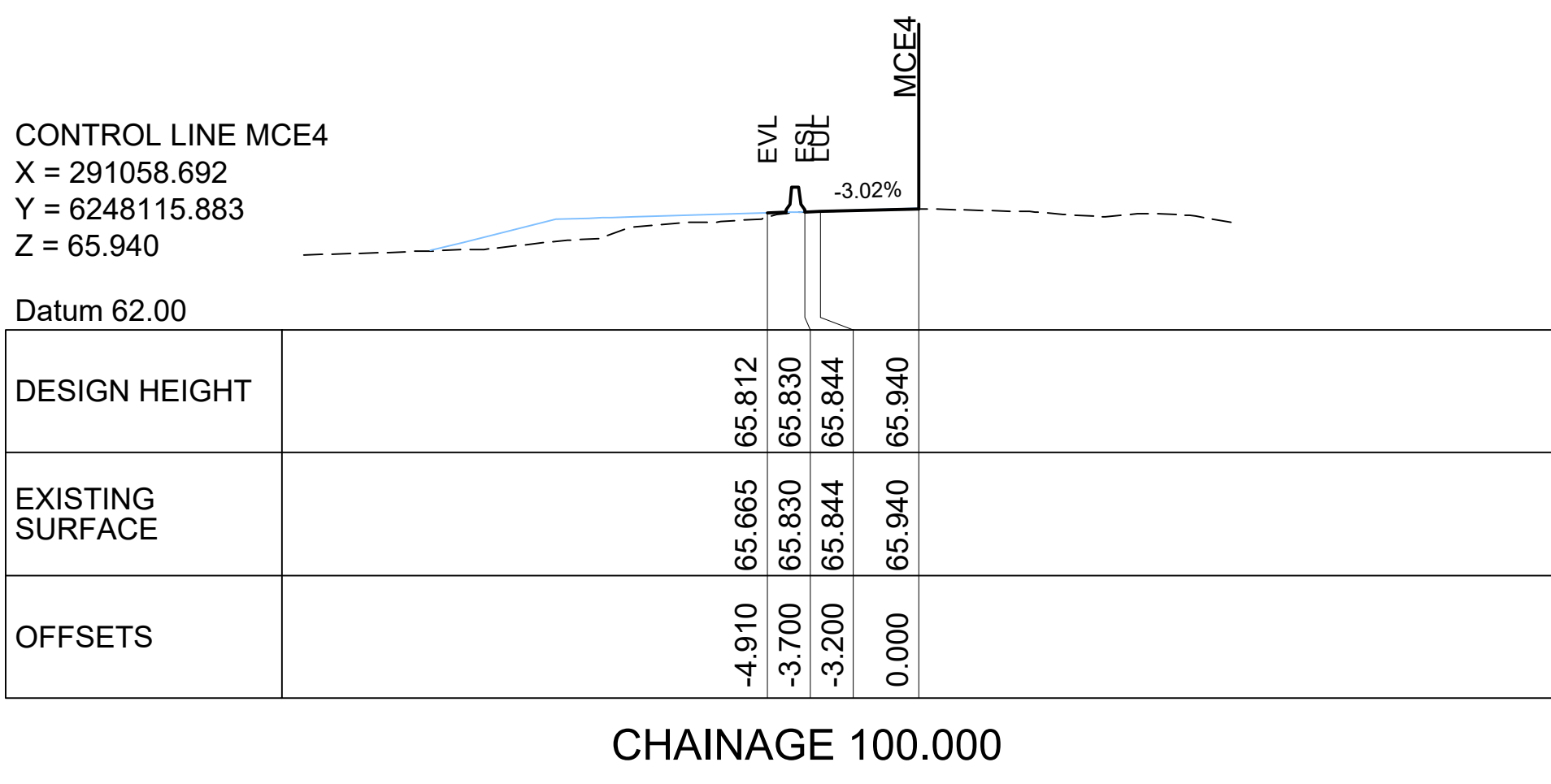
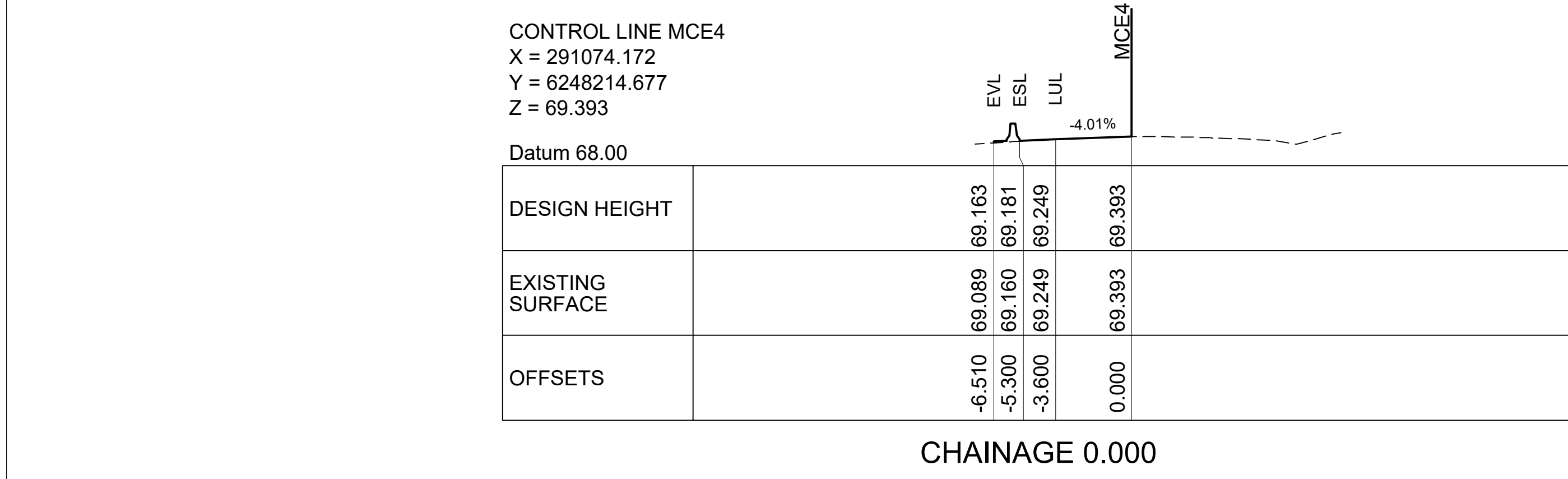
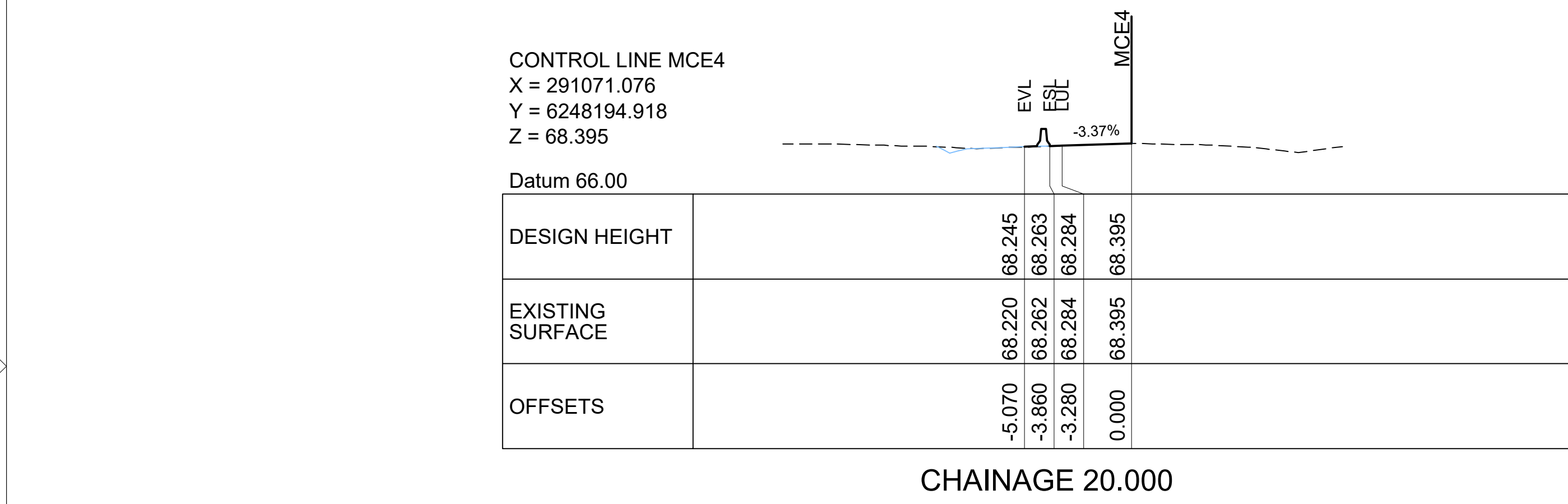
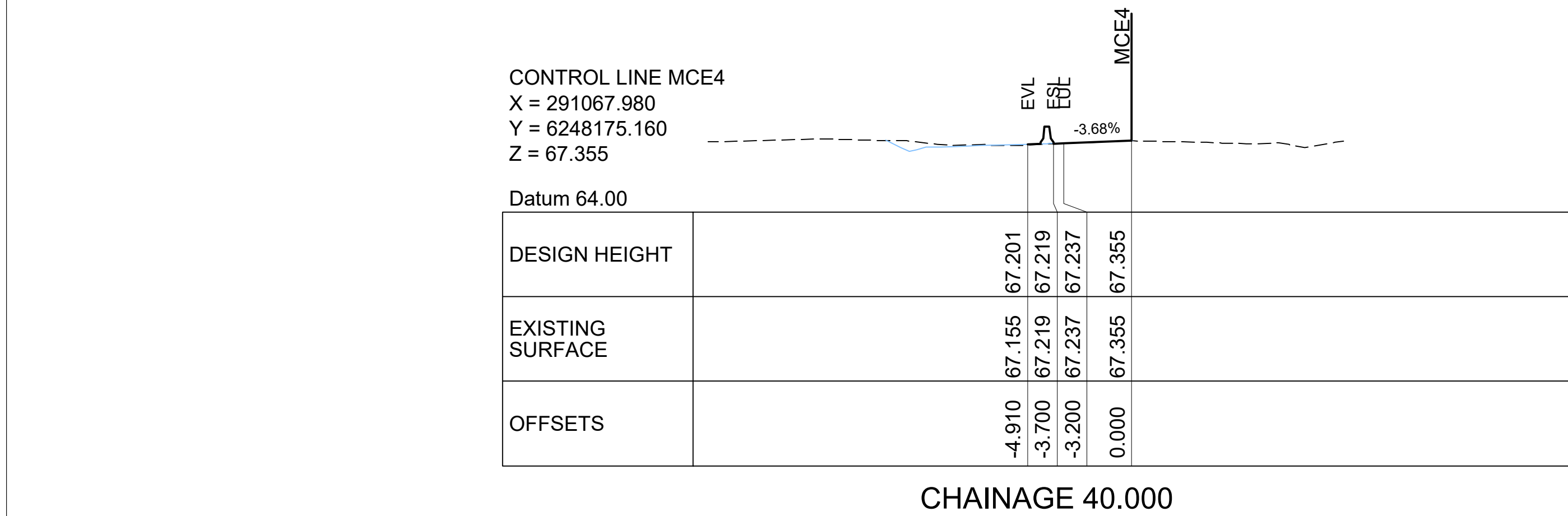
NOT FOR CONSTRUCTION

-	-	-	-	-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT CONSTRUCTION STAGING PLANS LONGLEY'S ROAD LONGITUDINAL SECTION MCE4 SHEET 1	STATUS ISSUED FOR INFORMATION		
-	-	-	-	-	-	-		DRAWN	CIVLINK		05/11/2021					SHEET	
-	-	-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021						
-	-	-	-	-	-	-		DESIGN	CIVLINK		05/11/2021						
-	-	-	-	-	-	-		DESIGN CHECK	A.GOSPER		05/11/2021						
3	05/11/2021	DRAFT STAGING DESIGN - FOR REVIEW			KM	AG	AG	CO-ORDINATE SYSTEM	DESIGN MANAGER	A.GOSPER		05/11/2021				DRAWING No WSAE0-CN-DRG-1111	REVISION 3
2	01/11/2021	DRAFT STAGING DESIGN - FOR REVIEW			KM	AG	AG		TRAFFIC MANAGER	L.PEAU		05/11/2021					
1	18/10/2021	DRAFT STAGING DESIGN - FOR INTERNAL REVIEW			KM	AG	AG										
REV	DATE	DESCRIPTION			DRAWN	REVIEWED	APPROVAL										

010203040

50 mm ON A3 SIZE ORIGINAL

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DO NOT SCALE DIMENSIONS FROM DRAWING



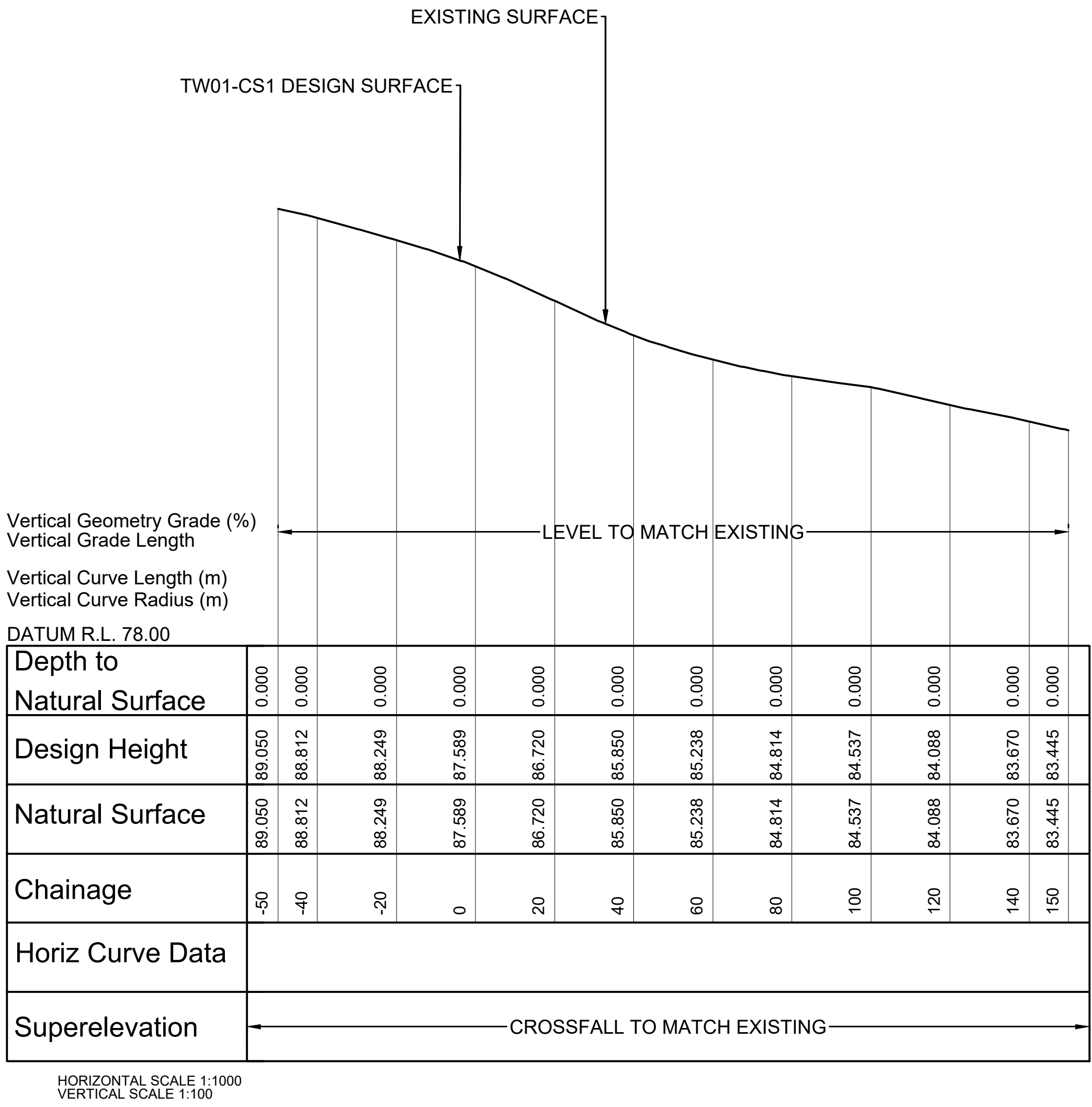
- NOTES:
1. FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 2. FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 2. FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 3. FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 4. FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

0 10 20 30 40 50 mm ON A3 SIZE ORIGINAL This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING



LONGITUDINAL SECTION - MCE5

- NOTES:
- FOR NOTES REFER TO DRG. WSAE0-CN-DRG-0003.
 - FOR LEGEND REFER TO DRG. WSAE0-CN-DRG-0004.
 - FOR DRAINAGE DETAILS REFER TO DRG. WSAE0-CN-DRG-0005.
 - FOR PAVEMENT DETAILS REFER TO DRG. WSAE0-CN-DRG-0006.
 - FOR GENERAL DETAILS REFER TO DRG. WSAE0-CN-DRG-0007.

NOT FOR CONSTRUCTION

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3

05/11/2021

DRAFT STAGING DESIGN - FOR REVIEW

KM

AG

AG

2

01/11/2021

DRAFT STAGING DESIGN - FOR REVIEW

KM

AG

AG

1

18/10/2021

DRAFT STAGING DESIGN - FOR INTERNAL REVIEW

KM

AG

AG

REV

DATE

DESCRIPTION

DRAWN

REVIEWED

APPROVAL

HEIGHT DATUM

CO-ORDINATE SYSTEM

TITLE

NAME

TICKET #

DATE

DRAWN

CIVILINK

05/11/2021

DRAWING CHECK

CIVILINK

05/11/2021

DESIGN

CIVILINK

05/11/2021

DESIGN CHECK

A.GOSPER

05/11/2021

DESIGN MANAGER

A.GOSPER

05/11/2021

TRAFFIC MANAGER

L.PEAU

05/11/2021

CLIENT

CONSULTANT

ABERGELDIE

CONSTRUCTIVE TECHNOLOGY GROUP

CIVILINK CONSULTING

PROJECT

WESTERN SYDNEY AIRPORT
CONSTRUCTION STAGING PLANS
AEROTROPOLIS ROAD
LONGITUDINAL SECTION MCE5
SHEET 1

STATUS

ISSUED FOR INFORMATION

SCALE

0 10 20 30 40m

SHEET

DRAWING No

WSAE0-CN-DRG-1211

REVISION

3

0 10 20 30 40

50 mm ON A3 SIZE ORIGINAL

This Drawing may have been prepared using colour and may be incomplete if copied
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Datum 84.00

Method	MCE (%)
LUR	~1.5
EVR	~-1.5
IDR	~-1.5
IAR	~-1.2

Datum 84.00

Method	MCE (%)
LUR	~1.5
EVR	~-1.5
IDR	~-1.6
IAR	~-1.4

Datum 86.00

Category	Value
MCE5	0.00%
MCE6	-2.27%

Datum 82.00

Datum 82.00

Line graph showing MCE5 values for LUR, ESR, EVR, IDR, and IAR. The y-axis is labeled MCE5. The x-axis has labels LUR, ESR, EVR, IDR, and IAR. A dashed line represents the baseline at -2.23%. The solid line shows a sharp peak at EVR, reaching approximately 1.5%.

Datum 82.00

Figure 1 is a line graph showing the MCE5 metric over time for four different models: LUR, EVR, IDR, and IAR. The y-axis is labeled 'MCE5' and the x-axis is labeled 'CE5'. The LUR model shows a sharp peak at -3.37%. The EVR, IDR, and IAR models show a much smaller peak at -3.37%.

0 10 20 30 40 50 mm ON A3 SIZE ORIGINAL This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

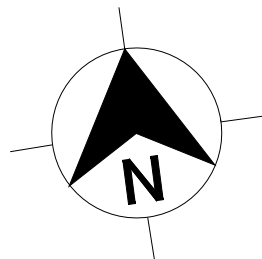
Datum 82.00

DESIGN HEIGHT	84.429	84.330	
EXISTING SURFACE	84.429	84.329	
OFFSETS	0.000	3.425	

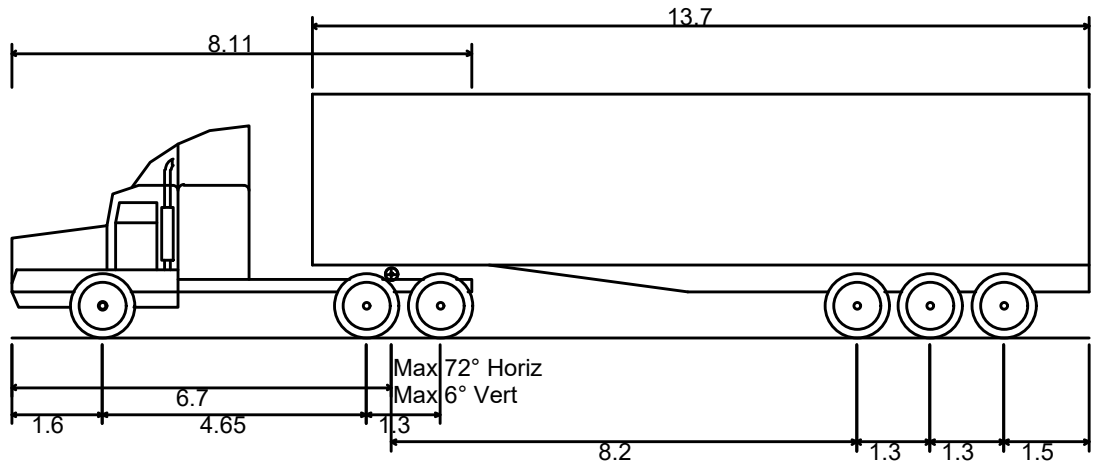
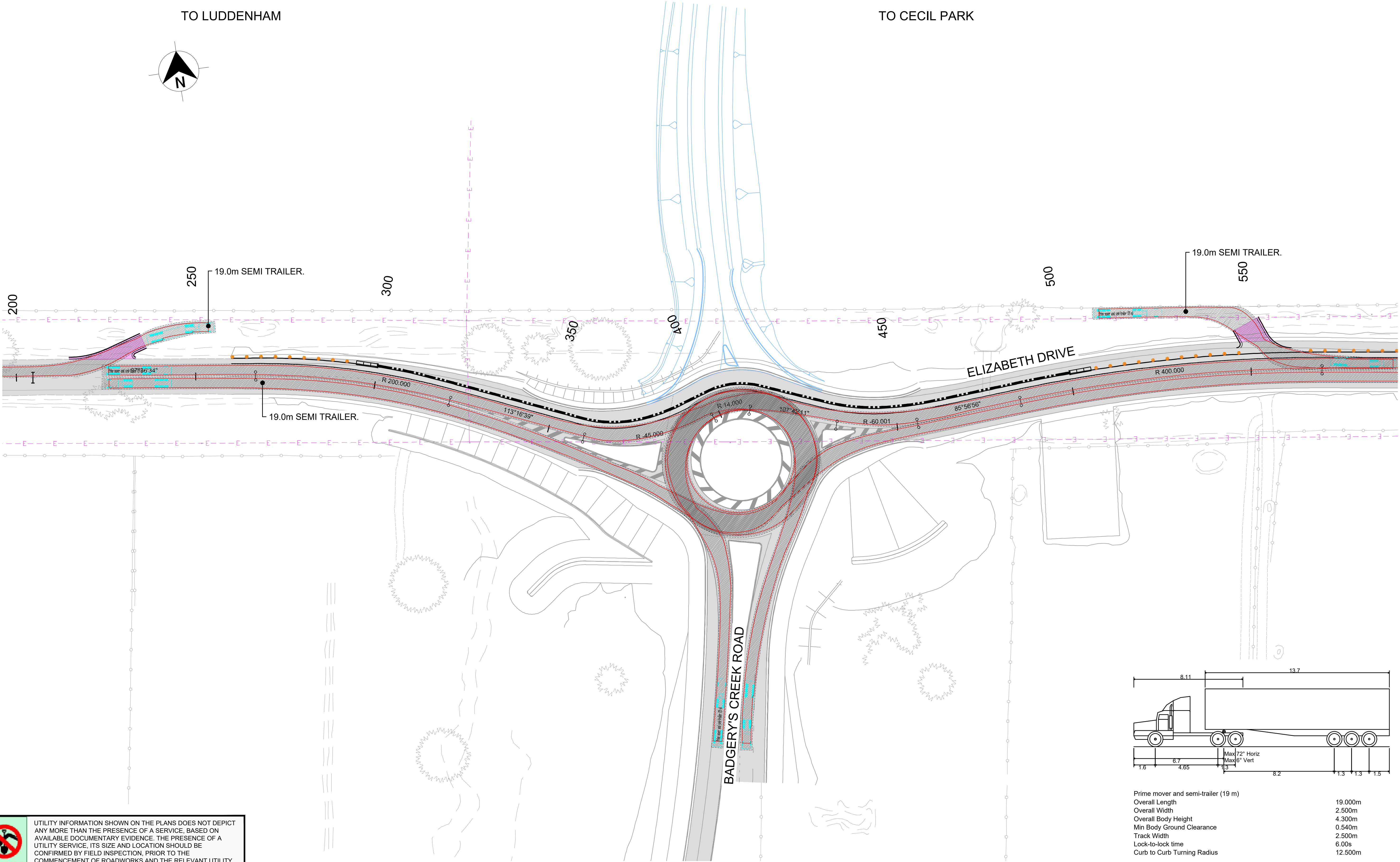
NOT FOR CONSTRUCTION

0 10 20 30 40 50 mm ON A3 SIZE ORIGINAL This Drawing may have been prepared using colour and may be incomplete if copied
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TO LUDDENHAM





TO CECIL PARK




Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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NOT FOR CONSTRUCTION

			-	-	-	<div>HEIGHT DATUM</div> <div>HEIGHT DATUM</div> <div>COORD SYS</div> <div>CO-ORDINATE SYSTEM</div>	TITLE	NAME	TICKET #	DATE	<div></div> <div>CIVLINK CONSULTING</div>	<div>CLIENT</div> <div></div> <div>CONSULTANT</div> <div>CIVLINK CONSULTING</div>	PROJECT	WESTERN SYDNEY AIRPORT DESIGN VEHICLE SWEPT PATHS - 19.0m SEMI TRAILER ELIZABETH DRIVE - STAGE 1 SHEET 1	STATUS	ISSUED FOR INFORMATION		
-	-	-	-	-	-		DRAWN	CIVLINK		07/01/2022			SCALE	<div><div>0</div><div>5</div><div>10</div><div>15</div><div>20m</div></div>		SHEET		
-	-	-	-	-	-		DRAWING CHECK	CIVLINK		07/01/2022			DRAWING No	WSAE0-CN-SK-1001				
-	-	-	-	-	-		DESIGN	CIVLINK		07/01/2022			REVISION					
-	-	-	-	-	-		DESIGN CHECK	A.GOSPER		07/01/2022			2					
-	-	-	-	-	-		DESIGN MANAGER	A.GOSPER		07/01/2022								
-	-	-	-	-	-		TRAFFIC MANAGER	L.PEAU		07/01/2022								

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TO LUDDENHAM

TO CECIL PARK

200 250 300 350 400 450 500 550

ELIZABETH DRIVE

BADGERY'S CREEK ROAD

25.0m B-DOUBLE.

97°36'34"

113°16'38"

107°42'14"

85°56'50"

R 200.000

R 45.000

R 14.000

R 60.001

R 400.000

6.21

10.86

12.5

4.6

3.35

1.3

6.8

1.3

1.3

0.56

8.1

1.3

1.3

1.6

Max* Horiz

Max* Vert

Max* Horiz

Max* Vert

B-Double (25.0m)

Overall Length 25.000m

Overall Width 2.500m

Overall Body Height 4.300m

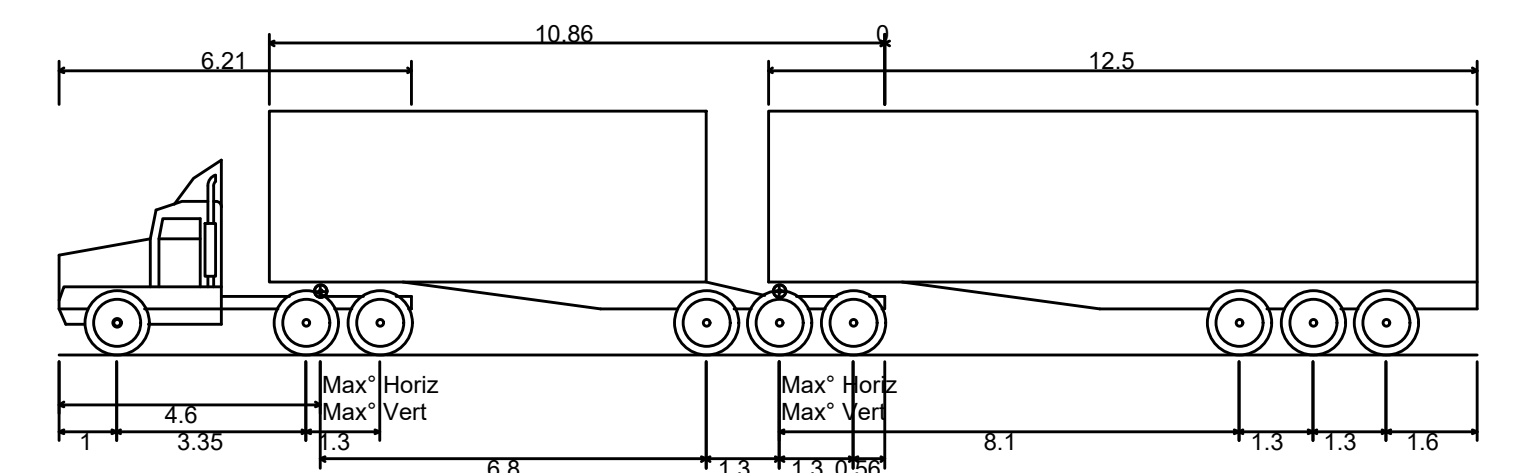
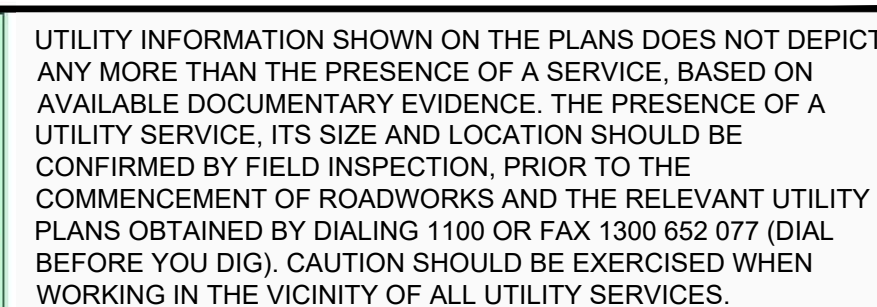
Min Body Ground Clearance 0.540m

Track Width 2.500m

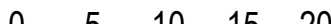
Lock-to-lock time 6.00s

Curb to Curb Turning Radius 15.000m

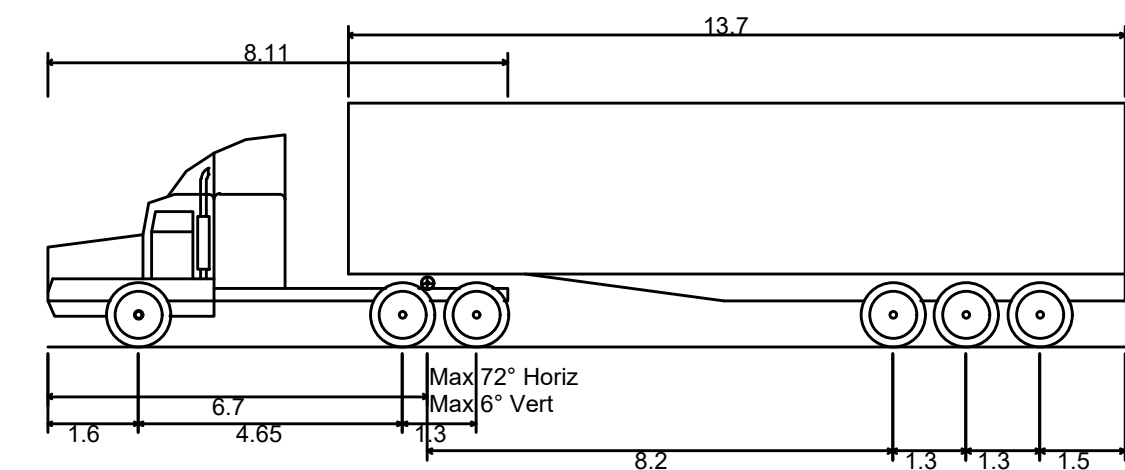
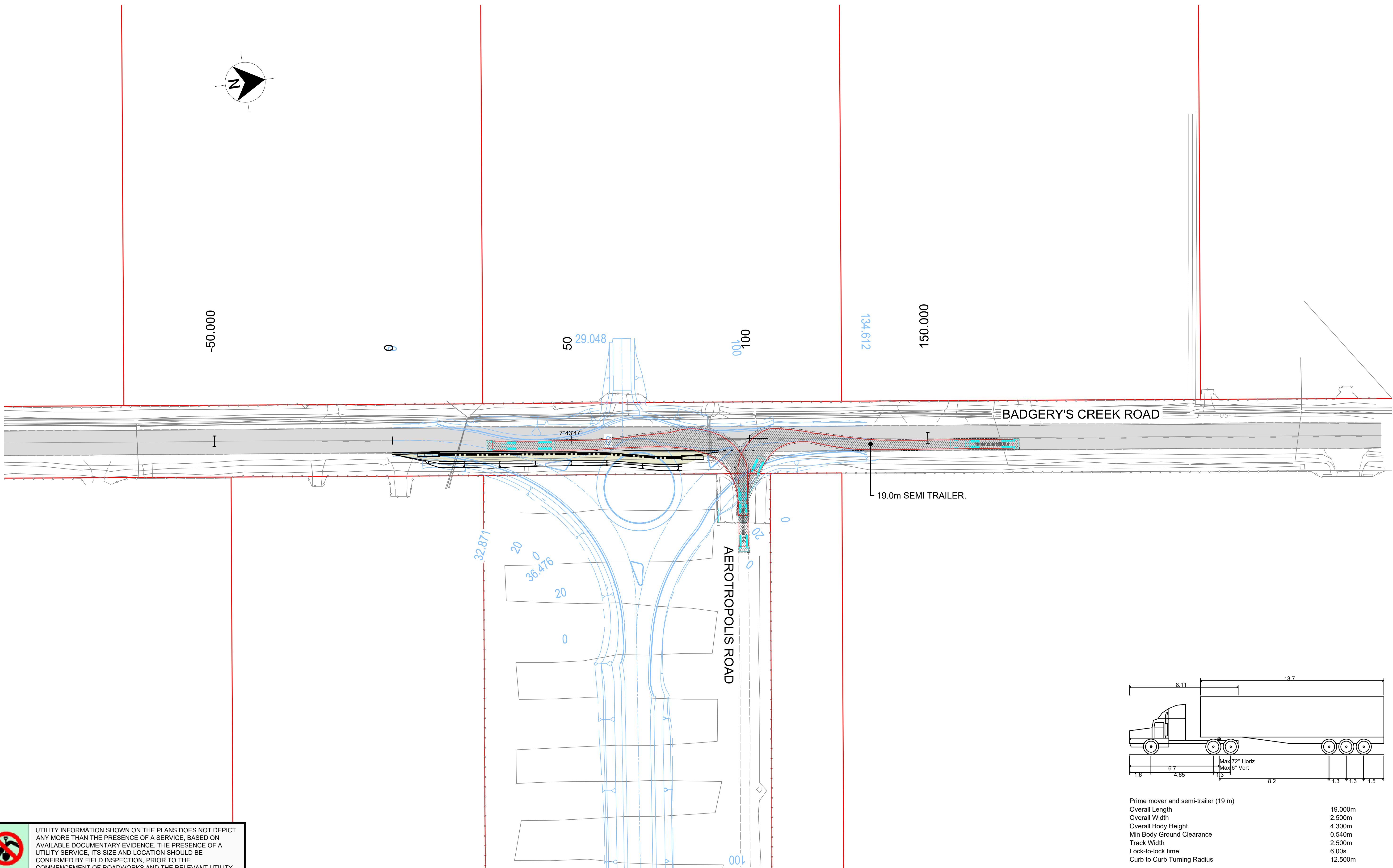
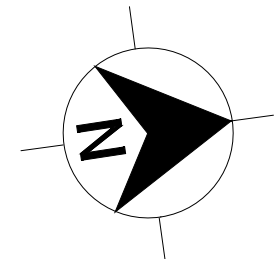
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B-Double (25.0m)	
Overall Length	25.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m


STATUS			ISSUED FOR INFORMATION		
SCALE					SHEET
DRAWING No		WSAE0-CN-SK-1002			REVISION 2

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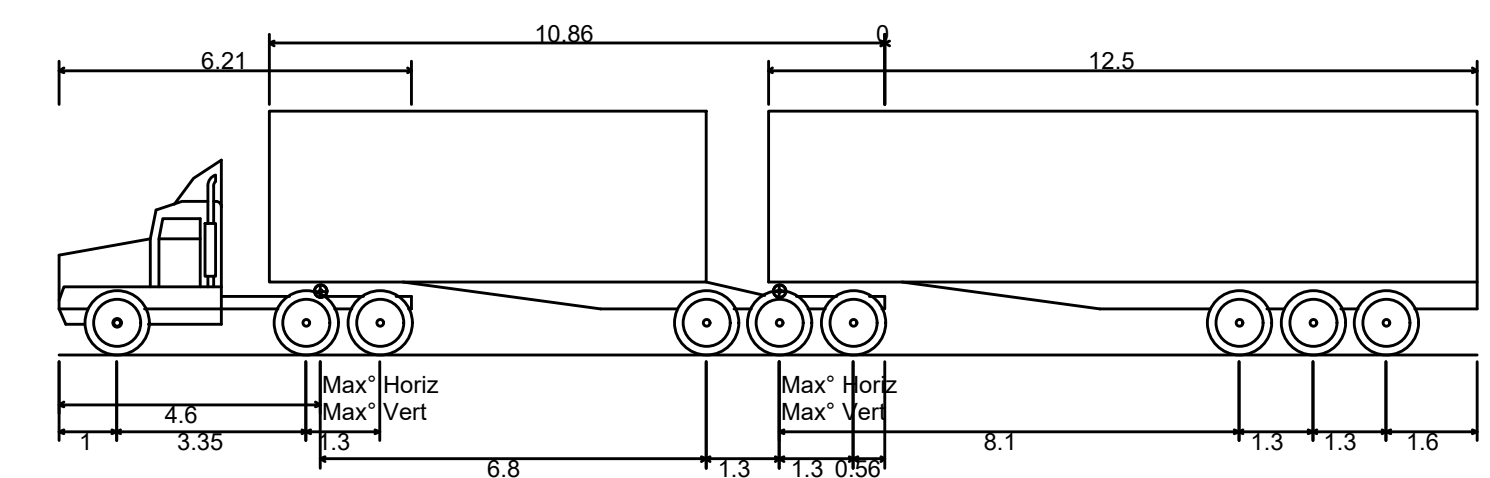
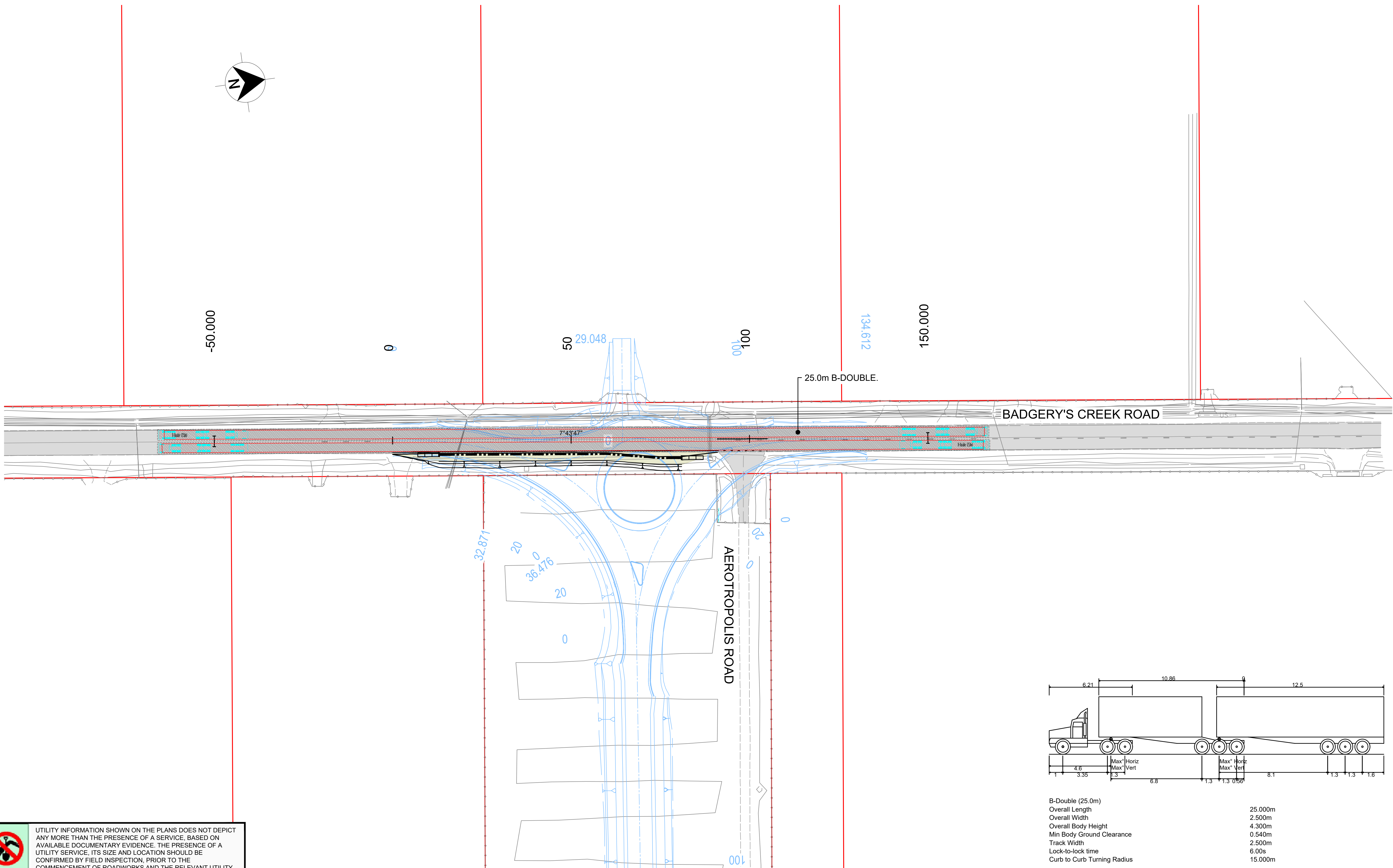
Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

NOT FOR CONSTRUCTION



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-	-	-	-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CONSULTANT CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT DESIGN VEHICLE SWEEP PATHS - 19.0m SEMI TRAILER AEROTROPOLIS ROAD - STAGE 1 SHEET 1	STATUS ISSUED FOR INFORMATION		
-	-	-	-	-	-		DRAWN	CIVLINK		05/11/2021					SCALE <div><div></div><div>05101520m</div></div>	SHEET
-	-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021						
-	-	-	-	-	-		DESIGN	CIVLINK		05/11/2021						
-	-	-	-	-	-		DESIGN CHECK	A.GOSPER		05/11/2021						
-	-	-	-	-	-		DESIGN MANAGER	A.GOSPER		05/11/2021						
REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL		CO-ORDINATE SYSTEM	TRAFFIC MANAGER	L.PEAU							




B-Double (25.0m)	
Overall Length	25.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

NOT FOR CONSTRUCTION

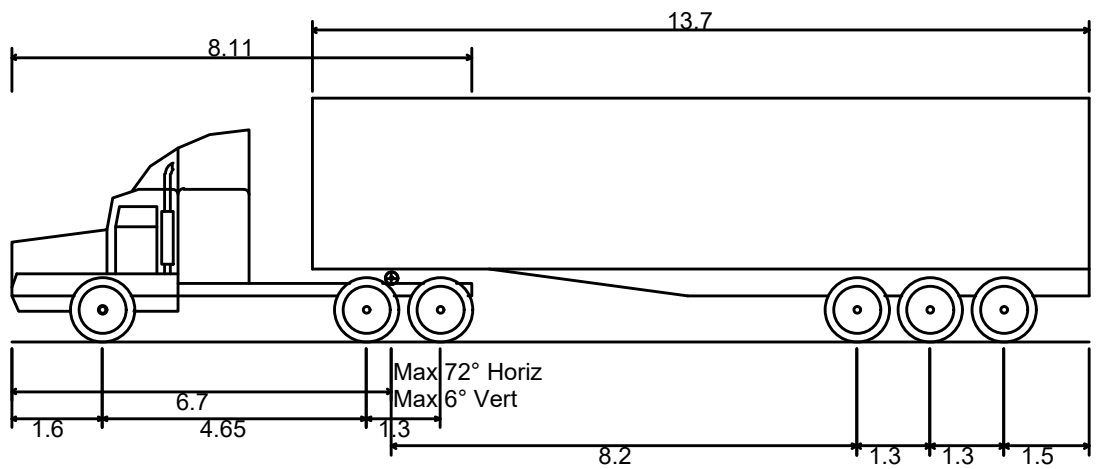
+			-	-	-	<div><div><div></div><div></div></div><div>CIVLINK CONSULTING</div></div>	CLIENT	<div><div><div></div><div>ABERGELDIE</div><div>ENGINEERING & ARCHITECTURE</div></div></div>	PROJECT	WESTERN SYDNEY AIRPORT DESIGN VEHICLE SWEEP PATHS - 25.0m B-DOUBLE AEROTROPOLIS ROAD - STAGE 1 SHEET 2	STATUS			ISSUED FOR INFORMATION				
-			-								SCALE		<div><div>0</div><div>5</div><div>10</div><div>15</div><div>20m</div></div>		SHEET			
+			-								DRAWING No		WSAE0-CN-SK-1202		REVISION 1			
+			-															
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-			-								CO-ORDINATE SYSTEM		TRAFFIC MANAGER		L.PEAU		05/11/2021	
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REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL													

This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING







UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.



Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m



NOT FOR CONSTRUCTION

			-	-	-	<div>HEIGHT DATUM</div> <div>HEIGHT DATUM</div> <div>COORD SYS</div> <div>CO-ORDINATE SYSTEM</div>	TITLE	NAME	TICKET #	DATE	<div></div>	CLIENT <div></div> <div>CONSULTANT</div> <div>CIVLINK CONSULTING</div>	PROJECT <div>WESTERN SYDNEY AIRPORT</div> <div>DESIGN VEHICLE SWEEP PATHS - 19.0m SEMI TRAILER</div> <div>DERWENT ROAD - STAGE 1</div> <div>SHEET 1</div>	STATUS	ISSUED FOR INFORMATION					
-	-	-	-	-	-		DRAWN	CIVLINK		05/11/2021				SCALE	<div><div></div><div>0</div><div>5</div><div>10</div><div>15</div><div>20m</div></div>		SHEET			
-	-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021				DRAWING No	WSAE0-CN-SK-1301					
-	-	-	-	-	-		DESIGN	CIVLINK		05/11/2021								REVISION	1	
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-	-	-	-	-	-		DESIGN MANAGER	A.GOSPER		05/11/2021										
-	-	-	-	-	-		TRAFFIC MANAGER	L.PEAU		05/11/2021										
REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL															

This Drawing may have been prepared using colour and may be incomplete if copied
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UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

			-	-	-	HEIGHT DATUM	TITLE	NAME	TICKET #	DATE		CLIENT  CONSULTANT CIVLINK CONSULTING	PROJECT WESTERN SYDNEY AIRPORT BADGERY'S CREEK ROAD PERMANENT SPEED ZONE SHEET 1	STATUS ISSUED FOR INFORMATION			
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-	-	-	-	-	-		DRAWING CHECK	CIVLINK		05/11/2021							
-	-	-	-	-	-		DESIGN	CIVLINK		05/11/2021							
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REV	DATE	DESCRIPTION				DRAWN	REVIEWED	APPROVAL									

NOT FOR CONSTRUCTION



BADGERY'S CREEK ROAD

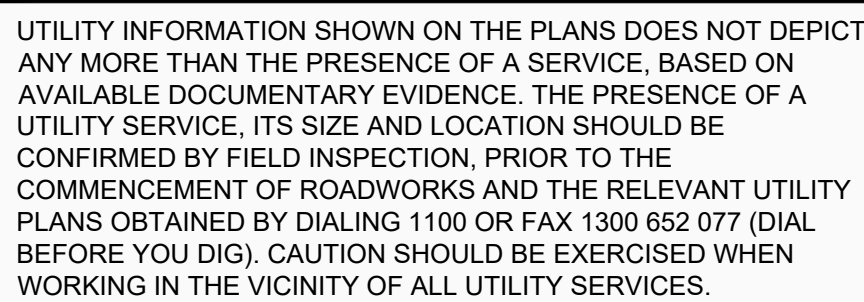
EXISTING "80" PAVEMENT
NUMERALS TO BE CHANGED TO "60".



JAGELMAN ROAD



R4-1



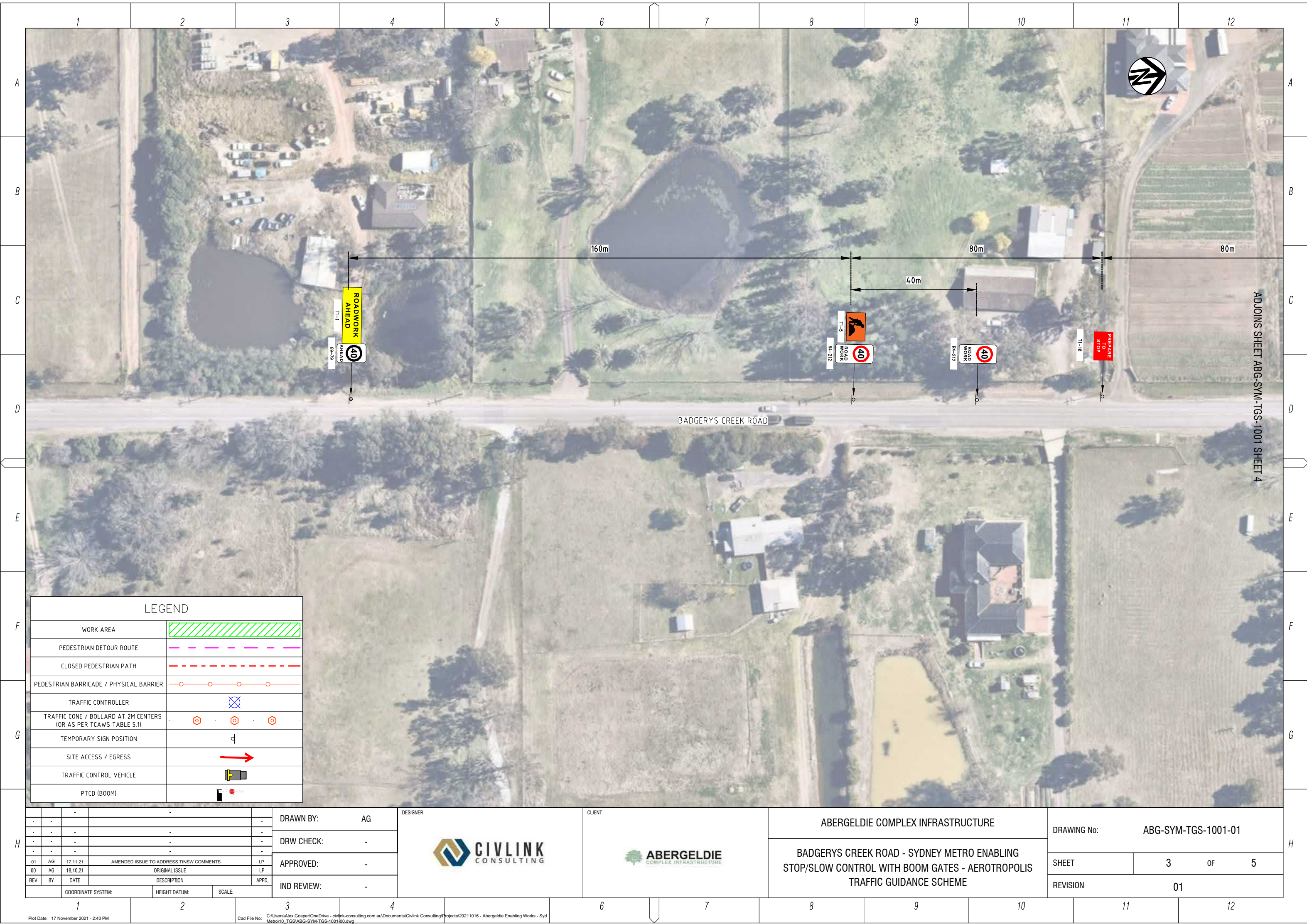
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NOT FOR CONSTRUCTION

20 APPENDIX B – SHORT TERM TRAFFIC CONTROL PLANS



A
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LEGEND

WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5.1)	
TEMPORARY SIGN POSITION	d
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

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01	AG	17.11.21	AMENDED ISSUE TO ADDRESS TINSW COMMENTS	LP	
00	AG	18.10.21	ORIGINAL ISSUE	LP	
REV	BY	DATE	DESCRIPTION	APPD.	
COORDINATE SYSTEM:		HEIGHT DATUM:	SCALE:		

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DRW CHECK: -
APPROVED: -
IND REVIEW: -

DESIGNER



CLIENT



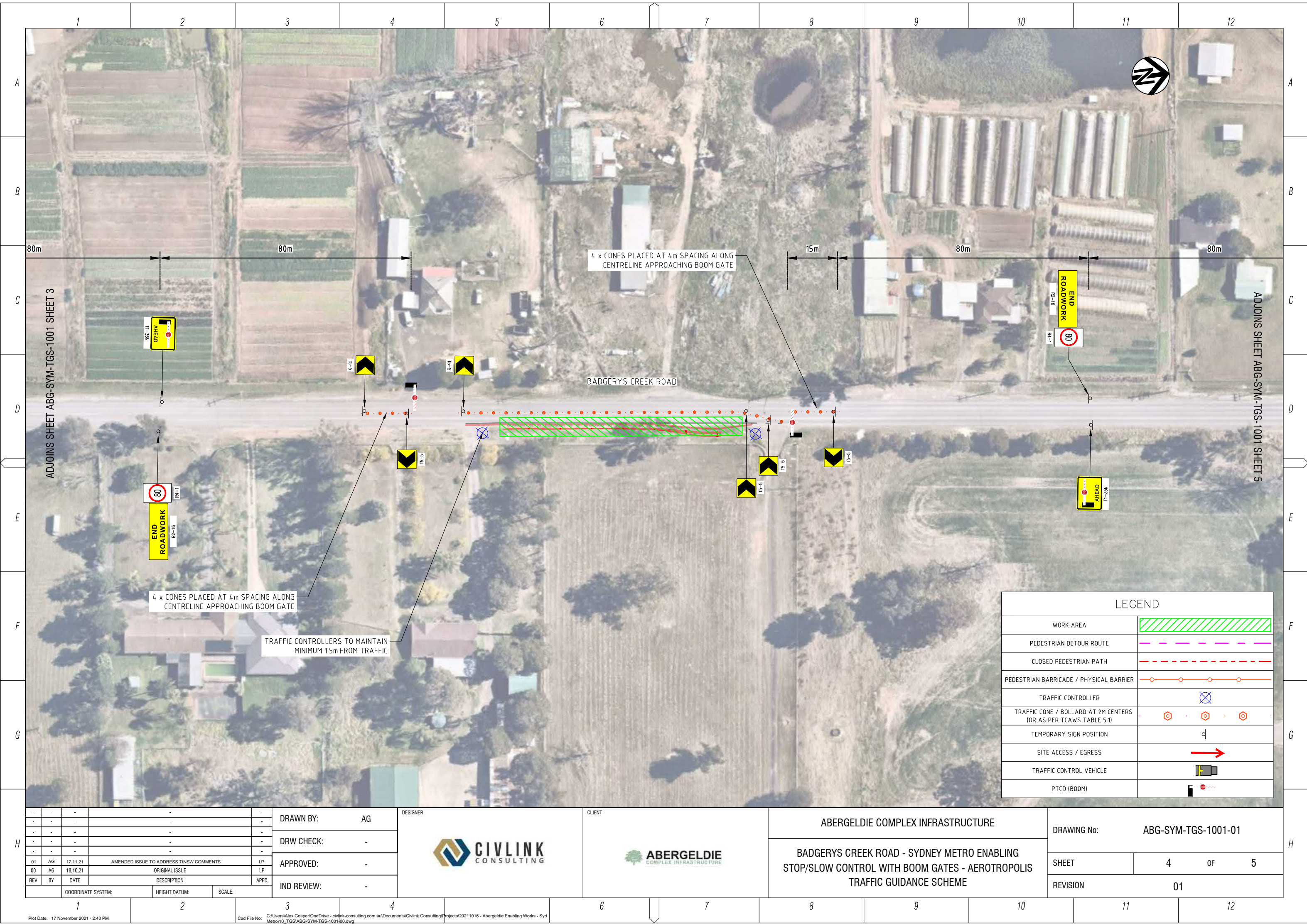
ABERGELDIE COMPLEX INFRASTRUCTURE

BADGERYS CREEK ROAD - SYDNEY METRO ENABLING
STOP/SLOW CONTROL WITH BOOM GATES - AEROTROPOLIS
TRAFFIC GUIDANCE SCHEME

DRAWING No: ABG-SYM-TGS-1001-01

SHEET 3 OF 5

REVISION 01



LEGEND	
WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5.1)	
TEMPORARY SIGN POSITION	
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

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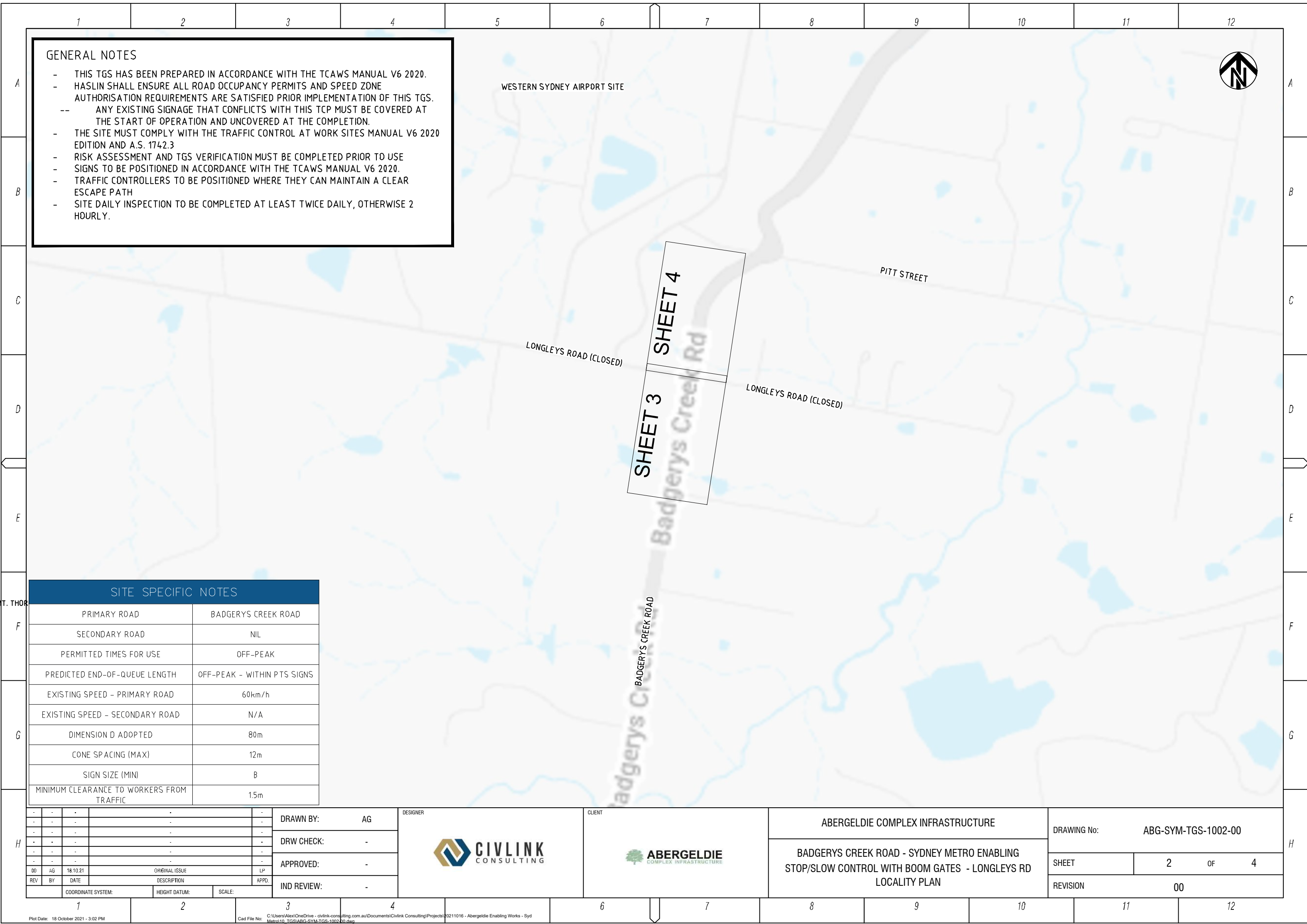
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ABERGELDIE COMPLEX INFRASTRUCTURE	
BADGERYS CREEK ROAD - SYDNEY METRO ENABLING STOP/SLOW CONTROL WITH BOOM GATES - AEROTROPOLIS TRAFFIC GUIDANCE SCHEME	

DRAWING No:	ABG-SYM-TGS-1001-01		
SHEET	4	OF	5
REVISION	01		



GENERAL NOTES

- THIS TGS HAS BEEN PREPARED IN ACCORDANCE WITH THE TCAWS MANUAL V6 2020.
- HASLIN SHALL ENSURE ALL ROAD OCCUPANCY PERMITS AND SPEED ZONE AUTHORISATION REQUIREMENTS ARE SATISFIED PRIOR IMPLEMENTATION OF THIS TGS.
- ANY EXISTING SIGNAGE THAT CONFLICTS WITH THIS TCP MUST BE COVERED AT THE START OF OPERATION AND UNCOVERED AT THE COMPLETION.
- THE SITE MUST COMPLY WITH THE TRAFFIC CONTROL AT WORK SITES MANUAL V6 2020 EDITION AND A.S. 1742.3
- RISK ASSESSMENT AND TGS VERIFICATION MUST BE COMPLETED PRIOR TO USE
- SIGNS TO BE POSITIONED IN ACCORDANCE WITH THE TCAWS MANUAL V6 2020.
- TRAFFIC CONTROLLERS TO BE POSITIONED WHERE THEY CAN MAINTAIN A CLEAR ESCAPE PATH
- SITE DAILY INSPECTION TO BE COMPLETED AT LEAST TWICE DAILY, OTHERWISE 2 HOURLY.



SITE SPECIFIC NOTES

PRIMARY ROAD	BADGERYS CREEK ROAD
SECONDARY ROAD	NIL
PERMITTED TIMES FOR USE	OFF-PEAK
PREDICTED END-OF-QUEUE LENGTH	OFF-PEAK - WITHIN PTS SIGNS
EXISTING SPEED - PRIMARY ROAD	60km/h
EXISTING SPEED - SECONDARY ROAD	N/A
DIMENSION D ADOPTED	80m
CONE SPACING (MAX)	12m
SIGN SIZE (MIN)	B
MINIMUM CLEARANCE TO WORKERS FROM TRAFFIC	1.5m

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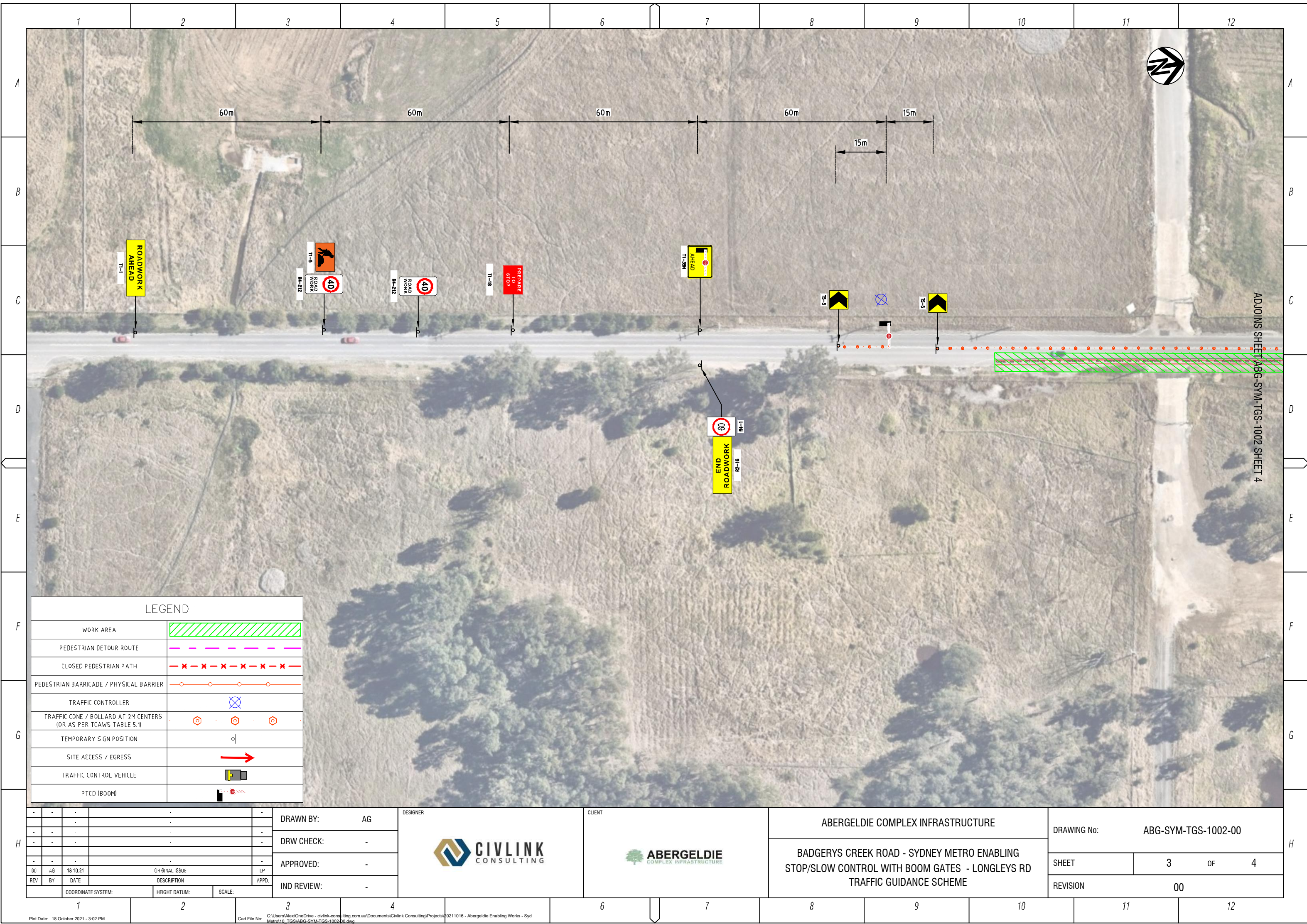
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APPROVED:	-
IND REVIEW:	-

DESIGNER

CLIENT

ABERGELDIE COMPLEX INFRASTRUCTURE
BADGERYS CREEK ROAD - SYDNEY METRO ENABLING STOP/SLOW CONTROL WITH BOOM GATES - LONGLEYS RD LOCALITY PLAN

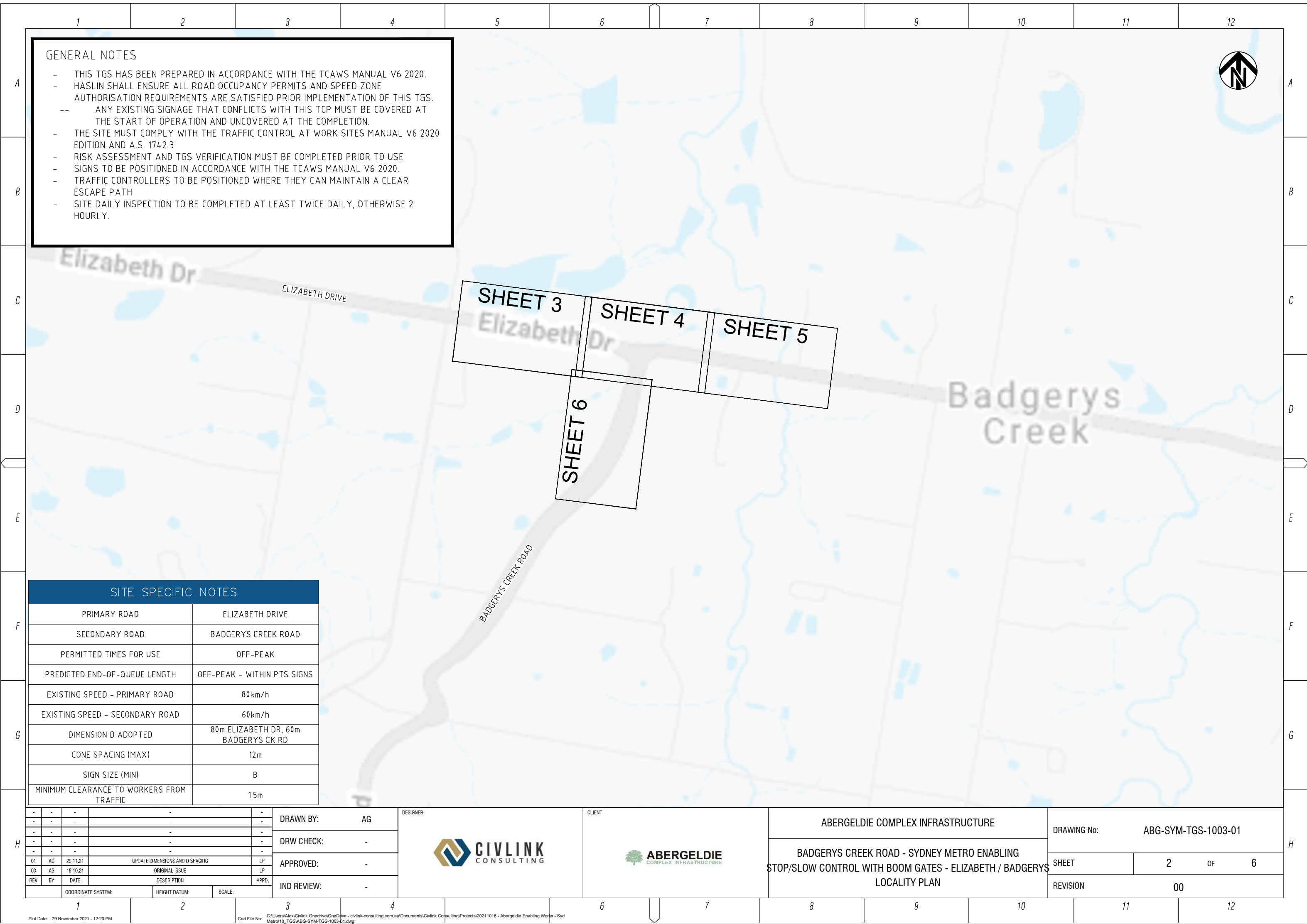
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SHEET	2 OF 4
REVISION	00



LEGEND

WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5.1)	
TEMPORARY SIGN POSITION	
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

DO		AG	18.10.21	ORIGINAL ISSUE	LP	DRAWN BY: AG	DESIGNER	CLIENT	ABERGELDIE COMPLEX INFRASTRUCTURE	DRAWING No: ABG-SYM-TGS-1002-00
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						APPROVED: -				REVISION 00
						IND REVIEW: -				



GENERAL NOTES

- THIS TGS HAS BEEN PREPARED IN ACCORDANCE WITH THE TCAWS MANUAL V6 2020.
- HASLIN SHALL ENSURE ALL ROAD OCCUPANCY PERMITS AND SPEED ZONE AUTHORISATION REQUIREMENTS ARE SATISFIED PRIOR IMPLEMENTATION OF THIS TGS.
- ANY EXISTING SIGNAGE THAT CONFLICTS WITH THIS TCP MUST BE COVERED AT THE START OF OPERATION AND UNCOVERED AT THE COMPLETION.
- THE SITE MUST COMPLY WITH THE TRAFFIC CONTROL AT WORK SITES MANUAL V6 2020 EDITION AND A.S. 1742.3
- RISK ASSESSMENT AND TGS VERIFICATION MUST BE COMPLETED PRIOR TO USE
- SIGNS TO BE POSITIONED IN ACCORDANCE WITH THE TCAWS MANUAL V6 2020.
- TRAFFIC CONTROLLERS TO BE POSITIONED WHERE THEY CAN MAINTAIN A CLEAR ESCAPE PATH
- SITE DAILY INSPECTION TO BE COMPLETED AT LEAST TWICE DAILY, OTHERWISE 2 HOURLY.



SITE SPECIFIC NOTES

PRIMARY ROAD	ELIZABETH DRIVE
SECONDARY ROAD	BADGERYS CREEK ROAD
PERMITTED TIMES FOR USE	OFF-PEAK
PREDICTED END-OF-QUEUE LENGTH	OFF-PEAK - WITHIN PTS SIGNS
EXISTING SPEED - PRIMARY ROAD	80km/h
EXISTING SPEED - SECONDARY ROAD	60km/h
DIMENSION D ADOPTED	80m ELIZABETH DR, 60m BADGERYS CK RD
CONE SPACING (MAX)	12m
SIGN SIZE (MIN)	B
MINIMUM CLEARANCE TO WORKERS FROM TRAFFIC	1.5m

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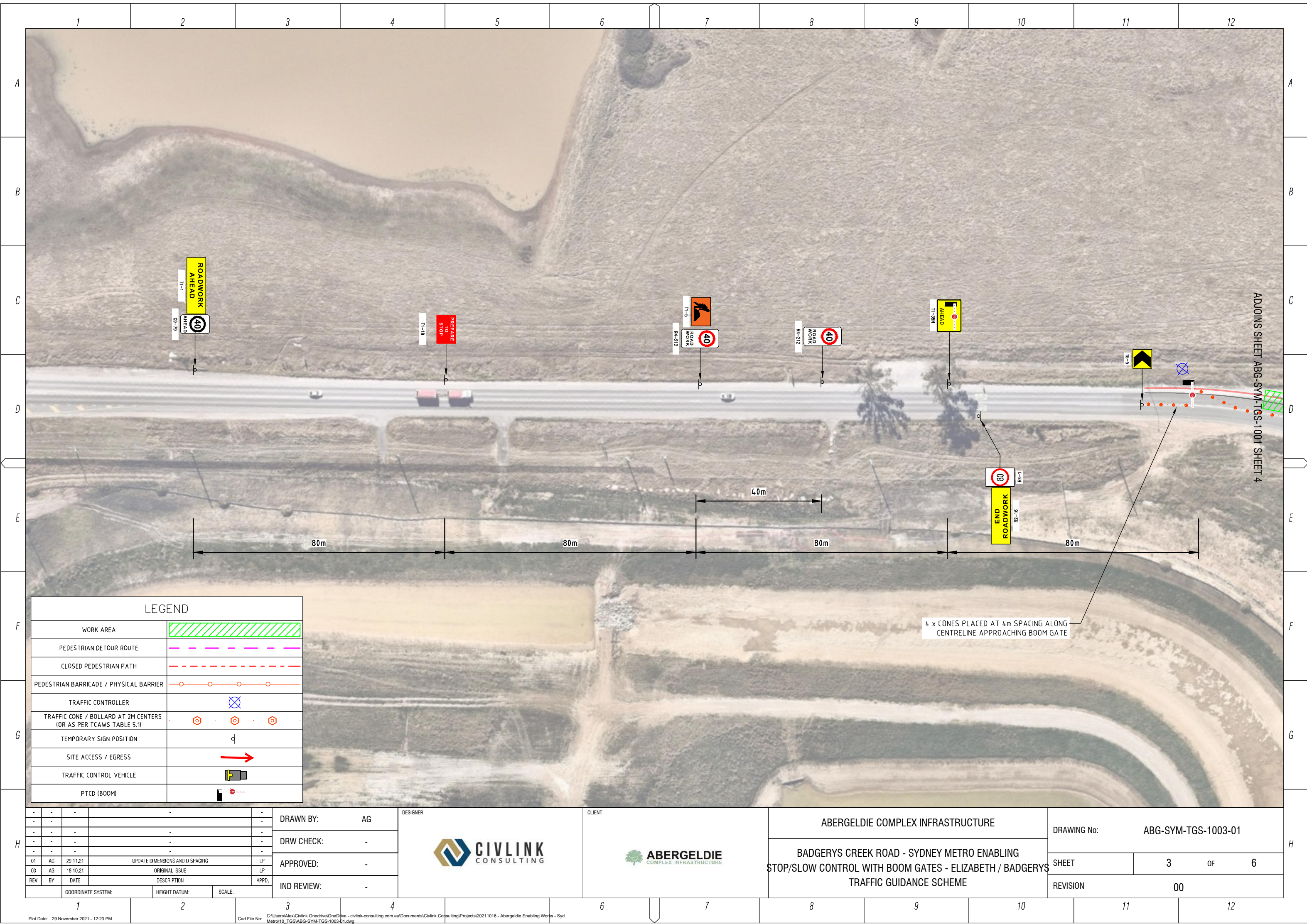
DESIGNER

CLIENT

ABERGELDIE COMPLEX INFRASTRUCTURE

BADGERYS CREEK ROAD - SYDNEY METRO ENABLING
STOP/SLOW CONTROL WITH BOOM GATES - ELIZABETH / BADGERYS
LOCALITY PLAN

DRAWING No:		ABG-SYM-TGS-1003-01	
SHEET	2	OF	6
REVISION		00	



LEGEND

WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5.1)	
TEMPORARY SIGN POSITION	d
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

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IND REVIEW:	-

DESIGNER



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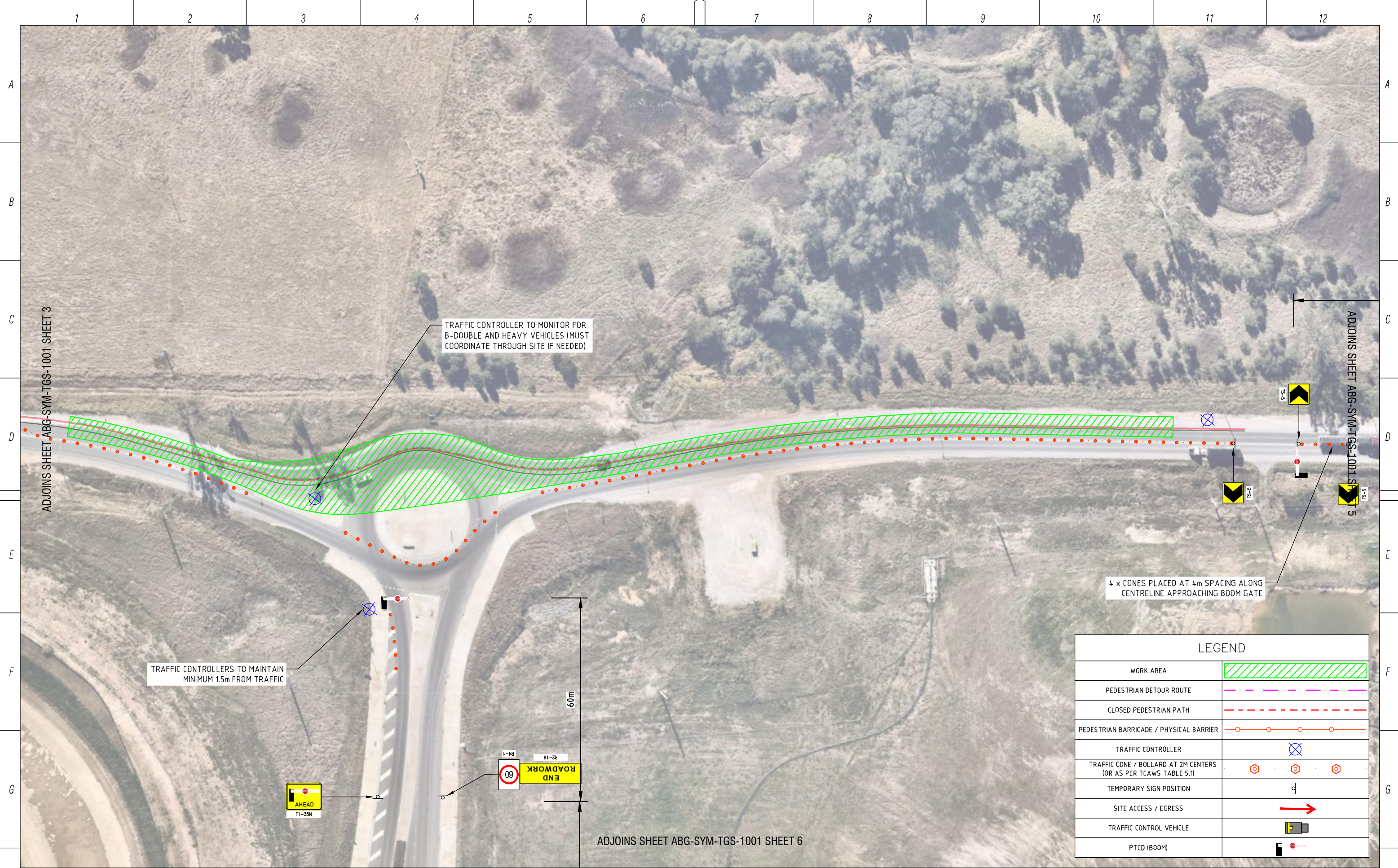


ABERGELDIE COMPLEX INFRASTRUCTURE
BADGERYS CREEK ROAD - SYDNEY METRO ENABLING STOP/SLOW CONTROL WITH BOOM GATES - ELIZABETH / BADGERYS TRAFFIC GUIDANCE SCHEME

DRAWING No: ABG-SYM-TGS-1003-01

SHEET 3 OF 6

REVISION 00



LEGEND	
WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5.1)	
TEMPORARY SIGN POSITION	
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

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APPROVED: -

IND REVIEW: -

DESIGNER

CLIENT

ABERGELDIE COMPLEX INFRASTRUCTURE

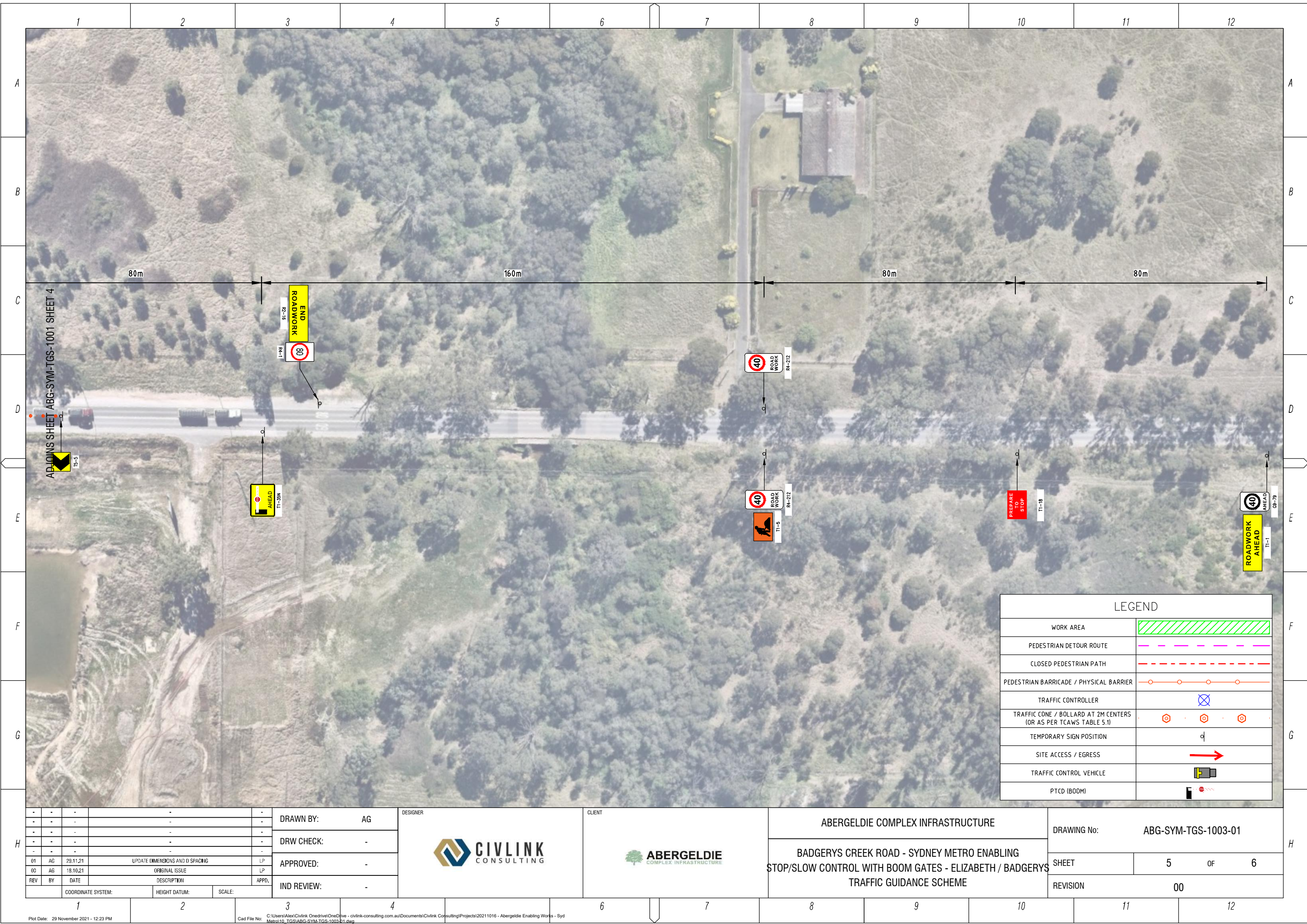
BADGERYS CREEK ROAD - SYDNEY METRO ENABLING
STOP/SLOW CONTROL WITH BOOM GATES - ELIZABETH / BADGERYS
TRAFFIC GUIDANCE SCHEME

DRAWING No: ABG-SYM-TGS-1003-01

SHEET	4	OF	6
REVISION	00		

Plot Date: 29 November 2021 - 12:23 PM

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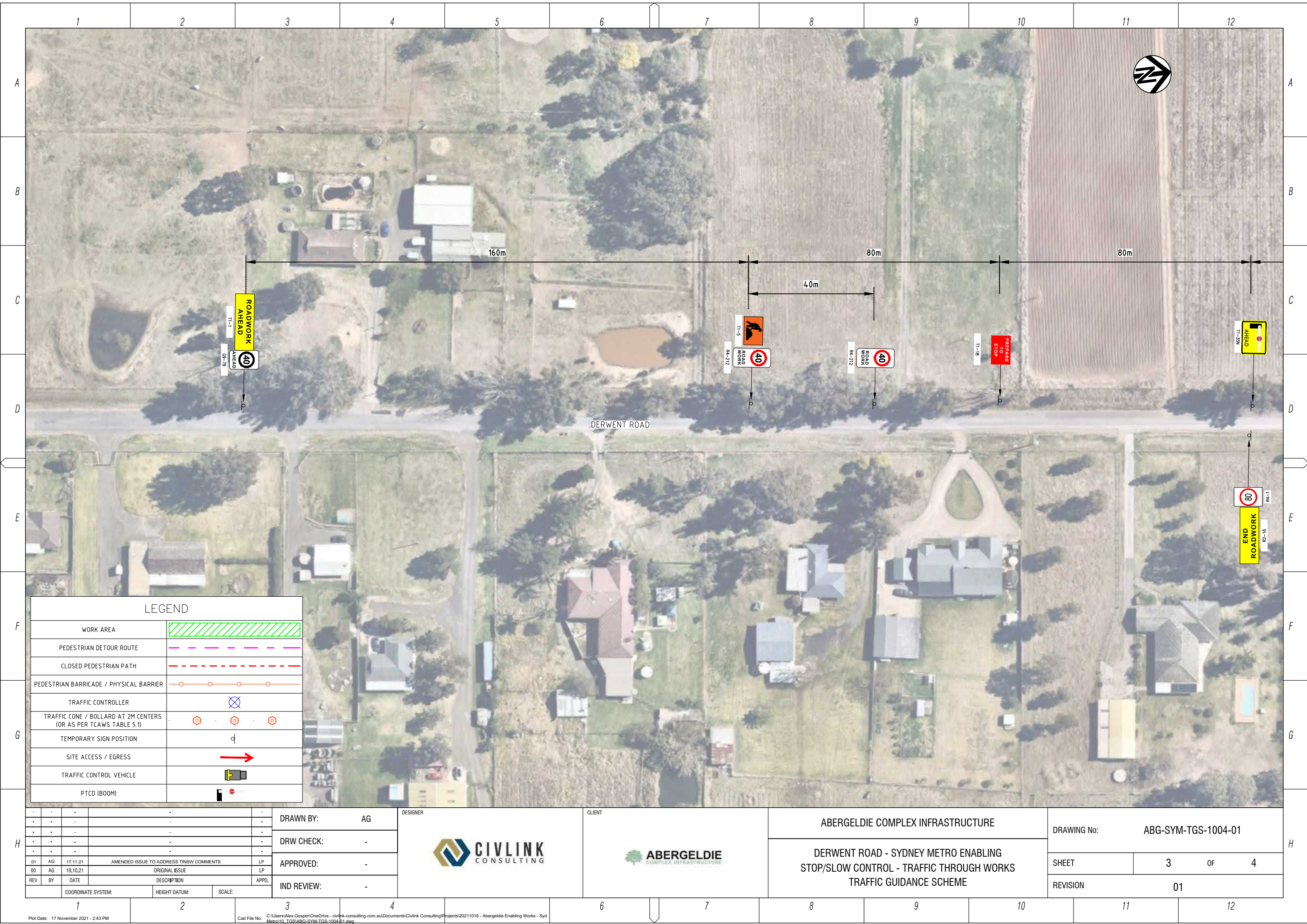
ABERGELDIE COMPLEX INFRASTRUCTURE

BADGERYS CREEK ROAD - SYDNEY METRO ENABLING
STOP/SLOW CONTROL WITH BOOM GATES - ELIZABETH / BADGERYS
TRAFFIC GUIDANCE SCHEME

DRAWING No:	ABG-SYM-TGS-1003-01		
SHEET	5	OF	6
REVISION	00		

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	-	-	-	-	-	DRW CHECK:	-			DERWENT ROAD - SYDNEY METRO ENABLING STOP/SLOW CONTROL - TRAFFIC THROUGH WORKS LOCALITY PLAN		SHEET	2 OF 4	
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			COORDINATE SYSTEM:		HEIGHT DATUM:	SCALE:								



LEGEND	
WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5-1)	
TEMPORARY SIGN POSITION	d
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

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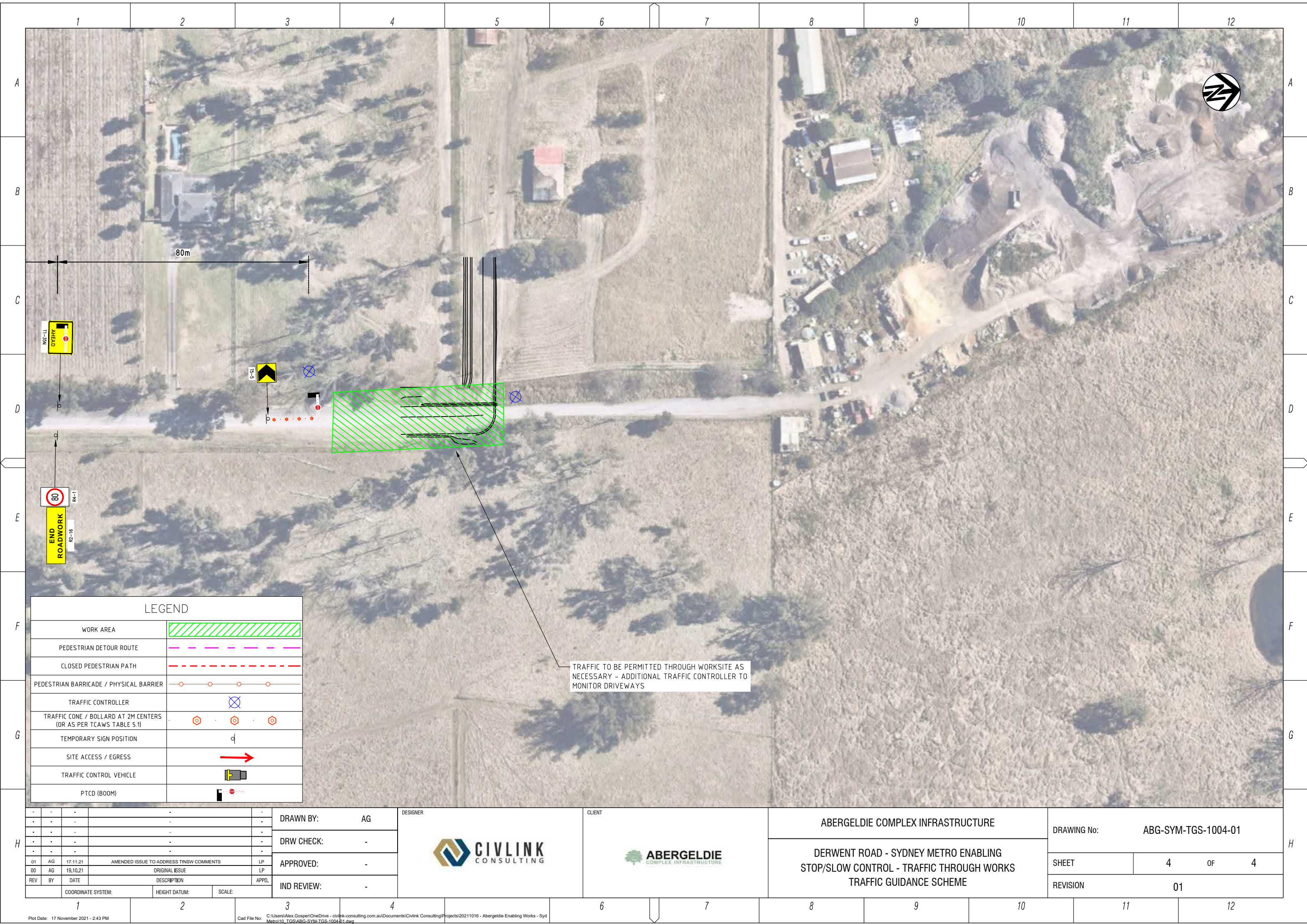
ABERGELDIE COMPLEX INFRASTRUCTURE

DERWENT ROAD - SYDNEY METRO ENABLING
STOP/SLOW CONTROL - TRAFFIC THROUGH WORKS
TRAFFIC GUIDANCE SCHEME

DRAWING No: ABG-SYM-TGS-1004-01

SHEET 3 OF 4

REVISION 01



LEGEND

WORK AREA	
PEDESTRIAN DETOUR ROUTE	
CLOSED PEDESTRIAN PATH	
PEDESTRIAN BARRICADE / PHYSICAL BARRIER	
TRAFFIC CONTROLLER	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS TABLE 5.1)	
TEMPORARY SIGN POSITION	
SITE ACCESS / EGRESS	
TRAFFIC CONTROL VEHICLE	
PTCD (BOOM)	

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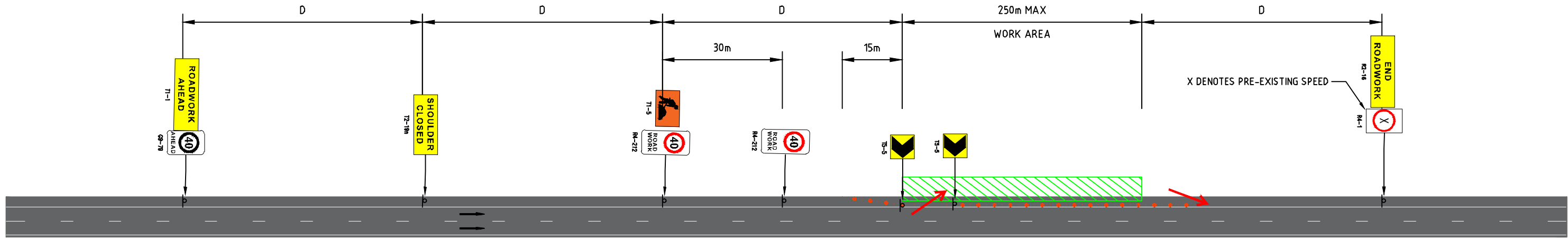
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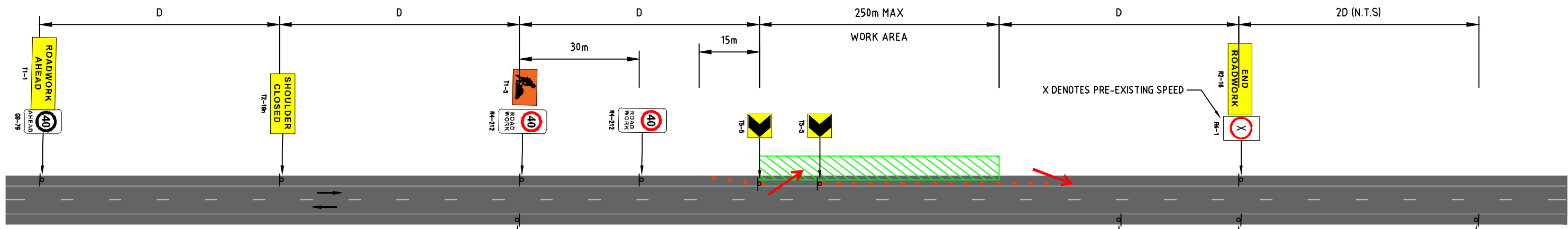
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ABERGELDIE COMPLEX INFRASTRUCTURE
DERWENT ROAD - SYDNEY METRO ENABLING STOP/SLOW CONTROL - TRAFFIC THROUGH WORKS TRAFFIC GUIDANCE SCHEME

DRAWING No:	ABG-SYM-TGS-1004-01
SHEET	4 OF 4
REVISION	01

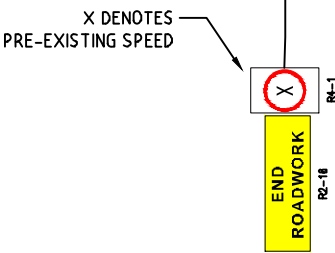


GENERIC SHOULDER CLOSURE - DIVIDED CARRIAGEWAY (60 - 80km/h POSTED SPEED)



GENERIC SHOULDER CLOSURE - SINGLE CARRIAGEWAY (60 - 80km/h POSTED SPEED)

LEGEND	
SITE COMPOUND	
TRAFFIC CONE / BOLLARD AT 2M CENTERS (OR AS PER TCAWS)	
TEMPORARY SIGN POSITION	
SITE ACCESS / EGRESS	



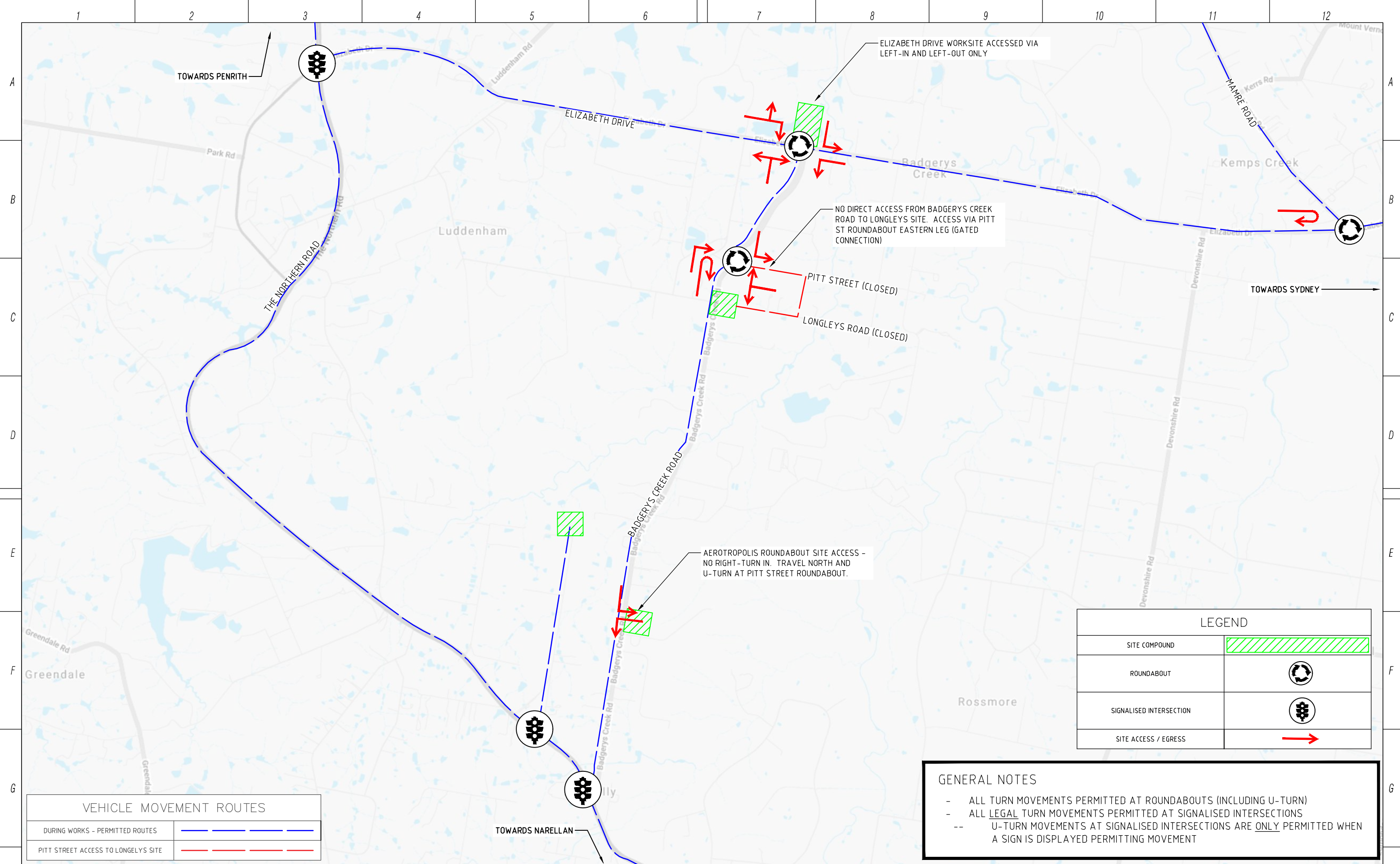
- GENERAL NOTES**
- THIS TGS HAS BEEN PREPARED IN ACCORDANCE WITH THE TCAWS MANUAL V6 2020.
 - HASLIN SHALL ENSURE ALL ROAD OCCUPANCY PERMITS AND SPEED ZONE AUTHORISATION REQUIREMENTS ARE SATISFIED PRIOR IMPLEMENTATION OF THIS TGS.
 - ANY EXISTING SIGNAGE THAT CONFLICTS WITH THIS TCP MUST BE COVERED AT THE START OF OPERATION AND UNCOVERED AT THE COMPLETION.
 - THE SITE MUST COMPLY WITH THE TRAFFIC CONTROL AT WORK SITES MANUAL V6 2020 EDITION AND A.S. 1742.3
 - RISK ASSESSMENT AND TGS VERIFICATION MUST BE COMPLETED PRIOR TO USE
 - SIGNS TO BE POSITIONED IN ACCORDANCE WITH THE TCAWS MANUAL V6 2020.
 - TRAFFIC CONTROLLERS TO BE POSITIONED WHERE THEY CAN MAINTAIN A CLEAR ESCAPE PATH
 - SITE DAILY INSPECTION TO BE COMPLETED AT LEAST TWICE DAILY, OTHERWISE 2 HOURLY.

- GENERIC PLAN USE**
- THIS TGS HAS BEEN PREPARED FOR THE USE ON ROADS THAT MATCH THE CONSTRAINTS AND CRITERIA DISPLAYED
 - THIS PLAN IS NOT TO BE USED ON FREEWAYS OR MOTORWAYS
 - THIS PLAN IS NOT INTENDED TO BE USED ADJACENT LANE DROPS
 - THIS PLAN IS NOT INTENDED TO BE USED IN 100km/h SPEED ZONES
 - ENSURE WORKERS MAINTAIN 1.5m CLEARANCE TO TRAFFIC
 - SIGNS TO BE POSITIONED TO MAINTAIN DRIVEWAY AND SIDE ROAD SITE DISTANCES
 - SIGN POSITIONING TO AVOID OBSTRUCTING PEDESTRIAN AND CYCLIST ACCESS
 - WHERE HIGH VOLUME OF PEDESTRIAN AND CYCLIST ACTIVITY, ADDITIONAL TRAFFIC CONTROLLER TO BE POSITIONED ADJACENT WORKS TO MANAGE AND GUIDE PEDESTRIANS AND CYCLISTS AROUND OR THROUGH THE WORKSITE

SITE SPECIFIC NOTES	
PRIMARY ROAD	DERWENT ROAD, ELIZABETH DRIVE, BADGERYS CREEK ROAD
SECONDARY ROAD	NIL
PERMITTED TIMES FOR USE	24/7
PREDICTED END-OF-QUEUE LENGTH	N/A - LIMITED
EXISTING SPEED - PRIMARY ROAD	DERWENT / ELIZABETH - 80km/h BADGERYS CK ROAD - 60km/h
EXISTING SPEED - SECONDARY ROAD	N/A
DIMENSION D ADOPTED	DERWENT / ELIZABETH - 80m BADGERYS CK RD - 60m
CONE SPACING (MAX)	12m
SIGN SIZE (MIN)	B
MINIMUM CLEARANCE TO WORKERS FROM TRAFFIC	1.5m

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21 APPENDIX C – SITE VMP



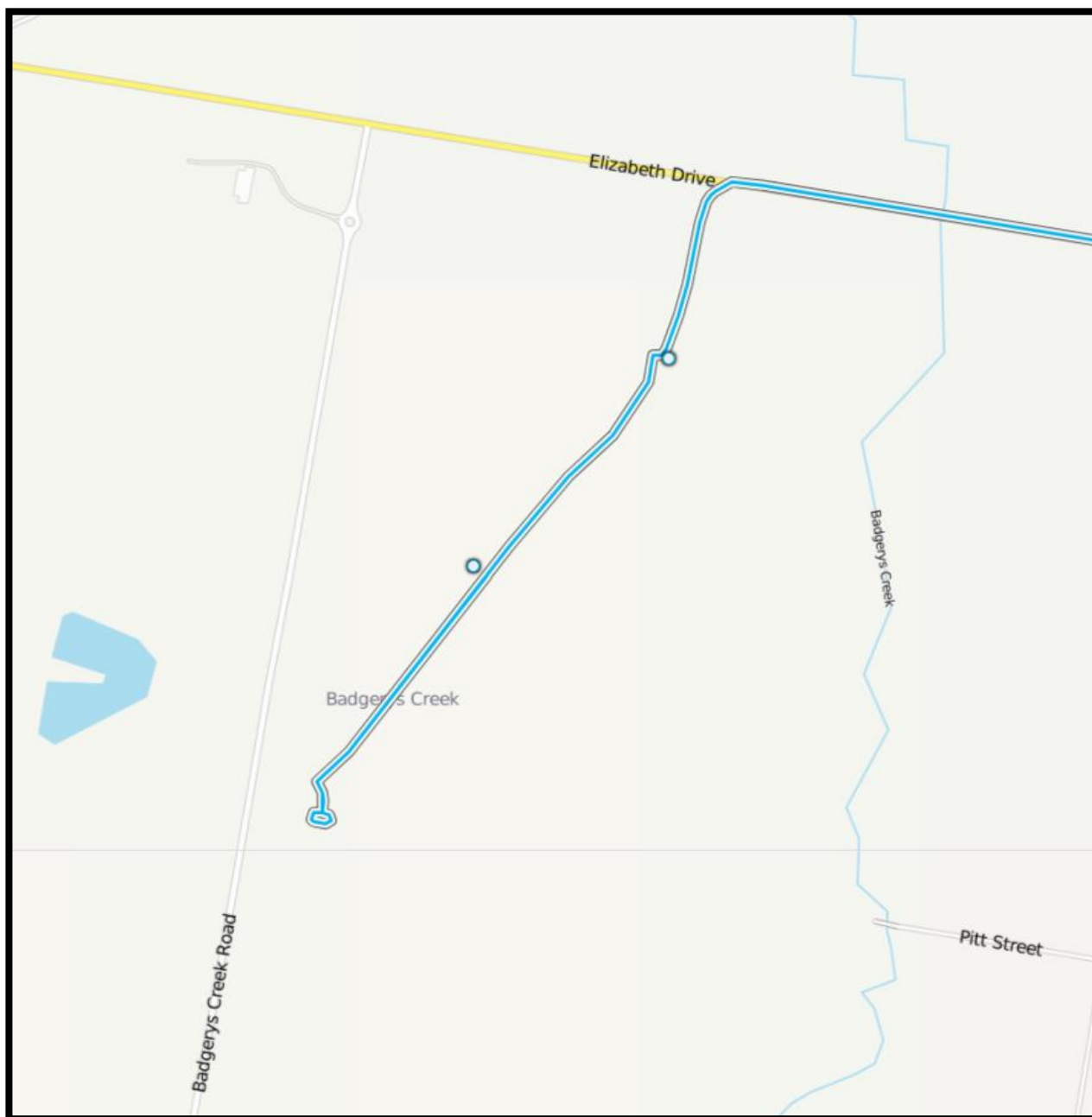
VEHICLE MOVEMENT ROUTES	
DURING WORKS - PERMITTED ROUTES	
PITT STREET ACCESS TO LONGELYS SITE	

LEGEND	
SITE COMPOUND	
ROUNDABOUT	
SIGNALISED INTERSECTION	
SITE ACCESS / EGRESS	

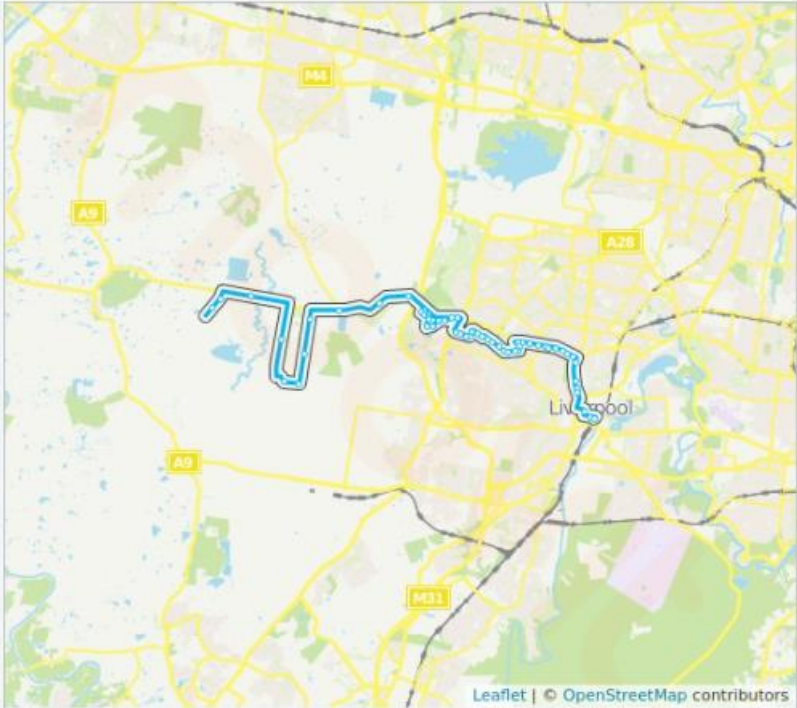
GENERAL NOTES

- ALL TURN MOVEMENTS PERMITTED AT ROUNDABOUTS (INCLUDING U-TURN)
- ALL LEGAL TURN MOVEMENTS PERMITTED AT SIGNALISED INTERSECTIONS
- U-TURN MOVEMENTS AT SIGNALISED INTERSECTIONS ARE ONLY PERMITTED WHEN A SIGN IS DISPLAYED PERMITTING MOVEMENT


22 APPENDIX D - BUS ROUTE 801 MAP & TIMETABLE



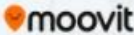
801 bus Route Map



Leaflet | OpenStreetMap contributors

 **801**

Badgerys Creek to Liverpool



Download PDF: 801 timetable, stops and map

View PDF: 801 timetable, stops and map

801 bus Timetable

801 bus route operates on Tuesday, Wednesday, Thursday, Friday.
Timetable hours: 15:00 - 17:55

Day	Operating Hours
Monday	Not Operational
Tuesday	15:00 - 17:55
Wednesday	15:00 - 17:55
Thursday	15:00 - 17:55
Friday	15:00 - 17:55
Saturday	Not Operational
Sunday	Not Operational

23 APPENDIX E – TRAFFIC CONTROL INSPECTION CHECKLIST

SWP033-F01 TRAFFIC CONTROL INSPECTION CHECKLIST



Note: If traffic controls are installed on a public road in accordance with local traffic authority approved TCP / TMP – then the traffic controls shall be inspected by an appropriately ticketed person with applicable level qualification using the local traffic authority inspection checklist. The following inspection can be carried out by the Site Supervisor with any identified issues resolved on site if within their ability or otherwise given to the nominated traffic controller contractor to resolve.

Project Name:

Project No:

INSPECTION CRITERIA	Yes	No	N/A	Comments / Action
Separation				
Are separate entries and exits provided for vehicles and pedestrians including visitors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the entries and exits protect pedestrians from being struck by vehicles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the layout of the workplace effectively separate pedestrians, vehicles and powered mobile plant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are systems in place to keep pedestrians and moving vehicles or plant apart like physical barriers, exclusion zones and safety zones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vehicle routes				
Are the roads and pathways within the workplace suitable for the types and volumes of traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are loading zones clearly marked?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do vehicle route designs take into account vehicle characteristics under all conditions, for example emergency braking, running out of fuel or adverse weather?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there enough suitable parking places for every vehicle and are they used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are traffic directions clearly marked and visible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If a one way system is provided for vehicle routes within the workplace is it properly designed, signposted and used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are vehicle routes wide enough to separate vehicles and pedestrians and for the largest vehicle using them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do vehicle routes have firm and even surfaces?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are vehicle routes kept clear from obstructions and other hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are vehicle routes well maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do vehicle routes avoid sharp or blind corners?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pedestrian routes				
Are pedestrian walkways separated from vehicles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Where necessary are there safe pedestrian crossings on vehicle routes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there a safe pedestrian route which allows visitors to access the site office and facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are pedestrian walkways clearly marked?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are pedestrian walkways well maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vehicle movement				
Have drive-through, one-way systems been used to reduce the need for reversing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are non-essential workers excluded from areas where reversing occurs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are vehicles slowed to safe speeds, for example speed limiters on mobile plant or chicanes on vehicle routes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do drivers use the correct routes, drive within the speed limit and follow site rules?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Signs				
Are there appropriate speed limit signs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there clear warnings of powered mobile plant hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there clear signage of pedestrian and powered mobile plant exclusion zones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is lighting adequate to ensure signs are visible, particularly at night?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Warning devices				
Are flashing lights, sensors and reversing alarms installed on powered mobile plant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Personal Protective Equipment				
Is PPE like high visibility clothing provided and used where necessary?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



INSPECTION CRITERIA	Yes	No	N/A	Comments / Action
Information, training and supervision				
Have workers received site specific training and information on traffic hazards, speed limits, parking and loading areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is information and instruction about safe movement around the workplace provided to visitors and external delivery drivers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the level of supervision sufficient to check traffic movement and ensure safety of pedestrians and drivers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vehicle safety				
Have vehicles and powered mobile plant been selected which are appropriate for the tasks to be done?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do vehicles have good direct visibility or devices for improving vision like external and side mirrors and reversing sensors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are vehicles fitted with effective service and parking brakes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do vehicles and powered mobile plant have seatbelts where necessary?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there a regular maintenance program for all vehicles and powered mobile plant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there a system for reporting faults on all vehicles and powered mobile plant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do drivers carry out basic safety checks before using vehicles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic Signs				
Are all external to site traffic signs installed / located as per TCP / TMP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are any modification to approved TCP / TMP been approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all signs free of obstructions limiting visual contact by drivers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all signs free of damage affecting their readability?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are signs visible in all lighting conditions / weather conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all signs of the correct size?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all signs installed at the correct height?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are VMS signs placed in clear line of sight to drivers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are VMS signs parked / placed in safe position?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are traffic speeds being adhered to?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are appropriate cautionary / warning signs placed well in advance on the approach to the works?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Any signs not use have been covered over?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Has access for cyclists / pedestrians been provided for?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Has access into / out of property been provided for?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic Controllers				
Are traffic controllers (TC) being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there sufficient / correct number of TC in use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are TC qualifications / tickets current and sighted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Has an appropriate means of communication between TC been established?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic Barriers				
Are traffic barriers installed correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are the barriers the correct type for the application?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are water barriers filled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If using flex-barriers, are workers working outside the deflection zone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have speeds been adjusted to suit barrier type and installation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Corrective Actions Required as a result of Inspection				

Traffic Controls Inspected by:		Dated:	
<p>Note: If the answer is "No" to any of the above questions, then the identified issue shall be immediately rectified by site personnel if within their ability to do so or alternatively having the traffic control contractor return to site and rectify. If a potential issue cannot be immediately rectified – the Supervisor shall advise all site personnel of the unsafe condition and what action is to be taken to make area safe until properly resolved.</p>			

24 APPENDIX F – COMMUNITY COMMUNICATION STARATEGY

SYDNEY METRO COMMUNITY COMMUNICATION STRATEGY CONTAINED IN ITS OWN DOCUMENT FILE



Overarching Community Communications Strategy (OCCS)

A framework for communication and engagement during construction

Project:	Sydney Metro	Date:	12 April 2021
Group:	Project Communication	Status:	FINAL
Author:	Michelle Delaat	Revision:	2.2
Company:	Sydney Metro	File number:	
File name:	Overarching Community Communication Strategy (OCCS)		

Unclassified

Revision	Revision date	Status	Brief reason for update	Name/ position/ company	Author/ Reviewer/ Approver	Signature
1	17/7/20		JOa	A/Deputy Executive Director Communications & Engagement	Anita Brown	<i>Anita Brown</i>
2	05/08/20		Updated roles and responsibilities for independent advisors	A/Deputy Executive Director Communications & Engagement	Anita Brown	<i>Anita Brown</i>
2.1	28/10/20		Remove reference to Transport for NSW Good Neighbour Policy	A/Deputy Executive Director Communications & Engagement	Anita Brown	<i>Anita Brown</i>
2.2	07/04/2021		Minor changes including references in line with Sydney Metro West planning approval for SSI 10038	A/Director, Project Communication, Sydney Metro West	Joanna Vaughn	<i>Joanna Vaughan</i>

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1 Introduction

1.1. Sydney Metro

Sydney's new world-scale metro system is the biggest program of public transport infrastructure currently under construction in Australia and the largest urban rail infrastructure investment in the nation's history.

A key part of delivering the NSW Government's Future Transport 2056 priorities, this customer-focused fully-accessible metro service will help grow the state's economy and help create vibrant places and communities. Sydney Metro has responsibility for delivering great places around metro stations so that precincts are designed, developed, activated and managed in line with the metro system to ensure the best outcomes for customers and communities.

Sydney Metro works collaboratively and in partnership with the Australian Government to deliver Sydney Metro – Western Sydney Airport which is a jointly-funded project.

1.2. Transforming Sydney

Sydney Metro is transforming Sydney, cutting travel times, reducing congestion and making it easier and faster to get around Australia's biggest city.

This new world-class mass transit system will evolve with the city it will serve for generations to come. Metro rail will catalyse development in Greater Western Sydney and serve as the transport spine for new communities.

Global Sydney's population will pass 6 million by 2036; an extra 1.7 million people will progressively move into to Australia's biggest city, which will support an extra 840,000 jobs and 680,000 homes.

Sydney Metro will help boost economic productivity by bringing new jobs and new educational opportunities closer to home.

Designed with customers at its centre, stations will be quick and easy to get in and out of, trains will be fast, safe and reliable, and technology will keep customers connected at every step of the journey.

Sydney Metro will integrate with new communities and transform existing urban centres.

1.3. Future Transport

In October 2017, the NSW Government announced Future Transport 2056 – Transport for NSW's 40-year blueprint for the future of the NSW transport system.

To support the Greater Sydney Commission's Greater Sydney Region Plan, the new transport strategy aims to improve public transport so that – by 2056 – 70 per cent of people will live within 30 minutes of work, study and entertainment.

Future Transport 2056 is a comprehensive strategy to ensure travel is more personal, integrated, accessible, safe, reliable and sustainable.

There are three parts to the strategy: programs that are committed to or funded by the NSW Government over the next 10 years; those that are under investigation; and visionary projects

in the 20 year-plus timeframe that are being identified now for future consideration as the population grows.

More information about Future Transport 2056 is available at:

<https://future.transport.nsw.gov.au/>

1.4. Sydney Metro values

At Sydney Metro our vision and values guide us in our interactions with each other, our stakeholders and our partners.

Our Vision is “Transforming Sydney with a world class metro”, and our Mission is to deliver Sydney a connected metro service: providing more choice to customers and opportunities for our communities now and in the future.

Culture is a critical enabler of an organisation’s success. To help develop a strong organisational culture, Sydney Metro has established a set of values that guides its approach to the procurement and delivery of Sydney Metro. These values are:



Figure 1: Sydney Metro Core Values

Sydney Metro has an expectation that contractors will adhere and uphold these values in their dealings with Sydney Metro, other contractors and stakeholders. Our values support us working together to achieve agreed outcomes supporting the delivery of our projects across our many diverse communities.

Sydney Metro has a number of programs and initiatives in place to embed these values and recognise individuals and teams for consistently demonstrating them.

1.5. Sydney Metro community and stakeholder engagement

We meet communities where they are based so we can build strong relationships and create opportunities for meaningful engagement.

Sydney Metro creates successful engagement outcomes by working closely and cooperatively with the community, Federal, State and local government, contractors, advisors, other service providers and key stakeholders.

Sydney Metro has been working with stakeholders and communities every step of the way since 2011, adapting to community needs and refining our approach to delivering community and stakeholder engagement to achieve better outcomes.

Key to the ongoing success of our engagement program has been a commitment to building personal relationships through face-to-face and digital engagement, supported by effective action and collaboration within multidisciplinary project teams.

Sydney Metro understands that the community and stakeholders want to communicate and access information in ways that are convenient and accessible. Our communication approach

continues to evolve to ensure our diverse communities have access to a variety of platforms that ensure a personalised approach to community engagement. Sydney Metro will continue to monitor the communication landscape to provide best practice solutions to engagement.

1.6. Our neighbours

New metro stations are a catalyst for development, regeneration and renewal of neighbourhoods, bringing to life placemaking opportunities. It can be exciting to watch the metro station and local precinct come to life but we also know that communities located immediately near construction sites will be more likely to notice construction works and associated impacts, and may potentially find the cumulative changes happening in their local area difficult to comprehend.

Sydney Metro's communication and engagement approach places particular emphasis on these communities whether they are residents, businesses, schools and childcare centres, or places of worship.

Sydney Metro has extensive experience working with a range of businesses located near our construction sites, and we ensure that tailored communication solutions are provided. Our approach ensures businesses are provided with engagement solutions for their type of business, operational hours of work and size of the organisation.

1.7. A new project delivery landscape

Sydney is growing and the NSW Government is delivering projects to reduce traffic congestion and improve public transport.

Sydney Metro is committed to working closely with other nearby projects, local councils, Federal and State Government agencies, and our stakeholders to manage and coordinate construction activities and traffic to help minimise impacts on the community.

Sydney Metro works with other nearby projects to enable close coordination of communication, sharing of information to streamline engagement, and assist the community to understand projects more holistically in their area.

1.8. Fostering strong relationships throughout the project lifecycle

Sydney Metro works with the community and its stakeholders throughout project development, planning, and project delivery. At all stages of this project lifecycle, Sydney Metro ensures engagement is open and transparent ensuring goodwill is established and strong relationships formed.

Sydney Metro will work with its delivery partners to ensure project commitments and community and stakeholder needs established during the planning phases are continued and considered during the delivery phase.

1.9. Statutory planning context

The delivery of the Sydney Metro network are predominately considered State significant infrastructure (SSI) projects under Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) requiring preparation and public exhibition of an Environmental Impact Statement and approval from the NSW Minister for Planning and Public

Spaces. The Minister for Planning and Public Spaces may approve the projects subject to conditions of approval.

In addition to approval under the EP&A Act, some Sydney Metro projects may also require assessment and approval under Commonwealth legislation, such as the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Specifically, Sydney Metro Western Sydney Airport also requires approval under the Commonwealth *Airports Act 1996* (Airports Act) for all works located within the footprint of Western Sydney International (Nancy Bird-Walton) Airport.

Sydney Metro projects associated with the delivery of integrated stations and precinct developments are generally subject to assessment and approval as State significant development (SSD) in accordance with Division 4.7 of the EP&A Act.

This Overarching Community Communication Strategy (OCCS) and the commitments provided within this strategy are intended to form part of any relevant planning approval for Sydney Metro projects. Following the approval of projects, contractor-specific community communication strategies will be prepared in accordance with this overarching strategy and any relevant project-specific conditions of approval.

1.10. Integrated stations and precinct developments

New metro stations create opportunities to provide for community needs in consideration of the future vision, relevant planning controls and local character of each area.

An integrated station and precinct development is made up of the metro station and building(s) above and/or around the station. Once built, these developments could deliver a range of uses like community facilities, new homes and green spaces, shops, restaurants and commercial office spaces.

All future integrated station and precinct developments would be subject to separate planning approval processes that would include community and stakeholder engagement in line with this OCCS and any statutory requirements of a State Significant Development.

Where required, early engagement would be undertaken with key project stakeholders to support the development of a two-way dialogue in relation to integrated station and precinct developments ahead of relevant planning approval processes.

2. About this plan

The Overarching Community Communication Strategy (OCCS) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with communities, stakeholders and businesses. This plan is intended to be used as a framework for community engagement across all Sydney Metro projects and contracts.

The OCCS considers all work activities and packages for Sydney Metro and its projects for the duration of work, and 12 months following the completion of construction.

Sydney Metro is responsible for the development and implementation of the OCCS to ensure there is a coordinated approach to stakeholder, business and community liaison across the entire program of work for Sydney Metro.

Contract specific Community Communication Strategies (CCS) will be developed by appointed project delivery communication teams (PDCT) to address contract and site specific needs of the community, stakeholders and businesses. These strategies will reflect the requirements of the OCCS (this plan) and they will adhere to the requirements outlined in the relevant contract specification – Stakeholder and Community Engagement, along with requirements identified in any relevant planning approval and/or environmental protection licence.

The OCCS and CCS' are supported by a Construction Complaints Management System (CCMS) which outlines the framework for managing complaints, enquiries and escalation processes throughout the project lifecycle. The CCMS also outlines the process for reporting complaints.

The Small Business Owners Engagement Plan (SBOEP) is a stand-alone plan which supports these strategies.



Figure 2: Communication strategy hierarchy

The communication strategy hierarchy is supported by the procedures and processes outlined in Section 8 and the Sydney Metro Integrated Management System's Communication and Engagement Management Plan, which outlines Sydney Metro's approach to stakeholder management, public affairs, public communication and strategic partnerships.

2.1. Accountabilities

The Deputy Executive Director Communication and Engagement, or delegate, is accountable for this document. Accountability includes authorising the document, monitoring its effectiveness, and performing a formal document review.

Members of the team including Sydney Metro staff, contractors, subcontractors and consultants are accountable for ensuring the requirements of this plan are implemented within their area of responsibility. This document will be reviewed and reissued annually.

2.2. Purpose

This OCCS will guide Sydney Metro's interactions with stakeholders and the community and will outline the:

- Approach, objectives, principals, and tools to be used
- Team structure, roles and responsibilities
- Communication protocols and procedures to be followed
- Key stakeholders
- Approach to low impact works or preparatory activities
- Approach to reporting and evaluation
- The commitments provided in this plan are intended to form part of, and satisfy the obligations of, any relevant planning approval for Sydney Metro projects.

2.3. Communication and engagement approach

Sydney Metro is committed to establishing genuine relationships with stakeholders and the community. This is underpinned by the belief that effective communication is a crucial element in the successful delivery of all our projects.

Sydney Metro recognises the diverse engagement and information needs of the community and stakeholders and commits to robust and transparent engagement processes that are inclusive in nature.

The International Association for Public Participation (IAP2) is used to guide engagement during different project phases with an emphasis on inform, consult and active participation levels as appropriate. The levels of consultation outlined in the spectrum are provided as a guide only, and the Project team will ensure an individual approach is taken when engaging with each stakeholder.

The spectrum may be considered in engagement with members of the community, stakeholders including Government agencies, members of parliament and public sector stakeholders.

IAP2'S PUBLIC PARTICIPATION SPECTRUM



Figure 3: The IAP2 public participation spectrum

2.4. Place managers

Sydney Metro ensures a personal approach is undertaken when undertaking community engagement by having dedicated community relations specialists called place managers. Their role is to act as a single, direct contact between members of the community and the project team.

Sydney Metro also has personal managers to provide support throughout any property acquisition process. Their role is to work closely with property owners or tenants and to make sure the process is as easy as possible.

2.5. Objectives

Sydney Metro's corporate strategic objectives are:

- Manage customer and community expectations
- Integration of 'place'
- Record infrastructure investment
- Technological change
- Drive towards long-term financial sustainability.

The Sydney Metro project communication and engagement objectives are to:

- Minimise project impacts on stakeholders and the community where possible
- Minimise project impacts on local businesses recognising specific needs and requirements

- Provide adequate, timely and coordinated stakeholder and community communication and engagement
- Assist stakeholders and the community in their understanding of project construction including activities to be undertaken by project delivery partners and their objectives, benefits, potential impacts and expected outcomes
- Appropriately address stakeholder and community issues
- Provide consistency across our external communication activities and interfaces with stakeholders during delivery of all Sydney Metro projects
- Coordinate approach to manage project enquiries and complaints with interface projects where appropriate
- Act as a conduit and advocate between the project team and the broader community.

2.6. Roles and responsibilities

Figure 4 below demonstrates throughout the project lifecycle, Sydney Metro will begin engaging with the community and stakeholders in the early strategic planning stages of the project and will continue this relationship through to commissioning, and operation of metro services after which point some of these stakeholders and community members will become customers of Sydney Metro.

The project lifecycle can involve several project phases occurring concurrently. Understanding this assists Sydney Metro and the PDCT(s) to work together to ensure communication is clear and consistent across the different facets of the project.

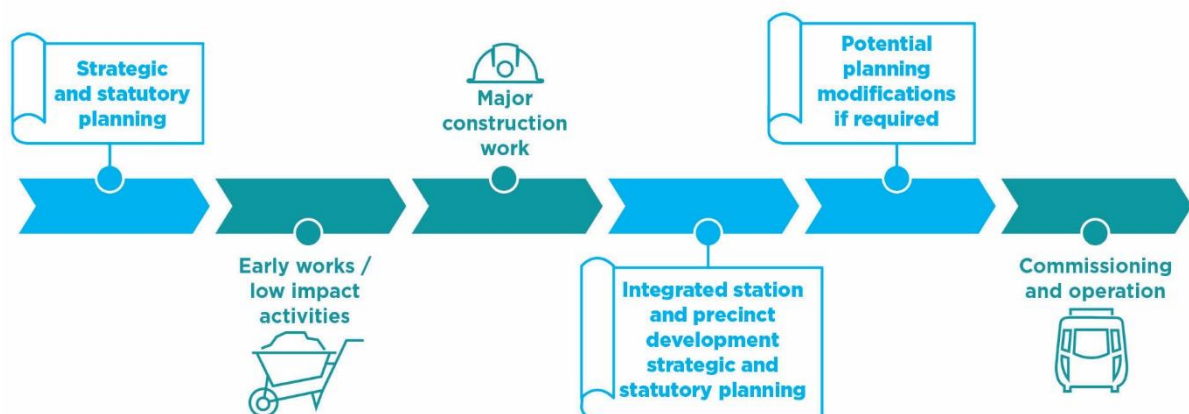


Figure 4: Potential stakeholder and community engagement touchpoints through the project lifecycle

Figure 5 below outlines key responsibilities of Sydney Metro, and the PDCTs during project planning and delivery. Figure 5 is intended as a guide, noting there would be times when responsibilities would overlap particularly in the pre-construction phase and in the transition between statutory planning and construction communication. The full suite of delivery partner responsibilities for the PDCT will be outlined in the contract General Specification – Stakeholder and Community Engagement.

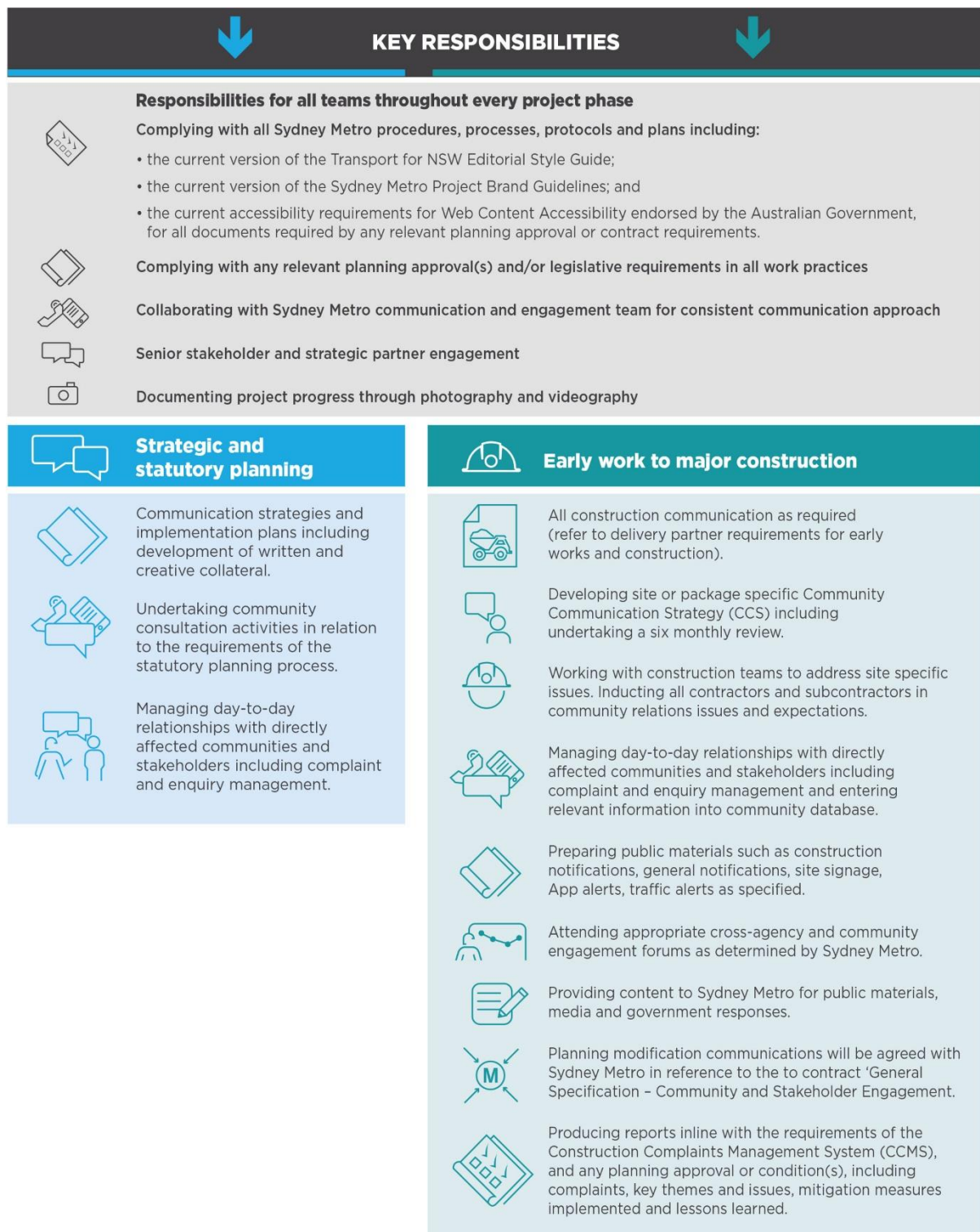


Figure 5: Responsibilities during planning and construction

Table 1: Roles and responsibilities in the planning and delivery phases of the project.

Role	Responsibility
Environmental Representative	<p>A suitably qualified and experienced Environmental Representative is independent of the design and construction personnel and responsible for advising the Department of Planning, Industry and Environment on the environmental performance of projects. The Environmental Representative is engaged by the Sydney Metro for the duration of construction of the project and approved by the Secretary of the Department of Planning, Industry and Environment.</p> <p>The Environmental Representative may provide advice to the Sydney Metro Communication and Engagement team in relation to environmental performance and mitigation measures.</p> <p>Provide an independent review to help resolve complaints about construction issues where a resolution has been unable to be reached by the PDCT and the Sydney Metro project team.</p>
Acoustic Advisor, if required according to planning approval	<p>A suitably qualified and experienced Acoustic Advisor is independent of the design and construction personnel and responsible for advising the Department of Planning, Industry and Environment specifically on noise and vibration performance of the project. The Acoustic Advisor is engaged by Sydney Metro for the duration of construction of the project and approved by the Secretary of the Department of Planning, Industry and Environment.</p> <p>The Acoustic Advisor may provide advice to the Sydney Metro Communication and Engagement team in relations to acoustic performance and mitigation measures.</p>
Independent property impact assessment panel, if required according to planning approval	<p>An independent panel may provide assistance in the resolution of property damage concerns following investigation by Sydney Metro and technical specialists in consultation with the affected property owner.</p>
Western Sydney Airport or Airport Environment Officer, if required according to planning approval	<p>Western Sydney Airport is the lessee of Western Sydney International (Nancy Bird-Walton) Airport and have responsibility for the site.</p> <p>An Airport Environment Officer is responsible for the day to day regulatory oversight of compliance with the Commonwealth <i>Airport (Environment Protection) Regulations 1997</i> (AEPRs) at Western Sydney International (Nancy Bird-Walton) Airport and will have a role in relation to works for Sydney Metro – Western Sydney Airport on this site.</p>
Other project technical specialists	<p>Provide subject matter technical expertise for the duration of construction, or as otherwise agreed by the Secretary of the Department of Industry, Planning and Environment. This scope will include but not limited to: construction, noise, vibration, tunnelling and general project related issues.</p>
Independent mediation	<p>Upon the recommendation of the Director, Project Communication or the Environmental Representative, provide independent mediation to</p>

service(s) (engaged as required)	<p>help resolve complaints about construction issues where a resolution has been unable to be reached by the PDCT and/or the Sydney Metro project team.</p> <p>Any mediator engaged by Sydney Metro, to assist in resolving a complaint, would be required to hold suitable qualifications and have experience mediating similar matters.</p>
Deputy Executive Director Communication & Engagement	Overall responsibility for defining, developing and implementing the strategic direction of Sydney Metro in respect of all communication and engagement activities.
Director Project Communications	Responsible and accountable for authorising all communication and engagement documents, monitoring their effectiveness and performing formal document review.
Sydney Metro Communication and Engagement Team	<p>This team's key accountabilities and responsibilities include:</p> <ul style="list-style-type: none"> • Communication and engagement • Stakeholder management • Public affairs • Public communication • Strategic partnerships • Project communications.
Project Communication teams (Sydney Metro and PDCT)	<ul style="list-style-type: none"> • Develop and/or implement this Overarching Community Communications Strategy • Provide place managers to engage with the local community during the design, planning approval and early work/low impact/major construction activity stages • Develop and implement project communication plans • Develop external facing project communication collateral • Proactively identify potential issues and work cooperatively to develop agreed management strategies.

2.7. Roles and responsibilities for complaint management during construction

The CCMS will outline the framework for managing complaints, enquiries and escalation processes throughout the project lifecycle.

Complaints are first managed by the PDCT and any unresolved complaints may then be escalated to Sydney Metro.

The Director, Project Communications is the designated complaints handling management representative for the escalation of complaints for independent review. Complaints would only be escalated for independent review following a full and thorough investigation by the PDCT and Sydney Metro. The Director, Project Communication may also refer a complaint to independent mediation at any stage in the complaint management process.

Following any escalation for independent review, the Environmental Representative would make an assessment on the adequacy of Sydney Metro's response to the complaint in accordance with this plan, the CCMS and the project's planning and assessment process, in consideration of what is fair and reasonable.

Following this review the Environmental Representative would either make a recommendation to close the complaint and notify the Secretary or provide recommendations for consideration by Sydney Metro on any additional actions that could be undertaken to assist in resolving the complaint.

The Environmental Representative may also refer any reasonable and unresolved complaint for independent mediation, at which time a qualified mediator would be engaged by the project. This process is outlined in figure 6.

This process does not apply to complaints specifically relating to the Western Sydney Airport site which would be managed and escalated to Western Sydney Airport in accordance with the CCMS.

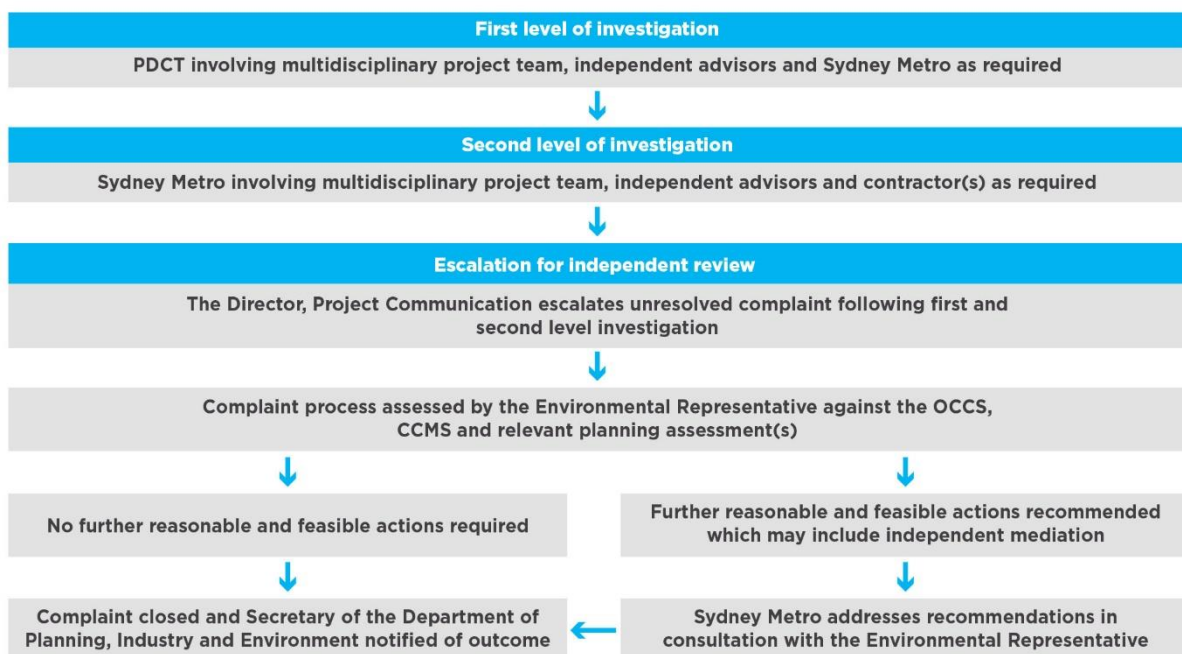


Figure 6: complaint escalation process for Sydney Metro

3. Our stakeholders

3.1. Our relationships

Effective relationships and consistent and accountable communication practices are crucial to the successful delivery of Sydney Metro. Sydney Metro is committed to providing proactive and positive interactions with all our stakeholders during the delivery of our projects. Our stakeholders include:

- Our colleagues across Transport for NSW
- Local, State and Federal government departments and agencies
- Media
- Industry partners
- Precinct partners and city deal partners
- Broader network users and customers
- The community across Sydney, including businesses.

Table 2: Sydney Metro stakeholders (as relevant to each Sydney Metro project)

Sector	Stakeholders
Community	Neighbours
	Residents and residents groups
	Businesses and business groups
	Property owners and tenants
	Business owners and tenants
Government	Land owners
	Interest groups
	Education and religious facilities
	Transport users
	Owners and managers of local social infrastructure and community facilities
	Peak community groups
	Multicultural support groups
Government	Federal Minister for Infrastructure, Transport and Regional Development
	Federal Minister for Population, Cities and Urban Infrastructure
	NSW Minister for Transport and Roads
	NSW Minister for Jobs, Investment, Tourism and Western Sydney

Sector	Stakeholders
	<p>State elected members and their electoral offices</p> <p>Local elected members</p> <p>Local Council General Managers/CEOs</p> <hr/> <p>Department of Infrastructure, Transport, Regional Development and Communications</p> <p>Department of Energy and Environment</p> <p>Western Sydney Airport</p> <hr/> <p>Transport for NSW</p> <p>Department of Planning, Industry and Environment</p> <p>Infrastructure NSW</p> <p>Department of Premier and Cabinet</p> <p>NSW Treasury</p> <p>Port Authority of NSW</p> <p>NSW Health</p> <p>Department of Family and Community Services</p> <p>Department of Education</p> <p>Schools Infrastructure NSW</p> <p>Western City Aerotropolis Authority</p> <p>Planning Partnership Office</p> <p>Western Sydney City Deal Delivery Office</p> <hr/> <p>Council officers</p> <p>Emergency services</p> <ul style="list-style-type: none"> – Police – Ambulance – NSW Fire and Rescue – Rural Fire Services – State Emergency Services
Neighbouring projects	<p>Parramatta Light Rail</p> <p>Western Harbour Tunnel and Beaches Link</p> <p>WestConnex Rozelle Interchange</p> <p>Westmead redevelopment</p> <p>Glebe Island Multi-User facility</p> <p>Revitalisation of Blackwattle Bay and the new Fish Market</p> <p>Western Sydney International Airport</p> <p>M12 Motorway</p>

Sector	Stakeholders
Service providers	Sydney Water Water NSW Power utilities Telecommunication providers Local Councils
Industry	Academic institutions Contractors Peak bodies Transport associations Transport experts Unions
Precinct partners, City Deal partners	Local Councils State Government agencies Federal Government agencies Government-owned corporations
Media	All media

4. Our communities

Sydney Metro recognises that our projects are undertaken across a range of diverse communities and our information needs to be accessible for all people. The project will continue to monitor, adapt and review communication streams, key messages and audiences to continue to connect with people in ways that are meaningful to them.

4.1. Community demographics

Sydney Metro uses area demographics and census data to better understand the communities in which we operate. The information we gather ensures we provide accessible information to people from all backgrounds including:

- People with languages other than English (LOTE)
- Culturally and linguistically diverse communities (CALD)
- Vulnerable communities
- Aboriginal and Torres Strait Islander Communities (ATSI)
- Diverse communities.

The PDCT CCS must demonstrate how their communication approach will use tools and strategies that meet the needs of their diverse communities. Specific tools outlined below should be considered as appropriate.

4.2. Working with culturally and linguistically diverse (CALD) and languages other than English (LOTE) communities

The following processes and communication tools can be used to improve accessibility and outreach with people who come from CALD and LOTE backgrounds:

- Providing project information on the Sydney Metro website which can be translated into 58 different languages
- Working closely with local councils and community groups to utilise existing CALD relationships
- Continued outreach with targeted CALD community groups, and face-to-face meetings and briefings with CALD communities as required
- Advertising project milestones in foreign language newspapers
- Translating project milestone factsheets and newsletters into targeted languages
- Ensuring that foreign language submissions can be received
- Providing translators for meetings and engagements as required.

4.3. Working with vulnerable communities

Sydney Metro recognises that a range of community members may be vulnerable in relation to disabilities and health, age, employment and housing status, among other issues.

The following processes, communication tools and approaches would be used to improve accessibility and outreach with vulnerable communities:

- Engage with relevant support organisations to keep vulnerable communities informed of work occurring
- Training construction personal that all interactions with vulnerable people should be respectful and courteous
- Where required provide regular updates to rough sleepers about construction timing and impacts
- Businesses impacted by people sleeping rough who may have been displaced by construction should also be kept informed and engaged.

Sydney Metro endorses the NSW Government approach to homelessness by incorporating the Sydney Metro Protocol for Homelessness within all community communication strategies.

4.4. Working with Aboriginal and Torres Strait Islander (ATSI) communities

The following key focus areas have been developed by the Transport for NSW Reconciliation Action Plan (RAP), and will be reflected and incorporated in all engagement objectives and activities undertaken by Sydney Metro:

- Build and strengthen relationships
- Respect and celebrate culture.

The following processes and communication tools can be used to improve accessibility and outreach with ATSI communities:

- Working collaboratively and respectfully with our Aboriginal and Torres Strait Islander staff, Aboriginal Peak Bodies, and with the communities in which we operate
- Continue working with our key stakeholders to further build upon existing relationships, and seek to invest in new partnerships to support our progress in delivering meaningful outcomes for Aboriginal and Torres Strait Islander peoples whilst delivering on our core business.

4.5. Working with diverse communities

Sydney Metro will continue to review its communication tools to ensure inclusive community engagement and the varied information requirements of our communities and stakeholders is prioritised.

The following processes and communication tools can be used to improve accessibility and outreach with diverse communities:

- Web and digital based engagement tools allowing people to engage with the project at a time that is convenient to them
- Using multiple communication platforms to enhance communication reach, for example printed notifications, face-to-face doorknocks and email
- Ensuring communities are providing with convenient options to access the project team such as providing multiple times for community information sessions and a 1800 number 24 hour a day, seven days a week
- Harnessing a place management approach to understand the specific needs of communities and tailor communication accordingly.

All Sydney Metro communication materials will adhere to Web Content Accessibility Guidelines (WCAG 2.0).

5. Businesses

Sydney Metro would work with local businesses within project catchments to ensure communication and engagement is tailored to their specific needs.

Sydney Metro's overarching approach to business engagement is to:

- Identify and document potentially impacted businesses prior to project commencement
- Provide early advice to businesses of upcoming projects
- Provide businesses with information about the project and its long terms benefits
- Provide businesses with information about construction progress
- Ensure businesses understand the scope of the works and mitigation measures contractors can provide
- Ensure businesses understand the proposed timing of the works
- Consult with businesses and take steps to minimise potential impacts
- Ensure the project team understands the operational requirements and sensitivities of businesses around each site.

The PDCT CCS must include at a minimum the identification and details of specific businesses located within 50 metres of each relevant construction site.

PDCTs must identify the specific needs of each business, any potential impacts associated with construction works, and proposed mitigation measures. These measures must also address if there is a need for translation or cultural and other specialists.

The PDCT CCS must also outline the approach and timing of holding regular business forums at each construction site.

Evaluation and monitoring of business engagement is outlined in section 11.

5.1. Small Business Owners Engagement Plan

The Sydney Metro PDCT will provide assistance if required to small business owners located within 50 metres of a Sydney Metro construction site, where they may be potentially impacted by construction activities. For the purposes of this program, a 'small business' is defined as a business that employs fewer than 20 people.

Sydney Metro activities to support to eligible businesses may include:

- Small business education and mentoring
- Activation events
- Business engagement events
- Marketing and promotion.

6. Communication tools

Sydney Metro uses a range of communication and engagement tools to ensure project information reaches a wide variety of people likely to be impacted by the project. Using a variety of tools provides our communities with options to engage with the project in ways that suit their needs and lifestyle.

When planning communication strategies the PDCT must consider the requirements of the General Specification – Stakeholder and Community Engagement along with the specific needs of their community as identified in their CCS. The CCS should then outline the specific tools used to reach their identified stakeholders.

The following communication tools matrix is provided as a guide only and other communication tools may be used with prior approval from the Director, Project Communication. CALD communication tools are also included in the table below.

Sydney Metro will provide a suite of project specific templates to the PDCT to assist in the development of communication collateral.

Table 3: Sydney Metro communication and engagement tools

Tool	Explanation and purpose	Responsibility
Community contact tools		
Community information line	Operational 24 hours a day and included on all public communication materials. Translation services are available for those with English as a second language.	SM
Community email address	This allows stakeholders and the community to have access to the project teams and to provide feedback and ask questions. All communication materials and the website will include the community email address. During construction, emails will be redirected to relevant PDCTs as required.	SM
Community post box	All stakeholders can use the postal address: PO Box K659, Haymarket NSW 1240 for all Sydney Metro enquires.	SM
CALD Translation services	All communication will promote our translation services for those with English as a second language.	SM
Information tools		
Newsletters	Printed and web accessible online site-specific newsletters will include information on: <ul style="list-style-type: none"> • construction progress 	SM/PDCT

Tool	Explanation and purpose	Responsibility
	<ul style="list-style-type: none"> • upcoming construction stages and milestones • environmental management achievements • community involvement achievements • three month look-ahead • community contact information. <p>Newsletters will be distributed to local communities, stakeholders and businesses and made available of the Sydney Metro website.</p>	
Sydney Metro direct mail email updates	The community, stakeholders and businesses will be offered the opportunity to register to receive Sydney Metro milestone updates.	SM
Construction email updates	The community, stakeholders and businesses will be offered the opportunity to register to receive construction updates.	PDCT
Fact sheets	Printed and/or web accessible fact sheets will be used as required to explain key aspects of Sydney Metro to the community and our stakeholders.	PDCT
Photography and videography	<p>Photos and videos will be used to record the construction process and assist with explaining aspects of Sydney Metro to stakeholders and the community.</p> <p>Images and footage will be used in notifications, newsletters, on the Sydney Metro website, presentations and reports as required.</p>	SM/PDCT
Information videos	Information videos can be used to highlight key project milestones, construction information or elements of the statutory planning process	SM/PDCT
Site signage and hoarding banners	Site signage and hoarding banners will identify Sydney Metro and provide contact information.	SM/PDCT
CALD Newsletters and fact sheets	Translating project milestone factsheets and newsletters into targeted languages where required.	SM/PDCT
Online tools		
Sydney Metro website	<p>Information about the project will be uploaded to the Sydney Metro website.</p> <p>The website will be referenced in all communication materials as a source of information and will be updated on a regular basis. Information will include:</p>	SM

Tool	Explanation and purpose	Responsibility
	<ul style="list-style-type: none"> • Description of the Sydney Metro • Project information including: <ul style="list-style-type: none"> – description, current status and timing – newsletters – notifications – up-to-date project information – graphics and images on the project background and progress – copies of relevant reports – photos, images and maps – links to documents as required under the relevant projects Conditions of Approval – a link to Sydney Metro contractor webpages. • Contact information • Email subscription service • The Sydney Metro website is translatable into 58 different languages using the Google translate function at the bottom of the home page. 	
Project interactive portal	<p>Sydney Metro may establish and maintain an online portal for the project displaying key project information including:</p> <ul style="list-style-type: none"> • statutory planning information • project map(s) • graphics and images of the project • newsletters and other project information • specific project information displays • contact information. 	SM
Contractor webpage	<p>Each contractor will establish and maintain a web site to upload and maintain information to be published. Including copies of community, environmental, sustainability, transport, traffic and noise and vibration reports and plans. A link will be provided to the Sydney Metro website.</p>	PDCT
Social media	<p>Facebook, Twitter and Instagram may be used to provide updates to stakeholders.</p> <p>Stakeholders should be offered the opportunity to join social media feeds via public materials produced for Sydney Metro.</p>	SM
CALD	<p>Updating the Sydney Metro website with project information, which can be translated into 58 different languages.</p>	SM/PDCT

Tool	Explanation and purpose	Responsibility
Sydney Metro and Contractor website	Ensuring that foreign language submissions can be received.	
Face-to-face and interactive tools		
Mobile information displays	Mobile information displays can be used at locations like community events, shopping centres and local public spaces to provide information about Sydney Metro, statutory planning processes or construction.	SM/PDCT
Virtual information rooms	Virtual information displays can be used to highlight project milestones, provide information about construction or statutory planning processes.	SM/PDCT
Door knock meetings	Individual door knock meetings will be used as required to discuss potential impacts of Sydney Metro with highly impacted stakeholders, especially residents, businesses directly neighbouring construction sites and owners or managers of nearby social infrastructure or community facilities.	SM/PDCT
In person and/or virtual meetings with individuals or groups	Stakeholder meetings will be used as required to discuss Sydney Metro activities including work in progress and upcoming work or any issues in connection with the activities.	SM/PDCT
Site visits	Site visits will be used where appropriate to inform select stakeholders about the progress of Sydney Metro and any key milestones or activities taking place.	SM/PDCT
In person and/or virtual presentations and forums	Presentations and forums will be used where appropriate to inform stakeholders about the progress of Sydney Metro and any key milestones or activities taking place.	SM/PDCT
In person and/or community and business based forums	Forums will be used to focus on key environmental management issues relating to construction activities with impacted community and business stakeholders.	SM/PDCT
CALD In persons and/or virtual tools	<p>Providing translators for virtual and/or in person meetings and engagements as required.</p> <p>Working closely with local councils and community groups to utilise existing CALD relationships.</p>	SM/PDCT

Tool	Explanation and purpose	Responsibility
	Continued outreach with targeted CALD community groups, and virtual and/or face-to-face meetings and briefings with CALD communities as required.	
CALD Presentations	Presentations will also be offered to local CALD community groups in multiple languages by bi-lingual team members or external translators.	SM/PDCT
Notifications		
Emergency works – notification letter	<p>An emergency works* – notification letter will be used to advise properties immediately adjacent to or impacted by emergency works, within two hours of door knock commencing work.</p> <p>Notifications must be delivered by the PDCT, issued on Sydney Metro letterhead and include the following:</p> <ul style="list-style-type: none"> • scope of work • location of work • hours of work • duration of activity • type of equipment to be used • likely impacts including noise, vibration, traffic, access and dust • mitigation measures • contact information. <p><i>*Work required to repair damaged utilities and/or make an area safe after an incident outside standard construction hours.</i></p>	PDCT
7 day notification - Community Signage	<p>Signage will be erected at least 7 days prior to any activity with the potential to impact stakeholders or the community. This includes:</p> <ul style="list-style-type: none"> • work in public areas such as a park • making changes to pedestrian routes • impacting on cycle ways • changing traffic conditions • disrupting access to bus stops. <p>Signage could include A-frames, mobile Variable Message Sign (VMS), hoarding or similar and be placed at either end of the corridor of work.</p>	PDCT
7 day - Traffic alert email	Traffic alert email will be sent at least 7 days prior to any works requiring changes to traffic. Recipients should include:	PDCT

Tool	Explanation and purpose	Responsibility
	<ul style="list-style-type: none"> • relevant authorities • transport operators (including bus, coach and taxi operators). <p>The notification audience and content will be guided by the Traffic and Transport Liaison Group and Traffic Management Plans.</p>	
7 day – utility notification	A notification will be sent to relevant utility service authorities at least 7 days before utility service work, to provide detailed information for their relevant call centre messaging.	PDCT
Notification letter	<p>Notification letters will be used to advise the community and stakeholders of any activity with the potential to cause impacts. The notification should be sent at least 7 days prior to the activity occurring to an area of 100 metres around the construction site for day works and 200 metres around the site for night works.</p> <p>Wherever possible works notifications should be combined for the month to include all proposed site activities. Following up communication should be implemented for night works including the use of email, door knock or MetroConnect App reminders.</p> <p>Notifications are required for:</p> <ul style="list-style-type: none"> • start of construction • significant milestones • changes to scope of work • night works • changes to traffic conditions • modifications to pedestrian routes, cycle ways and bus stops • out of hours work • changes to residential or business access • changes or disruptions to utility services • investigation activities. <p>Notifications will be issued on Sydney Metro letterhead and include the following:</p> <ul style="list-style-type: none"> • scope of work • location of work • hours of work • duration of activity • type of equipment to be used 	PDCT




Tool	Explanation and purpose	Responsibility
	<ul style="list-style-type: none"> likely impacts including noise, vibration, traffic, access and dust mitigation measures contact information. 	
Advertisements	<p>Display advertisements will be used to notify the community prior to the start of construction, update on construction activity, notify of exhibitions and events and announce Sydney Metro and milestones.</p> <p>Advertisements will be used as required, to fulfil the requirements of any planning approval, or licences and that required by law.</p> <p>Advertisements in local newspapers, if possible (that cover the geographical areas of the contractor's activities) will be used to notify of significant traffic management changes, detours, traffic disruptions and work outside any working hours contained in the environmental documents at least 7 days before any detour, disruption or change occurs.</p>	SM
Notification email	Email notifications via community engagement database distribution lists are utilised once on the ground notification distribution has been completed.	SM/PDCT
MetroConnect App	A native digital application may be utilised to provide brief construction information updates to the community. Stakeholders will be offered the opportunity to sign up for 'App' updates.	SM
CALD Advertisements	Advertising project milestones in foreign language newspapers.	SM
Briefings and media		
MP, local elected members and Ministerial briefings	MP, Local elected members and Ministerial briefings will be used to update these stakeholders on major Sydney Metro milestones.	SM
Media briefings and releases	Media releases, briefings and events will be used to update the community on major Sydney Metro milestones.	SM
Schools		
School education program	A school education program developed by Sydney Metro will be used to engage with primary and high school students.	SM

Tool	Explanation and purpose	Responsibility
Other requirements		
Site inductions	Site inductions will include communication and engagement requirements to ensure all members of the Sydney Metro and contractor teams are aware and respectful of our residential and business neighbours.	PDCT
Community engagement database	A web-based program used for the collection and recording of details regarding stakeholder and community contact and correspondence.	PDCT
Communication Interface Coordination Group	<p>Members would include communications representatives from interfacing projects with project sites shared or adjacent to Sydney Metro.</p> <p>The role of the Communications Interface Coordination Group is to:</p> <ul style="list-style-type: none"> • Establish relationships between communications teams from interfacing projects to facilitate effective handling of enquiries and complaints where relevant. • Provide an update on current and upcoming milestones, construction program and stakeholder and community issues. • Provide a forum to exchange information and coordinate communication and consultation activities to ensure a consistent approach to stakeholders, the community and others is delivered. 	SM/PDCT

7. Site establishment communication

Establishing relationships with stakeholders and the community, including determining suitable forums for engagement is a key priority prior to site establishment for construction. During this stage of engagement the PDCT should prioritise face-to face communication as much as possible. Sydney Metro will provide support for these activities as outlined in Table 4.

Table 4: Pre-construction engagement priorities

Activity		Responsibility
	Pre-construction communication planning	
	Prepare Community Communication (CCS) DRAFT in accordance with the General Specification – Stakeholder and Community Engagement, planning approval and environmental protection licence requirements	
	Set up site specific community email and 1800 phone number to receive correspondence	
	Set up project delivery webpage	
	Set up communication management system	
	Prepare start of construction advertisement	
	Establish area coordination groups	
	Early site engagement/post planning approval	
	Ministerial, stakeholder and government agency briefings	
	Council briefings	
	Prepare and seek approval from Sydney Metro for introductory communication material for community engagement	
	Initial doorknock and introductory material delivered and follow up meetings established for consultation	
	Conduct initial consultation with neighbouring properties, businesses and stakeholders to establish specific needs	
	Refine CCS and submit to Sydney Metro	
	Establish forums for business and community engagement based on needs assessment	
	Publish start of construction advertisement	
	Host coordination meeting with relevant projects	
	Pre-construction engagement	
	Prepare and distribute introductory newsletter and email noting early engagement outcomes, project update, and forums available to attend prior to construction starting	
	Prepare and seek approval for forum collateral including project AO boards, factsheets and presentations	
	Hold first forums (prior to construction starting) inviting relevant local project representatives at each site	
	Erect temporary site signage and shade cloth (prior to hoarding being erected)	

KEY

 Sydney Metro

 Project Delivery Communication Team

8. Managing issues

8.1. Issue identification

It would be expected that the PDCT would work collaboratively with SM during pre-construction communication planning to understand the key themes arising from the environmental assessment process. This includes gaining knowledge of the relevant environmental impact statement(s) or other planning approvals documentation, key mitigation measures, potential cumulative impacts, community or stakeholder issues raised during the statutory planning process.

Sydney Metro expects the PDCT would appoint dedicated place managers and use the following methods during early site engagement, pre-construction engagement and delivery to identify potential issues for their communities:

- Gather information about community, stakeholder and business needs and requirements to guide delivery communication approaches.
- Build relationships with local communities, stakeholders and businesses, particularly those in close proximity to the site with a priority on personal and face-to-face communication to encourage open communication about concerns.
- Communicate early and often providing accurate information about upcoming project works and potential impacts.
- Share information with other projects in the area (see cumulative impacts).

The PDCT would be expected to work collaboratively with their environmental and construction counterparts, the Sydney Metro project implementation group, the project Environmental Representative and/or Airport Environment Officer to understand potential issues and agree on appropriate management approaches prior to escalating any issues as per the Sydney Metro Construction Complaints Management System.

The CCS must identify strategies for proactively identifying issues and appropriate mitigation measures.

8.2. Tools to manage issues


There are a number of tools available to assist projects in managing issues relating to construction and environmental impacts. These can be found in the following plans:





- Construction Environmental Management Framework
- Construction Traffic Management Framework
- Construction Noise and Vibration Standard
- Applicable contract specific management plans.

8.3. Key issues and mitigation measures

The following communication and mitigation measures are considered a guide to managing potential issues. The PDCT must identify the unique issues related to individuals and outline tailored mitigation measures which would also incorporate mitigation measures from the project's relevant planning approvals documentation.

Table 5: Key issues and mitigation measures

Issue	Communication and mitigation measures
Information about construction	
 <ul style="list-style-type: none"> • Lack of information • Coordination with other Transport Agencies • Temporary station closures at locations along the alignment where train possessions occur • Train replacement services 	<ul style="list-style-type: none"> • Regular notifications and newsletters (including contributing to other project notifications including Sydney Trains notifications for work during possessions) • One on one meetings on request • Doorknocks as required - both prior to works and as stakeholder checks after works • Attend stakeholder meetings to communicate Project information to their client base • Community contact facilities • Coordinate with projects and existing transport operations in close proximity to Sydney Metro works, regarding replacement services and temporary transport plans
<ul style="list-style-type: none"> • Coordination of information for tenants and property owners (including business owners) 	<ul style="list-style-type: none"> • Strata/building managers and owners notified of scheduled and emergency work in the area when necessary • Meetings arranged with strata/building managers and owners • Strata/building managers and owners informed of works before they commence • Coordinate communications through the Communication Interface Control Group • Implement the Small Business Owners Engagement Plan as required

Issue	Communication and mitigation measures
 <p>Utility relocation and continuity of supply</p> <ul style="list-style-type: none"> • Utility works affecting footpath or road access 	<ul style="list-style-type: none"> • Detailed briefings for businesses potentially affected • Timing works, particularly service cutovers, to minimise potential impacts • Provide alternative service where necessary to maintain essential supply
 <p>Visual amenity and visibility</p> <ul style="list-style-type: none"> • Impacts to visual amenity (overlooking or directly next door to sites) • Vandalism of site hoarding • Visibility of retail signage and shopfronts 	<ul style="list-style-type: none"> • Retain vegetation where possible or for as long as practical • Protection of trees to be retained • Hoarding designed in line with Sydney Metro Brand Style Guidelines • Prompt graffiti removal from hoarding, buildings, plant and surroundings kept well maintained and clean • Hoarding designed to maximise visibility of retail signage and shopfronts. • Explore opportunities for signage and wayfinding to maintain business visibility • Implement Small Business Owners Plan to promote local businesses
 <p>Cumulative impacts</p> <ul style="list-style-type: none"> • Multiple works in the one location • Adjacent projects 	<ul style="list-style-type: none"> • Coordinate communications through the Communication Interface Control Group
 <p>Transport interruptions</p> <ul style="list-style-type: none"> • Temporary station closures 	<ul style="list-style-type: none"> • Rail replacement services • Advertisements, notifications and station attendants redirecting passengers to alternative services

Issue	Communication and mitigation measures
<div data-bbox="207 421 314 542" data-label="Image"> </div> <p data-bbox="352 405 572 430">Noise and vibration</p> <ul data-bbox="339 468 718 734" style="list-style-type: none"> • Effects on sensitive receivers • Effects on sensitive equipment • Effects on quiet enjoyment (particularly for food and beverage businesses) • Construction traffic noise (deliveries and spoil movements) • Vibration generated by construction activities 	<ul data-bbox="837 461 1358 1234" style="list-style-type: none"> • Early engagement with neighbouring stakeholders on likely noise and vibration impacts • Implementation of mitigation measures in the Construction Noise and Vibration Management Plan, Minor Works Approval, Out of Hours Approval and other documents and plans where relevant • Noise minimised through use of appropriate plant, tools and techniques and adaptive programming, where possible. Information on specific noise and vibration reduction outcomes for each site can be found in the relevant Construction Noise and Vibration Impact Statement. Noise reduction strategies to be implemented with consideration given hours of operation and sensitive periods. • High impact noise works staged with respite periods as required by any applicable Environment Protection Licence or planning approval • Temporary noise screens used around equipment, where appropriate • Staff induction and toolbox meetings prior to noisy activities to highlight acceptable work force behaviour • Noise and or vibration monitoring offered in response to complaints • Vibration monitoring undertaken on any adjoining heritage structures if outlined in the relevant Construction Noise and Vibration Impact Statement • Referral to Small Business Owners Engagement Plan for advice on small business complaints where appropriate
<div data-bbox="204 1339 314 1411" data-label="Image"> </div> <p data-bbox="352 1301 408 1326">Dust</p> <ul data-bbox="339 1352 762 1415" style="list-style-type: none"> • Dust generated by construction activities • Concern about health impacts of dust 	<ul data-bbox="849 1352 1326 1444" style="list-style-type: none"> • Dust minimised by using water carts, water sprayers, street sweepers, chemical and organic ground cover, hard stands and limiting activities on windy days where necessary

Issue	Communication and mitigation measures
 <p>Access</p> <ul style="list-style-type: none"> • Access for deliveries and customers • Traffic changes on local roads • Impacts to local street parking • Traffic modifications including changes to footpaths • Utility works affecting footpath or road access 	<ul style="list-style-type: none"> • Coordination of works with deliveries and business priorities, where possible • Installation of suitable signage to direct pedestrians, delivery drivers and customers where appropriate
 <p>Construction traffic</p> <ul style="list-style-type: none"> • Heavy vehicle movements on local roads 	<ul style="list-style-type: none"> • Implement site specific Traffic Management Plans • Coordinate traffic management in accordance with Construction Traffic Management Plan (CTMP) • Construction traffic movements minimised in peak times, where possible • Heavy vehicle specific access and egress locations and routes to minimise local congestion • Truck driver toolbox meetings on localised conditions • Out of hours deliveries to minimise impacts of oversized vehicles on local roads • Traffic Control Group
 <p>Property acquisition</p> <ul style="list-style-type: none"> • Concerns about property acquisition 	<ul style="list-style-type: none"> • Personal Manager involvement and support • Detailed meetings with supporting Centre for Property Acquisition information and Sydney Metro newsletters and fact sheets
 <p>Property impacts</p> <ul style="list-style-type: none"> • Concerns about potential property damage • Potential effects of vibration and settlement 	<ul style="list-style-type: none"> • Property Condition Surveys offered where eligible in line with relevant Construction Noise and Vibration Impact Statement (CNVIS) for each site • Vibration modelling information • Distribute fact sheets • Protection of heritage items using hoarding

Issue	Communication and mitigation measures
 <p>Access</p> <ul style="list-style-type: none"> • Access for deliveries and customers • Traffic changes on local roads • Impacts to local street parking • Traffic modifications including changes to footpaths • Utility works affecting footpath or road access 	<ul style="list-style-type: none"> • Coordination of works with deliveries and business priorities, where possible • Installation of suitable signage to direct pedestrians, delivery drivers and customers where appropriate
 <p>Construction traffic</p> <ul style="list-style-type: none"> • Heavy vehicle movements on local roads 	<ul style="list-style-type: none"> • Implement site specific Traffic Management Plans • Coordinate traffic management with the Sydney Coordination Office • Construction traffic movements minimised in peak times, where possible • Heavy vehicle specific access and egress locations and routes to minimise local congestion • Truck driver toolbox meetings on localised conditions • Out of hours deliveries to minimise impacts of oversized vehicles on local roads • Traffic Control Group
 <p>Property acquisition</p> <ul style="list-style-type: none"> • Concerns about property acquisition 	<ul style="list-style-type: none"> • Personal Manager involvement and support • Detailed meetings with supporting Centre for Property Acquisition information and Sydney Metro newsletters and fact sheets
 <p>Property impacts</p> <ul style="list-style-type: none"> • Concerns about potential property damage • Potential effects of vibration and settlement 	<ul style="list-style-type: none"> • Property Condition Surveys offered where eligible in line with relevant CNVIS for each site • Vibration modelling information • Distribute fact sheets • Protection of heritage items using hoarding

9. Cumulative impacts

Sydney Metro will ensure coordination with interfacing projects to manage community and stakeholder issues.

Sydney Metro recognises that communities and stakeholders may be experiencing or have experienced impacts relating to other projects in their local area. This section outlines approaches to ensure cumulative impacts are considered in communication and engagement.

On the Sydney Metro – Western Sydney Airport project, coordination with Western Sydney Airport is essential for issues raised about work on sites within shared project areas.

9.1. Coordination for effective communication

Sydney Metro will host Communications Interface Coordination Groups for areas where projects interface. The purpose of these groups will be to provide a forum for exchange of information, understand any emerging concerns across the projects and to coordinate communication and engagement activities as appropriate.

Coordination and consultation with other projects will generally include:

- Provision of regular updates about the detailed construction program, construction sites and haul routes.
- Coordination of traffic notifications between projects.
- Coordination of engagement activities such as community information sessions, newsletters and notifications and complaint resolution.

This approach will support a range of other coordination forums to address coordinating works with traffic and noise impacts and identifying potential conflicts in construction programs.

All enquiries and complaints made by the community and stakeholders will be managed in accordance with the Sydney Metro Construction Complaints Management System. It would be expected that the place manager on call would have general knowledge of other projects in the area to provide a personal approach and knowledge of who the complainant should contact for further information.

All phone calls to the Sydney Metro's call centre, will be managed in accordance with the Sydney Metro call handling procedure. Community enquires that do not relate to Sydney Metro projects, will be forwarded to the relevant project.

Figure 7 illustrates the process for complaint and enquiry management across projects in similar areas.

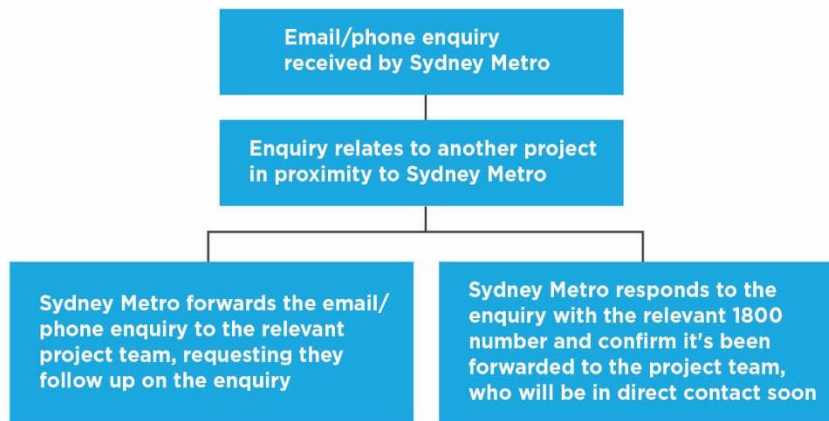


Figure 7: Project related email / phone coordination

9.2. Occurrence of cumulative impacts

The PDCT CCS must identify projects that Sydney Metro may interface within their project area including further opportunities for coordinated communication.

This may include:

- Other parts of Transport for NSW
- Local Councils
- State Government agencies
- Federal Government agencies
- Western Sydney Airport
- Sydney Coordination Office
- Department of Planning, Industry and Environment
- Sydney Trains
- NSW Trains
- Sydney Buses
- Sydney Water
- Water NSW
- Port Authority of NSW
- Sydney Motorways Corporation
- Emergency service providers
- Utility providers
- Construction contractors.

10. Crisis and incident communication processes

In the unlikely event that a crisis or incident occurs, crisis communications management will be in place. Any communication management system prepared by the PDCT as part of the Emergency Management Plan should align with Sydney Metro's Crisis Communications Plan.

Contract teams are required to invite the Director, Communications and the Deputy Executive Director, Communication and Engagement to attend and participate in formal incident and crisis communication exercises when they are conducted.

The CCS must reflect Sydney Metro's Crisis Communications Management Plan and Incident notification process.

The PDCT has the following responsibilities in relation to crisis communication:

- Immediately notify the Director, Communications within 10 minutes of any incident or issue that may have an impact on the community, environment, personnel, subcontractors or other stakeholders or may attract the attention of the media, the Minister for Transport, a local MP, council or the broader community. For any other incidents notify the Director, Communications within one hour of the incident occurring.
- Obtain approval from the Director, Communications before contacting or providing information to any person, other than that which is required to directly manage the incident or to comply with Law, including stakeholders, the media or the public.
- Make available suitably qualified and experienced personnel to support the Director, Communications in responding to the community, the media and other stakeholders.
- Provide all necessary communications materials that may need to be disseminated as a result of such incidents.

11. Monitoring, evaluation and reporting

The PDCT is responsible for monitoring the effectiveness of strategies to inform and to minimise impacts of construction on the community, including businesses. The PDCT is required to provide detailed information to Sydney Metro each month on performance criteria outlined in this plan and the site specific CCS including:

- Enquiry and complaint trends and how lessons learned are being applied across the project to avoid issues recurring, highlighting sensitive receivers and small businesses.
- The status of complaints and details of any escalation required.
- Communication tools used to engage with stakeholders and the community including doorknocks, meetings, presentations, notifications and newsletters.

11.1 Audit and review – site specific CCS'

This document will be reviewed and reissued annually.

Evaluation of the performance and effectiveness of the site specific PDCT CCS' will be undertaken every six months or as required. Key elements of the evaluation will include examining the adequacy of the PDCT CCS and its implementation in achieving the intent of the consultation as evidenced by the items in table 6.

Table 6: Six monthly CCS audit requirements

Performance Parameters	Measures	Reporting
Identifying all potential local community, businesses and stakeholders that may be impacted by or have an interest in the project (based on the stakeholder categories provided in this plan)	Inclusion in the PDCT CCS of: <ul style="list-style-type: none">• A thorough stakeholder scan of local community, businesses and stakeholders including maps.	Accurate and up-to-date listings of local businesses noting changes of leases and ownership at least every six months.
Appropriateness of communication and engagement tools	Inclusion in the PDCT CCS of: <ul style="list-style-type: none">• A communication tool matrix and/or table detailing communication tools to be used for which stakeholders and why.	Communication matrix and/or table to be updated at least every six months to adjust approach to community needs and lessons learned.
Identifying appropriate mitigation measures to address issues	Inclusion in the PDCT CCS of: <ul style="list-style-type: none">• Mitigation measures that would be used in response to identified issues• A detailed complaint investigation process to ensure mitigation	Appropriateness of mitigation measures to accommodate community needs and lessons learned to be reviewed at least every six months and the

	measures are considered before escalating complaints to the next level (as per the CCMS).	PDCT CCS to be updated accordingly.
Cumulative impacts process	Inclusion of: <ul style="list-style-type: none"> • Identified nearby projects and tools/forums to engage with projects • Processes for coordination of communication, including project collateral and face-to-face events. 	Nearby project information to be reviewed regularly and updated as part of the PDCT CCS review, included any new processes, at least every six months.

11.1. Audit and review - businesses

The PDCT is required to compile monitoring data on a bi-annual basis and include lessons learned based on the items in table 7.

Table 7: Six monthly monitoring program and performance measures for businesses

Performance Parameters	Measures	Monitoring	Reporting
Awareness of construction activity and likely impacts.	<ul style="list-style-type: none"> • Notifications issued within required timeframes on 100% of occasions, unless otherwise agreed with Sydney Metro. • Number of business briefings, building-based information sessions and face-to-face meetings prior to works. • The objective is to make contact via these measures with 100% of businesses within 50 metres prior to works that have the potential to impact the owners. 	<ul style="list-style-type: none"> • Records in community engagement database on number and timing of notifications. • Records in community engagement database on number of (and attendance at) briefings, information sessions and completed doorknocks/face-to-face meetings. • Feedback from meetings, presentations and briefings (documented in community engagement database). 	<ul style="list-style-type: none"> • Number of notifications issued. • Percentage of notifications issued on time. • Number of briefings, information sessions and completed doorknocks. • Percentage of businesses within 50 metres contacted prior to works. • Number of complaints received from businesses relating to lack of information about construction activities and impacts. • Lessons learned.

		<ul style="list-style-type: none"> Records in community engagement database on complaints received from businesses relating to lack of information about construction activities and impacts. 	
Measures implemented to maintain business vehicle and pedestrian access, parking, visibility and amenity during construction activity.	<ul style="list-style-type: none"> Potential issues identified in advance and mitigation measures implemented in consultation with affected businesses to address access, parking, visibility and/or amenity issues. The objective is 100% implementation of agreed mitigation measures relating to access, parking, visibility and other amenity aspects. 	<ul style="list-style-type: none"> Consultation with businesses on potential impacts and mitigation measures (documented in community engagement database). Feedback on effectiveness of mitigation measures (documented in community engagement database). Records in community engagement database on complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity, including details of any repeat complaints about the same issue. 	<ul style="list-style-type: none"> Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues. Percentage of businesses where mitigation measures were implemented as agreed. Details of mitigation measures implemented. Business feedback on effectiveness of mitigation measures. Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity. Lessons learned.
Agreed measures to minimise noise and vibration impacts on noise and vibration sensitive businesses.	<ul style="list-style-type: none"> Agreed mitigations implemented, including agreed respite, work methods, proactive engagement and ongoing communication. Businesses identified as potentially affected 	<ul style="list-style-type: none"> Consultation with businesses on noise and vibration impacts and mitigation measures documented in community engagement database. 	<ul style="list-style-type: none"> Number of businesses with agreed mitigation measures to address noise and vibration impacts. Summary of non-standard mitigation measures implemented. Number of referrals to Sydney Metro.

	<p>by high noise for extended periods, and requests for at property treatment or relocation, referred to Sydney Metro if all negotiated solutions offered under the scope of the contract fail to provide an acceptable solution to the impacted businesses.</p> <ul style="list-style-type: none"> • The objective is for zero referrals to Sydney Metro over a six-month timeframe during standard construction. 	<ul style="list-style-type: none"> • Documentation of affected businesses impacts and mitigation measures in site specific Construction Noise and Vibration Impact Statement reports. • Feedback on effectiveness of mitigation measures (documented in community engagement database). • Records of businesses referred to Sydney Metro for additional assessment / treatment. • Records in community engagement database on noise and vibration complaints from businesses. 	<ul style="list-style-type: none"> • Number of repeat complaints from noise sensitive receivers relating to noise and vibration impacts. • Lessons learned.
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12 Low impact or preparatory activities process

12.1 Purpose

This implementation process describes the approach Sydney Metro will use to manage engagement and ongoing consultation with stakeholders, and the community and businesses with an interest in, or potentially affected by Sydney Metro low impact or preparatory activities.

Low impact work is generally defined within State significant infrastructure conditions of approval for Sydney Metro projects as work that is not considered main construction works but will support main construction activities. Preparatory activities is a term defined within the Western Sydney Airport Plan and may apply to the variation to the Airport Plan for on-airport works for Sydney Metro – Western Sydney Airport. Each of these terms are described in more detail in table 8 below.

This low impact or preparatory activities plan must be implemented in conjunction with the overarching requirements outlined in this strategy.

12.2 Relationship to plans

The intention of this low impact or preparatory activities implementation process is to cover low impact or preparatory activities prior to the main construction works starting. Low impact activities may be conducted by Sydney Metro or its Contractors.

At the commencement of Construction, Contractor activities will be covered by the PDCT Community Communication Strategy.

12.3 Low impact and preparatory activities

For the purposes of this process, low impact activities are defined as:

- Survey, survey facilitation and investigations works (including geotechnical investigations, road and building dilapidation survey works, drilling and excavation).
- Treatment of contaminated sites.
- Establishment of ancillary facilities including construction of ancillary facility access roads and providing facility utilities.
- Operation of ancillary facilities that have minimal impact on the environment and community.
- Clearing and relocation of vegetation (including native).
- Installation of mitigation measures, including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments.
- Property acquisition adjustment works, including installation of property fencing and utility relocation and adjustments to properties.

- Utility relocation and connections that have minimal impact on the environment and community.
- Maintenance of existing buildings and structures.
- Archaeological testing under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010) or archaeological salvage and clearance undertaken in association with other Low Impact Work to ensure there is no impact on heritage items.
- Any other activities that have minimal environmental impact.

Preparatory activities are generally defined in the Western Sydney Airport Plan as the following:

- Day to day site and property management activities
- Site investigations, surveys (including dilapidation surveys), monitoring and related works (e.g. geotechnical or other investigative drilling, excavation, or salvage)
- Establishing construction work sites, site offices, plant and equipment, and related site mobilisation activities (including access points, access tracks and other minor access works, and safety and security measures such as fencing but excluding bulk earthworks)
- Enabling preparatory activities such as demolition or relocation of existing structures (including buildings, services, utilities and roads) and the disinterment of human remains
- Any other activities which are determined Preparatory Activities.

Prior to low impact or preparatory activities taking place, a pre-construction work form will be completed for approval by the PDCT.

12.4 Monitoring and reporting

Due to the short-term and intermittent nature of low impact activities to businesses, business monitoring as outlined in Section 8 of this OCCS will not be undertaken for work covered by section 12.

Feedback received during proactive doorknocks and incoming correspondence (emails and phone calls) will be informally monitored and any dissatisfaction from businesses recorded and managed in accordance with the Construction Complaints Management System in the first instance. Complaints are reported on daily through the Daily Complaints Report and quarterly in the Construction Compliance Report.

Table 8: Communication tools for low impact or preparatory activities

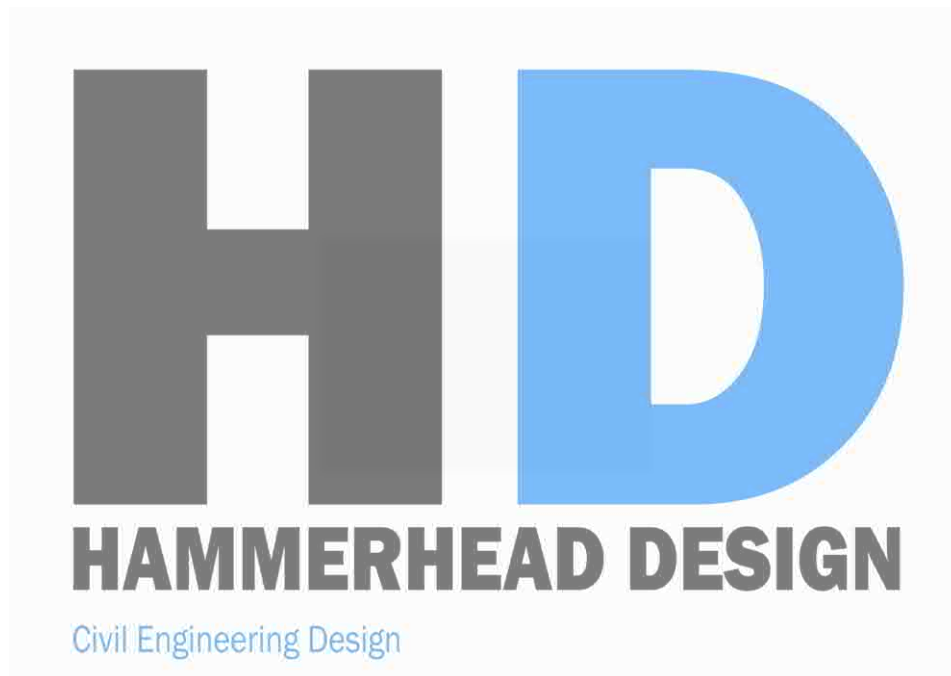
Activity	Communication tools	Stakeholder	Timing
Survey and site investigations, including geotechnical investigations	Notification letter ¹	Delivered to properties within 50m or work in standard construction hours, 100m for out of hours work ²	7 days prior to work starting
	Metro Connect	Sent to stakeholder distribution email lists for	
	Doorknock (if intrusive or loud)	Immediate neighbours	
Site establishment (including vegetation clearing, fencing, controls etc.)	Newsletter	Local council Local member Senior stakeholders Local groups Delivered to properties within 500m	At site establishment As required
	Notification letter	Delivered to properties within 200m for night work and 100m for day work ² Local groups	7 days prior to work starting
	Site signage Hoarding banners Directional signage	People passing by the site	As required
	Doorknock	Properties within 50m Educational and religious institutions	7 days prior to work starting
Out of hours work	Notification letter ²	Delivered to properties within 200m ² Local groups	7 days prior to work starting
	Doorknock	Properties within 50m	7 days prior to work starting
Planned service disruptions	Included in notification letter	Delivered to properties within 200m ²	7 days prior to disruption

¹ Where work is undertaken wholly within the rail corridor, during a possession, the notification will be distributed by Sydney Trains. See explanation for 'Work during rail possessions'.

² This area will expand if the noise assessment shows a wider impact radius.

Activity	Communication tools	Stakeholder	Timing
Emergency work	Notification letter Doorknock	Affected properties	Within 2 hours
Work during rail possessions	Sydney Trains notification	Sydney Trains delivery area (250m on either side of the rail corridor)	Delivered prior to possession period by Sydney Trains
Construction milestones	Included in notification letter	Delivered to properties within 100m or work in standard construction hours, 200m for out of hours work ²	7 days prior to new milestone
	Doorknock	Properties within 50m Educational and religious institutions	7 days prior to new milestone
	Briefings	Local council Local member Senior stakeholders Local groups Government agencies Specific businesses as required	As required or requested
Traffic changes, including any public transport changes	Included in notification letter	Delivered to properties within 100m or work in standard construction hours, 200m for out of hours work ²	7 days prior to work starting 7 days prior to new milestone
	VMS Traffic alert Bus stop notices	Road users	7 days prior to work starting 7 days prior to new milestone
Emergency work	Notification letter Doorknock	Affected properties	Within 2 hours
Transport infrastructure disruptions	Notification letter Bus stop notices Directional signage	Transport users Local council Transport agencies	As required

25 APPENDIX G – ROAD SAFETY AUDIT



Detailed Design Road Safety Audit

Western Sydney Airport: Elizabeth Drive & Badgery's Creek Road Upgrade TW01-CS1

Prepared for:



Document Number:

HDRSA-21017-01

DOCUMENT CONTROL RECORD

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Author	Christian Cloete		
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Date Issued	22 October 2021		
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1. INTRODUCTION

Hammerhead Design Pty Ltd has been engaged by Civlink Consulting Pty Ltd to conduct a Detailed Design Road Safety Audit on the proposed temporary traffic management arrangements along Badgerys Creek Rd, Aerotropolis Access Rd and Derwent Road Access.

2. THE PROJECT

2.1 Overview

Transport for NSW has commissioned the construction of new intersections & road alignments from Badgerys Creek Road to provide access to the Sydney Metro – Western Sydney Airport Aerotropolis Metro Station for future use during the construction of the station and to facilitate public access when the metro station is operational.

To facilitate these works TfNSW has engaged Abergeldie Complex Infrastructure to construct these new intersections and road alignments as part of the Enabling Works at Badgerys Creek Road Area and Aerotropolis.

The construction scope for the SMWSA Enabling Works at Badgerys Creek Road area and Aerotropolis Contract consists of two different project sites as follows:

- Badgerys Creek Road Area, Upgrade of Pitt Street, Longleys Road, construction of Link Road and Elizabeth Drive roundabout fourth leg; and –
- Aerotropolis Access Road and Derwent Road Access Upgrade.

Key features at each location include:

Roadworks at Badgerys Creek Road Area:

- Construction of an additional fourth leg on the roundabout to the existing 3-leg roundabout at the intersection of Badgerys Creek Road and Elizabeth Drive including all associated civil works identified within the Drawings;
- Road widening and modification to Pitt Street and Longleys Road to suit two-way heavy vehicle movements with total road length being modified approximately 1,362m including all associated earthworks, clearing, utility adjustments, civil road works and finishing works;
- Construction of 'Link Road', a 400m road connecting Pitt Street and Longleys Road including all associated clearing, earthworks, utility adjustments, civil road works and finishing works;
- Upgrade to existing Badgerys Creek Road and Longleys Road intersection to suit left in/ left out movements; and
- Adjustment and relocation of utilities impacted by the roadworks.

Aerotropolis Access Road and Derwent Road:

- Construction of a new roundabout at the intersection of Badgerys Creek Road and the proposed Aerotropolis Access Road;
- Construction of the new Aerotropolis Access road including new utilities, stormwater drainage, pavement works and finishing works;
- Construction and modification of the access road into 40 Derwent Road; and
- Adjustment and relocation of utilities affected by the roadworks.

2.2 Audit Location

The different locations of the Road Safety Audit are highlighted below.

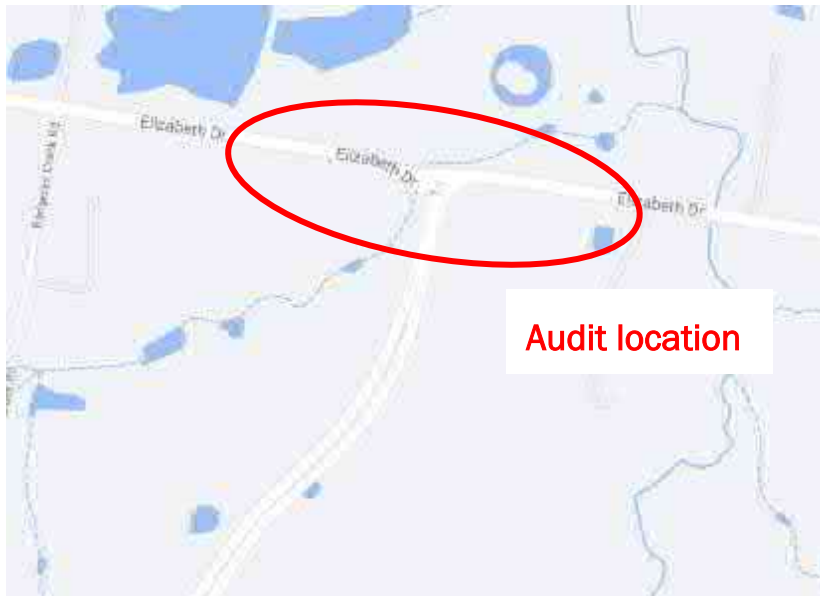


Figure 1 – Elizabeth Drive Locality Plan

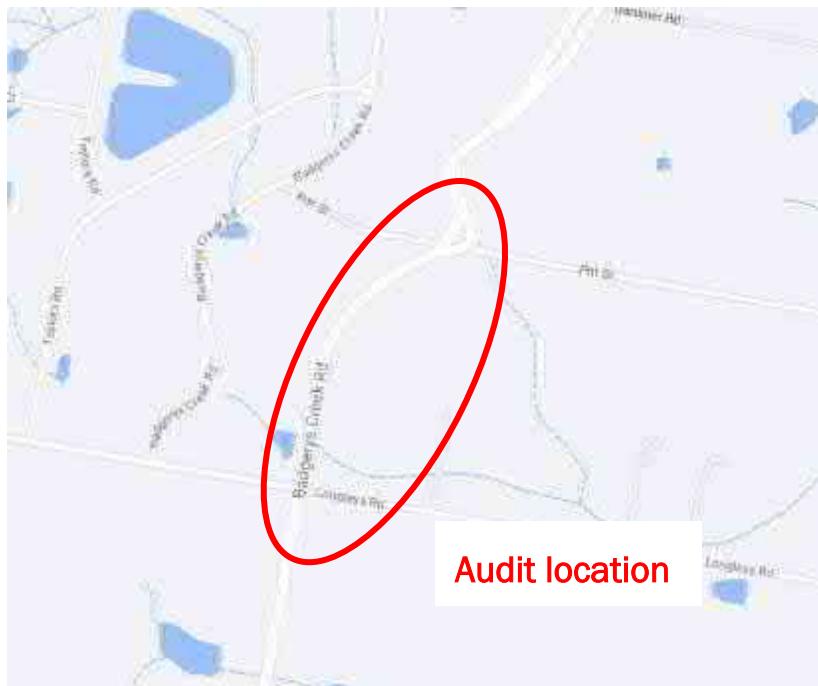


Figure 2 – Pitt Street / Longley's Road Locality Plan

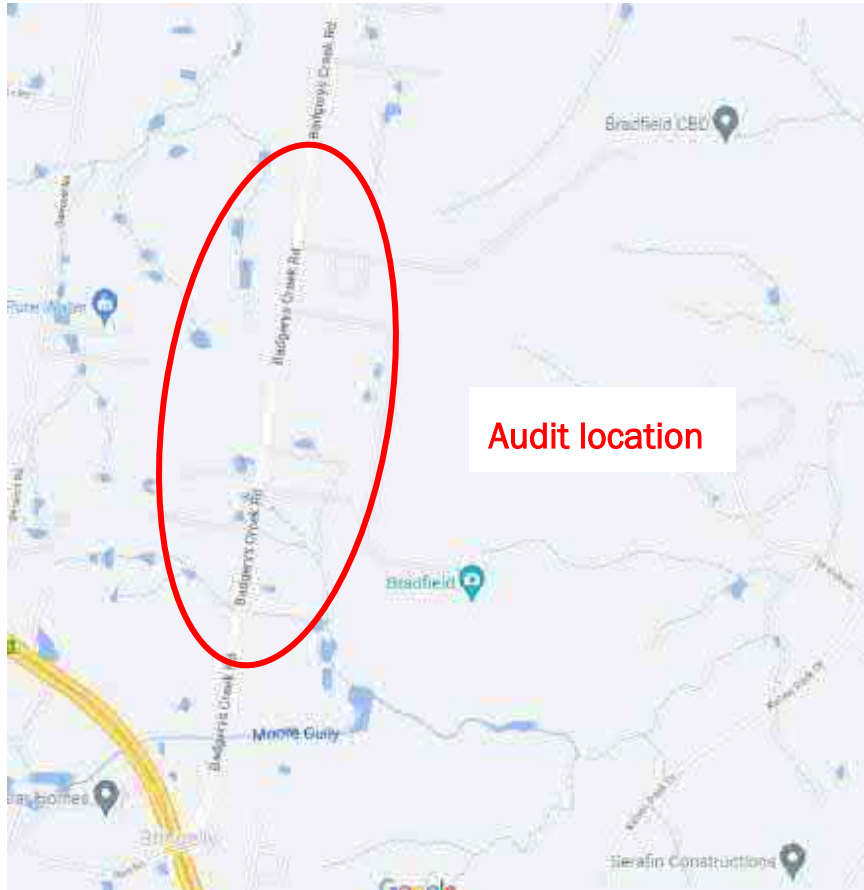


Figure 3 – Aerotropolis Road Locality Plan

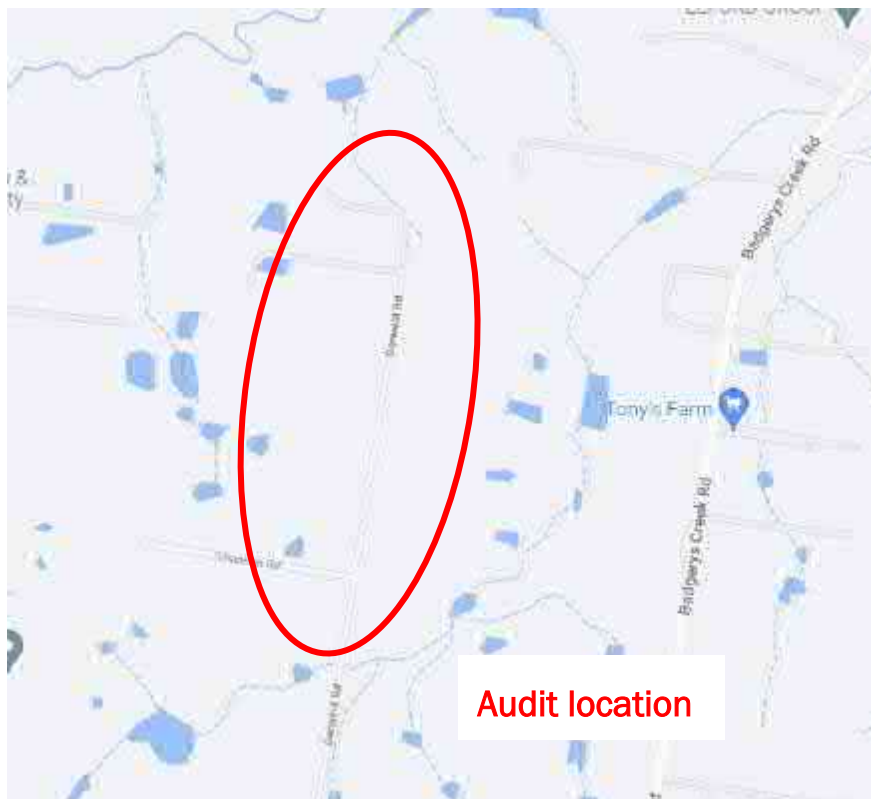


Figure 4 – Derwent Road Locality Plan

2.3 Information Assessed

This Road Safety Audit examines the safety of the proposed traffic arrangements to identify if any elements of the design can be modified to improve the safety of the overall scheme.

The audit has been undertaken referencing drawings listed below Issued for Information.

SHEET NO.	TITLE
ABG-SYM-TGS-G001-00	General - Traffic Guidance Scheme (Sheets 1-2)
ABG-SYM-TGS-1001-00	Aerotropolis Access Road - Traffic Guidance Scheme (Sheets 1-5)
ABG-SYM-TGS-1002-00	Longley's Road - Traffic Guidance Scheme (Sheets 1-5)
ABG-SYM-TGS-G001-00	Elizabeth / Badgery's - Traffic Guidance Scheme (Sheets 1-5)
ABG-SYM-TGS-G001-00	Derwent Road - Traffic Guidance Scheme (Sheets 1-3)

SHEET NO.	TITLE
WSAE0-CN-DRG-0001	TEMPORARY WORKS AND TRAFFIC STAGING - COVER SHEET
WSAE0-CN-DRG-0002	TEMPORARY WORKS AND TRAFFIC STAGING - DRAWING INDEX
WSAE0-CN-DRG-0003	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL NOTES
WSAE0-CN-DRG-0004	TEMPORARY WORKS AND TRAFFIC STAGING - LEGEND
WSAE0-CN-DRG-0005	TEMPORARY WORKS AND TRAFFIC STAGING - DRAINAGE DETAILS
WSAE0-CN-DRG-0006	TEMPORARY WORKS AND TRAFFIC STAGING - PAVEMENT DETAILS
WSAE0-CN-DRG-0007	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL DETAILS
WSAE0-CN-DRG-0008	TEMPORARY WORKS AND TRAFFIC STAGING - TYPICAL SECTIONS - STAGE 1 SHEET 1
WSAE0-CN-DRG-0009	TEMPORARY WORKS AND TRAFFIC STAGING - TYPICAL SECTIONS - STAGE 1 SHEET 2
	ELIZABETH DRIVE
WSAE0-CN-DRG-1001	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1
WSAE0-CN-DRG-1002	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 2
WSAE0-CN-DRG-1003	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 3
WSAE0-CN-DRG-1011	TEMPORARY WORKS AND TRAFFIC STAGING - LONGITUDINAL SECTIONS MCE3 SHEET 1
WSAE0-CN-DRG-1021	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 1
WSAE0-CN-DRG-1022	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 2
WSAE0-CN-DRG-1023	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 3
WSAE0-CN-DRG-1024	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE3 SHEET 4
	LONGLEY'S ROAD AND PITT STREET
WSAE0-CN-DRG-1101	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1
WSAE0-CN-DRG-1102	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 2
WSAE0-CN-DRG-1103	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 3
WSAE0-CN-DRG-1111	TEMPORARY WORKS AND TRAFFIC STAGING - LONGITUDINAL SECTIONS MCE4 SHEET 1
WSAE0-CN-DRG-1121	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE4 SHEET 1
WSAE0-CN-DRG-1122	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE4 SHEET 2
	AEROTROPOLIS ROAD
WSAE0-CN-DRG-1201	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1
WSAE0-CN-DRG-1202	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 2
WSAE0-CN-DRG-1211	TEMPORARY WORKS AND TRAFFIC STAGING - LONGITUDINAL SECTIONS MCE5 SHEET 1
WSAE0-CN-DRG-1221	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE5 SHEET 1
WSAE0-CN-DRG-1222	TEMPORARY WORKS AND TRAFFIC STAGING - ANNOTATED CROSS SECTIONS MCE5 SHEET 2
	DERWENT ROAD
WSAE0-CN-DRG-1301	TEMPORARY WORKS AND TRAFFIC STAGING - GENERAL ARRANGEMENT SHEET 1

2.4 Tasks



The following tasks have been undertaken for this audit:

- Identification of hazards to road user safety;
- Assessment of risk of road safety hazards; and
- Documenting all issues identified in this report.

2.5 Previous Audits

The auditors are unaware if any previous audits undertaken in this project.

2.6 AUDIT TEAM

	Lead Auditor	Auditor 2	Auditor 3
Name	Christian Cloete	Anthony Swan	-
Accreditation	Level 3 - RSA-07-0958	Level 2 – RSA-02-1475	-
Signature			

3. MEETINGS

3.1 Commencement meeting

A phone meeting was held between Alex Gosper on 21 October 2021 to briefly discuss project scope and background.

3.2 Site inspection

Not undertaken. Auditors have reviewed Google StreetView and Nearmap high resolution aerial photography in conjunction with the design plans.

3.3 Completion meeting

A telephonic close out meeting is to be held at a later date if required.

4. THE ROAD SAFETY AUDIT PROCESS

4.1 Overview

The Austroads Guide to Road Safety describes a Road Safety Audit as:

“A road safety audit is a formal examination of a future road or traffic project or an existing road, in which an independent, qualified team reports on the project’s crash potential and safety performance.”

The figure below is extracted from Austroads Guide to Road Safety: Part 6A: Road Safety Audit (2019). It outlines the steps involved in the audit, and who is responsible for each step of the process.

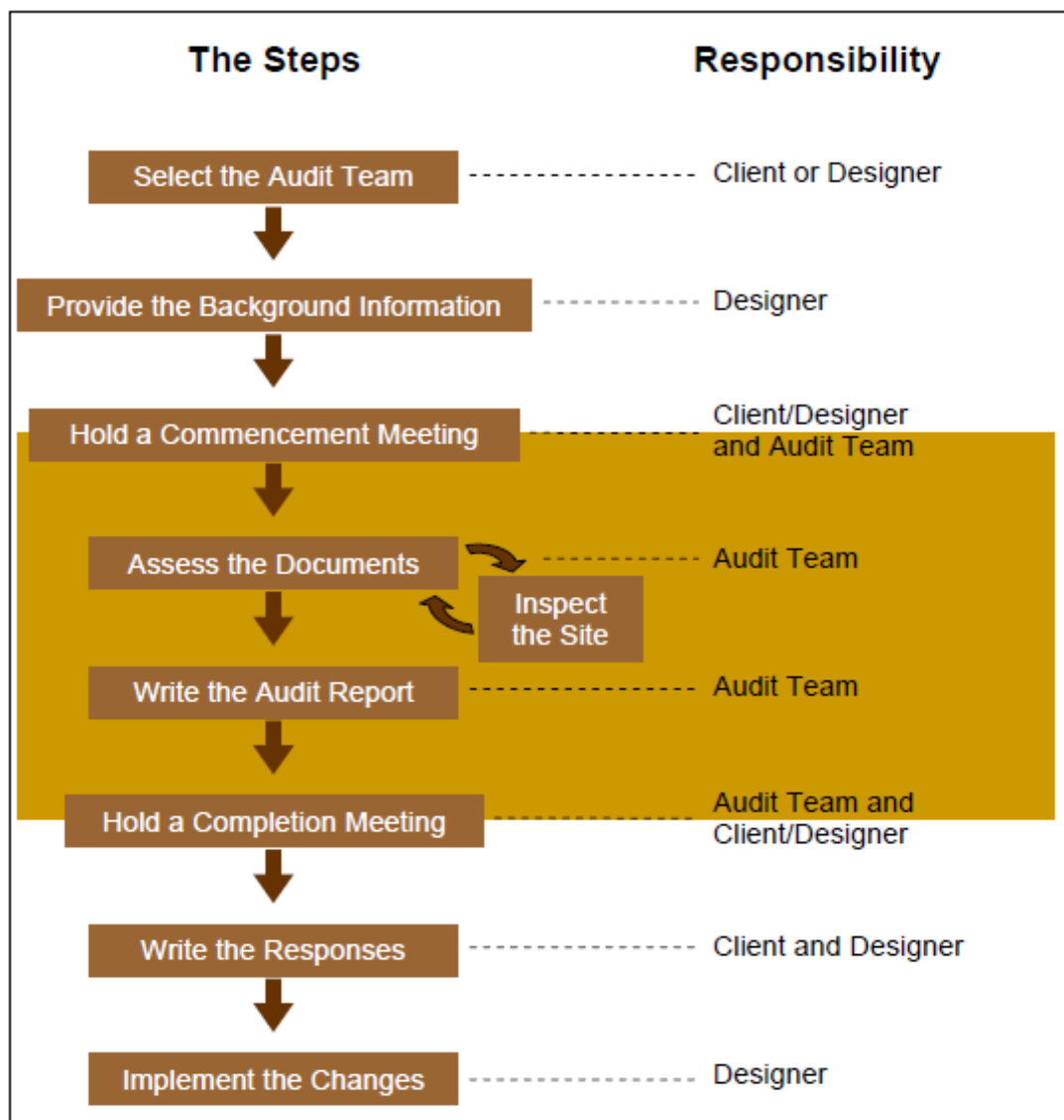


Figure 2 – Road Safety Audit Process (Austroads 2019)

4.2 Risk Assessment

This Road Safety Audit adopts the risk assessment process as described in Austroads, using the following risk matrices.

Table 1 - Frequency

Frequency	Description
Frequent	Once or more per week
Probable	Once or more per year
Occasional	Once every five to ten years
Improbable	Less than once every ten years

Table 2 - Severity

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

Table 3 - Risk Level

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

Table 4 - Suggested Treatment approach

Risk	Suggested Action
Intolerable	Must be corrected
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high.
Medium	Should be corrected or the risk significantly reduced, even if the treatment cost is moderate, but not high.
Low	Should be corrected or the risk reduced, if the treatment cost is low.

When the designer / project manager is developing remedial treatments to address the road safety issues identified, the table above provides guidance on selecting an appropriate treatment.

4.3 Reference Material

The following design standards and manuals were used to assist with the audit:

- Austroads 'Guide to Road Safety Part 6A: Road Safety Audit Manual (2019)';
- Austroads 'Guide to Road Design' series
- TfNSW - Traffic Control at Work Sites TCAWS;

5. AUDIT FINDINGS

A list of all the road safety issues identified are provided in the table below.

While every effort has been made to identify potential safety hazards, no guarantee can be made that every issue has been identified.

6. RESPONDING TO THE AUDIT

Responsibility for the road safety rests with the asset owner.

It should be noted that the asset owner and/or designers are under no obligation to accept each audit finding or recommendation.

It is not the auditor's responsibility to agree to or approve of the construction team or designer's responses to each audit finding.

This road safety audit provides the asset owner with an unbiased list of potential issues which can be formally considered by the construction team, the designer and the asset owner, in conjunction with all other related issues.

This Road Safety Audit report is a formal document that should be responded to in writing. The response should highlight agreement or disagreement with each issue raised giving reasons for disagreement. Further, each issue should have a remedial measure nominated to address the risk.

7. CONCLUDING STATEMENT

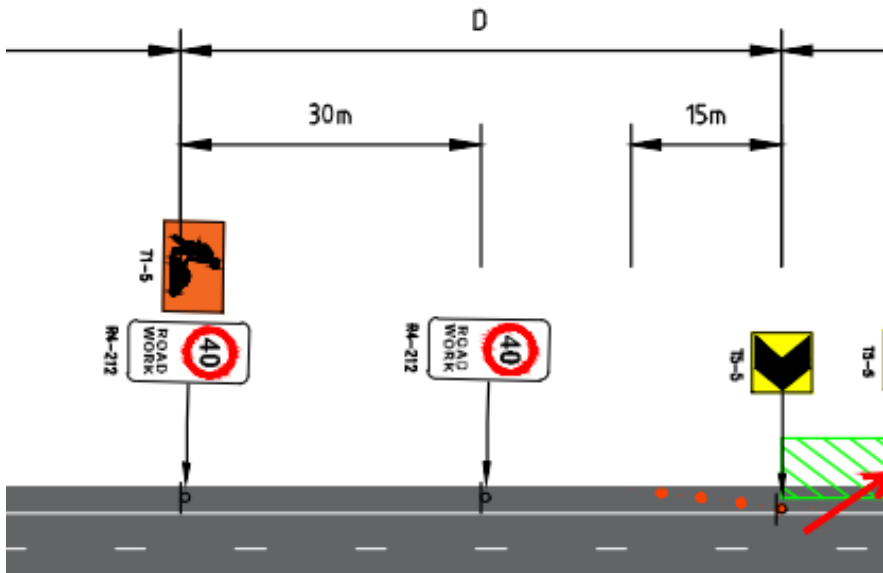
Hammerhead Design Pty Ltd have conducted a detailed design road safety audit of the constructed proposed development at the location described in section 2.2.

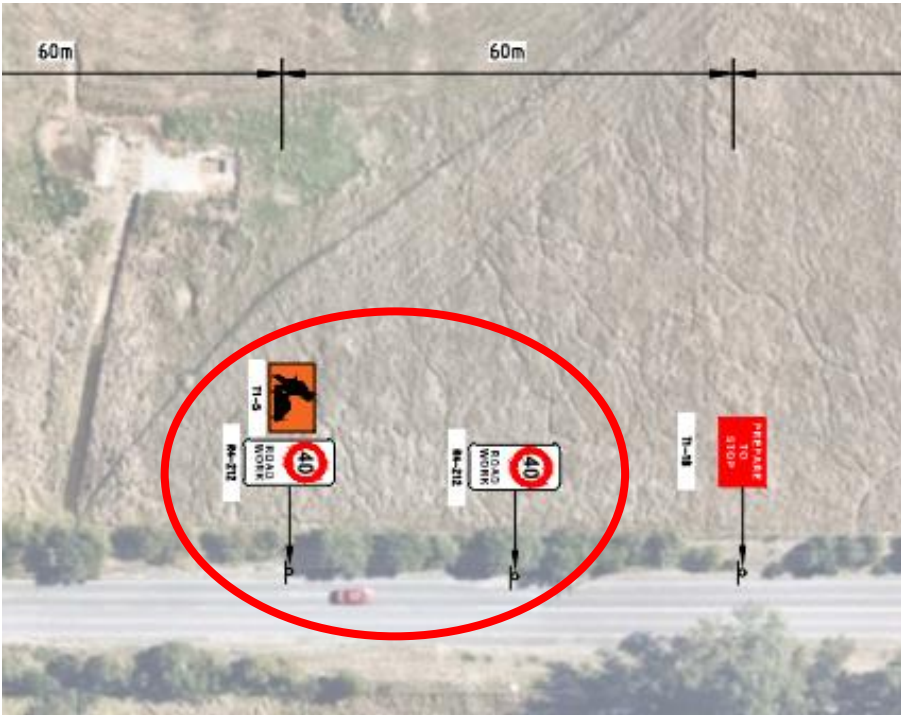
The audit has been carried out for the sole purpose of independently identifying any features that could be altered or removed to improve the safety of the development.

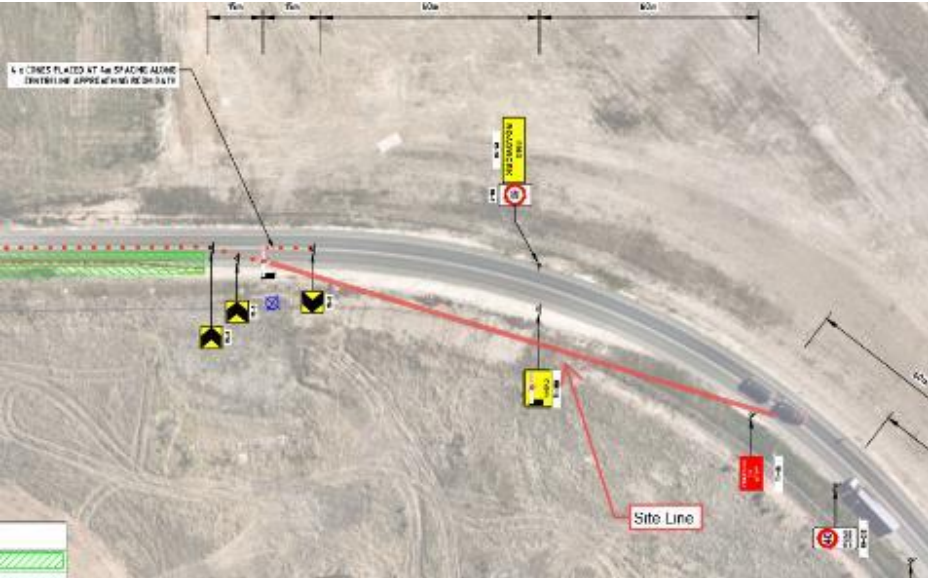
The identified issues have been noted in this report. The accompanying findings and recommendations are put forward for the Client's consideration.

Table 6 – List of Road Safety Issues identified


Item	Location Description	Risk Rating	Client Response
1	<p><u>ABG-SYM-TGS-G001-00</u></p> <p>TGS is of a generic nature, for this reason; any risks associated with site specific conditions cannot be assessed.</p> <p>Example: curves, crests, side streets or any other site-specific condition could introduce additional risk, that should be considered before implementation.</p>	NA	Additional notes to be included to address sight distances etc and site-specific constraints for consideration.


Item	Location Description	Risk Rating	Client Response
2	<p><u>ABG-SYM-TGS-G001-00</u></p> <p>It is noted, the TGS may be used within 60km/h and 80km/h zones.</p> <p>The TCAWS section 4.5.5 recommends using a distance of 0.5D between repeated speed signs. The 30m distance between 40km/h signs may prove insufficient during use within an 80km/h zone. This may increase risk of nose tail type accidents.</p> 	<p>Medium</p> <p>Frequency – Occasional</p> <p>Severity – Minor</p>	Noted – 0.5D to be updated in plan

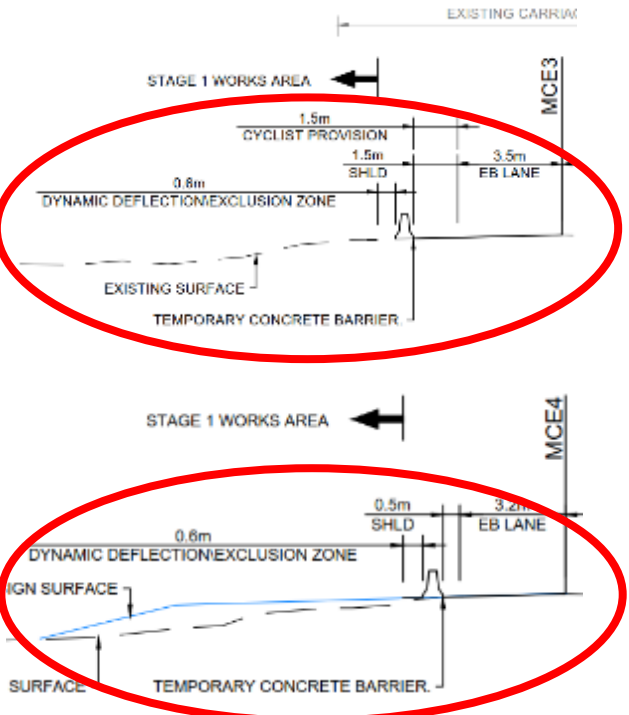
Item	Location Description	Risk Rating	Client Response
3	<p><u>ABG-SYM-TGS-1002-00</u></p> <p>Distance between the 40km/h signs is not noted. This could lead to signs being placed at incorrect distances.</p> <p>If signs are placed at incorrect distances, drivers may not have enough time to comprehend all messages. This can lead to an increased risk of nose to tail & head on type incidents.</p> 	<p>Medium</p> <p>Frequency – Occasional Severity – Minor</p>	<p>Noted – distance to be shown.</p>

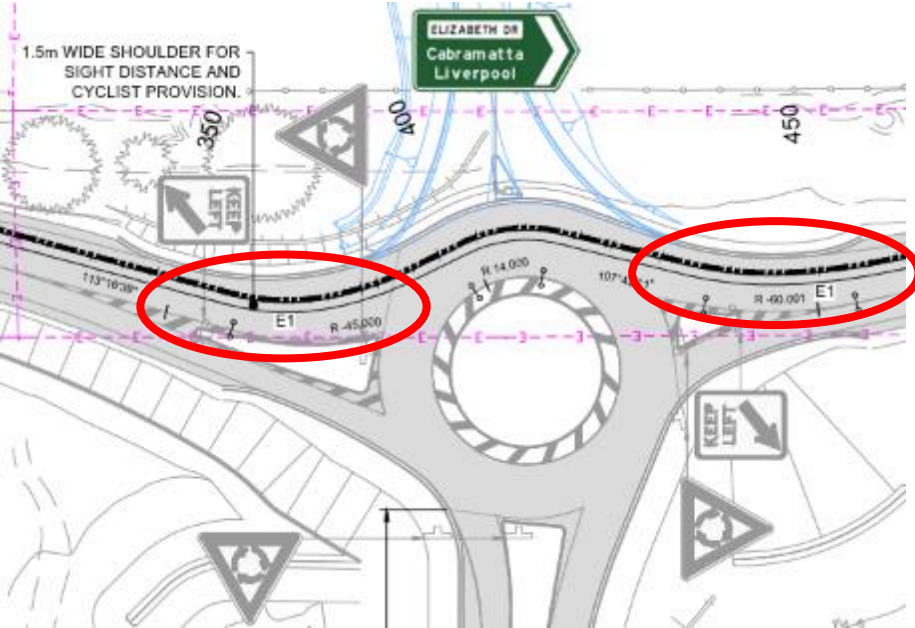
Item	Location Description	Risk Rating	Client Response
4	<p><u>ABG-SYM-TGS-1002-00 (Badgery's Creek Rd – Southbound Approach)</u></p> <p>Site Line, appears sufficient, however; this could quickly change in the event of: A vehicle puling over, Overgrown vegetation, or any roadside furniture being installed.</p> <p>If site line was to become obstructed, this could increase risk of nose to tail and head on type accidents.</p> <p>Note Only.</p> 	NA	Noted

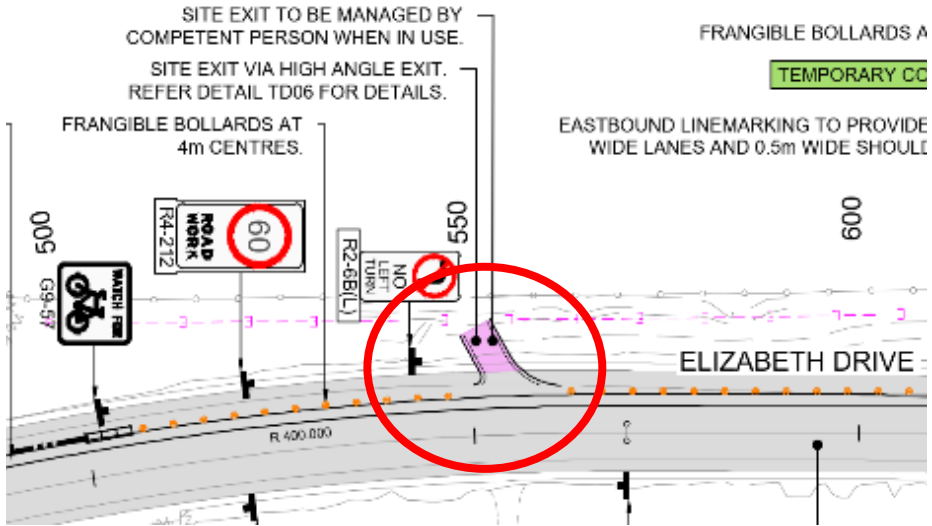
Item	Location Description	Risk Rating	Client Response
5	<p><u>Construction Staging Plans (General)</u></p> <p>TGS ABG-Work zones have not been nominated on the layout plans, and therefore the auditors have not been able to review the appropriateness of the proposed barrier systems.</p> <p>Should intended work area not be protected to the full extent, then the likelihood and severity risks of workers being injured by errant vehicles is increased.</p>	<p>High</p> <p>Frequency – Occasional Severity – Serious</p>	<p>Work area extents has been generated from permanent design models as shown in blue in the designs. Barriers are designed to protect necessary permanent works areas.</p>
6	<p><u>ABG-SYM-TGS-1002-00</u></p> <p>TGS ABG-SYM-TGS-1002-00 appears to have an extra page '5'.</p> <p>Note only (not a safety issue).</p>	<p>NA</p>	<p>Removed</p>

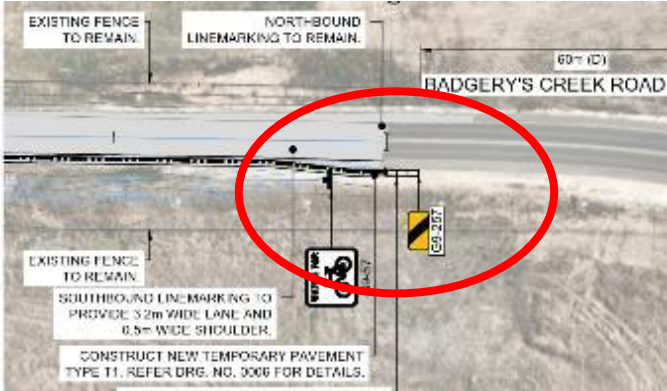
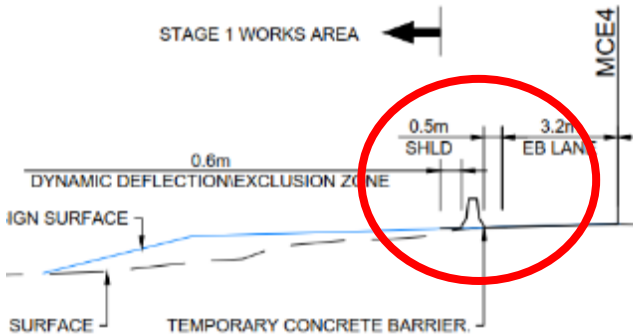
Item	Location Description	Risk Rating	Client Response
7	<p><u>ABG-SYM-TGS-1003-00</u></p> <p>Distances between signs are not noted. This may result in signage being located at incorrect distances.</p> <p>If signs are placed at incorrect distances, drivers may not have enough time to comprehend all messages. This can lead to an increased risk of nose to tail & head on type incidents.</p> 	<p>Medium</p> <p>Frequency – Occasional</p> <p>Severity – Minor</p>	<p>Noted – signage distances to be updated</p>

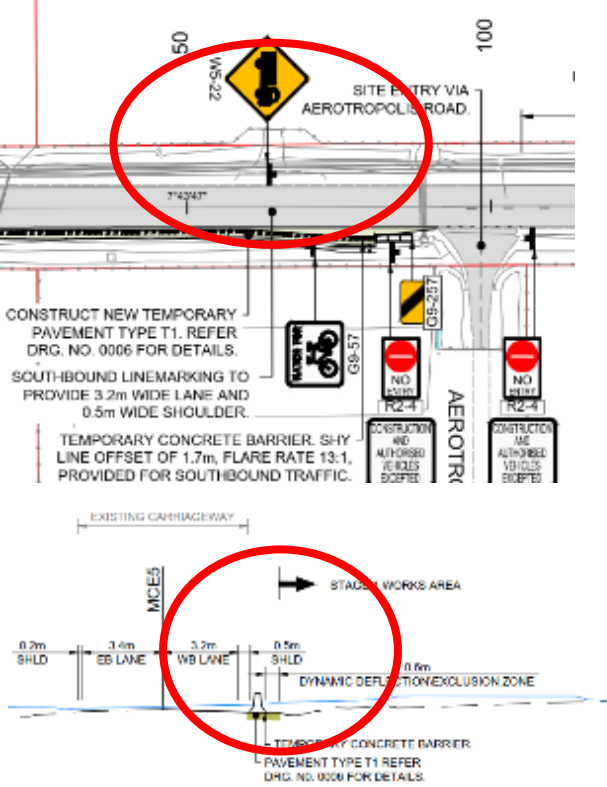
Item	Location Description	Risk Rating	Client Response
8	<p><u>ABG-SYM-TGS-1003-00 (Eastbound Approach to RDBT)</u></p> <p>Traffic speed being reduced from 80km/h to 40km/h.</p> <p>TCAWS Table 6-12 recommends the use of 40 ahead signs with speed reductions of more than 35km/h.</p> <p>Insufficient waning of a speed reduction may increase the risk of sudden breaking resulting in nose/tail type accidents, or speeding vehicles; increasing the risk to workers.</p> 	<p>Medium</p> <p>Frequency – Occasional</p> <p>Severity – Minor</p>	40 ahead sign to be added to plan

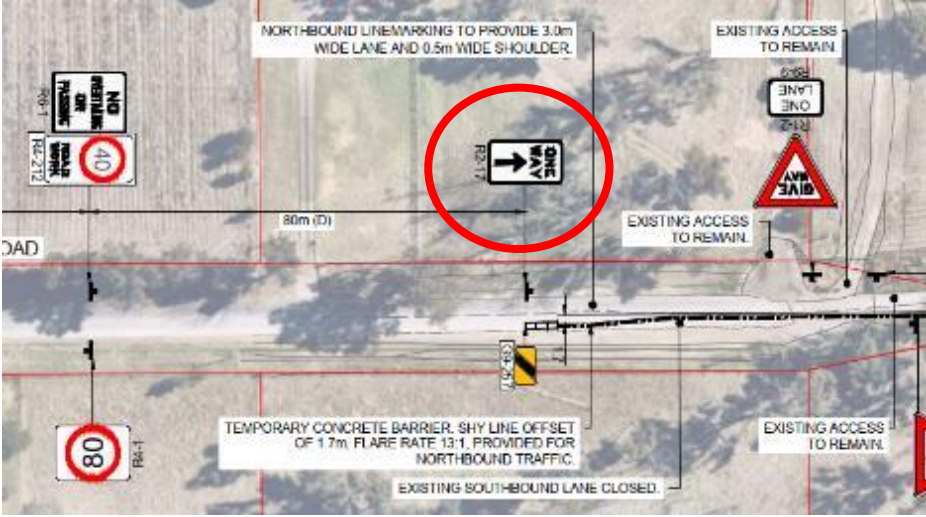
Item	Location Description	Risk Rating	Client Response
9	<p><u>WSAE0-CN-DRG-0008 & 0009 (All stages)</u></p> <p>It is not clear when reviewing the drawings as what barrier classification is being provided, and in turn whether the appropriate dynamic deflection has been provided.</p> <p>Insufficient exclusion zone could lead to injury to workers in the case of a vehicle colliding with the barriers.</p> 	<p>Medium</p> <p>Frequency – Occasional</p> <p>Severity – Minor</p>	<p>Dynamic deflection note to be updated to reflect barrier installed on site.</p>

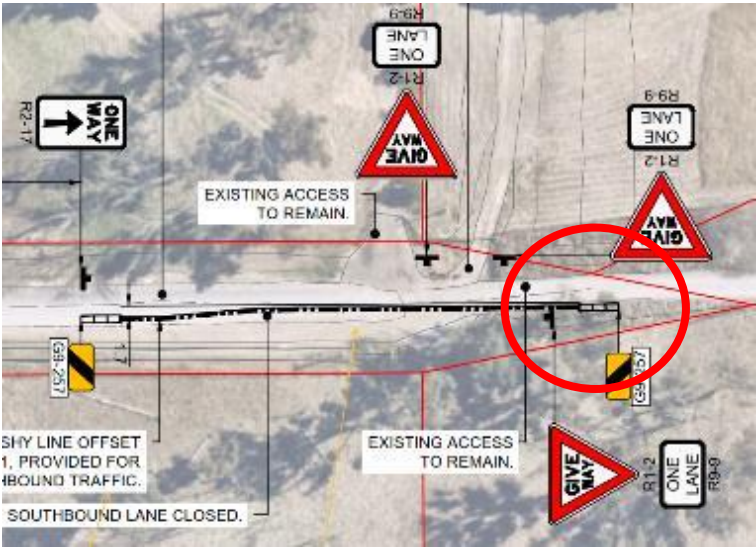
Item	Location Description	Risk Rating	Client Response
10	<p><u>WSAE0-CN-DRG-1002</u></p> <p>Swept paths through the adjusted roundabout have not been provided, and therefore it is not clear whether the appropriate design vehicle can pass through the roundabout without trafficking the 1.5m cycle path/shoulder.</p> <p>Should the design vehicle not be able to do so, there is a potential for clashes between vehicles and cyclists.</p> 	<p>High</p> <p>Frequency – Occasional</p> <p>Severity – Serious</p>	<p>Swept paths to be provided</p>

Item	Location Description	Risk Rating	Client Response
11	<p>WSAE0-CN-DRG-1002</p> <p>It's unclear if a safe observation angle will be maintained for the 'high angle exit TD08'.</p> <p>If there's an Insufficient observation angle, this may increase the risk of side on impacts.</p> 	<p>High</p> <p>Frequency – Occasional</p> <p>Severity – Serious</p>	<p>Note to be added for maintaining observation angle of 70 – 90 degrees</p>

Item	Location Description	Risk Rating	Client Response
12	<p><u>WSAE0-CN-DRG-1101-1103</u></p> <p>Unlike Elizabeth Drive, it appears that there has been no provision in the shoulder adjacent to the proposed barriers for cyclists.</p> <p>Should cyclists be expected in this area, then the 0.5m shoulder will create the potential for clashes between vehicles and cyclists.</p>  	<p>High</p> <p>Frequency – Occasional</p> <p>Severity – Serious</p>	<p>It is noted that cyclist provision south of this point is limited, and the occurrence of cyclists is unlikely. A sign has been provided to warn motorists of the potential for cyclists travelling within the lane and the length of the barrier is limited, which too would see limited exposure for any cyclist who did ride along this section of road.</p>

Item	Location Description	Risk Rating	Client Response
13	<p><u>WSAE0-CN-DRG-1201-1202</u></p> <p>Unlike Elizabeth Drive, it appears that there has been no provision in the shoulder adjacent to the proposed barriers for cyclists.</p> <p>Should cyclists be expected in this area, then the 0.5m shoulder will create the potential for clashes between vehicles and cyclists.</p> 	<p>High</p> <p>Frequency – Occasional</p> <p>Severity – Serious</p>	<p>It is noted that cyclist provision south of this point is limited, and the occurrence of cyclists is unlikely. A sign has been provided to warn motorists of the potential for cyclists travelling within the lane and the length of the barrier is limited, which too would see limited exposure for any cyclist who did ride along this section of road.</p>

Item	Location Description	Risk Rating	Client Response
14	<p><u>WSAE0-CN-DRG-1301 (Derwent Rd Northbound)</u></p> <p>The use of R2-17 (One-way) sign, indicates to Northbound Traffic, the road is only one way.</p> <p>This may give Northbound Traffic a false sense of security, where they do not expect there could be traffic waiting to give-way and, could create confusion with traffic wanting to head Southbound.</p> <p>Due to the limited properties, the risk is lowered but still has the potential to apply to one-off visitors and deliveries.</p> 	<p>Medium</p> <p>Frequency – Occasional</p> <p>Severity – Minor</p>	Noted – sign to be removed

Item	Location Description	Risk Rating	Client Response
15	<p><u>WSAE0-CN-DRG-1301 (Derwent Rd Southbound)</u></p> <p>There does not appear to be barrier flare on the southbound approach to the 'One-Lane' arrangement. One may assume that the provision of the Give-Way would mean that the southbound approaching vehicle would have to slow down and potentially even stop to give way to the approaching traffic, and that therefore the flare would be unnecessary.</p> <p>However as the existing roadway is straight for a considerable distance in each direction, all traffic will have a clear line of sight past the barriers.</p> <p>In the case of a vehicle approaching from the north who can see well in advance of the barriers that there is no approaching traffic, the driver may slow down or even give way, but may shy away from the barrier unsafely.</p> 	<p>Medium</p> <p>Frequency – Occasional</p> <p>Severity – Minor</p>	<p>Noted – due to the expected low speed of approaching traffic and site constraints the barriers are proposed to remain in the current configuration. Flare has been provided on the northbound where traffic has right-of-way.</p>

Extract from Austroads Guide to Road Safety Part 6A: Road Safety Audit 4.8.B

“Audit recommendations are not mandatory. In the event of a crash, the audit documentation may be sought by representatives of an injured person. It is important that audit recommendations are given due consideration. If it is not possible to adopt a recommendation (for example, due to high cost implications), is there another effective way of partly addressing the problem or can a solution be staged over time? Reasons for not accepting findings and recommendations should be adequately documented.”

26 APPENDIX H – ELIZABETH DRIVE / BADGERYS CK ROAD SIDRA ANALYSIS

USER REPORT FOR SITE

All Movement Classes

Template: Default Site User Report



Project: Elizabeth Drive Badgerys Ck Road



Site: 101 [Badgerys Creek / Elizabeth Drive EXISTING AM Peak (Site Folder: General)]

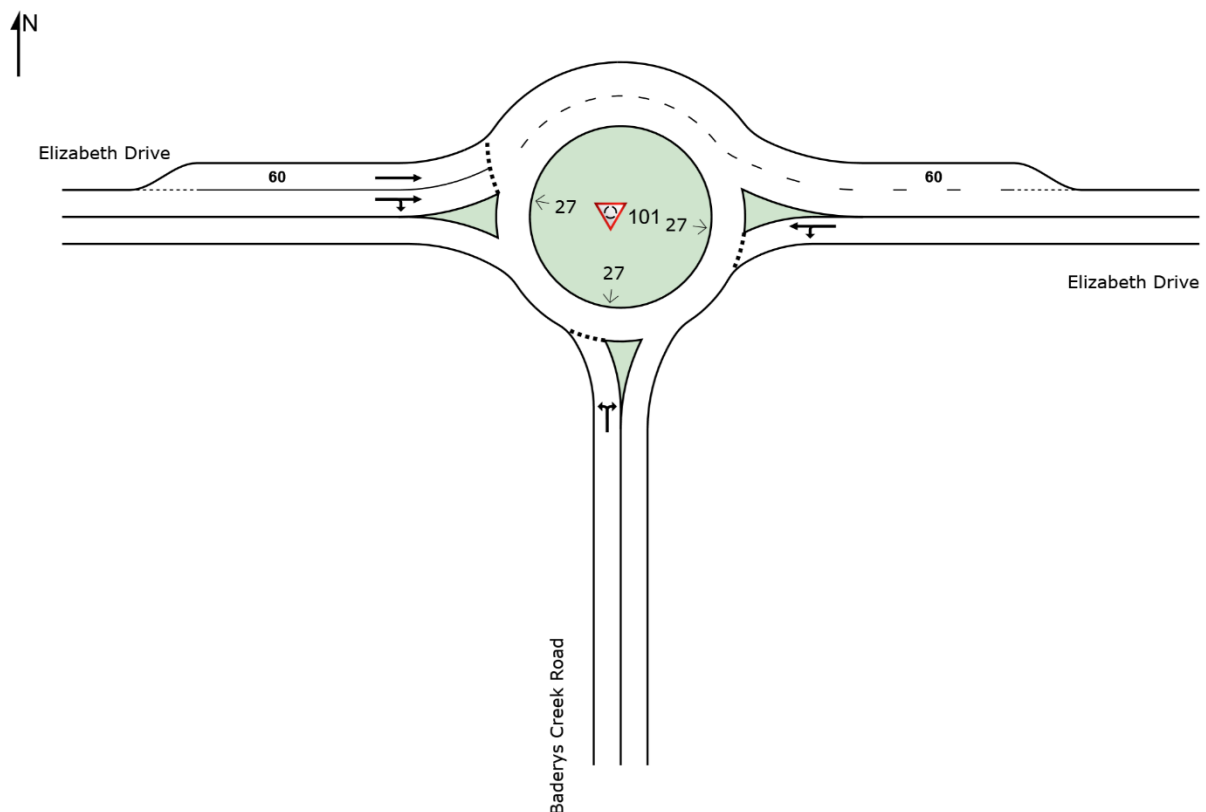
New Site

Site Category: Existing Design

Roundabout

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	%	veh/h	%				veh	m				
South: Badgerys Creek Road														
1	L2	97	10.0	102	10.0	0.349	5.5	LOS A	2.2	16.7	0.54	0.68	0.54	51.4
3	R2	264	10.0	278	10.0	0.349	11.0	LOS A	2.2	16.7	0.54	0.68	0.54	52.9
Approach		361	10.0	380	10.0	0.349	9.5	LOS A	2.2	16.7	0.54	0.68	0.54	52.5
East: Elizabeth Drive														
4	L2	117	10.0	123	10.0	0.280	3.9	LOS A	2.0	14.9	0.22	0.38	0.22	55.0
5	T1	268	10.0	283	10.0	0.280	3.9	LOS A	2.0	14.9	0.22	0.38	0.22	56.7

Approach														
		385	10.0	405	10.0	0.280	3.9	LOS A	2.0	14.9	0.22	0.38	0.22	56.2
West: Elizabeth Drive														
11	T1	789	10.0	830	10.0	0.491	6.3	LOS A	4.0	30.4	0.59	0.54	0.59	54.5
12	R2	44	10.0	46	10.0	0.491	10.7	LOS A	4.0	30.4	0.62	0.54	0.62	54.4
Approach		833	10.0	877	10.0	0.491	6.5	LOS A	4.0	30.4	0.59	0.54	0.59	54.5
All Vehicles		1579	10.0	1662	10.0	0.491	6.6	LOS A	4.0	30.4	0.49	0.53	0.49	54.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Queues (Distance)

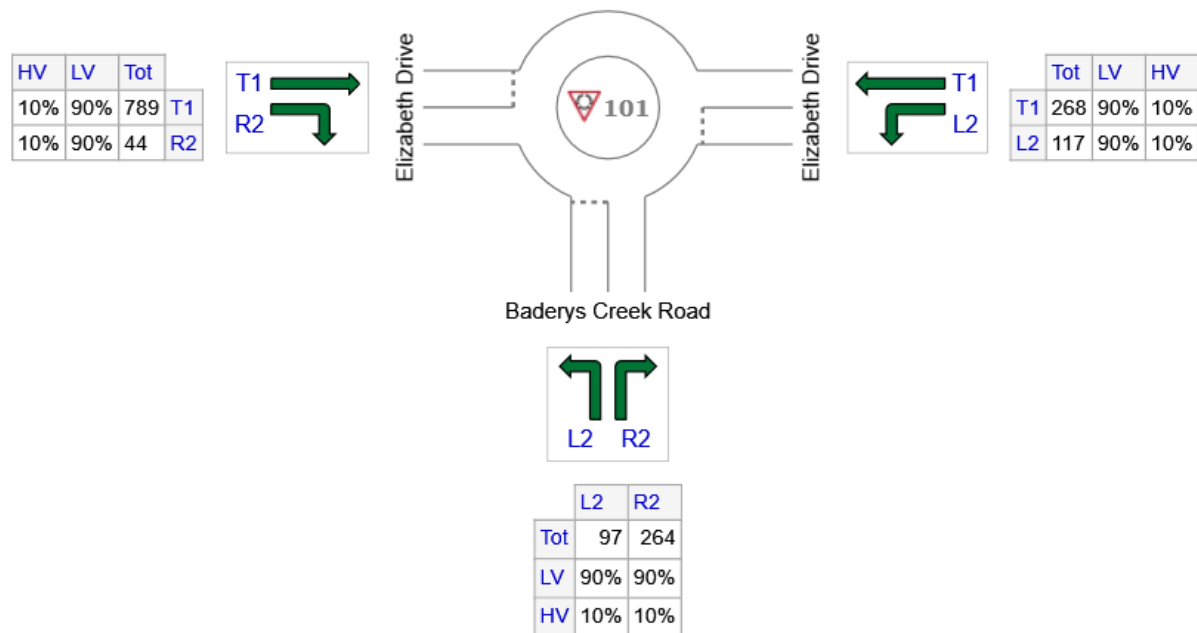
Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (m)	Back of Queue (m)		Queue at Start of Green (m)		Cycle Average Queue (m)		Queue Storage Ratio		Prob. Block.	Prob. SL Lane Ov.	Ov. Lane No.
					Av.	95%	Av.	95%	Av.	95%	Av.	95%			
South: Badgerys Creek Road															
Lane 1		0.349	1.000	0.0	6.7	16.7	NA	NA	1.5	2.7	0.01	0.03	0.0	NA	NA
Approach		0.349			6.7	16.7	NA	NA	1.5	2.7	0.01	0.03			
East: Elizabeth Drive															
Lane 1		0.280	1.000	0.0	6.0	14.9	NA	NA	0.2	0.4	0.01	0.03	0.0	NA	NA
Approach		0.280			6.0	14.9	NA	NA	0.2	0.4	0.01	0.03			
West: Elizabeth Drive															
Lane 1		0.235	1.000	0.0	4.4	10.8	NA	NA	0.9	1.6	0.07	0.18	NA	0.0	2
Lane 2		0.491	1.000	0.0	12.2	30.4	NA	NA	2.2	4.0	0.02	0.06	0.0	NA	NA
Approach		0.491			12.2	30.4	NA	NA	2.2	4.0	0.02	0.06			
Intersection		0.491			12.2	30.4	NA	NA	2.2	4.0	0.02	0.06			

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Input Volumes

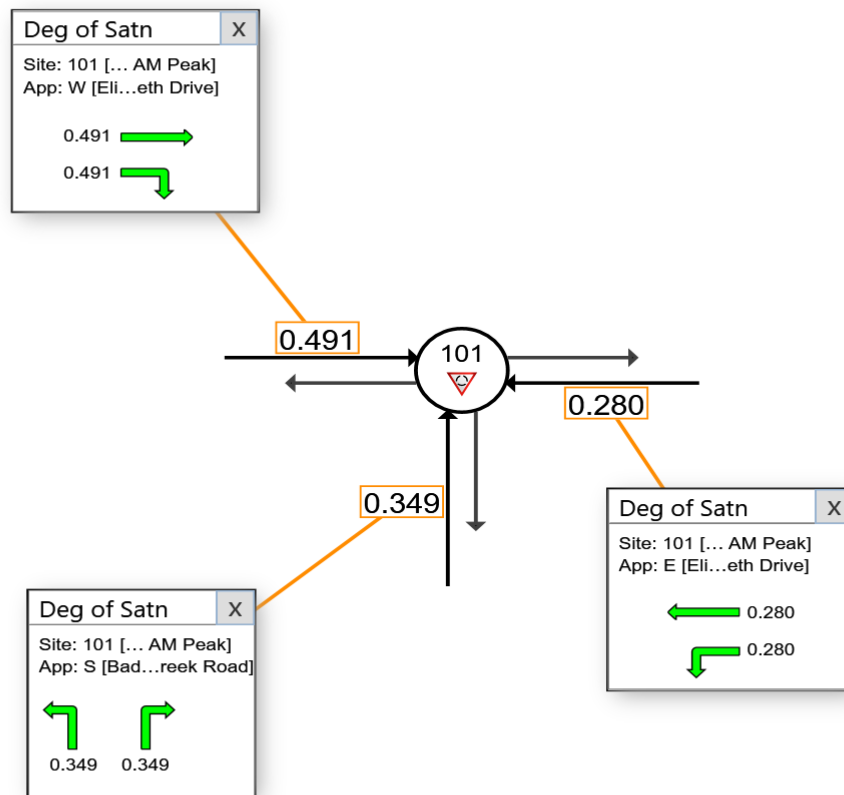
Volume Display Method: Total and %



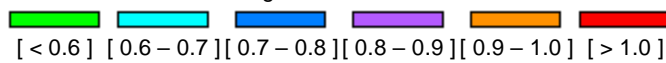
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Badgerys Creek Road	361	325	36
E: Elizabeth Drive	385	347	39
W: Elizabeth Drive	833	749	83
Total	1579	1421	158

Degree of Saturation

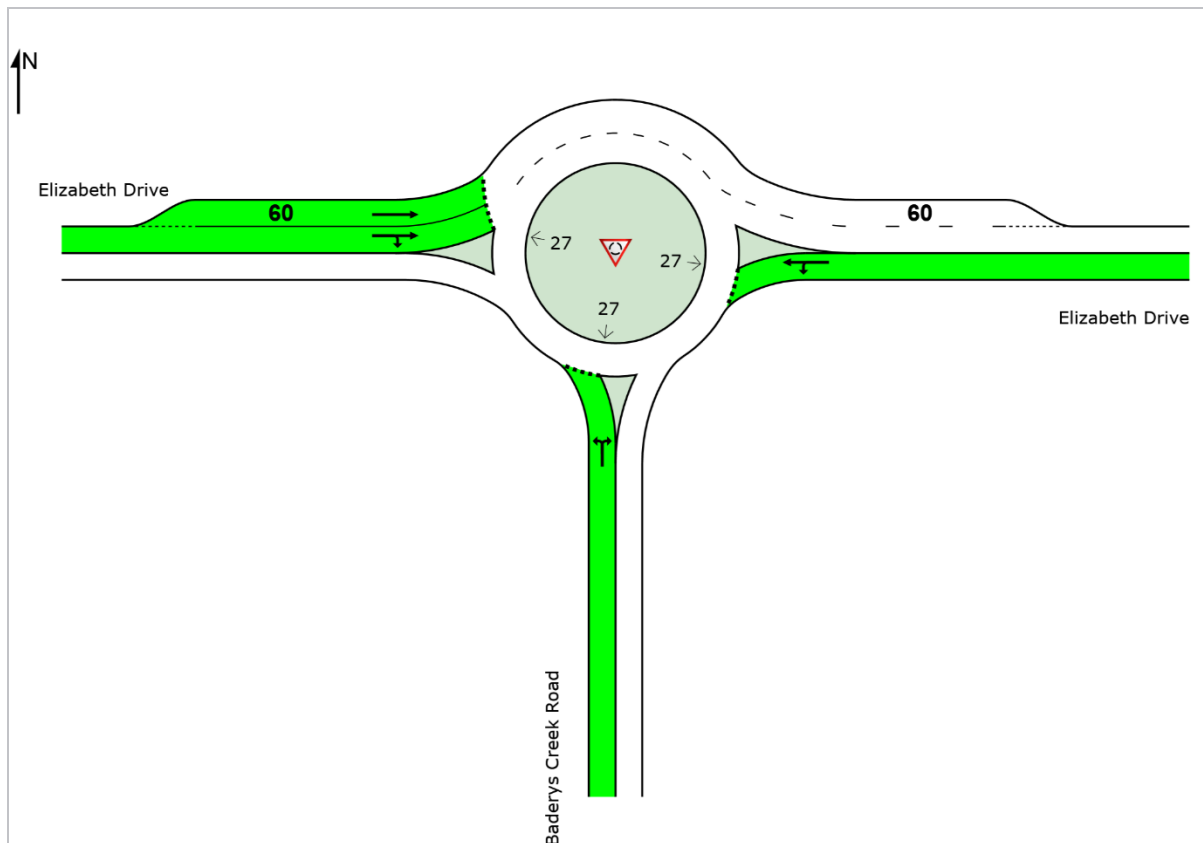
Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.



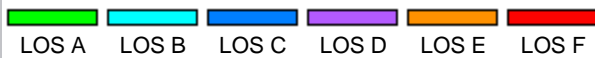
Colour code based on Degree of Saturation



Level of Service				
	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Delay Model: SIDRA Standard (Geometric Delay is included).



Site: 101 [Badgerys Creek / Elizabeth Drive PROPOSED AM Peak (Site Folder: General)]

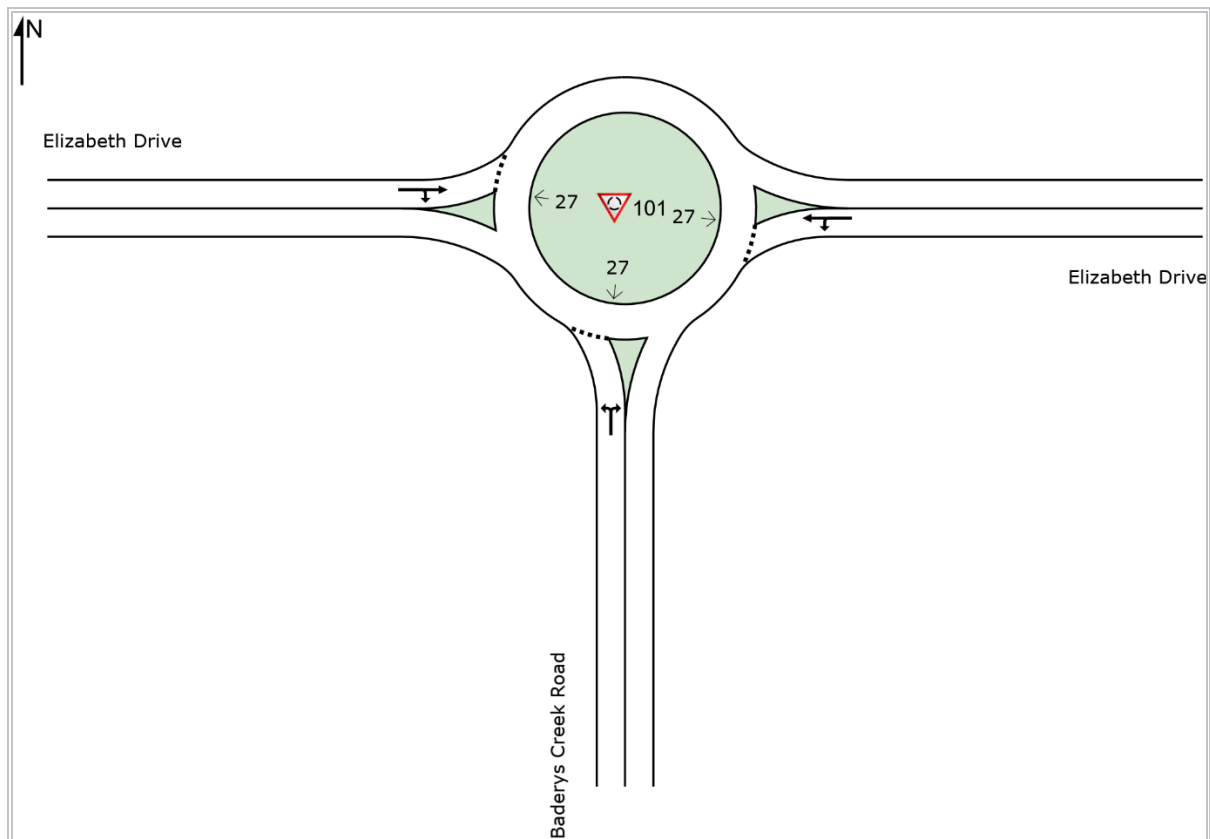
New Site

Site Category: Existing Design

Roundabout

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	%	veh/h	%				veh	m				
South: Baderys Creek Road														
1	L2	97	10.0	102	10.0	0.349	5.5	LOS A	2.2	16.8	0.54	0.68	0.54	51.4
3	R2	264	10.0	278	10.0	0.349	11.0	LOS A	2.2	16.8	0.54	0.68	0.54	52.8
Approach		361	10.0	380	10.0	0.349	9.5	LOS A	2.2	16.8	0.54	0.68	0.54	52.4
East: Elizabeth Drive														
4	L2	117	10.0	123	10.0	0.281	3.9	LOS A	2.1	16.2	0.24	0.38	0.24	54.9
5	T1	268	10.0	283	10.0	0.281	3.9	LOS A	2.1	16.2	0.24	0.38	0.24	56.6
Approach		385	10.0	405	10.0	0.281	3.9	LOS A	2.1	16.2	0.24	0.38	0.24	56.1
West: Elizabeth Drive														
11	T1	789	10.0	830	10.0	0.787	9.5	LOS A	12.1	91.6	0.91	0.85	1.10	52.8
12	R2	44	10.0	46	10.0	0.787	15.0	LOS B	12.1	91.6	0.91	0.85	1.10	52.9
Approach		833	10.0	877	10.0	0.787	9.8	LOS A	12.1	91.6	0.91	0.85	1.10	52.8
All Vehicles		1579	10.0	1662	10.0	0.787	8.3	LOS A	12.1	91.6	0.66	0.70	0.76	53.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Queues (Distance)

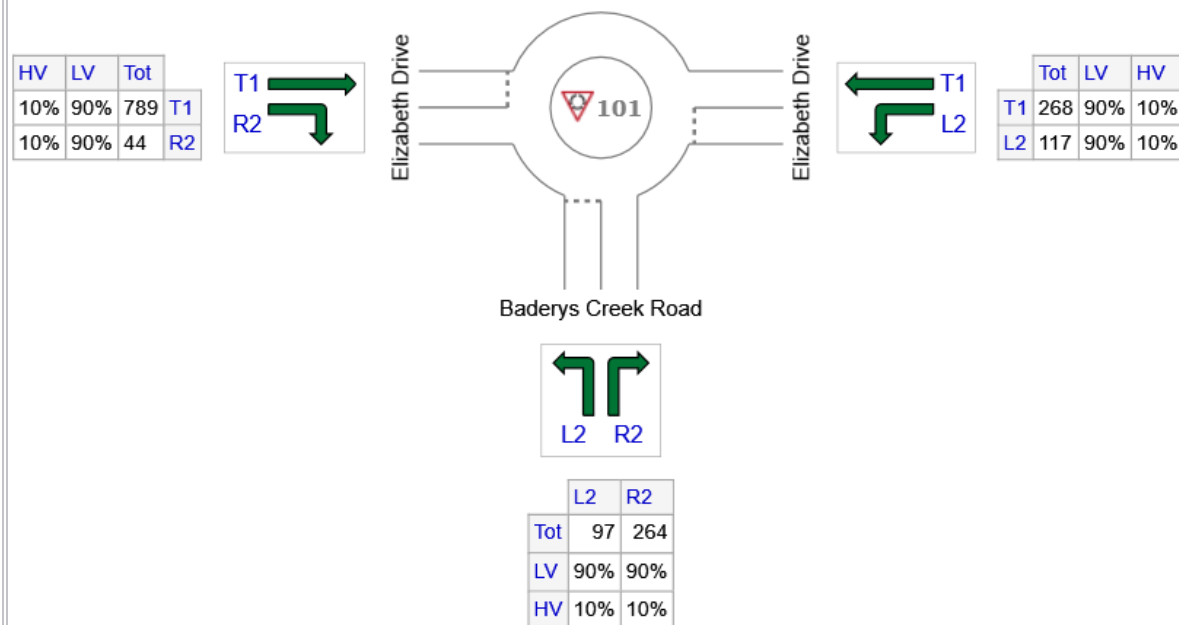
Lane Number	Contin. Lane	Deg. Satn v/c	Prog. Factor (Queue)	Overflow Queue (m)	Back of Queue (m)		Queue at Start of Green (m)		Cycle Average Queue (m)		Queue Storage Ratio		Prob. Block. %	Prob. SL Ov. %	Ov. Lane No.
					Av.	95%	Av.	95%	Av.	95%	Av.	95%			
South: Badgerys Creek Road															
Lane 1		0.349	1.000	0.0	6.8	16.8	NA	NA	1.5	2.7	0.01	0.03	0.0	NA	NA
Approach		0.349			6.8	16.8	NA	NA	1.5	2.7	0.01	0.03			
East: Elizabeth Drive															
Lane 1		0.281	1.000	0.0	6.5	16.2	NA	NA	0.2	0.4	0.01	0.03	0.0	NA	NA
Approach		0.281			6.5	16.2	NA	NA	0.2	0.4	0.01	0.03			
West: Elizabeth Drive															
Lane 1		0.787	1.000	5.3	36.9	91.6	NA	NA	10.8	19.6	0.07	0.18	0.0	NA	NA
Approach		0.787			36.9	91.6	NA	NA	10.8	19.6	0.07	0.18			
Intersection		0.787			36.9	91.6	NA	NA	10.8	19.6	0.07	0.18			

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Input Volumes

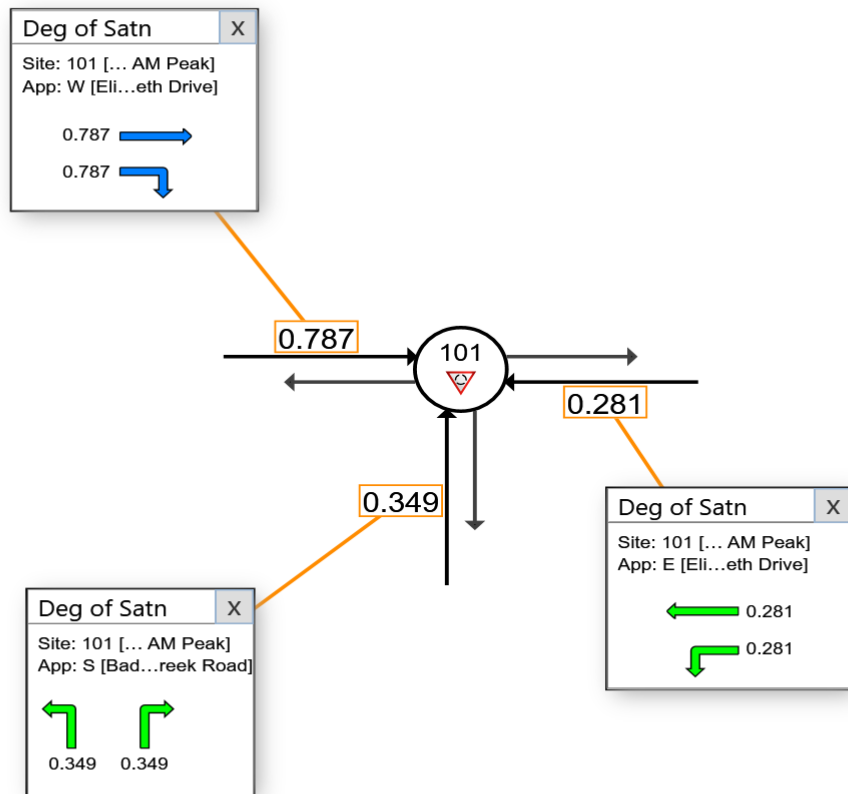
Volume Display Method: Total and %



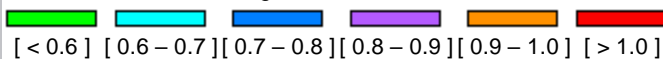
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Badgerys Creek Road	361	325	36
E: Elizabeth Drive	385	347	39
W: Elizabeth Drive	833	749	83
Total	1579	1421	158

Degree of Saturation

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

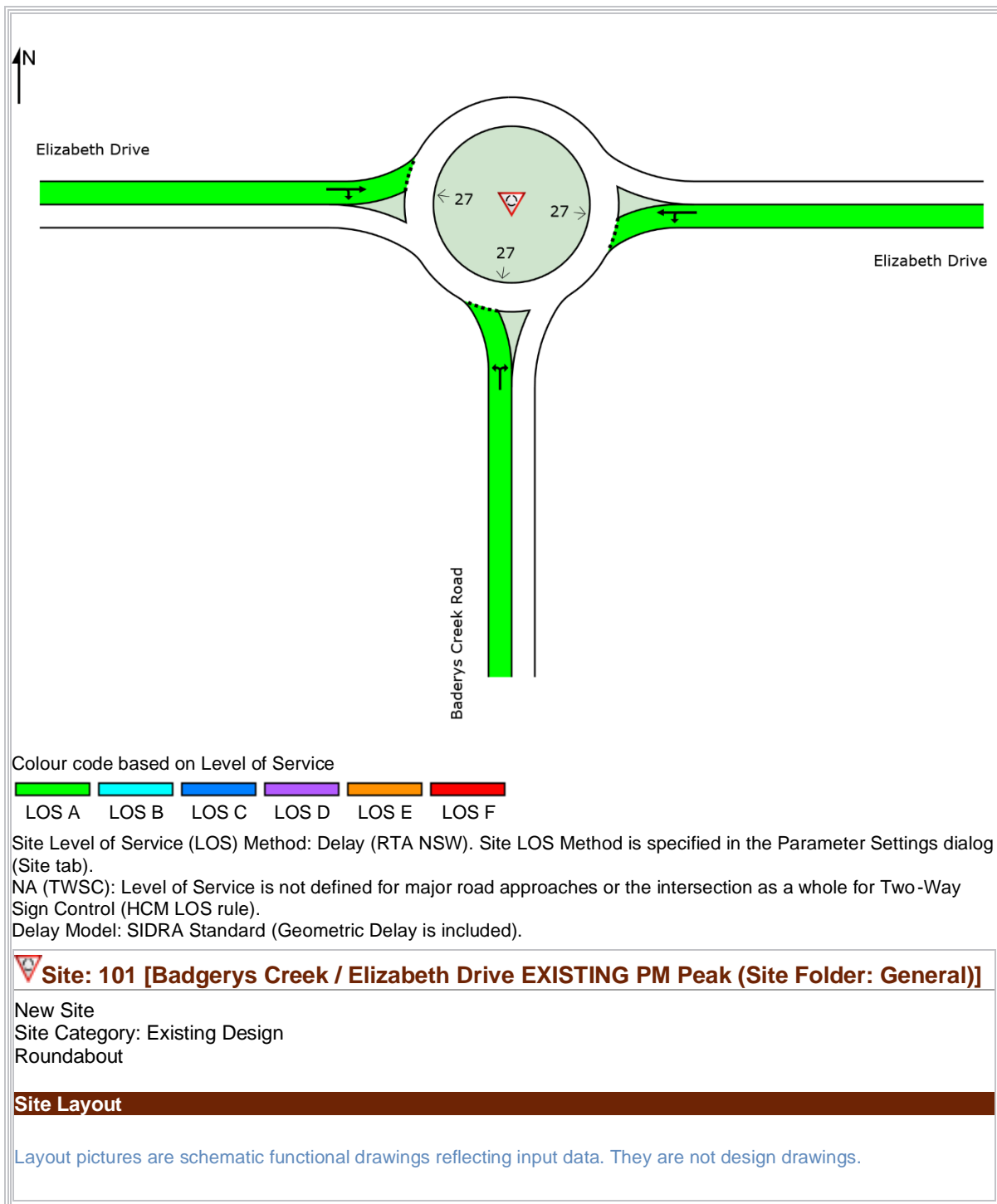


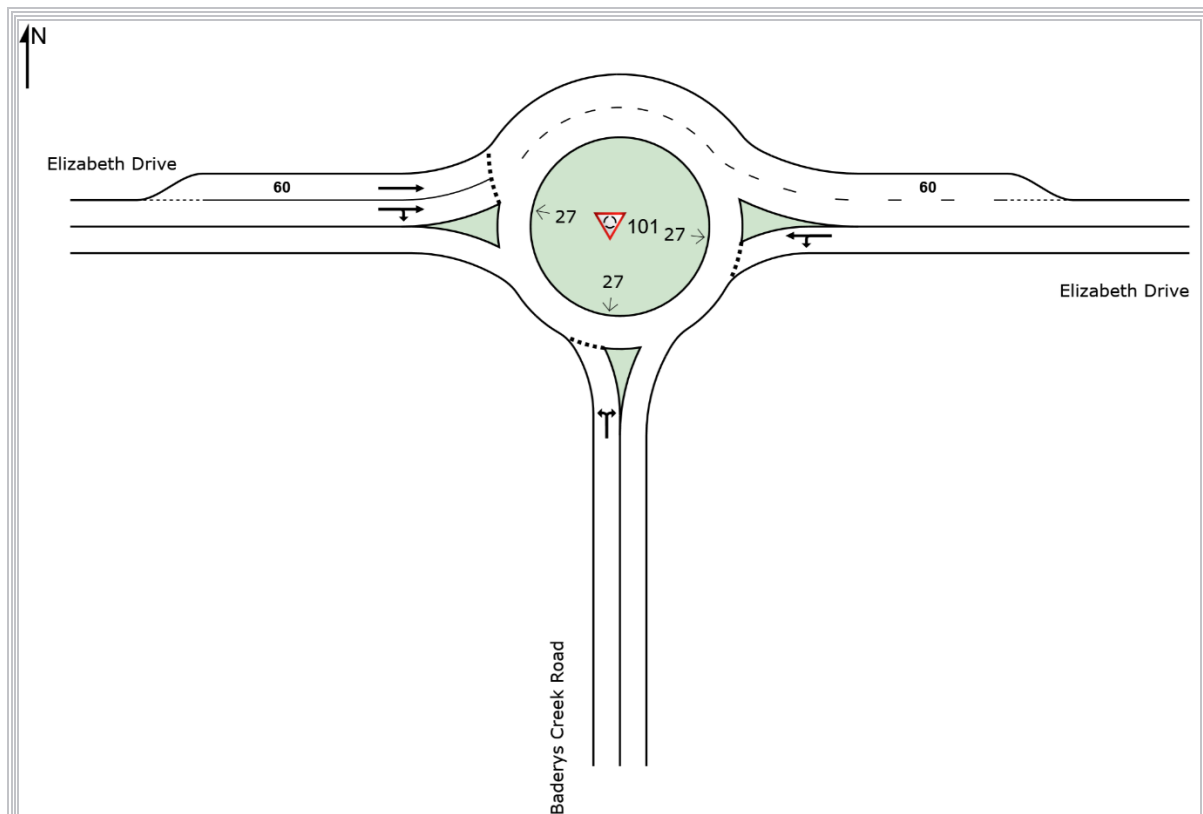
Colour code based on Degree of Saturation



Level of Service

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A





Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Baderys Creek Road														
1	L2	80	10.0	85	10.0	0.279	8.7	LOS A	1.9	14.6	0.83	0.85	0.83	50.1
3	R2	100	10.0	105	10.0	0.279	14.2	LOS A	1.9	14.6	0.83	0.85	0.83	51.5
Approach		180	10.0	190	10.0	0.279	11.7	LOS A	1.9	14.6	0.83	0.85	0.83	50.9
East: Elizabeth Drive														
4	L2	218	10.0	229	10.0	0.708	5.0	LOS A	8.0	60.6	0.61	0.51	0.61	53.2
5	T1	682	10.0	718	10.0	0.708	5.1	LOS A	8.0	60.6	0.61	0.51	0.61	54.8
Approach		900	10.0	947	10.0	0.708	5.1	LOS A	8.0	60.6	0.61	0.51	0.61	54.4
West: Elizabeth Drive														
11	T1	308	10.0	324	10.0	0.221	4.4	LOS A	1.5	11.6	0.33	0.46	0.33	55.2
12	R2	120	10.0	126	10.0	0.221	9.6	LOS A	1.5	11.6	0.33	0.49	0.33	54.8
Approach		428	10.0	450	10.0	0.221	5.9	LOS A	1.5	11.6	0.33	0.47	0.33	55.1
All Vehicles		1508	10.0	1587	10.0	0.708	6.1	LOS A	8.0	60.6	0.56	0.54	0.56	54.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

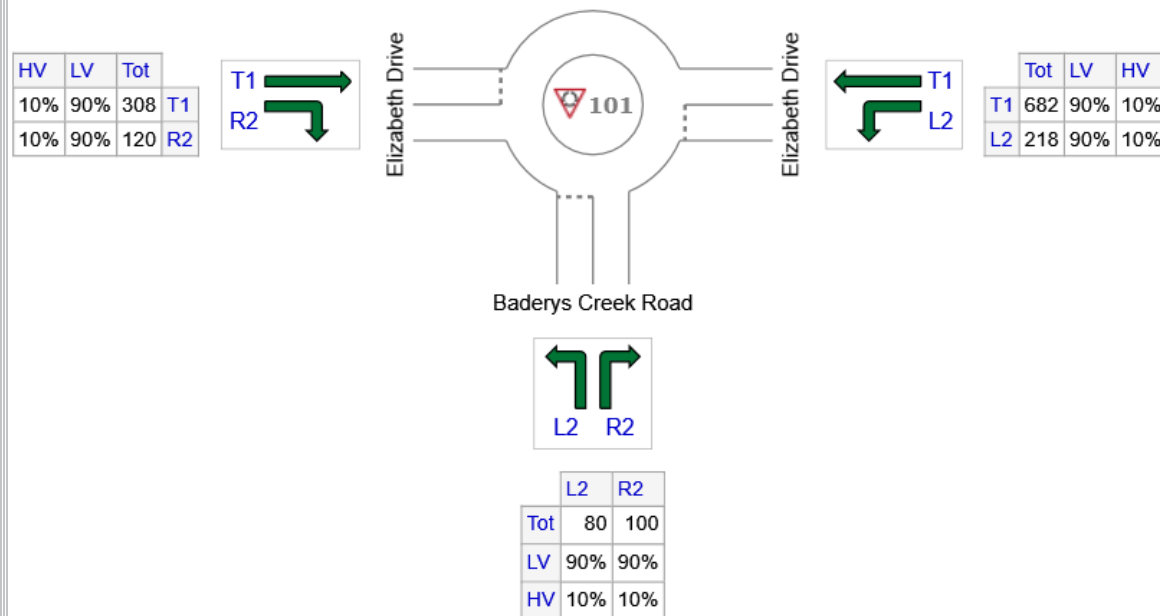
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Queues (Distance)

Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (m)	Back of Queue (m)		Queue at Start of Green (m)		Cycle Average Queue (m)		Queue Storage Ratio		Prob. Block.	Prob. SL Ov.	Ov. Lane No.
					Av.	95%	Av.	95%	Av.	95%	Av.	95%			
v/c															
Av. 95%															
South: Baderys Creek Road															
Lane 1		0.279	1.000	0.0	5.9	14.6	NA	NA	2.0	3.7	0.01	0.03	0.0	NA	NA
Approach		0.279			5.9	14.6	NA	NA	2.0	3.7	0.01	0.03			
East: Elizabeth Drive															
Lane 1		0.708	1.000	0.0	24.4	60.6	NA	NA	2.8	5.0	0.05	0.12	0.0	NA	NA
Approach		0.708			24.4	60.6	NA	NA	2.8	5.0	0.05	0.12			
West: Elizabeth Drive															
Lane 1		0.106	1.000	0.0	1.9	4.7	NA	NA	0.2	0.3	0.03	0.08	NA	0.0	2
Lane 2		0.221	1.000	0.0	4.7	11.6	NA	NA	0.3	0.5	0.01	0.02	0.0	NA	NA
Approach		0.221			4.7	11.6	NA	NA	0.3	0.5	0.01	0.02			
Intersection		0.708			24.4	60.6	NA	NA	2.8	5.0	0.05	0.12			

Queue Model: SIDRA Standard.

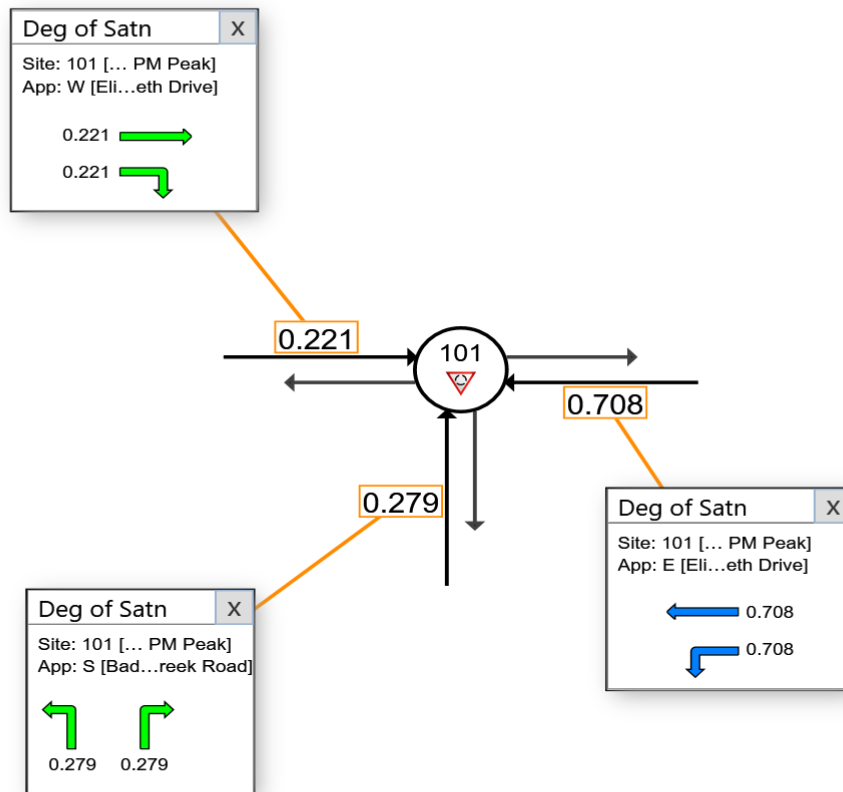
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Input Volumes**Volume Display Method: Total and %**

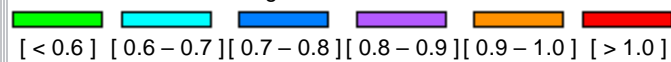
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Baderys Creek Road	180	162	18
E: Elizabeth Drive	900	810	90
W: Elizabeth Drive	428	385	43
Total	1508	1357	151

Degree of Saturation

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

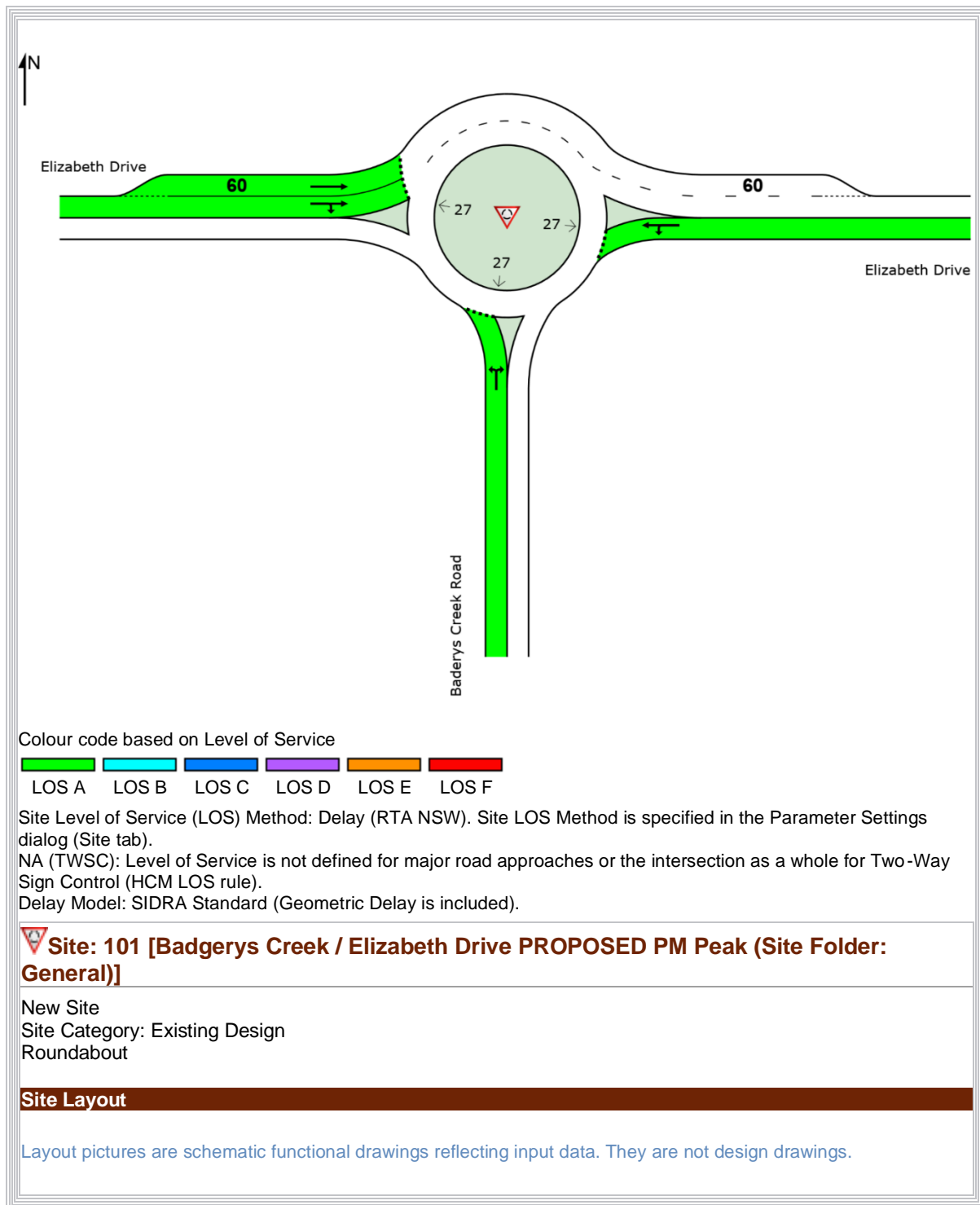


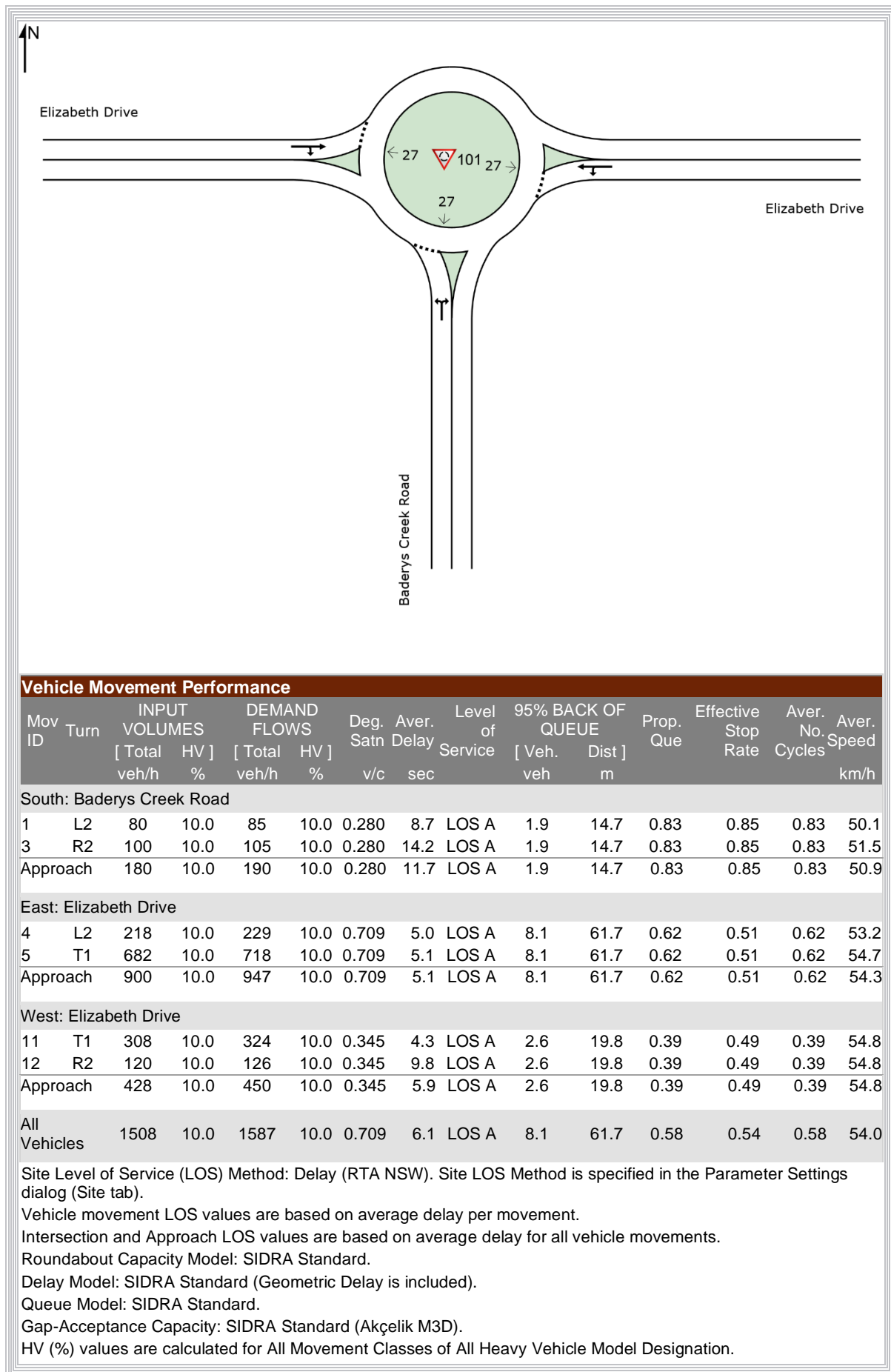
Colour code based on Degree of Saturation



Level of Service

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A





Lane Queues (Distance)

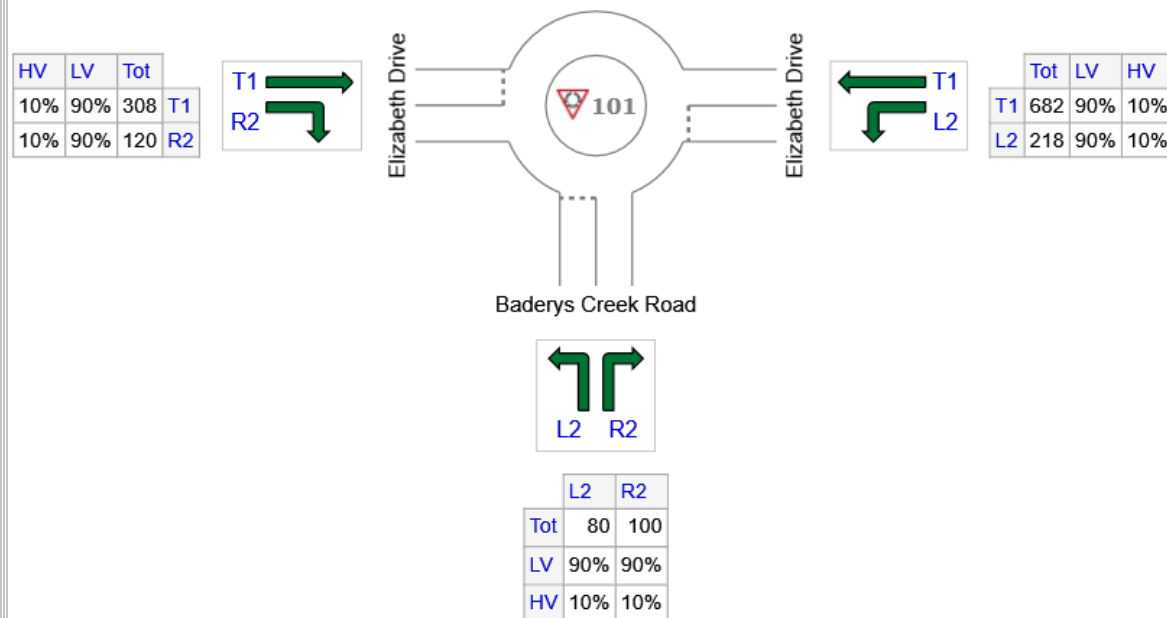
Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (m)		Back of Queue (m)		Queue at Start of Green (m)		Cycle Average Queue (m)		Queue Storage Ratio		Prob. Block.	Prob. SL Lane Ov.	Ov. Lane No.
				v/c		Av.	95%	Av.	95%	Av.	95%	Av.	95%			
South: Baderys Creek Road																
Lane 1		0.280	1.000	0.0	5.9	14.7	NA	NA	2.0	3.7	0.01	0.03	0.0	NA	NA	
Approach		0.280			5.9	14.7	NA	NA	2.0	3.7	0.01	0.03				
East: Elizabeth Drive																
Lane 1		0.709	1.000	0.0	24.8	61.7	NA	NA	2.8	5.0	0.05	0.12	0.0	NA	NA	
Approach		0.709			24.8	61.7	NA	NA	2.8	5.0	0.05	0.12				
West: Elizabeth Drive																
Lane 1		0.345	1.000	0.0	8.0	19.8	NA	NA	0.6	1.1	0.02	0.04	0.0	NA	NA	
Approach		0.345			8.0	19.8	NA	NA	0.6	1.1	0.02	0.04				
Intersection		0.709			24.8	61.7	NA	NA	2.8	5.0	0.05	0.12				

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Input Volumes

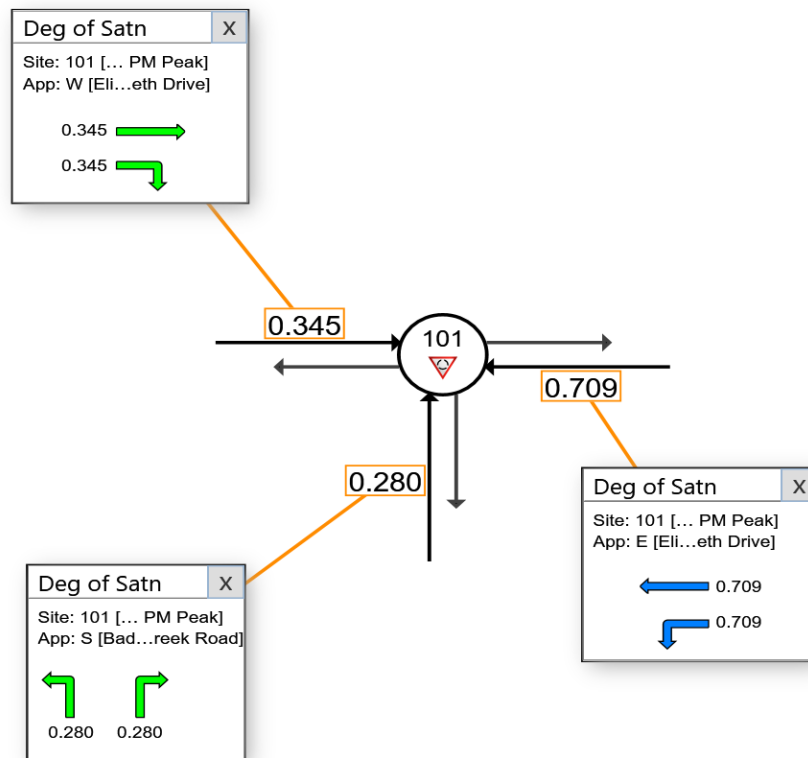
Volume Display Method: Total and %



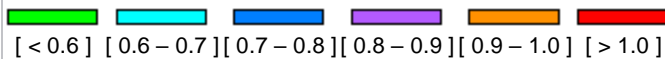
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Baderys Creek Road	180	162	18
E: Elizabeth Drive	900	810	90
W: Elizabeth Drive	428	385	43
Total	1508	1357	151

Degree of Saturation

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

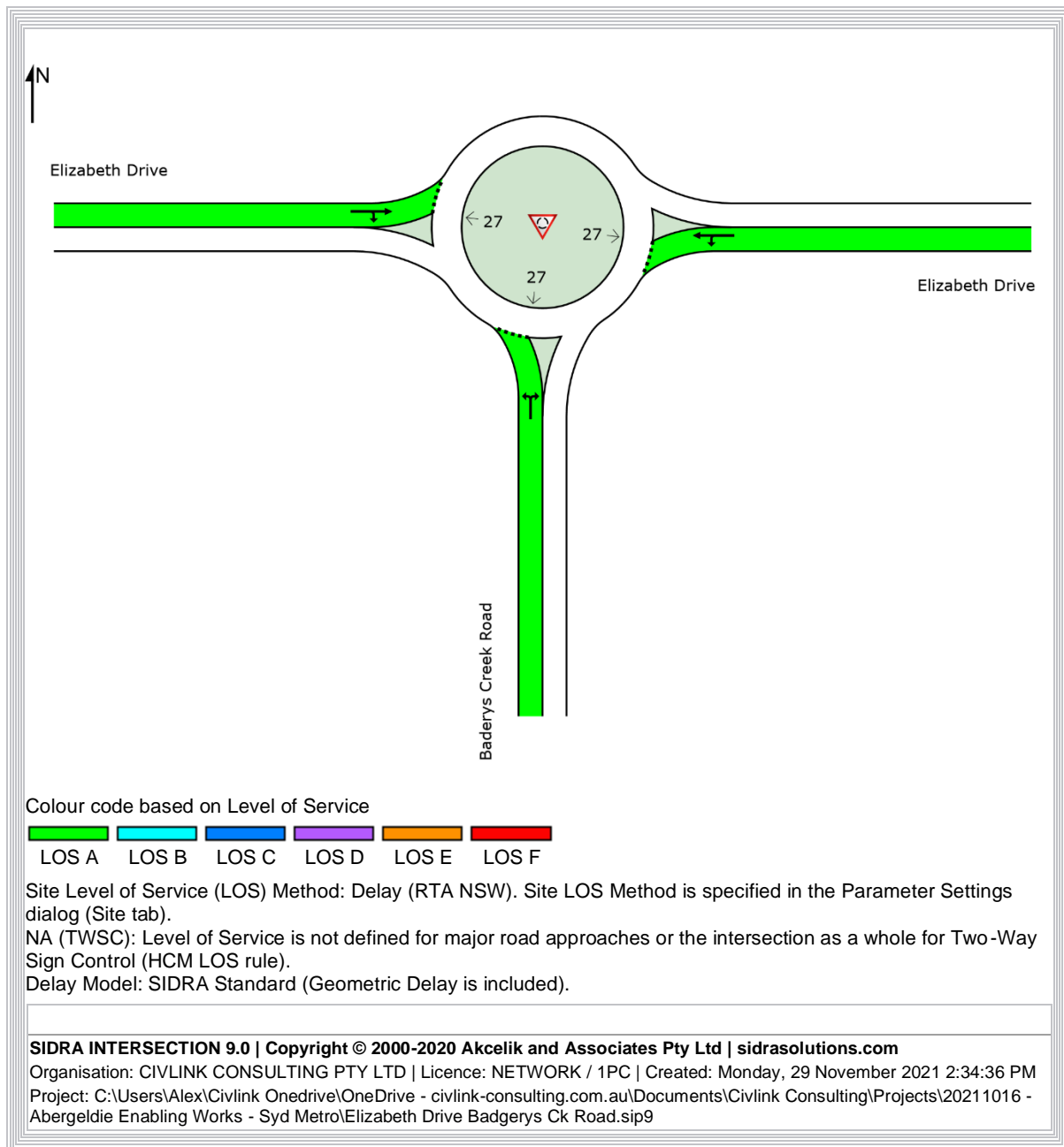


Colour code based on Degree of Saturation



Level of Service

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



27 APPENDIX I – DRIVERS CODE OF CONDUCT



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TfNSW

SMWSA – Enabling Works at Badgerys Creek Road Area and Aerotropolis

CONTRACT No. 21.0000139278.1275

DRIVERS CODE OF CONDUCT

Revision: 0

2 DECEMBER 2021

**DOCUMENT IS NOT CONTROLLED WHEN ACCESSED OUTSIDE OF
ABERGELDIE'S INTEGRATED MANAGEMENT SYSTEM (AIMS)**



WATER



BRIDGES



TRANSPORT



UNDERGROUND



ENERGY



REMEDIATION

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2 INTRODUCTION

2.1 PURPOSE

This Drivers Code of Conduct (DCC) provides a concise outline of Abergeldie Complex Infrastructures requirements relating to driver operation to/from and when on site. It is provided in support of and shall be read in conjunction with the Abergeldie Site Induction. Additionally, this procedure outlines the rules which apply to the SMWSA Enabling Works At Badgerys Creek Road Area & Aerotropolis site in support of the Construction Traffic Management Plan.

2.2 OBJECTIVES

The objectives of the DCC are to:

- Minimise impacts on the community;
- Encourage an environment for safe operations; and
- Maximise public safety by adhering to the Australian road rules.

3 Responsibilities

The roles and responsibilities relevant to the DCC are defined in Table XX below.

Role	Responsibility
Abergeldie employees, sub-contractors and site personnel	All Abergeldie employees, sub-contractors and other site personnel are responsible to comply with this management plan. Abergeldie employees, contractors and other site personnel must take appropriate action detailed in this management plan in accordance with Abergeldie's legal and environmental obligations.
Road Transport Providers (Truck companies)	Are responsible for ensuring that their drivers are aware of and compliant to the expectations outlined within the DCC travelling to, from and whilst on site.

4 Legislative & Site Requirements

Drivers shall comply with the Work Health and Safety Act NSW 2011, NSW Road Rules and the associated Regulation, the Heavy Vehicle National Law (NSW) No 42a of 2013 which includes:

- Drivers & operators shall be appropriately and currently licensed;
- All drivers are to ensure their vehicles / equipment are fit for use prior to travelling to the site;
- All drivers, operators & construction workers are to abide by their approved safe work method statements which must outline the procedures to travel to and from site as well as loading and unloading;
- Construction workers/drivers are made aware of the access arrangements, and they take special care to ensure that any private vehicles are given due care and attention. This also relates to construction vehicles passing each property access (such as earthworks haulage vehicles, material deliveries, grading operations, compaction equipment, etc.).
- Compliance with the Abergeldie Construction Traffic management plan;

- All drivers are to plan their trips to and from site to avoid unnecessary impacts to the road network;
- Where fitted, seat belts must be worn at all times whilst operating equipment & vehicles;
- Parking to occur only in designated parking areas;
- Drivers are to obey the latest vehicle movement plan which stipulate permitted turn movements within the site;
- At all times drivers shall maintain a safe speed whilst taking into consideration the posted speed limits, road and weather conditions;
- Drivers shall comply with signposted load limits;
- Drivers are to ensure that loads are adequately secured prior to travelling to & from the site;
- Drivers shall be aware of any pedestrian facilities (i.e. crossings and designated pedestrian paths)
- Drivers are to be aware of the authorised delivery times;
- Drivers shall ensure loads are covered when transporting materials;
- Drivers shall arrange for the clean-up of any spillage emanating from the vehicle;
- Drivers shall ensure there are no unauthorised discharges into adjacent drains or waterways;
- Drivers are to ensure that the vehicle tyres are clean as to prevent tracking of material out into the public road; and
- The dumping of rubbish or waste of any kind is prohibited;

5 Over Dimensional Loads

At all times, Abergeldie and its sub-contractors will comply with the requirements of the National Heavy Vehicle Regulator (NHVR). Safe Work Method Statements (SWMS) will be prepared to ensure that work methods address:

- Accurately and safely weighing or measuring the vehicle load;
- Safely restraining loads;
- Providing reliable evidence to calculate the weight or measurement of the vehicle or load;
- Ensuring that weather conditions or the positioning of the load and/or vehicle does not breach the Road Transport (Mass, Loading and Access) Regulation 2005 or the Road Transport (Vehicle Registration) Regulation 2007;
- Exercising supervision or control of others involved in the loading of vehicles;
- Provide information, instruction, training and supervision to employees; and
- Ensuring compliance with the requirements of the Road Traffic (Heavy Vehicle Driver Fatigue) Regulations 2008.

All loads will be moved within the time conditions stipulated with the necessary pilot and escort vehicles and documentation. Abergeldie engineering staff and site supervisors responsible for the ordering of these deliveries will check that haulage contractors are operating in compliance with these conditions.

Abergeldie is aware that neighbouring projects are also upgrading the road network. Abergeldie will coordinate any project required OSOM movements with adjacent projects to ensure the proposed route is clear still suitable for use.

6 Existing Conditions

This project will see the majority of construction traffic utilising Badgerys Creek Road, Elizabeth Drive, The Northern Road, and Derwent Road to facilitate the works.

The various construction areas and subject roads are shown below:



Figure 1 - Aerial view of the SWMSA enabling works construction zones & roads

6.1 BADGERYS CREEK ROAD

Badgerys Creek Road is a Collector Road which connects the Northern Road to Elizabeth Drive, it is seven kilometres in length and is an undivided road with one lane in each direction. The shoulders on either side of the road are unsealed and the road itself is signposted at 80km/hr from The Northern Road to 300 metres north of the Elford Quarry (approx. 3.5km in length). The remaining section of Badgerys Creek Road is 60km/hr. Initial inspection of the road traffic suggests that it is primarily used as a connection route for heavy vehicles and light vehicles between other more major roads.

6.2 ELIZABETH DRIVE

Elizabeth Drive is an arterial road which runs east-west from Liverpool through to connect to The Northern Road, via the M7 Motorway interchange and an intersection with Badgerys Creek Road. Elizabeth drive terminates at an intersection with the Northern Road at the western end, and is typically a 2-way un-divided road with a posted speed of 80km/h. The speed on approach to Badgerys Creek Road is reduced to 60km/hr to provide safe throughfare at the existing roundabout.

6.3 THE NORTHERN ROAD

The Northern Road is an arterial road which connects Narellan to the Great Western Highway. For the entirety of the impacted length, the Northern Road is two lanes in each direction and signposted at 80km/h. There are signalised intersections at The Northern Road, Derwent Road,

Mersey Road, Leppington Pastoral, Adams Road and Elizabeth Drive. A dedicated bus lane exists on both northbound and southbound carriageways from the Leppington Pastoral to Elizabeth Drive.

6.4 DERWENT ROAD

Derwent Road is a local road which intersects with The Northern Road, north of Badgerys Creek Road. The intersection with The Northern Road is a signalised intersection. It is an 80km/hr two-way two-lane undivided semi-rural no thru road which provides access for residents and rural businesses. Derwent road is approximately 6m wide and does not contain formal shoulders or formal cul de sac.

7 Mitigation Measures

Abergeldie are aware of the impact that construction has on the local community. As a consequence, mitigation measures may be implemented to minimise the traffic impact. These are presented in the sections below.

7.1 ACCESS DESIGN

Abergeldie will design all access and egress points to minimise conflicts with the vehicle movements on the road network and in accordance with the relevant Traffic & Safety requirements.

7.2 COMMUNITY CONSULTATION

As outlined in the CTMP, Abergeldie will ensure early and effective consultation occurs with affected residents, sensitive receivers and stakeholders to minimise disruption by construction traffic.

7.3 DUST GENERATION

All adjoining roads are sealed roads. It is not anticipated that dust impacts will occur on the sealed roads as a result of the Works. However, Abergeldie will monitor the generation of dust associated with the use of the nominated travel routes.

Mitigation measures to minimise dust impacts include:

- where safe to do so, exposed and disturbed surfaces, including unsealed roads, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants, especially during inclement weather conditions where required and appropriate;
- vehicle movements to occur on dedicated routes proposed within the VMP;
- where safe to do so, access points proposed within the VMP & CTMP, will be cleaned if there is a build-up of dust-generating sediment, where required; and
- regularly conducting visual inspections of dust emissions and applying additional controls as required.

7.4 NOISE IMPACTS

Due to the relative close proximity to residents, drivers are requested to minimise the noise created as much as practically possible.

Abergeldie will monitor the following to minimise noise related traffic impacts:

- All heavy vehicle movements or deliveries occur within the approved working hours;
- Use of compression brakes in the vicinity of the site is minimised;
- Idling is minimised where possible; and

- Following at safe distances so as to prevent sudden braking causing excessive noise;

8 Incident & Hazard Reporting

In the event of an incident or breakdown on site, drivers are to contact the Construction Supervisor as soon as it is safe to do so. The process to respond to the incident is outlined within the Traffic Incident Management Plan contained in the Construction Traffic Management Plan.

Road conditions and traffic hazards can impact on road safety. Items such as potholes in the vicinity of the site shall be reported by drivers to Construction Supervisors. These are to be addressed as required.

9 Management of Non-Compliance

All personnel & sub-contractors are instructed to provide the necessary supervision and processes to ensure compliance. Where non-compliance with the DCC is observed Abergeldie representatives will:

1st & 2nd occasions of non-compliance:

Where possible approach the driver involved, draw attention to the non-compliance and advise of the behaviour required. Record the registration number of the truck and the fleet number of the truck and advise that the incident will be recorded as a warning under the DCC and that three warnings will result in the driver being precluded from entering the site. If unable to approach the driver, communication should be made with both the applicable company's supervisor on site and/or Abergeldie management to progress this issue in a timely manner. An Abergeldie representative will record and track this issue. The relevant person will be notified of the incident in writing and requested to do the following:

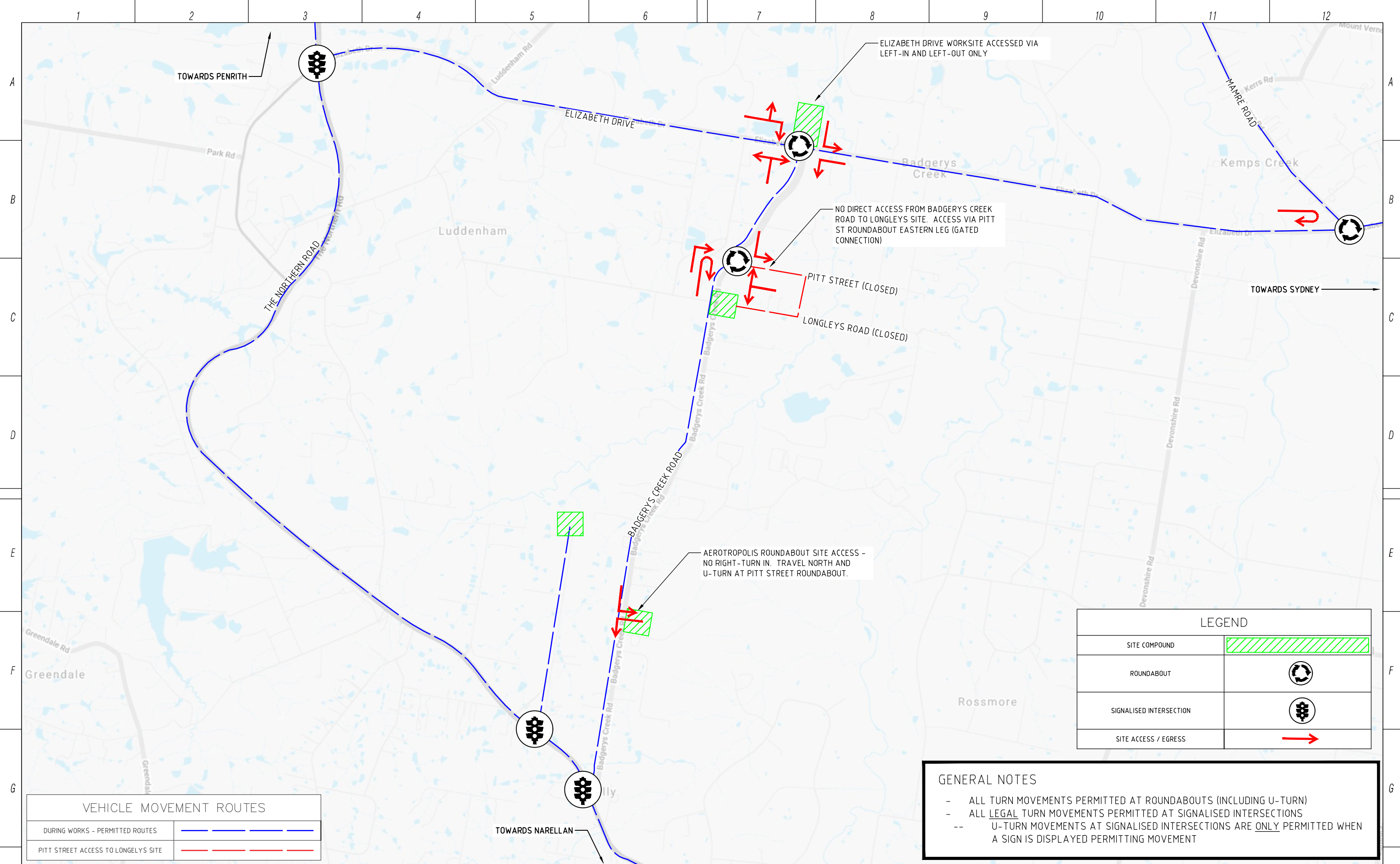
1. Formally advise the person of the warning;
2. Counsel the person involved and advise of the consequences of further non compliances;
3. Reinstruct the person of Abergeldie's requirements;
4. Notify Abergeldie of the driver's name for Abergeldie records.

3rd occasion of non-compliance:

Repeat the steps above. Inform the driver and company that the driver has received two previous warnings. The sub-contractor shall carry out steps 1 to 4 (above) and advise the driver he is no longer permitted on site.



10 APPENDIX A – Vehicle Movement Plan



LEGEND	
SITE COMPOUND	
ROUNDABOUT	
SIGNALISED INTERSECTION	
SITE ACCESS / EGRESS	

GENERAL NOTES

- ALL TURN MOVEMENTS PERMITTED AT ROUNDABOUTS (INCLUDING U-TURN)
- ALL LEGAL TURN MOVEMENTS PERMITTED AT SIGNALISED INTERSECTIONS
- U-TURN MOVEMENTS AT SIGNALISED INTERSECTIONS ARE ONLY PERMITTED WHEN A SIGN IS DISPLAYED PERMITTING MOVEMENT

VEHICLE MOVEMENT ROUTES	
DURING WORKS - PERMITTED ROUTES	
PITT STREET ACCESS TO LONGELY'S SITE	

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
00	AG	5.11.21	UPDATE PER SITE COMMENTS		LP
00	AG	4.11.21	ORIGINAL ISSUE		LP
REV	BY	DATE	DESCRIPTION		APPD.
COORDINATE SYSTEM:		HEIGHT DATUM:	SCALE:		

DRAWN BY:	AG
DRW CHECK:	-
APPROVED:	-
IND REVIEW:	-



ABERGELDIE COMPLEX INFRASTRUCTURE

SYDNEY METRO WEST - ENABLING WORKS PROJECT
SITE ACCESS CONFIGURATION
VEHICLE MOVEMENT PLAN

DRAWING No: ABG-SYM-VMP-0001-01

SHEET 1 OF 1

REVISION 01

CTTMP Internal Approval Brief

Project: Sydney Metro WSA

CTTMP Title: Enabling Works at Badgerys Creek Road Area and Aerotropolis

CTTMP Reference: 21.0000139278.1275

Revision: v9.0 07/01/2022

Timing:

Works Description

To establish a work area behind barriers at the following locations:

- Elizabeth Drive/ Badgerys Creek Intersection to construct a 4th leg
- Badgerys Creek Road at Pitt Street and Longleys Road to undertake localised widening works
- Badgerys Creek Road to construct a roundabout for the Aerotropolis Station access Road
- Derwent Road roadworks to construct an appropriate access

These works are necessary for the main work construction activities for the future Sydney Metro WSA and will provide access for rail corridor construction, concrete batch plants and station box access

Impact Summary

General Traffic

☒ Yes

☐ No

☐ NA

Notes: Elizabeth Drive works requires a reduction in capacity at the roundabout until the 4th leg is completed. The impacts will be mostly in the AM and PM peaks. Modelling in the report indicates that there will be minimal and localised delays on Elizabeth Drive. The remaining sites may have intermittent impacts under traffic control.

Future proposals of road closures to help facilitate works, they will however be subject to a separate TMP.

Buses

☐ Yes

☒ No

☐ NA

Notes: Bus services and stops will be maintained

Pedestrians and Cyclists

☐ Yes

☒ No

☐ NA

Notes: Area is currently rural and there are no formal footpaths.

Sydney Trains, Metro, Light Rail

☐ Yes ☐ No ☒ NA

Notes: Nil impact

Freight and Servicing

☐ Yes ☒ No ☐ NA

Notes: Nil Impact

Consultation

Planning and Programs

☒ Yes ☐ No ☐ NA

Notes: P&P representatives have reviewed the CTMP and have confirmed close out via email

Transport Integration

☐ Yes ☒ No ☐ NA

Notes: No impact to services or bus stops

Local Council

☒ Yes ☐ No ☐ NA

Notes: Works are being undertaken on roads under the care and control of TfNSW and Liverpool Council. All works have been presented directly to Council and through the TCGs and TTLGs.

Emergency Services

☒ Yes ☐ No ☐ NA

Notes: Through the TTLG and communications process

Communications activities arranged

☒ Yes ☐ No ☐ NA

Notes: Road work signage, changed speed limits and portable VMS will be installed to warn motorists of changed traffic conditions

Non-Standard Conditions of Approval

- Approval is given to the site set up only
 - Any future stage switches or proposed weekend closures will be subject to a new TMP being submitted and approved
-

Internal approvals

<p>Name: Francois LaRue</p> <p>Title: Operations Manager South, Greater Sydney</p> <p></p> <p>Recommended / Not Recommended</p> <p>Date: 13/01/2022</p>	<p>Name: Joe Morabito</p> <p>Title: Director, Project and Services Changes, River and Parklands</p> <p></p> <p>Approved / Not Approved</p> <p>Date: 13/01/2022</p>
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