CONSTRUCTION TRAFFIC MANAGEMENT PLAN

BANK STREET COMMERCIAL WHARF – DRY WORKS

November 2019

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1 INTRODUCTION

1.1 Background

Roads and Maritime Services NSW (Roads and Maritime) proposes to redevelop the existing commercial zoned area underneath the Anzac Bridge into a commercial wharf to service the harbour area during the redevelopment of the Sydney Fish Markets.

The existing site is vacant land adjacent to new apartment buildings. The existing commercial wharf is to be demolished and redeveloped as part of the Fish Market works. The new Bank Street wharf will be the primary wharf until the completion of the new Fish Markets in 2024. The Commercial Wharf works involve both 'Dry Works' and 'Wet Works' for which Christie Civil is responsible for 'Dry Works' only.

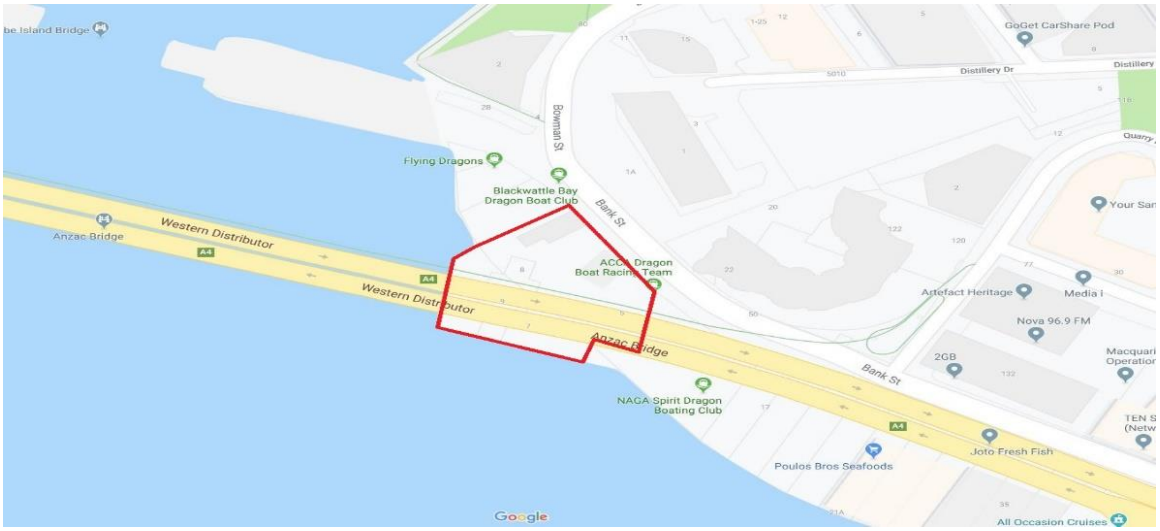


Figure 1 - Locality Plan (Map View)

Figure 2 - Locality Plan (Landscape View)

1.2 Brief

The majority of the major works within the 'Dry Works' scope will be completed within the site boundaries without impeding the flow of pedestrian or vehicle traffic. Where construction processes require adjustments to the current traffic conditions, there arrangements will be undertaken with the correct approvals with the least affect to current conditions as reasonable and practicable as possible.

Construction activities that require these changes will be outlined and detailed further throughout this plan.

1.3 Scope of Construction Activity

The project scope of works includes but not limited to the following:

- All works associated with achieving the proposed development (excluding the Pontoon and Jetties)
- All groundworks associated with achieving the proposed development to maintain all cut material within the site
- All services, utilities and infrastructure to service the development including supply of services to the wharf/pontoon and the new incoming power supply and kiosk (with off-site works)
- Resurfacing, grading and finishes throughout
- Construction of the wharf management compound including all structures, boundary treatments and finishes
- Hard and soft landscaping of the public domain including services, security and civil upgrades
- Construction of the proposed pontoon and timber jetties are excluded from this scope.

Construction of the proposal would see an increase in vehicles accessing the proposal area, due to construction staff working at the site and for delivery or materials and resources to the site. The subsequent increase of traffic along Bank Street is expected to have no effect on major road networks nearby, specifically Harris St and the Anzac Bridge entries/exits.

1.4 Construction Traffic Management Plan

When approved, this Construction Traffic Management Plan (CTMP) will generate any associated Traffic Control Plans (TCP'S), and applications for Speed Zone Authorisations (SZA'S), supporting the CTMP that require approval by the Transport Management Centre (TMC).

This document reports on the impact of changes during construction on the traffic and transport operations on the existing road network. It also makes recommendations to mitigate

these traffic impacts as part of a traffic management strategy. The purpose of this CTMP is to ensure that:

- The impacts of construction to vehicular, cycle and pedestrian traffic is considered and minimised.
- Durations of disruptions is minimised
- Public and safety and accessibility is maintained at all times

The CTMP is based on providing 1 lane of traffic in each direction along Bank Street for the entirety of the project and minimising impediment on pedestrian flow along Bank Street. This requires the work to be sequenced to allow new construction that does not interfere with existing traffic conditions (unless approved by ROL's or local council as required).

The sequence proposed is as follows.

- Underground service works i.e.;
  - Fire
  - Potable water
  - Sewer
  - Ausgrid Works
  - Internal Electrical Works and Communications
  - In conjunction with the following;
- Retaining Walls construction
- Drainage works
- Concrete Road Pavements, Footings, Footpaths, Stairs and Asphalt Hardstand
- Finishing works;
  - Bin Storage Area, Demountable Office Building, Structural Steel, Roofing and Cladding, Fencing, Railing and Landscaping
- Above ground service works;
  - Ausgrid, Fire, Potable Water, Sewer, Internal Electrical and Comms

The remainder of this report follows the structure outlined below.

- Section 2 describes existing traffic situation in the vicinity of the area
- Section 3 details the proposed CTMP
- Section 4 details Traffic Control Management procedures
- Section 5 details emergency response and contacts

1.5 Project Team Contacts and Roles

Position	Name	Telephone	Email	Mobile
Construction Manager	Martin Carey	(02) 9552 3077	martincarey@christiecivil.com.au	0405 771 132
Systems Manager and	Keith Choy	(02) 9552 3077	keithchoy@christiecivil.com.au	0410 347 394

Environmental Manager				
Project Manager	Thomas Caruana	(02) 9552 3077	thomascaruana@christiecivil.com.au	0420 209 096
Site Foreman	Ivan Vukic	(02) 9552 3077	-	0411 682 517
Project Engineer	Tiago Martins	(02) 9552 3077	tiagomartins@christiecivil.com.au	0414 805 652
Site Engineer	Simon Xin	(02) 9552 3077	simonxin@christiecivil.com.au	0435 211 566
Plant Manager	Keith Choy	(02) 9552 3077	keithchoy@christiecivil.com.au	0410 347 394

Table 1 - Christie Civil Site Project Team Contact Details

Contacts	Name	Telephone	Fax	Mobile
Traffic Control Site manager	Sara Acret (Roadwork Solutions)	1300 433 093		0423 289 786
Traffic emergency nominated person	Thomas Caruana	(02) 9552 3077		0420 209 096
Alt / Traffic emergency nominated person	Thomas Freeburn	(02) 9552 3077		0437 646 778

Table 2 - RMS Project Team Contact Details

2 EXISTING

At present, the closest pedestrian facilities to the proposal location are the Dragon Boat racing teams and Waterfront Park located to the north of the job site along Bowman Street. Currently there are minimal operating drive ways that pose safety risks to pedestrians walking along the northbound footpath therefore the additional site access created will increase the safety risks to pedestrians. This may result in many pedestrians attempting to run across the drive way when trucks are entering/exiting, putting themselves and drivers at risk. This risk will be controlled with truck movements to be made under traffic control.

See below aerial view of road showing the current configuration.

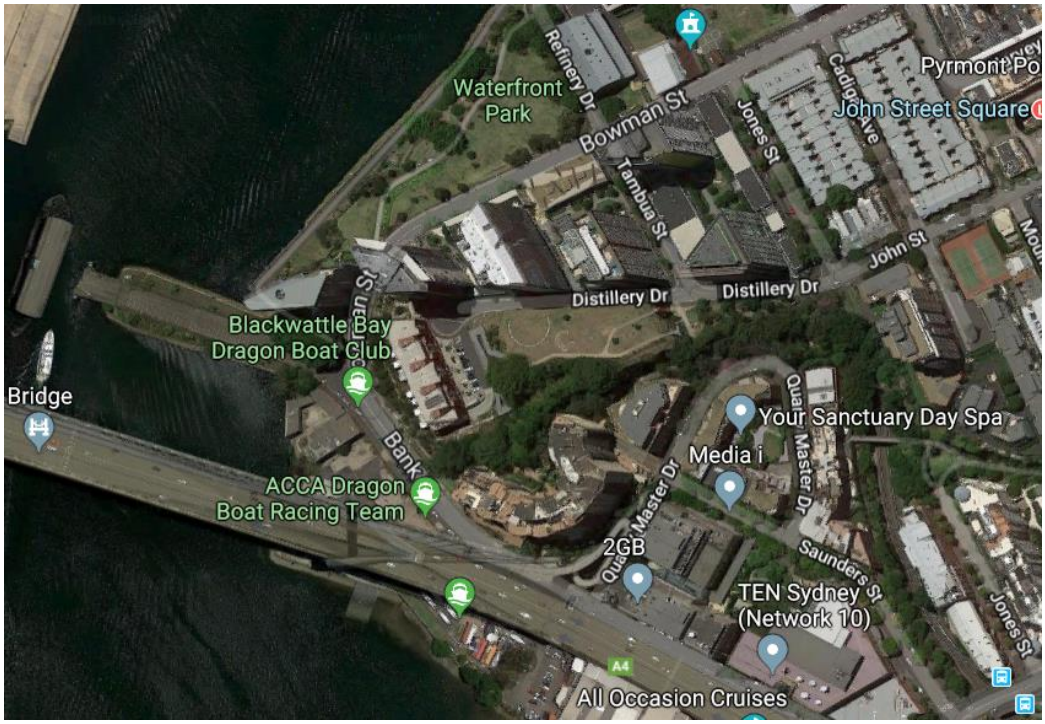


Figure 3 - Location of Job Site to the South of the ACCA Dragon Boat Racing Team

3 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

This CTMP indicates the proposed traffic management measures to facilitate the construction of the commercial wharf in a safe and efficient manner.

The construction activities will be supported by the construction compound which will be located within the site boundaries. The site compound will provide office space and workers amenities. Workers will be able to park onsite when necessary, otherwise public transport networks will be used. All Traffic Control Plans noted in the following sections are attached in Appendix 1.

For all work zones, the current speed limit of 50km/h will be maintained. Traffic speeds during peak times are slow due to the volume of traffic in and around the Pyrmont area.

3.1 Location of Proposed Work Zone

At this stage, it is anticipated by Christie Civil that a Work Zone is not required, however if required, the below area will be proposed;

Figure 4 - Work Zone to be Proposed if Required

3.2 Haulage Routes

The location of the job site is located beneath the Anzac Bridge, and as a result, the most direct route when heading west along the A4 involves a tight hair-pin turn that would not be manageable by a heavy vehicle and as such the following routes have been outlined. It is assumed at this stage that large deliveries will be received from the Western Suburbs or the Southern Sydney Industrial Precinct in Alexandria.

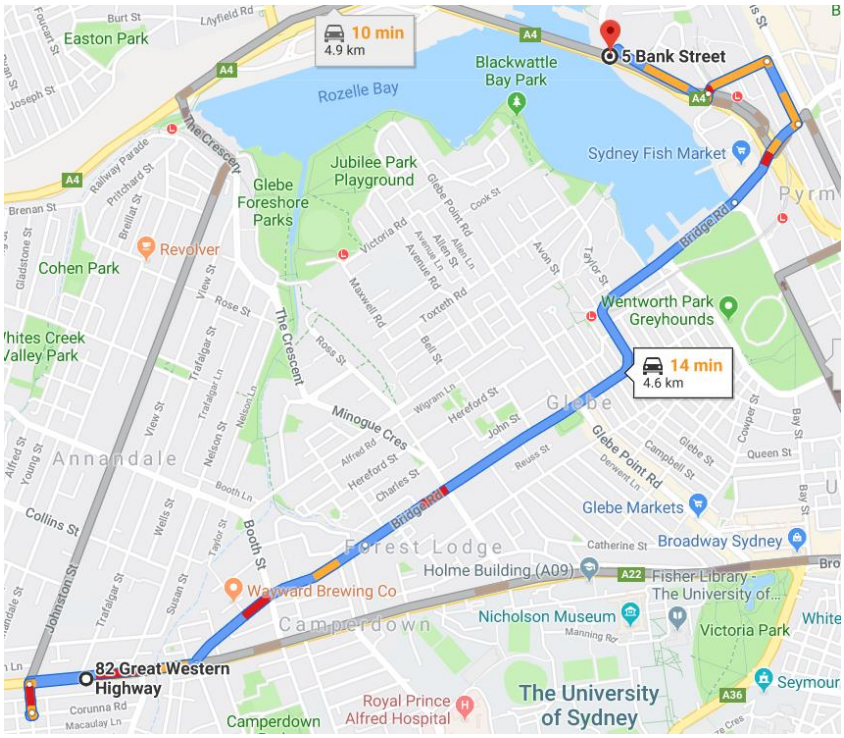


Figure 5 - Truck Route Heading West into the City Along the A22

Figure 6 - Truck Route Heading North into the City Along South Dowling Street

3.3 Construction Vehicle Access and TCP Arrangements

The existing drive way providing access into the lot allocated for development will be used as Construction Access. Widening of the drive way will occur towards the end of the project to minimise damage through heavy vehicle traffic. Construction vehicle access for LV's and rigid trucks will have no effect on existing traffic conditions, however delivery drivers will be required to follow the procedure set out below:

- Deliveries to be made during times set out below in Section 3.4
- Drivers to contact the Site Representative/s 5-10 minutes prior to arrival to ensure safe access through the gates
- Pedestrians to be controlled as per Pedestrian Control Plan (PCP) 002 shown in Section 4.5

Heavy vehicles will be required to deliver larger materials such as craneage and counter-weights, structural steel elements and reinforcement. Deliveries requiring HV will be undertaken in accordance with the proposed TCP's outlined in Appendix One and PCP 001. Heavy vehicles and any oversized deliveries will not be allowed to queue or idle on Bank Street and will be brought straight into site through traffic control and radio communication. Pedestrian management is detailed in Section 4.5 of this CPTMP.

3.4 Construction Hours

The following hours have been allocated by the RMS;

- Monday to Friday: 7am-6pm
- Saturday: 8am-1pm

No work is allowed on Sundays or Public Holidays.

3.5 Construction Vehicle Movements

All construction activities will require vehicle movements in and out of the construction site and also parking on site and on the street in allocated spots. The following activities shall require heavy vehicle movements into and out of the site:

- Establishment
- Layback widening (6 meter from boundary with up to 2 meter wings)
- Deliveries;
    - Structural Steel
    - Reinforcement for slabs
    - Imported fill and tipping of surplus materials
    - Demountable sheds
- Structural steel erection and construction
- Installation of the Stainless-Steel roofing
- Installation of demountable

- Asphalt placing
- Concrete pours (pumping required)

It is not expected that a large volume of construction vehicles will enter the site throughout the project. The largest volume will occur when concrete pours are taking place. The following are estimates of heavy vehicle movements during the aforementioned construction activities.

- Site Establishment – 2 semi-trailer loads for establishment
- Demolition Works – up to 6 rigid movements per day during demolition
- Layback widening – up to 2 rigid movements per day during the works, including concrete trucks
- Deliveries
    - Structural Steel – 3 semi-trailer loads for the project
    - Reinforcement – 2 rigid deliveries per day during concrete works
    - Importing Fill – up to 3 rigid deliveries per day during as required.
    - Demountable shed – 1 semi-trailer load and crane access for 1 day
- Structural steel erection and construction
- Installation of the Stainless-Steel roofing – up to 3 rigid loads of material delivered during the project
- Installation of demountable – One 50T mobile crane movement
- Asphalt placing
    - 2 semi-trailer loads for drop off and pickup of plant
    - Up to 6 rigid movements for asphalt material delivery
- Concrete Pours – up to 8 rigid movements per day when concrete works occur

3.6 Changes Required to On-Street Parking

It is anticipated by Christie Civil that no changes are required to on street parking at this stage, however details of a proposed work zone if required is outlined in section 3.1 of this CPTMP. It is to be noted with the increase in construction activity and the lack of available space on site for parking that public transport will have to be utilised for the main mode of commute to site.

3.7 Construction Program

Refer to Appendix 5.

3.8 Community and Stakeholder Liaison

The following will be made available by Christie Civil to the community prior to commencing on site;

- A toll-free 24-hour telephone number on which complaints and enquiries about the carrying out of any works may be registered
- A postal address to which written complaints and enquiries may be sent; and
- An email address to which electronic complaints and enquiries may be transmitted

The telephone number, mail address and email will be managed by the nominated Project Manager, Thomas Caruana. The feedback received by the community will be used to improve the works and decrease the inconvenience and disruption to the surrounding community. These details will be signposted prominently at the site entrance and southern boundary. The sign shall be mounted at eye level and be off A1 size.

Where a change in work conditions is required, i.e. a change in traffic conditions, noise levels or out of hours work, the community will be notified by letter box drop. The letter shall include details of the change, time and place of change and the affected areas. The letter will also provide the same details as posted on the site boundaries should any member of the community have any queries or complaints. A register of complaints and liaison from the community will be created, maintained and stored in the site office to ensure all respondents are addressed efficiently and appropriately. The *Communication Plan* is set out in detail in *Section 4.7* of the CEMP.

3.9 Potential Impacts

3.9.1 Traffic

Impact to traffic is expected to be minimal, with larger deliveries requiring Heavy Vehicle access as stipulated in section 3.5, requiring temporary traffic control to stop vehicles whilst the HV enters/exits site. These stoppages will be momentary and occur one at a time. Traffic control will be managed so as to give right of way to public traffic first, then construction vehicles.

Widening of the existing layback will require the shoulder to be taken out under an approved ROL. Proposed TCP's are detailed in Appendix One.

3.9.2 Pedestrians and Cyclists

As expected with vehicle traffic, impacts on cyclists and pedestrians will be minimal. With the increased use of the existing drive way, pedestrians and cyclists will be at a higher risk of colliding with a vehicle, and as such, all entries and exits will be managed by a qualified traffic controller to ensure pedestrians are clear prior to construction vehicle movements. Where necessary, pedestrians will need to be stopped on the footpath on truck entry to ensure no HV is queuing or idling on Bank Street.

3.9.3 Buses

The figure below shows the bus routes around Sydney CBD and the Pyrmont area. As shown, the proposed works has no effect on any Bus routes in the surrounding areas.

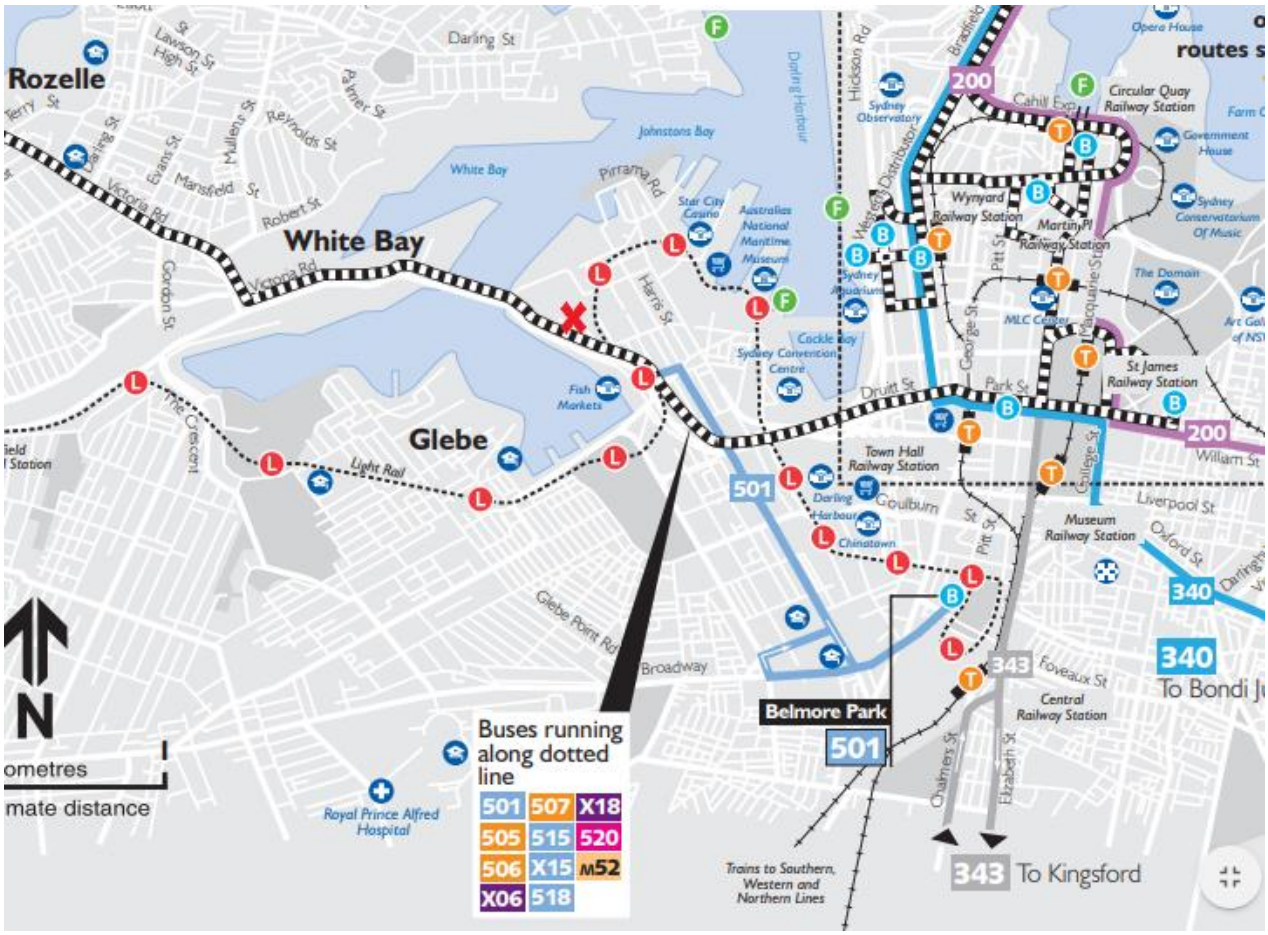


Figure 7 – Bus Routes in the Surrounding Area (Job Location Indicated with Red X)

4 TRAFFIC CONTROL MANAGEMENT PROCEDURES

Safe Work Method Statements will be developed as part of the project in accordance with WHS regulations and RMS Traffic Control at Worksites Manual. Safeguards in place at worksites include barriers, signage, and traffic controllers.

4.1 Traffic Control Plans

All TCP'S to be used during construction activity will be developed in accordance with AS1742.3 and RMS "Guide to Traffic Control at Worksites" by a suitably qualified person. A TCP can only be prepared by a person who has undertaken the RMS Traffic Control at worksites Manual Training and holds current certification.

All worksites and TCP's will be implemented by suitably qualified personnel as per authorised TCP for the particular stage of works.

4.2 Inspection of Roadwork Traffic Schemes

There are 3 main types of inspections.

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

Checklists as per RMS Traffic control at Worksites manual are to be used. The inspections will be undertaken by either the Traffic Controllers, Site Supervisor, Site Engineer or Project Manager.

4.3 Road Opening Permit (City of Sydney Council)

A Road Opening Permit (ROP) authorises the works to be carried out on the local council road as approved by local council. Applications are made to the City of Sydney Council using the standard application form. A minimum of 48 working days is required for the assessment of the application which and payment will be made after confirmation of approval. Prior to any works on the road, a current ROP must be in place and a copy issued to the supervisor managing that works. The ROP must be adhered to at all times noting start and finish times with a plan in place to manage works ensuring the finish time is met.

4.4 Pedestrians and Cyclists

Pedestrian movements around/between the worksite will alter slightly; however always allow pedestrian access around the worksite. Layback widening and deliveries will temporarily impact pedestrians' paths along Bank Street. Detour signs would be established to direct pedestrians to alternate pedestrian routes. Traffic control will be in place to assist with pedestrian management safely around the work area during these periods.

See below pedestrian signage locations to assist pedestrian access when construction commences on site. Refer to PCP 001 for pedestrian access during layback works and other works requiring temporary closure of the footpath. During deliveries, pedestrians will be directed by Traffic Control to walk/stop only when it is safe to do so. Pedestrians will be given right of way by traffic controllers where possible, however not allowing trucks to queue or idle along Bank Street.

Pedestrian movements are to be monitored at all times to ensure the pedestrian management plans in place are effective and traffic control are to be on lookout to ensure pedestrians are escorted around the jobsite if required.

All pedestrian detour signs are to be audited once installed to ensure they are highly visible and effective to local pedestrians.

All pedestrian / cyclist detour paths will ensure:

- Pavements are available
- Fencing around site to ensure no pedestrian access
- Sufficient lighting as impacted from the existing lighting
- Ensure all pedestrian/cycle path widths are and pram ramps are wheelchair compliant, and that all pedestrian push buttons are accessible (as existing areas are impacted by Christie Civil).
- Usability of all pedestrian / cycle paths should be maintained

The Temporary fencing used for the construction site is to be compliant with council regulations of “A” Class Hoarding (A structure of wire usually 2.1m in height or greater) as works are facilitated in a public place that is fenced off from the public while maintaining safe access around the job site.

Allowance will be made for all works to be undertaken within the work hours stipulated in Section 3.4.

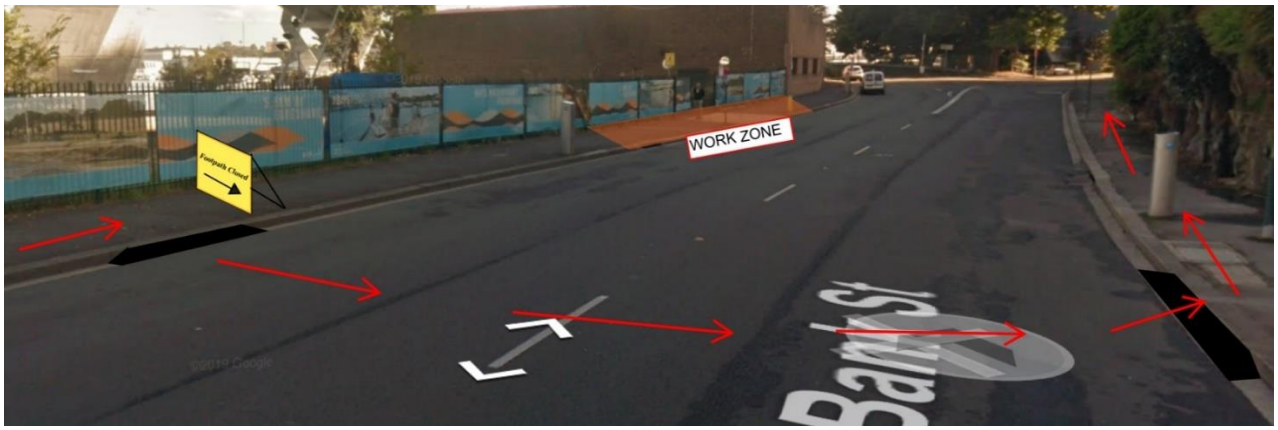


Figure 8 - PCP 001: Footpath Closed Both Sides, Pedestrians to Cross Bank St and Continue

Access to residential properties and local businesses will be maintained at all times.

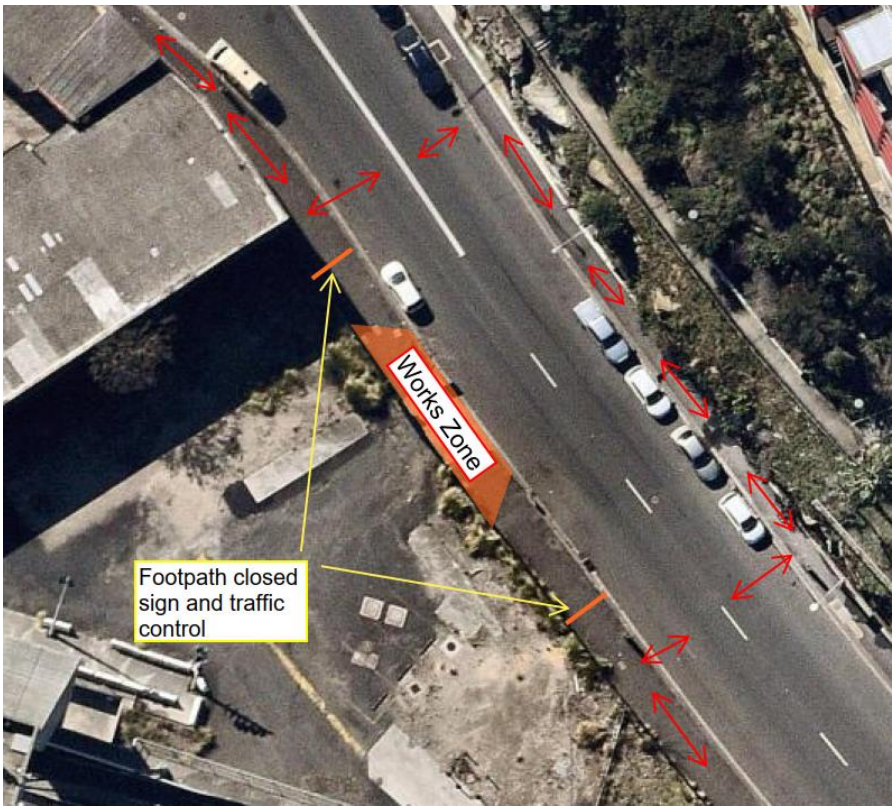


Figure 9 - PCP 001: Footpath Closed Both Sides, Pedestrians to Cross Bank St and Continue

Figure 10 - PCP 002: Personnel to Stop Pedestrians from Crossing Whilst Trucks Enter/Exit

4.5 Buses

No bus stops or bus routes run along Bank Street. The works will NOT impact the bus routes in any way after reviewing route timetables. Day works will not affect any bus routes. Night works will also have no effect on buses.

Sydney Buses will be notified of traffic management setups and expected detours for information purposes.

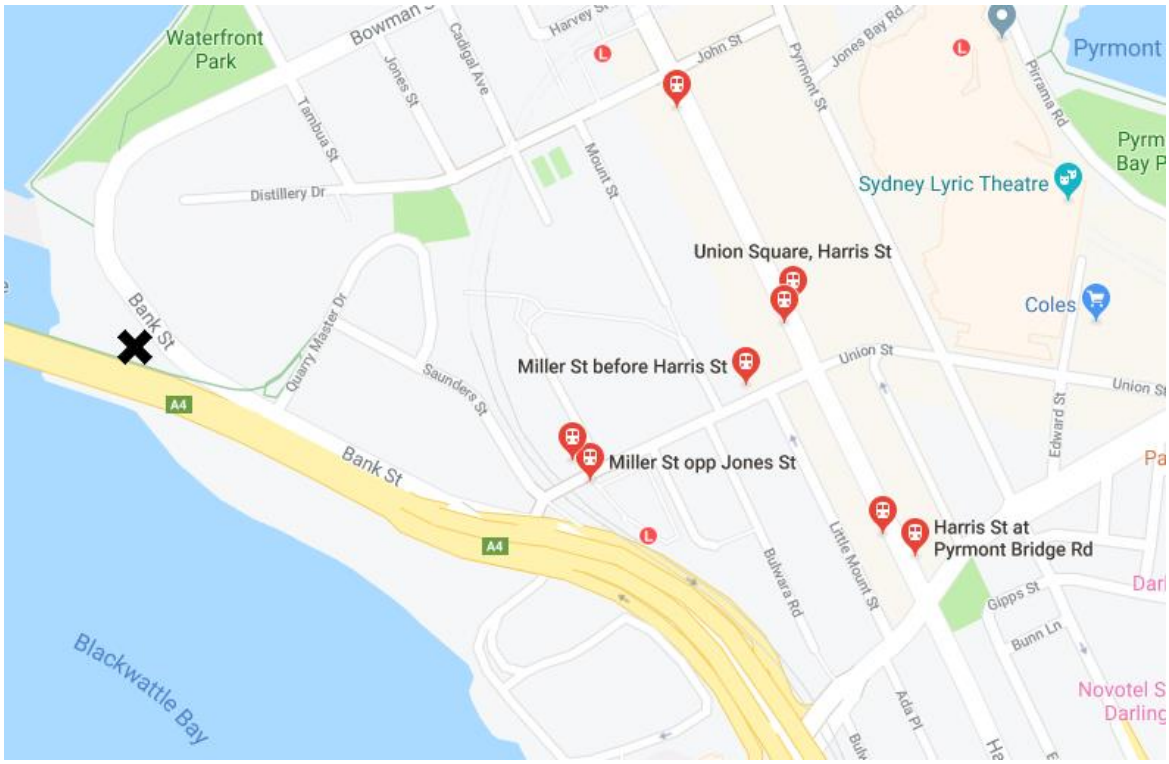


Figure 11 - Bus Stops Near the Work

4.6 Traffic Control Checklists

Traffic control checklists shall be used each morning and during the night (if required) to ensure that traffic control plans have been implemented correctly. The checklist will allow workers to confirm signage is as per the traffic control plan and set at correct distances, unobscured and implemented according to Australian Standards.

4.7 Delivery Drivers and General Access to Work Sites and Compound (Vehicle Management Plans)

4.7.1 Delivery Times

Deliveries will be scheduled during approved construction hours. Outside of the approved hours, the site gates will be locked to stop any delivery from entering the site. Where deliveries arrive to site outside these hours, they will unable to enter site and will have to arrange alternative delivery times with the site contact.

Delivery drivers will be required to contact the site representative/s 5 minutes prior to arrival to allow sufficient times for traffic management to be set up at the site gate to ensure trucks are not idling or queuing on Bank Street. Two traffic controllers will manage all vehicular movements into/out of site.

4.7.2 Onsite Vehicle Management Plan (VMP)

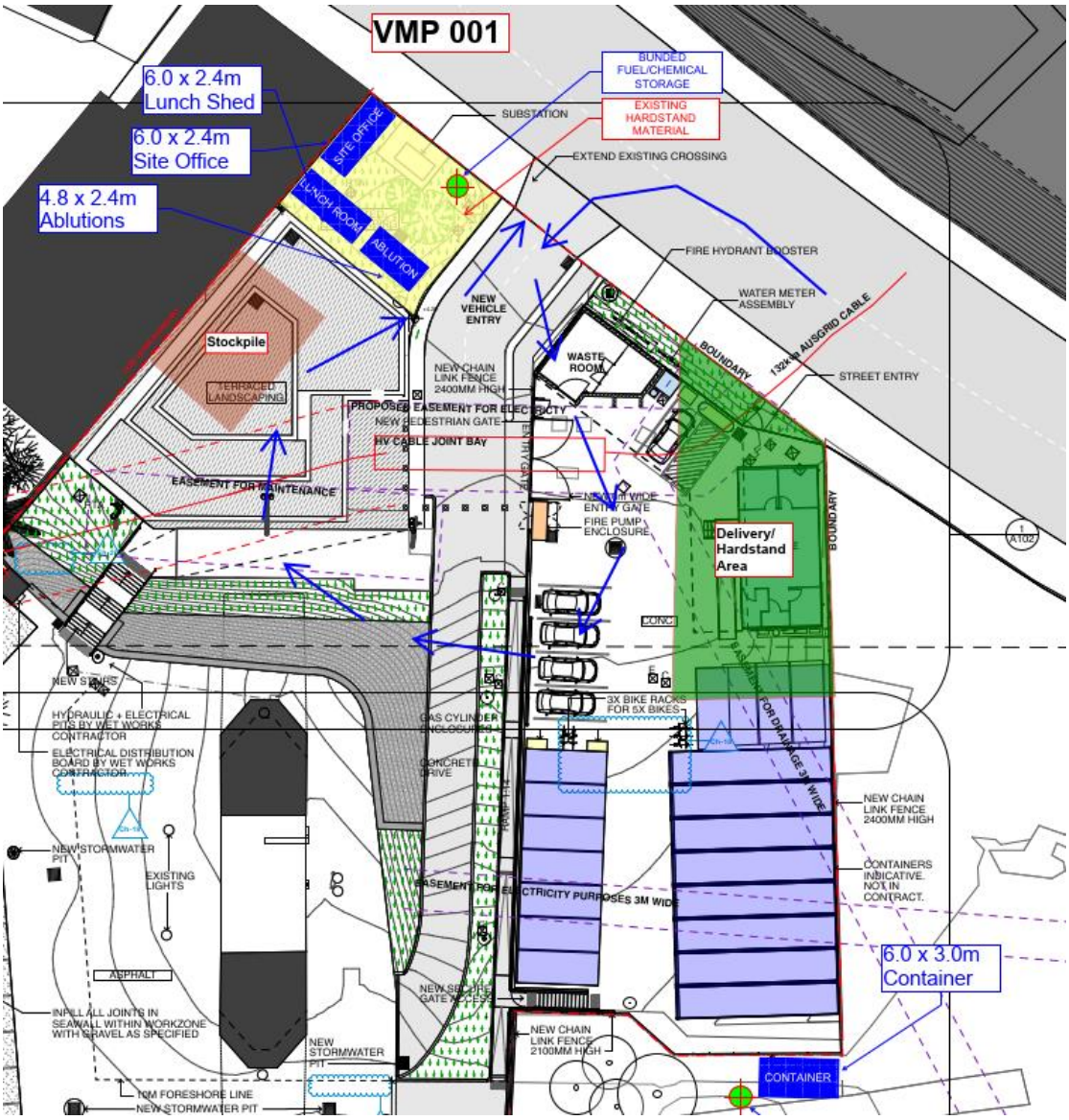


Figure 12 - VMP 001: Truck/Vehicle Movements Shown with Blue Arrow

The area of the site allows for trucks to turn around and drive out of site. It is anticipated that there will be no Heavy Vehicles used for deliveries and/or craneage that will be large enough to require reversing in/out of site onto Bank Street.

5 EMERGENCY RESPONSE AND CONTACTS

5.1 Emergency Response

In the event of an emergency, please refer to *Section 4.4 of the Bank Street Commercial Wharf – Dry Works Project Plan.*

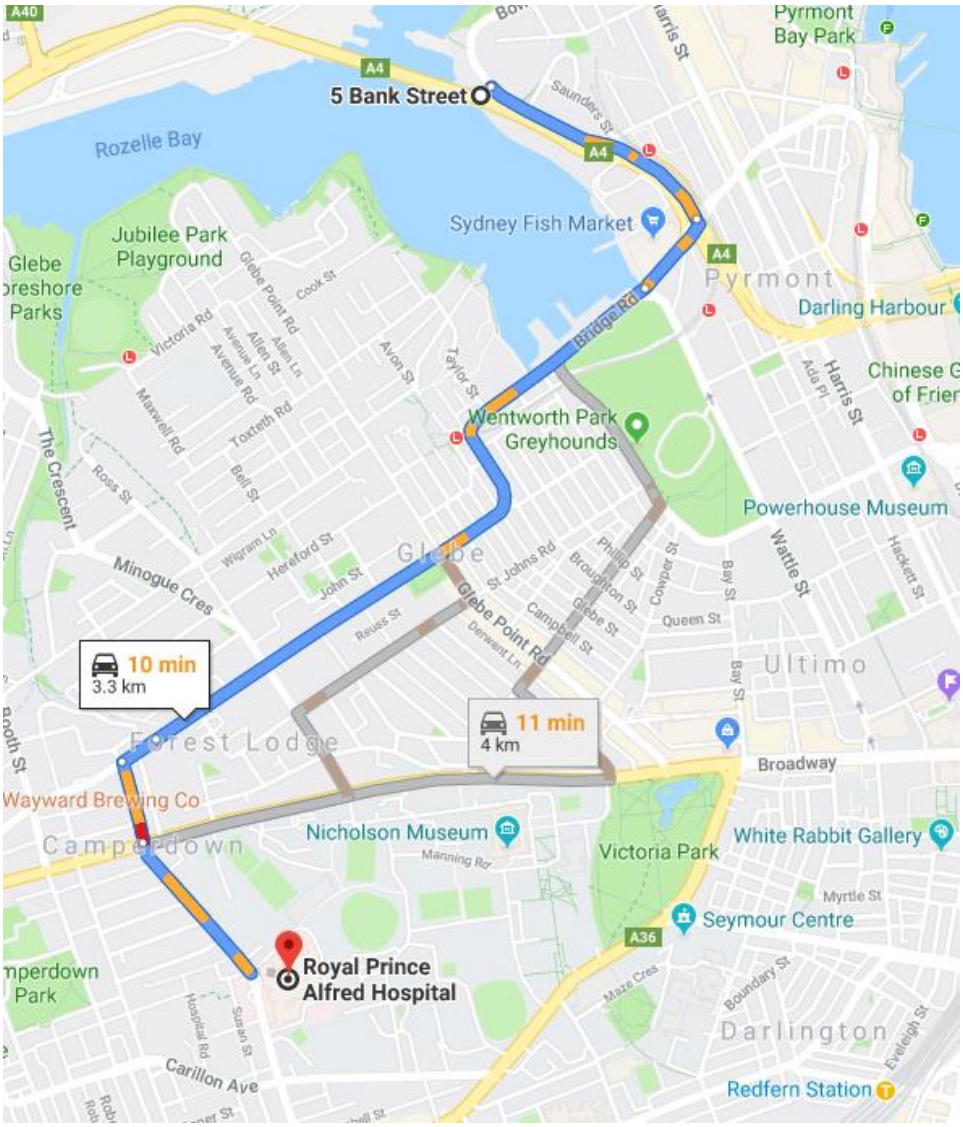


Figure 13 - Map to Nearest Hospital; Royal Prince Alfred

5.2 Emergency Contact Details

Emergency contact details are as follows:

Emergency Contact	Contact Number
Police – Fire – Ambulance	000 (mobile 112)
Royal Prince Alfred (RPA) Hospital	(02) 9515 6111
EPA Pollution Hotline	131 555

Sydney Water Emergency	13 20 09
Ausgrid	13 13 88
Jemena	13 19 09
Poison Information Centre	13 11 26
SafeWork (NSW)	9370 5000
Telstra	132 203
Optus	1800 505 777

Table 3 - General Emergency Contact Details

Contacts	Name	Telephone	Fax	Mobile
Council	City of Sydney Council	(02) 9265 9333	(02) 9710 0265	-
Police (local)	Day Street Police Station	(02) 9265 6499	-	-
Fire Brigade (local)	Pyrmont Fire Station	(02) 9493 1038	-	-
Medical Centre	Pyrmont Doctors	(02) 8999 0550	-	-
Hospital	Royal Prince Alfred	(02) 9515 6111	-	-

Table 4 - Site Specific Emergency Contact Details

Contacts	Name	Telephone	Fax	Mobile
Construction Manager	Martin Carey	(02) 9552 3077	(02) 9552 3818	0412 004 164
Systems Manager and Environmental Manager	Keith Choy	(02) 9552 3077	(02) 9552 3818	0405 771 132
Project Manager	Thomas Caruana	(02) 9552 3077	(02) 9552 3818	0420 209 096
Site Foreman	Ivan Vukic	(02) 9552 3077	(02) 9552 3818	0411 682 517
Project Engineer	Tiago Martins	(02) 9552 3077	(02) 9552 3818	0414 805 652
Plant Manager	Keith Choy	(02) 9552 3077	(02) 9552 3818	0405 771 132

Table 5 - Project Team Emergency Contact

APPENDIX ONE – TRAFFIC CONTROL PLANS

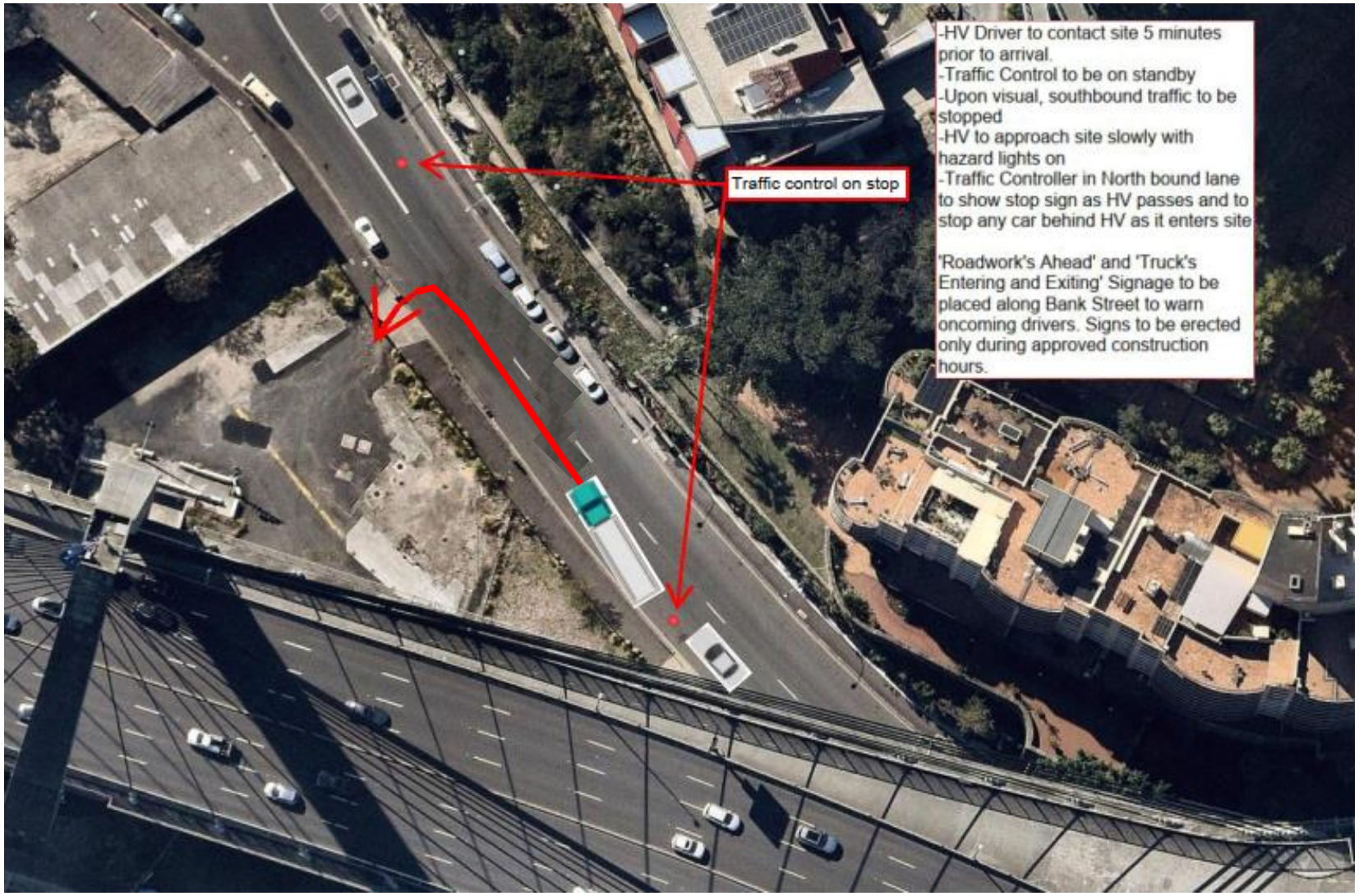


Figure 14 - TCP 001 – HV Trucks entering site

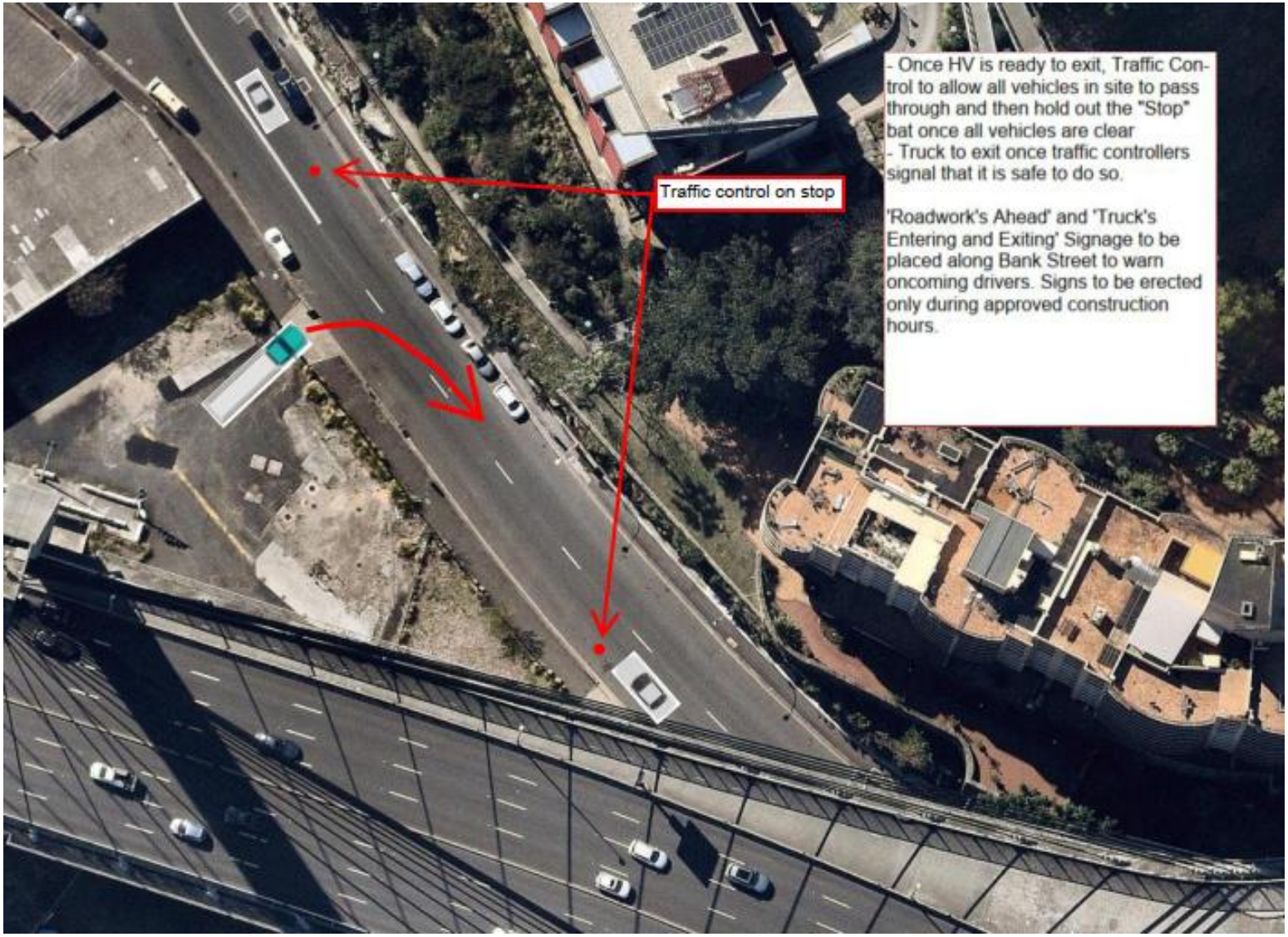
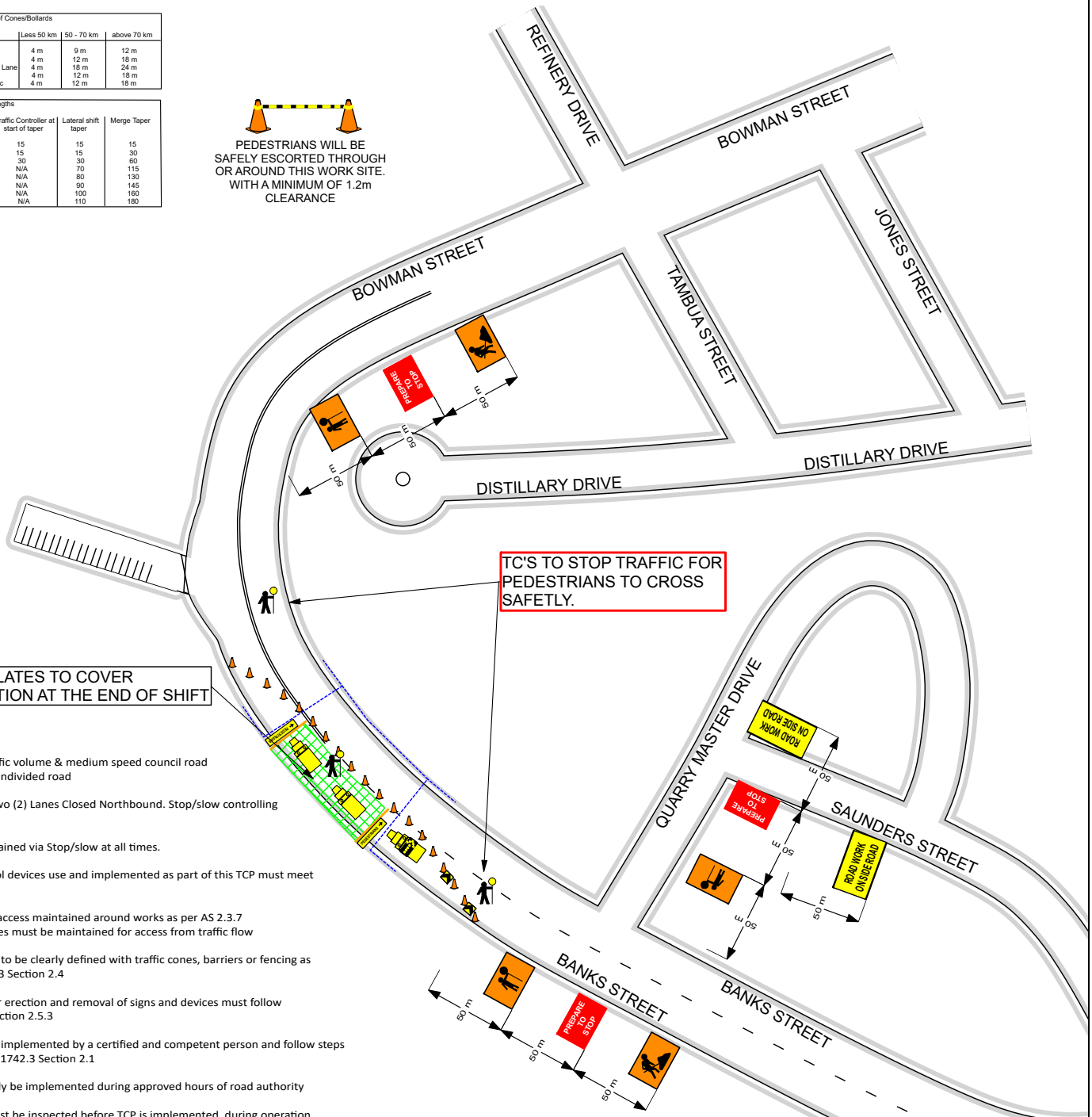


Figure 15 - TCP 002 – HV Trucks Exiting Site

Recommended Spacing of Cones/Bollards			
Purpose/Usage	Less 50 km	50 - 70 km	above 70 km
Merge Taper	4 m	9 m	12 m
Lateral Sift Taper	4 m	12 m	18 m
Shoulder Closure/Parking Lane	4 m	18 m	24 m
Lane Closure	4 m	12 m	18 m
Separating opposing traffic	4 m	12 m	18 m

Recommended Taper Lengths			
Speed of approaching Traffic	Traffic Controller at start of taper	Lateral shift taper	Merge Taper
45 km or less	15	15	15
46 - 55 km	15	15	30
56 - 65 km	30	30	60
66 - 75 km	N/A	70	115
76 - 85 km	N/A	80	130
86 - 95 km	N/A	90	145
96 - 105 km	N/A	100	160
Greater than 105 km	N/A	110	180

PEDESTRIANS WILL BE SAFELY ESCORTED THROUGH OR AROUND THIS WORK SITE. WITH A MINIMUM OF 1.2m CLEARANCE



NOTES:-

1. Medium traffic volume & medium speed council road 4 lane 2 way undivided road
2. Two (2) of Two (2) Lanes Closed Northbound. Stop/slow controlling traffic
3. Traffic maintained via Stop/slow at all times.
4. Traffic control devices use and implemented as part of this TCP must meet AS 3.2.3
5. Pedestrians access maintained around works as per AS 2.3.7 Safe clearances must be maintained for access from traffic flow
6. Work area is to be clearly defined with traffic cones, barriers or fencing as per AS 1742.3 Section 2.4
7. Sequence for erection and removal of signs and devices must follow AS 1742.3 Section 2.5.3
8. TCP must be implemented by a certified and competent person and follow steps set out in AS 1742.3 Section 2.1
9. TCP must only be implemented during approved hours of road authority
10. The site must be inspected before TCP is implemented, during operation and pre-closedown as per AS 1742.3 Section 2.5.5
11. Duplication of signs may be required as per AS 1742.3 Section 3.5.5
12. The site must be monitored to avoid end of queue collisions as per AS 1742.3 Section 4.7.8
13. Any modifications made to this TCP must be noted in box provided
14. Construction vehicles shall not remain stationary in 'live traffic' lanes, unrestricted site access & egress must be maintained at all times

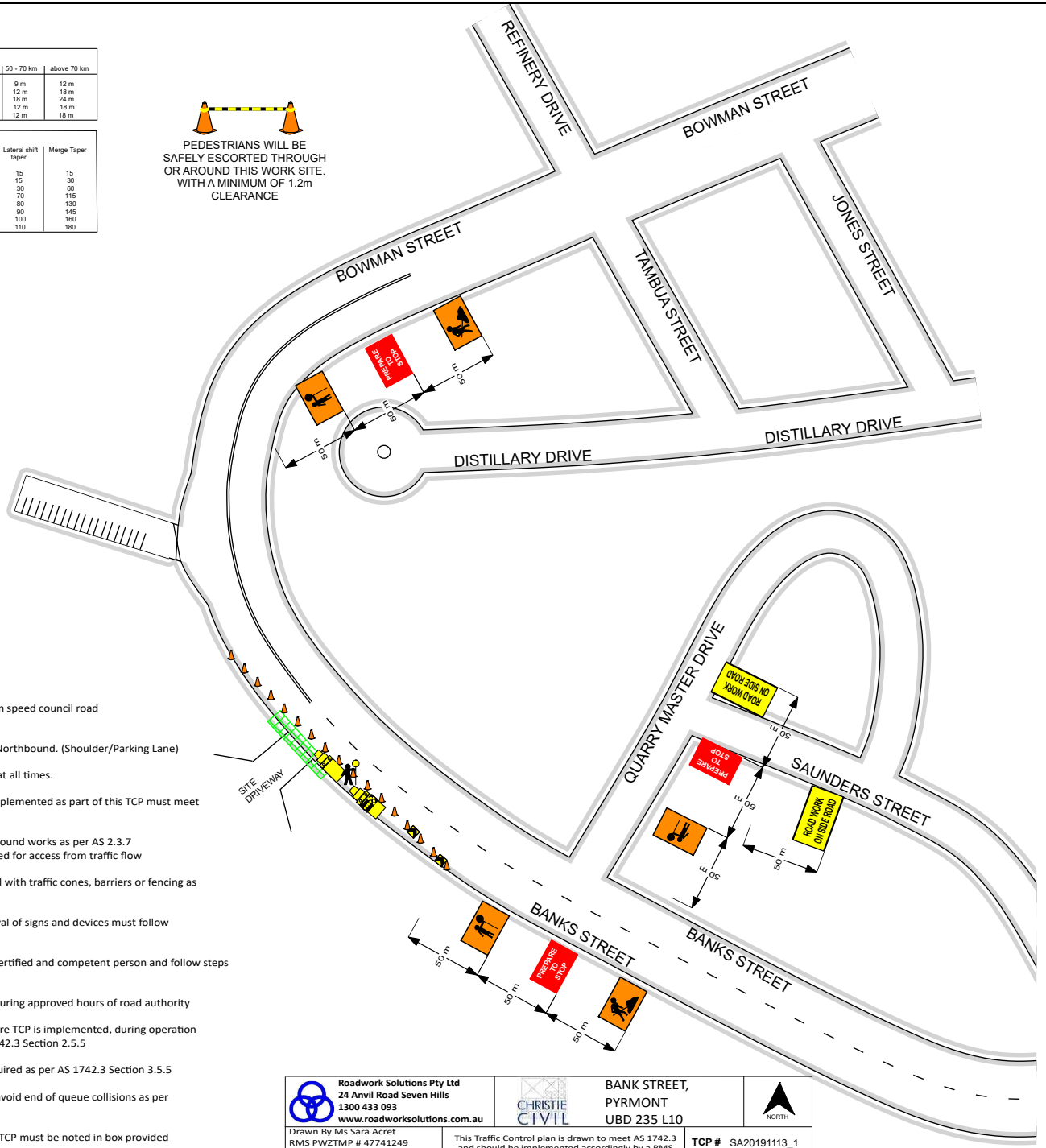
Roadwork Solutions Pty Ltd **24 Anvil Road Seven Hills** **1300 433 093** **www.roadworksolutions.com.au**	CHRISTIE CIVIL BANK STREET, PYRMONT UBD 235 L10	NORTH
Drawn By Ms Sara Acret RMS PWZTMP # 47741249 05/11/2019 NOT DRAWN TO SCALE	This Traffic Control plan is drawn to meet AS 1742.3 and should be implemented accordingly by a RMS qualified person. This plan can be altered by an accredited person with signed & dated changes. They then become responsible for any changes implemented.	**TCP #** SA20191105_1 **VERSION:** 001

www.invarion.com

Recommended Spacing of Cones/Bollards			
Purpose/Usage	Less 50 km	50 - 70 km	above 70 km
Merge Taper	4 m	9 m	12 m
Lateral Sift Taper	4 m	12 m	18 m
Shoulder Closure/Parking Lane	4 m	18 m	24 m
Lane Closure	4 m	12 m	18 m
Separating opposing traffic	4 m	12 m	18 m

Recommended Taper Lengths			
Speed of approaching Traffic	Traffic Controller at start of taper	Lateral shift taper	Merge Taper
45 km or less	15	15	15
46 - 55 km	15	15	30
56 - 65 km	30	30	60
66 - 75 km	N/A	70	115
76 - 85 km	N/A	80	130
86 - 95 km	N/A	90	145
96 - 105 km	N/A	100	160
Greater than 105 km	N/A	110	180

PEDESTRIANS WILL BE SAFELY ESCORTED THROUGH OR AROUND THIS WORK SITE. WITH A MINIMUM OF 1.2m CLEARANCE



NOTES:-

1. Medium traffic volume & medium speed council road
   4 lane 2 way undivided road
2. One (1) of Two (2) Lanes Closed Northbound. (Shoulder/Parking Lane)
3. Traffic maintained past worksite at all times.
4. Traffic control devices use and implemented as part of this TCP must meet AS 3.2.3
5. Pedestrians access maintained around works as per AS 2.3.7
   Safe clearances must be maintained for access from traffic flow
6. Work area is to be clearly defined with traffic cones, barriers or fencing as per AS 1742.3 Section 2.4
7. Sequence for erection and removal of signs and devices must follow AS 1742.3 Section 2.5.3
8. TCP must be implemented by a certified and competent person and follow steps set out in AS 1742.3 Section 2.1
9. TCP must only be implemented during approved hours of road authority
10. The site must be inspected before TCP is implemented, during operation and pre-closedown as per AS 1742.3 Section 2.5.5
11. Duplication of signs may be required as per AS 1742.3 Section 3.5.5
12. The site must be monitored to avoid end of queue collisions as per AS 1742.3 Section 4.7.8
13. Any modifications made to this TCP must be noted in box provided
14. Construction vehicles shall not remain stationary in 'live traffic' lanes, unrestricted site access & egress must be maintained at all times

Roadwork Solutions Pty Ltd **24 Anvil Road Seven Hills** **1300 433 093** **www.roadworksolutions.com.au**	CHRISTIE CIVIL BANK STREET, PYRMONT UBD 235 L10	NORTH
Drawn By Ms Sara Acret RMS PWZTMP # 47741249 13/11/2019 NOT DRAWN TO SCALE	This Traffic Control plan is drawn to meet AS 1742.3 and should be implemented accordingly by a RMS qualified person. This plan can be altered by an accredited person with signed & dated changes. They then become responsible for any changes implemented	**TCP #** SA20191113_1 **VERSION:** 001

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APPENDIX THREE – LOCATION RISK ASSESSMENT

The below Risk Assessment is a previous card from another site. A job specific card will be developed for Bank Street Commercial Wharf once works on site commence.

Roadwork **Solutions** Pty Ltd
24 Anvil Road Seven Hills
ABN 26 143 305 444
1300 433 093

Traffic Control
Location Risk Assessment

Location: **Princes Highway x Bath Road, Kirrawee**

Type of Work: **Building Pedestrian Bridge.**

Date: **28/02/2019** Time: Completed By: **Sara Acret PWZ TMP #47741249**

The answers to the below questions will be used in conjunctions with AS 1742.3 & the RMS 'Traffic Control at Worksites' Manual *Version 4*, to design a traffic control plan of the work site. This may include the installation of additional signs or changes to the sign locations. Safety of workers & the public are paramount

		(Circle)
1.	Will the location of any intersections, exit/entry ramps within the worksite increase the risk to workers?	YES / (NO)
2.	Will vehicles be entering or leaving the worksite from private or commercial driveways?	YES / (NO)
	If yes will extra safety measures be required?	(YES) / NO
3.	Is there adequate sight distance for, signage on approaches to worksite?	(YES) / NO
4.	Are signs & traffic controllers visible (not in shade etc)?	(YES) / NO
5.	Will traffic control measures be safe & suitable for the Approach speeds of traffic?	(YES) / NO (Speed lowered to 40km)
6.	Will work be undertaken during peak times?	(YES) / NO
	If yes will extra safety measures be required?	(YES) / NO
7.	Will bus stops/routes (including school) be affected?	YES / (NO)
8.	Will pedestrians be affected?	(YES) / NO
9.	Will cyclists be affected?	(YES) / NO
10.	Are there any services that might be a risk to construction vehicles, plant or crew (Power lines etc) ?	(YES) / NO
11.	Is the time of day significant (night works, sun rise/set) ?	(YES) / NO
12.	Is a RMS Road Occupancy Licence Required?	(YES) / NO

Form 002 – Location Risk Assessment Issue 1

Figure 16 - Location Risk Assessment (Sample)

APPENDIX FOUR – TRAFFIC CONTROL AT WORK SITES CHECKLIST

Traffic control at worksites checklist

NSW GOVERNMENT | Transport Roads & Maritime Services

Project details

Project name								
Contractor				Contract no.				
Type of work				Duration of works				
Location								
Road configuration								
Date		Time		Inspector				
Design and inspect (orange card) certificate no.								
Is TCP being reviewed?	Yes ☐	No ☐		Has TCP been modified?	Yes ☐	No ☐		

Compliance

Yes ☐	No ☐	NCPN or memo no.			
Details					
Surveillance officer name		Signature		Date	

Follow-up action

	Yes	No		Yes	No
Product non-conformance?	☐	☐	System non-conformance?	☐	☐
Contractor generated an NCR?	☐	☐	Contractor generated a CAR?	☐	☐
Comments					

Matters arising	NCPN no.: Date:	Contractor's NCR no.: Date:	CAR no.: Date:
Closed out:	RMS representative name	Signature	Date

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
1	**Traffic Control Plan (TCP)**							
1.1	Does the work require any of: • Traffic Management Plan (TMP) • Traffic Control Plan (TCP) • Traffic Staging Plan (TSP) • Vehicle Movement Plan (VMP)	RMS QA Spec G10	☐	☐	☐			
1.2	Are all required plans approved?	4.3	☐	☐	☐			
1.3	Is the approved TCP on site?	4.3.1/2	☐	☐	☐	☐	☐	☐
1.4	Have signs and devices been set out as in the TCP?	4.3.1/2				☐	☐	☐
1.5	If modifications have been made, are they approved and marked on the TCP?	4.5	☐	☐	☐	☐	☐	☐
1.6	Has a TCWS Appendix D Risk Assessment (RA) been completed and attached to the TCP?	App D	☐	☐	☐			
1.7	Does the RA cover the risks associated with the work site?					☐	☐	☐
1.8	Does the RA cover the current risks, including 'out of hours' work?		☐	☐	☐	☐	☐	☐
1.9	Is the TCP relevant for the works in progress?	4.4.2	☐	☐	☐	☐	☐	☐
1.10	Has a Road Occupancy Licence been issued and is it being complied with?	RMS QA Spec G10	☐	☐	☐			
1.11	Are the requirements implemented for safe clearances to workers and pedestrians and traffic approach speeds?	3.6 9.3	☐	☐	☐	☐	☐	☐
1.12	Other							
Item #	**Comments (reference each comment to an item #)**							
2	**Roadworks Speed Zones (RSZ)**							
2.1	Have the RSZ been authorised?	8.2.6	☐	☐	☐			
2.2	Is a copy of the 'Speed Zone Authorisation' form held on site?	8.2.6	☐	☐	☐			
2.3	Has a 'Speed Zone Authorisation' form been sent to local Police?	8.2.6 (a)	☐	☐	☐			
2.4	Are records being kept of the times of RSZ installation?	8.2.7	☐	☐	☐			

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
2.5	Where an RSZ is in place, is the limit appropriate for the works being undertaken?	8.2.3	☐	☐	☐	☐	☐	☐
2.6	Are the speed limit/s operating within the approved times?	8.2.6	☐	☐	☐	☐	☐	☐
2.7	Is the length of the speed zone as per TCWS?	8.2.4 (b)	☐	☐	☐	☐	☐	☐
2.8	Are Advanced Speed Warning Signs used appropriately?	8.2.5 (a)				☐	☐	☐
2.9	Are speed signs duplicated at the start of the speed zone?	8.2.5 (a)				☐	☐	☐
2.10	Are speed signs of the correct size?	8.2.5(b)				☐	☐	☐
2.11	Are all signs installed at the correct spacing?	8.2.5 (a)				☐	☐	☐
2.12	Are all signs installed at the correct height?	8.2.5 (c)				☐	☐	☐
2.13	Have conflicting speed zone signs and pavement markings been covered / removed?	8.2.5(e)				☐	☐	☐
2.14	Have repeater signs been installed if required?	8.2.5 (a)				☐	☐	☐
2.15	Are 'ENFORCED' signs required and installed?	8.2.5 (f)	☐	☐	☐	☐	☐	☐
2.16	At the end of the work, has the pre-existing speed limit been reinstated?	8.2				☐	☐	☐
2.17	When signs are not in use, are they covered adequately?	3.4.1, 8.2	☐	☐	☐	☐	☐	☐
2.18	Other							
Item #	**Comments (reference each comment to an item #)**							
3	**Record keeping**							
3.1	Are records being kept for roadwork speed zones?	8.2.6	☐	☐	☐			
3.2	Are records kept as required in Appendix E?	6.1	☐	☐	☐			
3.2.1	• By the Works Supervisor?	6.1.1	☐	☐	☐			
3.2.2	• By the Team Leader?	6.1.2	☐	☐	☐			
3.3	Is RA available on site and kept with TCP?	App D	☐	☐	☐			
3.4	Where portable traffic signals (PTS) are used, is the form Record of Approval and Use completed and retained?	T 10.7	☐	☐	☐			

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
3.5	Other							
Item #	Comments (reference each comment to an item #)							
4	Traffic Controllers (TCs)							
4.1	Are Traffic Controllers (TCs) being engaged? (Night work – 4.13)	8.1	☐	☐	☐	☐	☐	☐
4.2	Is the correct number of TCs being engaged?	8.13	☐	☐	☐	☐	☐	☐
4.3	Have TCs certificates been sighted and the details been recorded?	QA Spec G10	☐	☐	☐			
4.4	Is TCs' high visibility clothing acceptable and not faded?	8.1.1(a)				☐	☐	☐
4.5	Are all Traffic Controllers displaying the RMS logo and the label 'Authorised Traffic Controller'?	8.1.1(c)				☐	☐	☐
4.6	Is the traffic speed restricted to a max of 60 km/h?	8.1.1(d)				☐	☐	☐
4.7	Is the sight distance to approaching traffic 1.5D or greater?	8.1.1(e)				☐	☐	☐
4.8	Do TCs have a clear escape route?	8.1.4				☐	☐	☐
4.9	Has provision been made to prevent end of queue accidents?	8.1.1(e)				☐	☐	☐
4.10	Are TCs able to communicate with each other (line of sight, two way radios, additional TCs)?	8.1.1(f) 3.5.7				☐	☐	☐
4.11	Are the Prepare to Stop (T1-18) and Traffic Controller Ahead (T1-34, T1-200-2/3) signs correctly displayed?	8.1.1 (a) 8.1.4				☐	☐	☐
4.12	Are the above signs covered or removed when not required?	8.1.4				☐	☐	☐
4.13	Are TCs controlling traffic in accordance with Instructions to Traffic Controllers?	8.1.4				☐	☐	☐

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
4.14	If TCs are being engaged for night work: • Are they wearing approved clothing? • Are they safely lit and visible? • Are they using appropriate communication tools? • Are they using lighted wands?	8.1.5				☐	☐	☐
4.15	Other							
Item #	Comments (reference each comment to an item #)							
5	Portable Traffic Signals (PTS)							
5.1	Are PTS being used?		☐	☐	☐			
5.2	Are the PTS formally approved for use? (this may be included on the TCP approval)	4.3.3 10.5	☐	☐	☐			
5.3	Are the PTS marked as complying with RMS Specification PTS/3?	10.2	☐	☐	☐			
5.4	Are the PTS correctly registered?		☐	☐	☐	☐	☐	☐
5.5	Is the approach speed of traffic reduced to 60 km/h or less?	10.7.2	☐	☐	☐	☐	☐	☐
5.6	Is minimum sight distance of 150 metres provided?	10.7.3	☐	☐	☐	☐	☐	☐
5.7	Have the PTS been correctly sighted and established?	10.7.1	☐	☐	☐	☐	☐	☐
5.8	Has a holding line been marked on the roadway?	TCP 43				☐	☐	☐
5.9	Are procedures in place to review the endof queue when PTS are operating?	3.5.7	☐	☐	☐	☐	☐	☐
5.10	Have all signs associated with PTS been erected correctly?	TCP 43				☐	☐	☐
5.11	Other							
Item #	Comments (reference each comment to an item #)							

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
6	**Flashing Arrow Sign (FAS)**							
6.1	Is an FAS being used?		☐	☐	☐	☐	☐	☐
6.2	Where FAS are being used, are they marked as complying with RMS Specification FAS/4 or FAS/5?	11.2				☐	☐	☐
6.3	Is it located correctly?	11.4.4				☐	☐	☐
6.4	Is the sign of the correct size?	3.2.10 11.4.1				☐	☐	☐
6.5	Is it being used in the correct Mode of Operation?	Table 11.1				☐	☐	☐
6.6	If Lane Status signs (T2-6 series) are being used in conjunction with FAS, is the message to the motorists consistent?					☐	☐	☐
6.7	Other							
Item #	**Comments (reference each comment to an item #)**							
7	**Variable Message Sign (VMS)**							
7.1	Is a variable message sign being used, as specified in TCWS?	3.2.8	☐	☐	☐	☐	☐	☐
7.2	Is the message related to the road or bridge works correct?	3.2.9				☐	☐	☐
7.3	Are there less than 4 words per screen and no more than 2 screens on display?	3.2.9				☐	☐	☐
7.4	Is the sign located in a safe position?					☐	☐	☐
7.5	Is the VMS fitted with flashing blue and red lights? If yes, are they switched off / removed?					☐	☐	☐
7.6	Other							
Item #	**Comments (reference each comment to an item #)**							
8	**Safety barriers**							

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
8.1	Are safety barriers installed correctly?	9.6				☐	☐	☐
8.2	Do the barriers comply with the requirements?	9.6 3.3.7				☐	☐	☐
8.3	Where barrier sections are used as Safety Barriers, are they individually marked or verified as complying with AS3845?	9.6				☐	☐	☐
8.4	Where non rigid barrier systems are used as safety barriers, is work behind the barrier prohibited from the deflection zone?	9.6.5				☐	☐	☐
8.5	Are water filled safety barrier elements full of water?					☐	☐	☐
8.6	Is the safety barrier erected as designed (incorporating end protection)?	9.6.1	☐	☐	☐	☐	☐	☐
8.7	Has the approach speed of traffic been reduced to the barrier design rating?		☐	☐	☐	☐	☐	☐
8.8	Other							
Item #	Comments (reference each comment to an item #)							
9	**Signs and devices**							
9.1	Are all signs and devices in good condition?	4.4.1				☐	☐	☐
9.2	Are the signs clearly visible and not affected by other signs, plant items, vegetation, shade, light glare etc?	3.1.1				☐	☐	☐

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
9.3	Are sign faces in compliance with AS1742.3 and have Class 1 retroreflective material as required by AS1906.1? Note: for the purpose of sign spacing, the value of D shall be the greater, of the existing speed limit, or the actual approach speed of traffic; NOT a value of any road / bridge work speed limit.	3.2.1				☐	☐	☐
9.4	Are the correct sign sizes being used? (A, B, C, or D) (Note: sign sizes are in millimeters – given in AS1742.1 with each sign face)	3.2.2	☐	☐	☐	☐	☐	☐
9.5	Are signs duplicated, where required?	3.2.4	☐	☐	☐	☐	☐	☐
9.6	Are signs erected at the correct height and position?	3.2.8				☐	☐	☐
9.7	Are the signs erected to give the correct sight distance?	3.2.8				☐	☐	☐
9.8	Are signs displayed on frangible mounts?	3.2.7				☐	☐	☐
9.9	Are barrier boards sighted at right angles to the flow of traffic at a maximum spacing of 100m?	3.3.1				☐	☐	☐
9.10	Are there any contradictory or superfluous signs, devices or markings?	4.3.2				☐	☐	☐
9.11	Have the needs of pedestrians been provided for?	9.3	☐	☐	☐	☐	☐	☐
9.12	Have the needs of cyclists been provided for?	9.4	☐	☐	☐	☐	☐	☐
9.13	Are all property accesses to the site controlled?	9.7	☐	☐	☐	☐	☐	☐
9.14	Are all cones and bollards installed at the correct spacing?	5.2.2				☐	☐	☐
9.15	Are the correct sized cones and bollards being used?	3.3.3	☐	☐	☐	☐	☐	☐
9.16	Where tapers are used, have they been identified as lateral shift or merge tapers and are they the correct length?	5.2 Table 5.2	☐	☐	☐	☐	☐	☐
9.17	Where there are 3 lanes of traffic or more in one direction and two lanes are closed, are the separate merge tapers of the correct length?	5.2.9	☐	☐	☐	☐	☐	☐
9.18	Are the 2 tapers separated by at least 1.5D?	5.2.9	☐	☐	☐	☐	☐	☐
9.19	Where work is beyond a crest or curve, has the taper been established prior to the crest or curves, with a sight distance from the motorist to the taper of 100m?	9.9.2				☐	☐	☐
9.20	Where temporary pavement marking and markers are used, do they comply with the requirements of TCWS manual?	3.3.6	☐	☐	☐	☐	☐	☐
9.21	Other							
Item #	Comments (reference each comment to an item #)							

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
10	**End of queue**							
10.1	Has the potential for end of queue accidents and proposed appropriate actions been considered in the risk assessment?	3.5.7(a)	☐	☐	☐			
10.2	Has an assessment of expected queue length been undertaken / documented?	3.5.7(b)	☐	☐	☐	☐	☐	☐
10.3	Has protection been provided where the end of queue is likely to be within D of the first downstream PTS sign?	3.5.7(c)	☐	☐	☐	☐	☐	☐
10.4	Is a sight distance between approaching motorists and the end of queue, being maintained at greater than 2D (open road areas) and 1.5D (build up areas)?	3.5.7(c)				☐	☐	☐
10.5	Where the first PTS sign is more than 4D from the control point, are repeater signs placed at intervals of not more than 4D?	3.5.7(c)	☐	☐	☐	☐	☐	☐
10.6	Is the traffic queue monitored at all times during the course of the work?	3.5.7(b)	☐	☐	☐	☐	☐	☐
10.7	Other							
Item #	**Comments (reference each comment to an item #)**							
11	**Workers on foot near plant**							
11.1	Have workers working within 3 metres of plant been trained / briefed / tool-boxed on requirements of TCWS and RMS TIP Sheet?	9.23	☐	☐	☐	☐	☐	☐
11.2	Where workers are working close to revolving plant, are satisfactory risk controls in place?	9.23	☐	☐	☐	☐	☐	☐
11.3	Has a VMP been developed where the conditions listed in TCWS occur on site?	9.23.1	☐	☐	☐	☐	☐	☐
11.4	Are spotters being used near reversing plant or delivery vehicles?	9.23	☐	☐	☐	☐	☐	☐

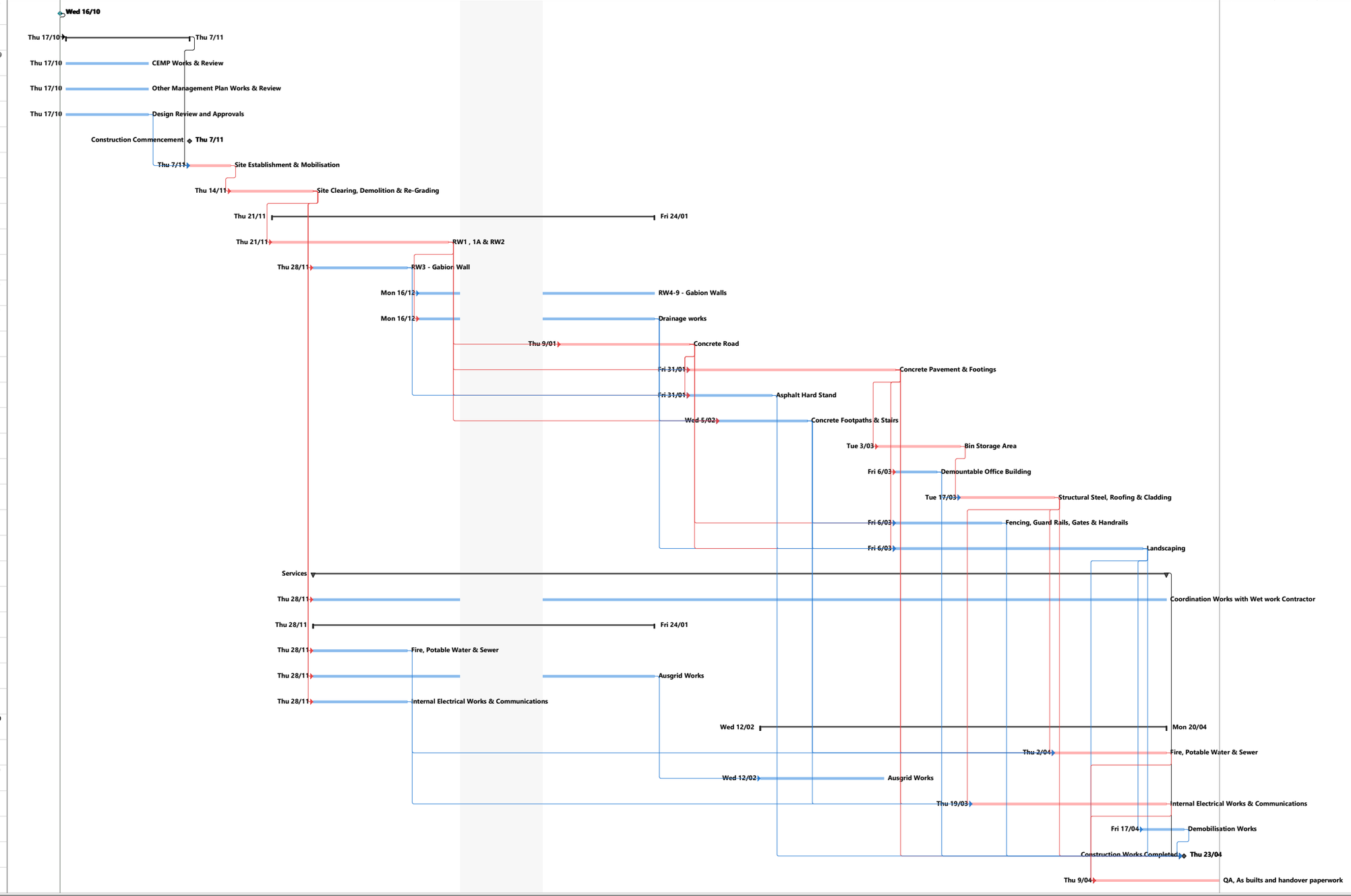
No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
11.5	Other							
Item #	Comments (reference each comment to an item #)							
12	Works traffic (VMPs)							
12.1	Have acceleration and deceleration lanes been provided?	7.2	☐	☐	☐	☐	☐	☐
12.2	Are U turns being undertaken safely, related to sight distances?	7.3	☐	☐	☐	☐	☐	☐
12.3	Are reversing movements being undertaken safely?	7.3	☐	☐	☐	☐	☐	☐
12.4	Are signs provided for stock pile sites etc as required by TCWS?	7.7	☐	☐	☐	☐	☐	☐
12.5	Are median crossovers being used correctly?	7.8	☐	☐	☐	☐	☐	☐
12.6	Has a VMP been approved and provided? Written VMP shall be prepared in 100km/h zones	7.5, 7.6 9.23.1	☐	☐	☐			
12.7	Does the person authorising the VMP have appropriate traffic control qualifications?		☐	☐	☐	☐	☐	☐
12.8	Have access and egress to the site been safely provided?	7.2	☐	☐	☐	☐	☐	☐
12.9	Are delivery vehicles required to report to a designated location / person? Is it happening on site?	9.23	☐	☐	☐	☐	☐	☐
12.10	Other							
Item #	Comments (reference each comment to an item #)							
13	Miscellaneous							
13.1	For intermittent work, are all requirements being met?	9.1.2	☐	☐	☐	☐	☐	☐
13.2	Where a spotter is used, are all requirements being met?	9.1.2	☐	☐	☐	☐	☐	☐
13.3	For mobile work, are all requirements being met?	9.17	☐	☐	☐	☐	☐	☐

No.	Activity	Reference	Conforms					
			Desktop review			Field		
			Yes	No	N/A	Yes	No	N/A
13.4	If the work is conducted at night, are all requirements being met?	9.2	☐	☐	☐	☐	☐	☐
13.5	Where travelling plant or vehicles travel slower than 20 km/h below the normal road speed limit, do they comply with the requirements of TCWS?	9.1.3 9.1.10	☐	☐	☐	☐	☐	☐
13.6	Other							
Item #	Comments (reference each comment to an item #)							

APPENDIX FIVE – CONSTRUCTION PROGRAM

Bank Street Commercial Wharf – Dry Works Package
CONSTRUCTION PROGRAM RMS18.0000303001.0611

Construction Traffic Management Plan

16.10.19

ID	Task Name	Start
1	CONTRACT AWARD	Wed 16/10/19
2	**Prepare Project Plans**	**Thu 17/10/19**
3	CEMP Works & Review	Thu 17/10/19
4	Other Management Plan Works & Review	Thu 17/10/19
5	Design Review and Approvals	Thu 17/10/19
6	**Construction Commencement**	Thu 7/11/19
7	Site Establishment & Mobilisation	Thu 7/11/19
8	Site Clearing, Demolition & Re-Grading	Thu 14/11/19
9	**Retaining walls**	**Thu 21/11/19**
10	RW1 , 1A & RW2	Thu 21/11/19
11	RW3 - Gabion Wall	Thu 28/11/19
12	RW4-9 - Gabion Walls	Mon 16/12/19
13	Drainage works	Mon 16/12/19
14	Concrete Road	Thu 9/01/20
15	Concrete Pavement & Footings	Fri 31/01/20
16	Asphalt Hard Stand	Fri 31/01/20
17	Concrete Footpaths & Stairs	Wed 5/02/20
18	Bin Storage Area	Tue 3/03/20
19	Demountable Office Building	Fri 6/03/20
20	Structural Steel, Roofing & Cladding	Tue 17/03/20
21	Fencing, Guard Rails, Gates & Handrails	Fri 6/03/20
22	Landscaping	Fri 6/03/20
23	**Services**	**Thu 28/11/19**
24	Coordination Works with Wet work Contractor	Thu 28/11/19
25	**Underground Works for:-**	**Thu 28/11/19**
26	Fire, Potable Water & Sewer	Thu 28/11/19
27	Ausgrid Works	Thu 28/11/19
28	Internal Electrical Works & Communications	Thu 28/11/19
29	**Above Ground Works for:-**	**Wed 12/02/20**
30	Fire, Potable Water & Sewer	Thu 2/04/20
31	Ausgrid Works	Wed 12/02/20
32	Internal Electrical Works & Communications	Thu 19/03/20
33	Demobilisation Works	Fri 17/04/20
34	Construction Works Completed	Thu 23/04/20
35	QA, As builts and handover paperwork	Thu 9/04/20