



SMCSWSW4-HSE-WEC-TF-PLN-000003 [D]









HASLIN & STEPHEN EDWARDS JOINT VENTURE - SOUTHWEST METRO STATION UPGRADE PACKAGE 4 - CANTERBURY, LAKEMBA, MARRICKVILLE STATIONS

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C	06	11/03/2021	SEVENTH ISSUE WITH SYDNEY METRO COMMENTS ADDRESSED

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Reference Documentation

- CSSI 8256 Mod 1;
- SM ES-ST-214: G10 Traffic and Transport Management;
- SM PS-ST-221: Sydney Metro Principal Contractor Health and Safety Standard;
- SM Station Upgrade Works Package 4 Exhibit A SWTC;
- RMS Traffic Control at Worksites Manual. Version 6;
- Relevant Austroads Guidelines;
- RMS Supplements to Austroads and Australian Standards;
- AS 1742.3 Manual of uniform traffic control devices Part3: Traffic control devices for works on roads;
- Ministers Conditions of Approval;
- Construction Environmental Management Framework V3.2; and
- Construction Traffic Management Framework V4.5.

Compliance Table

The Project was assessed as a Critical State Significance Infrastructure (CSSI) by the Minister for Planning by virtue of clause 5 of Schedule of the Stage Environmental Planning Policy (state and Regional Development) 2011 (NSW) and section 5.13 of the Environmental Planning and Assessment Act 1979 (NSW). The Minister's Conditions of Approval (CoA) were granted on the 12 December 2018 with Conditions. A Construction Traffic Management Plan is required in accordance with the CoA, The Construction Environmental Management Framework (CEMF), The Southwest Metro Construction Environmental Management Plan (CEMP Rev 2 04/12/2020), Sydney Metro Health & Safety Standard, the Principals General Specifications G10 and a number of Revised Environmental Mitigation Measures (REMMs) relating to traffic management are applicable to the Southwest Metro Package 4 works and have been referenced accordingly below.

Applicable Conditions of Approval (CoA) SSI 8256

Clause	Issue / Description	Document Reference or Response
E19	Section 4.1.1 of this CTMP	
	(b) 8:00am to 6:00pm Saturdays; and(c) at no time on Sundays or public holidays.	
E46	The Proponent must establish a Traffic and Transport Liaison Group(s) (TTLGs) to inform traffic and transport management measures during Construction and Operation of the CSSI. Management measures must be coordinated with the TfNSW following consultation with the Sydney Coordination Office the Relevant Roads Authority.	Section 11 of this CTMP





	The TTLG must comprise representatives from the Relevant Road Authority(ies), transport operators (including bus and taxi operators) and emergency services as required. The TTLG must be consulted to inform preparation of the Construction Traffic Management Plan(s).	
E47	Construction Traffic Management Plans (CTMPs) must be prepared for each Construction site or stage (or Low Impact Activity where required) in accordance with the CEMF and relevant Austroads, Australian Standards and TfNSW requirements. The CTMPs must be submitted to the RMS following engagement with the Sydney Coordination Office and before Construction commences at the relevant Construction site or stage. A copy of the Construction Traffic Management Plans must be submitted to the Planning Secretary for information.	Section 1.1 of this CTMP
E48	The Proponent must prepare a Temporary Transport Management Plan in accordance with the Temporary Transport Strategy included in documents listed in Condition A1 one (1) month before the implementation of the Plan.	TTMP is being prepared by SCO HSEJV will provide appropriate documentation as required by SCO
E49	Before any local road is used by a heavy vehicle for the purposes of Construction of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the relevant council(s) within four (4) weeks of completion of the survey and at least two (2) weeks before the road is used by heavy vehicles associated with the Construction of the CSSI.	Section 4.3.2 of this CTMP
E50	If damage to roads occurs as a result of the Construction of the CSSI, the Proponent must either: (a) compensate the relevant road authority for the damage so caused. The amount of compensation may be agreed with the relevant road authority; or (b) rectify the damage to restore the road to at least the condition it was in pre-Construction as identified in the Road Dilapidation Report(s).	Section 4.3.2 of this CTMP
E51	During Construction, all reasonably practicable measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access must be provided, and opportunities for parking arrangements must be investigated in consultation with affected businesses/properties and implemented before the disruption. Adequate signage and directions to businesses/properties must be provided before, and for the duration of, any disruption.	Section 6.3, 6.4, 6.4.1 & Section 9 of this CTMP





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E52	Safe pedestrian and cyclist access must be maintained around Work sites during Construction. In circumstances where pedestrian and cyclist access is restricted or removed due to Construction activities, an alternate route which complies with the relevant standards must be provided and signposted.	Section 9.1 & 9.2 of this CTMP
E53	The Proponent must prepare a Walking and Cycling Strategy to identify opportunities and works to connect stations with the surrounding communities, by connecting to or enhancing existing pedestrian and cyclist paths. The Walking and Cycling Strategy must also identify opportunities and works to improve pedestrian and cyclist facilities between Sydenham and Bankstown. The Walking and Cycling Strategy must be prepared in consultation with relevant council(s), local bike user groups and relevant stakeholder(s). Identified opportunities and works, where relevant, must be integrated with the relevant Station Design and Precinct Plan(s). Works that are identified as being the responsibility of the Proponent, including those associated with east- west	Not applicable to this CTMP as the current design considers the outputs from the Walking & Cycling Strategy
	pedestrian and cyclist facilities must be delivered within twelve (12) months following commencement of Operation.	

Applicable Conditions within the Construction Environmental Management Framework (CEMF)

Hanagement Famework (GDIMF)					
Section	Issue / Description	Document Reference or Response			
3.4	 Subject to Section 3.3(b) and Section 3.2(b) the Principal Contractor will prepare issue-specific environmental sub plans to the CEMP and SMP which will address each of the relevant environmental impacts at a particular site or state of the project. Issue specific sub plans will include: Soil management; Groundwater management; Traffic and transport management; Noise and vibration management; Heritage management; Flora and fauna management; Carbon and energy management; 	It is noted that in accordance with the Sydney Metro City and Southwest Sydenham to Bankstown Staging Report, the CTMP is not a sub-plan of the Construction Environmental Management Plan, it is a standalone Plan in accordance with CoA-E47			



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- i. Materials management;
 j. Soil and water management;
 k. Air quality management; and;
 l. Waste management and recycling;
 2. Additional detail on the minimum requirements for these
- 3.7 Condition Surveys

Section 4.3.2 of this CTMP

a. a. Prior to the commencement of construction the Principal Contractors will offer Pre-construction Building Condition Surveys, in writing, to the owners of buildings where there is a potential for construction activities to cause cosmetic or structural damage. If accepted, the Principal Contractor will produce a comprehensive written and photographic condition report produced by an appropriate professional prior to relevant works commencing.

sub plans is provided in Sections 6-17 of the CEMF.

b. Prior to the commencement of construction, the Principal Contractor will prepare a Road Dilapidation Report for all local public roads proposed to be used by heavy vehicles.

3.8 Register of Hold Points

- Section 4.3.2 of this CTMP
- Principal Contractors will identify hold points, beyond which approval is required to proceed with a certain activity. Example activities include vegetation removal and water discharge. Hold points will be documented in relevant CEMPs.
- CEMF Table 1.4 provides the structure for the register of hold points as well as a preliminary list of hold points which will be implemented:
 - Hold Point: use of local roads by heavy vehicles
 - Release of hold point: Road Dilapidation Report
 - By Who: Appropriate Professional nominated by Principal Contractor

3.9 Training, Awareness and Competence

Section 1.7.9 of this CTMP

a. Principal Contractors will be responsible for determining the training needs of their personnel. As a minimum this will include site induction, regular toolbox talks, and topic specific environmental training as follows:

The site induction will be provided to all site personnel and will include, as a minimum:



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- Training purpose, objectives and key issues;
- Contractor's environmental policy and key performance indicators;
- Due diligence, duty of care and responsibilities;
- Relevant conditions of any environmental licence and/or the relevant conditions of approval;
- Site specific issues and controls including those described in the environmental procedures;
- Reporting procedure for environmental hazards and incidents; and
- Communication protocols.

Toolbox talks will be held on a regular basis in order to provide a project or site wide update, including any key or recurring environmental issues; and topic specific environmental training should be based upon, but is not limited to, Issue specific subplans required under Section 3.4 (a)(i-xi).

Principal Contractors will conduct a Training Needs Analysis which:

- Identifies that all staff are to receive an environmental induction and undertake environmental incident management training;
- Identifies the competency requirements of staff that hold environmental roles and responsibilities documented within the Construction Environmental Management Plan and sub-plans;
- Identifies appropriate training courses/events and the frequency of training to achieve and/or maintain these competency requirements; and
- Implements and documents as part of the CEMP a training schedule that plans attendance at environmental training events, provides mechanisms to notify staff of their training requirements, and identifies staff who do not attend scheduled training events or who have overdue training requirements.

5.1 Working Hours

Standard working hours are between 7am – 6pm on weekdays and 8am –

1pm on Saturdays.

Works which can be undertaken outside of standard construction hours without any further approval include:

 Those which have been described in respective environmental assessments as being required to take place 24/7. For example, tunneling and underground excavations and supporting activities will be required Sections 4.1.1 & 4.1.2 of this CTMP



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24/7;

- Works which are determined to comply with the relevant Noise Management Level at sensitive receivers:
- The delivery of materials outside of approved hours as required by the Police or other authorities (including RMS) for safety reasons;
- Where it is required to avoid the loss of lives, property and / or to prevent environmental harm in an emergency; and
- Where written agreement is reached with all affected receivers.

Principal Contractors may apply for EPA approval to undertake works outside of normal working hours under their respective Environment Protection Licenses.

5.2 Principal Contractors will consider the following in the layout of construction sites:

Section 1.3.4 of this CTMP

- The location of noise intensive works and 24-hour activities in relation to noise sensitive receivers:
- The location of site access and egress points in relation to noise and light sensitive receivers, especially for sites proposed to be utilised 24 hours per day;
- The use of site buildings to shield noisy activities from receivers;
- The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours; and
- Aim to minimise the requirement for reversing, especially of heavy vehicles.

8.1 Construction Traffic Management Objectives

- 1. The following traffic management objectives will apply to the construction of the project:
 - Minimise disruption to traffic operation, road users, pedestrians, cyclists and access to adjoining properties (private and public).

b. Maximise the safety for the workers, by isolating work areas from traffic flows, applying low exposure work methods, education and the installation of appropriate traffic control.

 Limit obstructions and restrictions, and when required, provide alternatives to maintain access for local community, transport operators (buses) including overdimension load movements and commercial Section 9 of this CTMP

Appendix A - TCP's

Section 9 of this CTMP



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		developments. d. Encourage sustainable transport options by site workers.	Section 6.4 of this CTMP
8.2		Principal Contractors will develop and implement a Construction Traffic Management Plan for their scope of works. The Construction Traffic Management Plan will as a	This Document is the Construction Traffic Management Plan
		a. Implement the traffic and transport mitigation measures as detailed in the environmental approval documentation.	REMMs are addressed in the
		 b. Be developed in consultation with the relevant road authority, Central Business District Co-ordination Group (CBDCG) and / or transport operator. 	table below Section 2.3 & 11 of this CTMP
		c. Set out the overall traffic management resources, processes and procedures for the management of traffic and transport during construction of the Project Works and Temporary Works.	Section 6 of this CTMP
		d. Include Construction Traffic Control Plans setting out the specific traffic and transport management arrangements to be implemented at specific locations during the construction of the Project works and Temporary Works.	Appendix A of this CTMP
	2.	Includes a Traffic Route Management Plan that identifies:	Section 2.6 & 4.2 and appendix B of this
		 Traffic generation from other major infrastructure developments, impacts from traffic and haulage routes. 	CTMP
		 Types and volumes of construction vehicles and associated route and times restrictions. 	
		c. Potential traffic disruptions and temporary and permanent detours, and	
		d. Management, mitigation and restoration measures.	
	3.	Includes a Parking Management Plan that identifies:	Section 6.3 & 6.4 of
		Parking requirements and on and offsite parking arrangements and associated impacts	this CTMP



b. Remote parking arrangements and associated access between sites and public transport nodes



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- Alternate parking arrangements for displaced parking, and
- d. Communication and parking management measures.
- Includes Site Specific Traffic Access and Management Plans which detail:
 - Site access and associated route and turning movements and the design and signalisation of intersections

Sections 4.2 & appendix B of this CTMP

 Potential activities that could result in the disruption to traffic and transport networks including pedestrian, cyclist and public transport networks and during special events.

Sections 5, 7 & Appendix A of this CTMP

c. The timing to limit disruptions to the road and transport networks.

Sections 1.8 & 7 of this CTMP

d. The maintenance of access to and safety of transport networks, parking and property.

Sections 6 & 9 of this CTMP

 Service facilities and station sites, and other locations identified by the relevant road authority or transport regulator.

Section 3 of this

 Details responses to the management of an event that directly involves or impacts on traffic and transport networks.

Section 8 of this CTMP

Transport for New South Wales (TfNSW) and its contractors will undertake liaison with agencies and the community regarding traffic management. This may involve:

 Establishment of a Traffic and Transport Liaison Group which could consist of representatives from Sydney Metro Contractors, TfNSW, CBDCG, WestConnex, RMS, NSW Police, relevant councils, emergency services, and bus operators the group would review:

Section 11 of this CTMP

6. Road Occupancy Licence (ROL) applications to monitor potential cumulative impacts from multiple ROL's operating concurrently in one area.

Section 7.1 of this CTMP

8.3 Construction Traffic Mitigation

1. Examples of traffic mitigation measures include:

Sections 4.2, 6 & 9 of this CTMP

- a. Minimising heavy vehicle movements during peak traffic times.
- Avoidance of local road for heavy vehicle routes, where feasible.





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c. Providing safe pedestrian and cyclist movements around the worksites.

Applicable Conditions within the Sydney Metro H&S Standard

Applicable Collultions within the Syuney Metro H&S Standard					
Section	Issue / Description	Document Reference or Response			
13.5	The PC must manage the risks associated with working in and around live traffic in accordance with the Sydney Metro Construction Traffic Management Framework. The PC must develop a Traffic Management Plan which will include a procedure for working on or near public roads including the development, review, approval and implementation of Traffic Control Plans (TCPs)/Traffic Control Guidance Schemes (TCGSs) for specific activities involving work on or near public roads. As a minimum requirement, the PC must ensure the following when working in and around live traffic: • Traffic Management Plans (TMPs) must be developed by a person that holds the RMS approved Prepare Work Zone Traffic Management Plan certificate of competence. • Where there is a risk of workers from being struck by live traffic, temporary road closures and detours must be considered as the first option to eliminate the hazard of moving traffic. • Temporary traffic signalling devices must be used to control traffic movements as per AS1742.3 and mitigate the risks to workers (including traffic controllers) of being struck by moving traffic. • Where the use of traffic controllers is deemed reasonably practicable, traffic controllers must hold an RMS approved Traffic Controller's license (formerly known as the Blue Card – Stop/Slow bat). • Traffic controllers and workers on the road must be provided with physical protection from the risk of being struck by out-of-control vehicles using preferably road safety barriers compliant to AS3845 accepted by RMS for use on NSW Roads (and compliant with AS 3845), or engineer-certified crash attenuators (e.g. Truck and Trailer Mounted Attenuators) fitted to shadow vehicles. • Where crash attenuators are used, they must be used in accordance with the National Guidelines for the use	CTMP Author – Louis Peau Prepare Work Zone TMP Qualification: 0051923852 EXP 14/02/2022			



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of Truck and Trailer Mounted Attenuators (TMAs).
 All signage must be installed in accordance with the relevant TCP/TCGS and must be inspected at the frequency specified in the CTMP.
 In addition to the minimum required PPE as specified in the section of this Standard, entitled <u>Personal</u> <u>Protective Equipment (PPE)</u>, Traffic Controllers must wear high visibility clothing with trousers fitted with double-reflective stripes or reflective boot covers in accordance with Section 8 of AS 4602.
 Sufficient traffic controller workers must be engaged so that the traffic controllers may rotate and have breaks.
 Traffic controllers working at night must carry illuminated wands to direct traffic.

Applicable Conditions within the SWM Marrickville, Canterbury & Lakemba Station Upgrades CEMP Rev 2 (04/12/2020)

Section	Issue / Description	Document Reference or Response
4.6	Construction Traffic Management Plan/s (CTMP/s) will be prepared by the Principal Contractor as per CoA-E47. These are standalone documents and do not form part of the CEMP. The CTMP/s will be submitted to DPIE for information following engagement with RMS (TfNSW) and SCO (CJP).	Section 7 of this CTMP

Applicable Revised Environmental Mitigation Measures (REMMs)

Section	Issue / Description	Document Reference or Response
TC1 Applies to: All stations	Temporary transport arrangements Guided by the Temporary Transport Strategy, detailed temporary transport plan/s would be developed prior to construction to manage the movement of people along the T3 Bankstown Line during possession periods. The plans would be developed in consultation with key stakeholders (including the Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, Sydney Trains, local councils, emergency services, and bus operators), and would address the requirements specified by the Temporary Transport Strategy. The development of each plan would consider, as a minimum: • a review of the road network constraints along any proposed rail replacement bus route	TTMP is being prepared by SCO HSEJV will provide appropriate documentation as required by SCO





	 further traffic analysis of key intersections used by rail replacement buses potential impacts to local road networks affected by rail passengers diverting to cars to reach their destinations the design of temporary facilities at bus stop locations in consultation with the relevant road authority expected changes to parking demand at other stations, displacement of existing parking, and any upgrades that may be required. 	
TC2 Applies to: All stations	Sydney Metro would consult with Transport for NSW, Roads and Maritime Services, the State Transit Authority, the Inner West and Canterbury-Bankstown councils, and bus operators, to identify opportunities to minimise impacts to bus layovers and existing bus stops during operation of rail replacement buses.	Section 11.1 of this CTMP
TC3 Applies to: Bridge Works	The impacts on the surrounding road network of lane closures resulting from bridge works across the rail corridor would be assessed in detail, to identify the suite of management measures to be implemented for each closure required. This would be undertaken in consultation with Transport for NSW, Roads and Maritime Services, the Sydney Coordination Office, the Inner West and Canterbury-Bankstown councils, emergency services, and relevant bus operators. Planning for partial bridge closures would consider bus rerouting and timetabling, with the intention of minimising impacts to bus customers and bus operators.	Not applicable to SMCSWSW4 as no bridge closures are currently proposed. If required in the future, the CTMP would be updated to reflect the bridge closures.
TC4	Parking Impacts during construction	Sections 6.3 & 6.4
Applies to: All Stations	Opportunities to reduce the loss of existing on and off street car parking (including the amount of spaces reduced and the time associated with this reduction) would be reviewed during detailed design and construction planning.	of this CTMP
TC5 Applies to: All Stations	Where parking spaces are lost or access is impeded, particularly for extended periods, alternative parking would be provided wherever feasible and reasonable. This would include consideration of other privately owned (or vacant) land within close proximity to affected stations.	Sections 6.3, 6.4 & 6.4.1 of this CTMP
TC6	Impacts of intersection performance	Currently, no modifications to
Applies to: All project works	Further consideration of the need for intersection modifications would be undertaken, to improve intersection performance at locations most affected by the addition of construction heavy vehicles and rail replacement buses. This would be undertaken in consultation with Transport for NSW, Roads and Maritime Services, the Sydney Coordination Office, and the relevant road authority. The improvements considered would include:	signalised intersections has been proposed, if intersection modifications are required, the CTMP will be updated to reflect this.





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	 modification to the existing traffic signal phasing lane priority changes changing lane designations (line markings and signage) kerbside changes (such as removing on street parking or implementing no standing zones at peak times to increase lane capacity) physical geometric changes (such as minor kerb cutbacks to enable large vehicles to safely move through intersections) restricting turning movements where traffic demand is low. 	
TC7 Applies to: All Stations	Changes to cyclist facilities during construction Where existing cycle facilities (e.g. bike parking) would be temporarily unavailable at a station, suitable replacement facilities would be provided while the facility is unavailable.	Section 9.2 of this CTMP
TC8 Applies to: All project works	 Management of traffic, transport and access A construction traffic management plan would be prepared and implemented prior to construction. The plan would be prepared in accordance with the Construction Environmental Management Framework, and would detail, as a minimum: how traffic would be managed when construction works are being carried out the activities proposed and their impact on the road network and on road users how these impacts would be addressed. The plan would be prepared in consultation with the Traffic and Transport Liaison Group and would be approved by the relevant authority before construction commences. 	This document is the CTMP
TC9 Applies to: All Stations	Changes to public transport services and alternative transport arrangements Modification of existing bus stops, or implementation of new stops and alterations to service patterns, would be carried out by Sydney Metro in consultation with the Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and Canterbury-Bankstown councils, and bus operators.	Section 9.4 of this CTMP





TC10 Applies to: All Stations	Sydney Metro would undertake an extensive community awareness and information campaign before changes to public transport services are implemented. This would include a range of communication activities such as: • information at stations • wayfinding signage • clearly marked bus stop locations • letter box drops • web based information and transport 'app' where changes to travel are found in a single place • information via 131 500 • advertising in local papers • email information bulletins.	Under the Sydney Metro Overarching Community Communication Strategy, a Project specific Community Communication Strategy is to be developed.
TC11 Applies to: All project works	Impacts on special events Consideration of special events would be undertaken as part of construction work programming. For special events that require specific traffic and pedestrian management, measures would be developed and implemented in consultation with Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and Canterbury-Bankstown councils, and the organisers of the event.	Section 7.1.3 of this CTMP
TC12 Applies to: All project works	Impacts of construction compounds and work sites Vehicle access to and from construction sites would be managed to ensure pedestrian, cyclist, and motorist safety. Depending on the location, this may require manual supervision, barrier placement, temporary traffic signals, modifications to existing traffic signals, or police assistance.	Sections 4.2 & 4.3 of this CTMP
TC13 Applies to: All project works	Construction Vehicles Construction vehicles (including contractor staff vehicles) would be managed to: • minimise parking or queuing on public roads • minimise use of residential streets to gain access to work sites or compounds • minimise vehicle movements near schools, particularly during school start and finish times.	Sections 4.2 & 4.3 of this CTMP
TC14 Applies to: All project works	Signage Directional signage and line marking would be used to direct and guide drivers, pedestrians, and other road user's past construction compounds and work sites, and on the surrounding	Section 6.2, 6.5 & 11.3 of this CTMP





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	road network. This may be supplemented by variable message signs to advise drivers of potential delays, traffic diversions, speed restrictions, or alternate routes.	
TC15	Construction parking impacts	Section 6.3 & 6.4 of
Applies to: All project works	Construction sites would be managed to minimise construction worker parking on surrounding streets. A worker car parking strategy would be developed in consultation with the relevant local council to identify measures to reduce the impact on the availability of on street and off-street parking. The strategy would identify potential mitigation measures including alternative parking locations. The strategy would encourage contractor staff to:	this CTMP
	use public transport	
	car share	
	 park in a designated off-site area and access 	
	 construction sites via shuttle bus. 	
TC16	Traffic incidents	Section 8.1 of this
Applies to: All project works	In the event of a traffic related incident, co-ordination would be carried out with the Sydney Coordination Office and Transport Management Centre's Operations Manager.	СТМР
TC17	Changes to road, pedestrian and cyclist networks	Sections 9.1, 9.2 &
Applies to: All project works	The community would be notified in advance of proposed road and pedestrian network changes through appropriate forms of community notification.	9.3 of this CTMP
TC18	Impacts on pedestrian or cyclist paths	Section 9 of this
Applies to: All project works	A condition survey would be undertaken to confirm changes to routes proposed to be used by pedestrians and/or cyclists are suitable (e.g. suitably paved and lit), with identified modification requirements discussed with the Inner West and/or Canterbury-Bankstown councils and implemented prior to use of the routes.	СТМР
TC19	Pedestrian, cyclist and motorist safety	Sections 9 & 4.2.1
Applies to: All project works	Pedestrian, cyclist, and motorist safety in the vicinity of the construction sites would be addressed during	of this CTMP
	construction planning and development of the	
	construction traffic management plan. Measures that may be implemented to assist in multi modal traffic management include:	
	 speed awareness signs in conjunction with variable message signs near construction sites to provide alerts 	





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	to drivers	
	 a community engagement program to provide road safety education and awareness to road users about sharing the road safely with heavy vehicles 	
	 heavy vehicle training for drivers to understand route constraints, safety issues, and limiting the use of compression braking 	
	 safety technology and equipment installed on heavy vehicles to enhance vehicle visibility, eliminate vehicles' blind spots, and monitor vehicle location, speeding compliance, and driver behaviour. 	
TC20	Impacts to access	Section 9.6 of this CTMP
Applies to: All project works	Access for residents, businesses, and community infrastructure would be maintained. Where disruption to access cannot be avoided, consultation would be undertaken with the owners and occupants of affected properties, to confirm their access requirements and to discuss alternatives.	CTMP
TC21 Applies to: All project works	Access to stations and surrounding properties for emergency vehicles would be provided at all times. Emergency service providers (i.e. police and ambulance) would be consulted throughout construction to ensure they are aware of station closures, changes to access, including bridge lane closures, and changes to station or rail corridor access.	Section 8 of this CTMP
TC22 Applies to: All project works	Co-ordination of cumulative traffic effects The potential cumulative effects of construction traffic from multiple construction sites within the project would be further considered during development of the construction traffic management plan. Where there is potential for cumulative impacts across the project, these issues would be addressed with the assistance of the Traffic and Transport Liaison Group.	Noted. Cumulative traffic effects would be addressed within the TTLG
NVC15 Applies to: All project works	The routes for construction haulage vehicles and bus services associated with the Temporary Transport Strategy would be selected on the basis of compliance with the relevant road traffic noise criteria, where reasonable and feasible. Where compliance with the noise criteria is not possible, reasonable and feasible noise mitigation would be implemented.	Section 4.2.3 of this CTMP



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1 Introduction

1.1 Purpose

The purpose of this Construction Traffic Management Plan is to ensure the safety of the public and maintain an accessible and efficient road network for all road users.

This document has been prepared to assist Haslin Stephen Edwards Joint Venture (HSEJV) staff to implement traffic and pedestrian/passenger management control measures when carrying out construction and related works located at the Southwest Metro Upgrade (Notably package 4 - Canterbury, Lakemba and Marrickville stations). This Construction Traffic Management Plan (CTMP) has been prepared to meet condition E47 of the Ministers Conditions of Approval.

The term "traffic" wherever used within this CTMP, encompasses all applicable vehicle and pedestrian traffic. A vehicle is defined as a motor vehicle, bus, truck, motorcycle and bicycle.

Traffic management shall be undertaken in a manner that shall provide for the safety of all HSEJV staff, subcontractors and the public and ensure road users are not exposed to foreseeable risks. The aim of the plan is to understand the works involved, the specific work locations and determine the traffic management requirements to mitigate the associated impact, if any, resulting from the works to complete the SWM project.

As per CoA-E47, this CTMP is written in accordance with the CEMF, relevant Austroads, Australian Standards and Transport for New South Walked (TfNSW) requirements. This CTMP will be submitted to TfNSW following engagement with the Sydney Coordination Office and before Construction commences at the relevant construction site or state. A copy of the CTMP will be submitted to the Planning Secretary for information.

HSEJV understands the similarities and particulars of each station and recognize the need to have a consistent approach to ensure a high level of safety and compliance. The intention for this CTMP is to act as the overarching Traffic Management Plan (TMP) for all three stations (Canterbury, Lakemba and Marrickville).

Additional Site-Specific Traffic Management Plans will be submitted for each station / stage of works one month prior to implementation. These Site-Specific Traffic Management Plans will explain the traffic management strategies presented in this CTMP in greater detail. These Site-Specific TMP's will be submitted to Sydney Metro to enable ongoing compliance with CoA-E47 throughout the project.

1.2 Objectives

The following traffic management objectives will apply to the construction of the project:

- Minimise disruption to traffic operation, road users, pedestrians, cyclists and access of adjoining properties (private and public);
- Maximise the safety for both workers and the public, by isolating work areas from traffic flows, applying low exposure work methods, education and installation of the appropriate traffic control;
- Limit obstructions and restrictions, and when required, provide alternatives to maintain access for local community, transport operators (buses) including over-dimensional load movements and commercial developments;
- Encourage sustainable transport options by site personnel; and
- Implement the traffic and transport mitigation measures as detailed in the environmental approval documentation.



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1.3 SWM Package 4 Scope of Works

Sydney Metro City & Southwest (C&SW) includes a new 30km metro line extending the metro rail from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the center of Sydney.

Sydney Metro C&SW will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new underground metro platforms at Central Station. In addition, it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.

The Sydney Metro Station Upgrade Works Package 4 encompasses works at: Marrickville Station, Canterbury Station and Lakemba Station

This document is the CTMP, which aims to manage and mitigate the impacts of construction traffic, road works, bridge works and sets out the responsibilities and strategies involved in providing a safe environment for all road users.

All workers, employees, subcontractors, employers and the management team, involved in the construction of the project shall adhere to this CTMP.

Construction works under this CTMP will commence once the CTMP has been approved. Additional Site-Specific Sub Traffic Management Plans will be submitted for each station / stage of works and will explain the traffic management strategies presented in this CTMP in greater detail.

A locality map of each station is shown below (Figure 1 - 3).

1.3.1 Canterbury Station Scope of Works

- Refurbish and repurpose rooms of existing concourse booking office, platform building 1 and 2;
- Remove existing stair & canopy to Platform 1. Provide a new lift & stair to Platform 1 including associated canopies;
- Regrade platform as per Sydney Metro's requirement and provide drainage, platform screen doors, platform edge screens and mechanical gap fillers to Platform 1 and 2;
- Provide a new lift to platform 2 including associated canopies;
- Construction of the Sydney Metro Services Building;
- Provide new security gates to concourse entry;
- New cabling and containment for LV services and lighting;
- Clad the southern side of station concourse booking office and refurbish the building. Provide a new opening onto Canterbury Road for existing retail;
- Remove the existing planter beds to Broughton Street;
- Remove the canopy directly over the existing planter bed facing Broughton Street;
- Remove existing brick retaining wall from station concourse forecourt entry adjacent to Canterbury road;
- Provide accessible entries from both Canterbury Road and Broughton Street to station concourse;
- Replace the existing vertical protection (anti-throw) screens to the station concourse bridge;
- Renew lighting to the concourse, footbridge, platform buildings, platforms and ramp to Platform 2;
- Repair the existing booking office roof and associated stormwater system. Repaint, repoint and repair existing platform buildings;





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- Replace existing balustrade on Platform 2 ramp and continue new fencing to platform building 2 with new. Resurface asphalt finish to Platform 2 ramp and contain asphalt edges with steel flat bar;
- Installation of new CSR cable route;
- Installation of security and segregation fencing;
- Canterbury Road bridge parapet works (city and country side); and
- Replacement of existing bus shelters on Broughton Street.

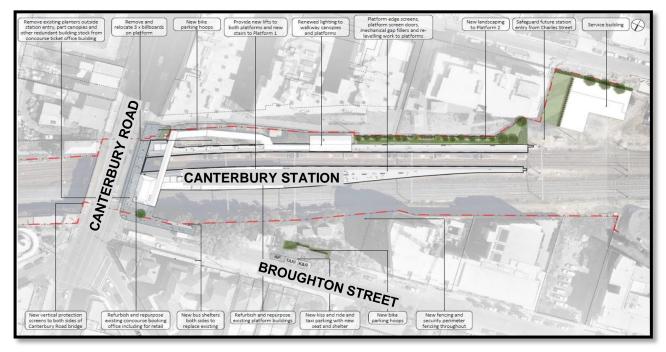


Figure 1 - Canterbury Station

1.3.2 Lakemba Scope of Works

- Refurbish and repurpose rooms of existing platform buildings;
- Refurbish concourse area;
- Construction of the Sydney Metro Services Building;
- Regrade platform as per Sydney Metro's requirement and provide drainage, platform screen doors, platform edge screens and mechanical gap fillers to Platform 1 and 2;
- New cabling and containment for LV services and lighting;
- Installation of new glass screens to existing concourse and footbridge;
- Provide new landscaped plaza at Railway Parade including additional bicycle hoops and feature paving;
- Installation of new vertical protection screens to both sides of the existing Haldon Street Bridge;
- Minor refresh of existing entry concourse stairs;
- · Installation of new CSR cable route; and
- Installation of security fencing.



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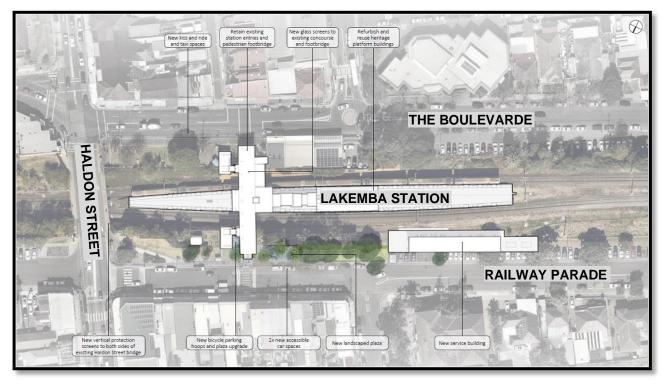


Figure 2 - Lakemba Station

1.3.3 Marrickville Station

- Repurpose and refurbish station rooms in Platform Buildings 1 and 2. Achieve final state of fit out, room performance and services as indicated;
- Regrade platform as per metro's requirement and provide drainage, platform screen doors, platform edge screens and mechanical gap fillers to Platform 1 and 2;
- Retain existing fixed-location readers (FLR's) to concourse;
- Existing finishes to match the existing;
- Installation of security and segregation fencing;
- New Platform coping edge, new drainage and regrading platform to suit Sydney Metro requirements;
- New Anti-Throw Screens to Illawarra Road Bridge;
- Widening of the existing footpath from station street to Charlotte Avenue, adjustments to the security fence location and provision of smart poles for the station entry;
- · Construction of the Sydney Metro Services Building;
- Installation of new Combined Services Route (CSR) cable route (including track under bores and cable bridge structure);
- New cabling and containment for low voltage (LV) services and lighting; and
- · Cable containment for communications containment.





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Figure 3 - Marrickville Station

1.3.4 Compound Setup

Principal Contractors will consider the following in the layout of construction sites:

- The location of noise intensive works and 24-hour activities in relation to noise sensitive receivers;
- The location of site access and egress points in relation to noise and light sensitive receivers, especially for sites proposed to be utilised 24 hours per day;
- The use of site buildings to shield noisy activities from receivers;
- The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours; and
- Aim to minimise the requirement for reversing, especially of heavy vehicles.

1.4 Review and Update

This CTMP will be submitted to TfNSW Greater Sydney Planning and Programs (GS P&P) following engagement with relevant Council's and stakeholders before Construction commences at the relevant construction site or state. A copy of the CTMP will be submitted to the Planning Secretary for information.

1.5 General information

Due to the residential nature of some of the surrounding streets, queueing and idling of heavy vehicles will not be permitted. This shall be management by engaging competent suppliers and scheduling heavy vehicle movements. Vehicles may only wait inside the worksite.

Vehicles are to be managed to minimise the use of residential streets to gain access to work sites or compounds, and to minimise vehicle movements near schools, particularly during start and finish times.

Access for residents, buses, and community infrastructure is to be maintained. If this is not possible, consultation is to be undertaken with the affected owners and occupants in line with the Community Consultation Strategy (see section 7 of this CTMP).



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Swept path analysis reveals that all access gates are suitable for the largest anticipated vehicle (12.5m single unit truck). In the event a larger vehicle requires access into each site, route analysis details will be included in the applicable Site Specific TMP.

1.6 Key Personnel

HSEJV have elected to deploy three individual delivery teams to manage the required construction at each station upgrade. Tables 1-3 list the key personnel involved with each station upgrade within the SWM Package 4 works.

Lakemba Station			
Position	Name	Phone Number	
Project Director	Chris Hammond	0400 063 398	
Senior Project Manager	Celso Paiva	0499 013 312	
Project Manager	James Chia	0433 405 523	
Traffic Engineer	Sairam Pilli	0428 196 077	

Table 1 - Lakemba Station Key Personnel

Canterbury Station			
Position	Name	Phone Number	
Project Director	Chris Hammond	0400 063 398	
Senior Project Manager	Celso Paiva	0499 013 312	
Project Manager	Vitor Reis	0447 124 014	

Table 2 – Canterbury Station Key Personnel

Marrickville Station			
Position	Name	Phone Number	
Project Director	Chris Hammond	0400 063 398	
Senior Project Manager	Daniel Brazdil	TBA	
Project Manager	Brad Mulligan	0425 330 991	

Table 3 – Marrickville Station Key Personnel

1.7 Roles and 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 HSEJV responsibilities for personnel attached to each of the key positions are listed below.



Traffic Engineer

Traffic Engineer

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1.7.1 Project Director (PD):

The Project Director will support the station project teams in complying with the traffic management requirements associated with the Project including:

- Ensuring sufficient traffic management resources are made available and allocated to the Project;
- Driving an 'incident and injury free' culture in all areas of construction and traffic management; and
- Ensuring quality assurance procedures are maintained in accordance with project requirements;

1.7.2 Senior Project Manager (SPM):

The Construction Manager will support the station project teams in his duties, including:

- Facilitate efficient and timely communication between the construction team and the traffic personnel;
- Work closely with the station personnel to ensure site layouts are planned to achieve efficient and safe on-site plant, equipment, traffic and pedestrian movements; and
- Ensure construction activities requiring traffic management are identified in good time to permit the necessary planning, approvals, implementation and administration to be undertaken in accordance with the CTMP & Site Specific TMP's;

1.7.3 Project Manager(s)

Each Project Manager will be responsible for the long and short-term temporary Traffic Management their station upgrade. In addition, the PM will:

- Identify and commission each station and site specific TMP's in a timely manner;
- Enforce the G10 requirements;
- Communicate with project stakeholders regarding traffic matters (CJP, TfNSW, CJM, Sydney Metro);
- Oversee the station compliance with the provisions of this document (CTMP), Site Specific TMP's and ensure the traffic management objectives of the project are achieved;
- Implement, monitor and review all Site Specific TMP's;
- Attend traffic-related meetings (TCG / TTLG / LTC);
- be responsible for the implementation of ROLs 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; and
- monitor over-dimension heavy vehicle movements.

1.7.4 Traffic Engineer:

The Traffic Engineer's responsibilities during construction are as follows:

 Assist the Project Manager with TCP implementation and review of effectiveness within their work areas;



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- Obtain and maintain all necessary approvals and ROL's for the TCP's as necessary;
- Direct and assist the field staff in the application of the CTMP;
- Ensure that only adequately trained and qualified personnel are engaged or are available to undertake operations and maintenance duties;
- Be familiar with and have access to the lists prepared by the Traffic Fields Crews of personnel, equipment and emergency service representatives;
- Be familiar with and undertake the instruction of personnel in the operational aspects of the CTMP and the Incident Response Plan;
- Ensure all traffic management personnel, plant and equipment are available in a timely manner to meet the requirements of the construction program;
- Develop work methods to ensure utmost consideration is given to providing a safe working
 environment for employees as well as addressing the safety of road users and the general public;
- Undertake briefing of field staff responsible for the carrying out of traffic management and emergency response activities; and
- Investigate with the Project Manager, all traffic incidents and community concerns which relate to traffic matters.

1.7.5 Traffic Control Supervisor (Subcontractor)

HSEJV will appoint a traffic control supervisor for each station upgrade which will provide the resource requirements relating to the traffic management field crews (including incident assistance) and the routine management & maintenance of traffic control facilities.

The Foreman's responsibilities during construction are as follows:

- Report to the Project Manager;
- Comply with G10 requirements;
- Implement and monitor site specific TMP's;
- Coordinate and supervise sub-contractors deployed for TMP/TCP implementation;
- Manage Traffic Controllers at all work sites;
- Ensure that traffic control facilities are maintained and monitored throughout the Works;
- Work cooperatively with other incident response or emergency services when required;
- Be available to receive regular briefings on the implementation of the CTMP and toolbox meetings;
- Respond to incidents on the road network affected by the construction works taking advice from the Emergency Responders and TfNSW;
- Monitor road occupancy licence conditions daily for compliance including:
 - Monitoring traffic delays and general conditions;
 - Monitoring traffic queue lengths and total stoppage times;
 - Maintaining and adjusting traffic control measures to assist prevailing traffic flows; and
 - o Monitoring of over-dimensional heavy vehicle movements;

1.7.6 Traffic Controllers / Traffic Field Crews

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



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- Project-wide traffic control duties (not related to a specific area or zone) including but not limited to:
 - Respond and attend to unplanned incidents across the project;
 - Ensure all relevant signs and devices are in place before starting traffic control;
 - o Wear high visibility clothing and carry their traffic control identification;
 - Maintain an approved logbook to record experience gained as a trainee Traffic Controller;
 - Not obstruct drivers' view of or be partially hidden by other road signs and devices;
 - Give definite and clear signals to public and construction traffic;
 - When two traffic controllers are used, be visible to one another or have radio communication so the flow of traffic from each direction can be coordinated;
 - o Traffic will be held only to allow single HV movements to be made and then released; and
 - Follow all other relevant procedures and requirements contained in the relevant TCP or JSA/SWMS for the activity undertaken.
- Assist the Foreman to undertake their duties to the satisfaction of the CTMP;
- Utilise resources provided by the Foreman to undertake routine and periodic maintenance of longterm traffic management and control facilities; and
- Undertake the reporting and auditing requirements of Section 6 of TfNSW Traffic Control at Worksites manual;

1.7.7 Safety Officer:

- Report any identified workplace health and safety concerns to the PM;
- Liaise with PM on traffic management incidents within the Project boundaries;
- Refer all road safety issues to the PM;
- Advise workers in safety work methods specific to traffic management operations;
- Assist with workplace safety aspects of TCP design and implementation, as necessary;

1.7.8 All Other Persons

All other persons carrying out work activities on or immediately adjacent to the site shall:

- Always take reasonable care for their safety and that of those around them;
- Follow the applicable requirements contained in this document;
- Prior to proceeding with any work, contact their supervisor or a HSEJV Site Management;
- Team member for clarification of any requirement applicable in this document, and any other relevant permits, plans or approvals;
- Provide appropriate notification of deliveries to the nominated Site Contact;
- Wear high visibility vest or shirt where required under this document;
- Always obey the applicable road rules for pedestrians, riders, and drivers;
- Always follow safe driving practices, including using the correct thoroughfare in accordance with any posted speed limits and safety requirements in a manner that does not put at risk their safety or that of any other persons (e.g. passengers, fellow workers, or members of the public);





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- Always avoid creating any form of safety hazard or unreasonable delays when parking or parked.
 Any workers associated with the site must park their vehicles wholly within the site boundaries; and
- Workers associated with the site will not occupy public on-street parking spaces.
- Principal Contractor
- Principal Contractors will consider the following in the layout of construction sites:
- The location of noise intensive works and 24-hour activities in relation to noise sensitive receivers;
- The location of site access and egress points in relation to noise and light sensitive receivers, especially for sites proposed to be utilised 24 hours per day;
- The use of site buildings to shield noisy activities from receivers;
- The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours; and
- Aim to minimise the requirement for reversing, especially of heavy vehicles.

1.7.9 Training Needs and Requirements

- The Principal Contractor is responsible for training needs and requirements of their personnel. The minimum requirements are:
- Site induction;
- Regular Toolbox Talks;
- Topic specific environment training;

The site induction is to be provided to all site personnel. This must include, as a minimum:

- Training purpose, objectives and key issues;
- Contractor's environmental policy and key performance indicators;
- Due diligence, duty of care and responsibilities;
- Relevant conditions of any environmental licence and/or the relevant conditions of approval;
- Site specific issues and controls including those described in the environmental procedures;
- Reporting procedure for environmental hazards and incidents; and
- Communication protocols.

Toolbox talks will be held on a regular basis in order to provide a project or site wide update, including any key or recurring safety & environmental issues. Personnel will be briefed on site specific TCP's, VMP's, PMP's & TMP requirements during both site induction and regular toolbox talks.

1.7.9.1 Sydney Metro Industry Curriculum (SMIC)

HSEJV is also aligned with the Sydney Metro Industry Curriculum (SMIC) and is committed to improving the skills and competence within the industry. HSEJV will ensure that project personnel that fall within the SMIC identified critical skills, attend the required mandatory training. In regard to the SWM Package 4 works, this training will apply to personnel involved with:

- Civil Construction
 - All Civil Construction workers with less than 2 years experience in the industry are required to complete the Civil Construction Introduction Skills course. This course will be required to be completed prior to commencement to Site.



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 All Pre-cast Fabrication workers are required to complete the Civil Construction Introduction Skills course. This course will be required to be completed prior to commencement to Site.

· Heavy haulage

 All workers identified as Frequent Heavy Vehicle Drivers will be required to participate in Heavy Haulage Introduction Skills. This course will be required to be completed prior to commencement.

Those in Supervisory positions

 All workers who act as a Supervisor in Defined Occupations or as a Worksite Protection Officer will be required to complete leadership training.

Rail

 All workers who provide Worksite Protection will be required to complete the Rail Introduction Skills course. The Rail Introduction Skills course will be required to be completed prior to commencement to Site.

Cultural Awareness

 All workers who act as a Supervisor in Defined Occupations or as a Worksite Protection Officer will be required to complete the Cultural Awareness Training.

Demolition

- All Demolition workers who have less than 26 weeks of demolition industry experience are required to complete the Demolition Introduction Skills. This course will be required to be completed prior to commencement to Site.
- All Demolition workers who have more than 26 weeks of demolition industry experience are required to complete the Demolition Experienced Worker course. This course will be required to be completed prior to commencement to Site.
- O Demolition Supervisors are required to complete Demolition Nominated Supervisor course. This course will be required to be completed prior to commencement to Site.

1.8 Proposed Timing and Duration

This CTMP will be in use for the entire duration of the SWM Package 4 works, which is planned to start by March 2021 and current scope set to complete by 20 April 2022. Construction works under this CTMP will commence once the CTMP has been approved.

2 Traffic Management Documents

2.1 Construction Traffic Management Plan (CTMP)

This HSEJV CTMP for the SWM package 4 works represents an overarching impact mitigation statement as required by the CoA, CEMF, CEMP & G10 specification. 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.

2.2 Site Specific Traffic Management Plan (TMP)

Site specific Traffic Management Plans (Site Specific Traffic Access and Management Plans) conforming to AS 1742.3 and the TfNSW Traffic Control at Worksites Manual will be developed for each stage of works. These plans will contain additional written details describing the nature of the works as well as traffic and





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stakeholder impacts. These 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
- Maintaining traffic flow

2.3 CTMP & Site Specific TMP Process

As displayed in the diagram below, the CTMP & Site Specific TMP (Site Specific Traffic Access and Management Plans) arrangements and procedures for the project will be documented in the following key levels shown in Figure 4 below (blue highlights).

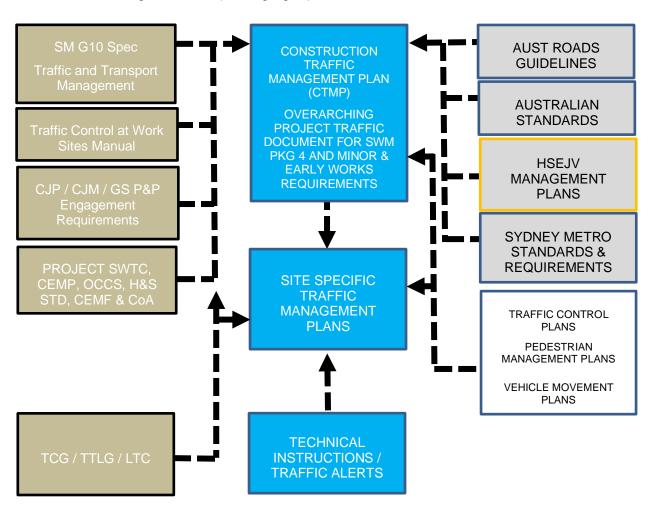


Figure 4 - Document hierarchy flowchart

2.4 Change Management

Amendments to this CTMP and/or Site Specific TMP's may be required to address changed conditions, circumstances or procedures. These changes will be discussed in within the TCG before being submitted to TfNSW Greater Sydney Planning and Programs (GS P&P) and relevant Local Councils and others (as required) for review, feedback and approval of the changes.



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Each new revision to the plan(s) will be distributed to all relevant stakeholders with an instruction that the superseded copy be destroyed or marked as superseded. The revision number is included at the end of the document number, which is noted on each page. When amendments occur, the document or relevant section will be reissued with the revision number updated accordingly.

2.5 Traffic Control Plans (TCP)

Site specific TCP's will be submitted with each site specific TMP. However, some low impact early & minor works are necessary at each site prior to the site specific TMP's being approved. These have been included within this CTMP in Appendix A. TCP implementation details are included within section 5 (Early & Minor Works Scope) of this CTMP.

See Appendix A for the TCP's proposed to be installed for the Canterbury Station early investigation works.

Records will be maintained of:

- All traffic control plans, including dates and times the plans were erected and removed;
- Any adjustments made to such schemes; and
- Inspections.

All inspections will obey guidelines provided in AS 1742.3. Three inspection types identified as part of this process are:

- Pre-start, during work and pre-closedown inspections of traffic control layout (daily, by Field Supervisor);
- Inspect the traffic control layout on the day before work begins, and weekly inspections (Traffic Representative); and
- Undertake traffic control safety audit at least once a month (Traffic Representative).

All documentation will be maintained in regard to all Traffic Control Plans and any modifications to them, along with dates, times and reasons for their inclusion and exclusion.

2.6 Vehicle Movement Plans (VMP)

Where applicable, HSEJV will provide a VMP 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, HSEJV will attach a VMP as an Appendix to the Site Specific TMP submission. This VMP will show the daily routes to and from the work site avoiding small council roads where practicable.

Early & minor works VMP's for Canterbury & Marrickville stations are attached in Appendix B. The Lakemba Station VMP will be presented in a separate site-specific establishment TMP.

2.7 Pedestrian Movement Plans (PMP)

Where applicable, HSEJV will provide a PMP together within each of the 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.



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3 EXISTING CONDITIONS

3.1 Canterbury Station

Canterbury station is situated on Canterbury Road which is a major arterial route that runs east/west between Clemton Park and Dulwich Hill. Canterbury Road connects to Fairford Road and King Georges Road which are main feeder roads to the M5 motorway. It is predominantly posted at 60km/hr, with a 4 lane, two-way undivided carriageway with no formal cycle lanes. Adjacent to the station is high density housing (apartment complexes) which suggests that high pedestrian volumes are currently experienced in this location. Furthermore, several bus stops are located on Canterbury Road and Broughton Road.

HSEJV are aware of proposed traffic signals to be installed at the Charles Street & Canterbury Road intersection. This CTMP will be updated as new information becomes available to ensure there are no conflicts between the two construction sites.

3.2 Lakemba Station

Lakemba Station is situated between Railway Parade and The Boulevarde in Lakemba. Both roads run in an east/west direction with a two lane, two-way undivided configuration and are predominantly posted at 50km/hr. Both roads provide on road parking. Being an "island platform", the station can be accessed from both Railway Parade and The Boulevarde. Parking facilities, bus stops and zebra crossings exist adjacent to the station. The area contains medium/high density housing which suggests that high pedestrian volumes are experienced in this location. The Haldon Street over bridge (which requires new anti-throw screens) is situated between Railway Parade and The Boulevarde. Haldon street runs in a north/south direction with a four lane, two-way divided configuration and is sign posted at 50km/hr.

3.3 Marrickville Station

Marrickville station is located on Illawarra Road which is an arterial road that runs in a north/south direction between the suburbs of Undercliffe and Enmore. Adjacent to the station concourse, Illawarra Road is a 50km/hr two lane, two-way undivided configuration with an additional south bound bus zone. No formal public parking facilities are located on Illawarra Road. The station can also be accessed from Station Street which is a one-way kiss and ride facility designed for vehicles under 7m. Like the Canterbury and Lakemba Stations, this area also contains high density housing which suggests a high volume of pedestrian traffic is experienced in this location.

3.4 Council Jurisdictions

All project works fall into the jurisdictions of two councils:

- Canterbury & Lakemba Station are under the Canterbury and Bankstown Council (CBC)
- Marrickville Station is under the Inner West Council (IWC)



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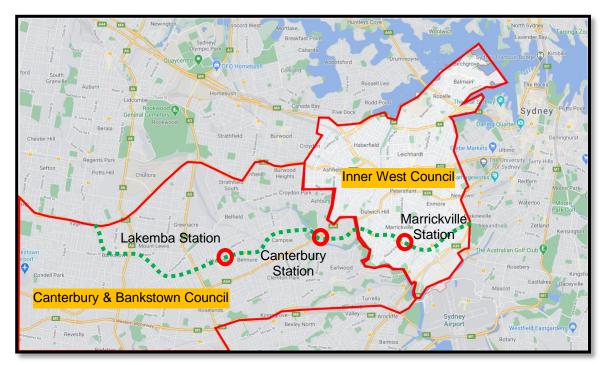


Figure 5 - Council Jurisdictions

4 ANTICIPATED IMPACTS

4.1 Constraints

4.1.1 Work Hours

The CoAs acknowledge the need to carry out works outside standard construction hours.

CoA E19 defines standard Sydenham to Bankstown hours of work as:

Monday to Friday 7am to 6pm and Saturdays 8am to 6pm;

Exceptions for highly noise intensive work (refer Section 5.4) are in accordance with E24:

8am to 6pm Monday to Friday and 8am to 1pm Saturday.

In accordance with CoA E20, notwithstanding CoA E19 and E24, work may be undertaken outside the hours specified in the following circumstances:

- For the delivery of materials required by the NSW Police Force or other authority for safety reasons; or
- Where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or
- Where different construction hours are permitted or required under an EPL in force in respect of the Project; or
- Work approved under an Out of Hours Works Protocol for work not subject to an EPL as required by CoA E25; or
- Construction that causes L_{Aeq(15minute)} noise levels:



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- No more than 5dB(A) above the rating background level at any residence in accordance with the ICNG, and
- No more than the 'Noise affected' noise management levels specified in Table 3 of the ICNG at other sensitive land uses, and
- O Continuous or impulsive vibration values, measured at the most affected
- o residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of AVTG, and
- Intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of AVTG.
- Where a negotiated agreement has been reached with a substantial majority of sensitive receivers
 who are within the vicinity of and may be potential affected by the particular Construction, and the
 NML and/or limit for ground-borne noise and vibration (human comfort) cannot be achieved. All
 agreements must be in writing and a copy forwarded to the Planning Secretary at least one week
 before the commencement of activities.

This Project does require evening and night work throughout the construction program, particularly to reduce impacts on the operational Sydney Trains railway along the Sydenham to Bankstown route. The Sydney Trains EPL 12208 applies to works carried out under a rail possession.

EPL12208 Condition O13.1 adopts the EPA ICNG standard work hours on Saturdays (8am to 1pm). Out of hours works applications must be prepared and approved for Saturday 1pm to 6pm work if carried out under EPL 12208 under a rail possession, but not if the work is carried out outside a rail possession and in accordance with CoA E19.

E19 states that works must not be undertaken on Sundays or Public Holidays, however this would not apply for weekend works or extended periods carried out under rail possessions when EPL 12208 would apply. The CoA E24 restriction on highly noise intensive work (as outlined in Section 5.4) does not apply to works under a possession although reasonable and feasible efforts are to be made to conduct highly noise-intensive works during less sensitive periods where possible.

Any works planned to occur outside standard work hours must be assessed and approved in advance in accordance with Sydney Metro's approved City and Southwest Out of Hours Works Strategy/Protocol.

For works conducted outside standard construction hours, the following time periods are considered in order of least noise-sensitive to most noise-sensitive for typical residential receivers:

- Saturday afternoon 1pm to 6pm least noise-sensitive
- Sunday day 8am to 6pm
- Monday to Sunday evening 6pm to 10pm
- Monday to Sunday night before midnight 10pm to midnight
- Monday to Friday early morning "shoulder period" 6am to 7am
- Monday to Sunday night after midnight 10pm to 6am Monday to Friday, or 10pm to 8am Saturday and Sunday – most noise sensitive

These priorities are generally represented in the CoAs and EPL clauses which relate to restrictions on high impact works.

The break-down of noise-sensitive periods is a useful tool for planning out of hours works using Sydney Metro's City and Southwest Out of Hours Works Strategy/Protocol. Noise impacts can be effectively managed by determining the most practical sequence of events which can also limit noisier activities to less noise-sensitive times.



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4.1.2 Out-of Hours Emergency Works

CEMF Requirement:

Works which can be undertaken outside of standard construction hours without any further approval include:

- Those which have been described in respective environmental assessments as being required to take place 24/7. For example, tunneling and underground excavation works and other supporting activities;
- Works which are determined to comply with the relevant Noise Management Level at sensitive receivers;
- The deliver or materials outside of approved hours as required by the Police or other authorities (including TfNSW) for safety reasons;
- Where it is required to avoid the loss of lives, property and/or to prevent environmental harm in an emergency; and
- Where written agreement is reached with all affected receivers.

CoA Requirement:

In accordance with CoA E21, on becoming aware of the need for emergency work in accordance with Condition E20(b), the Principal Contractor must notify the ER and the EPA (if a EPL applies) of the need for that work. The Principal Contractor must use best endeavours to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those works.

4.2 Construction Traffic

4.2.1 Construction Traffic Generation

Each site will see an increase in heavy vehicle movements in and out of site during non-possession periods. However, during track possession, station closures or road closures an estimated rate of approximately 40 – 50 truck movements a day in total is predicted. HSEJV will ensure that suppliers and subcontractors are notified of the approved routes in and around each site prior to commencing work on site.

HSEJV are aware of external contractors currently working within the proximity of each station and others that may generate construction traffic. HSEJV will ensure that communication lines are established via the TCG & TTLG interface to ensure conflicting activities are avoided, and cohesion of adjacent worksites is maintained for the benefit of all road users.

Specific construction driver training to understand route constraints, expectations, safety issues, human error and its relationship with fitness for work and chain of responsibility duties, and to limit the use of compression braking is to be completed where necessary.

4.2.2 Access and Egress Requirements

To provide safe entry and exit to the worksite from the designated site gates HSEJV will:

- Monitor the number of access points in use (from the rail corridor);
- Ensure the access points nominated can accommodate the turning movement of the largest vehicle that will be accessing the site as required. Swept path analysis reveals that all access gates are suitable for the largest anticipated vehicle (12.5m single unit truck). In the event a larger vehicle requires access into each site, analysis details will be included in the applicable site specific TMP.
- Ensure all access points are clearly visible to approaching traffic and signposted accordingly;





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- Coordinate heavy vehicle movements to ensure they do not queue on residential streets but enter through the access gates as soon as possible after arriving.
- Ensure that vehicles will enter and exit the access gates in forward direction only. If this is not
 possible, traffic control will be implemented to assist.
- Minimise heavy vehicle movements during peak traffic times.
- Plan to avoid use of local roads by heavy vehicles, where feasible.

Segregation of pedestrians and cyclists from site access points will not be feasible. Traffic Control will be utilised to manage this interface. Where required, pedestrians and cyclists will be held briefly to allow safe vehicle movements.

Access points that are existing railway access gates via existing driveways and easements will not need to be modified.

4.2.3 Haulage Routes / Delivery Routes

Haul and delivery truck routes to and from construction sites and access points will be developed in key consideration of minimising impact on local streets and maximising use of arterial roads using Higher Mass Limit (HML) routes as outlined by TfNSW as part of their Intelligent Access Program (IAP) and Restricted Access Vehicle (RAV) routes.

TfNSW has roads and zones throughout Sydney that are approved for RAV and HML for certain heavy vehicles to travel along.

Relevant local councils and/or TfNSW permission is required should construction vehicles greater than the allowable load limit require access to roads containing restrictions. These haulage routes must be approved by the TfNSW following endorsement by Sydney Coordination Office and consultation with the TTLG. The routes are available in in Appendix B – Vehicle Movement Plans.

HSEJV are aware that haulage routes need to be approved by a noise and vibration professional to ensure that they are compliant with project requirements for night-time traffic noise criteria. Additionally, HSEJV will ensure that compression braking and idling of vehicles is reduced where possible. Haulage routes will be determined by selecting the most direct route which will also minimise the use of residential roads.

4.2.4 Canterbury Station

The new access and egress points are proposed at both the Charles Street and Broughton Street compounds. The primary site compound is located on Charles Street, as this location is adjacent to the Sydney Trains lines. The Broughton Street compound is a secondary compound which has been nominated for engineering and administrative staff use only. Workers will have to park within the Charles Street compound in order to access the Broughton Street site office.

It is noted that a 3.65m head room clearance exists in the under bridge between on Charles Street. HSEJV will ensure that appropriate planning and controls are in place to accommodate vehicles that exceed this height limit.



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Figure 6 - Canterbury Station compound layout (Source: Near Map)

4.2.4.1 Permitted Movements for Construction Vehicles at Canterbury Station

Haulage routes for the works will be carried out via the existing road network. This will see the majority of trucks entering the site from the Charles Street Compound access. The trucks will have the capability turn around within the compound to depart the site and return to Charles Street in a forward direction, which will further reduce the impact on the local road network. Figure 7 shows the public roads which are proposed to be used by construction vehicles (highlighted green). These roads have been subject to a road condition survey.



Figure 7 – Public roads proposed for use by construction vehicles (Source: Near Map)



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Canterbury Station Permitted Movements	
Intersection / Access	Permitted turn movement
Charles Street Compound	All movements permitted
Charles Street / Canterbury Road	Left in / Left out (light vehicles only)
Broughton Street / Canterbury Road	All movements permitted by signalised intersection
All other intersections	HV's - Left in / left out LV's - all turn movements permitted by intersection

Table 4 - Canterbury Station Table of permitted movements

4.2.5 Lakemba Station

The new access and egress points will be created for compounds on both Railway Parade and The Boulevarde. The construction compound and proposed stockpile area on The Boulevarde will be utilised during possession periods only.



Figure 8 – Lakemba Station compound layout (Source: Near Map)

4.2.5.1 Permitted Movements for Construction Vehicles at Lakemba Station

Haulage routes for the main platform works (during possession periods) will be via the existing road network. Additionally, an internal haulage route (within the rail corridor) will be established to further minimise use of the existing road network. This will see the majority of trucks entering & exiting the site from The Boulevarde stockpile and material compound access adjacent to Dennis Street. Figure 9 shows the public roads which are proposed to be used by construction vehicles (highlighted green). These roads have been subject to a road condition survey.



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Figure 9 – Public roads proposed for use by construction vehicles (Source: Near Map)

Lakemba Station Permitted Movements		
Intersection / Access	Permitted turn movement	
Railway Parade MSB site	All turn movements permitted	
The Boulevarde site compound	HV's & LV's - Left in / left out	
Haldon Street / The Boulevarde intersection	All movements permitted by signalised intersection	
Haldon Street / Railway Parade intersection	Left in / left out	
All other intersections	HV's - Left in / left out LV's - all turn movements permitted by intersection	

Table 5 – Lakemba Station Table of permitted movements

4.2.6 Marrickville Station

Site access and egress points will be implemented Victoria Road, Riverdale Ave, Station Street and Wooley Lane. The primary site compound is located off Victoria Road, as this location provides easiest access to the Sydney Trains lines. The Riverdale Ave and Wooley Lane accesses are situated on local roads which will not cause adverse impact to network performance. It is proposed that the Station Street access is only utilised during possession periods.



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Figure 10 – Marrickville Station compound access (Source: Near Map)

4.2.6.1 Permitted Movements for Construction Vehicles at Marrickville Station

Haulage routes for the works will be via the existing road network. This will see the majority of trucks entering the site from the Victoria Road Compound access. The trucks will be able to turn around within the compound to depart the site and return to Victoria Road, which will reduce the impact on the local road network. Figure 11 shows the public roads which are proposed to be used by construction vehicles (highlighted green). These roads have been subject to a road condition survey.

It is noted that a 4.0m head room clearance exists in the under bridge between Victoria Road and Myrtle Street. HSEJV will ensure appropriate planning and necessary controls are in place to cater to vehicles that may exceed the Victoria Road bridge clearance height. Figure 11 reveals the proposed haulage route for construction vehicles entering the Victoria Road compound. This route has been determined by selecting the most direct route which minimises the use of residential roads.

Marrickville Station Permitted Movements		
Intersection / Access Permitted turn movement		
Vistoria Dand Common d	Left in / Left out Note: the Marrickville Station delivery team will assess	
Victoria Road Compound	the need for short term traffic control if vehicle movements are in execss of 20 per shift	

HV's - Left in / left out

All other intersections & access points

LV's – all turn movements permitted by intersection

Table 6 – Marrickville Station Table of permitted movements



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Figure 11 – Public roads proposed for use by construction vehicles (Source: Near Map)

4.2.7 Swept Path Analysis

Each of the proposed construction access gates at Canterbury Station & Marrickville Station has had swept path analysis conducted to meet the requirements in the CoA. The swept path analysis reveals that all access gates are suitable for the largest anticipated vehicle (12.5m single unit truck). In the event a larger vehicle requires access into each site, analysis details will be included in the applicable site specific TMP.

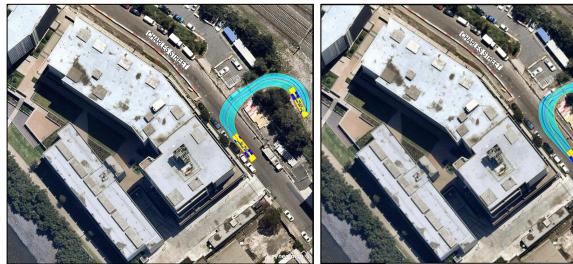
4.2.7.1 Canterbury Station

The Broughton Street / Canterbury Road intersection currently carries buses which are equivalent to the largest anticipated construction vehicle, hence swept paths have not been analysed for that particular intersection. Instead, swept paths have been analysed at the Charles Street compound / rail corridor access.



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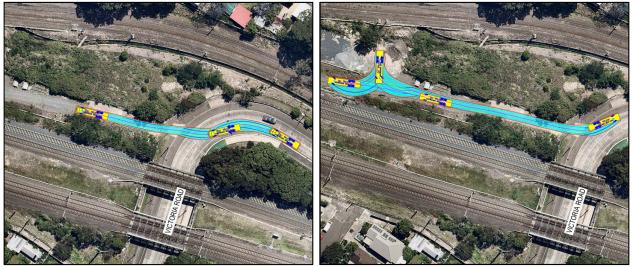




Figures 12 & 13 – Charles Street Rail Corridor Access – Canterbury Station (Excerpt from LoR/JHG SWMC Early Works CTMP)

4.2.7.2 Marrickville Station

HSEJV are aware of the sight distance constraints at the Victoria Road compound site gate. Therefore, all right turn movements are to be carried out under traffic control. As part of the Marrickville Station Site Establishment TMP. A long-term signage plan has been proposed which consists of truck symbolic warning signage to be shown on both approaches to the gate. This will warn motorists of the anticipated truck movements at this location.



Figures 14 & 15 – Victoria Rad compound access – Marrickville Station (Excerpt from LoR/JHG SWMC Early Works CTMP)

4.2.7.3 Lakemba Station

The road network immediately adjacent to the Lakemba Station falls under the "Local Road" classification which already carries heavy vehicles such as buses and other industrial vehicles. Typically, local roads like those existing adjacent to Lakemba Station (The Boulevarde, Railway Parade & Haldon Street) are designed to cater to a single articulated heavy vehicle (19.0m semi-trailers). HSEJV are aware of this and anticipate the largest vehicles to be utilised will be 12.5m single unit trucks. In the event, larger vehicles are required for the construction of the Lakemba Station upgrades, details and analysis will be provided in the Lakemba



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site specific TMP.

4.2.8 Traffic Modelling

Traffic modelling would only be necessary when long-term changes to the road network are required due to the project works. The majority of road occupancies from HSEJV are short term and would not require traffic modelling.

Where long term closures are required (i.e. during the June shut down at Canterbury Station), traffic modelling may be carried out to identify potential impacts to the road network. Such information will be presented in the site specific Traffic Management Plans.

4.3 Heavy Vehicles

4.3.1 Oversize Overmass OSOM

Only Canterbury Road is an approved route for OSOM vehicles. If changes to the road network are to occur, these will be presented in a site specific / stage specific Traffic Management Plan. Regardless, the relevant TfNSW & CJM representatives will be notified of any work occurring on the specified OSOM routes to ensure that network performance is optimised.

4.3.2 Road Dilapidation

In order to heavy vehicles to utilise the surrounding road network, a road dilapidation report is required and is to be submitted via a Hold Point. This road dilapidation report is to be completed by a professional nominated by the Principal Contractor.

A copy of this road dilapidation report is to be provided to the relevant council(s) within four (4) weeks of completion of the survey and at least two (2) weeks prior to the road being used by heavy vehicles associated with the construction of the CSSI.

If Damage to local roads occurs as a result of the Construction, the Proponent must either:

- Compensate the relevant road authority for the damage caused. The amount of compensation to be agreed with the relevant road authority.
- Rectify the damage to restore the road to at least the condition it was in pre-Construction as identified in the road dilapidation report(s).

HSEJV have completed a road condition survey of the public roads which are proposed for use by construction vehicles, the table below presents the roads which have been surveyed.

Public Roads Included In Road Condition Survey (Including footpath and road furniture)		
Station	Street Names	
Canterbury	 Canterbury Road (between Berna Street & Minter Street Charles Street Broughton Street John Street Robert Street Close Street 	
Lakemba	 Haldon Street (between Railway Parade and The Boulevarde) Railway Parade (including Alice Street North to Moreton Street) The Boulevarde (between Sproule Street to Moreton Street) 	
Marrickville	Illawarra Road (between Warburtn Street and Arthur Street)Carrington Road	



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- Myrtle Street
- Victoria Road

Table 7 – Public Roads Included in the Road Condition Survey

5 EARLY & MINOR WORKS SCOPE

Each station will require traffic control approvals to carry out necessary early and minor works (i.e. utility locations, tree trimming & site establishment). Minor and Early Works are defined as low impact activities that will be undertaken prior to approval of the CEMP. These will be captured within this CTMP until such time that site specific TMP's have been approved.

Sections 5.1 to 5.3 provides details of the early & minor works at each station along with the proposed TCP. These TCP's can be found in Appendix A. It is proposed that these TCP's will be utilised for short term works and will be implemented during off-peak periods.

The implementation of these TCPs will be dependent on approval such as but not limited:

- Relevant Road Authority Approval;
- Minor Works Approval;
- · OOHW Works Approval if applicable; and
- Consultation the appropriate stakeholder i.e. Sydney Buses, Sydney Trains and Taxi Council.

5.1 CANTERBURY STATION

TCP REFERENCE	ROAD	PLAN DESCRIPTION
HS-CAN-3001-P1	Canterbury Road	Eastbound Partial Lane closure for service investigation, hoarding installation & removal
HS-CAN-3002-P1	Canterbury Road / Broughton Road	Broughton St Partial Closure for service investigation, tree trimming and delivery of material. ***Consultation with Sydney Buses required prior to implementation***.
HS-CAN-3003-P1	Canterbury Road	Canterbury Rd SB Slow Lane Short Term Closure for service investigation and implementation of temporary works. ***Pedestrian access will be maintained***.
HS-CAN-3004-P1	Canterbury Road	Canterbury Road westbound footpath closure & pedestrian detour for service investigation.

Table 8 – Canterbury Station minor & early works TCP's

5.2 LAKEMBA STATION

TCP REFERENCE	ROAD	PLAN DESCRIPTION
HS-LAK-40001-P1	Railway Parade	Intermittent stoppages for site establishment and delivery of materials.



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HS-LAK-40002-P1	Railway Parade	West bound lane closure for site establishment and delivery of materials.
HS-LAK-40003-P1	Railway Parade	West bound partial lane closure for site establishment and delivery of materials.
HS-LAK-40004-P1	The Boulevarde	East bound lane closure for site establishment and delivery of materials.

Table 9 - Lakemba Station minor & early works TCP's

Note: A site specific TMP will be generated for the Boulevarde site compound establishment

5.3 MARRICKVILLE STATION

TCP REFERENCE	ROAD	PLAN DESCRIPTION
HS-MAR-50001-P1	Illawarra Road	Illawarra Road SB lane closure to carry out utility investigation & clash detection works
HS-MAR-50002-P1	Illawarra Road	Illawarra Road NB partial lane closure to carry out utility investigation & clash detection works

Table 10 - Marrickville Station minor & early works TCP's

6 TRAFFIC MANAGEMENT CONTROLS

6.1 Traffic Controllers / Traffic Field Crews

All traffic controllers shall hold Transport for New South Wales 'Traffic Controller' qualification and wear the required Personal Protective Equipment (PPE) at all times.

During all work on site, the following precautions shall be taken:

- A traffic controller shall direct traffic and work vehicles using a "STOP/SLOW" sign.
- All trucks involved in the work shall follow a set route to minimise traffic disruption.

Where HSEJV works require vehicles to be stopped or slowed down to navigate through or past the work site then it shall be necessary to use qualified TfNSW Traffic Controllers. The selected Traffic Controller Subcontractor will be responsible for the management of all traffic throughout the delivery phase.

A Traffic Controller is a person who has graduated from an accredited course to Traffic Controller. Traffic controllers are also required to maintain a logbook of traffic control related information. Traffic Controllers are required to implement the approved TCP for the subject work area.

Their actions will comply with the TCAWS Manual and the site-specific TCP(s) and ROL(s) issued for each site. They will carry their qualification card on their person at all times when controlling traffic.

Each TCP 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.

6.2 Signage - Regulatory, Advice & Guidance



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During the construction of the Works, there may 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 Issue 6.0 (Oct 2020);
- AS 1742.3 and 1743 Road Sign Specifications;
- AS 1428 Design for Access and Mobility;
- AS 1742.1-15;
- AS 1743 Road Signs Specifications;
- TfNSW Signs Index Database;

6.2.1 Signage

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

- · Identify any impacts on existing signs;
- Obtain CJP / TfNSW approval for the general advance warning signage strategy (including VMS) for Work sites and implement at the commencement of construction;
- If VMS are required, details will be included in each of the site specific TMP's; and
- Ensure consistency of new signs/temporary signs and existing signs on the road network;

All traffic control signs installed in the shoulder or verge, within the clear zone, will be frangible. HSEJV 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. Signage plans for the Works will be developed and included as attachments in the site specific TMPs.

The HSEJV Traffic Engineer's 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.

6.2.2 Roadwork Speed Limits

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

HSEJV will implement Roadwork Speed Zones logically, credibly and capable of being enforced by NSW Police. The Traffic Control at Work Sites Manual (Ver 6) will be utilised to select Road Work Speed Zones. At times due to the nature of works, HSEJV anticipates that workers on foot will be positioned within 1.5m of live traffic with no intervening physical barrier. Speed Zone selection will be carefully considered to ensure safety of both workers and public traffic & credibility of the work site is prioritised.

When considering the use of a roadwork speed zones, HSEJV will:



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

6.3 Temporary Removal of Car Parking Spaces

The routes to some access gates are along residential streets with on-street parking, which restricts the road width available for heavy vehicles to manoeuvre. Overall, there will be a low quantity of parking to be removed. Parking may have to be removed on one side of the road and this may affect the parking options for residents and visitors of the street.

HSEJV will consult the relevant stakeholders in accordance with the Transport for New South Wales (TfNSW) Sydney Metro Overarching Community Communications Strategy (OCCS) which outlines TfNSW's policies and instructions relating to managing engagement and ongoing consultation with all affected stakeholders.

Removal of parking spaces will be minimised as practicable for specific deliveries and work activities (generally 1 day prior to specific combined deliveries).

The following parking may be affected:

- On the Unnamed Lane opposite Wooley Lane near Marrickville Station. It is expected that a number of spaces on the Unnamed Lane will be required to provide access for heavy vehicles into Access C.
- Public carpark on Charles Street. Proposed that all parking spaces to be removed (currently used by existing construction site) to facilitate positioning of the HSEJV compound at Canterbury Station.
- Broughton Street. Proposed to remove one car park east of Broughton Street Gate 1.
- Public carpark on The Boulevarde. Proposed that all parking spaces to be removed to facilitate positioning of the HSEJV compound at Lakemba Station.
- The Boulevarde in Lakemba. one car park either side of the Lakemba Station Compound accesses to allow for safe entry for heavy vehicles.

Street	Required Dates
Laneway opposite Wooley Lane	Possession weekends from 20 Mar 2021 to Jan 2022
Charles Street Public Carpark (Canterbury Station)	13/03/2021 – 10 th Jan 2022
Broughton Street	Possession weekends from 20 Mar 2021 to Jan 2022
The Boulevarde Public Carpark (Lakemba Station)	13/03/2021 - 10 th Jan 2022

Table 11 - List of proposed parking removal

Unless noted otherwise, signs will restrict parking as follows:

"No Parking 7am-6pm Mon-Fri, 8am-6pm Sat"

The road occupancy during rail possessions is not to be used for parking. It should be noted that any road occupancy will require approval from Inner West Council or Canterbury-Bankstown Council (noting applications will be submitted more than 10-15 days prior to any planned activities), with local residents also being notified minimum 1 week prior to activities commencing. No private workers vehicles will be allowed to



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park on surrounding residential streets.

Locations where parking spaces are to be temporarily suspended are shown below:

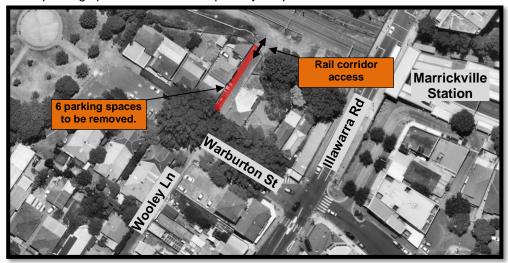


Figure 16 - Removed Parking Laneway opposite Wooley Lane



Figure 17 – Removed Parking at the Charles Street compound location



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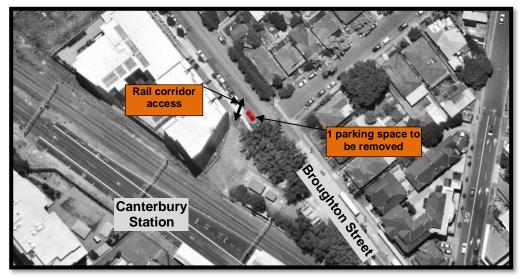


Figure 18 - Removed Parking on Broughton Street

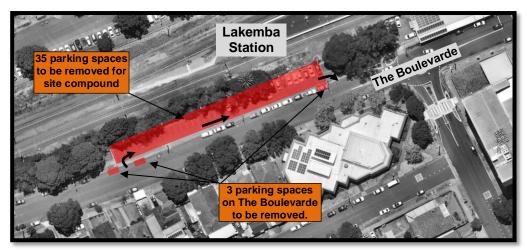


Figure 19 - Removed Parking on The Boulevarde

6.4 Parking Management Plan

The upgrade works involve working within a live rail environment. This limits the type of work activities which can be carried out during standard construction hours. The project will work during available Sydney Trains (ST) rail track possession weekends. The successful delivery of the project is reliant on working with and maximising scope of work during track possessions to deliver critical activities that are constrained by working within a live rail environment. This will involve a number of plant, machinery and workforce arriving and departing site during numerous shifts.

However, during standard construction hours, the project is committed to reducing project vehicles travelling along local roads and will encourage the workforce to:

- use public transport;
- · carpool/share; and
- park in a designated off-site area in Belmore to shuttle HSEJV staff to the relevant project sites as



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required.

During possession weekends, a larger number of workers than usual would travel to the work sites using personal vehicles due to:

- reduction in available public transport due to trains not running;
- less frequent bus services on weekends: and
- some bus services not operating.

6.4.1 Parking Removal Consultation

As per the CoA E-51 and REMM TC5, consultation will be undertaken with affected residents/businesses, and Council in the Local Traffic Committee (LTC), Traffic Control Group (TCG) and Traffic and Transport Liaison Group (TTLG) forums. HSEJV will prioritise the needs of each stakeholder during the planning phase of all works that require potential removal of parking.

Any road occupancy will require approval from the relevant council (IWC or CBC) as well as notifying nearby residents. The notification process is outlined in Section 11.

Ideally there is as close to zero loss in parking due to project works. At the Canterbury, Marrickville & Lakemba stations, HSEJV currently do not possess additional land to designate to displaced parking, therefore it is currently not practical to do so. Over the course of the project works, HSEJV will review the number of car parks displaced in the effort to maximise public usage.

6.5 Long-term Traffic Control Plans / Traffic Staging Designs / TCS modifications

Currently no long-term traffic changes, traffic staging designs and TCS modifications have been required in the SWM Package 4 construction methodology. In the event that long term changes are required, details will be planned and executed in conjunction with the relevant stakeholders and included within each applicable site specific TMP's.

6.6 Over-Dimensional Loads (OD)

HSEJV may receive deliveries of large construction materials (pre-cast concrete segments, heavy equipment) which require the use of over-sized transportation to and from the work site. At all times, if required, HSEJV will comply with the requirements of TFNSW *Operating Conditions: Specific permits for oversize and over-mass vehicles and loads.* HSEJV will prepare and comply with the relevant 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.



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6.6.1 Safety Barriers

If temporary work zone barriers are required, these details will be explained within each site specific TMP. HSEJV will only deploy safety barriers of a type currently approved by TfNSW for use on state roads relevant to the speed environment and the crash test Level (TL). See TfNSW Acceptance link (https://www.rms.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 complaint with:

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

Utilisation of non TfNSW approved safety barriers on local roads will be subject to a site-specific risk assessment and RSA (if applicable).

7 ROAD / LANE CLOSURES / DETOURS

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

For the purposes of this document:

"Free flow of traffic" means unimpeded traffic flow conditions within the project boundaries of each station prior to the commencement of any HSEJV work.

"Road Occupancy" means any part of HSEJV 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 within the project boundaries of each station 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 HSEJV labour, sub-contractors, equipment or plant that requires a traffic control plan under the provisions of the G10 specification; 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.

7.1 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.



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HSEJV will make available to CJP / CJM Representative or client representatives, upon their requests and at the location of the road occupancy, a copy of the ROL.

All HSEJV 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 Proponents work; and
- Regularly re-trained on the ROL terms, conditions and requirements throughout the period of the road occupancy.

7.1.1 ROL Conditions

Notwithstanding any ROL granted by CJM for any lane or shoulder closure, HSEJV will co-operate with CJM and other authorities, such as the Police or State Emergency Services, to facilitate traffic flows on the roadway through the Site. CJM may at any time direct HSEJV to temporarily cease work and re-open any closed lane or shoulder. They may also direct HSEJV to cease work and divert resources to assist with emergencies.

The ROL must be available to CJM:

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

7.1.2 Periods for Implementation of Road Occupancies

As each station upgrade within the SWM package 4 works is unique, road occupancy times are to be discussed & negotiated with CJM. HSEJV are aware that works requiring road occupancy will likely be carried out during off peak periods.

7.1.3 Planned Events

HSEJV will utilise the TCG & TTLG interface to ensure that there will be no conflict with any local events.

8 EMERGENCY MANAGEMENT

The occurrence of unplanned incidents within the project boundaries can have significant impacts on road user delay. Similarly, incidents that occur outside the project at each station can temporarily restrict construction activities.

As per REMM TC21 the TTLG interface will be utilised to notify emergency service providers (i.e. police and ambulance) throughout construction to ensure they are aware of station closures, changes to access, including bridge lane closures, and changes to station or rail corridor access.

8.1 Unplanned Events (Incident Response)

The types of unplanned incidents that may occur include:

- Motor vehicle crashes;
- Fires;
- Environmental spills;
- · Construction type incidents;
- Structural catastrophic failures;
- Inclement weather conditions;



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- Flooding;
- Anti-social behaviour; and
- Terrorist attacks/bomb threats

In the event of an unplanned incident HSEJV will follow an escalation process to manage unplanned incidents.

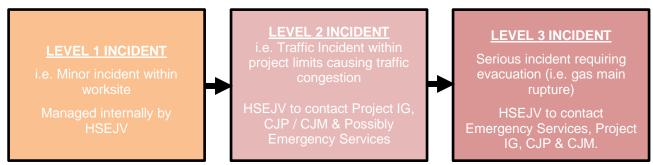


Figure 20 - HSEJV emergency escalation flow chart

As per the Project Safety Management Plan, HSEJV project teams will notify the relevant department in writing immediately after becoming aware of an incident. The notification will identify the location and nature of the incident. In the event of an environmental incident, HSEJV will notify DPIE and other authorities as required by Section 3.10.1 of the CEMP (Rev 2 04/12/20)

For G10 Compliance, HSEJV will provide Names and contact details of nominated personnel responsible for attendance at traffic incidents where required to do so by the New South Wales Police Service and Emergency Services, and for maintenance of traffic control devices and temporary roadways outside normal working hours. Provide confirmation that these details have been provided to the New South Wales Police Service. HSEJV will complete an Incident Report for all incidents attended.

In order to minimise the impact of such events on road user delay, HSEJV will:

- Clearly identify the relative responsibilities and roles of government agencies and the project team when responding to incidents;
- Establish and maintain communication protocols for both internal and external communications with Community & Stakeholder Manager involvement;
- Ensure access to stations and surrounding properties are provided at all times for emergency services;
- Provide close support to emergency services, where appropriate; and
- Reschedule planned works that will interfere with the incident, or create additional delays to those road users already affected by the incident;

9 MANAGING VULNERABLE ROAD USER GROUPS

9.1 Pedestrians

HSEJV will maintain pedestrian connectivity and functionality by preserving existing connections or providing upgraded alternative connections.

HSEJV will manage the pedestrian desire lines with temporary footpaths that comply with the requirements of AUSTROADS Guide to Road Design Part 6A: Pedestrians and Cycle Paths and AS1742.3. Prior to work



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commencing on State and local roads, where the pedestrian access may be affected, HSEJV will provide alternate pedestrian access routes that are clearly signed and delineated in accordance with all safety requirements.

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 prior to the construction activities commencing.

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

- Clearly define temporary footpath arrangements by using appropriate signage;
- maintain a smooth, even surface on all temporary footpaths and crossings;
- · conduct regular inspections to maintain footpaths free of trip hazards; and
- When changing footpath access, minimise grades for wheelchair use.

A condition survey would be undertaken to confirm changes to routes proposed to be used by pedestrians and/or cyclists are suitable (e.g. suitably paved and lit), with identified modification requirements discussed with the Inner West and/or Canterbury-Bankstown councils and implemented prior to use of the routes.

9.2 Cyclists

HSEJV will maintain all current formal and informal cyclist connectivity and functionality provided within and directly adjacent to the project area. HSEJV will manage the cyclist desire lines with temporary routes that comply with the requirements of AS1742 Part 9 – Bicycle Facilities, AUSTROADS Guide to Traffic Management Part 10 and AS1743 – Road Signs Specifications.

Cyclist volumes on the local roads within the project's boundaries are low and dedicated cyclist facilities are generally provided outside the work sites. Where practical, HSEJV 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.

It is anticipated that the works will involve temporary removal of bike parking facilities. HSEJV will ensure that the necessary consultation is carried out through the TCG, TTLG & LTC interface to guarantee appropriate implementation of alternate bike parking facilities.

If any changes are required during the construction of each station upgrade, this will be presented and explained within each of the site specific TMP's.

9.3 Disabled Persons

As part of this CTMP, HSEJV will implement the following measures to minimize impacts on disabled persons:

- Clearly define any temporary footpath arrangements by using appropriate signage;
- maintain sufficient space for wheelchair access;
- maintain a smooth surface in all the footpaths and pedestrian crossings;
- · conduct regular inspections to maintain footpath access free of trip hazards; and
- When changing footpath access, consider maximum grades for easy wheelchair access.



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9.4 Public Transport

Modification of existing bus stops, or implementation of new bus stops and alterations to service patterns, would be carried out by Sydney Metro in consultation with TfNSW, Sydney Coordination Office, the Inner West and Canterbury-Bankstown Councils and bus operators.

Current plans for both partial and full road closures will have a minor affect to bus routes and bus stops in the vicinity of each station. These will be addressed in each site specific Traffic Management Plan.

9.4.1 Possession Buses

During possession periods, buses will be utilised to service patrons that would otherwise use the train service. HSEJV will develop specific traffic plans (TCP's / VMP's / PMP's) in consultation with Sydney Trains possession bus routes. As possession bus routes are managed through the TTMP, If these bus routes are affected by the works, HSEJV will engage with CJP.

9.5 Emergency Vehicle Access

Access will always be maintained. Construction staff working will be made aware of the arrangements, and the potential for emergency services access through the worksite – and in these events to stand well clear and halt works to maximise safety while they pass.

9.6 Business and Residents

Business and residential access will always be maintained. There are no proposed adjustments to private property accesses as part of these works. If adjustments are required, these will be explained in the applicable site specific TMP.

10 MONITOR & REVIEW

10.1 Surveillance

To monitor the effects of the construction activity on affected roads and the surrounding network HSEJV will utilise field staff and traffic control subcontractors. Their objective will be to detect and report any unsafe traffic conditions, incidents and unusual congestion.

The surveillance staff will be regularly briefed on all changes implemented in the surrounding road network and the seasonal variations expected in traffic flows. As per the communications protocol, these staff will immediately report issues to the Traffic Engineer and/or Safety Officer. The Traffic Engineer will coordinate maintenance or remedial works with the Field Staff.

Communication is an important part of traffic operations, for both planned and unplanned incidents. HSEJV field resources will report all incidents or issues to the Traffic Engineer immediately. The Traffic Engineer will commence a response strategy as indicated in this plan. Methods of communication will include two-way radios and mobile telephones. The key contacts for each station are listed Tables 1-3.

10.2 Inspections

HSEJV will undertake regular inspections to ensure the safety of all traffic movements, as well as the well-being of pedestrians, cyclists, drivers and property through and surrounding all works sites. The responsibility and frequency of inspections is clearly stipulated in Section 2.5.5 of AS 1742.3.

Three main types of inspections and records will occur:

Inspections of short term (single shift) traffic controls during the shift;



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- Regular daytime inspections of long-term traffic controls after implementation; and
- Regular nighttime inspections of long-term traffic controls after implementation.

Pre-opening inspections will be carried by the Traffic Manager and Traffic Engineer before the start of each new temporary roadwork site or major modification. An independent Road Safety Audit will be conducted within 48hours of the implementation of any long-term alignment change (switch). Inspections of all temporary TCPs will be made:

- After initial erection of the traffic devices;
- After any changes are made;
- · Regularly (formal inspections at least daily); and
- After a change in prevailing conditions where practicable.

These following Forms will be used for these inspections:

- Form SEQ-CL-014 Daily Traffic Management Inspection Checklist;
- Form SEQ-CL-015 Long Term Traffic Management Audit;

HSEJV will undertake regular inspections to ensure the safety of all road users during works, as stipulated in Appendix A.2 of AS 1742.3 and duplicated in the TCAWS Manual. Findings will be recorded using the Forms attached in Appendix D of this CTMP, and as described below:

Inspection / Audit	Process
Daily Inspection of short-term traffic controls to be carried out by the Traffic Supervisor:	Form SEQ-CL-014 – Daily Traffic Management Inspection Checklist.
After initial set-up	mspection onecklist.
After any changes	
Regularly (daily) during works	
Audit of installed TMP(s) & station traffic strategies (weekly) to be carried out by the Traffic Engineer.	Form SEQ-CL-015 - Long Term Traffic Management Audit

Table 12 - Timing of internal traffic inspections and audits

10.3 Independent Road Safety Auditing

Road safety audits will be carried out by an auditing team consisting of a lead auditor and at least one other member who is experienced in traffic engineering. The lead auditor must be Level 3 accredited / recognised by the NSW Centre for Road Safety at the time the road safety audit is conducted. Road safety audits will be undertaken by a team which is independent of the Contractor.

The road safety audits will be carried out in accordance with the "NSW Centre for Road Safety's Guidelines for Road Safety Audit Practices" and "Austroads Guide to Road Safety Part 1: Overview & Part 6: Road Safety Audits".

A Road Safety Audit will be conducted and provided to supplement this CTMP, to fully assess the road safety risk, focusing on heavy vehicle haulage routes through pedestrianised areas.



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As per G10, once the CTMP is approved and implemented, HSEJV will commission a site road safety audit on the implemented arrangements.

As per the SWM package 4 SWTC, at a minimum HSEJV must carry out road safety audits at the following stages of the Works:

- prior to the commencement of construction (unless otherwise completed and provided as part of the Principal's Design Documentation);
- at completion of construction and prior to opening and operation of any road or road related areas;
- at or near completion of any applicable Temporary Works which impact Local Areas and road reserves.

HSEJV will undertake any additional road safety audits requested by the relevant road authority.

10.3.1 Preopening Inspections

Pre-opening inspections will be carried by the HSEJV Traffic Engineer in conjunction with the independent road safety auditor prior to all major traffic changes.

Any signage or devices identified during the checks or audits requiring attention will either be rectified at the time or advised to the Traffic Engineer during that shift for follow-up action.

11 TRAFFIC & TRANSPORT COMMUNICATIONS

HSEJV will liaise, consult and communicate with the community, authorities, agencies and all other stakeholders during the construction works.

This consultation will ensure that timely, accurate and comprehensive traffic and transport information is provided to all potential and existing road users to optimise their travel options and to reduce negative impacts due to construction.

11.1 Stakeholder Consultation

As per the Traffic & Transport Guidelines for Sydney Metro Construction Contractors, there are three required forums to discuss, review and approve project / site specific traffic strategies & TMP's.

These are:

- Traffic Control Group (TCG)
- Traffic and Transport Liaison Group (TTLG)
- Local Traffic Committee (LTC)

11.1.1 Traffic Control Group (TCG)

Sydney Metro will establish a Traffic Control Group (TCG) which will meet on a weekly/fortnightly basis to discuss:

- Traffic Management requirements & strategies;
- Traffic designs, TCP's, aerial images and design details:
- Upcoming activities which may provide opportunity for early feedback prior to submission of site specific TMP's; and
- Upcoming ROL embargo periods.



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The Project TCG will compromise of Customer Journey Planning (CJP) representatives, TfNSW Greater Sydney Planning and Programs (GS P&P) and HSEJV Traffic Engineer / senior manager(s).

11.1.2 Traffic and Transport Liaison Group (TTLG)

Sydney Metro will also establish a Traffic and Transport Liaison Group(s) (TTLGs) that will meet monthly to inform traffic and transport management measures during Construction and Operation of the CSSI. Management measures must be coordinated with TfNSW following consultation with CJP and other the relevant stakeholders.

The TTLG must comprise representatives from the Relevant Road Authority(ies), transport operators (including bus and taxi operators) and emergency services as required. The TTLG must be consulted to inform preparation of the Construction Traffic Management Plan(s).

The Project TTLG will include senior representatives of HSEJV (Station PM's), TfNSW, Customer Journey Management (CJM), CJP and other relevant agencies. The TTLG will provide a forum for discussion of all high-level traffic strategies 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 cyclist impacts; and
- Proposed communication strategies for future works and actions.

HSEJV 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. The following road user groups should be included in the TTLG:

- CJP Customer Journey Planning
- TfNSW Transport for New South Wales
- CJM Customer Journey Management (TMC)
- · Applicable Local Council's
 - IWC Inner West Council (Marrickville Station)
 - CBC Canterbury-Bankstown Council (Canterbury & Lakemba Stations)
- Emergency Services
- Bus & taxi operators

11.1.3 Local Traffic Committee (LTC)

Due to the nature of works, engagement with Local Councils will be required throughout the duration of the project. In order to facilitate this, HSEJV will engage the LTC & local councils (when required) should there be any anticipated impacts on council infrastructure or assets.

Copies of project notifications will also be sent to Inner West Council via (council@innerwest.nsw.gov.au), and Canterbury-Bankstown (council@cbcity.nsw.gov.au).

Any changes made to the public domain must be submitted to the Inner West Council, which will be referred



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to the Local Traffic Committee.

11.2 Community Consultation

The community would be notified in advance of proposed road and pedestrian network changes through appropriate forms of community notification.

The Overarching Community Communication Strategy (OCCS) outlines the HSEJV's approach to managing communications and engagement during the construction of the SWM Package 4 works as part of the Sydney Metro City & Southwest program of work.

The OCCS describes the engagement approach, processes, procedures and tools that will be used to provide timely, accurate and relevant information to the community. The CCS aims to maximise stakeholder and community understanding of the project activities, objectives and benefits, timing of potential impacts and available mitigation measures.

A number of communications tools will be used to notify the community of any upcoming changes to traffic conditions that have the potential to impact them, including:

- Monthly and specific notifications;
- Traffic alert emails;
- Variable Message Signs;
- Static signage;
- Advertisements;
- Sydney Metro website;
- Sydney Metro social media; and
- Doorknocks and other meetings.

11.3 VMS

HSEJV may deploy portable VMS boards to publicise pending and/or completed changes to traffic arrangements. HSEJV will comply with the TfNSW Guide to use Portable Variable Message Signs for Temporary Traffic Management on NSW Roads, when deploying VMS boards within the road corridor. VMS strategies and proposed messaging will be detailed within each site specific TMP.

12 OTHER KEY CONTACTS

SWM Package 4 – Other Contacts			
Position	Name	Phone Number	
Environmental Manager	Brad Cole	0407 782 830	
Community & Stakeholder Officer	David Simpdendorfer	0414 789 310	
HSEQ	Jeremy Wallis	0438 427 774	
Rail Safety Manager	Craig Diessel	0401 272 818	
Utilities interface Manager	Gary Cook Table 13 – Other Key Contacts	0405 110 160	



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Appendix A - Traffic Control Plans

INDEX

Canterbury Station TCP's

TCP REFERENCE	ROAD	PLAN DESCRIPTION
HS-CAN-30001-P1	Canterbury Road	Eastbound Partial Lane closure for service investigation, hoarding installation & removal
HS-CAN-30002-P2	Canterbury Road / Broughton Road	Broughton St Partial Closure for service investigation, tree trimming and delivery of material. ***Consultation with Sydney Buses required prior to implementation***
HS-CAN-30003-P2	Canterbury Road	Canterbury Rd SB Slow Lane Short Term Closure for service investigation and implementation of temporary works. ***Pedestrian access will be maintained***
HS-CAN-30004-P1	Canterbury Road	Canterbury Road westbound footpath closure & pedestrian detour for service investigation

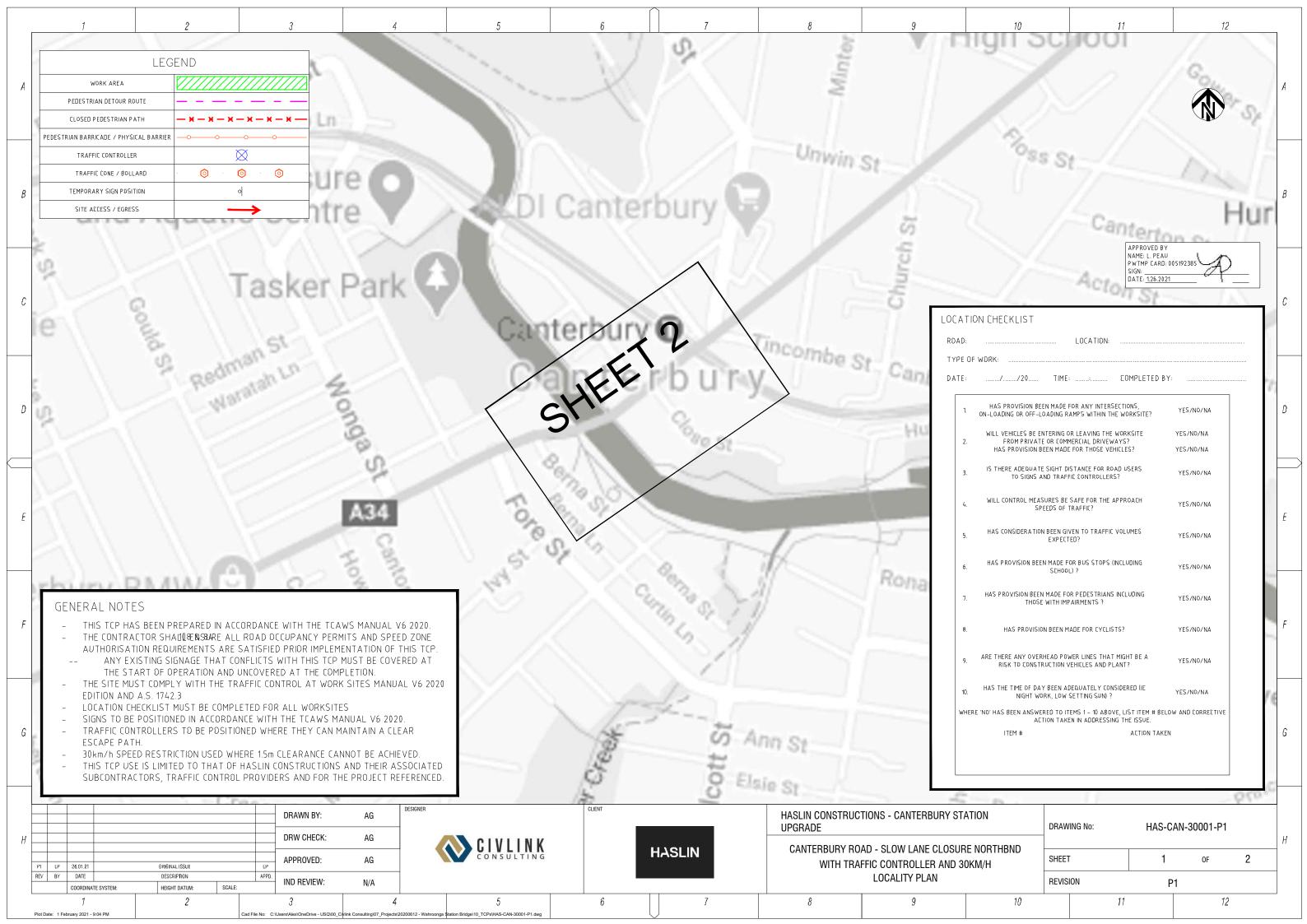
Lakemba Station TCP's

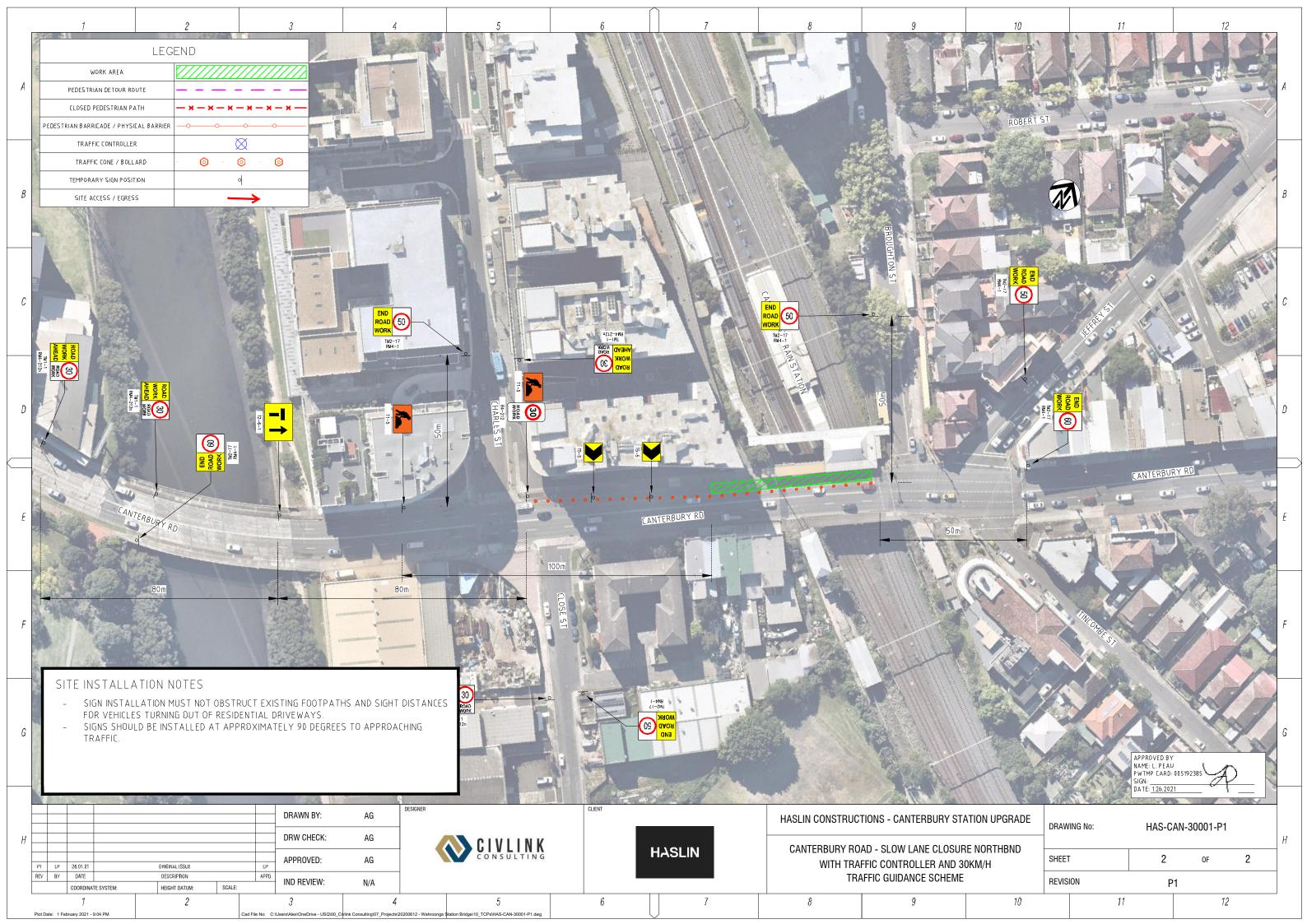
TCP REFERENCE	ROAD	PLAN DESCRIPTION
HS-LAK-40001-P1	Railway Parade	Intermittent stoppages for site establishment and delivery of materials.
HS-LAK-40002-P1	Railway Parade	West bound lane closure for site establishment and delivery of materials.
HS-LAK-40003-P1	Railway Parade	West bound partial lane closure for site establishment and delivery of materials.
HS-LAK-40004-P1	The Boulevarde	East bound lane closure for site establishment and delivery of materials.

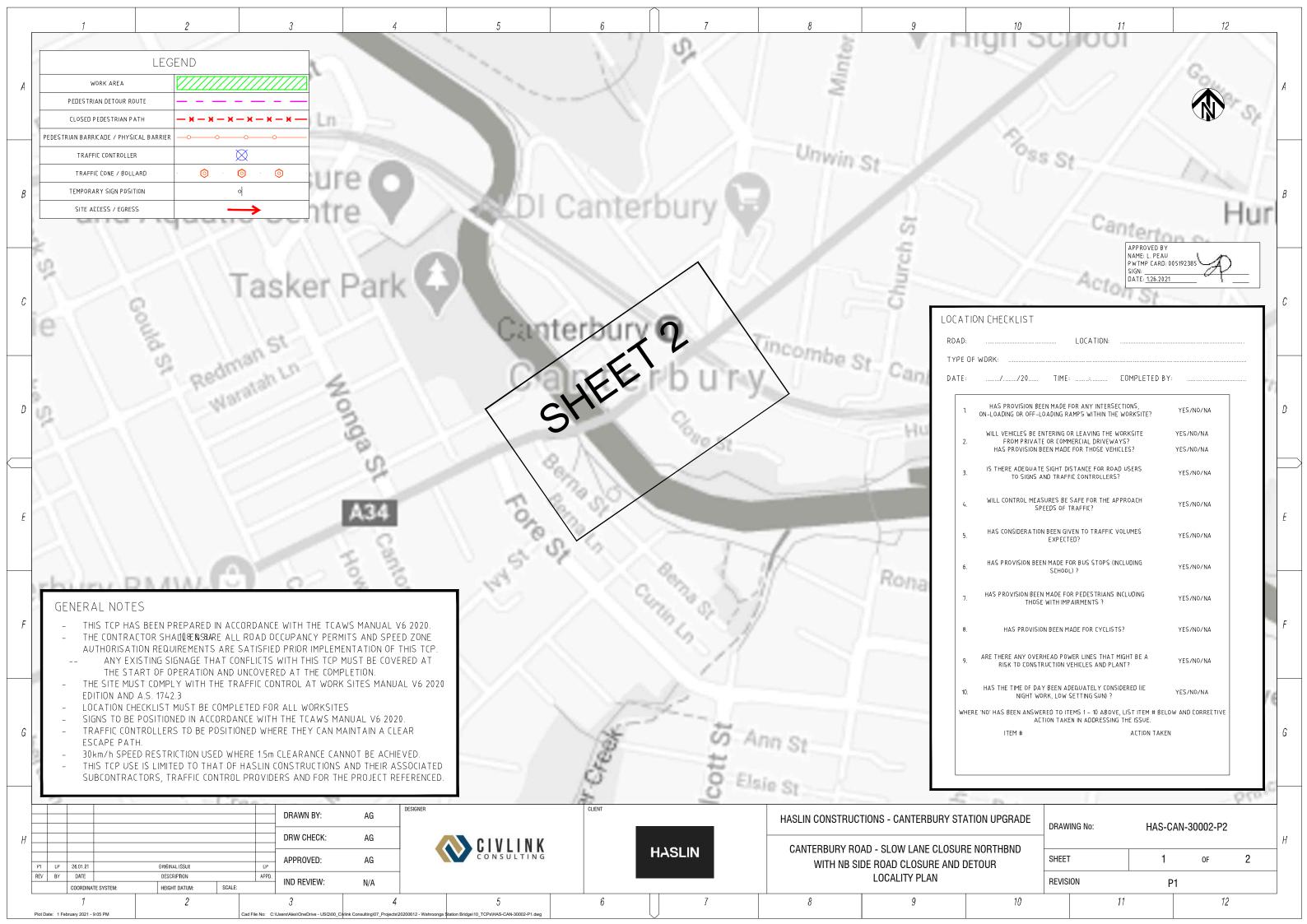
Marrickville Station TCP's

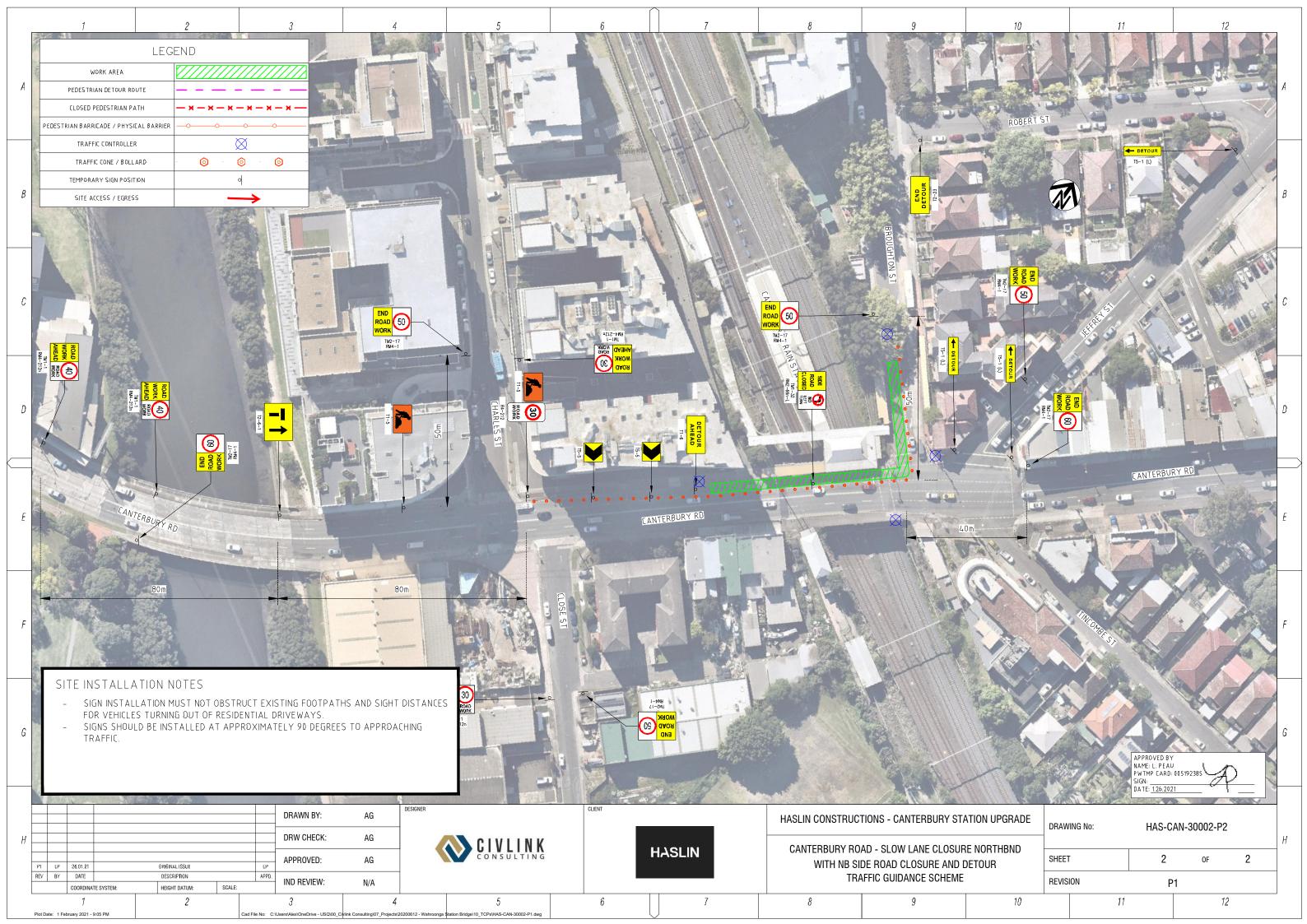
TCP REFERENCE	ROAD	PLAN DESCRIPTION
HS-MAR-50001-P1	Illawarra Road	Illawarra Road SB lane closure to carry out utility investigation & clash detection works
HS-MAR-50002-P1	Illawarra Road	Illawarra Road NB partial lane closure to carry out utility investigation & clash detection works

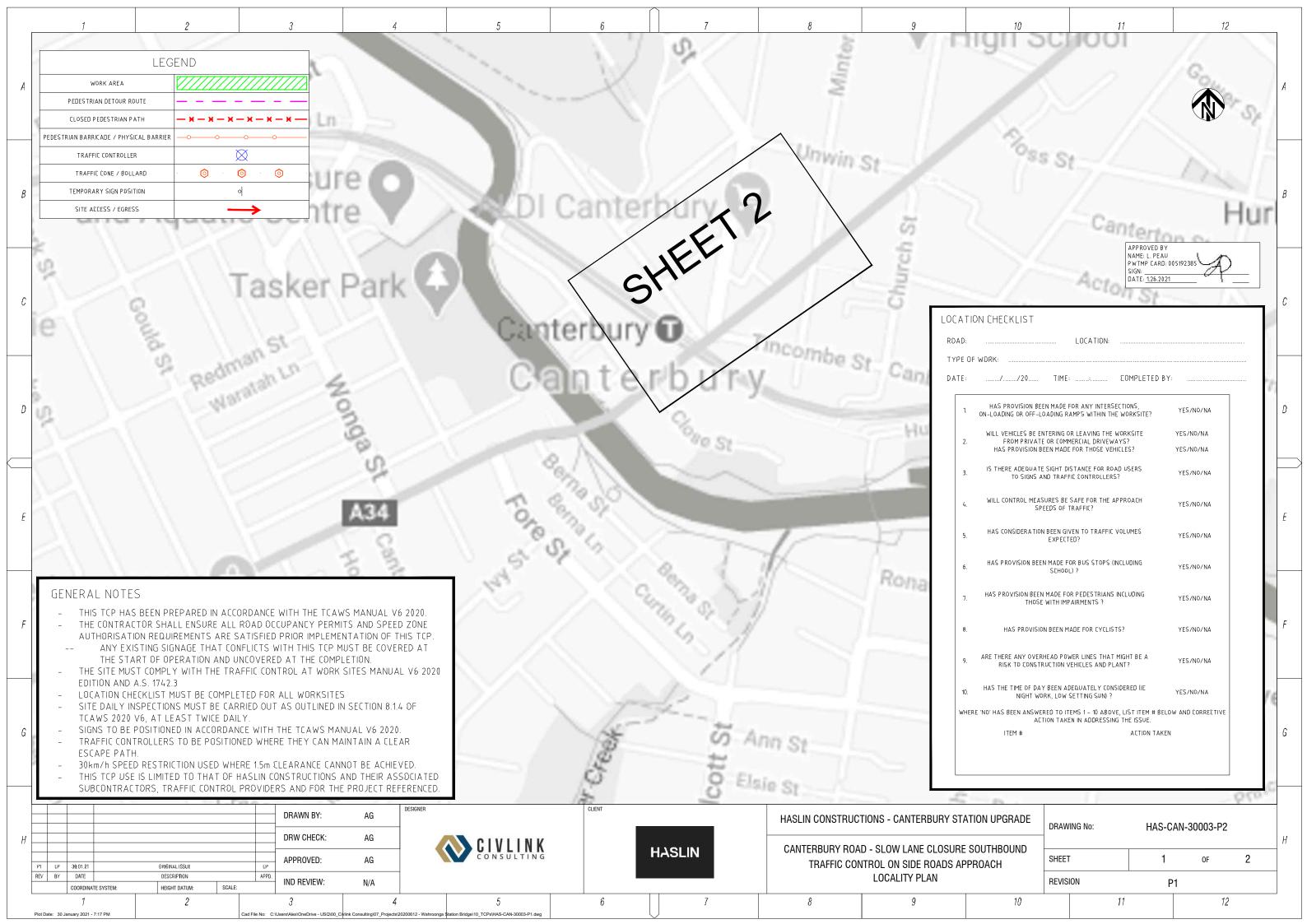


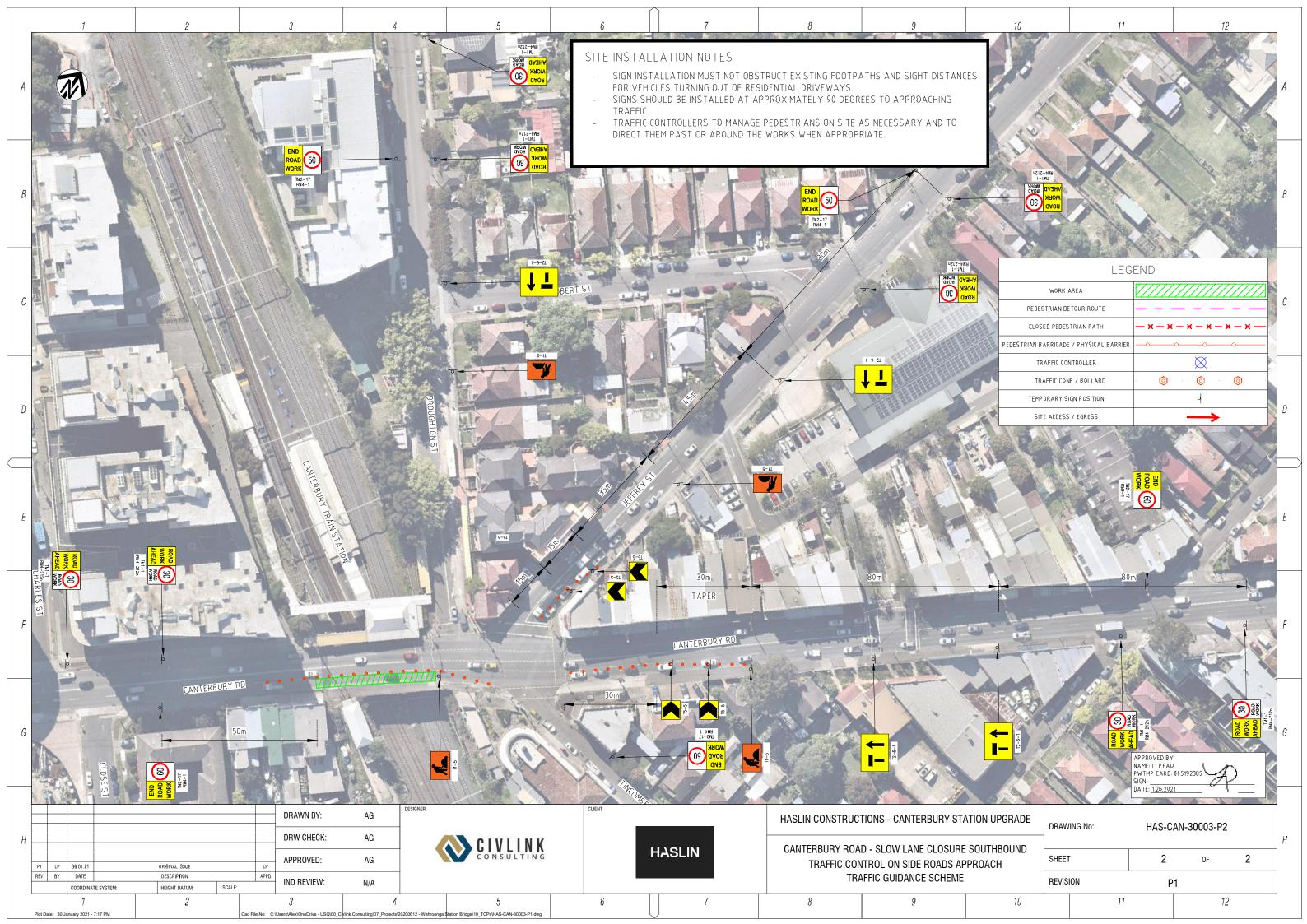


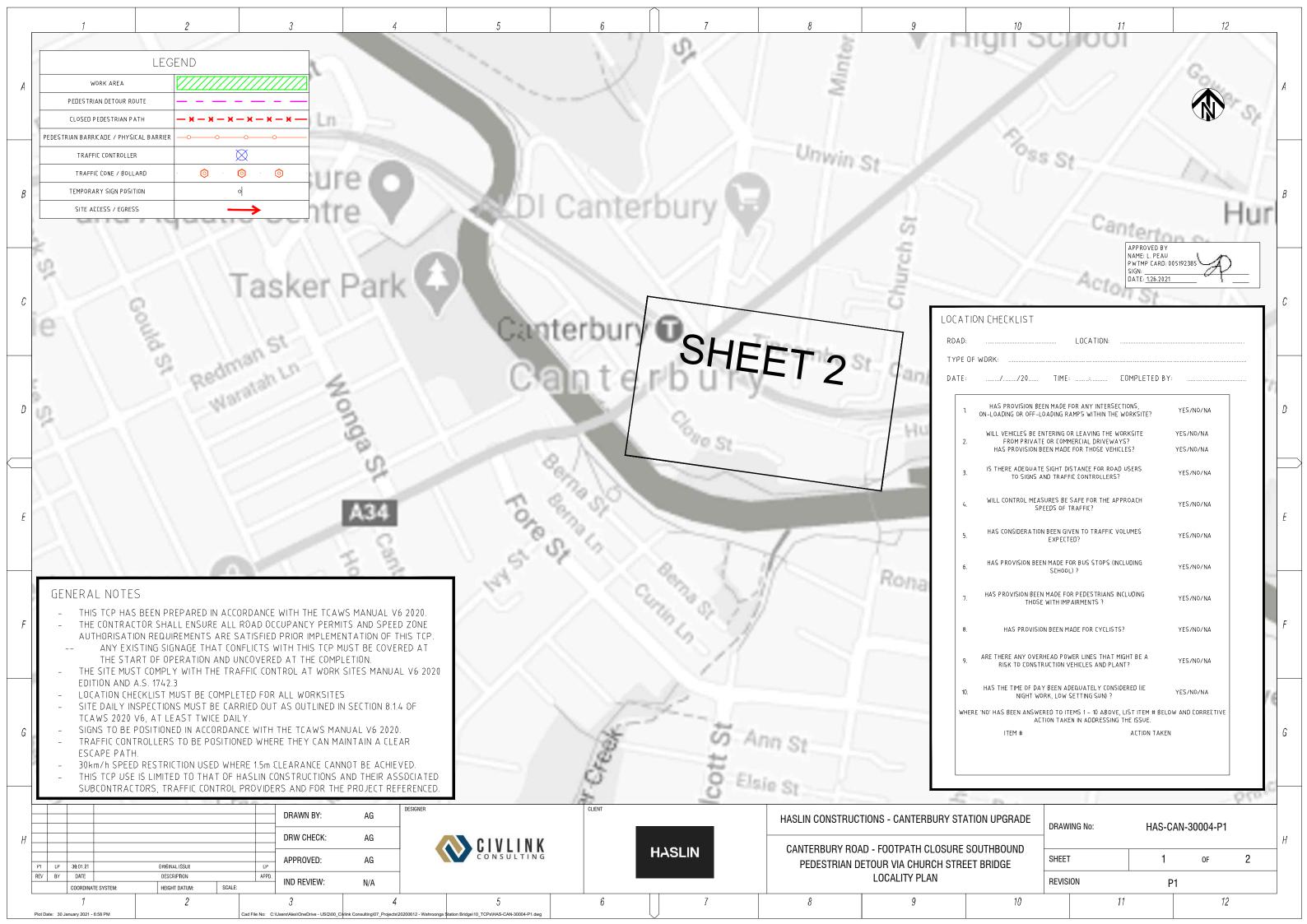


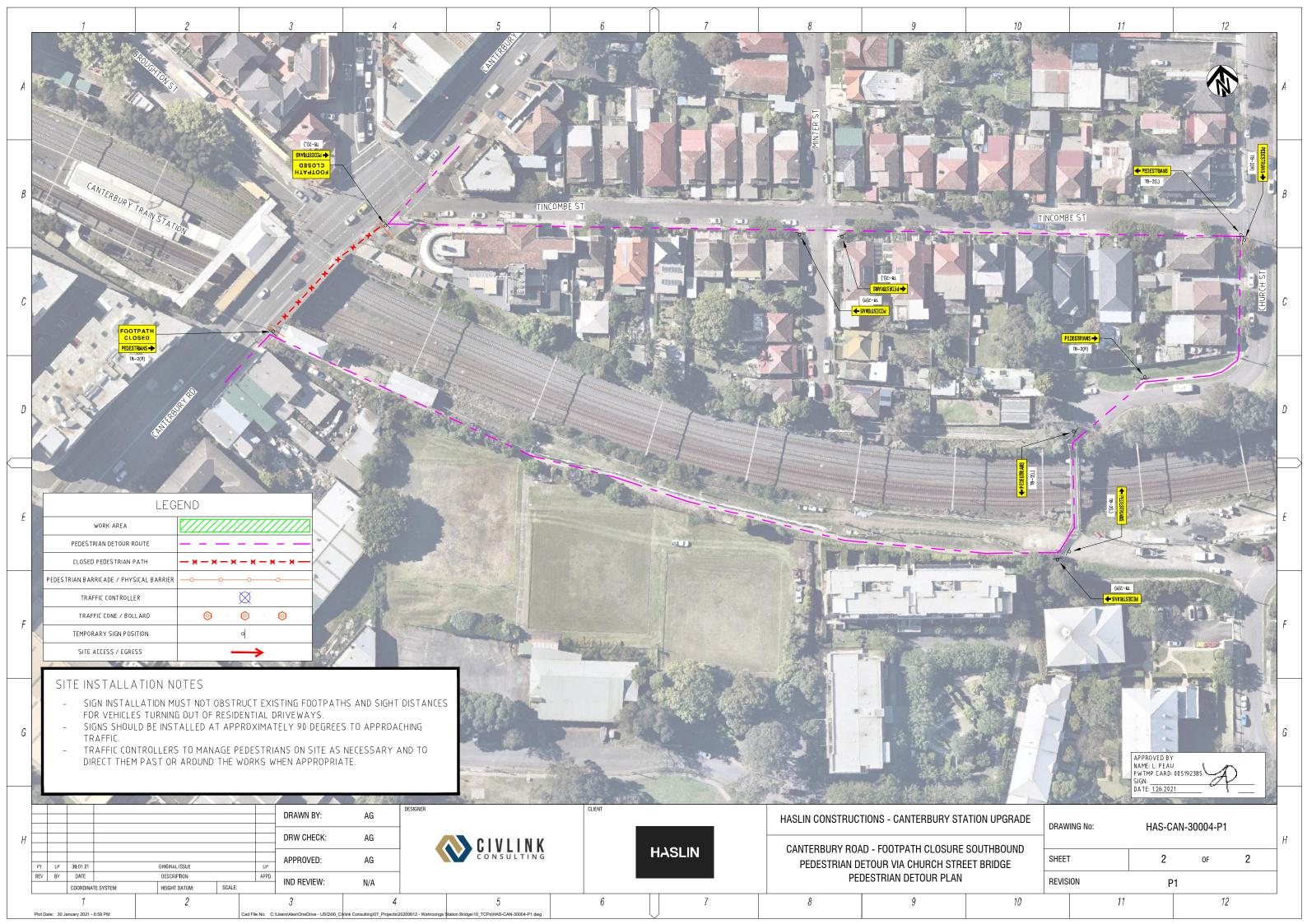


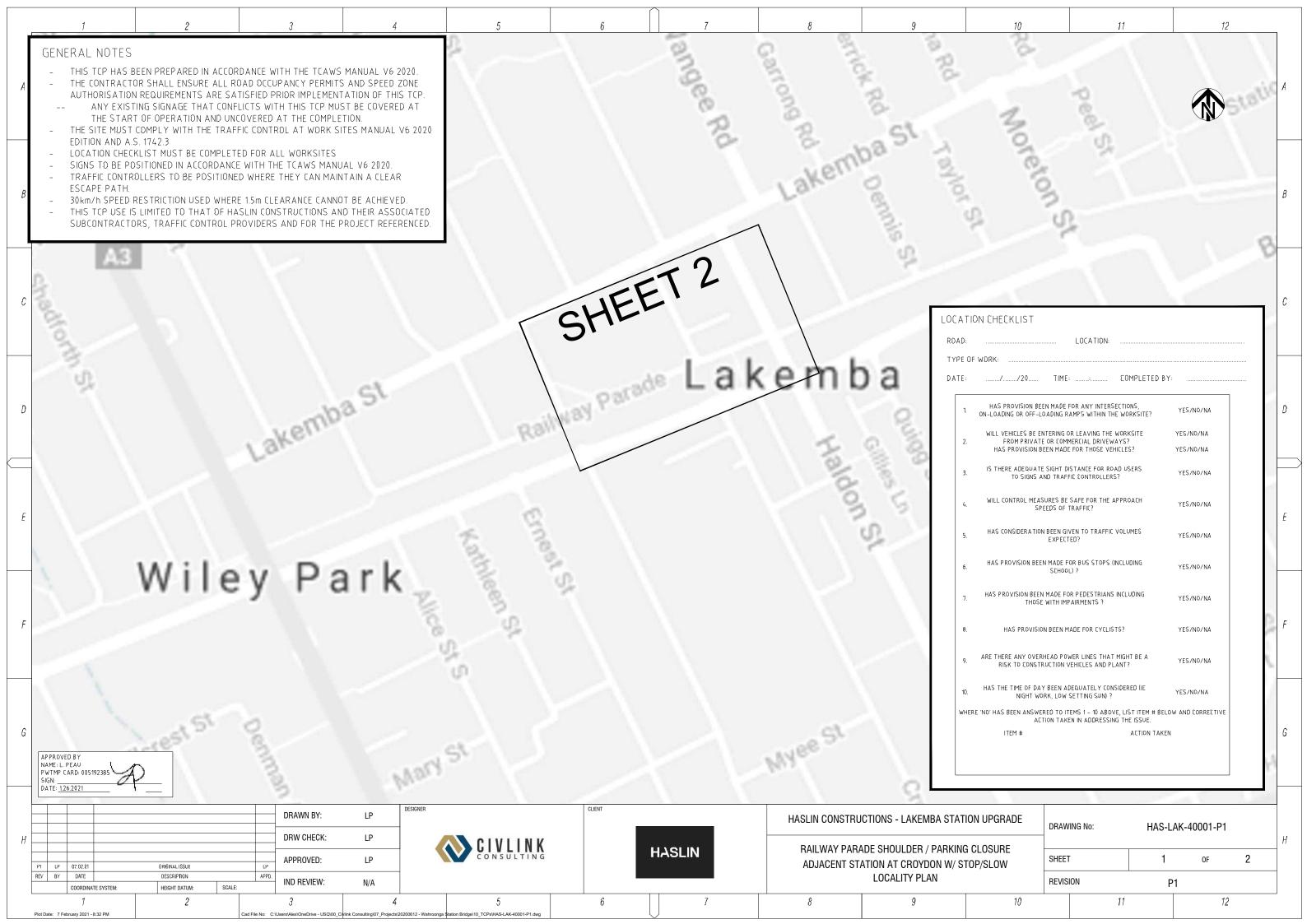


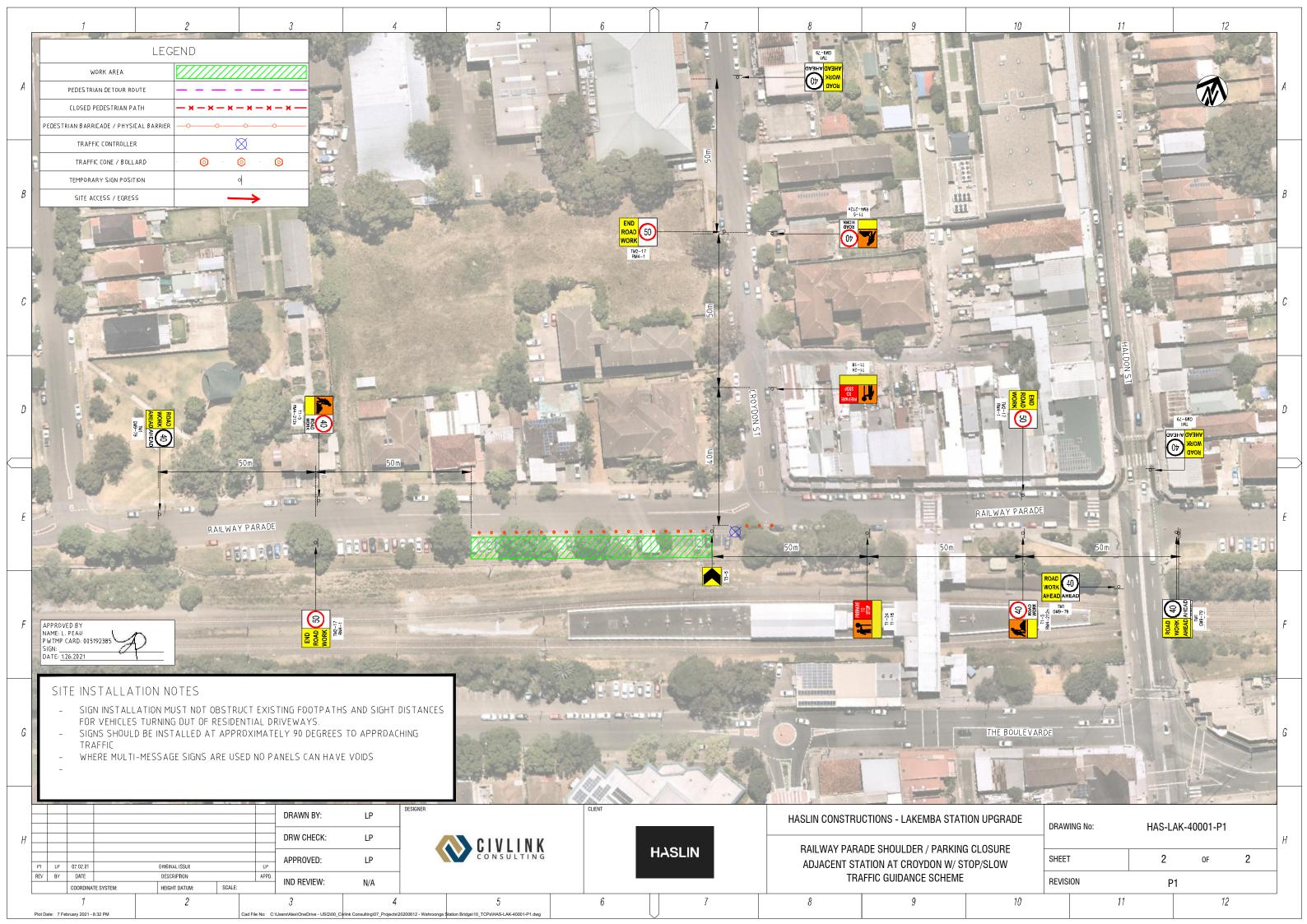


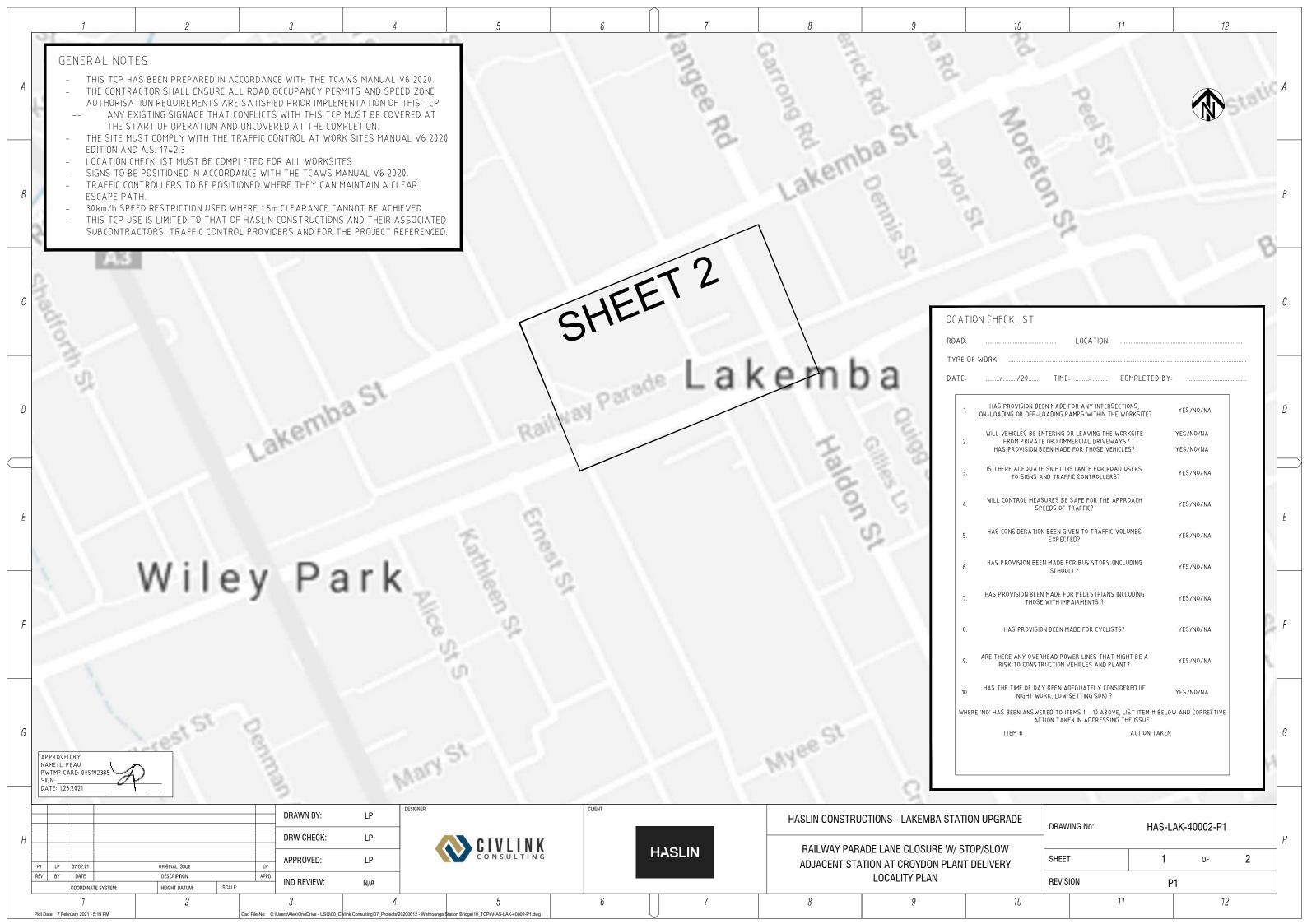


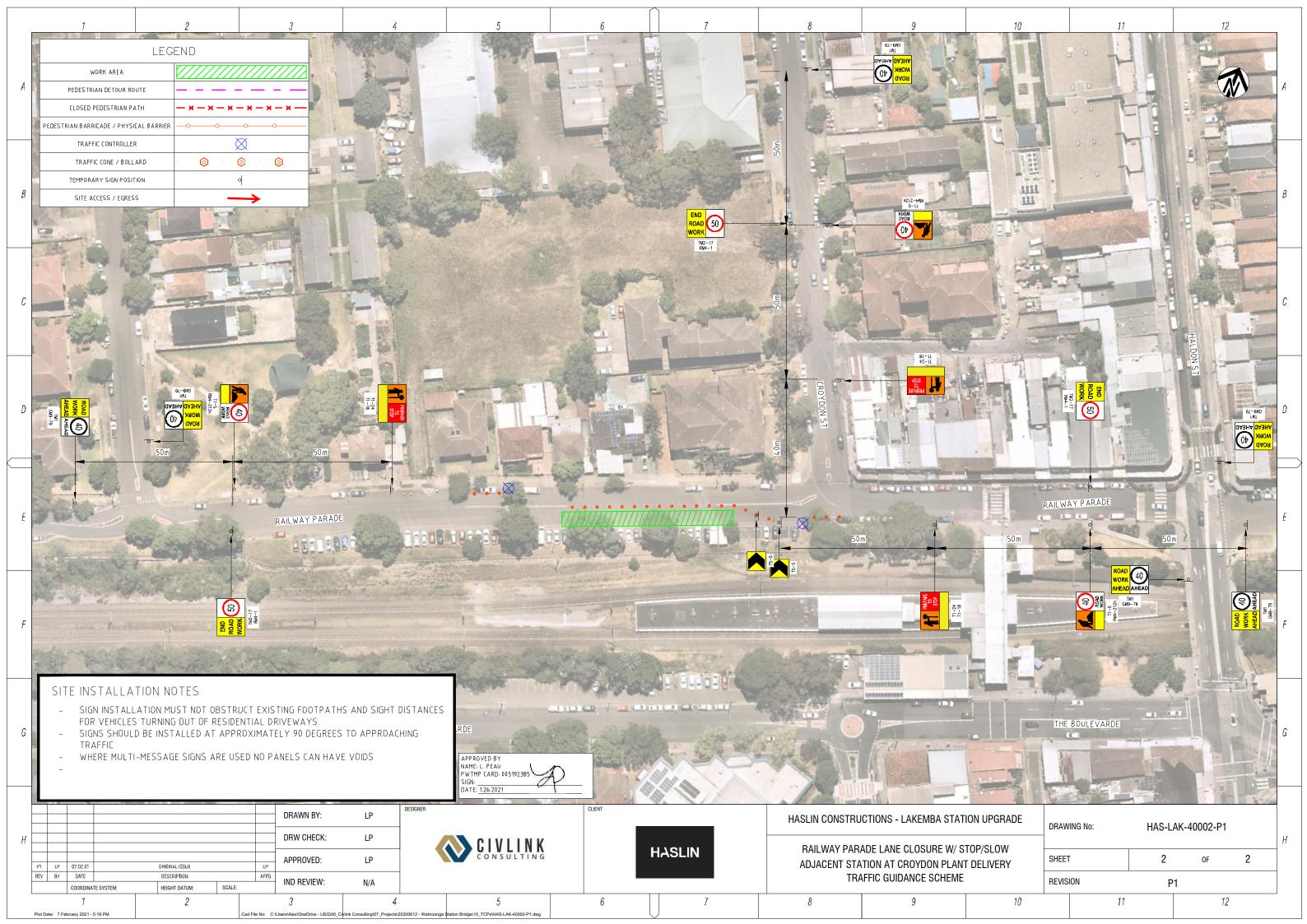


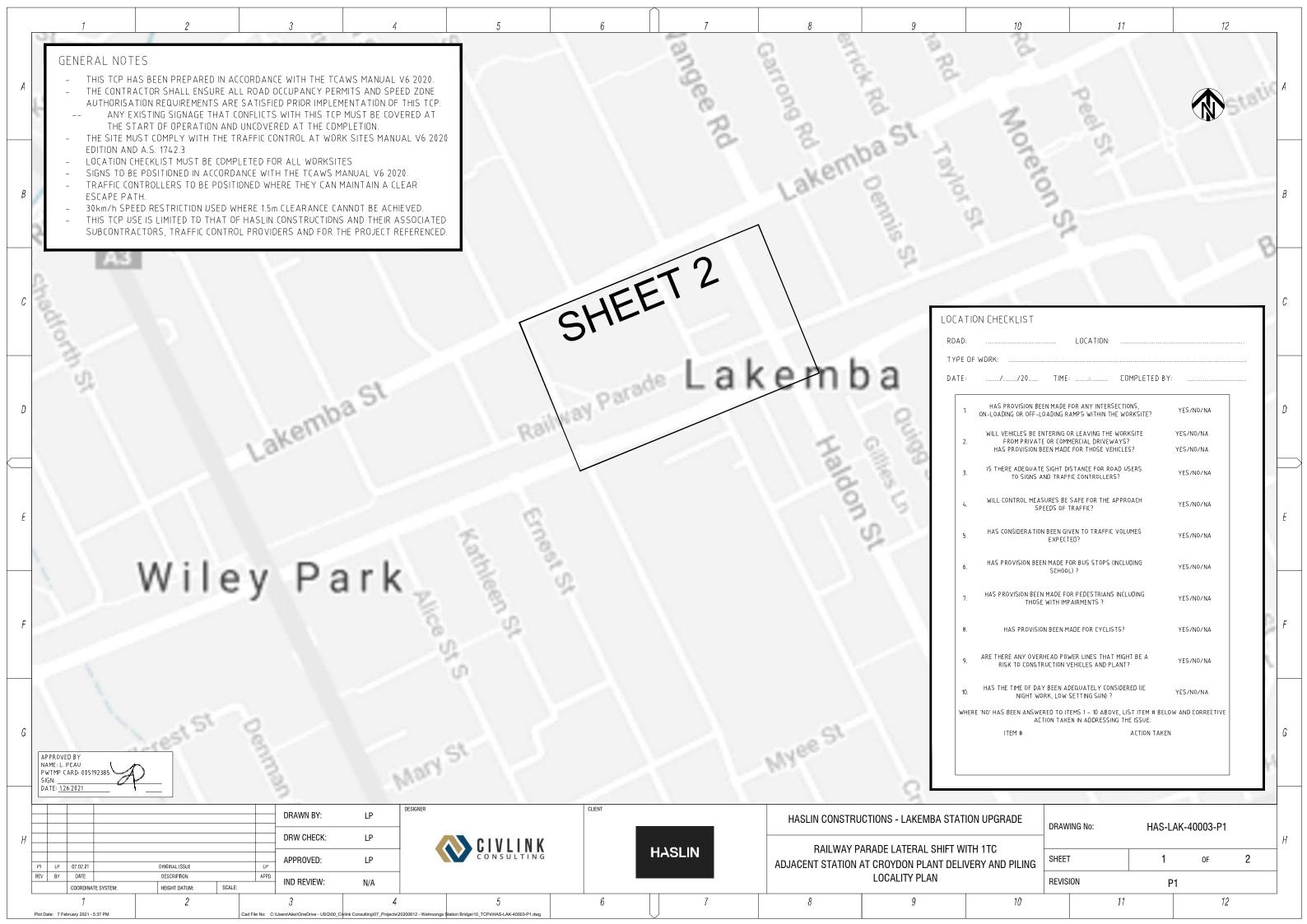


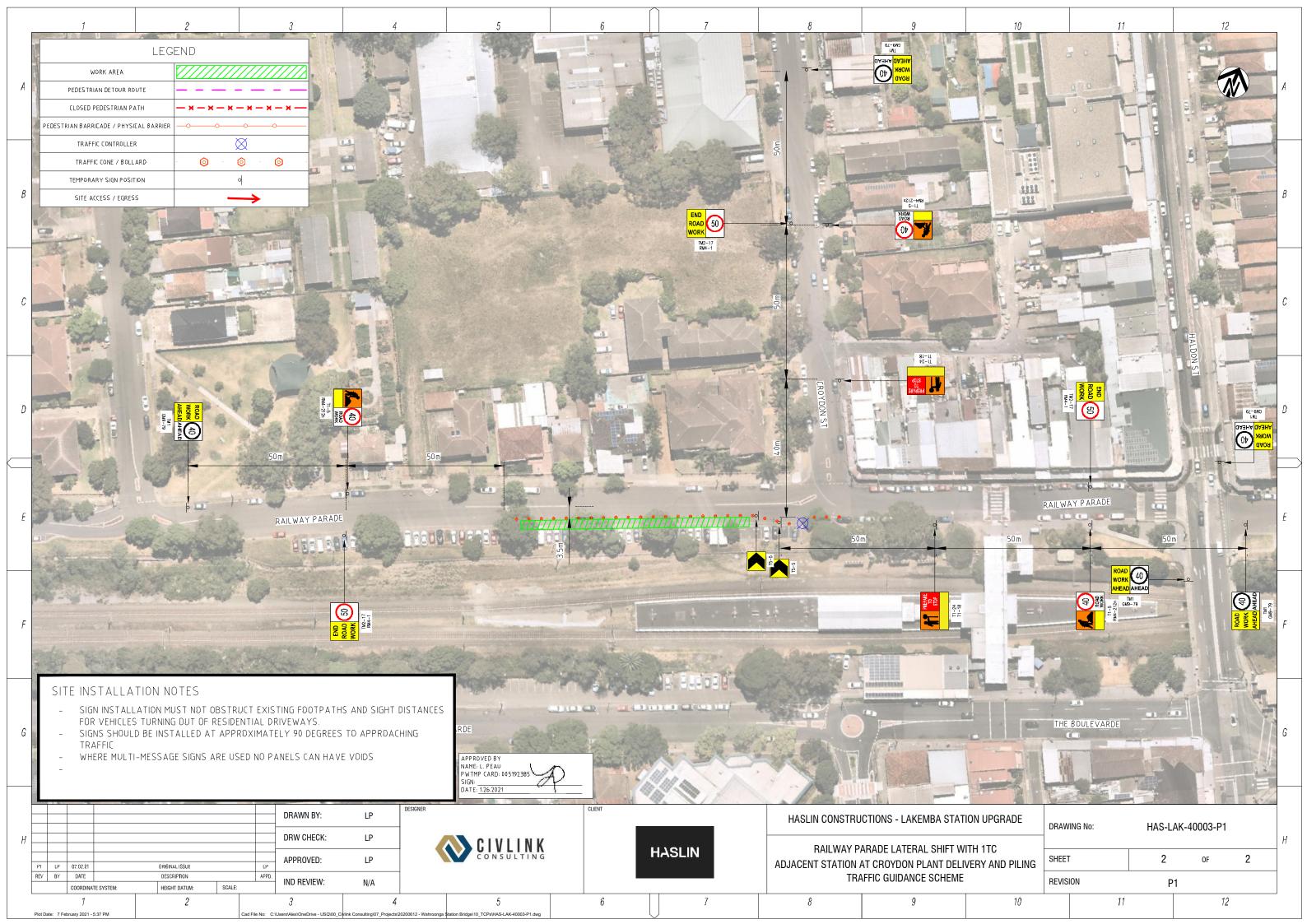


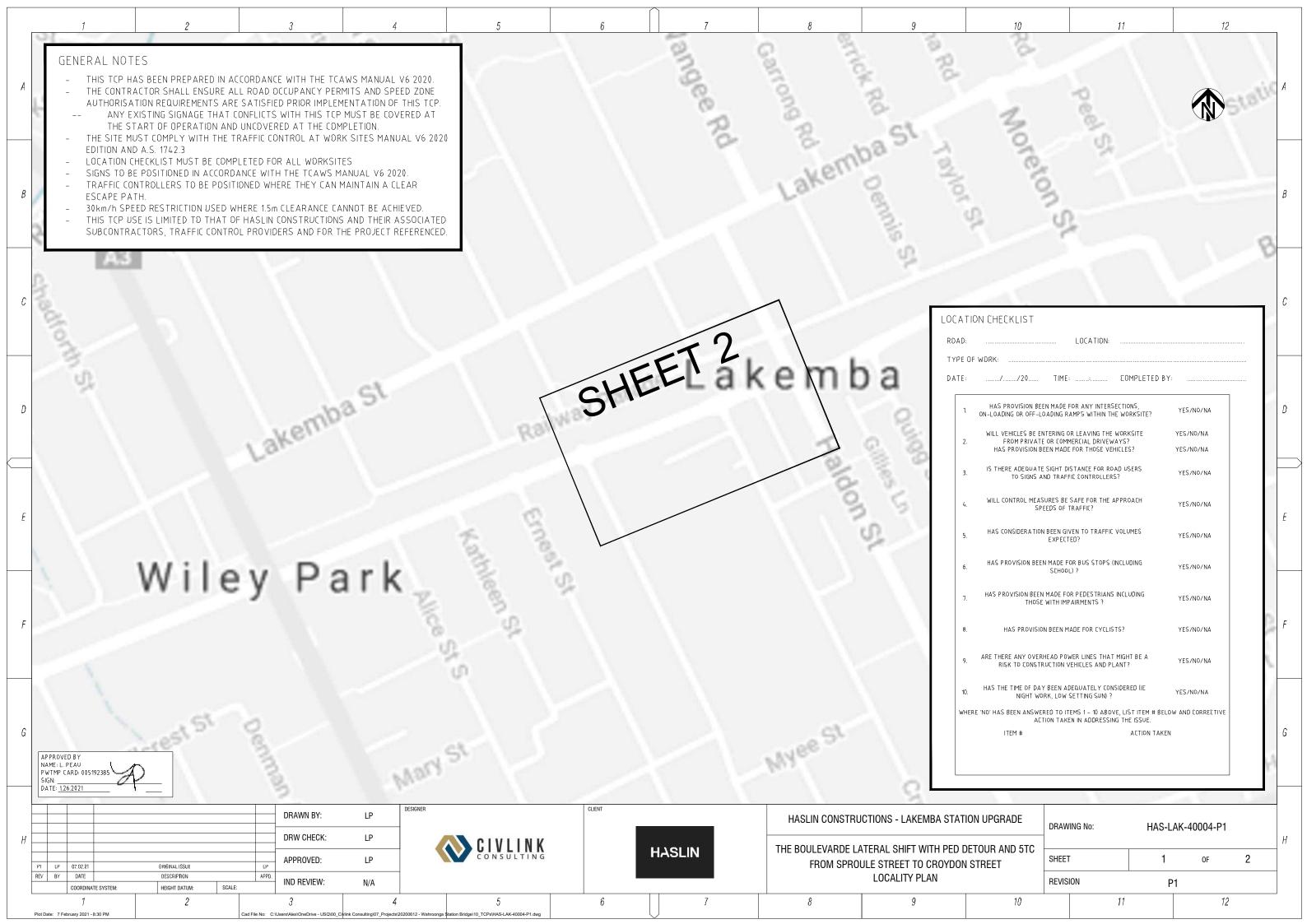


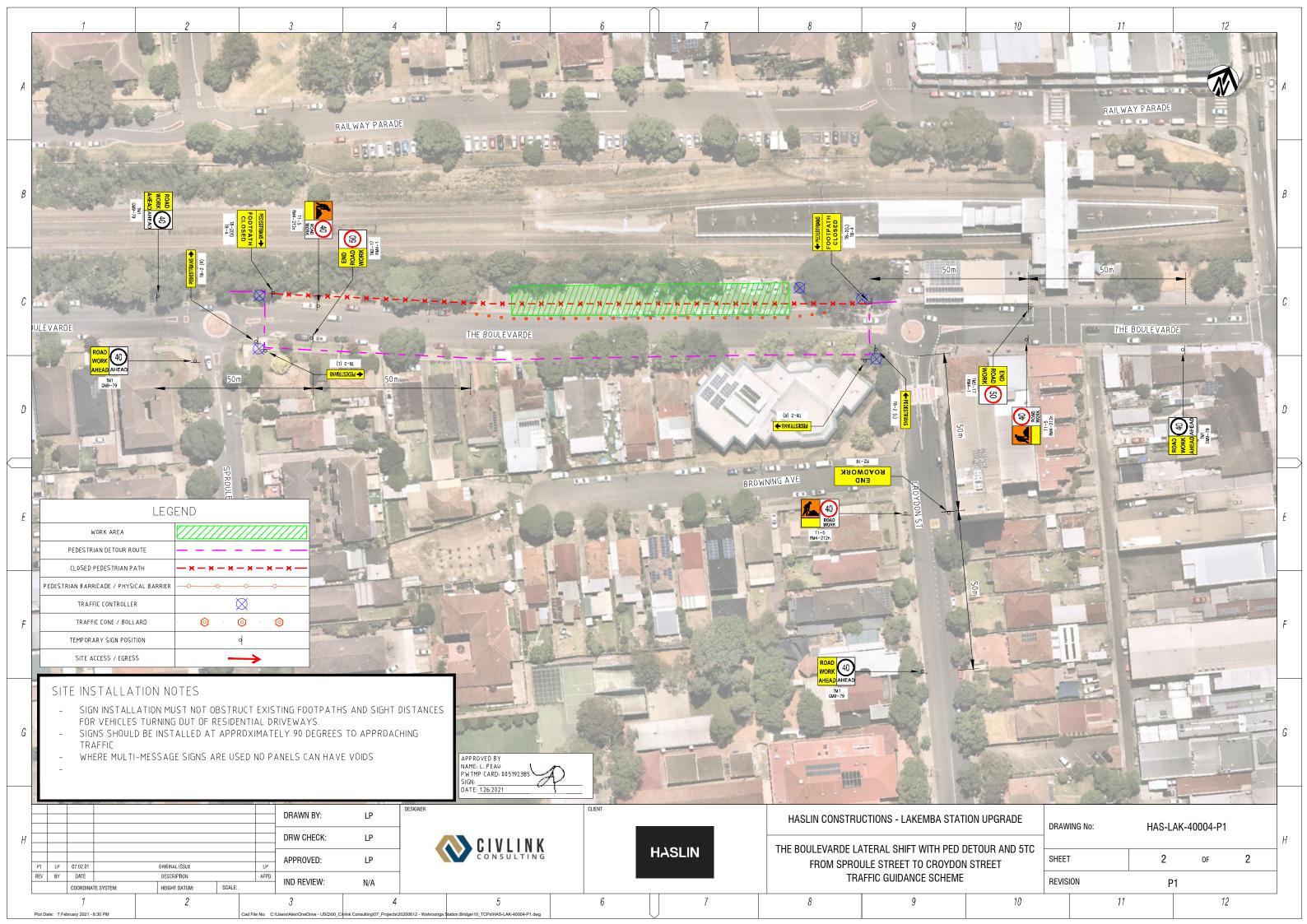


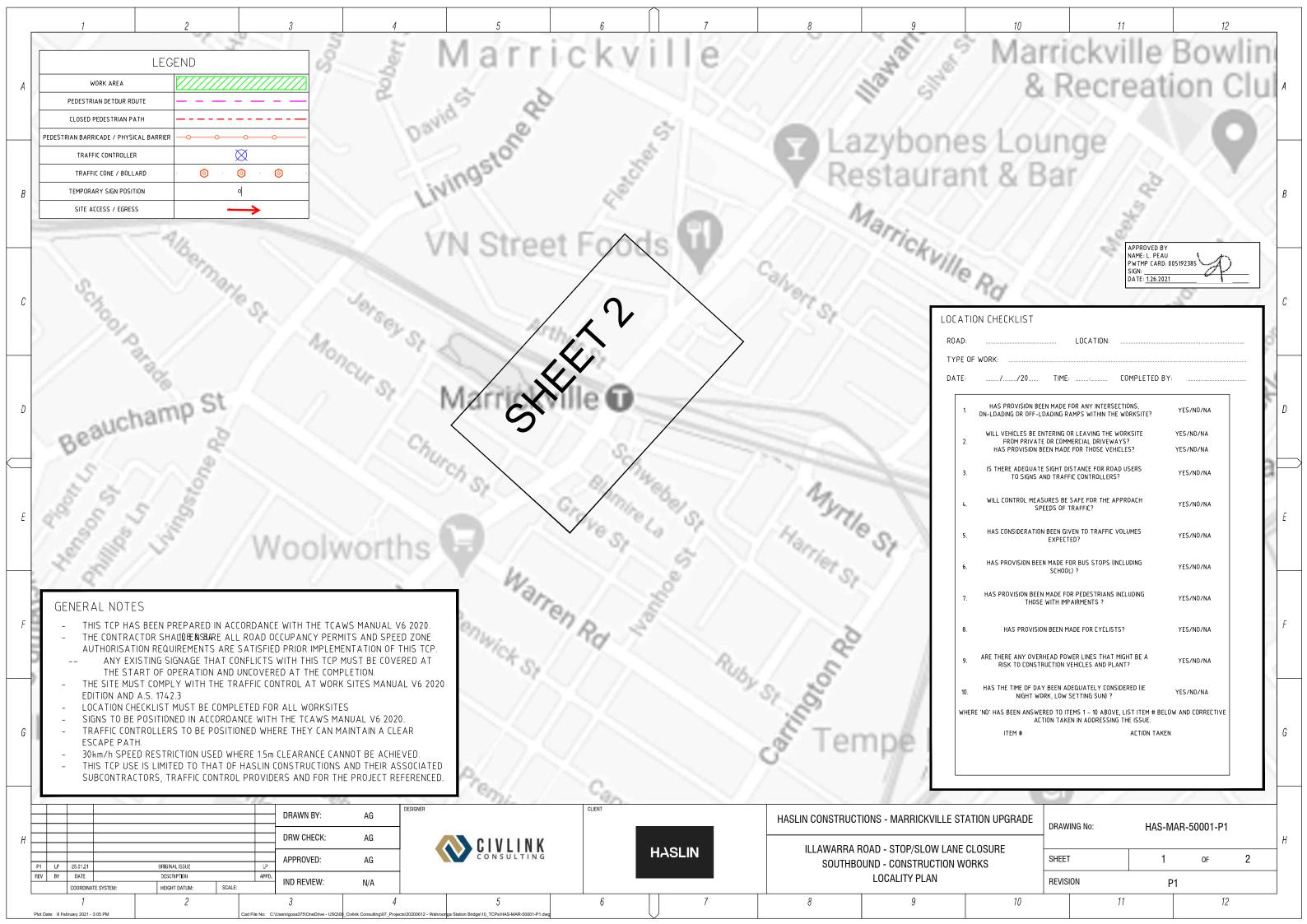


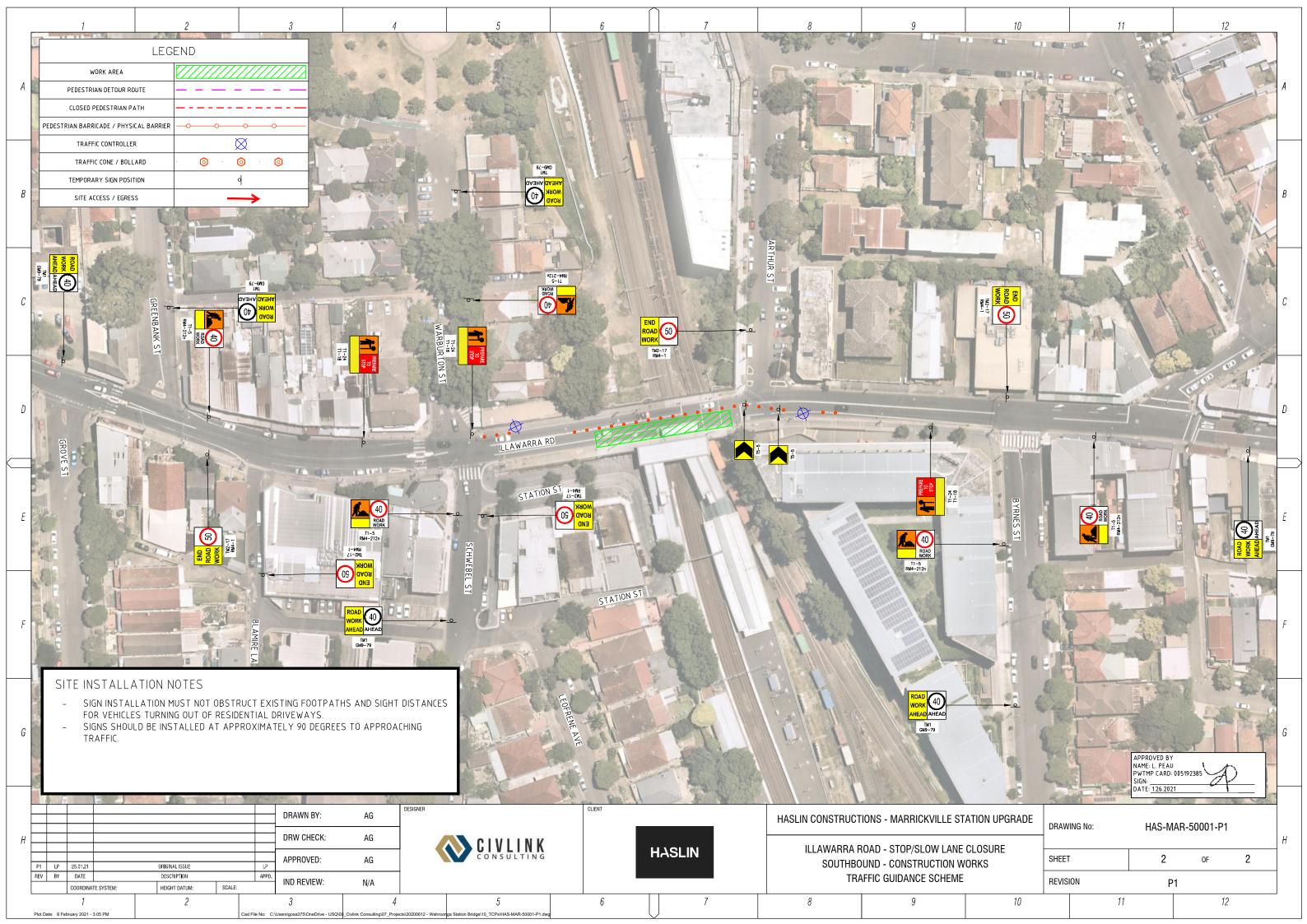


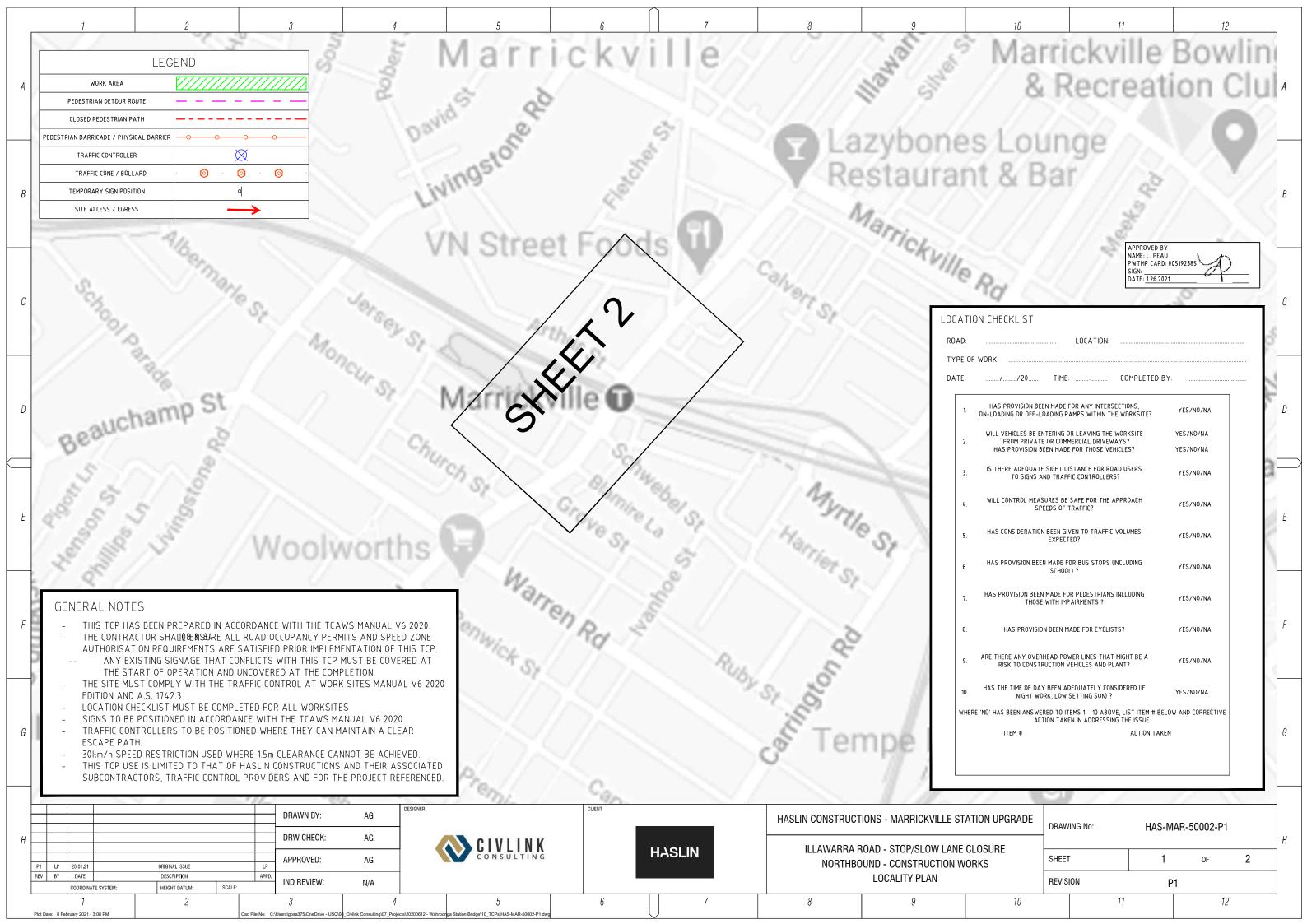


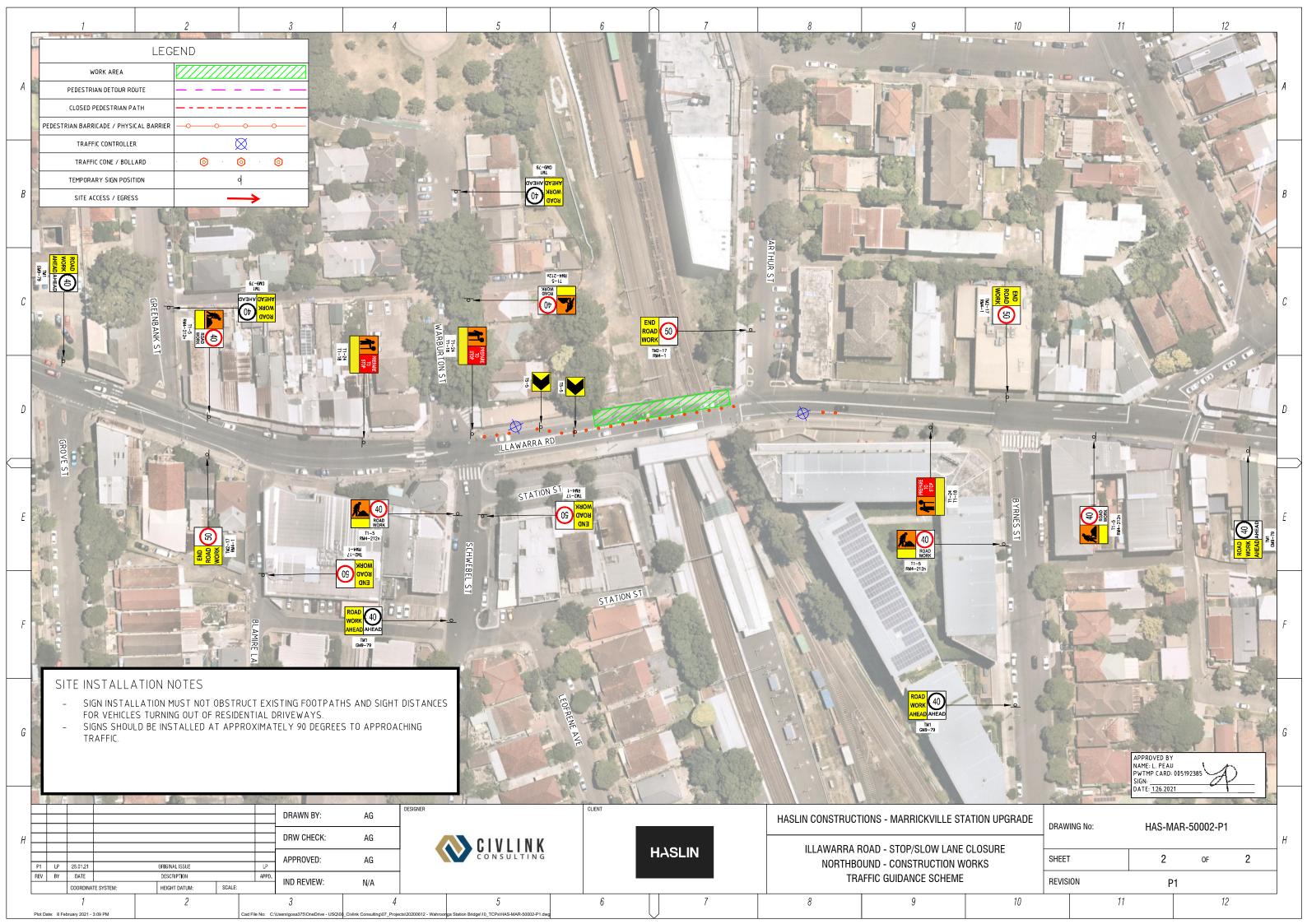












CONSTRUCTION TRAFFIC MANAGEMENT PLAN





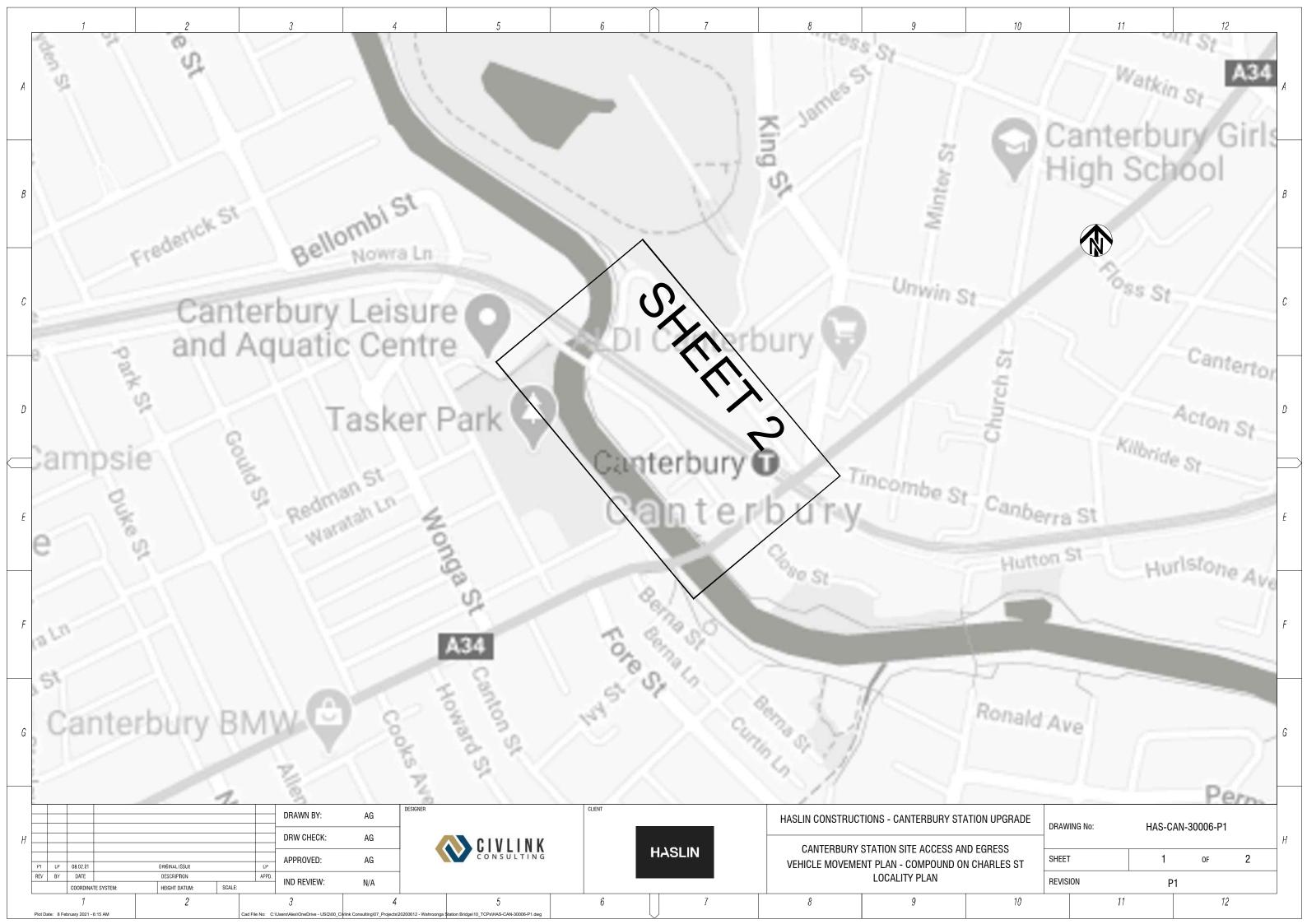
Appendix B - Vehicle Movement Plans

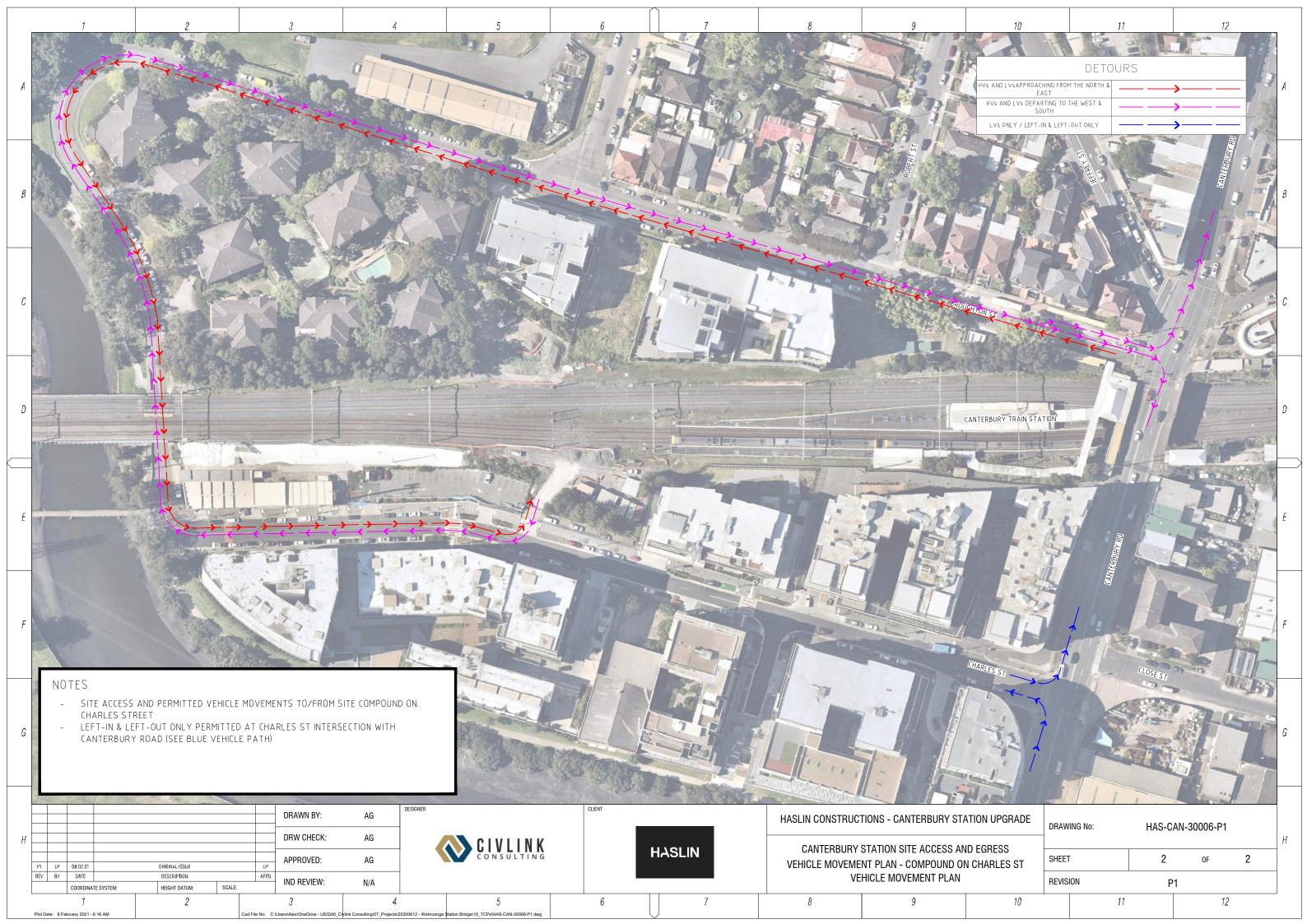
INDEX

VMP REFERENCE	STATION	PLAN DESCRIPTION				
HAS-CAN-30006-P1	Canterbury Station	Proposed movements to and from the Charles Street compound.				
HAS-MAR-50003-P2	Marrickville Station	Proposed movements to and from the Victoria Road compound.				

Note: The Lakemba Station VMP will be presented in a separate site-specific establishment TMP.











CONSTRUCTION TRAFFIC MANAGEMENT PLAN



HASLIN & STEPHEN EDWARDS JOINT VENTURE - SOUTHWEST METRO STATION UPGRADE PACKAGE 4 - CANTERBURY, LAKEMBA, MARRICKVILLE STATIONS

Appendix C – Inspection Checklists

INDEX

Inspection / Audit	Process			
Daily Inspection of short-term traffic controls to be carried out by the Traffic Supervisor:	Form SEQ-CL-014 – Daily Traffic Management Inspection Checklist.			
After initial set-up	inspection onecklist.			
After any changes				
Regularly (daily) during works				
Audit of installed TMP(s) & station traffic strategies (weekly) to be carried out by the Traffic Engineer.	Form SEQ-CL-015 - Long Term Traffic Management Audit			





Daily Inspection Checklist (Traffic Management)



Location: Date:

Item	Tick appropriate box:	Item	Tick appropriate box:				
Before Work Starts	Time of Inspection:	During Work Hours	Time of Inspection:				
1. Signs & devices appropriate for the day's	Satisfactorily	1. Signs & devices operating satisfactorily and seen by	Satisfactorily				
activities & conditions	Modifications/Repairs Required	motorists	Modifications/Repairs Required				
2. Signs & devices positioned and mounted	Satisfactorily	2. Signs & devices positioned and mounted correctly	Satisfactorily				
correctly	Modifications/Repairs Required		Modifications/Repairs Required				
3. Signs & devices clean and clearly visible	Satisfactorily	3. Signs & devices clean and clearly visible	Satisfactorily				
	Modifications/Repairs Required		Modifications/Repairs Required				
	Yes (Give details)	4. Traffic Controllers correctly attired and operating correctly	Satisfactorily				
			Modifications/Repairs Required				
4. Modifications and/or repairs completed	No (If no, give reason) Not Applicable 5. Modifications and/or repairs completed		Yes				
	I Not Applicable		No / N/A (give reason)				
Closing Down For Day	Time of Inspection:	Night Time Inspection	Time of Inspection:				
Signage appropriate for night time conditions	Satisfactorily	Yellow lamps operating	Satisfactorily				
eighage appropriate for high time conditions	Modifications/Repairs Required	Tono Mampe operating	Modifications/Repairs Required				
2. Signs & devices positioned and mounted	Satisfactorily		Satisfactorily				
correctly	Modifications/Repairs Required		Modifications/Repairs Required				
3. Signs & devices clean and clearly visible	Satisfactorily		Satisfactorily				
3. Signs & devices clear and clearly visible	Modifications/Repairs Required	l l l l l l l l l l l l l l l l l l l	Modifications/Repairs Required				
4. Trenches correctly barricaded and signed for	Satisfactorily	Driving surfaces adequate	Satisfactorily				
evening	Modifications/Repairs Required	Driving surfaces adequate	Modifications/Repairs Required				
5. Un-necessary signage removed (e.g. PREPARE	Satisfactorily	Modifications and/or repairs completed	Yes (Give details)				
TO STOP, SYMBOLIC WORKER)	Modifications/Repairs Required	Infoditions and/or repairs completed	No / N/A (give reason)				
6. Yellow lamps operating	Satisfactorily	Notes:					
6. Tellow lamps operating	Modifications/Repairs Required	 Items requiring modification and/or repair are to be described. 	and on the hack of this form				
7 Driving curfaces adequate	Satisfactorily	2. For all modifications that are different to the approved traffic control plan layout give detail					
7. Driving surfaces adequate	Modifications/Repairs Required	authorised changes.					
8. Modifications and/or repairs completed	Yes (Give details)	3. Hand sheets to supervisor at the end of each day.4. Ensure that all notes on the back of this sheet are copied when photocopying this report.					
. Modifications and/or repairs completed	No / N/A (give reason)	4. Ensure that airriotes on the back of this sheet are copied w	пен рногосоруну ина герои.				
Supervisor: Signed:	Date:	Project Systems Coordinator: Signed:	Date:				

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Audit Checklist (Traffic Management)

SEQ-CL-015

1.	Traff	fic Management Plan (TMP)	Yes	No	N/A	
	1.1 1.2 1.3 1.4	Has a TMP been prepared (sighted) Is the plan endorsed by a suitably qualified person? Do the works require complex traffic and/or high risk arrangements? Is the plan then endorsed by a suitably qualified traffic professional?				If no – go to question 2.1
2.	Аррі	roval to proceed	Yes	No	N/A	
	2.12.22.3	Has the Road Authority approved the works? Has the Road Authority accepted the TMP? Have all other required approvals been obtained, e.g. heritage, environmental etc.				
3.	Gen	eral Conditions of Approval	Yes	No	N/A	
	3.1 3.2 3.3 3.4 3.5 3.6 3.7	Are there restrictions on working hours? Are these work hours being adhered to? Does the TMP require communication of traffic changes to the public Are communication requirements being followed? Does the TMP require liaison with the others e.g. traffic operations centre? Are liaison requirements being followed? Does the TMP require a Road Safety Audit prior to each temporary traffic or pedestrian measure? Have Road Safety Audits been conducted prior to each measure to date?				If no – go to question 3.3 If no – go to question 3.5 If no – go to question 3.7 If no – go to question 3.9
	3.9	Are all other general conditions being compiled with?				
4.	Reco	ord Keeping	Yes	No	N/A	
	4.1	Are records of traffic management on the site being kept?				
5.	Pers	onnel	Yes	No	N/A	
	5.15.25.35.4	Is a qualified person on site during all working hours? Is high visibility clothing being worn in accordance with AS1742.3 Section 3.16.5? Are traffic control personnel working at time of audit? Do all traffic controllers hold Traffic Controller qualifications?				If no – go to question 6.1.1
	5.5	Are the Traffic Controllers managing traffic effectively?				
	5.6	Are communications between traffic control personnel effective and appropriate?				
6.	Traff	fic Sign & Device Layout	Yes	No	N/A	
	6.1	Compliance with Traffic Management Plan				



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Audit Checklist (Traffic Management)

SEQ-CL-015

	6.1.1	Are signs and devices set out in accordance with the approved TMP?				
	6.1.2	Are side roads adequately signed?				
6.2	Preser	sentation of Signs and Devices			N/A	
	6.2.1	Are signs & devices to the dimensions & appearance required?				
	6.2.2	Are signs & devices upright, clean & legible				
	6.2.3	Are sign supports straight and stable?				
	6.2.4	Can all signs and devices be easily seen by road users?				
6.3	Tempo	orary Speed Limits	Yes	No	N/A	
	6.3.4	Are temporary speed limit signs in use?				If no – go to question 6.4.1
	6.3.5	Has approval been obtained for the temporary speed limits?				
	6.3.6	Is speed limit through temporary works appropriate for the location & conditions? (AS1742.3 Section 4.4.3)				
	6.3.7	Are speed limit signs located on both sides of road?				
	6.3.8	Are speed limit repeater signs at appropriate travel time intervals				
6.4	Portab	le Traffic signals	Yes	No	N/A	
	6.4.1	Are portable traffic signals in use at time of audit?				If no – go to question 6.5.1
	6.4.2	Has approval been obtained for the portable traffic signals?				
	6.4.3	Are they proceeded by a PREPARE TO STOP (T1-18) sign?				
	6.4.4	Is the current mode of operation in balance with traffic demand?				
	6.4.5	Maximum observed delay time of queues under (minutes) stop condition?				minutes
	6.4.6	Is maximum observed delay time appropriate?				
6.5	Pavem	ent Configuration and Standard	Yes	No	N/A	
	6.5.1	Are lane widths adequate?				
	6.5.2	Is the lane marking clear and obvious to road users?				
	6.5.3	Is road surface condition adequate for all users (are motorcyclists or caravans expected?)				
6.6	Detou	rs, Sidetracks and Crossovers	Yes	No	N/A	
	6.6.1	Is sidetrack geometry adequate?				
	6.6.2	Is sidetrack drainage adequate?				
	6.6.3	Is sidetrack surface condition adequate for all users (are motorcyclists or caravans expected?)				
	6.6.4	Are detours well signed and operating satisfactorily?				
	6.6.5	Is access to private property adequate?				
6.7	Cyclist	s, Pedestrians and Disabled	Yes	No	N/A	
	6.7.1	Are the works in an area where cyclists, pedestrians or disabled are likely to enter the worksite?				If no – go to question 6.8.1
	6.7.2	Can cyclists & pedestrians safely traverse the site especially in contraflow situations?				



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Audit Checklist (Traffic Management)

SEQ-CL-015

	6.7.3	Are footpaths & shared paths clear of signs?				If Yes - go to question 6.7.5
	6.7.4	Have warning signs been provided for pedestrians & cyclists?				
	6.7.5	If paths have been re-routed, can cycles, wheelchairs and prams traverse them?				
6.8	Provisi	on for Hours of Darkness	Yes	No	N/A	
	6.8.1	Is traffic scheme for overnight use?				If no – go to question 6.9.1
	6.8.2	Are suitable lamps provided? (AS1742.3 Section 3.11)				
	6.8.3	All lamps operational and effective in darkness?				
6.9	Lane C	losures	Yes	No	N/A	
	6.9.1	Do the temporary works involve lane closures?				If no – go to question 6.10.1
	6.9.2	Are taper lengths in accordance with AS 1742.3 Section 4.3 for posted speed?				
	6.9.3	Are cones/bollards upright, correctly spaced & neatly aligned? (AS 1742.3 Section 3.9)				
6.10	Exca	vations Adjacent to the Road	Yes	No	N/A	
	6.10.1	Are boxouts or other excavations located adjacent to the trafficable roadway within the separation width?				If no – go to question 6.11.1
	6.10.2	Is sufficient width provided between the rear of any barrier and the excavation to allow for barrier deflection?				
	6.10.3	Are water filled barriers actually filled with water?				
	6.10.4	Are approach ends of barriers well separated from approaching traffic or protected by a crash cushion?				
6.11	Use o	of Variable Message Signs	Yes	No	N/A	
	6.11.1	Are variable message signs in use?				If no – go to question 6.12.1
	6.11.2	Does the use of variable message signs comply?				
	6.11.3	Are the variable message signs located within the transition zone?				
	6.11.4	Is the lettering size comply?				
	6.11.5	Are displayed messages complying?				
6.12	Misc	ellaneous	Yes	No	N/A	
	6.12.1	Are signs that should be in place only while workmen are on the road being removed after hours?				
		Comments:				END OF AUDIT
Signed:						
Date:						
⊅ at e .						