AGENDA

LOCAL TRAFFIC COMMITTEE MEETING

JULY 2020

The July 2020 meeting of the Inner West Local Traffic Committee will be held electronically with the Agenda emailed to Members for review. All comments are requested to be returned to Council by 5.00pm Monday 6 July 2020.

Location Remote Meeting

Function of the Local Traffic Committee

Background

Roads and Maritime Services (RMS) is legislated as the Authority responsible for the control of traffic on all NSW Roads. The RMS has delegated certain aspects of the control of traffic on local roads to councils. To exercise this delegation, councils must establish a local traffic committee and obtain the advice of the RMS and Police. The Inner West Council Local Traffic Committee has been constituted by Council as a result of the delegation granted by the RMS pursuant to Section 50 of the Transport Administration Act 1988.

Role of the Committee

The Local Traffic Committee is primarily a technical review and advisory committee which considers the technical merits of proposals and ensures that current technical guidelines are considered. It provides recommendations to Council on traffic and parking control matters and on the provision of traffic control facilities and prescribed traffic control devices for which Council has delegated authority. These matters are dealt with under **Part A** of the agenda and require Council to consider exercising its delegation.

In addition to its formal role as the Local Traffic Committee, the Committee may also be requested to provide informal traffic engineering advice on traffic matters not requiring Council to exercise its delegated function at that point in time, for example, advice to Council's Development Assessment Section on traffic generating developments. These matters are dealt with under **Part C** of the agenda and are for information or advice only and do not require Council to exercise its delegation.

Committee Delegations

The Local Traffic Committee has no decision-making powers. The Council must refer all traffic related matters to the Local Traffic Committee prior to exercising its delegated functions. Matters related to State Roads or functions that have not been delegated to Council must be referred directly to the RMS or relevant organisation.

The Committee provides recommendations to Council. Should Council wish to act contrary to the advice of the Committee or if that advice is not supported unanimously by the Committee members, then the Police or RMS have an opportunity to appeal to the Regional Traffic Committee.

Committee Membership & Voting

Formal voting membership comprises the following:

- one representative of Council as nominated by Council;
- one representative of the NSW Police from each Local Area Command (LAC) within the LGA, being Newtown, Marrickville, Leichhardt and Ashfield LAC's.
- one representative from the RMS; and
- State Members of Parliament (MP) for the electorates of Summer Hill, Newtown, Heffron, Canterbury, Strathfield and Balmain or their nominees.

Where the Council area is represented by more than one MP or covered by more than one Police LAC, representatives are only permitted to vote on matters which effect their electorate or LAC.

Informal (non-voting) advisors from within Council or external authorities may also attend Committee meetings to provide expert advice.

Committee Chair

Council's representative will chair the meetings.

AGENDA

1 Apologies

2 Disclosures of Interest

3 Confirmation of Minutes **Page**

4 Matters Arising from Council's Resolution of Minutes

5 Part A – Items Where Council May Exercise Its Delegated Functions

Traffic Matters

Parking Matters

Nil at the time of printing.

Late Items

Nil at time of printing.

6 Part B - Items for Information Only

7 Part C - Items for General Advice

8 General Business

9 Close of Meeting

Minutes of Meeting of Local Traffic Committee Meeting

Held electronically in June 2020

ACKNOWLEDGEMENT OF COUNTRY BY CHAIRPERSON

I acknowledge the Gadigal and Wangal people of the Eora nation on whose country we are meeting today, and their elders past and present.

COMMITTEE REPRESENTATIVES PRESENT

Clr Victor Macri	Councillor – Midjuburi-Marrickville Ward (Chair)
Bill Holliday	Representative for Jamie Parker MP, Member for Balmain
Chris Woods	Representative for Ron Hoenig MP, Member for Heffron
Cathy Peters	Representative for Jenny Leong MP, Member for Newtown
Maryanne Duggan	Representative for Jodi McKay MP, Member for Strathfield
SC Tony Kenny	NSW Police – Inner West Police Area Command
Sgt Trudy Crowther	NSW Police – Burwood Police Area Command
Tanmila Samin Islam	Transport for NSW (TfNSW)

NON VOTING MEMBERS IN ATTENDANCE

Clr Marghanita da Cruz	Councillor – Gulgadya-Leichhardt Ward (Alternative Chair)
Manod Wickramasinghe	IWC's Traffic and Transport Planning Manager
Adrian Prichard	Transit Systems – Inner West Bus Services
Colin Jones	Inner West Bicycle Coalition
Christina Ip	IWC's Business Administration Officer

VISITORS

Nil.

APOLOGIES:

SC Stephen Flanagan	NSW Police – Leichhardt Police Area Command

DISCLOSURES OF INTERESTS:

Nil.

CONFIRMATION OF MINUTES

The minutes of the Local Traffic Committee Meeting held in May 2020 were confirmed.

MATTERS ARISING FROM COUNCIL'S RESOLUTION OF MINUTES

The Local Traffic Committee recommendations of its meeting held in May 2020 were adopted at Council's meeting held on 26 May 2020.

EMAIL CONFIRMATION OF OFFICER'S RECOMMENDATION:

The representative for NSW Police – Inner West supported the Officer's recommendations for the items in their PAC.

The Transit Systems representative supported all the Officer's recommendations.

LTC0620 Item 1 Croydon Road, Croydon - Bus priority infrastructure program Parramatta Road intersection improvements (Gulgadya-Leichhart Ward/ Strathfield Electorate/ Burwood PAC)

SUMMARY

Transport for NSW (TfNSW) proposes to undertake improvements to the intersection of Parramatta Road, Arlington Street and Croydon Road to help improve turning paths and reduce conflict and congestion for buses and general traffic at this intersection. The proposal would also improve intersection capacity and efficiency, particularly on Croydon Road on the approach to the intersection, so vehicles can make better use of the lanes at the intersection.

Under this program, Bus stops either side of Croydon Road, just south of Parramatta Road, and Bus stops either side of Croydon Road at Australia Street will be amalgamated from 4 down to 2 stops. Lane and centreline marking will be extended in Croydon Road from Paramatta Road up to West Street and existing part-time 'No Stopping' restriction operational times will be extended.

Officer's Recommendation

THAT support be given for the following changes in Croydon Road, Croydon, in line with the RMS plan 2019/000987 as shown in Attachment 2.:

1. The Bus Stop (ID 213235) on the western side of Croydon Road, 30 metres south of Parramatta Road, be removed and the area be replaced with 'No Stopping' restrictions;

2. The Bus Stop (ID 213234) on the western side of Croydon Road, opposite Australia Street, be removed;

3. The Bus Stop (ID 213236) on the eastern side of Croydon Road, 65 metres south of Parramatta Road, be removed and the area be reassigned with 'No Parking' restrictions;

4. The Bus Stop (ID 213237) on the eastern side of Croydon Road, just north of Australia Street, be removed;

5. A 10 metre 'No Stopping' zone be installed on the eastern corner side of Croydon Road, north of Australia Street;

6. That a new 24m 'Bus zone' and 10m statutory 'No Stopping' be provided on the western side of Croydon Road, just south of Dalmar Street;

7. That a new 18.5m 'Bus zone' and 10m statutory 'No Stopping' zone be provided on the eastern side of Croydon Road, just south of Sunbeam Avenue;

8. The pedestrian (arm) crossing to the signals at the intersection of Croydon Road and Parramatta Road be widened, re-surfaced and re-line marked;

9. The part-time 'No Stopping' on the western side of Croydon Road, between Dalmar Street and Sophia Lane, be extended to operate in time from '6.30am-9.30am., 3.30pm-6.30pm M-F' to '6.00am-6.00pm M-F'; and

10. The existing lane marking (L1) and (BB) centerlines in Croydon Road be extended from Parramatta Road towards West Street.

DISCUSSION

The representative for the Member for Strathfield and the Burwood PAC representative requested that a right turn arrow, to assist movements from Croydon Road into Parramatta Road (city bound), be reconsidered by TfNSW to relieve congestion and prioritise city bound bus movements. Officers will forward this request to the TfNSW project manager for consideration.

Clr da Cruz asked Officers to comment on a request from the community that was referred to Council to consider line marking at Dalmer Street, Bay Street and Croydon Road to help prevent blocking of these intersections. Council Officers stated that "Do not queue across intersection" markings have typically not been supported by TfNSW except where it is perceived as an emergency access point (e.g. Fire Brigade, Police stations). It is noted that congestion at this location on Croydon Road is normally contained between Parramatta Road and Dalmar Street and this proposal seeks to reduce that congestion and hence reduce the frequency of the intersection being obstructed.

In response to a request from the community, Clr da Cruz asked if more measures could be implemented to encourage westbound drivers to stop behind the linemarking at traffic signals on Parramatta Road. Council Officers advised that appropriate linemarking setbacks and complementary traffic signal setbacks are generally the most appropriate way to alter motorist behaviour; however, they will seek advice from TfNSW regarding alternative strategies.

Clr da Cruz requested that TfNSW fund a safe pedestrian crossing point (pedestrian refuge or pedestrian (zebra) crossing) adjacent to the relocated bus stops, noting the walking distance to the signalised crossing of Croydon Road at Paramatta Road has increased to 150-200m due to this project. Council Officers will request the TfNSW project manager investigate this matter.

The Committee members agreed with the Officer's recommendation.

COMMITTEE RECOMMENDATION

THAT support be given for the following changes in Croydon Road, Croydon, in line with the RMS plan 2019/000987 as shown in Attachment 2.:

1. **The Bus Stop (ID 213235) on the western side of Croydon Road, 30 metres south of Parramatta Road, be removed and the area be replaced with 'No Stopping' restrictions;**

2. **The Bus Stop (ID 213234) on the western side of Croydon Road, opposite Australia Street, be removed;**

3. **The Bus Stop (ID 213236) on the eastern side of Croydon Road, 65 metres south of Parramatta Road, be removed and the area be reassigned with 'No Parking' restrictions;**

4. **The Bus Stop (ID 213237) on the eastern side of Croydon Road, just north of Australia Street, be removed;**

5. **A 10 metre 'No Stopping' zone be installed on the eastern corner side of Croydon Road, north of Australia Street;**

6. **That a new 24m 'Bus zone' and 10m statutory 'No Stopping' be provided on the western side of Croydon Road, just south of Dalmar Street;**

7. **That a new 18.5m 'Bus zone' and 10m statutory 'No Stopping' zone be provided on the eastern side of Croydon Road, just south of Sunbeam Avenue;**

8. **The pedestrian (arm) crossing to the signals at the intersection of Croydon Road and Parramatta Road be widened, re-surfaced and re-line marked;**

9. **The part-time 'No Stopping' on the western side of Croydon Road, between Dalmar Street and Sophia Lane, be extended to operate in time from '6.30am-9.30am., 3.30pm-6.30pm M-F' to '6.00am-6.00pm M-F'; and**

10. **The existing lane marking (L1) and (BB) centerlines in Croydon Road be extended from Parramatta Road towards West Street.**

For motion: Unanimous

LTC0620 Item 2 Smidmore Street, Marrickville – Marrickville Metro Expansion Works – Temporary Full Road Closure for an 18 Hour Overnight Period – To Install a Pedestrian Bridge (Midjuburi – Marrickville Ward / Newtown Electorate / Inner West PAC)

SUMMARY

Council has received an application from MLA Transport Planning (MLATP) for approval of a temporary full road closure of Smidmore Street, between Edinburgh Road and Murray Street, Marrickville for a period of 18 hours in order to install the pedestrian bridge connecting the existing and new Centres at Marrickville Metro.

Officer's Recommendation

THAT the proposed temporary full road closure of Smidmore Street , between Edinburgh Road and Murray Street, Marrickville for a period of 18 hours from 3:00pm on Wednesday, 1 July 2020 to 9:00am Thursday, 2 July 2020 (contingency period 2 weeks start date from Sunday 5 July 2020 – to 19 July 2020) be approved for the purpose of installing the pedestrian bridge connecting the existing and new Centres at Marrickville Metro subject to, but not limited to, the following conditions:

1. A Road Occupancy License be obtained by the applicant from the Transport Management Centre;

2. All affected residents and businesses, including the NSW Police Area Commander, Fire & Rescue NSW and the NSW Ambulance Services be notified in writing, by the applicant, of the proposed temporary full road closure at least 7 days in advance of the closure with the applicant making reasonable provision for stakeholders;

3. The occupation of the road carriageway must not occur until the road has been physically closed; and

4. Written concurrence being provided from Sydney Metro TSE Group to Council.

DISCUSSION

The Committee members agreed with the Officer's recommendation.

COMMITTEE RECOMMENDATION

THAT the proposed temporary full road closure of Smidmore Street , between Edinburgh Road and Murray Street, Marrickville for a period of 18 hours from 3:00pm on Wednesday, 1 July 2020 to 9:00am Thursday, 2 July 2020 (contingency period 2 weeks start date from Sunday 5 July 2020 – to 19 July 2020) be approved for the purpose of installing the pedestrian bridge connecting the existing and new Centres at Marrickville Metro subject to, but not limited to, the following conditions:

1. **A Road Occupancy License be obtained by the applicant from the Transport Management Centre;**

2. **All affected residents and businesses, including the NSW Police Area Commander, Fire & Rescue NSW and the NSW Ambulance Services be notified in writing, by the applicant, of the proposed temporary full road closure at least 7 days in advance of the closure with the applicant making reasonable provision for stakeholders;**

3. **The occupation of the road carriageway must not occur until the road has been physically closed; and**

4. **Written concurrence being provided from Sydney Metro TSE Group to Council.**

For motion: Unanimous

LTC0620 Item 3 Smidmore Street, Marrickville – Marrickville Metro Expansion Works – Temporary Full Road Closure for a Two Week Period – To Undertake Road Upgrade Works (Midjuburi – Marrickville Ward / Newtown Electorate / Inner West PAC)

SUMMARY

Council has received an application from MLA Transport Planning (MLATP) for approval of a temporary full road closure of Smidmore Street, between Murray Street and Marrickville Metro Dock 5 Access Driveway for a period of two weeks for the purpose of road works.

Officer's Recommendation

THAT the proposed temporary full road closure of Smidmore Street, between Murray Street and Marrickville Metro Dock 5 Access Driveway for a period of two weeks starting from Sunday, 12 July to Sunday, 26 July 2020 (contingency period Monday 27 July to Monday 10 August 2020) be approved for the purpose of road works subject to, but not limited to, the following conditions:

1. A Road Occupancy License be obtained by the applicant from the Transport Management Centre;

2. All affected residents and businesses, including the NSW Police Area Commander, Fire & Rescue NSW and the NSW Ambulance Services be notified in writing, by the applicant, of the proposed temporary full road closure at least 7 days in advance of the closure with the applicant making reasonable provision for stakeholders;

3. The occupation of the road carriageway must not occur until the road has been physically closed; and

4. Written concurrence being provided from Sydney Metro TSE Group to Council.

DISCUSSION

The Committee members agreed with the Officer's recommendation.

COMMITTEE RECOMMENDATION

THAT the proposed temporary full road closure of Smidmore Street, between Murray Street and Marrickville Metro Dock 5 Access Driveway for a period of two weeks starting from Sunday, 12 July to Sunday, 26 July 2020 (contingency period Monday 27 July to Monday 10 August 2020) be approved for the purpose of road works subject to, but not limited to, the following conditions:

1. **A Road Occupancy License be obtained by the applicant from the Transport Management Centre;**

2. **All affected residents and businesses, including the NSW Police Area Commander, Fire & Rescue NSW and the NSW Ambulance Services be notified in writing, by the applicant, of the proposed temporary full road closure at least 7 days in advance of the closure with the applicant making reasonable provision for stakeholders;**

3. **The occupation of the road carriageway must not occur until the road has been physically closed; and**

4. **Written concurrence being provided from Sydney Metro TSE Group to Council.**

For motion: Unanimous

LTC0620 Item 4 Campbell Street, St Peters - (New M5 Local Roads) Proposed Parking Restrictions in angle parking car park (Midjuburi - Marrickville Ward/ Heffron Electorate/ Inner West PAC)

SUMMARY

With the completion of the New M5 local roadworks in St Peters and the handover of the landscaped verges and on-street and off-street carparking spaces along Campbell Street, St Peters, Council has explored options to manage the new 26 space off-street angle parking in Campbell Street between Florence Street and St Peters Street, to best benefit the community and potential users. Local businesses and residents were consulted regarding what suitable timed-parking restrictions ought to be in place.

Officer's Recommendation

THAT the following restrictions be approved for the new 26 space off-street angle parking spaces adjacent to Campbell Street between Florence Street and St Peters Street;

1. Installation of '4P 6.00am – 6.00pm' zone along the 12 angle parking spaces from the western end;
2. Installation of 'P30 8.00am – 9.30am, 2.30pm – 4.00pm school days' & '4P 9.30am-2.30pm school days, 6.00am – 6.00pm other days' along the 12 angle parking spaces from the eastern end, excluding the mobility parking spaces; and
3. Installation of 'Mobility Parking Only' along the 2 disabled angle parking spaces from the eastern end.

DISCUSSION

The representative for the Member for Heffron requested that these restrictions be implemented as a matter of urgency to assist return to school arrangements.

The Committee members agreed with the Officer's recommendation.

COMMITTEE RECOMMENDATION

THAT the following restrictions be approved for the new 26 space off-street angle parking spaces adjacent to Campbell Street between Florence Street and St Peters Street;

1. **Installation of '4P 6.00am – 6.00pm' zone along the 12 angle parking spaces from the western end;**
2. **Installation of 'P30 8.00am – 9.30am, 2.30pm – 4.00pm school days' & '4P 9.30am-2.30pm school days, 6.00am – 6.00pm other days' along the 12 angle parking spaces from the eastern end, excluding the mobility parking spaces; and**
3. **Installation of 'Mobility Parking Only' along the 2 disabled angle parking spaces from the eastern end.**

For motion: Unanimous

LTC0620 Item 5 Hartley Street, Rozelle - Proposed Resident Parking Scheme (Baludarri-Balmain Ward/Balmain Electorate/Leichhardt PAC)

SUMMARY

Council has finalised an investigation into a Resident Parking Scheme (RPS) to address issues with long term parking by non-resident vehicles in Hartley Street, Rozelle between Brent Street and Victoria Road.

Officer's Recommendation

THAT a '2P 8am-10pm Mon-Fri, Permit Holders Excepted, Area R1' parking restriction be installed on both side of Hartley Street, on the frontage of residential houses in Hartley Street between Brent Street and Victoria Road, Rozelle.

DISCUSSION

The Committee noted that the Officer's recommendation incorrectly stated that the RPS will operate between 8am and 10pm. The RPS proposal had been consulted to operate between 8am and 6pm to be consistent with adjacent streets. It was agreed that the recommendation be amended accordingly.

Councillor da Cruz asked if visitor permits are available to residents who do not own a car. Council officers confirmed that all eligible properties will be entitled to visitor permits.

COMMITTEE RECOMMENDATION

THAT a '2P 8am-6pm Mon-Fri, Permit Holders Excepted, Area R1' parking restriction be installed on both sides of Hartley Street, on the frontage of residential houses in

Hartley Street between Brent Street and Victoria Road, Rozelle.

For motion: Unanimous

General Business

LTC0620 Item 6 Road safety around schools in Tempe

The representative for the Member for Heffron tabled a letter requesting for an investigation into changes to improve student safety and access for school buses around the schools in Tempe, in response to a bus colliding with the retaining wall at Tempe Public School on 18 February 2020.

LTC0620 Item 7 Illuminated sign outside Haberfield Rowers Club

The representative for the Member for Balmain asked for an update to the enquiry made at the May 2020 meeting regarding the glare from the Haberfield Rowers Club illuminated sign on the City West Link. Council Officers advised that this matter had been referred to Council's Compliance team and results of their investigation will be provided when available.

LTC0620 Item 8 Road safety at intersection of Stevens Lane and Fotheringham Lane, Marrickville

The representative for the Member for Newtown stated that a resident made representations to the Office of Jenny Leong MP regarding safety at the intersection of Stevens Lane and Fotheringham Lane, Marrickville. The resident stated that drivers aggressively use the laneways as rat runs while residents walk or ride bikes with children. The representative requested that Council investigate providing extra measures to improve safety at this intersection. In addition, Council was requested to review Council's polices on laneways in the LGA with a view to implementing speed restrictions and traffic calming measures on all of them to improve safety for residents.

LTC0620 Item 9 Road safety around Corunna Road, Westbourne Street and Cannon Streets, Stanmore

The representative for the Member for Newtown asked for an update on the investigation into concerns raised by a resident in 2019 regarding vehicles using the back streets of Corunna Road, Westbourne Street and Cannon Streets to avoid Parramatta Road and the lack of pedestrian crossings in these streets. At the time these concerns were raised, Council Officers had indicated that the resident's concerns and request would be considered in the next Local Area Traffic Management Scheme review for Stanmore North – Area 2.

LTC0620 Item 10 Safety at the intersection of Edgeware Road, Alice Street and Llewellyn Street, Marrickville

In reference to concerns raised at the February 2020 meeting, the representative for the Member for Newtown asked for a progress update on the investigation to improve safety at the intersection of Edgeware Road, Alice Street and Llewellyn Street, Marrickville.

LTC0620 Item 11 Temporary extension of pedestrian and cycling space

The representative for the Member for Newtown has requested information on the areas in Inner West that will be temporarily extended to provide more pedestrian and cycling space as a result of the coronavirus emergency.

This concluded the business of the meeting.

Item 1

Item No: **LTC0720 Item 1**

Subject: **TERRACE ROAD / NESS AVENUE, DULWICH HILL – TEMPORARY FULL ROAD CLOSURE OF RAIL UNDERPASS JUST NORTH OF THE ROUNDABOUT AT EWART STREET – SYDNEY METRO (SSJ) CONTINUATION OF EARLY ENABLING WORKS ON T3 LINE (DJARRAWUNANG-ASHFIELD WARD / SUMMER HILL ELECTORATE / INNER WEST PAC)**

Prepared By: Jennifer Adams - Engineer – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

An application has been received from Sydney Metro (SSJ) for the temporary full road closure of the rail underpass on Terrace Road / Ness Avenue just north of the roundabout at Ewart Street, Dulwich Hill for a two day period being 12.00am Saturday, 8 August 2020 until 12.00am Monday, 10 August 2020 in order to carry out the continuation of early enabling works on the Rail bridge and the standing of an Elevated Work Platform (EWP). The road will be temporarily closed to all vehicular traffic, including emergency vehicles and local residents.

RECOMMENDATION

THAT the proposed temporary full road closure of the rail underpass on Terrace Road / Ness Avenue just north of the roundabout at Ewart Street, Dulwich Hill for a two day period being 12.00am Saturday, 8 August 2020 until 12.00am Monday, 10 August 2020 be approved in order to carry out the continuation of early enabling works on the Rail Bridge and the standing of an Elevated Work Platform (EWP) subject to, but not limited to, the following conditions:

1. **A Road Occupancy License be obtained by the applicant from the Transport Management Centre;**

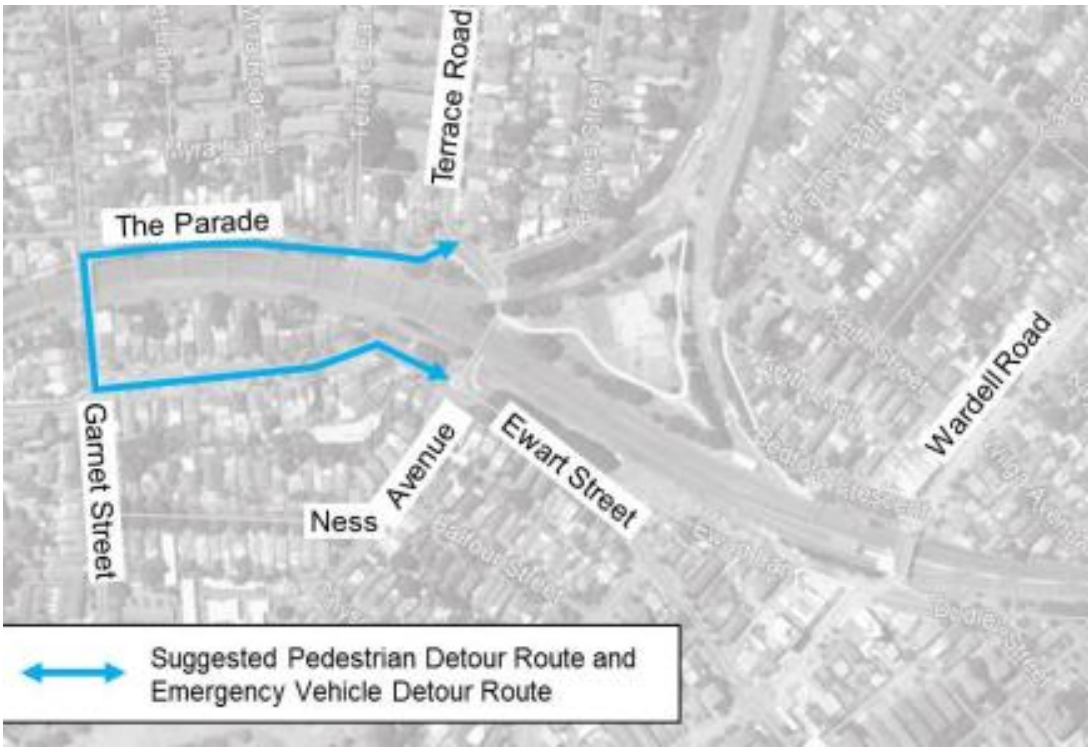
2. **All affected residents and businesses, including the NSW Police Area Commander, Fire & Rescue NSW and the NSW Ambulance Services be notified in writing, by the applicant, of the proposed temporary full road closure at least 7 days in advance of the closure with the applicant making reasonable provision for stakeholders; and**

3. **The occupation of the road carriageway must not occur until the road has been physically closed.**

BACKGROUND

Sydney Metro Southwest early works have been underway recently between Sydenham and Campsie to convert the existing rail to metro standards in preparation for the opening of Sydney Metro City and Southwest in 2024. Sydney Metro's SSJ Group who had undertook the previous works now require further works along the T3 Bankstown Line necessitating the temporary full road closure of the Terrace Road /Ness Avenue rail overbridge. Proposed works include the use of an elevated work platform (EWP) and mobile crane and this will require a full lane closure of both lanes at the Terrace Road / Ness Avenue, Dulwich Hill underpass.

Traffic movements will be managed in accordance with the submitted TMP and TCP which are attached at the end of this report. The alternative route for pedestrians (including cyclists) and emergency service vehicles is shown in the diagram below.



It is noted that the works will be carried out to coincide with a Bankstown line possession weekend - (5am on the Saturday morning through to 2am on the Monday morning). For the temporary full road closure (8 – 9 August) –SSJ will be working for the whole weekend.

FINANCIAL IMPLICATIONS

Under Council's Fees & Charges, the applicant is to pay a fee for the temporary full road closure.

PUBLIC CONSULTATION

Community notification by Sydney Metro (SSJ) will include:

- Notifying emergency services and relevant sections of the community and transport industry of work which results in significant traffic disruption. Provide to the RMS a draft of an appropriate advertisement 3 weeks before the proposed placement of the advertisement. See RMS M1 Clause 4.3.2.
- Notifying residents and businesses affected by disruption to property access or by night works in built-up areas. A letter will: be "letter-box-dropped" at least three Business Days before the proposed date and detail the dates and times of the proposed access restrictions and contact details.

The proposed road closure has been advertised on Council's website in accordance with the Roads Act 1993.

ATTACHMENTS

1.⇩ Traffic Management Plan
2.⇩ Traffic Control Plan

LAING O'ROURKE JOHN HOLLAND

Sydney Metro City & Southwest

Traffic Management Plan

for Temporary Closure of Terrace Road for the Southwest Metro Upgrade Project

John Holland Laing O'Rourke Joint Venture
100a Marrickville Road
Marrickville NSW 2204

About this release

Document Number: SMCSWSSJ-JHL-WEC-TF-PLN-0000 Edition 1 / Revision 0

Title: Traffic Management Plan

Author: Tom Wheatley, Bitzios Consulting

Issue	Date	Revision Description	Authorised by
Ed 1 / Rev 0	26 August 2019	New Plan	Project Manager

Management Review

See Section 9 for details

Planned Review Date	Scope	Review By	Review Record Ref no. Date
26 August 2020		Project Manager and Interface Manager	
26 August 2021			
26 August 2022			

Endorsement of TMP

Project Manager Date

_____ / /

Interface Manager Date

_____ / /

Date

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1. Overview

Scope of this Plan

The scope includes the provision for the safe movement of vehicular and pedestrian traffic, the protection of workers from passing traffic, the provision for access to properties located within the limits of the Terrace Road (Ness Avenue) closure, the design, construction, maintenance and removal of any necessary temporary roadways and detours, the provision of traffic controllers, the installation of temporary signs, road markings, lighting and safety barriers.

It also covers maintenance of the existing road corridor, including the existing road and road shoulder that may be used for the temporary diversion of traffic, over the duration of the Terrace Road closure.

John Holland Laing O'Rourke Joint Venture's Authority:

John Holland Laing O'Rourke Joint Venture (JHLOR JV) is authorised by the Roads Regulation 2008 to appoint traffic controllers and direct traffic and is registered under the RMS's Registration Scheme Category G.

JHLOR JV's Objectives

JHLOR JV's objectives with respect to the Traffic Management Plan ("TMP") are to:

- Ensure the safety of its employees, contractors, the general public, RMS and Council personnel, pedestrians, cyclists and traffic,
- Keep traffic delays to a minimum,
- Maintain satisfactory property access,
- Minimise disruption to businesses,
- For works near speed cameras, traffic lights & traffic counters etc:
    - Inform the RMS Representative and
    - Not damage the equipment,
    - Make suitable arrangements where required.
- When required, obtain approvals and licenses such as Road Occupancy, Direction to Restrict (DTR for Speed Limit Sign Authorisation) and Traffic Signals,
- Minimise disturbance to the environment,
- Design temporary roadways and detours in accordance with RMS Traffic Control at Work Sites Manual and
- Meet the requirements of RMS G10 Traffic management, RMS G11M Road Occupancy Provisions and the RMS Traffic Control at Work Sites Manual.

2. Management of the TMP

JHLOR JV has warranted that it will provide people, materials, resources and systems to properly perform the Services including related traffic management.

Council and the RMS require the people to be competent, experienced and qualified to carry out the Services.

The Southwest Metro Upgrade Project key personnel for traffic management are shown in the table below.

Name	Position	Phone Number
Paul Fields	Project Manager	0438 792 797
Bernard Grace	Interface Manager	0419 164 786
Luke Curley	Site Supervisor	0419 816 166
Traffic Group Australia (staff name to be confirmed)	Traffic Controller (Blue Card)	TBC
Traffic Group Australia (staff name to be confirmed)	Implement TCPs (Yellow Card)	TBC
Traffic Group Australia (staff name to be confirmed)	Prepare a Work Zone Traffic Management Plan	TBC

3. Implementation

Traffic Management for sites will be in accordance with the RMS Traffic Control at Work Sites Manual as modified to site conditions.

Before the Routine Services or any Ordered Work begins the Project Manager will carry out Risk Assessment (see Risk Management Plan) and develop treatments and Plans to eliminate or mitigate hazards.

4. Traffic Control Plans

JHLOR JV will implement approved Traffic Control measures for any Services which disrupt free traffic movement. These measures will include Traffic Control Plans ("TCP") and Vehicle Movement Plans as required and will encompass vehicle movement and pedestrian movement for both construction resources and the general public. Any property accesses affected by the construction activities will also be identified on the TCPs.

For all planned and scheduled works under the contract JHLOR JV will prepare Traffic Control Plans as follows:

4.1 For Services requiring a Non-Standard TCP:

Non-Standard TCPs will be signed off by a person who has qualified in the RMS "Design and Audit Traffic Control Plans" course (i.e. holds a current "Orange" ticket) and is experienced in the design and implementation of traffic management plans.

Work will not begin until the Council has approved the non-standard TCP.

JHLOR JV Hold Point
Process Held: Services requiring a non standard TCP.
Submission Details: Non-standard TCP as described above
Release of Hold Point: The Council's approval of JHLOR JV's non-standard TCP.

5. Responsibilities

The principle responsibilities and authorities of JHLOR JV staff with respect to traffic management are:

Project Manager

The Project Manager is responsible for ensuring traffic management:

- Is properly planned, organised, directed and controlled,
- Is properly resourced with people, equipment, facilities and systems and
- Meets the requirements of the contract including RMS Specifications G10 and G11,
- Complies with all other legislation and
- Is achieving its objectives

The Project Manager's responsibilities remain with him / her, however, the Project Manager has delegated as follows:

JHLOR JV's Interface Manager

The Interface Manager has delegated authority from, and responsibility to, the Project Manager for:

- The selection of any Traffic Control subcontractors,
- Ensuring that processes and control systems needed are established, implemented and maintained,
- Liaison with regulatory agencies regarding requirements for approvals, licences, permits and authorities,
- Arranging and approving training,
- Ensuring that the requirements of all the plans are properly implemented,
- Annually reviewing the continuing suitability, adequacy, and effectiveness, of all the plans and
- Community Relations including addressing complaints.

JHLOR JV's Site Supervisor

JHLOR JV's Site Supervisor has delegated authority from, and responsibility to, JHLOR JV's Project Manager for:

- Determination of traffic control at the work sites.
  When selecting a standard TCP or designing a Non-Standard TCP, he / she will ensure the following are considered:
  - The signing-off of Non-Standard TCPs by a person who has qualified in the RMS "Design and Audit Traffic Control Plans" course (i.e. holds a current "Orange" ticket) and is experienced in the design and implementation of traffic management plans,
  - Traffic Controllers,
  - Diversions, side tracks and/or detours as required,
  - Temporary warning signs,
  - Signs and devices,
  - Adequate delineation for night/wet conditions,
  - Special lighting when required,
  - Access ways to be kept clear for emergency vehicles and over-dimensional vehicles,
  - Temporary speed zones as required (and approved),
  - Vehicle Movement Plans (including specified locations for on-site parking, and consideration of pedestrian movement for workers, the public including children and disabled persons, bicycles, buses and light rail where applicable).
  - Set up diversions when required in consultation with Police when necessary,
  - Possible impact on main arterial roads,
  - Traffic impact for work near traffic lights,
  - Temporary delineation, barriers and signs until permanent measures are completed. All temporary measures will be maintained in an effective condition while in use and removed when permanent devices are complete including the removal of temporary raised pavement markers and temporary linemarking.
  - Position cones and early warning signs when required,
  - Sign sizes that are appropriate for the conditions,
  - Portable traffic signs if required,
  - Flashing traffic signs if required,
  - Place signs with regard to: Sight distance, motorists approaching at high speed, queue lengths, visibility, shade and light glare,
  - Ensuring only undamaged or non-defective signs are used and
  - Enuring consideration of the needs of:
    - Pedestrians (including those who are disabled),
    - Cyclists,
    - Business and property owners and
    - School crossings and bus routes.
- Ensuring the TCP is approved,
- Preparing and submitting Hold Point Forms, Road Occupancy License applications and & *Directions to Restrict* applications 10 working days before the Services are due to begin,
- Allocation of all resources required for the implementation of all the plans,
- Ensuring that control measures are maintained and that work-in-progress is inspected,
- Identifying training needs and arranging for employees and subcontractors to attend the training,
- Ensuring subcontractors/suppliers have suitable qualifications and experience and
- Carrying out and recording weekly inspections and verifications to demonstrate compliance of the Services.

Traffic Management Sub-contractor

The Traffic Management Sub-contractor has:

- Qualified in the "Prepare a Work Zone Traffic Management Plan" course [NOTE: It is a Contract requirements that whoever selects and modifies TCPs has this ticket]

and has delegated authority from, and responsibility to, the Site Supervisor for:

- Implementing the Traffic Management Plan and the Traffic Control Plan on site,
- Maintaining the TCP,
- Assessing and monitoring subcontractor's capabilities and performance in respect of site activities,
- Ensuring the safe passage of traffic at all times,
- Ensuring everyone on site is inducted and wears the appropriate approved clothing and
- Driving through the site to inspect the traffic control layout, recording any deficiencies and the action taken to rectify them.

6. Traffic Controllers

JHLOR JV will ensure any subcontractor undertaking traffic control is registered under the RMS's Registration Scheme Category G "Traffic Control".

All traffic controllers used by JHLOR JV have completed RMS accredited Traffic Controller training.
A list of their names, ticket numbers and ticket expiry dates is at Appendix A.

Traffic Controllers will carry their tickets with them.

Traffic Controllers will wear high-visibility outer garments complying with RMS OH&S Policy *4.0 Personal Protective Equipment* and bearing the words "Authorised Traffic Controller" and the RMS logo (logo patch supplied by the RMS).

7. Plant and Equipment

All vehicles used in traffic control operations will be equipped with the appropriate vehicle mounted warning devices in accordance with the RMS Traffic Control at Work Sites Manual.

During daytime, plant and equipment working in a position adjacent to traffic and having a projection beyond the normal width of the item, for example, a grader blade, will have a fluorescent red flag attached to the outer end of the projection. During poor light conditions or at night, an additional traffic controller with an illuminated red wand will direct traffic around such plant and equipment.

During night time, where traffic is permitted to use the whole or portion of the existing road, all plant items and similar obstructions will be removed from the normal path of vehicles, to provide a lateral clearance of at least 6 m where practicable, with a minimum clearance of 1.2 m.

Plant and equipment, within 6 m of the normal path of vehicles, will be lit by not less than two yellow steady lamps suspended vertically from the point of the obstruction nearest to a

traffic lane, and one yellow steady lamp at each end of the obstruction on the side furthest away from the traffic lane.

8. Time Management

The JHLOR JV aims to meet its time related obligations. Among them are:

- Notifying emergency services and relevant sections of the community and transport industry of work which results in significant traffic disruption. Provide to the RMS a draft of an appropriate advertisement 3 weeks before the proposed placement of the advertisement. See RMS M1 Clause 4.3.2.
- Notifying residents and businesses affected by disruption to property access or by night works in built-up areas. A letter will:
  - be "letter-box-dropped" at least three Business Days before the proposed date and
  - detail the dates and times of the proposed access restrictions and contact details. See RMS M1 Clause 4.3.4.
- Performing work and Services only in the times permitted.
- Lodging early as possible (at worst no less than 10 Business Days before the work) a road occupancy application. See RMS G10 (2.2). Noting, however, the exemptions for emergencies and hazards set down at RMS G10 (4.2).
- Promptly advising the TMC of delays to traffic which are, or are anticipated to be, longer than 15 minutes.

9. Out-of-Working Hours Contacts

See contact details in Section 2.

10. Reviewing this Traffic Management Plan

JHLOR JV will review the Traffic Management Plan to ensure it is appropriate and is being implemented effectively. Changes may arise from a change of scope, RMS or Council audits, RMS or Council comments or from opportunities for improvement.
The Plan will then be updated to reflect any changes which have occurred.
The revised document and the input which led to the revisions will be reviewed by JHLOR JV's Project Manager, approved by him/her and then forwarded to the RMS or Council Representative for his/her record.

The planned target dates (or frequencies) at which the TMP will be subject to formal review and the personnel who will participate in the review are identified in the table at *Management Review* at the beginning of this plan. Council's Contract Manager will maintain records of any review.

11. Proposed Traffic Management

A. Description or detailed plan of proposed measures.

Refer to the attached TCP for detail of the proposed closure and diversion route for vehicles. See below for the diversion route for emergency vehicles, heavy vehicles, cyclists and pedestrians.

B. Identification and assessment of impact of proposed measures.

Traffic counts were undertaken at the Ewart Street/Terrace Road intersection. The data indicated that:

- A maximum of 529 vehicles per hour in the AM peak 406 vehicles per hour in the PM peak used the underpass
- Northbound movements were higher in the AM, and southbound movements were higher in the PM
- Most southbound bridge vehicle movements turned left to head east on Ewart Street
- The majority of northbound bridge vehicle movements turned right onto Terrace Road from Ewart Street westbound.

The proposed detour route involves vehicles travelling via The Parade, Garnet Street, and Ewart Street. It is expected that Garnet Street would be the bottleneck for this trip, as it is a narrow street with kerbside parking in place on both sides of the road.

While traffic counts were not undertaken at Garnet Street, it is expected that this road would experience relatively low traffic volumes as it is one of many left-only links to New Canterbury Road. Vehicles wishing to head east on New Canterbury Road would most likely approach from Crinan Street.

Garnet Street is therefore expected to have sufficient capacity for the road closure.

The signposted diversion route is 700m long and is about 2 minutes driving time according to Google Maps.

C. Measures to ameliorate the impact of re-assigned traffic.

Only local traffic is affected. The diversion route is relatively short (700m). No additional measures are proposed other than the signposting of the alternative route to provide clear guidance to drivers.

The State arterial road network will not experience any increase in traffic due to the diversion.

D. Assessment of public transport services affected.

No public transport routes use Terrace Road. Route 418 uses Garnet Street. There may be some minor delays due to the increase in traffic on Garnet Street.

E. Details of provision made for emergency vehicles, heavy vehicles, cyclists and pedestrians.

The alternative route for emergency vehicles when Terrace Road is closed is via The Parade, Garnet Street, and Ewart Street as shown in Figure 11.1 and on the TCP.

Heavy vehicles are able to follow the same signposted diversion route, as shown on the TCP.

The suggested alternative route for pedestrians is the same as for vehicles via The Parade, Garnet Street, and Ewart Street as shown in Figure 11.1. The route is 700m.

VMS sign boards are to be installed on approaches to the bridge advising of the proposed closure at least 1 week before the closure date.

Traffic controllers are required at each end of the Terrace Road closure during construction hours.

The alternative route for pedestrians (including cyclists) and emergency services vehicles is shown in Figure 11.1.

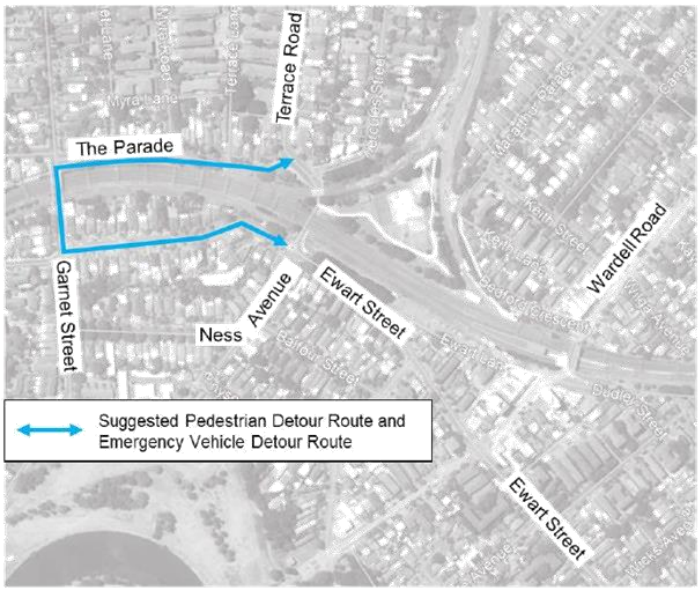


Figure 11.1 Alternative Route for Pedestrians and Emergency Services

F. Assessment of effect on existing and future developments with transport implications in the vicinity of proposed measures.

As the works are temporary there is no ongoing effect on development. However, notification requirements are noted in Section 8.

G. Assessment of effect of proposed measures on traffic movements in adjoining Council areas.

The work is fully contained within Inner West Council area. However, the diversion route uses about 120m of Garnet Street, which is on the boundary of the adjoining Canterbury-Bankstown Council area. This will have negligible impact on the traffic movements in the adjoining Council area beyond the diversion route.

H. Public consultation process.

As the works are temporary there is no need to consult with the public directly affected by the proposed measures. However, notification requirements are noted in Section 8.

Appendix A - Traffic Controllers' Tickets

Surname	First Name	Council or Contractor Name	Certificate Number	Expiry Date

Appendix B - Not Used

Appendix C - Hold points

Reference RMS Doc [Clause no]	Type RMS or JHLOR JV Hold	Process Held	Submission Details
M1 (4.3.2)	RMS Hold	Services which significantly disrupt traffic	Appropriate advertisement 3 weeks before
M1 (4.3.3)	JHLOR JV Hold	Services which significantly disrupt access	Letter box drop 3 Business Days before
RMS G10 (2.2)	RMS Hold	Road Occupancy	ROL Application 10 Business Days before
This Traffic Management Plan Clause:			
1	RMS Hold	Work near Speed Cameras, Traffic Counters etc.	Inform the RMS Representative
3	JHLOR JV Hold	Any Ordered Work	Risk Assessment and Treatment and Plans
4	JHLOR JV Hold	Ordered Work which disrupts traffic	Non standard relating to the work TCP
6	JHLOR JV Hold	Traffic Controller's engagement as such	Subcontractor registered under Scheme G traffic Controller has current ticket

Appendix D - JHLOR JV Traffic Control Plans for Routine Work under the Terrace Road Closure

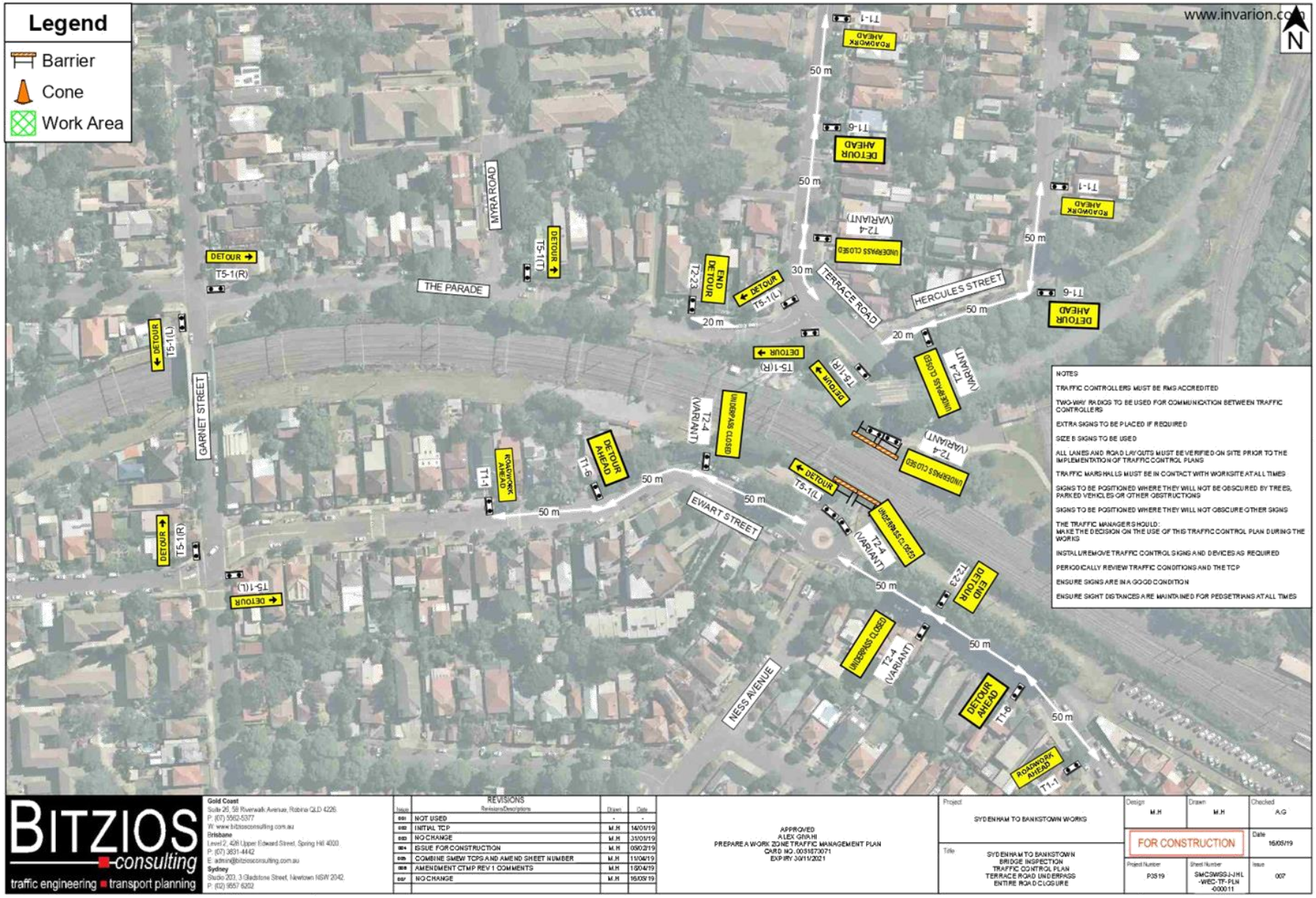
TCP Number	Location	Description of Control
SMCSWSSJ-JHL-WEC-TF-PLN-000011	Terrace Road (Ness Avenue) underbridge, Dulwich Hill - Entire Road Closure	Implement detour via Garnet Street bridge.

Appendix E - to L – Not used

Appendix M - Definitions

JHLOR JV has adopted the Definitions set out in Clause 1.3 of RMS Specification G10 Traffic Management.

Last page


Legend
Barrier
Cone
Work Area
www.invarion.com
N
MYRA ROAD
THE PARADE
GARNET STREET
EWART STREET
TERRACE ROAD
HERCULES STREET
NESS AVENUE
DETOUR
T5-1(R)
T5-1(L)
END DETOUR
T2-23
UNDERPASS CLOSED
T2-4 (VARIANT)
ROADWORK AHEAD
T1-1
DETOUR AHEAD
T1-6
50 m
30 m
20 m
NOTES
TRAFFIC CONTROLLERS MUST BE RMS ACCREDITED
TWO-WAY RADIOS TO BE USED FOR COMMUNICATION BETWEEN TRAFFIC CONTROLLERS
EXTRA SIGNS TO BE PLACED IF REQUIRED
SIZE B SIGNS TO BE USED
ALL LANES AND ROAD LAYOUTS MUST BE VERIFIED ON SITE PRIOR TO THE IMPLEMENTATION OF TRAFFIC CONTROL PLANS
TRAFFIC MARSHALLS MUST BE IN CONTACT WITH WORKSITE AT ALL TIMES
SIGNS TO BE POSITIONED WHERE THEY WILL NOT BE OBSCURED BY TREES, PARKED VEHICLES OR OTHER OBSTRUCTIONS
SIGNS TO BE POSITIONED WHERE THEY WILL NOT OBSCURE OTHER SIGNS
THE TRAFFIC MANAGER SHOULD:
MAKE THE DECISION ON THE USE OF THIS TRAFFIC CONTROL PLAN DURING THE WORKS
INSTALL/REMOVE TRAFFIC CONTROL SIGNS AND DEVICES AS REQUIRED
PERIODICALLY REVIEW TRAFFIC CONDITIONS AND THE TCP
ENSURE SIGNS ARE IN A GOOD CONDITION
ENSURE SIGHT DISTANCES ARE MAINTAINED FOR PEDSETRIANS AT ALL TIMES
BITZIOS consulting
traffic engineering ■ transport planning
Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000.
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042.
P: (02) 9557 6202
REVISIONS
Issue | Revisions/Description | Drawn | Date
000 | NOT USED | - | -
001 | INITIAL TCP | M.H | 14/01/19
002 | NO CHANGE | M.H | 31/01/19
003 | ISSUE FOR CONSTRUCTION | M.H | 09/02/19
004 | COMBINE SMEW TCPS AND AMEND SHEET NUMBER | M.H | 11/04/19
005 | AMENDMENT CTMP REV 1 COMMENTS | M.H | 16/04/19
006 | NO CHANGE | M.H | 16/05/19
APPROVED
ALEX GRAHI
PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
CARD NO. 00516730 71
EXPIRY 30/11/2021
Project
SYDENHAM TO BANKSTOWN WORKS
Title
SYDENHAM TO BANKSTOWN
BRIDGE INSPECTION
TRAFFIC CONTROL PLAN
TERRACE ROAD UNDERPASS
ENTIRE ROAD CLOSURE
Design M.H
Drawn M.H
Checked A.G
FOR CONSTRUCTION
Date 16/05/19
Project Number P3519
Sheet Number SMCSWSSJ-JHL-WEC-TF-PLN-000011
Issue 007

Item No: **LTC0720 Item 2**

Subject: **SMITH STREET, SUMMER HILL - PROPOSED REFUGE ISLAND EAST OF FLOUR MILL WAY – PLAN 10127 (DJARRAWUNANG - ASHFIELD WARD / SUMMER HILL ELECTORATE / BURWOOD PAC)**

Prepared By: Jennifer Adams - Engineer – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

Council has finalised a design plan for pedestrian safety improvement works in Smith Street, Summer Hill. The proposed works address concerns about pedestrian safety and driver behaviour in the area.

RECOMMENDATION

THAT the detailed design plan for the new pedestrian refuge island and new adjacent kerb ramps and associated signs and line markings in Smith Street, Summer Hill (as per Plan No.10127) be APPROVED.

BACKGROUND & OTHER STAFF COMMENTS

Construction of a new pedestrian refuge island in Smith Street adjacent to Floor Mill unit Development and Child Care Centre was originally proposed as part of the Green-Way cycleway project. However, recent concerns have been raised with regards to pedestrian safety. Therefore, the proposal for a pedestrian refuge at this location has been brought forward.

The detailed design plan for the proposed pedestrian refuge works along with the asssociated signs and line markings, in Smith Street, Summer Hill (Plan 10127 – Attachment 1) is now submitted for consideration.

The proposed scope of works includes the following:

- Construction of a new 2.5 metre wide pedestrian refuge Island to allow for both cyclists and pedestrians;
- Construction of new kerb ramps on both sides of the proposed refuge island;
- Installation of associated line marking and signage.

This proposal will result in the loss of three on-street parking spaces.

FINANCIAL IMPLICATIONS

The project is listed on Council's Traffic Facilities Capital Works budget for 2020/21 and funding of $35,000 has been allocated to this project.

PUBLIC CONSULTATION

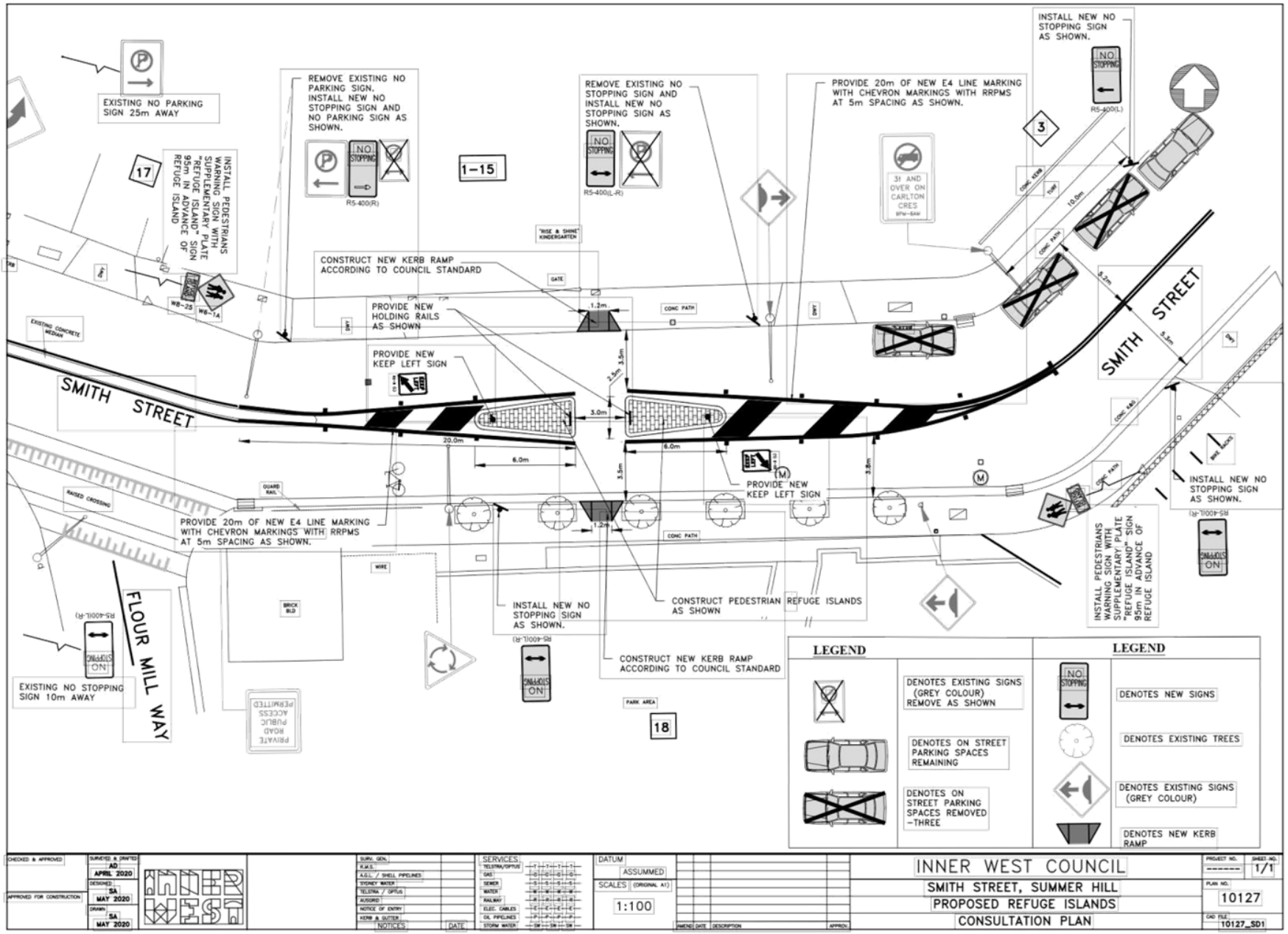
Consultation was conducted between 11 and 29 May 2020. A letter along with a copy of the design plan was sent to the local residents in the immediate locality. A total of 221 letters were distributed.

There were five responses and one phone call. Generally, the responses were supportive of the new pedestrian refuge facility. Two residents requested that the facility be upgraded to a pedestrian (zebra) crossing however, it is noted that the location, at this time, does not meet Transport for New South Wales' (TfNSW) warrants necessary for the installation of a pedestrian (zebra) crossing.

Other issues raised were loss of three car parking spaces; requested introduction of a 40km/h zone and placement of speed humps either side of the pedestrian refuge.

ATTACHMENTS

1.⇩ Smith Street Summer Hill - Design Plan


EXISTING NO PARKING SIGN 25m AWAY
REMOVE EXISTING NO PARKING SIGN. INSTALL NEW NO STOPPING SIGN AND NO PARKING SIGN AS SHOWN.
REMOVE EXISTING NO STOPPING SIGN AND INSTALL NEW NO STOPPING SIGN AS SHOWN.
PROVIDE 20m OF NEW E4 LINE MARKING WITH CHEVRON MARKINGS WITH RRPMS AT 5m SPACING AS SHOWN.
INSTALL NEW NO STOPPING SIGN AS SHOWN.
INSTALL PEDESTRIANS WARNING SIGN WITH SUPPLEMENTARY PLATE "REFUGE ISLAND" SIGN 95m IN ADVANCE OF REFUGE ISLAND
CONSTRUCT NEW KERB RAMP ACCORDING TO COUNCIL STANDARD
PROVIDE NEW HOLDING RAILS AS SHOWN
PROVIDE NEW KEEP LEFT SIGN
SMITH STREET
PROVIDE NEW KEEP LEFT SIGN
PROVIDE 20m OF NEW E4 LINE MARKING WITH CHEVRON MARKINGS WITH RRPMS AT 5m SPACING AS SHOWN.
INSTALL NEW NO STOPPING SIGN AS SHOWN.
CONSTRUCT PEDESTRIAN REFUGE ISLANDS AS SHOWN
CONSTRUCT NEW KERB RAMP ACCORDING TO COUNCIL STANDARD
INSTALL PEDESTRIANS WARNING SIGN WITH SUPPLEMENTARY PLATE "REFUGE ISLAND" SIGN 95m IN ADVANCE OF REFUGE ISLAND
INSTALL NEW NO STOPPING SIGN AS SHOWN.
EXISTING NO STOPPING SIGN 10m AWAY
FLOUR MILL WAY
LEGEND
DENOTES EXISTING SIGNS (GREY COLOUR) REMOVE AS SHOWN
DENOTES ON STREET PARKING SPACES REMAINING
DENOTES ON STREET PARKING SPACES REMOVED -THREE
LEGEND
DENOTES NEW SIGNS
DENOTES EXISTING TREES
DENOTES EXISTING SIGNS (GREY COLOUR)
DENOTES NEW KERB RAMP
INNER WEST COUNCIL
SMITH STREET, SUMMER HILL
PROPOSED REFUGE ISLANDS
CONSULTATION PLAN
1:100
10127
1/1

Item No: **LTC0720 Item 3**

Subject: **EDINBURGH STREET, MURRAY STREET AND RAILWAY PARADE, MARRICKVILLE – MARRICKVILLE METRO EXPANSION WORKS (MIDJUBURI – MARRICKVILLE WARD / NEWTOWN ELECTORATE / INNER WEST PAC)**

Prepared By: Jennifer Adams - Engineer – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

Council has received an application from John R Keith P/L (contractor to Marrickville Metro Shopping Centre expansion works) for approval of a temporary full road closure of Edinburgh Street, Murray Street and Railway Parade, Marrickville for a 27 day period starting from Monday 6 July to Saturday 1 August 2020 (10 day contingency period Saturday 1 August to Saturday 10 August 2020) for the purpose of undertaking excavation works for a sewer connection to the main line. The street would be temporary closed to all vehicular traffic, including emergency vehicles. It is recommended that the proposed temporary full road closure be approved, subject to the conditions outlined in this report.

RECOMMENDATION

THAT the proposed temporary full road closure of Edinburgh Street, Murray Street and Railway Parade, Marrickville for a 27 day period starting from Monday 6 July to Saturday 1 August 2020 (10 day contingency period Saturday 1 August to Saturday 10 August 2020) be approved for the purpose of sewer connection works relating to Marrickville Metro Expansion works subject to, but not limited to, the following conditions:

1. **A Road Occupancy License be obtained by the applicant from the Transport Management Centre;**

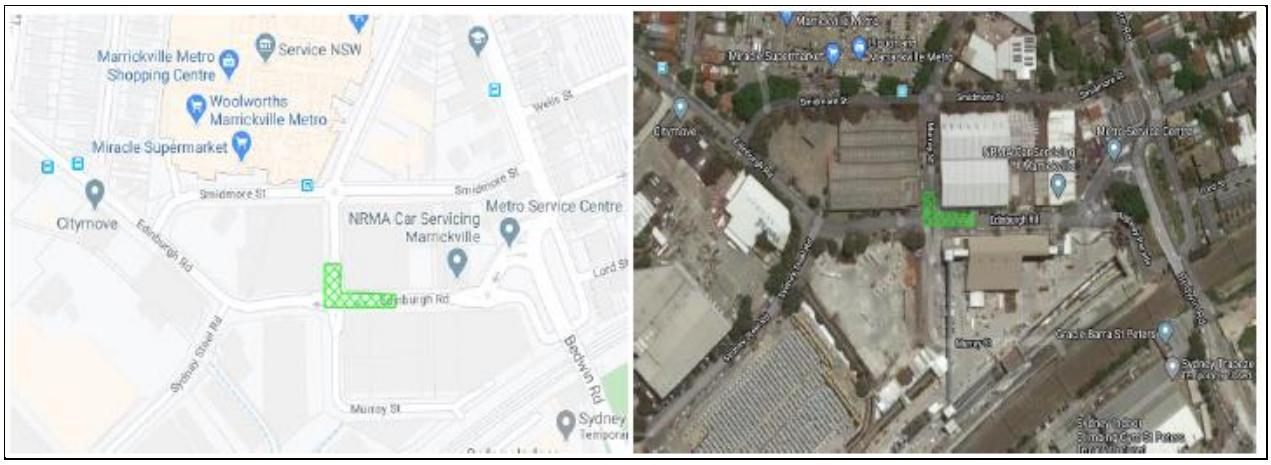
2. **All affected residents and businesses, including the NSW Police Area Commander, Fire & Rescue NSW and the NSW Ambulance Services be notified in writing, by the applicant, of the proposed temporary full road closure at least 7 days in advance of the closure with the applicant making reasonable provision for stakeholders;**

3. **The occupation of the road carriageway must not occur until the road has been physically closed; and**

4. **Written concurrence from Sydney Metro TSE Group is provided to Council.**

BACKGROUND AND OTHER STAFF COMMENTS

John R Keith have been nominated to deliver service installations and relocations from the interior of the Marrickville Metro Shopping Centre expansion project to the exterior roadway along the perimeter of site necessitating the full temporary road of Edinburgh Road, Marrickville. The diagram below shows the location of the proposed works at the corner of Edinburgh Road, Murray Street and Smidmore Street, Marrickville.



Edinburgh Road is a local road and acts as a collector road between Victoria Road in the west and Edgeware Road in the east. Between Murray Street and Edgeware Road, Edinburgh Road carries an average 9151 vehicles per day. Along its length it is generally a one lane two-way undivided roadway with kerbside parking on both sides of the road.

As the site is situated in close proximity to the Sydney Metro TSE Group works and the Marrickville Metro Shopping Centre expansion works all involved parties must be in consensus with any temporary full road closure and proposed designated detour routes.

The Traffic Management Plan (TMP) is attached. The TMP indicates that works will be undertaken between the hours of 7am to 6pm Monday – Friday and 7am – 3pm Saturday. Noting also that possible night works are envisaged for intricate works. In 15.2 it notes that *"In the unlikely event of delays queuing in greater than 100m of length, the Site Supervisor will remove the traffic implementation until traffic has returned to acceptable levels. The Site Supervisor will also notify the Council / Traffic Management Centre and John R Keith if required. Traffic Controllers are to monitor congestion at all times when onsite. Hold & Release shall not be undertaken during high traffic volumes. John R Keith should be mindful when scheduling the type of deliveries at specific times will be effective and minimize the impact to the public."*

FINANCIAL IMPLICATIONS

Under Council's Fees & Charges, the applicant is to pay a fee for the temporary full road closure along with any other required road occupancy and/or road opening permit fees.

PUBLIC CONSULTATION

The applicant is to notify all affected residents and businesses in writing at least 7 days prior to the commencement of works.

The proposed road closure has been advertised on Council's website in accordance with the Roads Act 1993.

ATTACHMENTS

1.⇩ JRK - Traffic Management Plan - Marrickville Metro
2.⇩ Traffic Control Plan

KPI GROUP

KPI TRAFFIC CONTROL

Traffic Management Plan
Marrickville Metro Shopping Centre
John R Keith

Contact for Further Information

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Bondi Junction NSW 2022
Mobile: 0491 278 904

PHONE: 1800 574 574
FAX: 03 9326 5778
Email: alex@kpiconstruction.com.au

Head Office
Unit 22, 74 Thomsons Road,
Keilor Park VIC 3042

PHONE: 03 9326 7795
FAX: 03 9326 5778
Email: finance@kpiconstruction.com.au

KPI Services (NSW):Pty Ltd
TMP Prepared by Alex Reid- PWZTMP 0043630869
Doc No: John.R.Keith 1804 KPI Services (NSW) Pty Ltd V1 Dated 18/5/2020

KPI CONSTRUCTION SERVICES

Contents

Document Control

Version	Approved	Qualification Number	Signature	Date
1.0	Alex Reid	0043630869	Alex Reid	18/5/2020
2.0	Alex Reid	0043630869	Alex Reid	
Issued to Client				
Version No	Date	Position	Client	Person
1.0	18/5/2020	Project Manager	John R Keith	Anthony Luck
1.0	18/5/2020	Site Foreman	John R Keith	TBA
1.0	18/5/2020	Traffic Engineer	KPI Construction	Tom Stevanoski
1.0	18/5/2020	Senior Traffic Planner	KPI construction	Lisa Reddan

References and Publications

AS/NZS ISO 31000 2009	Risk Management – Principles and Guidelines
AS/NZS 1158	Lighting for roads and public spaces
AS1742.3	Manual of Uniform Traffic Control Devices Part 3: Traffic Control works on Roads
Aust roads AP-R403-12	Aust roads Report – Implementation of National best practice for traffic control at road sites
TC@WS v5	Traffic Control At Work Sites Version 5. July 2018 – Roads and Maritime Services
	Traffic engineering and management – Monash University 2018
	Austroads report - Austroads Design Vehicles and Turning Paths 2013
	CTMP – Standard requirements – Inner West Council - Appendix A

List of Acronyms used in this plan and their definition

Anti-gawking screen	An opaque screen attached to TRSB to shield the construction worker from the view of passing motorists
Dynamic deflection	The largest transverse deflection of a TRSB system recorded during an actual crash or during a full-scale impact test
End Treatment	The collective term for devices and features at the leading and trailing ends of TRSB systems, which are selected on the basis of traffic speed and composition, the type of TRSB system and the particular site constraints
Nominated Traffic Officer	A person responsible in accordance with clause 5.1 for preparation and implementation of the TMP and TGS
On-Site Traffic Coordinator	A person responsible in accordance with clause 5.1 for the implementation of the prepared TMP and TGS
Traffic Controller	A person authorized in accordance with Clause 6.2.2 to control traffic at roadwork's
Traffic Guidance Scheme (TGS) / Traffic Control Plan (TCP)	A Traffic Guidance Scheme or Traffic Control Plan prepared by the Contractor in accordance with the requirements of the Contract as a means of planning and communicating individual traffic changes. The Traffic Guidance Scheme shows all proposed traffic control devices and their layouts on a plan
Traffic Management Plan (TMP)	The Traffic Management Plan prepared by the Contractor in accordance with the requirements of the Contract. It outlines how the works are integrated into the operation of the road network.
TRSB	Temporary Road Safety Barrier
RMS	Roads and Maritime Services NSW
TMP	Traffic Management Plan
TGS	Traffic Guidance Scheme
TMC	Transport Management Centre
TC@WS	Traffic Control at Work Sites V5 2018
The Code	Traffic Management for Construction or Maintenance Work Code of Practice 2008
SWMS	Safe Work Method Statements
TCAS	Traffic Control Accreditation Scheme
VMS	Variable Message Signs

Hold Points

The Hold Points applicable to this TMP are as follows:

4.1 Approval of Traffic Management Plan
4.2 Approval of Traffic Guidance Scheme

Purpose and Scope

This Traffic Management Plan (TMP) specifies the traffic control measures and devices to be used warn, instruct and guide road users in the safe negotiation of work sites on roads, and the methodology of managing the following around the construction sites including footpaths, shared paths and bicycle paths adjacent to the roadway.

This TMP formulates the basis of the Traffic Guidance Schemes (TGS) required for this project which cause interference or obstruction to the normal use of a road by any road user. The TMP also provides guidance for the planning design, installation and operation of the applicable traffic guidance schemes together with requirements for maintaining a safe workplace for both the general public and workers on site.

This TMP also provides organizations carrying out works on roads with a set of uniform practices for the signage locations and delineation devices of construction which will promote the safety of both workers and road users at the construction site.

The TMP has been prepared in accordance with the TC@WS Manual V5. 2018 and the Australian Standard 1742.3 specifies the traffic control measures and devices to be used to warn, instruct and guide road users around the work site or in the vicinity of the construction site. This includes safely guiding pedestrians and cyclists and motorists around the road works.

Operating under this TMP it is deemed necessary to implement the use of site specific Traffic Control Plans (TCP's) for all the road works/stages applicable to this construction site. Any recommendations outside the TC@WS will have a Local Government approval (Permit) to undertake works. Any works being performed in the vicinity of this construction site that are not related to the construction site are not covered under this site-specific TMP.

Preparation of this detailed TMP and proper implementation of measures identified in the approved plan is essential to ensuring the safety of all road users as well as the workers on site. The primary objective of this TMP is to ensure all works performed from, near or on the road are executed in accordance with the TC@WS / AS1742.3 safely, and not without a risk assessment deeming the proposed work safe.

While the secondary objective is to balance:

(a) The Safe and convenient movement of traffic with minimal disruption; and

(b) Construction and traffic management costs

(c) In selection of the appropriate traffic control modes, consideration has been given to:
- Minimising the hazards and risks to the community and personnel on site.
- Minimising interaction between the community and personnel on site.
- Minimising the opportunity of vehicular and plant collision.
- Optimizing traffic flow entering and exiting the site without impeding the general public.

Risk Management

Risk management on this construction site entails the identification and analysis of all safety risks likely to arise during works on around the road including the setting up, operating, changing and ultimate dismantling of a traffic guidance scheme, followed by the determination of appropriate measures to mitigate those risks.

The process is appropriate at all levels of planning and operation including the following:

(a) When preparing the required site-specific Traffic Guidance Schemes or Traffic Control Plans and safe work method statements (SWMS) for the road works.

(b) When preparing traffic guidance schemes for more extensive or complex works where site specific risks will assume importance.

(c) The use of Qualified Traffic Controllers, AS1742.3 approved signage / traffic control devices

In each case the process should be carried out by first identifying all the hazards likely to arise, evaluating them in terms of likelihood of occurrence and adverse consequences using historical data, experience or other means. The proposed procedural statement or traffic guidance scheme should then be checked in detail to ensure that adequate means of controlling or reducing those risks found to be significant, are in place.
John R Keith and any sub-contractors on site must comply with the relevant legislation, government Approval or authority to work (permits) and provisions in accordance with the following legislation:

- Manual of Uniforms Traffic Control Devices – Part 3 Works on Roads, AS 1742.3
- New South Wales Workplace Health and Safety Act and Regulation 2011.
- Traffic Control at Work Sites V.5 2018. (TC@WS)
- Code of Practice 2008 Manual Tasks – Code of Practice 2000 – Traffic Management for Construction or Maintenance Work.
- RMS Transport Management Centre (TMC *if applicable)*
- Inner West Council.
- Department of Roads and Maritime Services.
- New South Wales Police Force.
- Austroads Design Vehicles and Turning Path 2013
- Inner West Council – CTMP Standard Requirements – Appendix A

Traffic Control Principles

6.1 The purpose of traffic control at roadworks is to clearly communicate to all road users, including pedestrians and cyclists, the path and speed at which they should travel through, past, or around the roadwork site. The TC@WS provides detailed guidance on the most appropriate forms of traffic control for roadwork sites and should be applied as the optimal treatment at most sites.

6.2 The credibility and effectiveness of these TGSs will be reduced when the scheme and its relevance/relation to the roadwork site is not clear. This can lead to situations where drivers disregard traffic control devices, most notably speed limit signs. It is in both the Contractor's and Principal's interest that speed limit choices in the TGS are realistic, and enforceable.

6.3 Roadwork signage must be in accordance with the TGS and installed and maintained to the required standards.

6.4 Reduced speed zones must be kept to minimum lengths. This requires 'END ROADWORK' and speed signs to be in place as close to the end of the works as practicable.

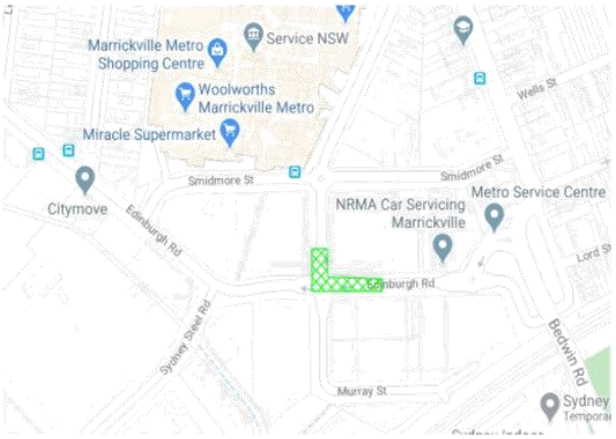
6.5 Reduced speed zones must be adept to minimum durations. This requires speed signs to be changed as soon as they are no longer appropriate.
6.6 If a speed zone is in place for road worker safety, then there must be road workers present.
6.7 A reduced speed zone in place for road safety (as a result of changes to the road environment) must be justified and the danger must be evident or made evident to the road user.
6.8 A reduced speed zone in place to protect works must be justified and the reason must be evident or made evident to the road user.
6.9 Speed zones should be implemented just prior to the commencement of works requiring the speed zone and should be removed immediately following the completion of the works requiring the speed zone.
6.10 All Long Term Signage erected must be covered up on termination of each shift, or removed from The roadway when no longer required.

Description of Works

John R Keith have been awarded a contract to deliver Service installations and relocations from the interior of the development to the exterior roadway along the perimeter of site, on Behalf of the Marrickville Metro Shopping Centre Project for the Australian and International community residing in Metro NSW. The Site's current CTMP and TGS do not form a part of this submission.

Location of works

Corner of Edinburgh Rd, Murray St and Smidmore St, Marrickville



Delivery of Plant and Machinery

Initial Pre –Excavation deliveries of plant and equipment will Ingress Site from Enmore / Stanmore Rd by turning into Edgeware Rd and following Edgeware rd for approximately 1km, the site vehicles are to turn right onto Edinburgh Rd at the Bedwin Rd intersection, site vehilces will then entre the road closure on Edinburgh Rd, (by traffic control Authorization) and follow Edinburgh Rd for approximately 300 meters where the vehicle will arrive at the work zone.
A temporary intermittent traffic stop may also be required for poor quality delivery drivers, or for works undertaken adverse weather to insure Roads, Building and Safely standards are maintained (RMS- TC@WS 9.1.2 Intermittent work) (AS1742.3 Cl 4.3.2 and 4.4.6).

It is foreseen that assisted entry and exit will only be for a minimal percentage of the total vehicles accessing the site. However, under safety regulations should these stops should need to occur they will be done so in suitable gaps in traffic, off peak hours. So other road users remain unaffected by the sites vehicular movements. (Refer to TCP- KPI 847). AS1742.3, CL 4.3.2 and 4.4.6 and councils regulations are to be complied with at all times during these works. It is the responsibility of the project manager to also compile onsite toolboxes with all site personnel and complete risk assessments for all vehicular movements for this site.

Traffic control may be utilized to assist vehicular movements in and around the site. During Vehicular ingress or egress Traffic Control will temporary close the footpath with extendable crowd control barriers (ECCB) until the vehicle safely passes and enters the roadway or site, once the vehicle is no longer a hazard, or has cleared the footpath area the barriers will be opened and pedestrians will be allowed to continue.

All delivery drivers are to have a CB radio fitted to insure seamless ingress and egress of site and to prevent site loading area overcrowding.

Both John R Keith Pty Ltd and KPI Services (NSW) are also conscious of the moderate traffic and pedestrian volumes in the vicinity of their construction site and intend to ensure equipment, material loading and unloading are conducted inside the site work zone area and do not cause an unnecessary impact on footpaths or roadways.

During this time pedestrians may be temporarily held while the site vehicle egresses safety from site, the author highly recommends the installation and use of extension crowd control barriers (ECCB) to assist with safe ingress and egress of site vehicles.

Vehicle Access Plans:
A vehicle access plan has been designed for site vehicles and deliveries to successfully ingress and egress From site and the surrounding Road Network with minimal disruption to other road users and pedestrians.

It has been noted in the instance an oversize or over mass vehicle is required onsite a council application will Be made 14 days prior the scheduled delivery. Due to site constraints no queuing or marshalling will be Undertaken on Local or State roads anytime during this project. For any road closure on this project, 6-8 Weeks lead time will be required to ensure emergency services have no impact
(* *Noting* Marrickville Police LAC, Inner West Council, Roads and Maritime Services, STA Buses).

Ingress

Majority of delivery Ingress Site from Enmore / Stanmore Rd by turning into Edgeware Rd and following Edgeware Rd for approximately 1km, the site vehicles are to turn right onto Edinburgh Rd at the Bedwin Rd intersection, site vehilces will then entre the road closure on Edinburgh Rd, (by traffic control Authorization) and follow Edinburgh Rd for approximately 300 meters where the vehicle will arrive at the work zone.

Egress

All Site vehicles will exit site forward motion only and will be permitted to travel northbound on Murray St, site vehicles will follow Murray St to the Edgeware / Victoria Rd intersection where the vehicle will turn Left onto Edgeware Rd and continue to head northbound for approximately 850 meters where the vehicle will turn either left or right onto Enmore / Stanmore Rd and disperse into the road network

Staging of Works

Woolworths Ashfield Project	Start	Finish
Stage 1 – Edinburgh Rd	6th July 2020	1st August 2020
Stage 2 – Murray St	6th July 2020	1st August 2020
Stage 3 – Smidmore St	6th July 2020	Project Completion – 1st August 2020

Traffic Management Plan Arrangements

12.1 Stage 1 – Edinburgh Rd

This stage involves the preparation and installation of Utility Services on Edinburgh Rd, including establishment of plant and machinery, delivery of excavation and demolition equipment.
All ingress / egress movements are to be undertaken in suitable gaps in traffic flow to minimize impact to other road users during the day to day operations during this stage, pedestrians may be temporary held or diverted to the adjacent footpath during this stage of works, to allow clear access for all site deliveries while providing separation from plant to pedestrians. All Site Vehicles are to be contained inside the work zone for loading / unloading.

It is foreseen that Tipper trucks or Bogey Trucks will be required for the Day to Day operations of this stage of the project. While Stage 1 – (Edinburgh Rd) comprises of Excavation and Service relocations / installations, and removal of spoil. While Oversize or over-mass vehicles are permitted to travel on local council roads during this project, (under Council Approval) in the instance an oversize vehicle is required a Council application will be made 28 days prior to the scheduled delivery date.

Vehicular traffic management options considered:

Option		Features	Comment
Traffic around the worksite	Detour	Would allow closure of the entire carriageway. Traffic can be diverted locally with a detour arrangement and traffic management can maintain access for Adjacent Construction sites and residents while Closure is undertaken.	Preferable
Traffic through the worksite		The works are largely located along the travel path of an area which will be inaccessible to vehicles.	Not Applicable
Traffic past the worksite	Shoulder	The works are located along the Kerbside shoulder path of an area which will be inaccessible to vehicles.	Not Applicable
	Lane	As active works are carried out on the Northern Site side of Edinburgh roadway, this is the natural path of traffic. Lane closure can be managed via stop slow arrangements	By Council + RMS for approval on Selected dates and times

Pedestrian traffic management options considered:

Pedestrian walkways may temporary closed on a day to day basis during the construction, for Pedestrian site awareness, "pedestrian detour" "use other footpath" "footpath closed" signage may be installed where footpaths meet the Work zone. All footpaths are to remain clear of construction materials at all times. (Refer to TCP – Pedestrian Management) during vehicular ingress or egress pedestrians may be temporarily held by traffic control to allow safe vehicular movement in or out of the site work zone.

Option		Features	Comment
Traffic around the worksite	Sidetrack	Would allow closure of the entire footpath. Not Practicable as works are long term in nature and poses inconvenience for pedestrians.	Not Applicable
	Detour	Would allow closure of the entire footpath. Practicable as work location will change daily in nature and poses minor inconvenience for pedestrians. Pedestrians are to be diverted to the adjacent footpath when closures are undertaken.	Occasionally
Traffic through the worksite		The works at times may impact on the pedestrian travel path. Traffic control will be on site to escort pedestrians through work area.	Occasionally
Traffic past the worksite	Shoulder	Pedestrians will be controlled with boom gates or have a choice to use the pedestrian crossings provided at each end of the work site which directs pedestrians to the opposite side of road.	Not Applicable
	Intermittent stoppages	Pedestrian footpath will remain clear and open at all times, Pedestrian intermittent stoppages may be required to assist with clear, safe ingress / egress.	Preferred

- Property access options considered
- Property access is to be maintained for residents and adjacent worksites are to be have close communication with the traffic provider to allow all worksites to operate simultaneously.

12.2 Stage 2 – Murray St

This stage involves the preparation and installation of Utility Services on Murray St, including establishment of plant and machinery, delivery of excavation and demolition equipment.

All ingress / egress movements are to be undertaken in suitable gaps in traffic flow to minimize impact to other road users during the day to day operations during this stage, pedestrians may be temporary held or diverted to the adjacent footpath during this stage of works, to allow clear access for all site deliveries while providing separation from plant to pedestrians. All Site Vehicles are to be contained inside the work zone for loading / unloading.

It is foreseen that Tipper trucks or Bogey Trucks will be required for the Day to Day operations of this stage of the project. While Stage 2 – (Murray St) comprises of Excavation and Service relocations / installations, and removal of spoil. While Oversize or over-mass vehicles are permitted to travel on local council roads during this project, (under Council Approval) in the instance an oversize vehicle is required a Council application will be made 28 days prior to the scheduled delivery date.

Vehicular traffic management options considered:

Option		Features	Comment
Traffic around the worksite	Sidetrack	Would allow closure of the entire carriageway. Not practical as engineering assessments would be required to determine if ground was suitable to bear traffic. Issues include presence of overhead electrical and vegetation.	Not Applicable
	Detour	Would allow closure of the entire carriageway. Not required during this project	Not Applicable
Traffic through the worksite		The works are largely removed from the travel path in an area which is inaccessible to vehicles.	Not Applicable
Traffic past the worksite	Traffic Past Worksite	As active works are not carried out on the roadway, site vehicles are to enter and exit in suitable gaps of traffic. All drivers are to have a CB radio installed to assist with safe ingress / egress.	Preferred
	Lane	Additional workspace or safety zone required to maintain clearance to excavations requiring traffic control.	By council application on selected dates

Pedestrian traffic management options considered:

Pedestrian walkways will remain unhindered during the construction, for Pedestrian site awareness, "pedestrian watch your step" signage will be installed where footpaths meet the site boundary. All footpaths are to remain clear of construction materials at all times. (Refer to TCP – Pedestrian Management) during vehicular ingress or egress pedestrians may be temporarily held by traffic control to allow safe vehicular movement in or out of the site works gates

Option		Features	Comment
Traffic around the worksite	Sidetrack	Would allow closure of the entire footpath. Not practical as works are short term in nature and no suitable surface is available.	Not Applicable
	Detour	Would allow closure of the entire footpath. Not practicable as works are long term in nature and poses inconvenience for pedestrians.	Not Applicable
Traffic through the worksite		The works at times may impact on the footpath. Traffic control will be on site to escort pedestrians through work area.	Not Applicable
Traffic past the worksite Traffic around the worksite	Intermittent stoppages	Pedestrian footpath will remain clear and open at all times, Pedestrian intermittent stoppages may be required to assist with clear, safe ingress / egress.	Preferable
	Sidetrack	Would allow closure of the entire footpath. Not practical as works are long term in nature	Not Applicable

- Property access options considered
- No property access is impacted by these works

12.3 Stage 3 – Smidmore St

This stage involves the preparation and installation of Utility Services on Smidmore St, including establishment of plant and machinery, delivery of excavation and demolition equipment.

All ingress / egress movements are to be undertaken in suitable gaps in traffic flow to minimize impact to other road users during the day to day operations during this stage, pedestrians may be temporary held or diverted to the adjacent footpath during this stage of works, to allow clear access for all site deliveries while providing separation from plant to pedestrians. All Site Vehicles are to be contained inside the work zone for loading / unloading.

It is foreseen that Tipper trucks or Bogey Trucks will be required for the Day to Day operations of this stage of the project. While Stage 3 – (Smidmore St) comprises of Excavation and Service relocations / installations, and removal of spoil. While Oversize or over-mass vehicles are permitted to travel on local council roads during this project, (under Council Approval) in the instance an oversize vehicle is required a Council application will be made 28 days prior to the scheduled delivery date.

Option		Features	Comment
Traffic around the worksite	Sidetrack	Would allow closure of the entire carriageway. Not practical as engineering assessments would be required to determine if ground was suitable to bear traffic. Issues include presence of overhead electrical and lighting.	Not Applicable
	Detour	Would allow closure of the entire carriageway. Not required during this project	Not Applicable
Traffic through the worksite		The works are largely removed from the travel path in an area which is inaccessible to vehicles.	Not Applicable
Traffic past the worksite	Shoulder	As active works are not carried out on the roadway, site vehicles are to enter and exit in suitable gaps of traffic. All drivers are to have a CB radio installed to assist with safe ingress / egress.	Preferred
	Lane	Additional workspace or safety zone required to maintain safe work clearance kerb side lane closure will be required for the dissemble and removal of perimeter hording	By Council approval on selected dates and times

Pedestrian traffic management options considered:

Pedestrian walkways will remain unhindered during the construction, for Pedestrian site awareness, "pedestrian watch your step" signage will be installed where footpaths meet the site boundary. All footpaths are to remain clear of construction materials at all times. During vehicular ingress or egress pedestrians may be temporarily held by traffic control to allow safe vehicular movement in or out of the site works gates.

Option		Features	Comment
Traffic around the worksite	Sidetrack	Would allow closure of the entire footpath. Not practical as works are short term in nature and no suitable surface is available.	Not Applicable
	Detour	Would allow closure of the entire footpath. Not practicable as works are long term in nature and poses inconvenience for pedestrians.	Preferred
Traffic through the worksite		It is anticipated that the work area may cross the travelled path Pedestrian movements would be maintained via Traffic Controller Escort. All works to be temporally stopped during escort operations	Occasional
Traffic past the worksite	Intermittent stoppages	Pedestrians will be controlled by intermittent stoppages while Construction Vehicles Ingress / Egress site. Pedestrians are to be escorted past works if required	Preferred
	Lane	Pedestrians directed into the traffic lane. Traffic not controlled and suitable separation not possible	Not Applicable

- Property access options considered
- No property access is impacted by these works.

12.4 Edinburgh Rd, Marrickville

Edinburgh Road has been identified as a Minor arterial roadway that links the inner suburb of Marrickville To the greater west and attracts less than 5,000 ADT, the roadway is designed as a 1 lane - 2 way undivided roadway, with dedicated Kerbside parking on both sites of the roadway.

As the site is situated in close proximity to the, Sydney Metro Marrickville, Westconnex motorway tunnel works, and the Marrickville Metro Shopping Centre Precinct which has been identified as a major roadway roadway connecting local civilians to the shopping precinct and the dedicated ingress/ egress roadway for other worksites. During any road closure, Traffic management is to insure work vehicles for the adjacent worksites are maintained to allow works to continue simultaneously without adverse effect.

It is highly recommended by the author to conduct / allow 24-hr x 7-day Full closure of Edinburgh Rd While Service works are undertaken to allow local residents to adjust to the closure and minimize disruption to the road network passing the Site

Any intricate works on Edinburgh Rd should be contained to the work area to still allow patron parking along Edinburgh Rd

Murray St, Marrickville.

Murray St Marrickville, has been identified as a minor used thoroughfare that attracts <5000 ADT.
It has been noted the Marrickville Metro Shopping Center has work gates along the site frontage where service connections are to be made to the site.

12.5 Worksite Hours

Works to be undertaken between the hours of 7am to 6pm Monday – Friday and 7am – 3pm Saturday. Night works are envisaged for intricate works and a Council applications, RMS -ROL application, STA bus approvals with police permissions will be submitted for approval for any night works on selected dates. Back up dates will also be provided all stakeholders in the instance of inclement weather or unforeseen events.

12.6 Rubbish collection

There are no bin collection services within the site location.
All waste and spoil will be removed by the Contractor or private waste collection Contractors

12.7 Road Ownership Restrictions

The Inner West Council is the local government authority that has jurisdiction over the inner portion of the metropolitan area of Marrickville, while Edinburgh Rd, Murray Stand Smidmore St are Council owned roadways. RMS will be notified for any changes to the road network if works impact Traffic light signals / phasing on Edinburgh Rd anytime during these works.

12.8 Bus Services

There is bus stops located along the work site frontage along Smidmore St, No impact or delays of bus services are expected by site day to day operations, when intricate works are undertaken, bus diversion / notification approvals will be submitted to Transit Systems (formally STA) prior to commencement of undertaking any work.

12.9 Train Services

There are no Active Train Lines within the vicinity of these works. Consideration has been taken into account for Works currently been undertaken for the Marrickville Metro Railway Project, and a copy of this TMP will be provided to the Sydney Metro Traffic Manager for approval.

12.10 Taxi Services

There is taxi ranks within the vicinity of these works on Smidmore St. When intricate works are undertaken notification will be submitted to the Sydney Taxi Council for approval

12.11 Specific Community Groups/Places of Worship

No Specific Community groups / places of worship will be affected by these works.

12.12 Hospitals / Emergency Services

Marrickville Local Area Police Station is within in close vicinity of These works. When
Intricate works are undertaken, work applications will be submitted to NSW Police Force for Approval 6-8 weeks prior to works undertaking.

12.13 Schools, Universities in the area

There are no Schools or Universities in the vicinity if these works.

12.14 Local Businesses / Residents

All Local Business and residents are to remain unaffected by these works. If works are to impact
Local businesses notification letters will be delivered to affected businesses 7 days prior to Commencement of Work along the affected roadway.

Affected Authorities

The project will be conducted on both adjacent roadways to the Marrickville Metro Shopping Centre Site Street frontages. Traffic impacts are not expected to affect any other authority's area of responsibility. In addition, if the site requires a Council Permit or road authority notification for any works outside the initial Scope an allowance of 14 days (2 weeks) prior will be required to allow the authorizing government department to allow resulting short-term or long-term changes in traffic conditions. This notification is required for each different traffic arrangement for each stage of the project.

Roles and Responsibilities

14.1 The Project Director

Has the primary duty under the Act to ensure, as far as reasonably practicable, that workers and other persons are not exposed to health and safety risks arising from the business or undertaking.
Planning and Defining Scope, Activity Planning and Sequencing, Resource Planning, Developing Schedules, Time Estimating, Cost Estimating and developing a budget.

The Project Director will liaise with the contracted traffic company to monitor and review the traffic management plan. This is likely to be in consultation with the nominated traffic officer. The project manager will ensure the TMP is accordance with the Australian standard or the TC@WS, contract specifications and authority stipulations.

14.1.2 Traffic Management Consultant

KPI Services (NSW) Pty Ltd is responsible for the following documentation:
Construction Traffic Management Plan: Design of an effective and compliant traffic management plan that outlines how the works are integrated into the operation of the road network, identifies and considers all foreseeable risks, and assesses the impact on all road users. Preparation of this traffic management plan requires a procedure to be followed whereby all essential aspects of the plan are considered in an ordered way. Additional Traffic Guidance Scheme: Details the traffic control signs, devices and measures to be applied at work sites to warn traffic and guide it through, or past, a work area or temporary hazard. Specific traffic guidance schemes are required for each separate element of the works. B Risk Assessment for TMP and TGS: Entails the identification and analysis of all safety risks likely to arise during works on road including the setting up, operating, changing and ultimate dismantling of a traffic guidance scheme, followed by the determination of appropriate measures to mitigate those risks. (See Appendix C for KPI Services (NSW) Pty Ltd Risk Assessment)

14.1.3 Road Users

Monday to Fridays' inbound peak periods are predicted to be from 06:30 to 10:00hrs and outbound from 15:00 to 18:30hrs.

- Edinburgh Rd is a Minor thoroughfare that connects the Marrickville CBD to Edgeware Rd and to Enmore / Victoria Rd to greater Sydney, This should be regarded as a hazard and tool boxed to all personnel on site. Construction worker on-street parking is strictly prohibited.
  Both John R Keith Pty Ltd and KPI Services (NSW) are to be mindful to provide safety in all of the following road users with traffic controllers meeting all regulations when working on or adjacent to major road corridors.
- Heavy Vehicles
- Cyclists
- Pedestrians
- Elderly & Disabled
- Emergency Vehicles.
- Adjacent worksites

14.1.4 *Traffic Management Company*

John R Keith Pty Ltd have elected KPI Services (NSW) Pty Ltd to implement and manage the traffic management component of this project. To ensure the safety of the worksite, on site workers and the general public. Traffic management is also required to ensure there are no traffic delays resulting from the worksite. Conflicting signage is removed or covered up and work in conjunction with existing or already programmed road works.

On site Management, shall ensure everyone on site is well aware of any accidents and complaints. Providing only duly accredited traffic controllers that hold a current certificate of competency: RIIWHS205D, RIIWHS302D Ensure that the appropriate traffic control devices are in place on a daily basis prior to the commencement of work; and

Ensure that any Traffic Guidance Schemes have been submitted to the administrator for approval 5 – 10 days prior to the implementation and ensuring that the traffic arrangements conform to the approved Traffic Guidance Scheme, as per Council or RMS requirements.

Responsible for completing an on-site documentation and record keeping – risk assessment, SWMS, traffic related incidents and Signage Checklist.

14.5 *Site Personnel*

All personnel engaged in the field activities will adhere to the correct work practices as required by the TC@WS manual and The Code. The approving authority shall be notified should a situation arise that is not covered by this TMP or the TC@WS. Further consideration for construction staff parking see clause 17.

- All Personnel to be tool boxed on traffic conditions and TGS / TCP prior to commencing work.
- Construction Personnel of between 5 - 12 staff for approximately 1 months.
- Construction worker on-street parking is strictly prohibited.

14.6 *Site/Traffic Supervisors and Controllers*

KPI Services (NSW) will appoint a Site Supervisor/Traffic Supervisor who shall undertake a review of the erected signage to ensure compliance with the approved TGS and shall maintain detailed daily records. This person shall be qualified in RIIWHS302D or equivalent Implement Traffic Management Plans, or Traffic Guidance Scheme record keeping will be undertaken.

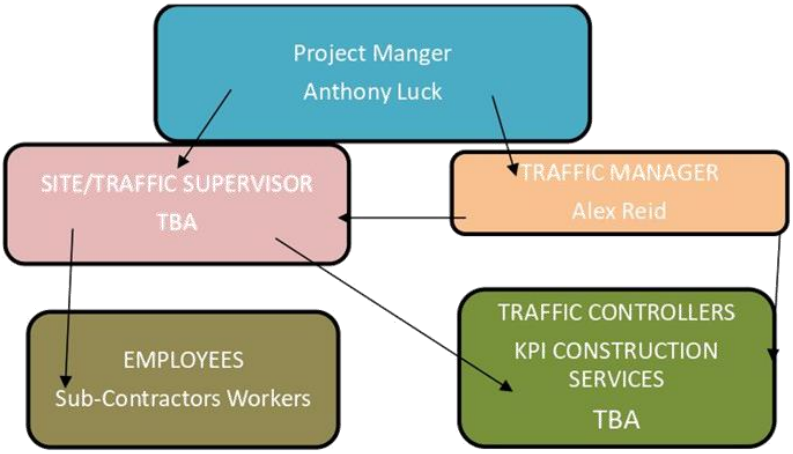
14.7 *The Traffic Manager*

For the duration of the project the registered traffic management company will be KPI Services (NSW) Pty Ltd. They will be providing Alex Reid as the Traffic Manager for the duration of the project. The traffic Managers details are contained in Appendix B.

14.8 *Traffic Control*

John R Keith will engage a KPI Services (NSW) undertake any traffic control duties. Registration details of KPI Services (NSW) Pty Ltd are contained in Appendix A.

Project Hierarchy



15 Incident or Accident Procedures

Emergency Services are ultimately responsible for the control and management of responses to all incidents that occur on the road network. Notwithstanding. The Project recognizes the importance of cooperation between all agencies involved in the road occupation to clear incidents quickly. Near miss reports, toolbox talks, Site meetings will be completed and actioned for any instance where safety may be compromised.

15.1 Accidents or Incidents

In the event of an incident or accident, including immediately adjacent to or passing through the road occupation, the Site Supervisor will inform NSW Police, TMC and the local authorities and the Traffic Manager of the event. Where possible, the TGS will be removed from the road. The Project commits the available traffic guidance resources to assist the respective agencies in the speedy clearance of the incident. In the event of an incident or accident, whether or not involving traffic or road users, all work shall cease and traffic shall be stopped, as necessary, to avoid further deterioration of the situation. Any traffic crash resulting in non-life-threatening injury shall immediately be reported to the NSW Police Service.

15.2 Delays in Queuing

In the unlikely event of delays queuing in greater than 100m of length, the Site Supervisor will remove the traffic implementation until traffic has returned to acceptable levels. The Site Supervisor will also notify the Council / Traffic Management Centre and John R Keith if required. Traffic Controllers are to monitor congestion at all times when onsite. Hold & Release shall not be undertaken during high traffic volumes. John R Keith should be mindful when scheduling the type of deliveries at specific times will be effective and minimize the impact to the public.

15.3 New South Wales Police Service

NSW Police Service enforces any speed restrictions approved by TMC or Council and have the authority to control the traffic flow on site. Therefore, a ROL or Council permit is required and must be available on site to present to any officers requesting to sight the permit. ROL OPLINC Submissions be made by a KPI Services (NSW) and will be kept current with project requirements.

15.4 *Remedies*

All non-conformances will be remedied within 24 hours of receipt of a written notice of the non-conformance.

15.5 *Damage to Services*

In the event that services are damaged, all work shall cease immediately, machinery and vehicles stopped and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area. The relevant road authority and relevant supply authority shall be called immediately. Damage to any other services shall be treated in a similar manner, except machinery may remain operational and access may be maintained where it is safe to do so. All site personnel shall be briefed on evacuation and control procedures.

Workplace Health and Safety

Jorn R keith Pty Ltd, employers and personas in control of workplaces have a statutory duty of care to provide a safe workplace for all personnel working at the site, accessing the site or impacted by the construction activity including employees, contractors, sub-contractors, visitors to the site and the general public.
This TMP forms part of the overall project Construction Traffic Management Plan (CTMP) and provides details on how all road users (considered likely to travel through, past or around the worksite and those impacted by the works) will be safely and efficiently managed for the full duration of the site occupancy and works.

16.1 *Safe Work Method Statement*

Prior to the commencement of this activity, KPI Services (NSW) will compile a Safe Work Method Statement (SWMS) for this project. KPI Services (NSW) traffic management practices require that the Traffic Controller's evaluate all traffic arrangements before they are open to traffic, immediately following the opening to traffic and periodically throughout the activity. Adjustments are recorded in the SWMS, and are documented on the TCP including reasons for the changes and are lodged with the Principal Contractor. New hazards that arise throughout the work will be subject to risk assessment and incorporated into the SWMS.

Works on Roads

The Traffic Guidance Schemes (TGS) for each stage have been designed by KPI Services (NSW) Pty Ltd. The devices shall be inspected periodically throughout the day in accordance with Appendix A of the TC@WS and aftercare considerations will be implemented including the covering or the removal of Workers Symbolic Signs, where they are not necessary. Traffic shall be controlled at all times, during construction, in accordance with the TC@WS v5 2018, AS 1742.3 and RMS regulations. Regular toolboxes and site meeting will be undertaken during the duration of this project to maximize traffic flow and efficiency while these works are undertaken. TCP / TGS plans will be continuously reviewed and revised to insure worker, motorist and pedestrian flows are maximized without impeding on safety.

Site Personnel Vehicle Management Plant

17.1 *Parking*

An average of 8+ construction personnel are expected to work on the site per day with peak of 12 staff for the major stages of construction, lasting approximately 3-5 weeks constitutively .

KPI Services (NSW) encourages the following to be adhered to

- Construction worker parking to be made available inside the Work zone.
- The site has made provisions internally for Delivery vehicles

17.2 Traffic Documentation

Traffic Management and Control documentation will be issued, collected and saved in accordance with Hutchinson Builders quality system. Documents will conform to The Code, TC@WS and Workcover and will consist of at least the following:

- **17.2.1** Daily Tool Box Minutes/induction notes or diary entries.
- **17.2.2** Daily sign on of SWMS.
- **17.2.3** Daily signage checks or KPI IMS Form M994m and
- **17.2.4** Incident Report forms as required.

17.3 Traffic Control Devices

Traffic control devices and their use shall conform to the requirements of the TC@WS and AS1742.3 and shall also be in compliance with Australian Standards. All traffic control devices shall be securely fixed in the correct position and maintained in an effective and clean condition suitable for day and night operations, whilst employed on the work under the Contract. Devices which are damaged or worn, or which do not conform to the above requirements shall not be used. It is highly recommended to utilize Extension Crown Control Barriers (ECCB) to assist with delineation of site vehicles and pedestrians at all site entrance points.

17.4 Traffic Controllers

Traffic control shall be undertaken in accordance with the Traffic Controller Accreditation Scheme. Approved Traffic Controllers issued by New South Wales Authorized Training Providers (ATO). The Traffic controller shall have a copy of their Qualification certificate available on the Site at all times during which traffic control operations are being undertaken.

Where Traffic Controllers are used to control or to stop and direct traffic, Traffic Controller shall:

- **17.4.1** Operate in accordance with the TC@WS and The Code
- **17.4.2** Hold a current Construction Industry White and Traffic Control Blue card
- **17.4.3** Hold a current Traffic Controller's accreditation in New South Wales
- **17.4.4** Take appropriate breaks as required by the legislation and The Code
- **17.4.5** Traffic Controllers will be relieved from duty whilst actively guiding traffic every two hours for at least 15 minutes or undertake a change of Position on the worksite
- **17.4.6** Traffic controllers, when utilized, shall be in constant communications with the Site Supervisor and Project Directors / Site Foreman via two-way radios.

17.5 Implementing Traffic Guidance Schemes

As detailed by the TC@WS and The Code, all personnel who install or dismantle TGS (Refer to TC@WS Section 3.4 or AS1742.3 CL2.5.3), shall hold a current implement Traffic Control Plan qualification (yellow ticket).

17.5.1 Temporary Signage

All traffic will comply with the AS1742.3 and will be installed.

17.5.2 *Long Term*

Long term signage associated with the TCP will be installed in accordance with TC@WS Section 3.1.3 or AS 1742.3 CL 1.4.15 and 1.4.5 It is foreseen that signage may be required to be kept long term on this project.

17.5.3 ***Short Term***

Mountings for short-term operations should be arranged so that the signs are prominently displayed to traffic and will command attention. The sign should be mounted so that it is clear of the ground and free of obstruction. The minimum height from the shoulder surface to the bottom edge of the sign is 200mm.

17.5.4 ***Personnel Symbolic Signs***

Personnel symbolic signs (workman and Flagman Symbolic) shall be removed or covered when those specific personnel are not visible to road users.

17.5.5 Speeds

Speed Zone Authorization (SZA) will not be obtained from RMS TMC or Local Council, all delivery vehicles are to adhere to the NSW road rules at all times.

17.5.6 Prohibition Notice

The principal is subject to a Prohibition Notice which restricts personnel from crossing high speed multilane divided roads with posted speed limit of 100kph or greater. The Contractor is to conform to the requirements of this Prohibition Notice and at all times refrain from crossing these roads without the use of lane closures or speed reduction.

17.5.7 Acceptable Traffic Impacts L.O.S.

For this project an Acceptance Traffic Impact L.O.S. Report is not required.

17.5.8 Traffic Lane Availability and Configuration

Traffic Patterns are Monday to Friday inbound peak periods predicted are 06:30-10:00hrs along Edinburgh Rd and outbound from 14:30-1830hrs.

Road Lane	Configuration	Speed
Edinburgh Rd	1 lane- Two Way - undivided Roadway that comprises of dedicated Kerbside parking.	50km/h regulatory speed
Murray St	1 lane- Two Way - undivided Roadway that comprises of dedicated Kerbside parking.	50km/h regulatory speed
Smidmore St.	1 lane- Two Way - undivided Roadway that comprises of dedicated Kerbside parking. And a Bus Stop on the Northern Side of the Roadway	50km/h regulatory speed

17.5.9 Changed Road Configuration

No Changed Road Configurations form a part of this TMP.

17.5.10 Times of Operations

The site will operate between 7am to 6pm Monday – Friday and 7am – 1pm Saturdays and night works from 8pm -5am Sunday - Thursday any works outside this scope council and relevant applications will be Submitted and approved by the Inner west Council

17.5.11 Speed Choices

The regulatory speed on all adjacent Streets is to be followed by RMS / Council Signposting's and shall be.

17.5.12 Provision for Police Control
It is not envisioned that Police assistance will be utilized.

17.5.13 Barriers
It is not envisaged that safety barrier systems (Water filled / bollards and Para webbing) will be required throughout this project the Contractor is required to erect a hording over footpaths to ensure safe pedestrian access at all times.

17.5.14 Anti- Gawking Screens
Anti-Gawking Screens will not be applicable on this work site

17.5.15 Protection and Delineation at Excavations
John R Keith will undertake a protection and delineation risk assessment during the commencement of any Demolition or Excavation works, and will install and dismantle protection screens when required under the Construction Management Plan

17.5.16 Detours
It is envisaged that Detours will be required for various stages for this project due to the work scope and nature of the works. It has been noted 6 week's notice is to be provided to Council and adjacent worksites to insure a seamless traffic management solution, at all times delivery vehicles for concurrent works are to remain unaffected and permitted to travel through road closures under Traffic Control Authorization.

Other Works in the Area

18 Adjacent Works
Close communication will be required with the Marrickville Metro Project Office (Expansion Team) and the Marrickville Metro Shopping Centre Development, Sydney Metro SSJ Group, TSE Group, Trans grid and Westconnex New M5.

Community

19.1 Public Consultation
John R Keith Pty Ltd and KPI Constructions will inform all affected residence and businesses of any planned traffic impacts as require. This will be undertaken by letter box drop delivered by a Site Representative by individual door knocks or mail drop.

19.2 Complaints
John R Keith shall keep a register of all complaints received and actions taken to address each complaint. The complaints register shall be forwarded to the Administrator on a weekly basis. John R Keith shall similarly keep a register of requests for information from the public. This public information request register shall also be forwarded to the Administrator on a weekly basis.

19.3 Variable Message Signs
It is envisioned that if variable message signs are required during any stage of the project, installations will be two (2) weeks in advance of any scheduled long term roadwork Traffic Changes. When used they shall be compliant with AS 4852.2-2009, positioned and programmed such that they do not create a distraction to drivers, do not obstruct line of sight and only display information that is relevant to current or forthcoming conditions.

19.4 Pedestrian and Bicycle and Access

Pedestrian and bicycle traffic will be managed in accordance with the TC@WS v5 2018. At all times pedestrians shall be separated from the worksite for the duration this project.

19.5 Entry into Private Properties

Entry in and out of private residents / businesses are to be maintained at all times and are to remain unaffected by these works.

19.6 Public Transport

Public transport routes will be affected during Stage 3. At any time if bus stops or Bus Routes are affected by These works Transit Systems (formally STA) and relevant stakeholders will be notified and works are to be approved prior to commencement.

19.7 Emergency Vehicle Access

Emergency vehicles will have continuous access throughout the duration of the project.

19.8 Night Works

Night works will be undertaken with the appropriate work approvals and permits.

19.9 Dates

Start Date: July 2020
Project Completion: August 2020

19.10 Times

Monday – Friday	0700 – 1800
Saturday	0700 – 1300
Sunday	N/A
Night works	2000 - 0500

20. Version 5 Amendments

KPI Services (NSW) Pty Ltd has considered the implications for traffic controllers' duties (Refer p23 Clause 17.3.1.) operating within the regulatory requirements of T@WS approved procedures Clause 4.3.17 documentation. After considering all options (including safety and cost effectiveness) and having presented the prevailing circumstances (refer TGS's pages 28-42) of this site and the TC's control station locations and method of traffic control.

21. Standards, Rules & Policies Community

KPI Services (NSW) Pty Ltd has strong emphasis on zero harm and its working relationship with its client and strives to achieve this through communication, certification and relevant documentation

POSITION	NAME	Email	CONTACT
Construction Manager	TBA		
Project Manager	TBA		
OHS Safety Rep.	TBA		
Community Relations Officer	TBA		
Environment Officer	TBA		
Site Supervisor	TBA		
Community Liaisons Officer	TBA		

KPI Services (NSW) Pty Ltd
After Hours Contact / 24 HR emergencies 0491 278 904
9-13 Bronte Rd, Bondi Junction
NSW Operations Manager: Alex Reid - 0491 278 904
Site Traffic Supervisor: TBA
Traffic Management Design: Alex Reid Orange Ticket: 0043630869

John R Keith Pty Ltd
91-101 Hutchinson St, ST Peters
NSW 2044

PH 02 9517 1215

Item 3

Appendix A:

Tuan Tran
Tel (02) 9482 6587
SF2017/091427

Transport Roads & Maritime Services

KPI Services Pty Ltd
22/74 Thomsons Road
Keilor Park VIC 3042

Attn: Angela Jarvis
Financial Controller
Tel: (03) 9326 7795
Mob: 0433 699 324
Fax: (03) 9326 5778
Email: finance@kpiconstruction.com.au

REGISTRATION OF CONTRACTORS

Dear Madam,

I refer to your application for category G under the RMS Registration Scheme.

After the assessment, I would like to advise that your company has been registered for:

Category G Provision of Traffic Control

The registration is valid for 3 years from the date of this letter and it will expire on 14 May 2020.

Yours faithfully,

Shalendra Ranasinghe
General Manager Commercial Services
Technical & Project Services Division
15 May 2017

Roads and Maritime Services
20-44 Ennis Road, Milsons Point NSW 2061| Locked Bag 928 North Sydney NSW 2059 DX10516 | www.rms.nsw.gov.au | 131 782

Attachment 1

Appendix B: Traffic Manager Evidence

Experience Summary: Alex Reid.

Alex has over 10 year's experience in Senior Traffic Management roles including Civil works, Major road upgrades, Major Events and large scale Sporting Events, Major Music Concerts and festivals, bridgeworks, highways, railway stations, construction developments including Commercial, residential and new suburb - estate developments and various local council works from Crookwell to Newcastle City Council and from City of Sydney to Lithgow Council. Alex began working with Traffic Management Australia in July 2007, and since then has worked projects like Pitt St mall upgrade Sydney CBD, Leighton Tower, North Sydney. Water and power utility upgrades, NBN contracts, Multi-Story Skyrise Constructions and new estate constructions within Sydney CBD and surrounding Council districts.

Alex is a current member of AITPM (Australian Institute of Traffic Planning and Management) and ARCS (National Australian Road Safety Conference) and has attended multiple Counter Terrorism seminars and Police training days for major events and is well adept at handling all situations where safety and common sense are crucial and his practical knowledge of emergency situations and training of TC@WS requirements make him an asset to KPI Services (NSW) Pty Ltd and our clients.

2007-2009 Various roadwork and Civil projects undertaken for Traffic Management Australia

2009 -2013 Various Highway upgrades for Traffic Logistics, Highway Projects managed include Great Western Hwy, Bullaburra West, Great western Hwy Hazelbrook, Great western Hwy Bullaburra East project. Sydney Water emergency patrol.

2009-2013 Joined Vigilant Group as Project and Events Manager, site manager of large scale Special Events and sporting projects, include Music festivals, concerts, marathons and sporting events.

2013- 2015 Joined Roadworx Group as Traffic Operations Manager, delivering Civil and Road projects on behalf of Local council and state Governments, worked closely in delivering multi story constructions inside the CBD and surrounding Suburbs, Train station Upgrades, undertaking roadside Audits and inspections, traffic consulting and reporting, TMP and CTMP development.

2013- 2017 Promoted to Traffic Manager – Events and Roadside Division at Vigilant Group, undertaken all planning and management of major events, including Vivid Sydney, Future Music, Defqon 1, Sydney half and full marathons, City to Surf, Blackmoores running festivals, Tough Mudder, NRL sporting Events, V8 Supercar race days, NYE Sydney CBD events.

2017 Member AITPM – Australian Institute of Traffic Planning and Management of and ARSC – Australian Road Safety Conference

2017-2018 Joined CBD Traffic Control as Traffic Manager, undertaking road planning and consulting, Traffic Data Collections and Analytics, new suburb estate development and approvals, civil construction and skyrise building developments, Railworks (RISI and RIW).

2018 KPI Services (NSW) Pty Ltd employed as NSW Operations Manager. Overseeing all Day to day Traffic operations, delivering Civil and Building construction projects to NSW

2019 Member of TMAA – Traffic Management Association Australia

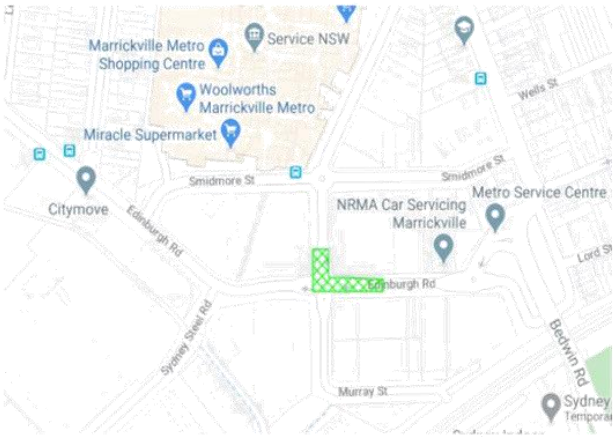
2020 -2021 Advanced Diploma of Business and Leadership

Appendix C: Traffic Guidance Schemes

See P27-48 for Traffic Control Plans / Traffic Guidance Schemes, and site documents

Location of works

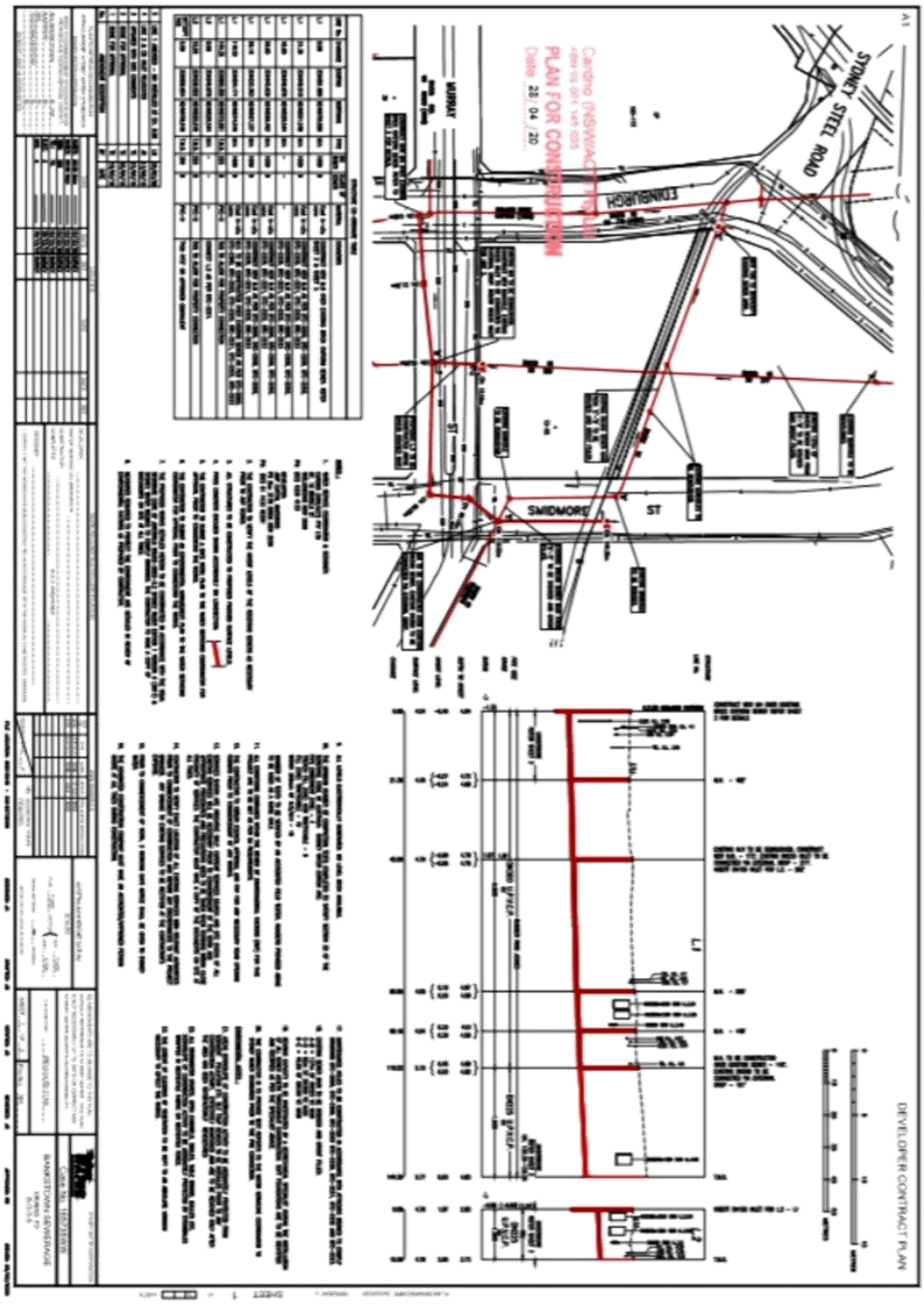
Corner of Edinburgh Rd, Murray St and Smidmore St, Marrickville



Item 3

Attachment 1

SITE PLAN

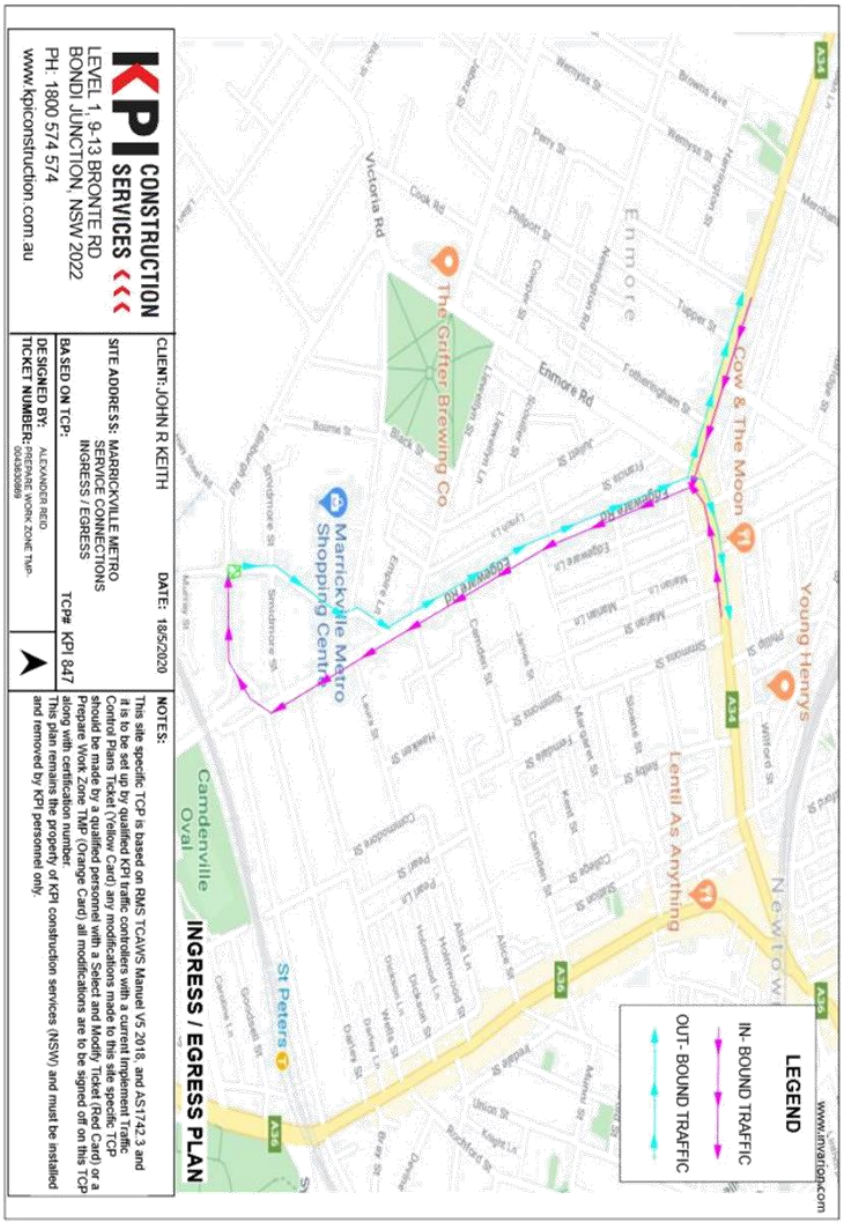


KPI Services (NSW) Pty Ltd
Prepared by Alex Reid- PWZTMP 0043630869
Doc No. John.R.Keith 1804 KPI Services (NSW) Pty Ltd V1 Dated 18/5/2020

Item 3

Attachment 1

TCP 847 – SITE INGRESS / EGRESS PLAN



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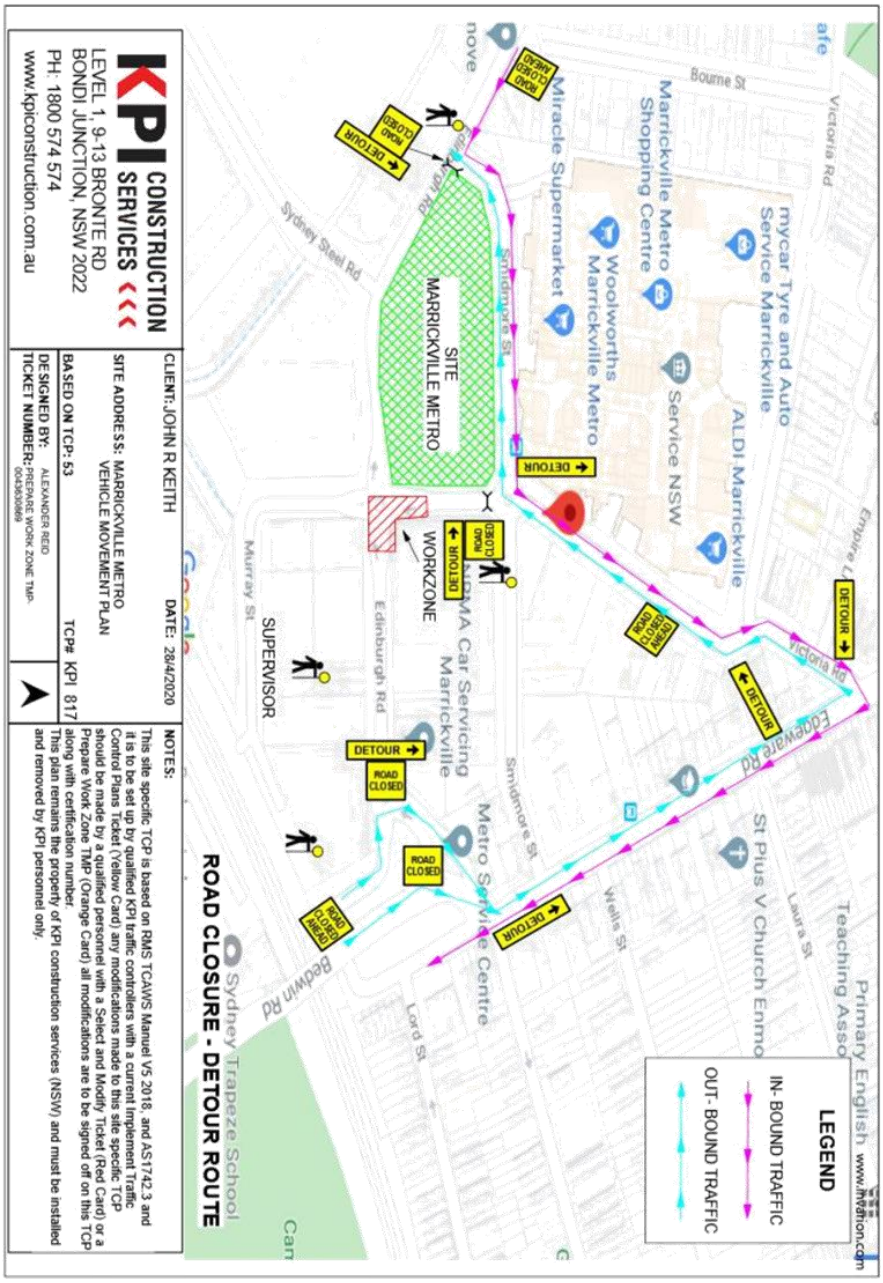
Item 3

Attachment 1

TCP 817 – STAGE 1 ROAD CLOSURE OVERVIEW – DETOUR ROUTE



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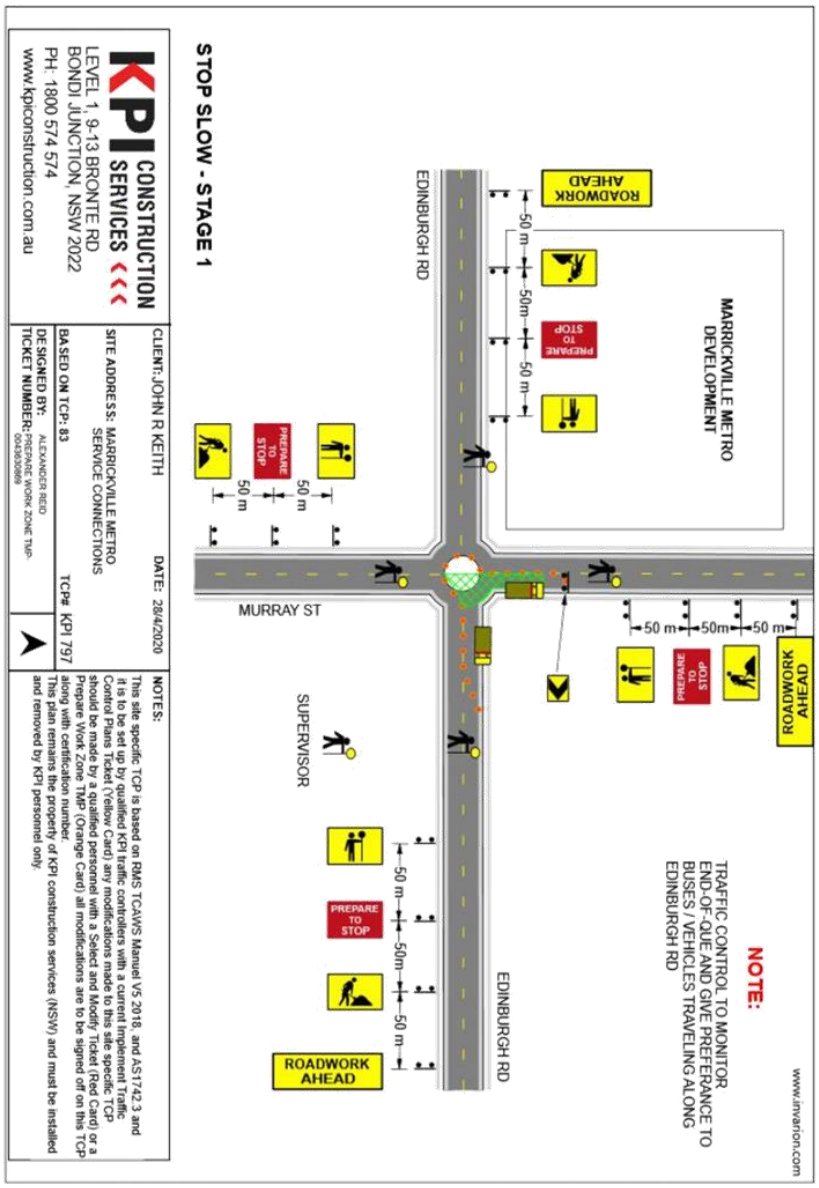
KPI Services (NSW) Pty Ltd
Prepared by Alex Reid- PWZTMP 0043630869
Doc No. John.R.Keith 1804 KPI Services (NSW) Pty Ltd V1 Dated 18/5/2020

KPI CONSTRUCTION SERVICES

TCP 797 – STAGE 1 STOP SLOW - OPTIONAL



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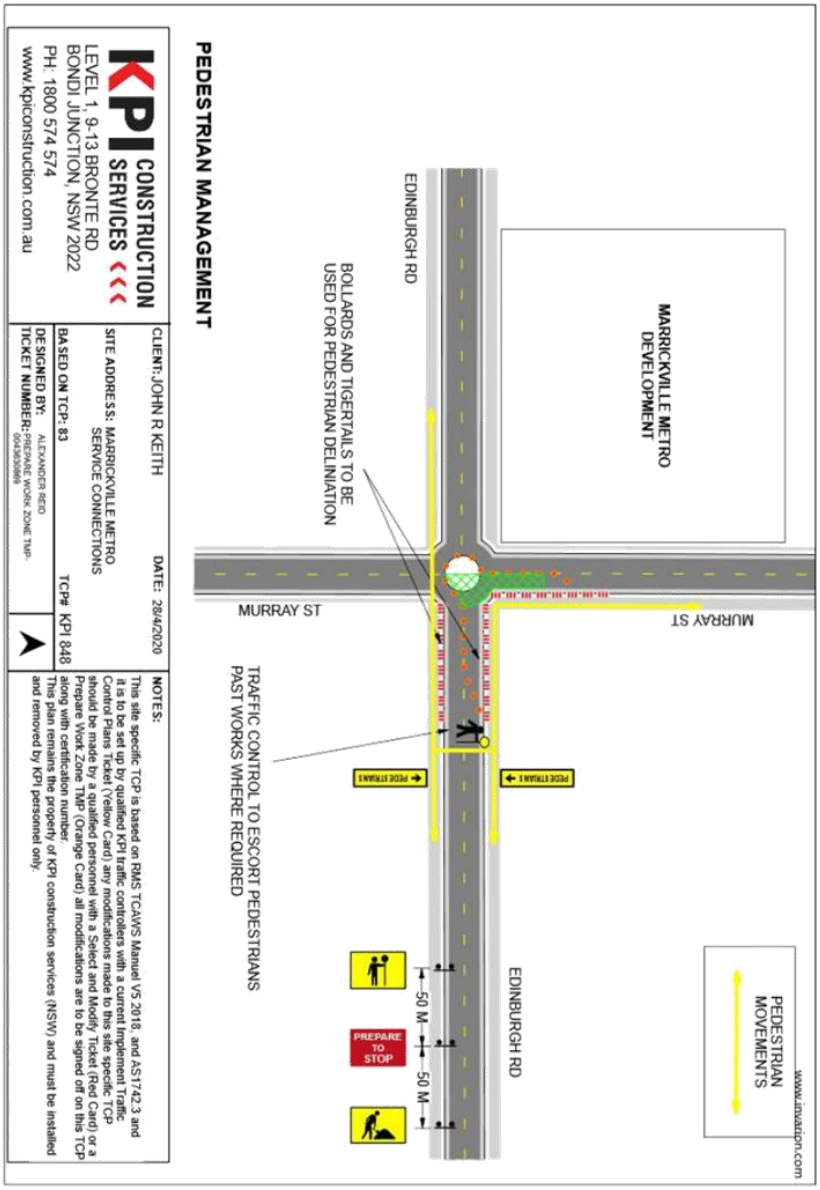
Attachment 1

TCP 848 – PEDESTRIAN MANAGEMENT -STAGE 1



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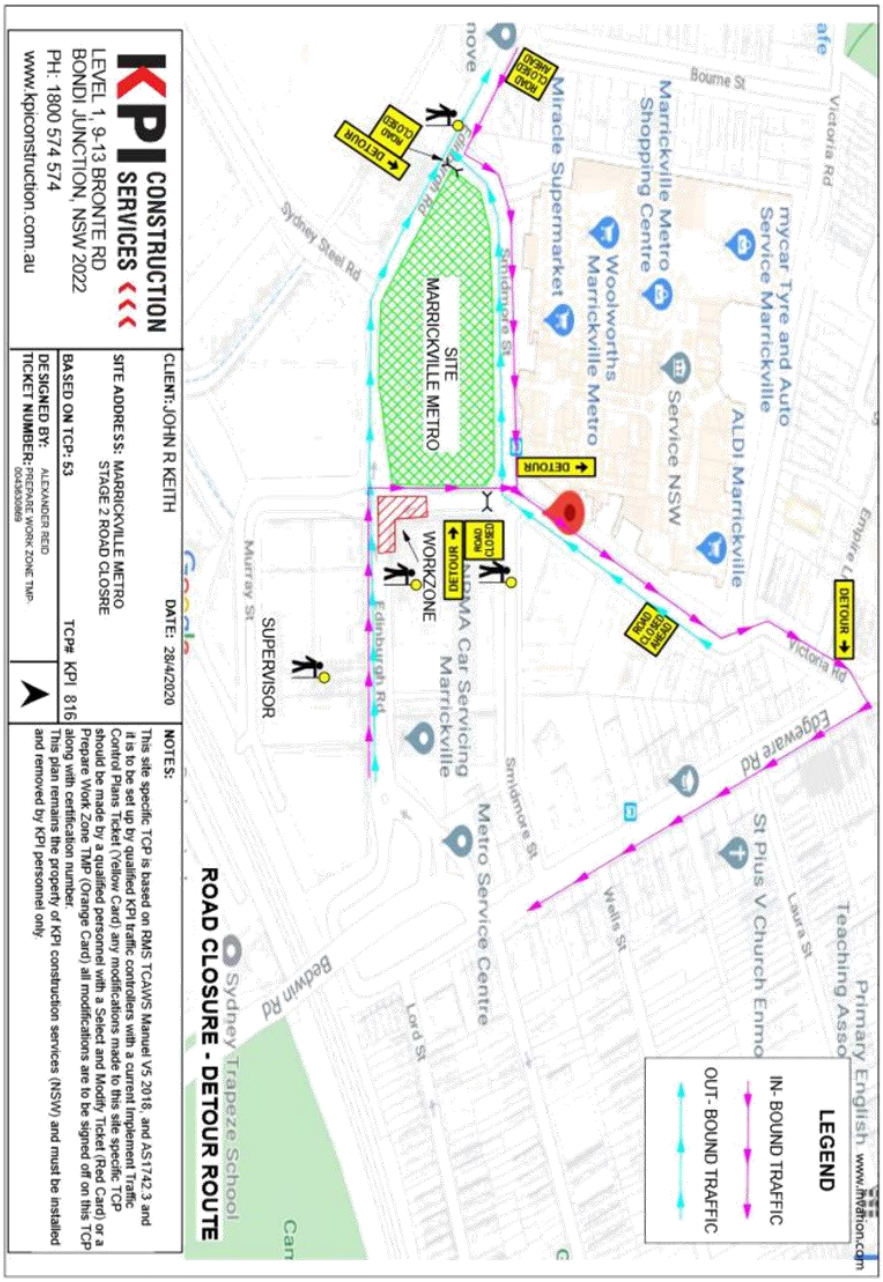
Item 3

TCP 816 – STAGE 2 ROAD CLOSURE OVERVIEW – DETOUR ROUTE



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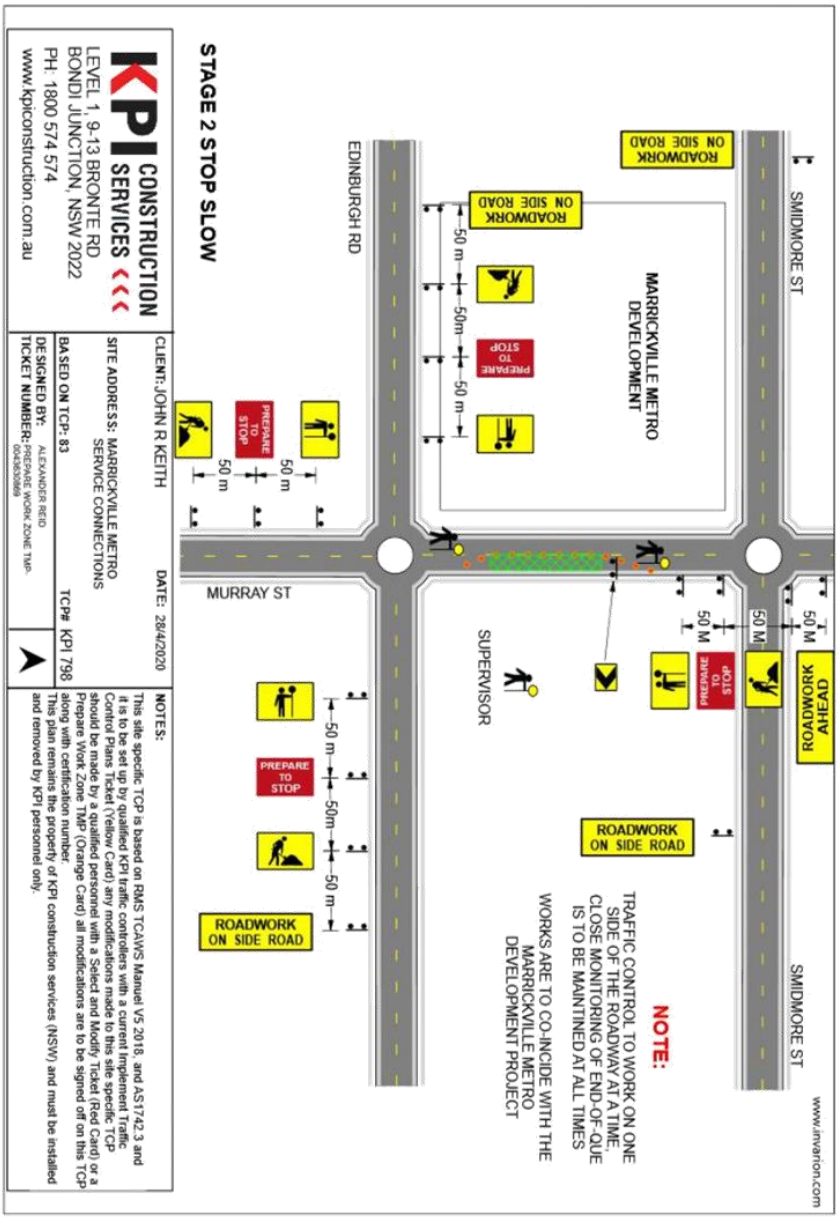
Attachment 1

Item 3

Attachment 1

TCP 798 – STAGE 2 STOP SLOW – OPTIONAL



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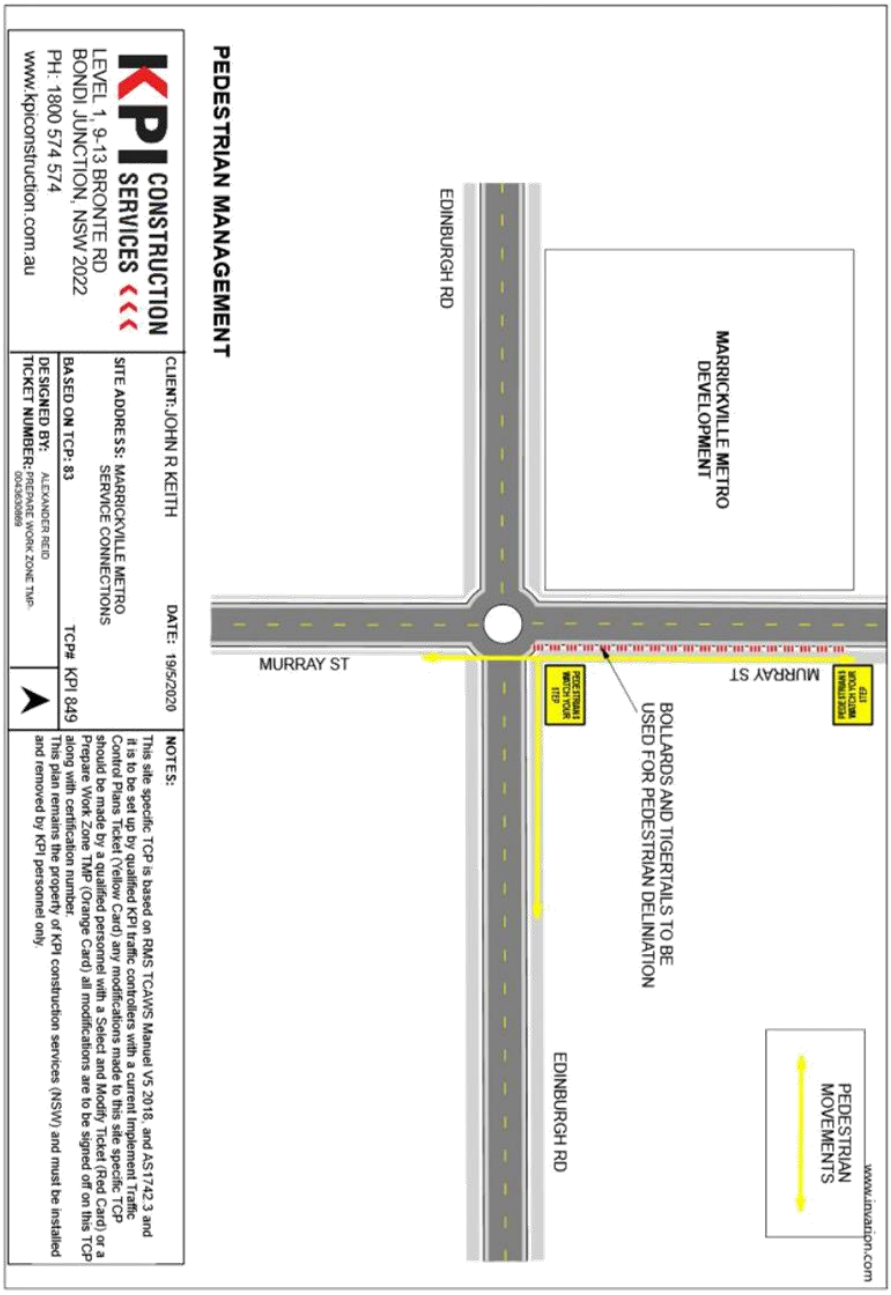
Attachment 1

TCP 849 – STAGE 2 PEDESTRIAN MANAGEMENT



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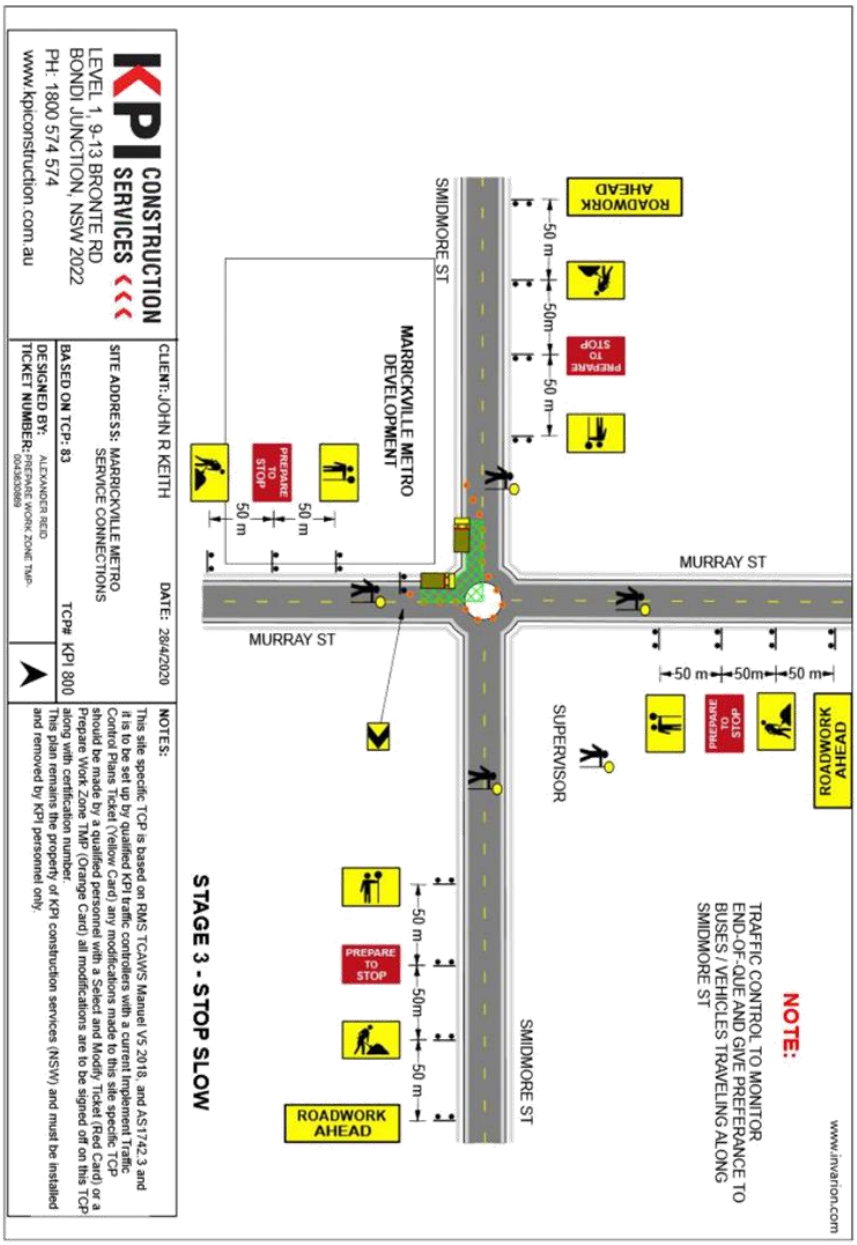
Attachment 1

TCP 800 – STAGE 3 – STOP SLOW



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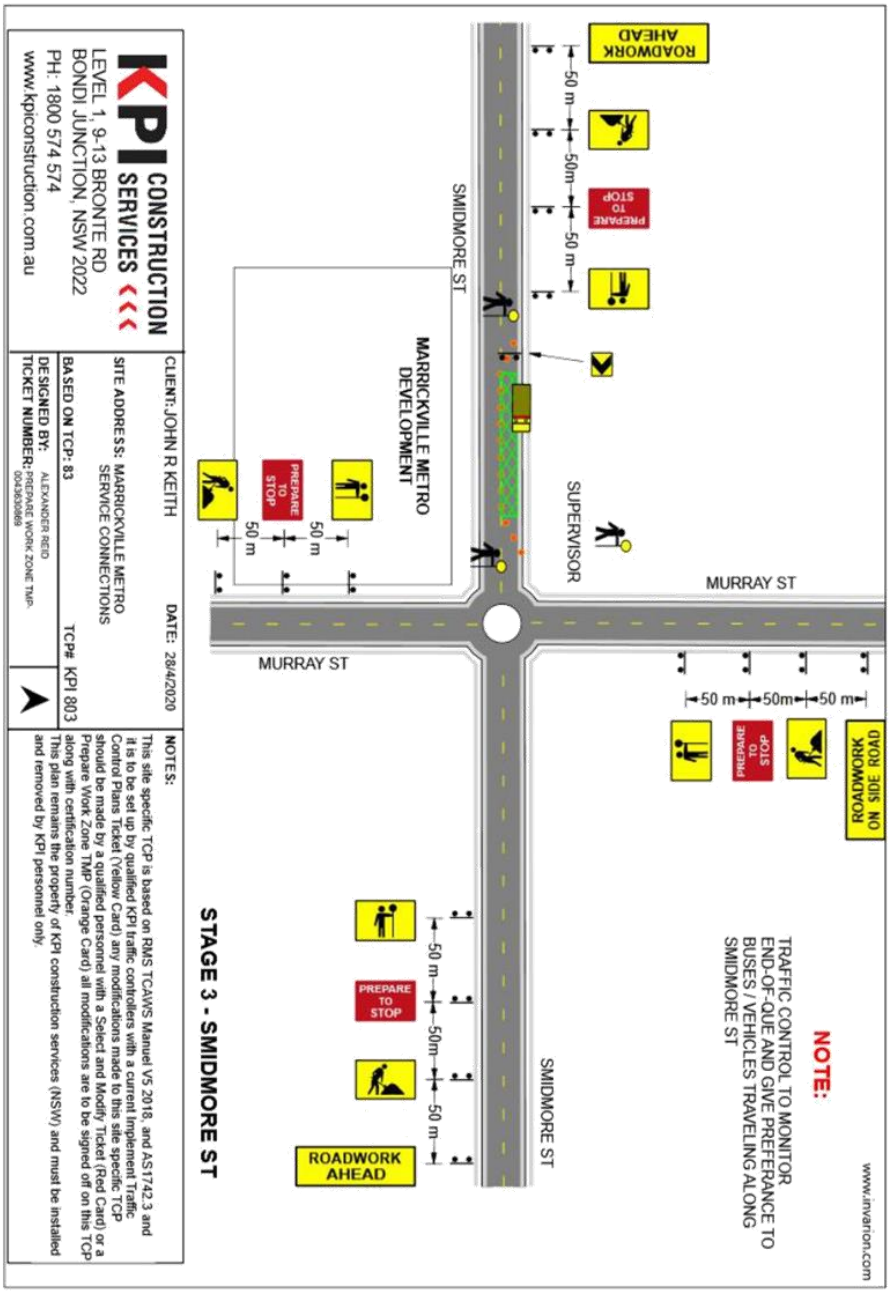
Attachment 1

TCP 803– STAGE 3 SMIDMORE ST



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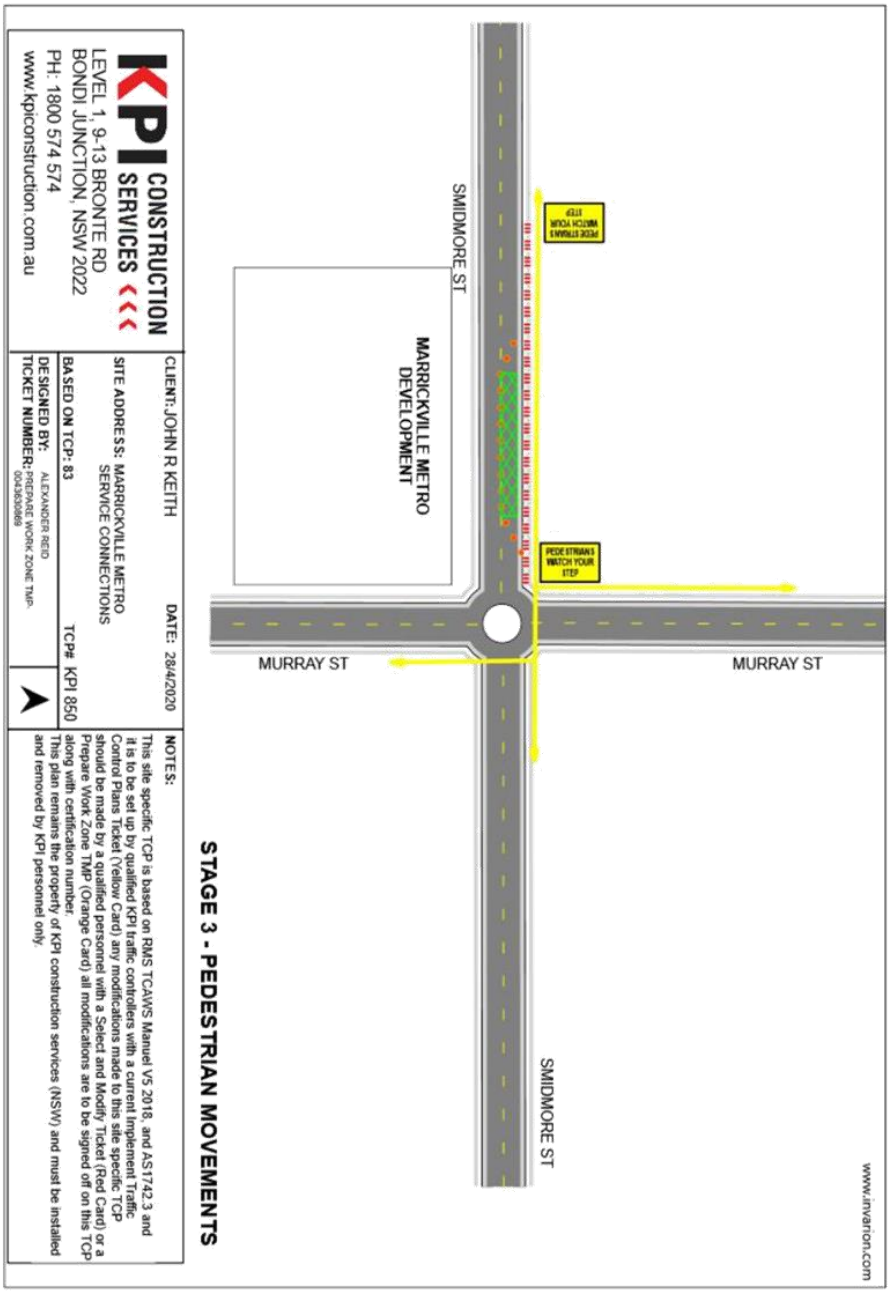
KPI 850– STAGE 3 PEDESTRIAN MOVEMENTS



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Item 3

NOTICE OF TEMPORARY LANE/ROAD CLOSURE - PERMIT NO._____
Conditions imposed by the NSW Police Force relative to Roads & Maritime Services or Council Permit to Stand and Operate Equipment.

To _____ (Company / business contact name) of _____ (Company / business contact address)

PARTICULARS OF CLOSURE AND CONDITIONS

(1) A temporary lane / road closure is imposed in the location described below during the nominated times due to the obstruction / danger posed to traffic by the excavation of footpath / roadway / standing and operation of a mobile crane / travel tower / mobile concrete pump with _____ metres of jib / mast on the

_____ (North South East West) side of _____ (name of street / road / lane / etc), _____ (suburb), between

_____ (cross street) and _____ (next cross street), occupying _____ metres of roadway,

between the hours of _____ (start time) and _____ (end time) on _____ (day or days of week) _____/_____/ 20_____ (date or dates).

(2) This notice or an exact copy is to be carried by the operator of the unit and produced if required. It is subject to cancellation at any time, and upon expiry the notice must be destroyed.

(3) Suitable warning signs and barricades are to be erected in the area that the unit is being operated.

(4) The roadway is to be properly marked with an adequate number of traffic lane markers to safely control the flow of traffic.

(5) Flagmen to be in attendance to control traffic.

(6) The unit suitably illuminated with adequate warning lamps when standing during the hours of darkness.

(7) Approval to be obtained from the local Council Engineer for local or regional roads.

(8) If this road is a state road you must provide police with a copy of the Road Occupancy Licence (ROL) otherwise you are not permitted to occupy the roadway.

(9) Ambulance and Fire Brigade to be informed.(Where whole of road closure)

(10) Relevant bus authorities to be informed. (Where closure interferes with a bus service)

(11) RMS Traffic Control Centre to be informed. (Where closure interferes with any traffic lights)

(12) Police conditions imposed for this operation has been obtained from _____ - Northern Beaches Police Station.

(13) Other. (Traffic Management Plan and Traffic Control Plan required)

(14) In addition to the foregoing conditions the operator will comply with any direction of a member of the NSW Police Force.

N.B. THESE WORKS MUST COMPLY WITH AUSTRALIAN STANDARD AS 1742.3 – 1996. (TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS) – ENQUIRES MAY BE DIRECTED TO WORKCOVER NSW.

Issued / / 20_____ at am / pm

_____ Signature & print name of applicant/

END OF DOCUMENT

NEW SOUTH WALES
Level 1, 11-13 Bronte Road,
Bondi Junction, NSW 2022

T: 1800 574 574
F: 03 9326 5778
alex@kpiconstruction.com.au

VICTORIA
Unit 22, 74 Thomsons Road
Keilor Park, Victoria 3042

T: 03 9326 7795
F: 03 9326 5778
jade@kpiconstruction.com.au

QUEENSLAND
Unit 17, 15 Industrial Avenue,
Molendinar, QLD 4214

T: 1800 574 574
M: 0499 224 771
terry@kpiconstruction.com.au

WESTERN AUSTRALIA
39 Dellamarta Road
Wangara, Western Australia 6065

T: 1800 574 574
finance@kpiconstruction.com.au

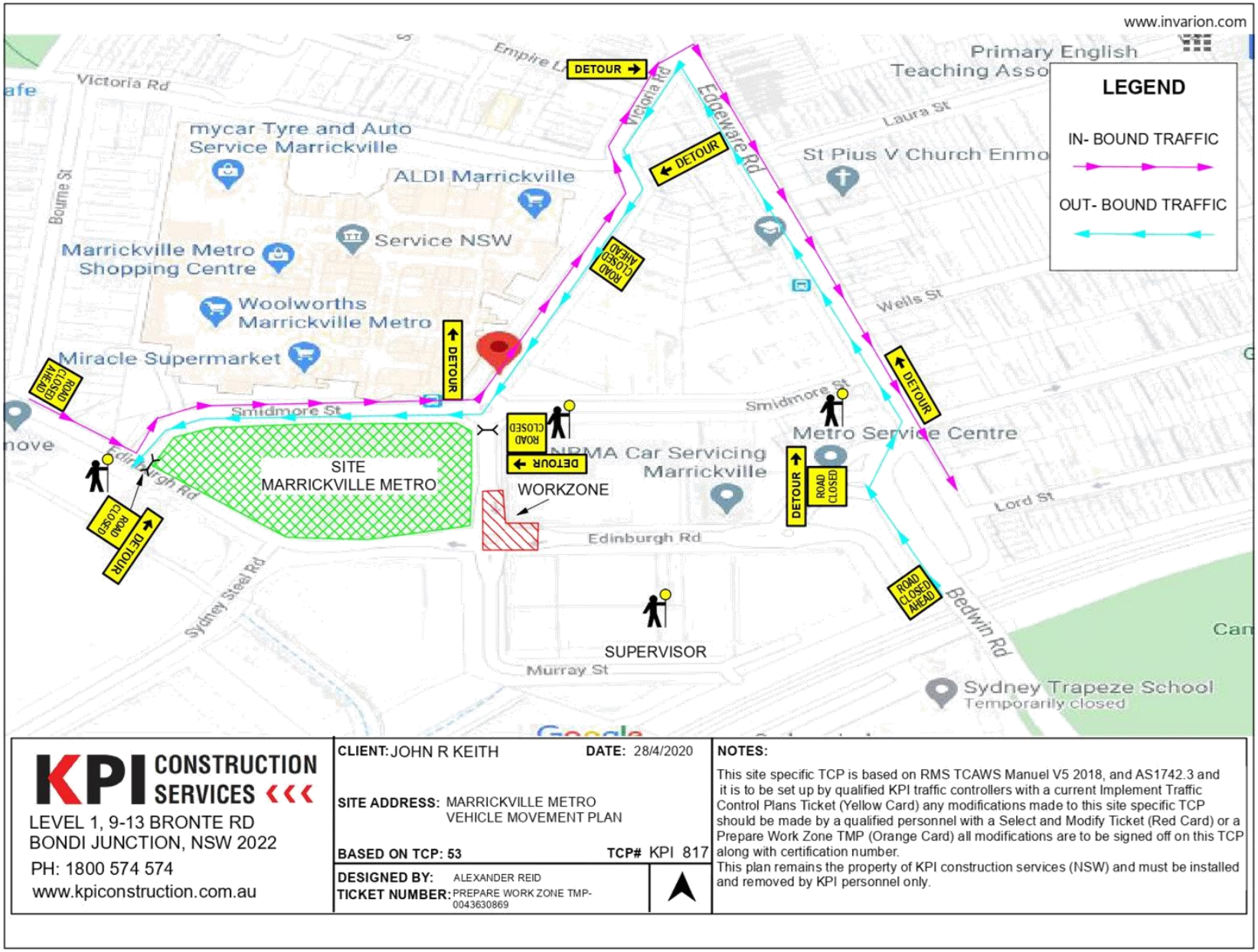
2019 -2020 Association Member of:

AITPM Leadership in Traffic and Transport

TRAFFIC MANAGEMENT ASSOCIATION OF AUSTRALIA NEW SOUTH WALES DIVISION

AUSTRALASIAN ROAD SAFETY CONFERENCE

KPI GROUP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Laura St
St Pius V Church Enmo
mycar Tyre and Auto Service Marrickville
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Service NSW
Marrickville Metro Shopping Centre
Woolworths Marrickville Metro
Miracle Supermarket
Bourne St
Wells St
Smidmore St
Metro Service Centre
NRMA Car Servicing Marrickville
SITE
MARRICKVILLE METRO
WORKZONE
Edinburgh Rd
Lord St
Sydney Steel Rd
SUPERVISOR
Murray St
Bedwin Rd
Sydney Trapeze School
Temporarily closed
KPI CONSTRUCTION SERVICES
LEVEL 1, 9-13 BRONTE RD
BONDI JUNCTION, NSW 2022
PH: 1800 574 574
www.kpiconstruction.com.au
CLIENT: JOHN R KEITH
DATE: 28/4/2020
SITE ADDRESS: MARRICKVILLE METRO
VEHICLE MOVEMENT PLAN
BASED ON TCP: 53
TCP# KPI 817
DESIGNED BY: ALEXANDER REID
TICKET NUMBER: PREPARE WORK ZONE TMP-0043630869
NOTES:
This site specific TCP is based on RMS TCAWS Manuel V5 2018, and AS1742.3 and it is to be set up by qualified KPI traffic controllers with a current Implement Traffic Control Plans Ticket (Yellow Card) any modifications made to this site specific TCP should be made by a qualified personnel with a Select and Modify Ticket (Red Card) or a Prepare Work Zone TMP (Orange Card) all modifications are to be signed off on this TCP along with certification number.
This plan remains the property of KPI construction services (NSW) and must be installed and removed by KPI personnel only.

Item No: **LTC0720 Item 4**

Subject: **WESTCONNEX M5 – ST PETERS INTERCHANGE ACTIVE TRANSPORT WORKS – PART 1 (MIDJUBURI – MARRICKVILLE WARD / HEFFRON ELECTORATE / INNER WEST PAC)**

Prepared By: George Tsaprounis - Coordinator – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

The St Peters Interchange project results from a request by the TfNSW and WestConnex for Council to deliver two (2) active transport projects around the M5 WestConnex Interchange at St Peters. The provision of such walking and cycling facilities with 1km of the St Peters Interchange is a condition of consent for the WestConnex M5 project.

The proposal presented reflects the outcomes of a recent concept design stage, including community consultation, and updates the status of the project in which the concept design was presented to the Local Traffic Committee in November 2019. The proposals includes a combination of a two way separated cycleway and shared path on the southern side of Burrows Avenue, adjacent to Sydenham Station and widening the shared path along Mary Street and upgrades to the existing on road cycle route along the other streets including George Street, Henry Street, Grove Street, Bakers Lane.

Following development of the concept designs, two rounds of community engagement, Local Traffic Committee endorsement in November 2019 to progress with the detailed design and implementation and subsequent preparation of detailed design plans. It is recommended that these detailed design plans be approved.

RECOMMENDATION

THAT:

1. **The final design solution for the M5 - St Peters Interchange Active Transport Works (plan no's. 2997-01 to 2997-07) be approved to enable tender documentation to be prepared and a construction contract advertised; and**

2. **The TCS designs resulting from this project be forwarded to TfNSW for approval**

BACKGROUND

The initial aims of the project were to identify pedestrian and cycle facilities that were to be provided by WestConnex as part of the State Significant Infrastructure for M5 interchange works. The review identified, but was not be limited to:

- current and future land use and associated pedestrian and cycle demand and needs;
- pedestrian and cycle impacts associated with the project;
- regional and local pedestrian and cycling strategies;
- pedestrian and cycle safety, accessibility and connectivity, including to the public realm;

- intersection and signal phasing opportunities to reduce waiting and crossing times for pedestrians and cyclists;
- provision of upgraded cycle and pedestrian facilities within 1,000 metres of the boundary of the St Peters Interchange, apart from the areas addressed in the development consent; and
- concept designs for pedestrian and cycleway infrastructure and implementation timeframes.

The concept designs that were prepared are consistent with the approved Pedestrian and Cycleway Network Review and included:

- pedestrian and cycle engineering and safety standards;
- a safety audit of existing and proposed pedestrian and cycle facilities to address the above standards;
- details of selected routes and connections to existing local and regional routes;
- timing and staging of all works;
- infrastructure details, including lighting, safety, security, and standards compliance;
- signage and wayfinding measures; and
- details of associated landscaping works.

Council engaged a design consultant in June 2019 to develop the concept designs and to progress the projects through the detailed design stages.

FINANCIAL IMPLICATIONS

The project is fully funded by Transport for NSW (TfNSW) and WestConnex and aims to increase safety for bike riders, pedestrians and motorists.

OFFICER COMMENTS

The proposed design elements are as follows:

- Burrows Avenue
    - A combination of a two-way separated cycleway and shared path on the southern side of Burrows Avenue, adjacent to Sydenham Station.

- George Street, Henry Street, Grove Street, Bakers Lane and Mary Street
    - Widened shared path along Mary Street as well as shared paths and improved pedestrian crossings in Mary Street and the Princes Highway opposite the St Peters Interchange. Upgrade to the existing on road cycle route along the other streets highlighted above as well as traffic calming on Henry Street, Sydenham and improved crossings at Unwin's Bridge linking with the existing L8 and L13 bike routes from the Marrickville Bicycle Strategy.

It is noted that two options were presented for Burrows Avenue to the November 2019 Local Traffic Committee, with the community split reasonably evenly in terms of preference for each option. Following futher feedback from stakeholders and Bicycle User Groups, an additional option was developed and presented to the community in early 2020.

The additonal option was seen as a compromise between those favouring retention of the five (5) existing car parks on Burrows Avenue and those favouring a fully off road cycle link on Burrows Avenue concerned with cyclist safety for the on road option in the eastbound direction. The proposed option includes a fully off road cycle link on Burrows Avenue, and

includes a relocation of the car parking to the west and a reduction in the number of spaces from five (5) to three (3).

It is noted that the Burrows Avenue option reduces the number of traffic lanes on approach to signalised intersection with Gleeson Avenue, and traffic modelling and a TCS plan has been prepared for this intersection for TfNSW approval.

Similarly, traffic modelling and a TCS plan has been prepared for the intersection of Unwins Bridge Road and George Street, to faciliate straight through access on George Street for cyclists through the existing median at the location that prevents such movements for vehicular traffic.

TfNSW are currently upgrading Sydenham Station to cater for the Sydney Metro. This includes an new entrance and forecourt on Burrows Avenue immediately east of George Street. Council and their designers have been in consutlation with TfNSW and their designers to ensure coordination between the two projects.

Away from Burrows Avenue, the majortiy of the cycle route is on road mixed traffic and along quiter residential road and lanes. Parking is largely unaffected by the proposals on these sections, although one (1) car parking space is proposed for removal adjacent to Sydenham Green to improve access to the park.

Path widening is proposed along Mary Street and the Princes Highway to accommodate a shared path, with one (1) car parking space removed to cater for the safe transition to and from the shared path adajcent to Bakers Lane. The signalised crossing of the Prince Highway to Canal Road is proposed to be upgraded to allow for shared use with cycle lanterns added as part of the interchange works.

PUBLIC CONSULTATION

The concept design was presented to the community as part of a community engagement process between Monday 21st October 2019 and Sunday 17th November 2019. The outcomes of this consultation process were presented to the November 2019 Local Traffic Committee meeting.

A further community engagement process was undertaken in May 2020, where the proposed design was presented to the community outlining the amended design that incorporated the feedback received as part of the late 2019 process.

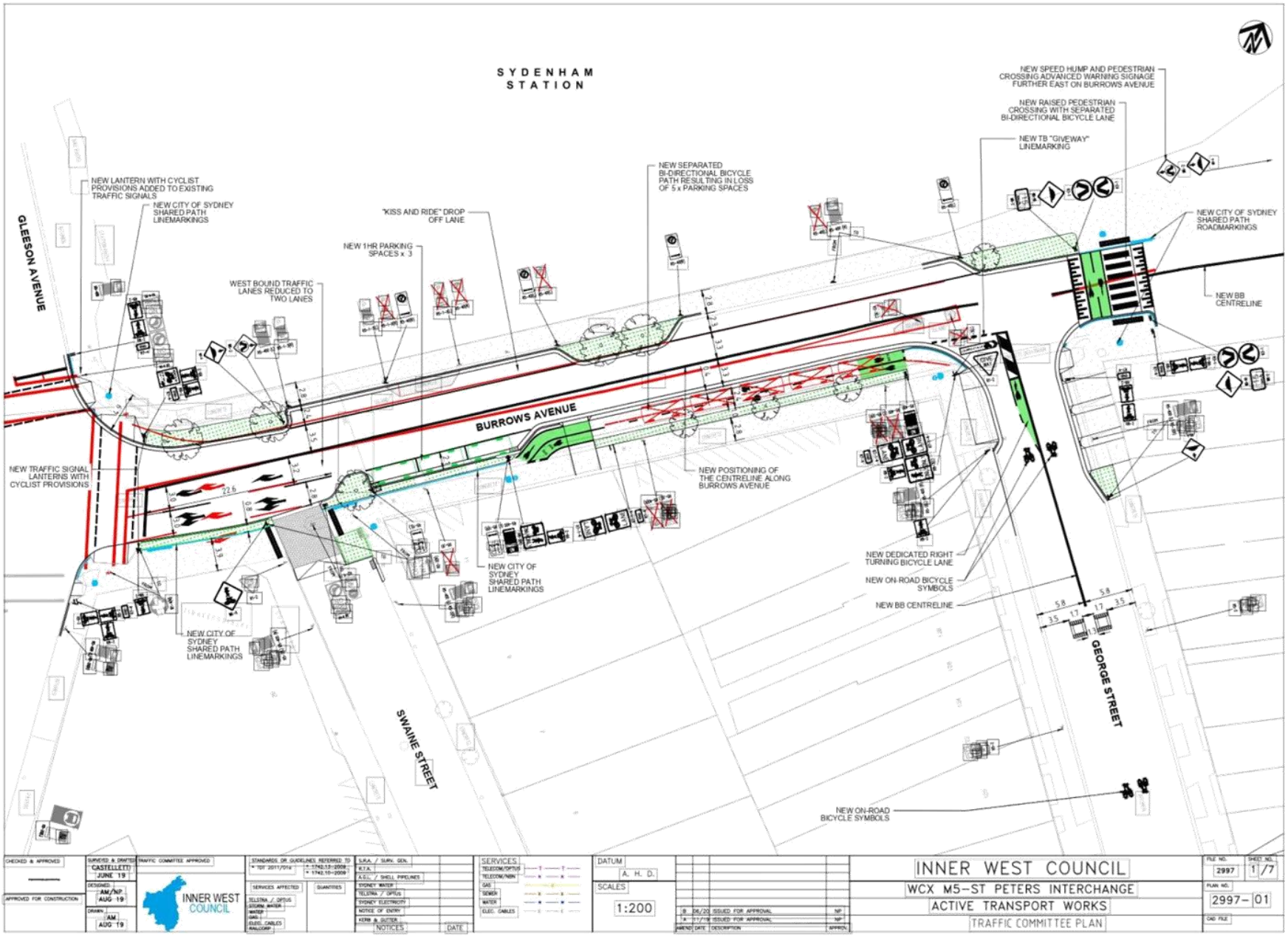
Five (5) responses were received as part of the May 2020 process, the majority related to the proposed layout and parking on Burrows Avenue, with some seeking amendments and some seeking clarifications. Through direct consultation with those respondents, minor amendments have been incorporated in the detailed design documentation to consider resident comments, for example some gaps shall be provided in the proposed landscape strip to improve waste collection and bin placement.

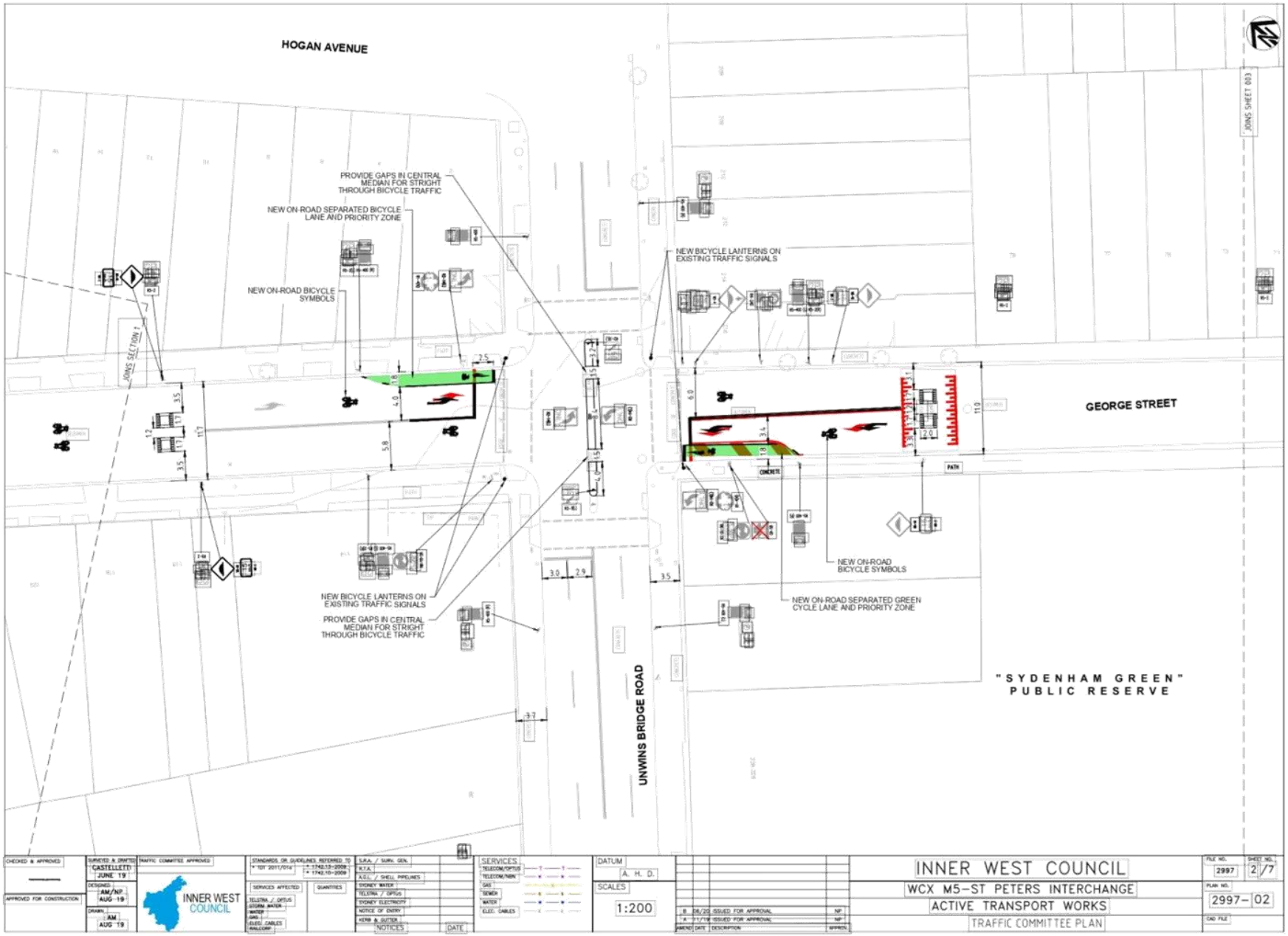
CONCLUSION

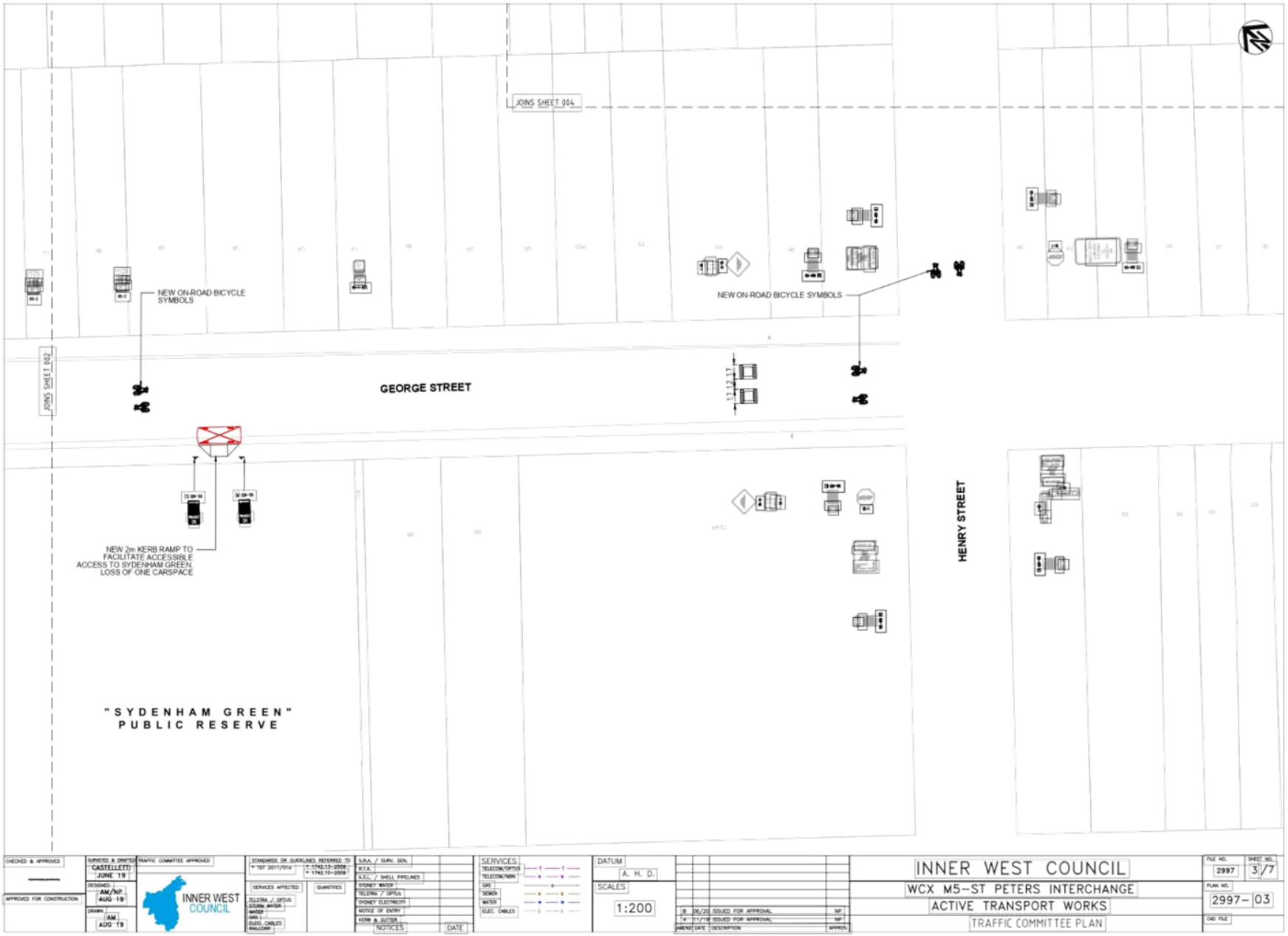
It is recommended that Local Traffic Committee endorse the approval of the current design proposals, to allow progression of the project to the tender documentation and implementation stage.

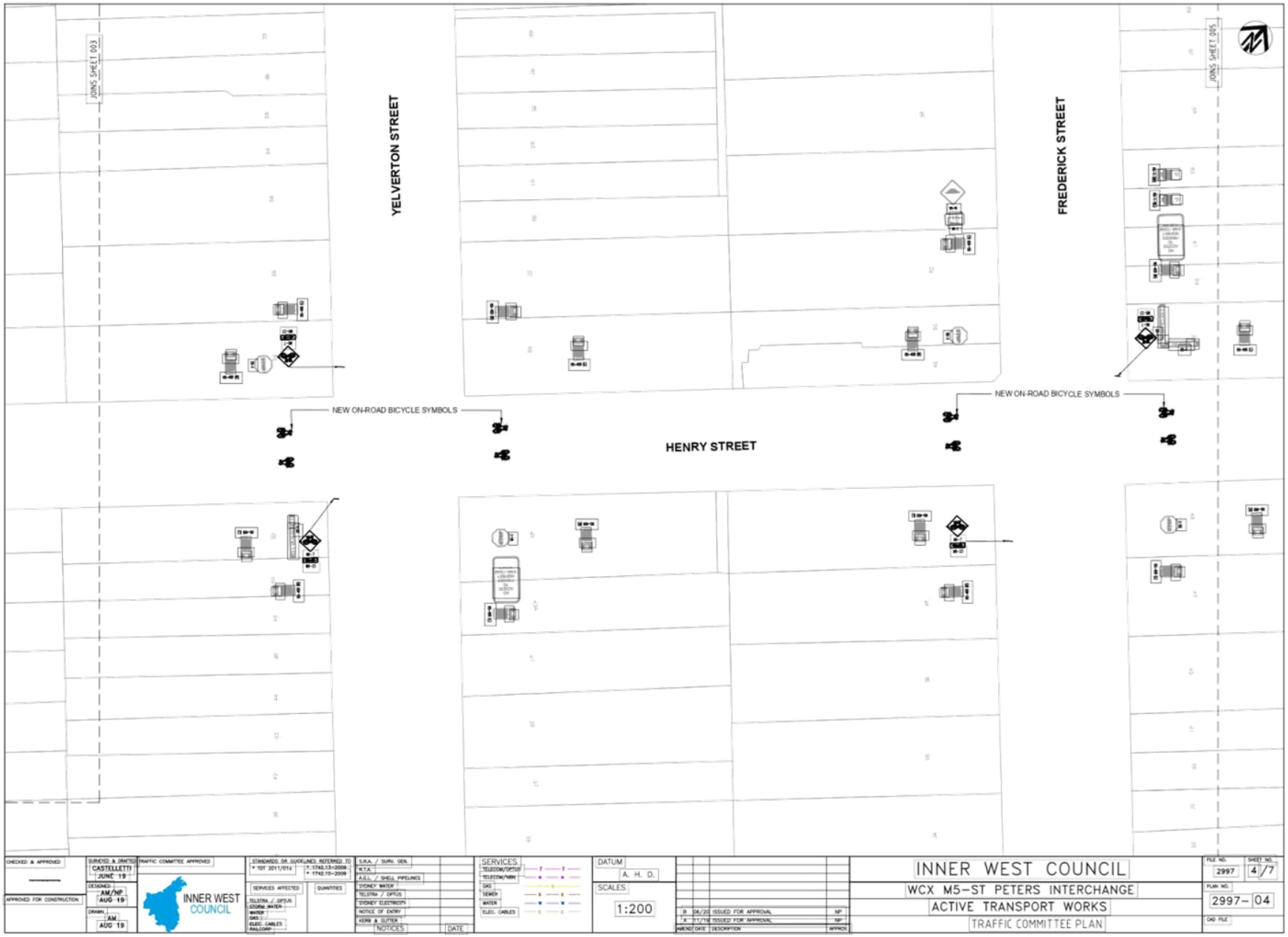
ATTACHMENTS

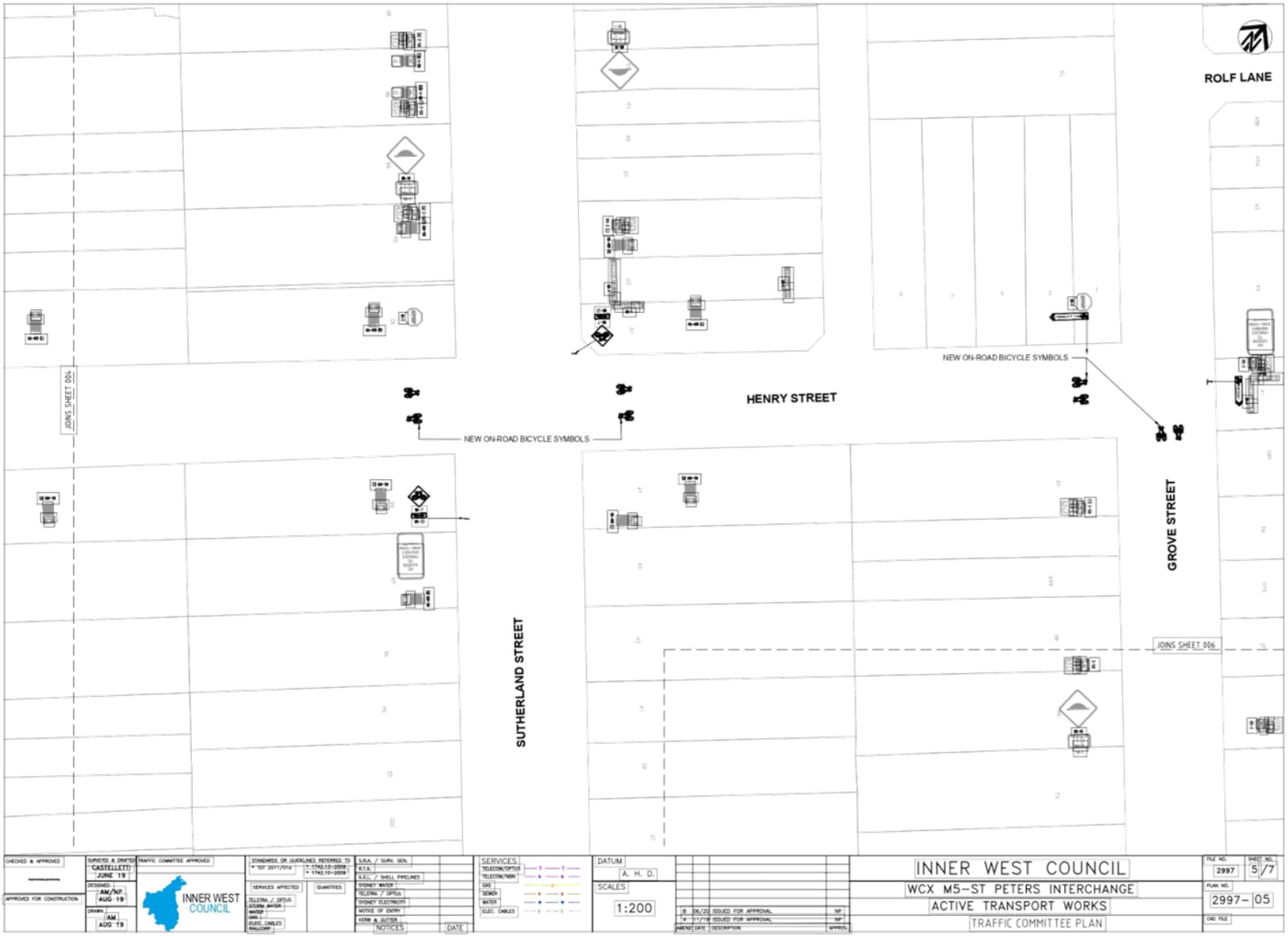
1.⇩ M5 - St Peters Interchange Active Transport Works Plan

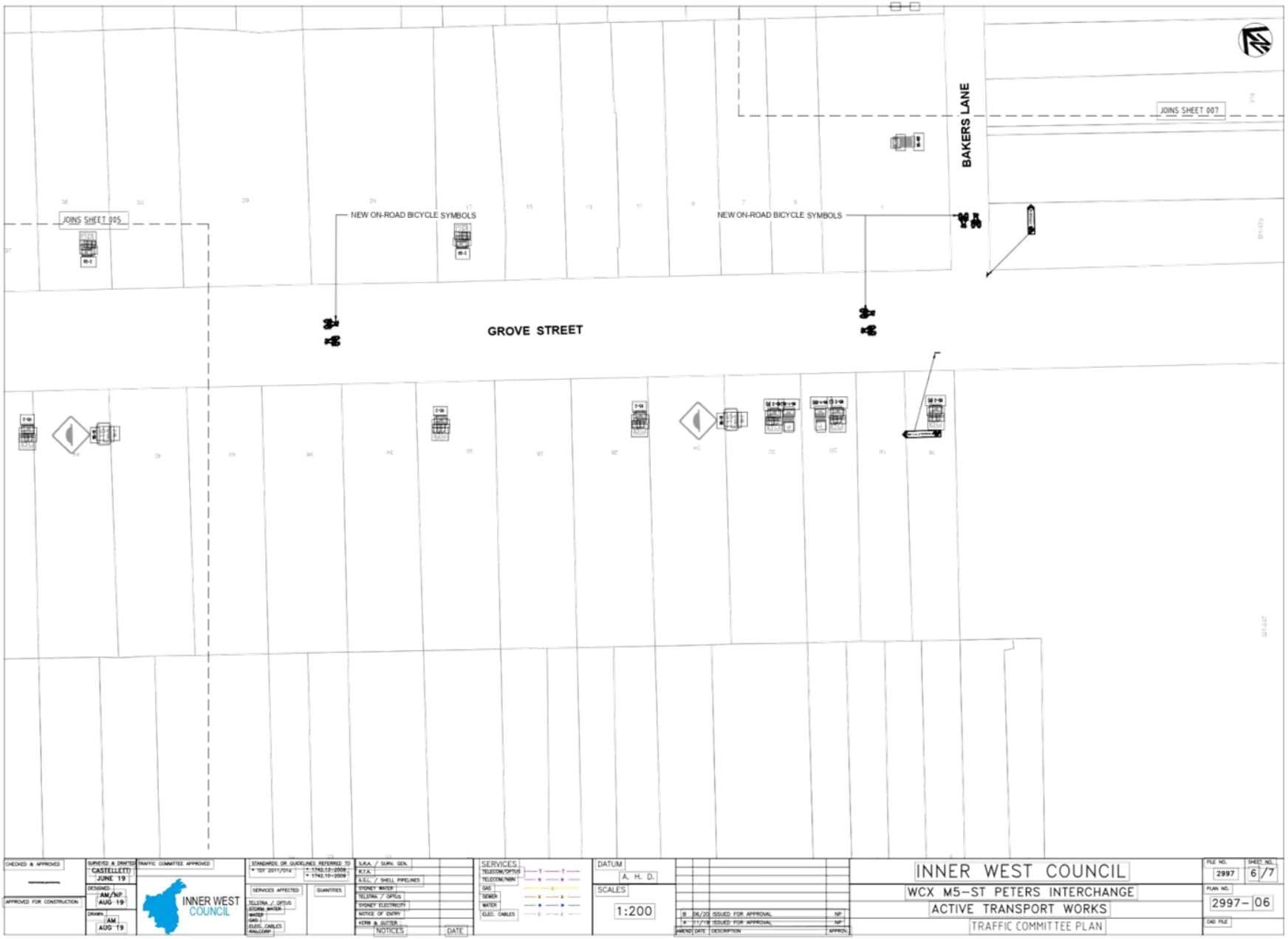

SYDENHAM STATION
NEW SPEED HUMP AND PEDESTRIAN CROSSING ADVANCED WARNING SIGNAGE FURTHER EAST ON BURROWS AVENUE
NEW RAISED PEDESTRIAN CROSSING WITH SEPARATED BI-DIRECTIONAL BICYCLE LANE
NEW TB "GIVEWAY" LINEMARKING
NEW SEPARATED BI-DIRECTIONAL BICYCLE PATH RESULTING IN LOSS OF 5 x PARKING SPACES
NEW LANTERN WITH CYCLIST PROVISIONS ADDED TO EXISTING TRAFFIC SIGNALS
NEW CITY OF SYDNEY SHARED PATH LINEMARKINGS
"KISS AND RIDE" DROP OFF LANE
NEW 1HR PARKING SPACES x 3
WEST BOUND TRAFFIC LANES REDUCED TO TWO LANES
GLEESON AVENUE
BURROWS AVENUE
NEW CITY OF SYDNEY SHARED PATH ROADMARKINGS
NEW BB CENTRELINE
NEW TRAFFIC SIGNAL LANTERNS WITH CYCLIST PROVISIONS
NEW POSITIONING OF THE CENTRELINE ALONG BURROWS AVENUE
NEW CITY OF SYDNEY SHARED PATH LINEMARKINGS
NEW DEDICATED RIGHT TURNING BICYCLE LANE
NEW ON-ROAD BICYCLE SYMBOLS
NEW BB CENTRELINE
NEW CITY OF SYDNEY SHARED PATH LINEMARKINGS
SWAINE STREET
GEORGE STREET
NEW ON-ROAD BICYCLE SYMBOLS
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
2997-01
1:200


HOGAN AVENUE
PROVIDE GAPS IN CENTRAL MEDIAN FOR STRIGHT THROUGH BICYCLE TRAFFIC
NEW ON-ROAD SEPARATED BICYCLE LANE AND PRIORITY ZONE
NEW ON-ROAD BICYCLE SYMBOLS
JOINS SECTION 1
NEW BICYCLE LANTERNS ON EXISTING TRAFFIC SIGNALS
GEORGE STREET
NEW ON-ROAD BICYCLE SYMBOLS
NEW ON-ROAD SEPARATED GREEN CYCLE LANE AND PRIORITY ZONE
NEW BICYCLE LANTERNS ON EXISTING TRAFFIC SIGNALS
PROVIDE GAPS IN CENTRAL MEDIAN FOR STRIGHT THROUGH BICYCLE TRAFFIC
UNWINS BRIDGE ROAD
"SYDENHAM GREEN" PUBLIC RESERVE
JOINS SHEET 003
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
SCALES
1:200
DATUM
A. H. D.
2997
2997-02
2/7


JOINS SHEET 004
JOINS SHEET 002
NEW ON-ROAD BICYCLE SYMBOLS
NEW ON-ROAD BICYCLE SYMBOLS
GEORGE STREET
HENRY STREET
NEW 2m KERB RAMP TO FACILITATE ACCESSIBLE ACCESS TO SYDENHAM GREEN. LOSS OF ONE CARSPACE
"SYDENHAM GREEN" PUBLIC RESERVE
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
1:200
2997-03
3/7


JOINS SHEET 003
YELVERTON STREET
FREDERICK STREET
JOINS SHEET 005
NEW ON-ROAD BICYCLE SYMBOLS
NEW ON-ROAD BICYCLE SYMBOLS
HENRY STREET
INNER WEST COUNCIL
1:200
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
2997
4/7
2997-04


ROLF LANE
HENRY STREET
NEW ON-ROAD BICYCLE SYMBOLS
NEW ON-ROAD BICYCLE SYMBOLS
GROVE STREET
SUTHERLAND STREET
JOINS SHEET 004
JOINS SHEET 006
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
1:200
2997-05


BAKERS LANE
JOINS SHEET 007
JOINS SHEET 005
NEW ON-ROAD BICYCLE SYMBOLS
NEW ON-ROAD BICYCLE SYMBOLS
GROVE STREET
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
2997-06
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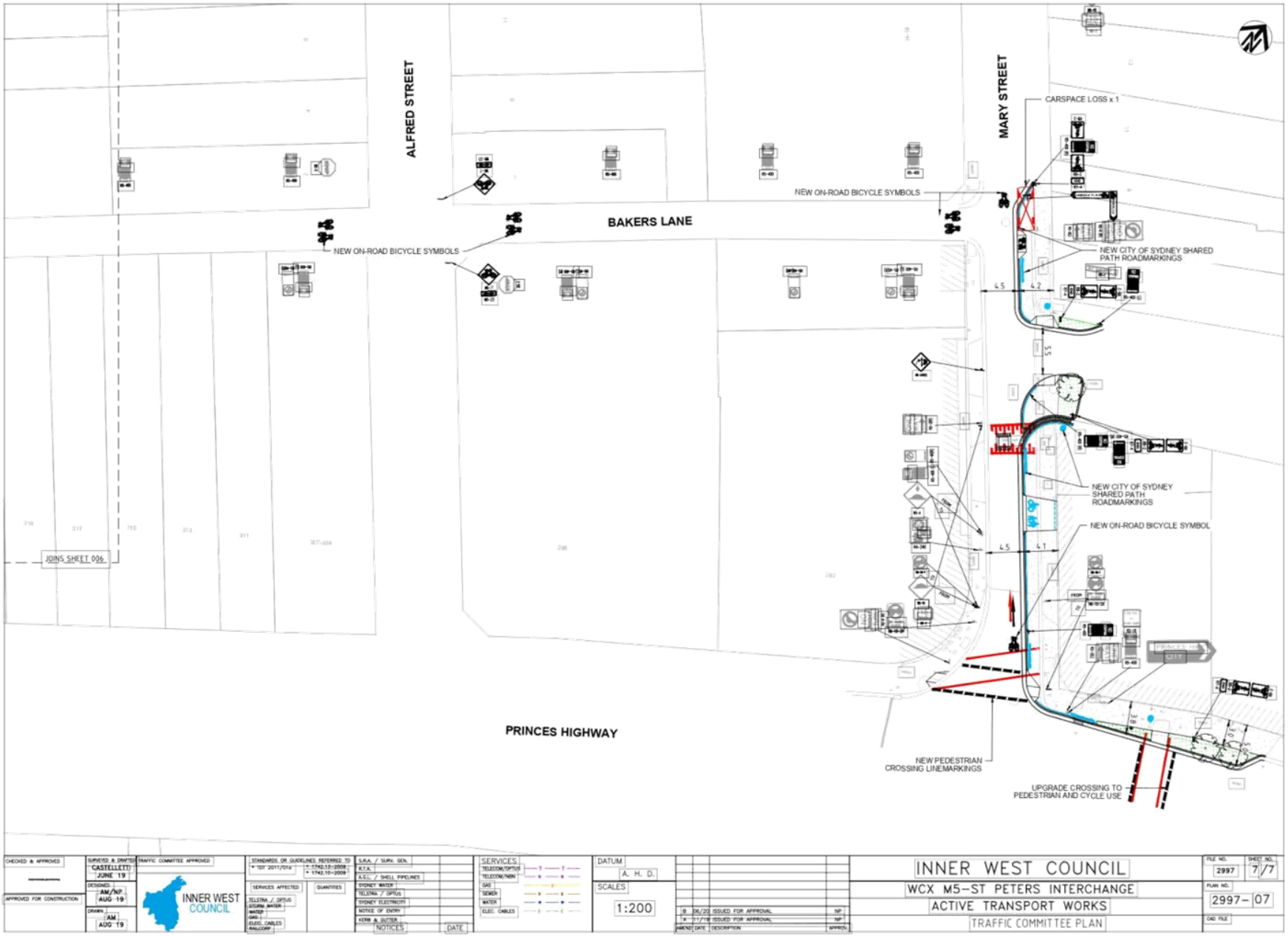

ALFRED STREET
MARY STREET
BAKERS LANE
PRINCES HIGHWAY
CARSPACE LOSS x 1
NEW ON-ROAD BICYCLE SYMBOLS
NEW ON-ROAD BICYCLE SYMBOLS
NEW CITY OF SYDNEY SHARED PATH ROADMARKINGS
NEW CITY OF SYDNEY SHARED PATH ROADMARKINGS
NEW ON-ROAD BICYCLE SYMBOL
NEW PEDESTRIAN CROSSING LINEMARKINGS
UPGRADE CROSSING TO PEDESTRIAN AND CYCLE USE
JOINS SHEET 006
4.5
4.2
5.5
4.5
4.1
INNER WEST COUNCIL
INNER WEST COUNCIL
WCX M5-ST PETERS INTERCHANGE
ACTIVE TRANSPORT WORKS
TRAFFIC COMMITTEE PLAN
2997-07
7/7
1:200
A. H. D.

Item 5

Item No: **LTC0720 Item 5**

Subject: **URBAN AMENITY IMPROVEMENT PROGRAM – LEICHHARDT AND CAMPERDOWN PRECINCTS (GULGADYA - LEICHHARDT & DAMUN-STANMORE WARDS/BALMAIN & NEWTOWN ELECTORATES/LEICHHARDT & INNER WEST PACS)**

Prepared By: George Tsaprounis - Coordinator – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

The Urban Amenity Improvement Program (UAIP) aims to reverse the urban decay and lack of design cohesion along Parramatta Road and is a NSW State Government initiative.

Within the Inner West Council LGA, the program comprises 10 separate locations as follows: Rofe Street – Parramatta Road to Jarrett Street, Renwick Street – Parramatta Road to Jarrett Street, Norton Street – Parramatta Road to the Italian Forum, Crystal Street – Parramatta Road to Elswick Street, Balmain Road – Parramatta Road to end of Italian Forum, Catherine Street – Parramatta Road to Albion Street, Dot Lane – Balmain Road to Hay Street, Petersham Street – Parramatta Road to Queen Street, Johnstons Creek, Wigram Road and Pyrmont Bridge Road – Parramatta Road to Booth Street

Following development and approval of the UAIP, Council is now progressing with the detailed design and aims to inform and seek approval of the Local Traffic Committee for the measures proposed under the program.

RECOMMENDATION

THAT the design proposals as discussed in this report and as indicated on the attached plans be approved at the following locations:

1. **Rofe Street (plan no. 3010-1A-TCP-001) – public domain upgrades and conversion to a one way road (subject to TfNSW approval of the TMP);**
2. **Renwick Street (plan no. 3010-1B-TCP-001) – public domain upgrades and provision of a 10km/hr shared zone (subject to TfNSW approval of the speed limit reduction);**
3. **Norton Street (plan no. 3010-1C-TCP-001) – public domain upgrades;**
4. **Crystal Street (plan no. 3010-1D-TCP-001 sheets 1 and 2) – public domain upgrades;**
5. **Balmain Road (plan no. 3010-1E-TCP-001 sheets 1 and 2) – public domain upgrades and cycleway connection;**
6. **Catherine Street (plan no. 3010-1F-TCP-001) – public domain upgrades and cycleway connection;**
7. **Dot Lane (plan no. 3010-2A-TCP-001) – new cycleway connection;**
8. **Petersham Street (plan no. 3010-3-TCP-001) – new pocket park (subject to TfNSW approval of the TMP);**
9. **Johnstons Creek and Wigram Road – new pedestrian and cycleway connection; and**

10. Pyrmont Bridge Road (plan no. 3010-4A-TCP-001 sheets 1 to 3) – public domain upgrades and cycleway connection (subject to TfNSW approval).

BACKGROUND

The UAIP is a NSW State Government, $198 million initiative under the Parramatta Road Corridor Urban Transformation Program. The Parramatta Road corridor and the UAIP extend from Granville to Camperdown, and include projects in Granville, Auburn, Homebush, Burwood, Kings Bay, Taverners Hill, Leichhardt and Camperdown. The vision for the Corridor, developed by Urban Growth NSW, is for a high-quality multi-use corridor with improved transport choices, better amenity and balanced growth of housing and jobs.

Overall, the proposed UAIP improvements can be categorised into three categories of projects:

- Streetscape upgrades including tree planting, multi-purpose lighting, new pavements and north-south pedestrian and cycle crossings;
- Creation of new or improved open spaces, urban plazas and town squares; and
- New walking and cycling links to key transport nodes and open spaces which connect to strategic regional and local networks.

The draft UAIP was released for Council and community consultation between September and December 2015. Feedback received during this time was considered and the UAIP was further refined and updated. In some cases, new works were identified and included in the UAIP and others were removed. Conceptual designs and costings were prepared for the projects. These were reassessed against the UAIP Selection Criteria and a final scope of works prepared. The final works in the UAIP have been discussed and agreed with each of the Councils along the corridor.

A traffic report was prepared as part of the UAIP, titled 'Traffic Assessment - Urban Amenity Improvement Program: Leichhardt and Camperdown – Traffic Studies' prepared by Traffix Traffic and Transport Planners dated 12 April 2019. The report determines that the parking loss is justifiable in consideration of the significant amenity, safety and streetscape improvements that will result, and that the traffic modelling undertaken supports the proposed measures.

Council engaged a design consultant in August 2019 to develop the designs and to progress the projects through the detailed design stages.

FINANCIAL IMPLICATIONS

The project is fully funded by the NSW Government and aims to increase safety for bike riders, pedestrians and motorists.

OFFICER COMMENTS:

The proposed measures at each of the locations are outlined below and are indicated on the attached plans:

1. <u>Rofe Street (refer to plan no. 3010-1A-TCP-001)</u>

The proposal includes the following:

- Conversion of Rofe Street from two way to one way in a northbound direction between Parramatta Road and Jarrett Street;

- Change of priority for stop control at the intersection of Rofe Street and Jarrett Street to give priorty to Jarrett Street to improve cycleway continuity;
- Kerb extensions to improve predestrian safety, increase amenity and calm traffic; and
- Landscaping and public domain upgrades.

It should be noted that there will be no loss of parking as a result of this proposal and no intersection performance impacts are expected. Vehicle swept paths have been undertaken to ensure that the proposed kerb extensions cater for all required traffic movements and vehicle types.

2. Renwick Street (refer to plan no. 3010-1B-TCP-001)

The proposal includes the following:

- Conversion of Renwick Street between Parramatta Road and Jarrett Street to a 10km/hr shared zone;
- Kerb extensions to improve predestrian safety, increase amenity and calm traffic; and
- Landscaping and public domain upgrades.

It should be noted that the proposal results in the loss of seven (7) car parking spaces. No intersection performance impacts are expected as a result of the proposed measures and vehicle swept paths have been undertaken to ensure that the proposed kerb extensions cater for all required traffic movements and vehicle types.

3. Norton Street (refer to plan no. 3010-1C-TCP-001)

The proposal includes the following:

- A continutous footpath treatment across Renwick Lane;
- Improvements to existing raised pedestrian (zebra) crossing; and
- Landscaping and public domain upgrades.

It should be noted that the proposal results in no parking loss and no intersection performance impacts are expected as a result of the proposed measures. Vehicle swept paths have been undertaken to ensure that the proposed kerb extension cater for all required traffic movements and vehicle types.

4. Crystal Street (refer to plan no. 3010-1D-TCP-001 sheets 1 and 2)

The proposal includes the following:

- Shared path and signalised cycle crossing connecting Margaret Street and Elswick Street; and
- Landscaping and public domain upgrades.

It should be noted that the proposal results in no parking loss and no intersection performance impacts are expected as a result of the proposed measures.

5. Balmain Road (refer to plan no. 3010-1E-TCP-001 sheets 1 and 2)

The proposal includes the following:

- Shared pathway between Parramatta Road and Dot Lane to improve cycle connections;
- A continuous footpath treatment across Dot Lane;
- Reduction in the bus parking provisions adjacent to the Italian Forum to cater for a single bus;
- Kerb extensions to improve predestrian safety, increase amenity, calm traffic and to facilitate a safe cycleway crossing of Balmain Road at Dot Lane; and

- Landscaping and public domain upgrades.

It should be noted that the proposal results in the loss of six (6) car parking spaces and no intersection performance impacts are expected as a result of the proposed measures. Vehicle swept paths have been undertaken to ensure that the proposed kerb extensions cater for all required traffic movements and vehicle types.

6. Catherine Street (refer to plan no. 3010-1F-TCP-001)

The proposal includes the following:

- Central median between Redmond Street and Albion Street to provide protection for cyclists utilising the cycle link between these streets;
- Conversion of a short section of existing angle parking to parallel parking;
- Kerb extensions to improve pedestrian safety, increase amenity and calm traffic; and
- Landscaping and public domain upgrades.

It should be noted that the proposal results in the loss of five (5) car parking spaces and no intersection performance impacts are expected as a result of the proposed measures. Vehicle swept paths have been undertaken to ensure that the proposed kerb extensions cater for all required traffic movements and vehicle types.

7. Dot Lane (refer to plan no. 3010-2A-TCP-001)

The proposal includes the following:

- Conversion of a section of the existing public car park to a shared pathway faciliting access along Dot Lane between Hay Street and Balmain Road; and
- Reconfiguration and formalisation of the existing car parking facility to minimise parking loss.

It should be noted that the proposal results in the loss of four (4) car parking spaces.

8. Petersham Street (refer to plan no. 3010-3-TCP-001)

The proposal includes the following:

- Conversion of Petersham Street between Parramatta Road and Queen Street to a pocket park, removing vehicle access to this section of the road.
- Kerb extensions on Queen Street to improve predestrian safety, increase amenity and calm traffic; and
- Landscaping and public domain upgrades.

It should be noted that the proposal results in the loss of three (3) car parking spaces.

9. Johnstons Creek and Wigram Road (refer to plan no. 3010-4A-TCP-001 sheets 1 to 3)

The proposal includes the following:

- Provision of a shared pathway beside Johnston's Creek between Chester Street and Booth Street;
- Raising of the roundabout intersection of Booth Street and Wigram Road;
- Provision of a widened footpath and shared pathway along Wigram Road to link from Booth Street to the existing cycle facility from Bicentennial Park, Glebe; and
- Landscaping and public domain upgrades.

It should be noted that the proposal results in no parking loss and no intersection performance impacts are expected as a result of the proposed measures. Vehicle swept paths have been undertaken to ensure that the proposed kerb extensions and roundabout works cater for all required traffic movements and vehilce types.

10. Pyrmont Bridge Road (refer to plan no. 3010-5-TCP-001 sheets 1 to 3)

The proposal includes the following:

- Uni-directional cycleway on both sides of Pyrmont Bridge Road
- Conversion of Pyrmont Bridge Road from two lanes to a single lane in each direction;
- Landscaping and public domain upgrades.

It should be noted that the proposals both result in the loss of twelve (12) car parking spaces. The Traffic Assessment Report indicates measures required to the intersections to ensure that the impacts of the proposed measures are minimsed. The proposal for changes to Pyrmont Bridge Road are to be further developed in consultation with Transport for NSW, and re-submitted to Council's Local Traffic Committee in due course. Construction of the Pyrmont Bridge Road component of the project will occur later than the other components due to the operation of the Westconnex dive site adjacent.

PARKING NUMBERS

Project Number	Project Site	Currently Available Parking (Numbers from Master Plan / Car Park design Report)	Parking Total Current design	Parking Loss Current Design	Parking Gain Current Design	Parking Loss reported to last LTC
1a	*Rofe Street*	*11*	11	**0**	-	0
1b	*Renwick Street*	*10*	3	**7**	-	7
1c	*Norton Street*	*3*	3	**0**	-	0
1d	*Crystal Street*	*7*	10	**0**	3	0
1e	*Balmain Road*	*17*	11	**6**	-	3
1f	*Catherine Street*	*15*	10	**5**	-	7
2a	*Dot Lane*	*39*	35	**4**	-	3
2b	*Temporary Cycle Link*	-	-	-	-	
3	*Petersham Street*	*3*	0	**3**	-	3
4	*Johnstons Creek*	-	-	-	-	0
5	*Pyrmont Bridge Road*	*32*	20	**12**	-	14

CONCLUSION

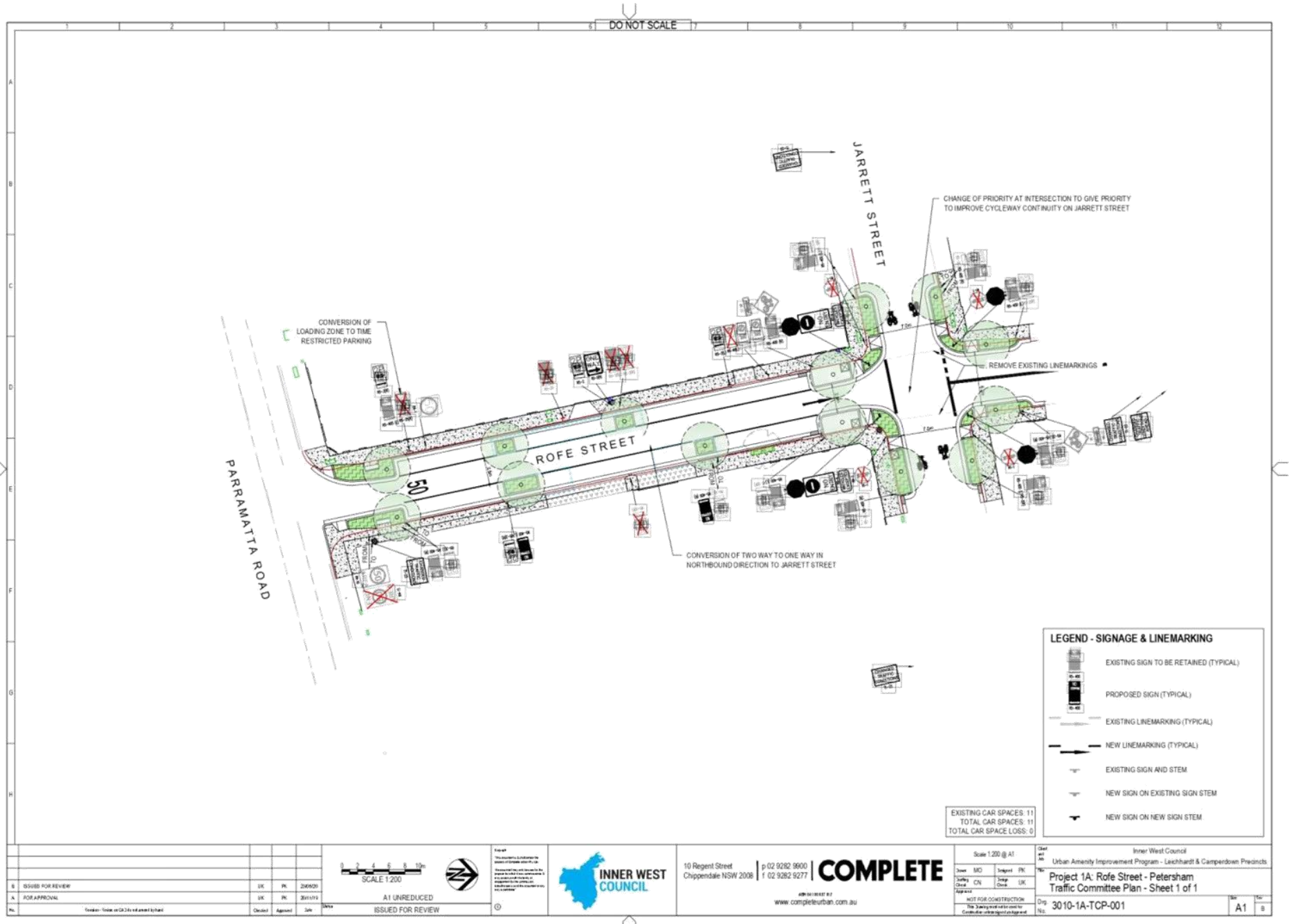
It is recommended that committee approve the design proposals as discussed in this report and as indicated on the attached plans at the following locations:

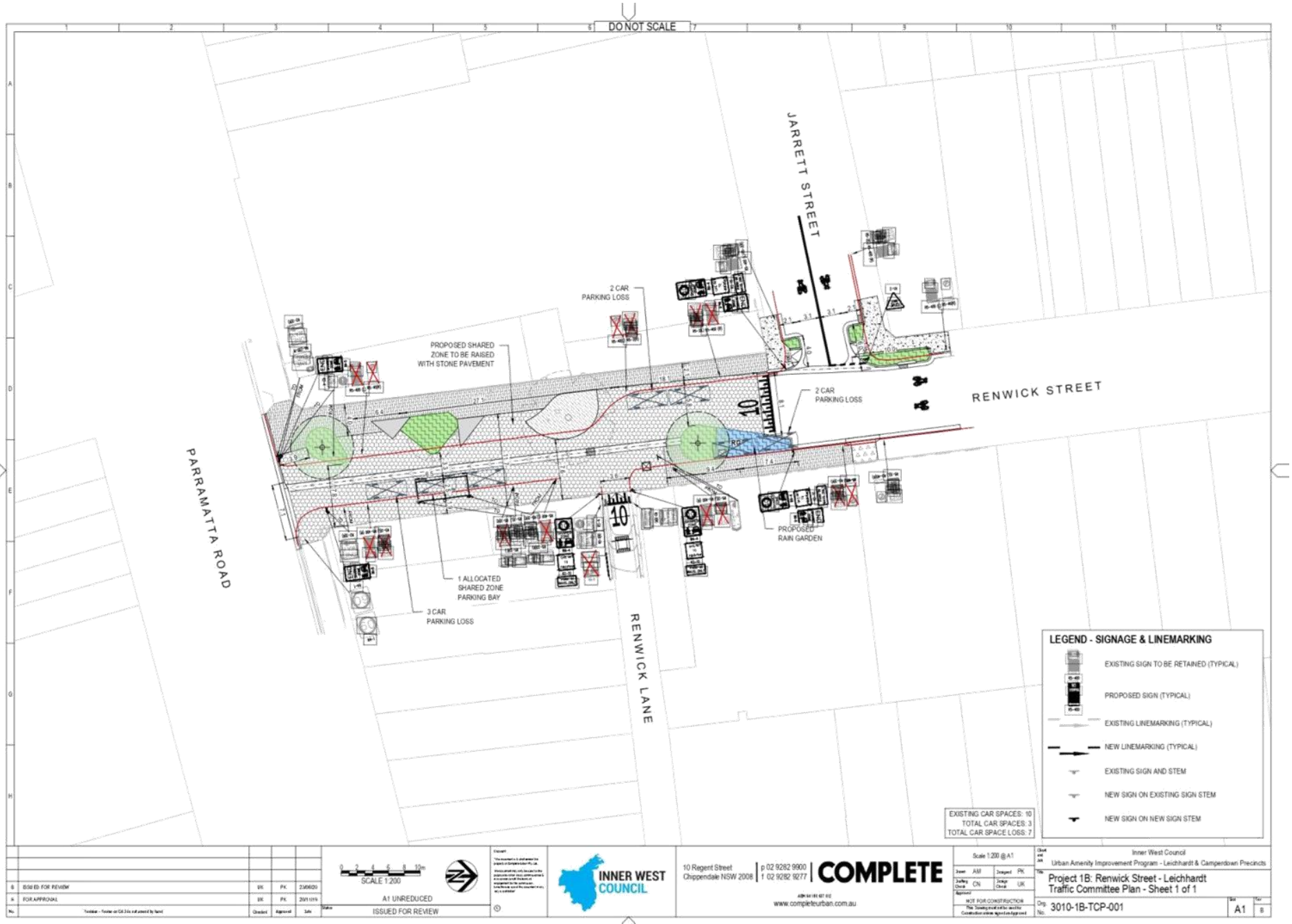
1. Rofe Street – public domain upgrades and conversion to a one way road;
2. Renwick Street – public domain upgrades and provision of a 10km/hr shared zone;
3. Norton Street – public domain upgrades;
4. Crystal Street – public domain upgrades;
5. Balmain Road – public domain upgrades and cycleway connection;
6. Catherine Street – public domain upgrades and cycleway connection;
7. Dot Lane – new cycleway connection;
8. Petersham Street – new pocket park;

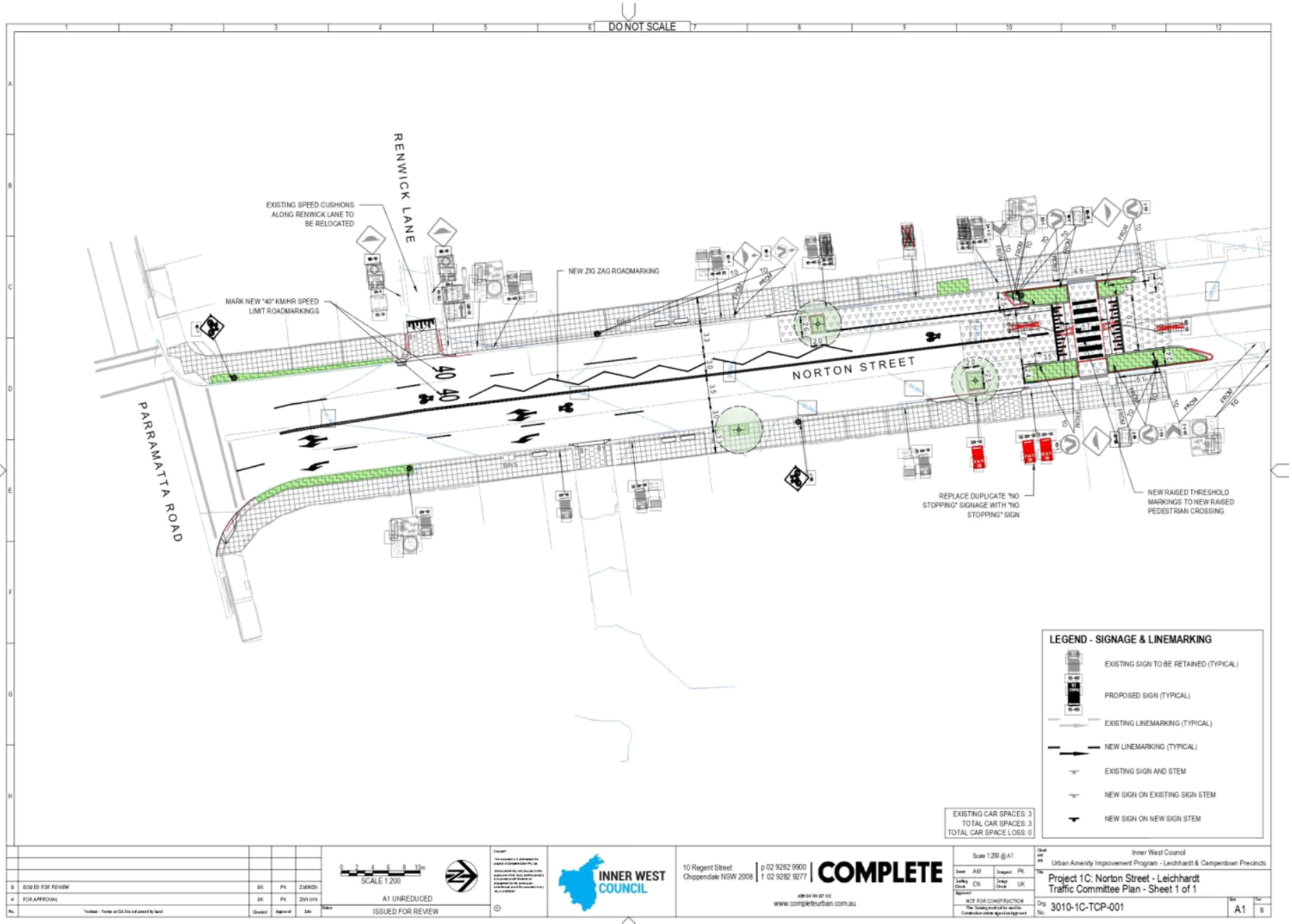
9. Johnstons Creek and Wigram Road – new pedestrian and cycleway connection; and
10. Pyrmont Bridge Road – public domain upgrades and cycleway connection.

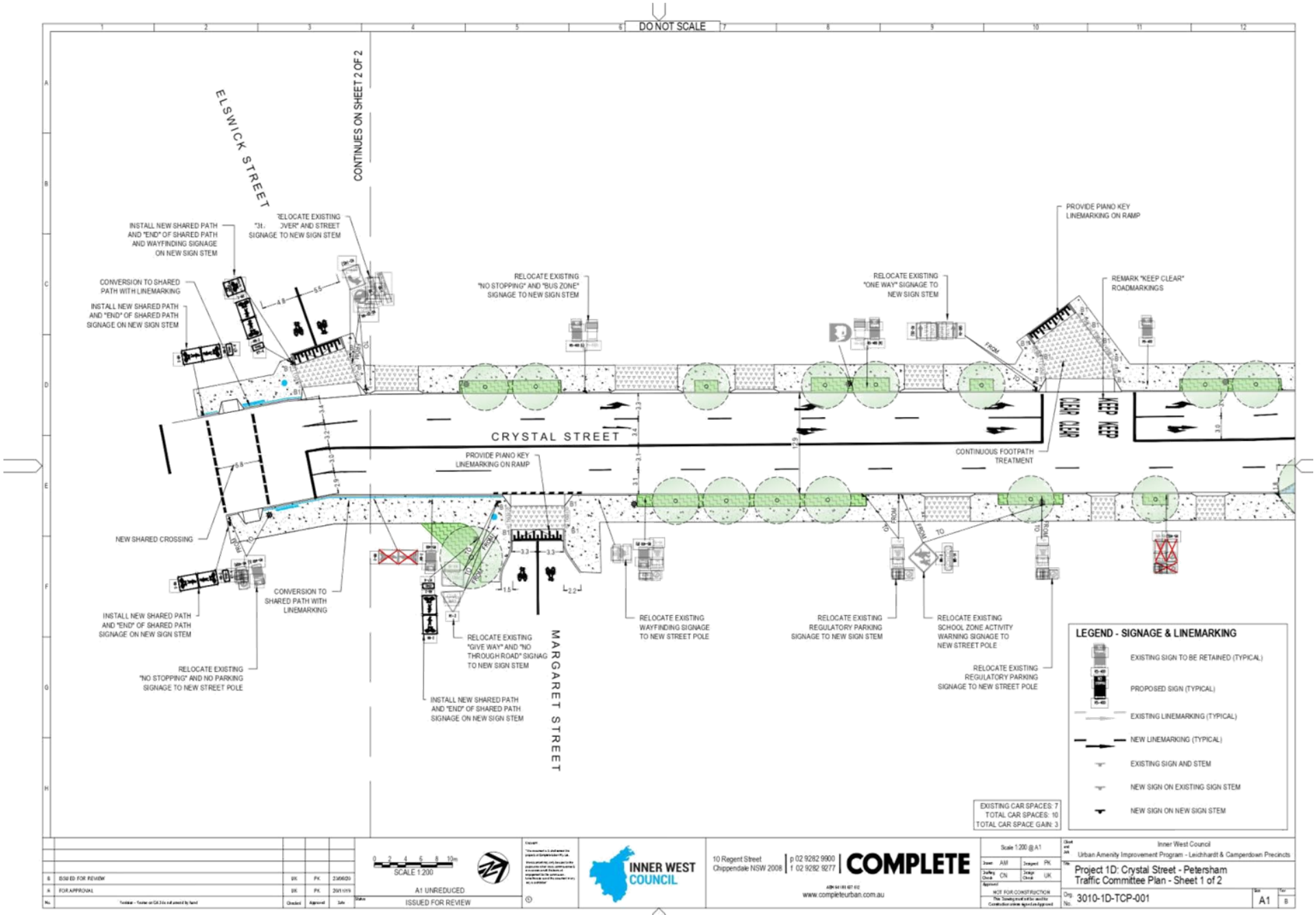
ATTACHMENTS

1.⇩ Urban Amenities Improvement Program Plans


DO NOT SCALE
JARRETT STREET
CHANGE OF PRIORITY AT INTERSECTION TO GIVE PRIORITY TO IMPROVE CYCLEWAY CONTINUITY ON JARRETT STREET
CONVERSION OF LOADING ZONE TO TIME RESTRICTED PARKING
REMOVE EXISTING LINEMARKINGS
ROFE STREET
50
PARRAMATTA ROAD
CONVERSION OF TWO WAY TO ONE WAY IN NORTHBOUND DIRECTION TO JARRETT STREET
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 11
TOTAL CAR SPACES: 11
TOTAL CAR SPACE LOSS: 0
SCALE 1:200
A1 UNREDUCED
ISSUED FOR REVIEW
INNER WEST COUNCIL
10 Regent Street
Chippendale NSW 2008
p 02 9282 9900
f 02 9282 9277
COMPLETE
www.completeurban.com.au
Scale 1:200 @ A1
NOT FOR CONSTRUCTION
Inner West Council
Urban Amenity Improvement Program - Leichhardt & Camperdown Precincts
Project 1A: Rofe Street - Petersham
Traffic Committee Plan - Sheet 1 of 1
Dwg No. 3010-1A-TCP-001
A1
B


DO NOT SCALE
JARRETT STREET
RENWICK STREET
PARRAMATTA ROAD
RENWICK LANE
2 CAR PARKING LOSS
PROPOSED SHARED ZONE TO BE RAISED WITH STONE PAVEMENT
2 CAR PARKING LOSS
PROPOSED RAIN GARDEN
1 ALLOCATED SHARED ZONE PARKING BAY
3 CAR PARKING LOSS
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 10
TOTAL CAR SPACES: 3
TOTAL CAR SPACE LOSS: 7
SCALE 1:200
A1 UNREDUCED
ISSUED FOR REVIEW
INNER WEST COUNCIL
10 Regent Street
Chippendale NSW 2008
p 02 9282 9900
f 02 9282 9277
COMPLETE
www.completeurban.com.au
Scale 1:200 @A1
NOT FOR CONSTRUCTION
Inner West Council
Urban Amenity Improvement Program - Leichhardt & Camperdown Precincts
Project 1B: Renwick Street - Leichhardt
Traffic Committee Plan - Sheet 1 of 1
Dwg No. 3010-1B-TCP-001
A1
B


DO NOT SCALE
RENWICK LANE
EXISTING SPEED CUSHIONS ALONG RENWICK LANE TO BE RELOCATED
NEW ZIG ZAG ROADMARKING
MARK NEW "40" KM/HR SPEED LIMIT ROADMARKINGS
NORTON STREET
PARRAMATTA ROAD
REPLACE DUPLICATE "NO STOPPING" SIGNAGE WITH "NO STOPPING" SIGN
NEW RAISED THRESHOLD MARKINGS TO NEW RAISED PEDESTRIAN CROSSING
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 3
TOTAL CAR SPACES: 3
TOTAL CAR SPACE LOSS: 0
SCALE 1:200
A1 UNREDUCED
ISSUED FOR REVIEW
INNER WEST COUNCIL
10 Regent Street
Chippendale NSW 2008
p 02 9282 9900
f 02 9282 9277
COMPLETE
www.completeurban.com.au
Scale 1:200 @A1
NOT FOR CONSTRUCTION
Inner West Council
Urban Amenity Improvement Program - Leichhardt & Camperdown Precincts
Project 1C: Norton Street - Leichhardt
Traffic Committee Plan - Sheet 1 of 1
3010-1C-TCP-001
A1
B


DO NOT SCALE
ELSWICK STREET
CONTINUES ON SHEET 2 OF 2
CRYSTAL STREET
MARGARET STREET
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH AND WAYFINDING SIGNAGE ON NEW SIGN STEM
RELOCATE EXISTING "GIVE WAY" AND STREET SIGNAGE TO NEW SIGN STEM
CONVERSION TO SHARED PATH WITH LINEMARKING
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
RELOCATE EXISTING "NO STOPPING" AND "BUS ZONE" SIGNAGE TO NEW SIGN STEM
RELOCATE EXISTING "ONE WAY" SIGNAGE TO NEW SIGN STEM
PROVIDE PIANO KEY LINEMARKING ON RAMP
REMARK "KEEP CLEAR" ROADMARKINGS
CONTINUOUS FOOTPATH TREATMENT
NEW SHARED CROSSING
PROVIDE PIANO KEY LINEMARKING ON RAMP
CONVERSION TO SHARED PATH WITH LINEMARKING
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
RELOCATE EXISTING "NO STOPPING" AND NO PARKING SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING "GIVE WAY" AND "NO THROUGH ROAD" SIGNAG TO NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
RELOCATE EXISTING WAYFINDING SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING REGULATORY PARKING SIGNAGE TO NEW SIGN STEM
RELOCATE EXISTING SCHOOL ZONE ACTVITY WARNING SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING REGULATORY PARKING SIGNAGE TO NEW STREET POLE
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 7
TOTAL CAR SPACES: 10
TOTAL CAR SPACE GAIN: 3
B ISSUED FOR REVIEW
A FOR APPROVAL
SCALE 1:200
A1 UNREDUCED
ISSUED FOR REVIEW
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Project 1D: Crystal Street - Petersham
Traffic Committee Plan - Sheet 1 of 2
3010-1D-TCP-001
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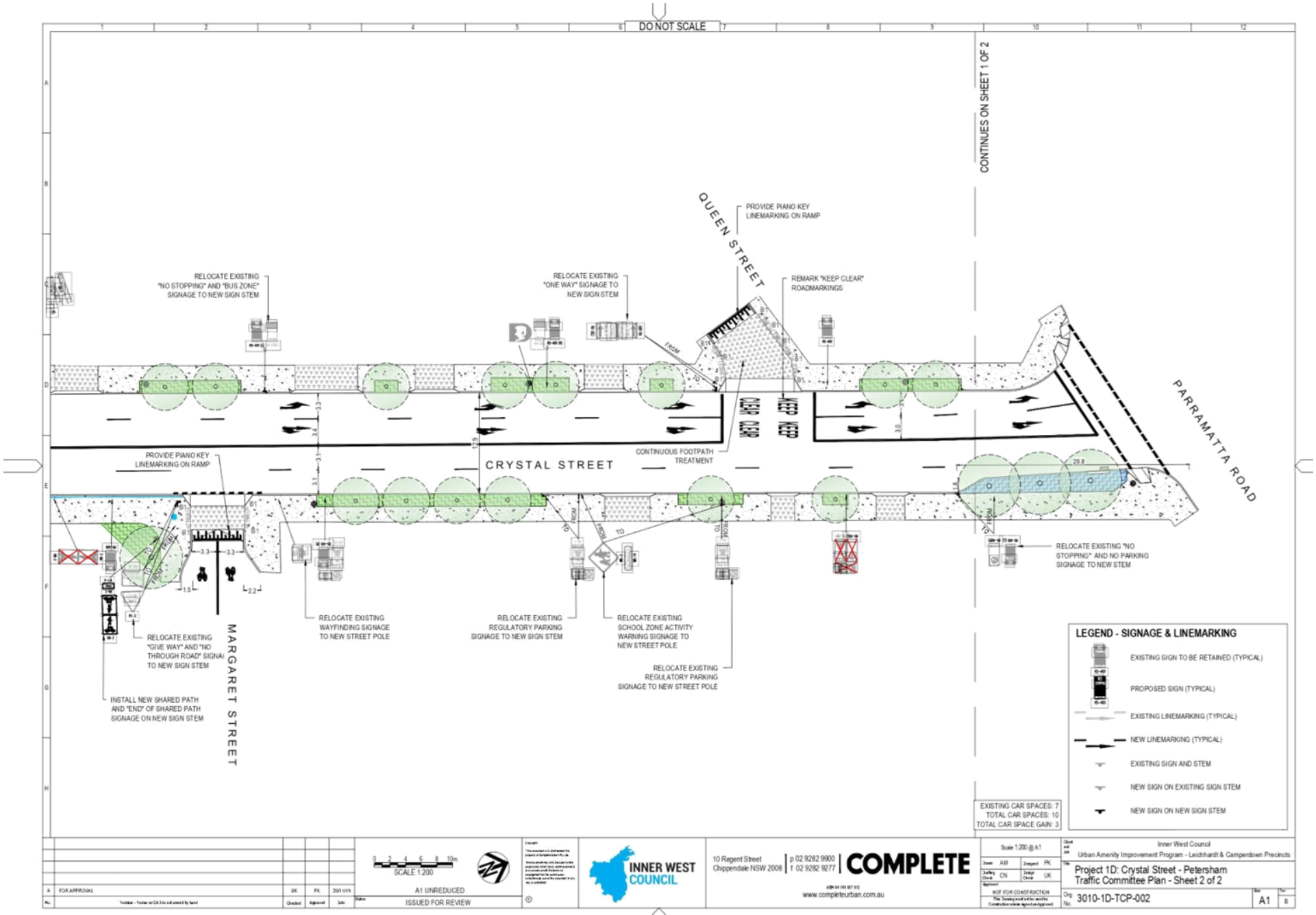
DO NOT SCALE
CONTINUES ON SHEET 1 OF 2
QUEEN STREET
PROVIDE PIANO KEY LINEMARKING ON RAMP
REMARK "KEEP CLEAR" ROADMARKINGS
RELOCATE EXISTING "NO STOPPING" AND "BUS ZONE" SIGNAGE TO NEW SIGN STEM
RELOCATE EXISTING "ONE WAY" SIGNAGE TO NEW SIGN STEM
KEEP CLEAR
KEEP CLEAR
PARRAMATTA ROAD
CRYSTAL STREET
CONTINUOUS FOOTPATH TREATMENT
PROVIDE PIANO KEY LINEMARKING ON RAMP
RELOCATE EXISTING "NO STOPPING" AND NO PARKING SIGNAGE TO NEW STEM
RELOCATE EXISTING WAYFINDING SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING REGULATORY PARKING SIGNAGE TO NEW SIGN STEM
RELOCATE EXISTING SCHOOL ZONE ACTIVITY WARNING SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING REGULATORY PARKING SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING "GIVE WAY" AND "NO THROUGH ROAD" SIGNAGE TO NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
MARGARET STREET
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 7
TOTAL CAR SPACES: 10
TOTAL CAR SPACE GAIN: 3
SCALE 1:200
A1 UNREDUCED
ISSUED FOR REVIEW
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Project 1D: Crystal Street - Petersham
Traffic Committee Plan - Sheet 2 of 2
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A1
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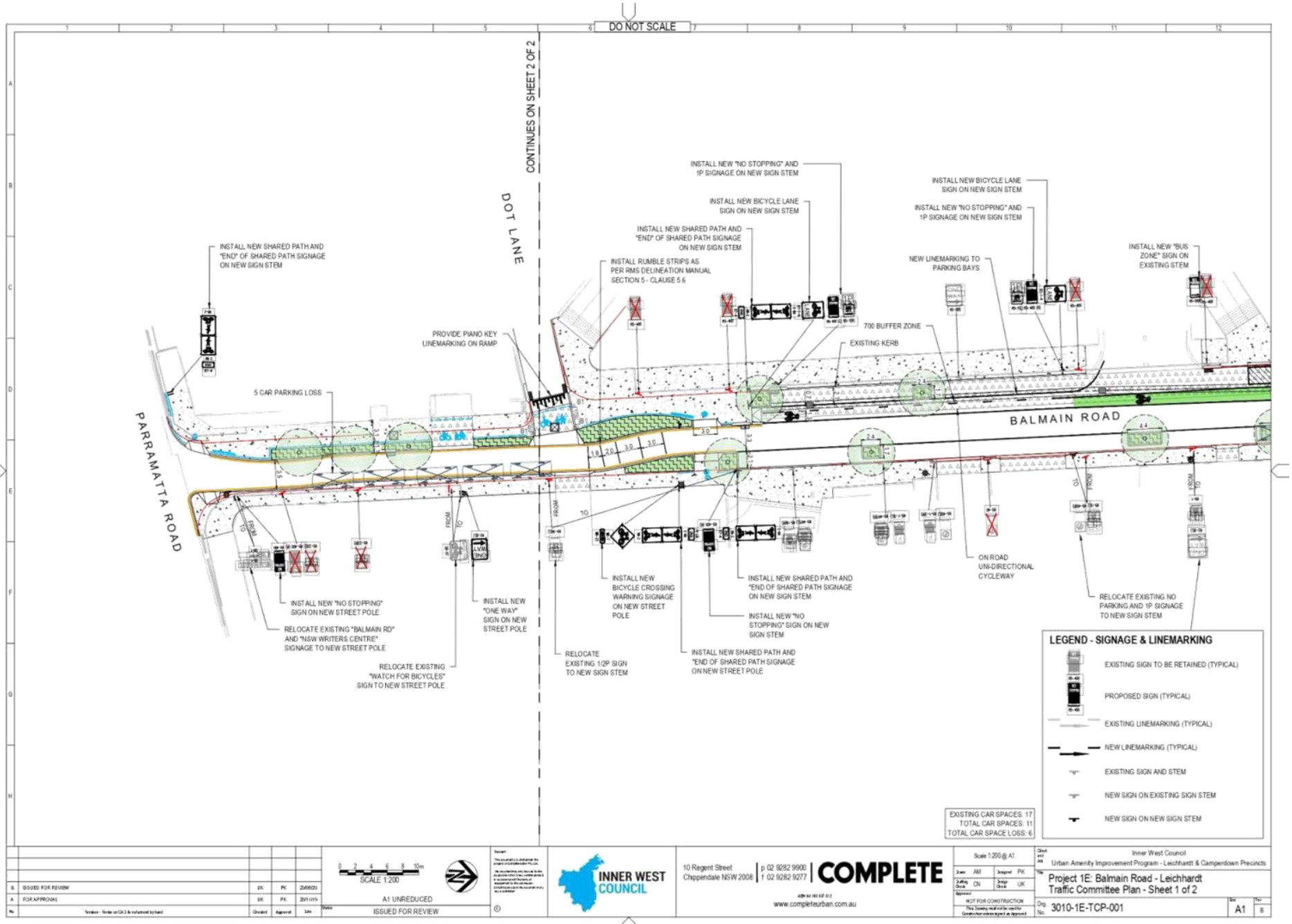
DO NOT SCALE
CONTINUES ON SHEET 2 OF 2
DOT LANE
PARRAMATTA ROAD
BALMAIN ROAD
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
PROVIDE PIANO KEY LINEMARKING ON RAMP
5 CAR PARKING LOSS
INSTALL NEW "NO STOPPING" SIGN ON NEW STREET POLE
RELOCATE EXISTING "BALMAIN RD" AND "NSW WRITERS CENTRE" SIGNAGE TO NEW STREET POLE
RELOCATE EXISTING "WATCH FOR BICYCLES" SIGN TO NEW STREET POLE
INSTALL NEW "ONE WAY" SIGN ON NEW STREET POLE
INSTALL RUMBLE STRIPS AS PER RMS DELINEATION MANUAL SECTION 5 - CLAUSE 5.6
INSTALL NEW BICYCLE CROSSING WARNING SIGNAGE ON NEW STREET POLE
RELOCATE EXISTING 1/2P SIGN TO NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END OF SHARED PATH SIGNAGE ON NEW STREET POLE
INSTALL NEW "NO STOPPING" AND 1P SIGNAGE ON NEW SIGN STEM
INSTALL NEW BICYCLE LANE SIGN ON NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END OF SHARED PATH SIGNAGE ON NEW SIGN STEM
INSTALL NEW "NO STOPPING" SIGN ON NEW SIGN STEM
700 BUFFER ZONE
EXISTING KERB
NEW LINEMARKING TO PARKING BAYS
ON ROAD UNI-DIRECTIONAL CYCLEWAY
INSTALL NEW BICYCLE LANE SIGN ON NEW SIGN STEM
INSTALL NEW "NO STOPPING" AND 1P SIGNAGE ON NEW SIGN STEM
INSTALL NEW "BUS ZONE" SIGN ON EXISTING STEM
RELOCATE EXISTING NO PARKING AND 1P SIGNAGE TO NEW SIGN STEM
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 17
TOTAL CAR SPACES: 11
TOTAL CAR SPACE LOSS: 6
G ISSUED FOR REVIEW
A FOR APPROVAL
SCALE 1:200
A1 UNREDUCED
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Project 1E: Balmain Road - Leichhardt
Traffic Committee Plan - Sheet 1 of 2
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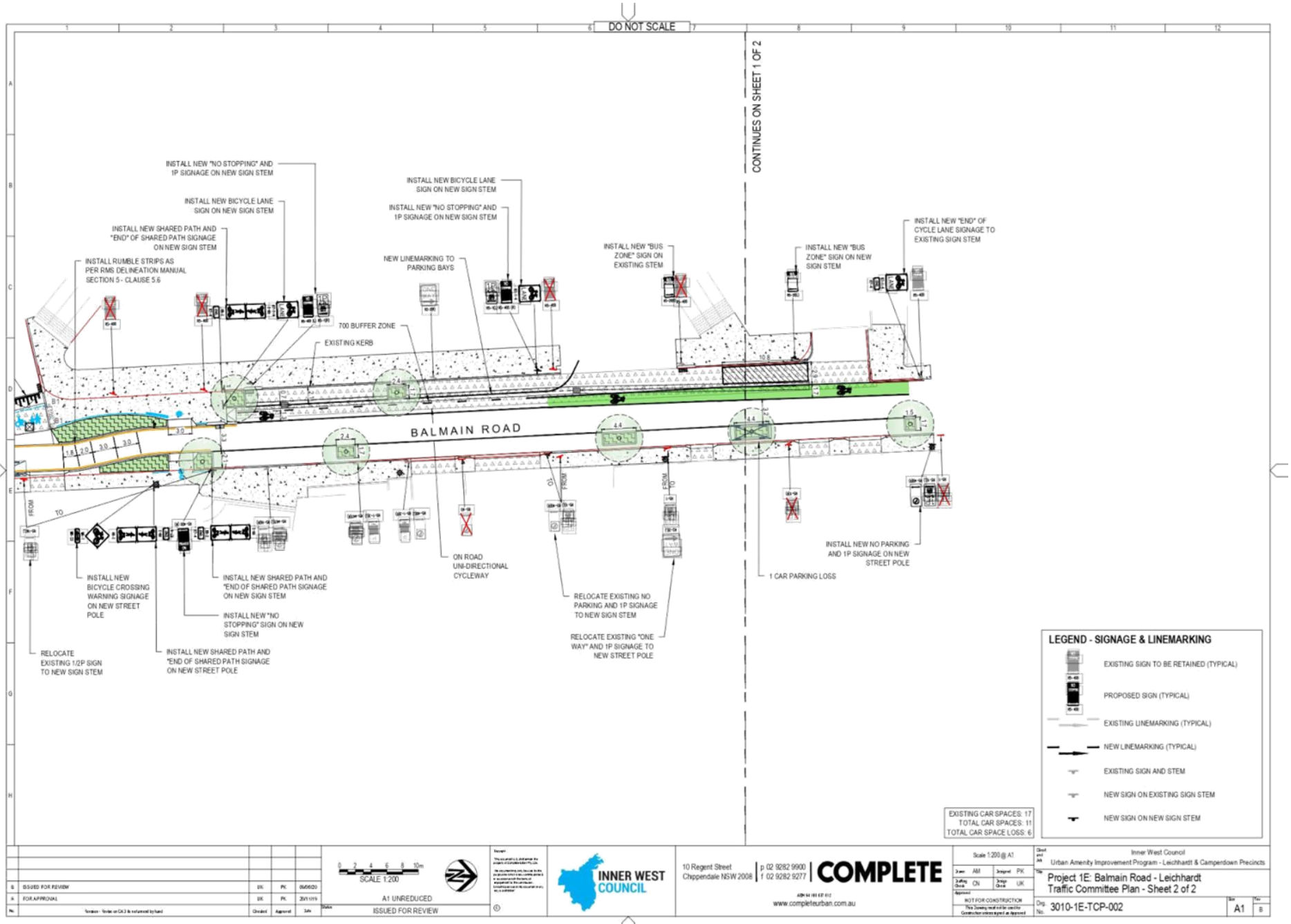
DO NOT SCALE
CONTINUES ON SHEET 1 OF 2
INSTALL NEW "NO STOPPING" AND 1P SIGNAGE ON NEW SIGN STEM
INSTALL NEW BICYCLE LANE SIGN ON NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
INSTALL RUMBLE STRIPS AS PER RMS DELINEATION MANUAL SECTION 5 - CLAUSE 5.6
INSTALL NEW BICYCLE LANE SIGN ON NEW SIGN STEM
INSTALL NEW "NO STOPPING" AND 1P SIGNAGE ON NEW SIGN STEM
NEW LINEMARKING TO PARKING BAYS
700 BUFFER ZONE
EXISTING KERB
INSTALL NEW "BUS ZONE" SIGN ON EXISTING STEM
INSTALL NEW "BUS ZONE" SIGN ON NEW SIGN STEM
INSTALL NEW "END" OF CYCLE LANE SIGNAGE TO EXISTING SIGN STEM
BALMAIN ROAD
INSTALL NEW BICYCLE CROSSING WARNING SIGNAGE ON NEW STREET POLE
INSTALL NEW SHARED PATH AND "END OF SHARED PATH SIGNAGE ON NEW SIGN STEM
INSTALL NEW "NO STOPPING" SIGN ON NEW SIGN STEM
RELOCATE EXISTING 1/2P SIGN TO NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END OF SHARED PATH SIGNAGE ON NEW STREET POLE
ON ROAD UNI-DIRECTIONAL CYCLEWAY
RELOCATE EXISTING NO PARKING AND 1P SIGNAGE TO NEW SIGN STEM
RELOCATE EXISTING "ONE WAY" AND 1P SIGNAGE TO NEW STREET POLE
INSTALL NEW NO PARKING AND 1P SIGNAGE ON NEW STREET POLE
1 CAR PARKING LOSS
EXISTING CAR SPACES: 17
TOTAL CAR SPACES: 11
TOTAL CAR SPACE LOSS: 6
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
SCALE 1:200
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Project 1E: Balmain Road - Leichhardt
Traffic Committee Plan - Sheet 2 of 2
Dwg No. 3010-1E-TCP-002
A1
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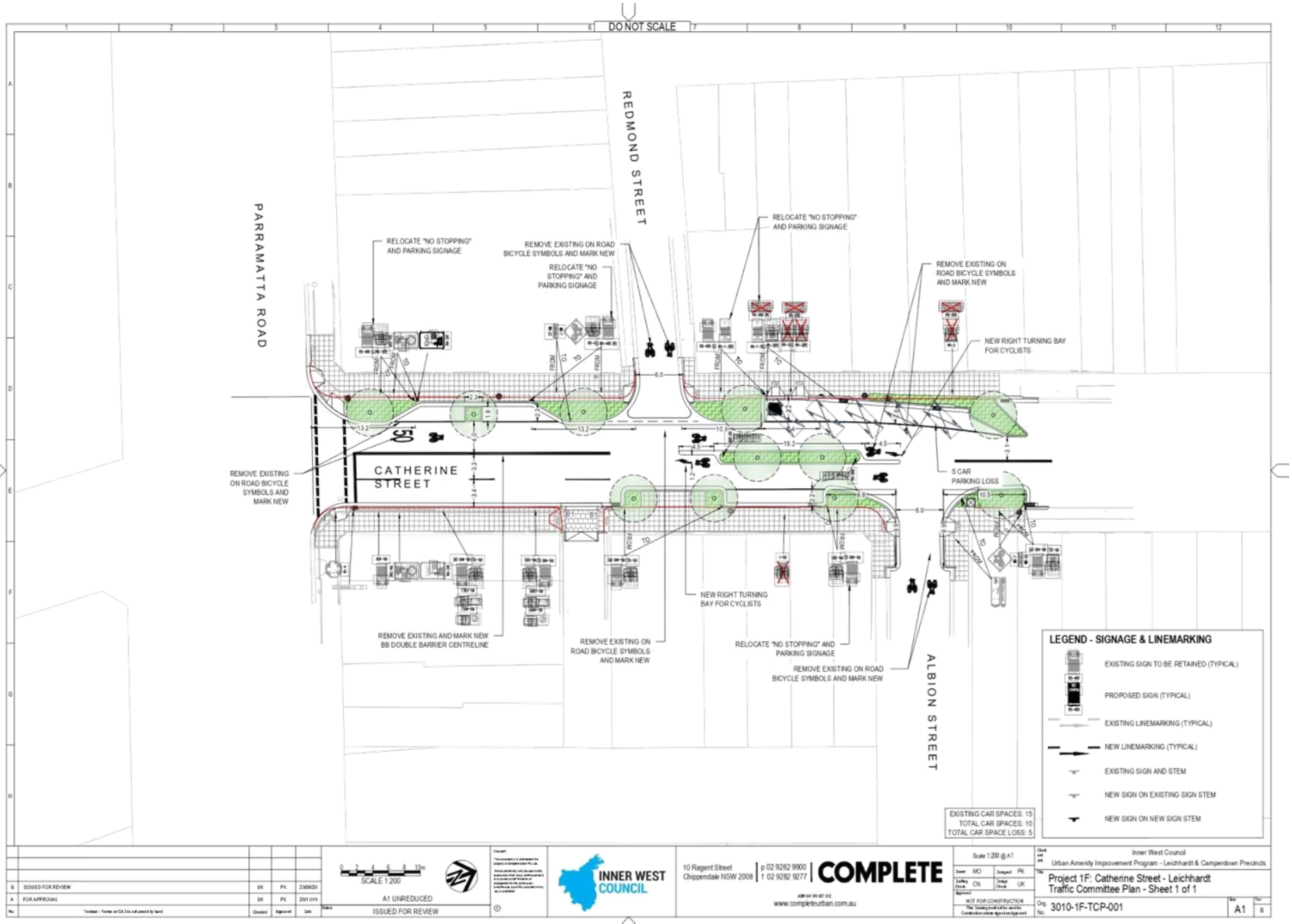
DO NOT SCALE
REDMOND STREET
PARRAMATTA ROAD
CATHERINE STREET
ALBION STREET
RELOCATE "NO STOPPING" AND PARKING SIGNAGE
REMOVE EXISTING ON ROAD BICYCLE SYMBOLS AND MARK NEW
RELOCATE "NO STOPPING" AND PARKING SIGNAGE
RELOCATE "NO STOPPING" AND PARKING SIGNAGE
REMOVE EXISTING ON ROAD BICYCLE SYMBOLS AND MARK NEW
NEW RIGHT TURNING BAY FOR CYCLISTS
REMOVE EXISTING ON ROAD BICYCLE SYMBOLS AND MARK NEW
5 CAR PARKING LOSS
NEW RIGHT TURNING BAY FOR CYCLISTS
REMOVE EXISTING AND MARK NEW BB DOUBLE BARRIER CENTRELINE
REMOVE EXISTING ON ROAD BICYCLE SYMBOLS AND MARK NEW
RELOCATE "NO STOPPING" AND PARKING SIGNAGE
REMOVE EXISTING ON ROAD BICYCLE SYMBOLS AND MARK NEW
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 15
TOTAL CAR SPACES: 10
TOTAL CAR SPACE LOSS: 5
SCALE 1:200
A1 UNREDUCED
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Project 1F: Catherine Street - Leichhardt
Traffic Committee Plan - Sheet 1 of 1
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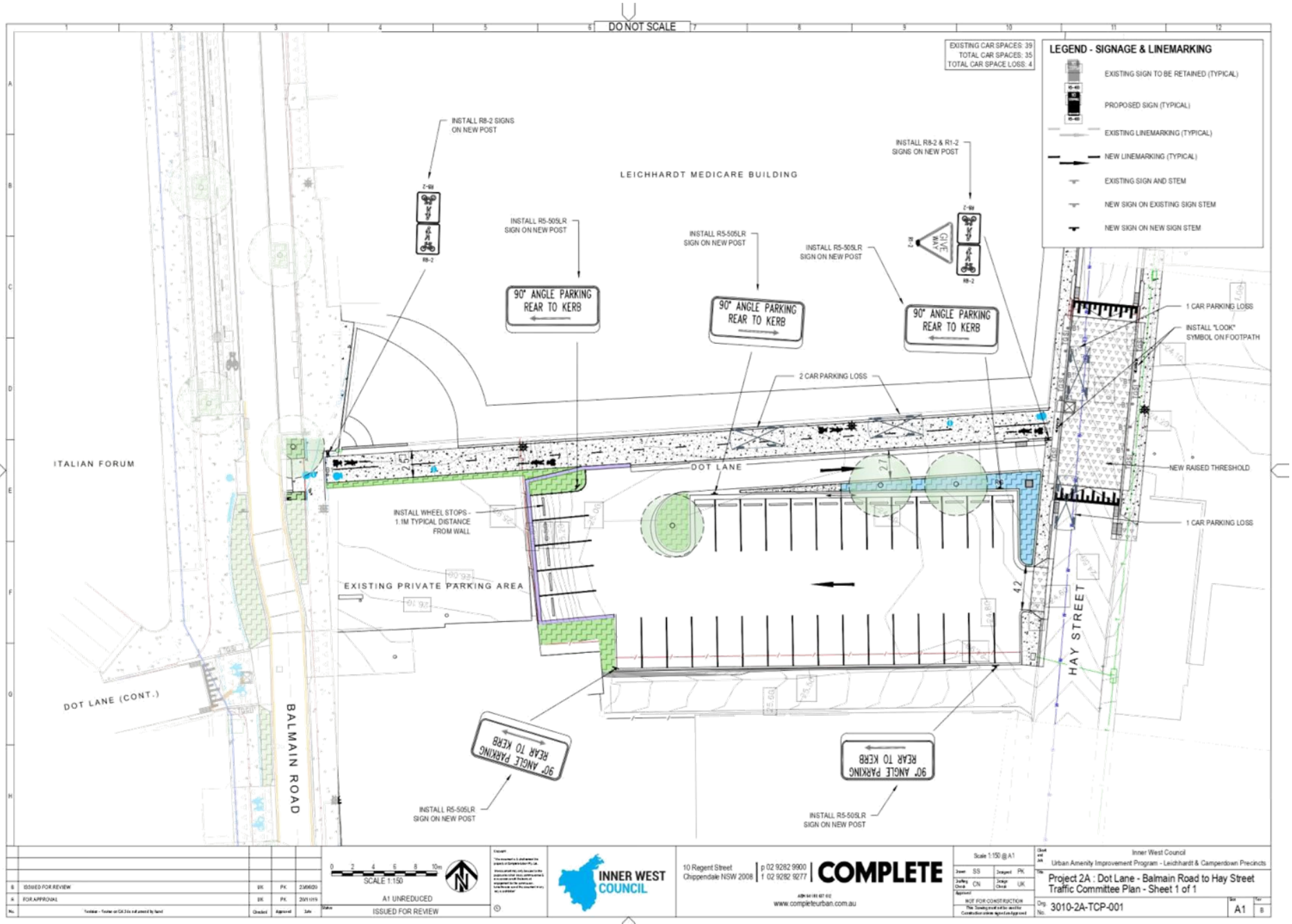
Size A1
Rev B


DO NOT SCALE
EXISTING CAR SPACES: 39
TOTAL CAR SPACES: 35
TOTAL CAR SPACE LOSS: 4
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
INSTALL R8-2 SIGNS ON NEW POST
INSTALL R8-2 & R1-2 SIGNS ON NEW POST
LEICHHARDT MEDICARE BUILDING
INSTALL R5-505LR SIGN ON NEW POST
INSTALL R5-505LR SIGN ON NEW POST
INSTALL R5-505LR SIGN ON NEW POST
90° ANGLE PARKING REAR TO KERB
90° ANGLE PARKING REAR TO KERB
90° ANGLE PARKING REAR TO KERB
1 CAR PARKING LOSS
INSTALL "LOOK" SYMBOL ON FOOTPATH
2 CAR PARKING LOSS
ITALIAN FORUM
DOT LANE
NEW RAISED THRESHOLD
INSTALL WHEEL STOPS - 1.1M TYPICAL DISTANCE FROM WALL
1 CAR PARKING LOSS
EXISTING PRIVATE PARKING AREA
HAY STREET
DOT LANE (CONT.)
BALMAIN ROAD
90° ANGLE PARKING REAR TO KERB
90° ANGLE PARKING REAR TO KERB
INSTALL R5-505LR SIGN ON NEW POST
INSTALL R5-505LR SIGN ON NEW POST
SCALE 1:150
A1 UNREDUCED
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Project 2A : Dot Lane - Balmain Road to Hay Street
Traffic Committee Plan - Sheet 1 of 1
3010-2A-TCP-001
A1
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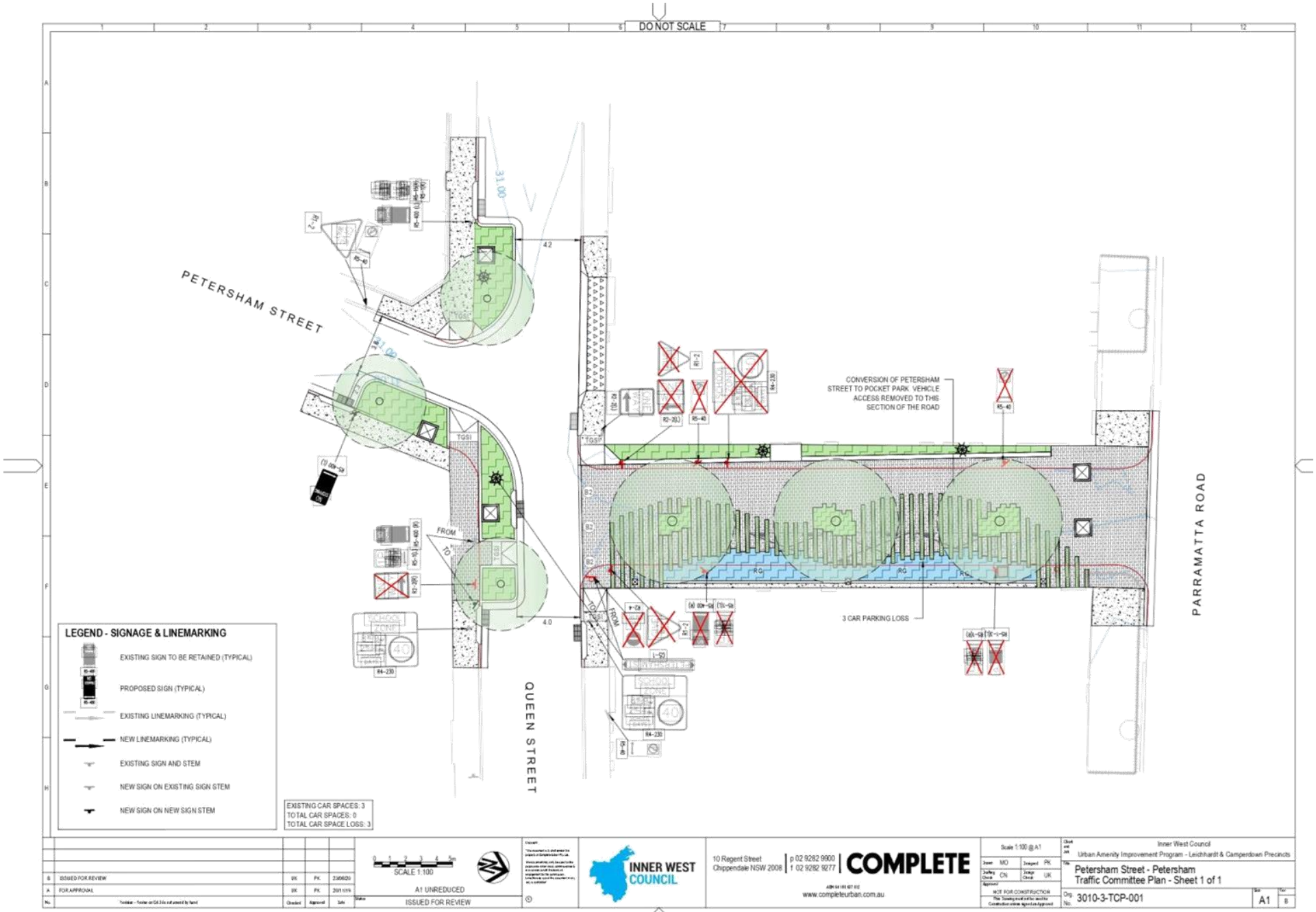
DO NOT SCALE
PETERSHAM STREET
QUEEN STREET
PARRAMATTA ROAD
CONVERSION OF PETERSHAM STREET TO POCKET PARK. VEHICLE ACCESS REMOVED TO THIS SECTION OF THE ROAD
3 CAR PARKING LOSS
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
EXISTING CAR SPACES: 3
TOTAL CAR SPACES: 0
TOTAL CAR SPACE LOSS: 3
SCALE 1:100
A1 UNREDUCED
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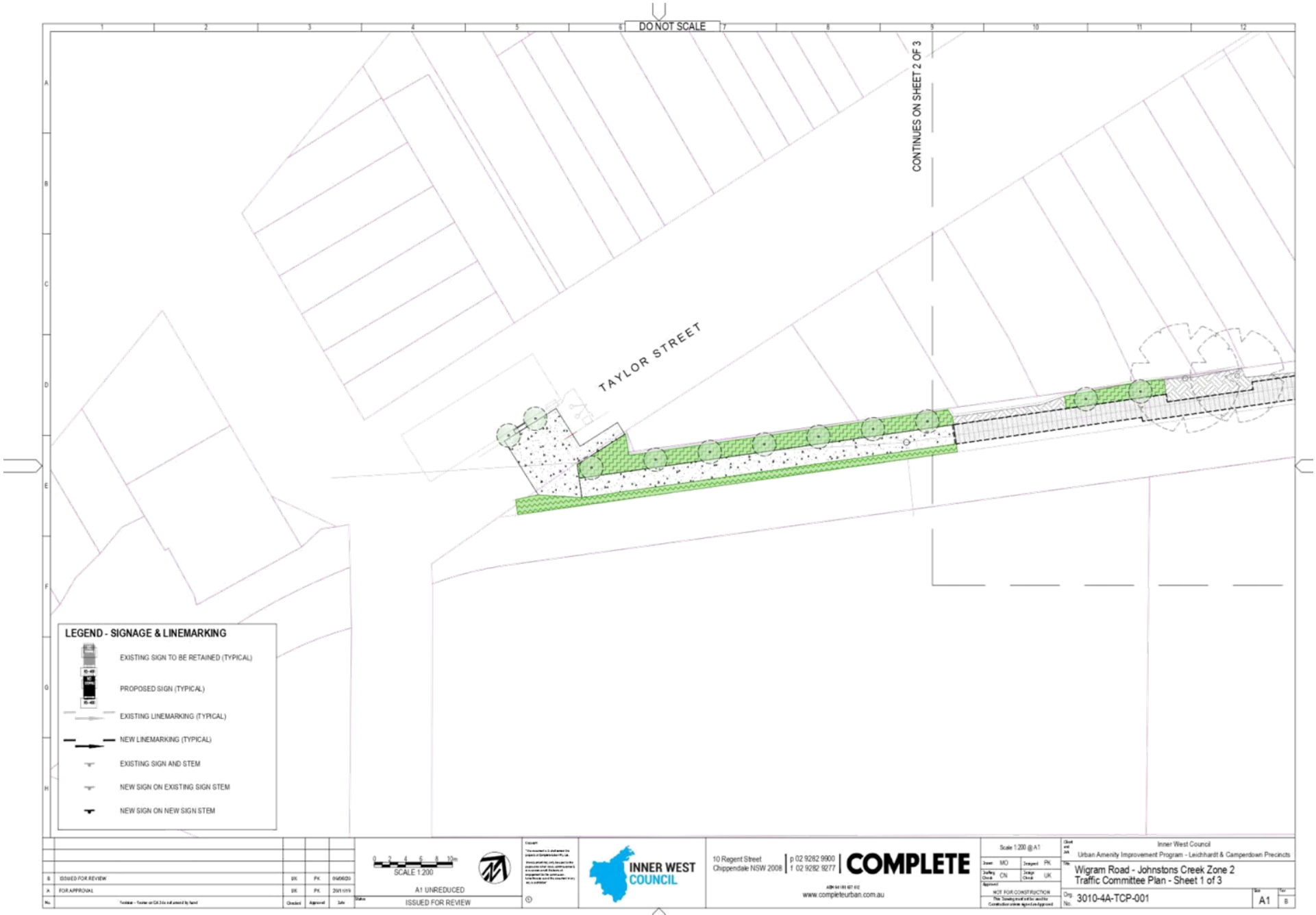
Petersham Street - Petersham
Traffic Committee Plan - Sheet 1 of 1
Dwg No. 3010-3-TCP-001
A1


DO NOT SCALE
CONTINUES ON SHEET 2 OF 3
TAYLOR STREET
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
SCALE 1:200
A1 UNREDUCED
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Wigram Road - Johnstons Creek Zone 2
Traffic Committee Plan - Sheet 1 of 3
3010-4A-TCP-001
A1
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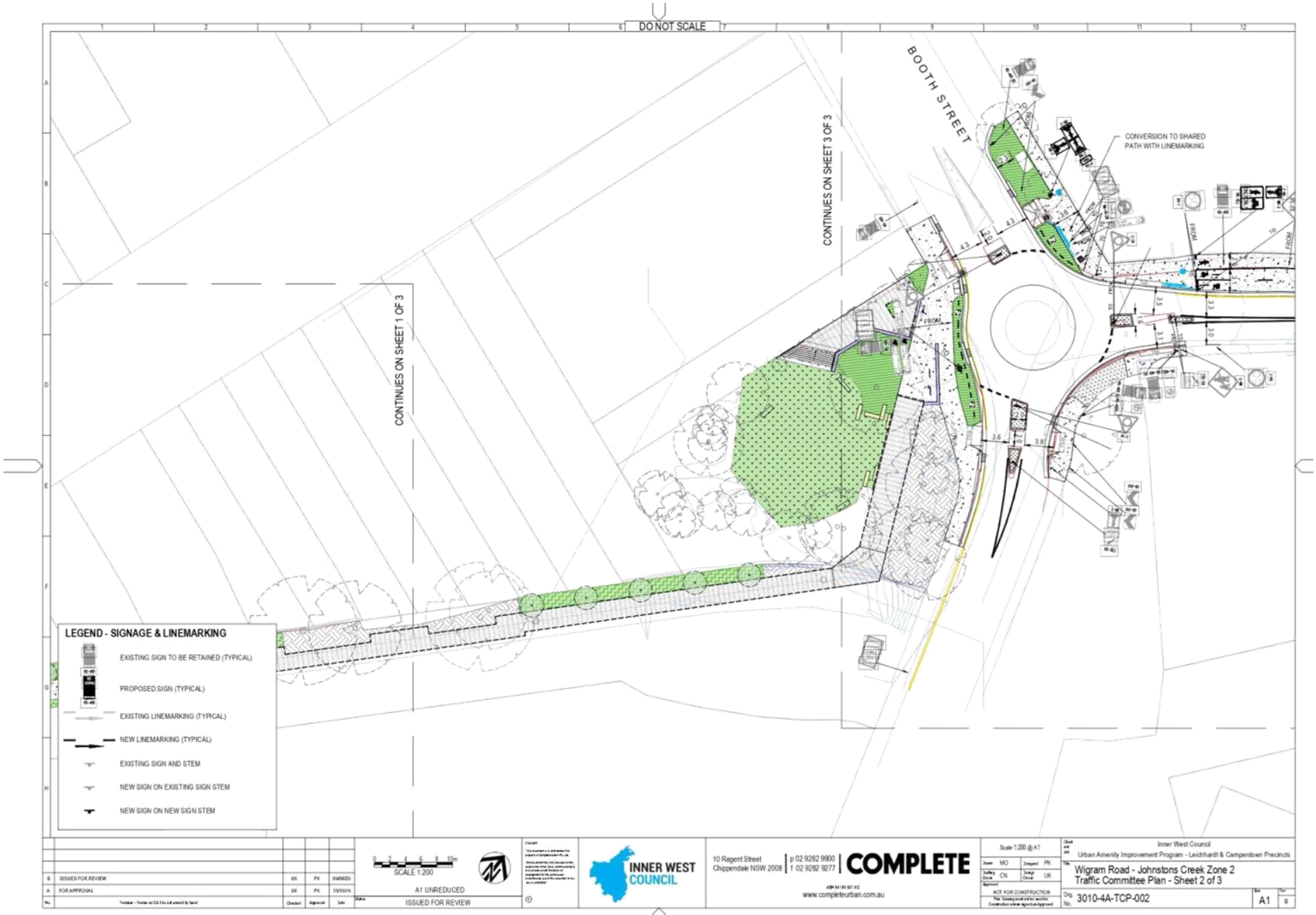
DO NOT SCALE
BOOTH STREET
CONTINUES ON SHEET 3 OF 3
CONTINUES ON SHEET 1 OF 3
CONVERSION TO SHARED PATH WITH LINEMARKING
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
SCALE 1:200
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Wigram Road - Johnstons Creek Zone 2
Traffic Committee Plan - Sheet 2 of 3
Dwg No. 3010-4A-TCP-002
A1
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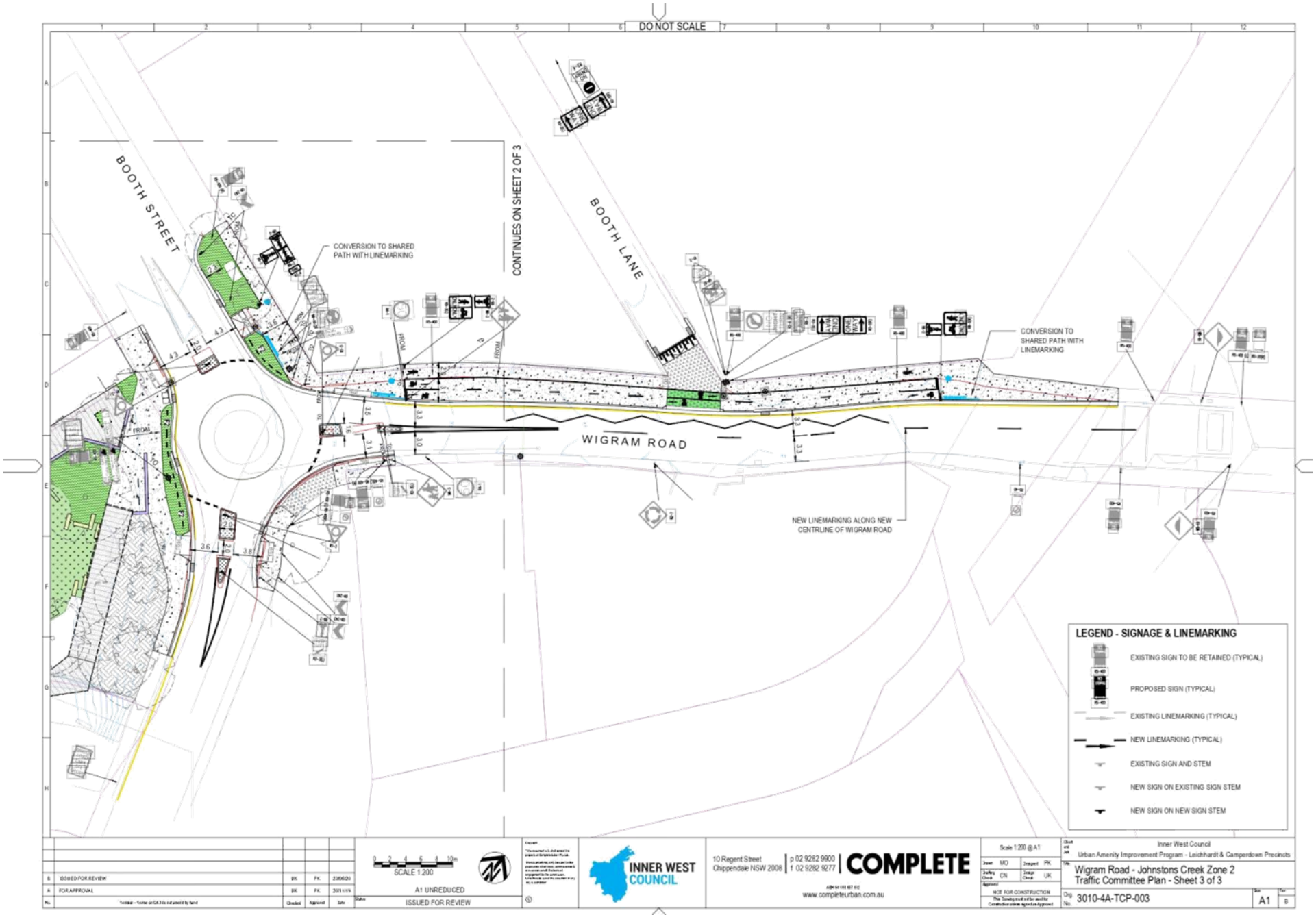
DO NOT SCALE
BOOTH STREET
BOOTH LANE
WIGRAM ROAD
CONTINUES ON SHEET 2 OF 3
CONVERSION TO SHARED PATH WITH LINEMARKING
CONVERSION TO SHARED PATH WITH LINEMARKING
NEW LINEMARKING ALONG NEW CENTRELINE OF WIGRAM ROAD
LEGEND - SIGNAGE & LINEMARKING
EXISTING SIGN TO BE RETAINED (TYPICAL)
PROPOSED SIGN (TYPICAL)
EXISTING LINEMARKING (TYPICAL)
NEW LINEMARKING (TYPICAL)
EXISTING SIGN AND STEM
NEW SIGN ON EXISTING SIGN STEM
NEW SIGN ON NEW SIGN STEM
SCALE 1:200
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Wigram Road - Johnstons Creek Zone 2
Traffic Committee Plan - Sheet 3 of 3
Dwg No. 3010-4A-TCP-003
A1
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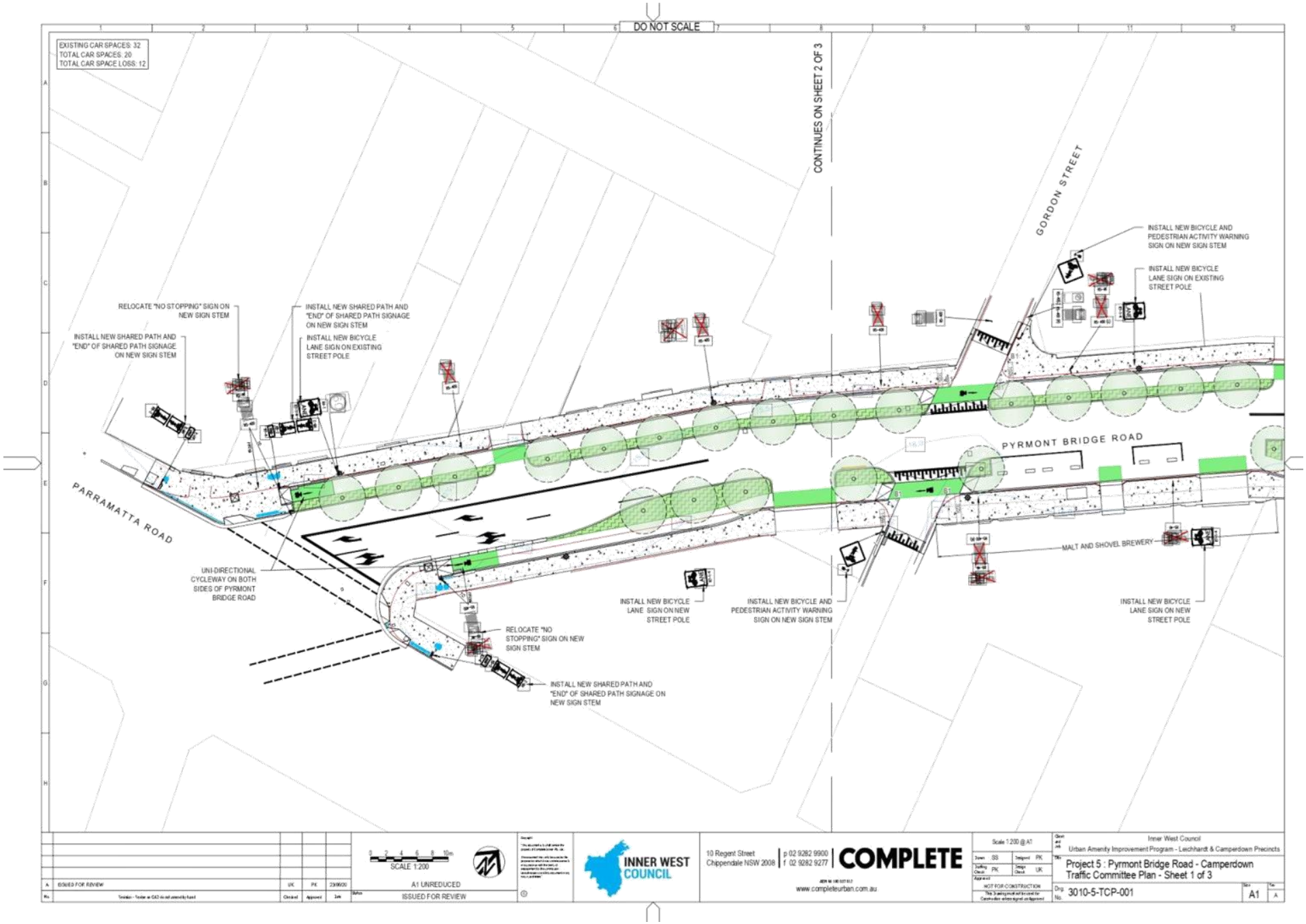
DO NOT SCALE
EXISTING CAR SPACES: 32
TOTAL CAR SPACES: 20
TOTAL CAR SPACE LOSS: 12
CONTINUES ON SHEET 2 OF 3
GORDON STREET
PYRMONT BRIDGE ROAD
PARRAMATTA ROAD
RELOCATE "NO STOPPING" SIGN ON NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
INSTALL NEW BICYCLE LANE SIGN ON EXISTING STREET POLE
INSTALL NEW BICYCLE AND PEDESTRIAN ACTIVITY WARNING SIGN ON NEW SIGN STEM
INSTALL NEW BICYCLE LANE SIGN ON EXISTING STREET POLE
UNI-DIRECTIONAL CYCLEWAY ON BOTH SIDES OF PYRMONT BRIDGE ROAD
INSTALL NEW BICYCLE LANE SIGN ON NEW STREET POLE
INSTALL NEW BICYCLE AND PEDESTRIAN ACTIVITY WARNING SIGN ON NEW SIGN STEM
MALT AND SHOVEL BREWERY
INSTALL NEW BICYCLE LANE SIGN ON NEW STREET POLE
RELOCATE "NO STOPPING" SIGN ON NEW SIGN STEM
INSTALL NEW SHARED PATH AND "END" OF SHARED PATH SIGNAGE ON NEW SIGN STEM
SCALE 1:200
A1 UNREDUCED
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Project 5 : Pyrmont Bridge Road - Camperdown
Traffic Committee Plan - Sheet 1 of 3
Dwg No. 3010-5-TCP-001
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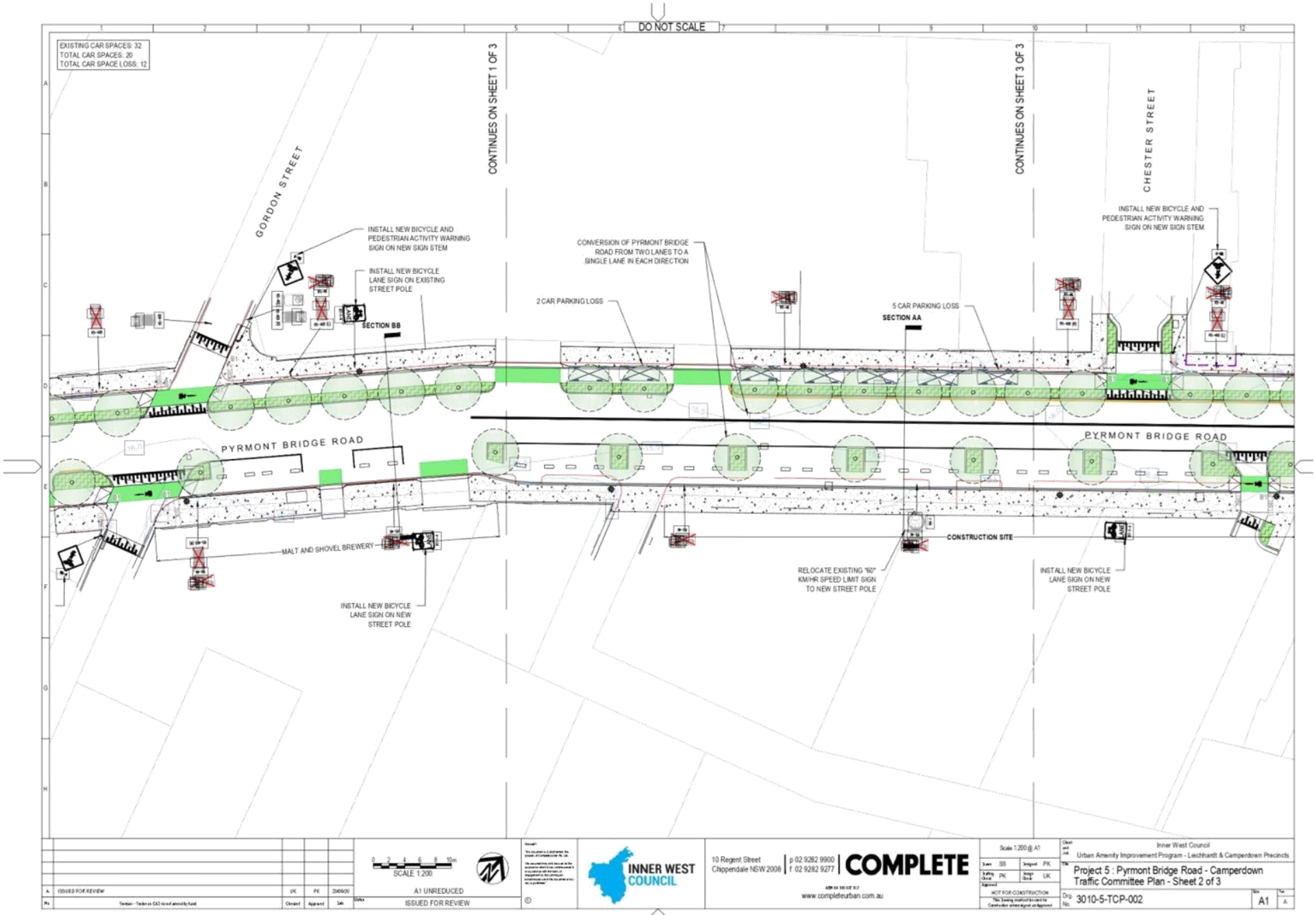
DO NOT SCALE
EXISTING CAR SPACES: 32
TOTAL CAR SPACES: 20
TOTAL CAR SPACE LOSS: 12
CONTINUES ON SHEET 1 OF 3
CONTINUES ON SHEET 3 OF 3
GORDON STREET
CHESTER STREET
PYRMONT BRIDGE ROAD
PYRMONT BRIDGE ROAD
INSTALL NEW BICYCLE AND PEDESTRIAN ACTIVITY WARNING SIGN ON NEW SIGN STEM
INSTALL NEW BICYCLE LANE SIGN ON EXISTING STREET POLE
SECTION BB
CONVERSION OF PYRMONT BRIDGE ROAD FROM TWO LANES TO A SINGLE LANE IN EACH DIRECTION
2 CAR PARKING LOSS
5 CAR PARKING LOSS
SECTION AA
INSTALL NEW BICYCLE AND PEDESTRIAN ACTIVITY WARNING SIGN ON NEW SIGN STEM
MALT AND SHOVEL BREWERY
INSTALL NEW BICYCLE LANE SIGN ON NEW STREET POLE
CONSTRUCTION SITE
RELOCATE EXISTING "60" KM/HR SPEED LIMIT SIGN TO NEW STREET POLE
INSTALL NEW BICYCLE LANE SIGN ON NEW STREET POLE
SCALE 1:200
A1 UNREDUCED
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Project 5 : Pyrmont Bridge Road - Camperdown
Traffic Committee Plan - Sheet 2 of 3
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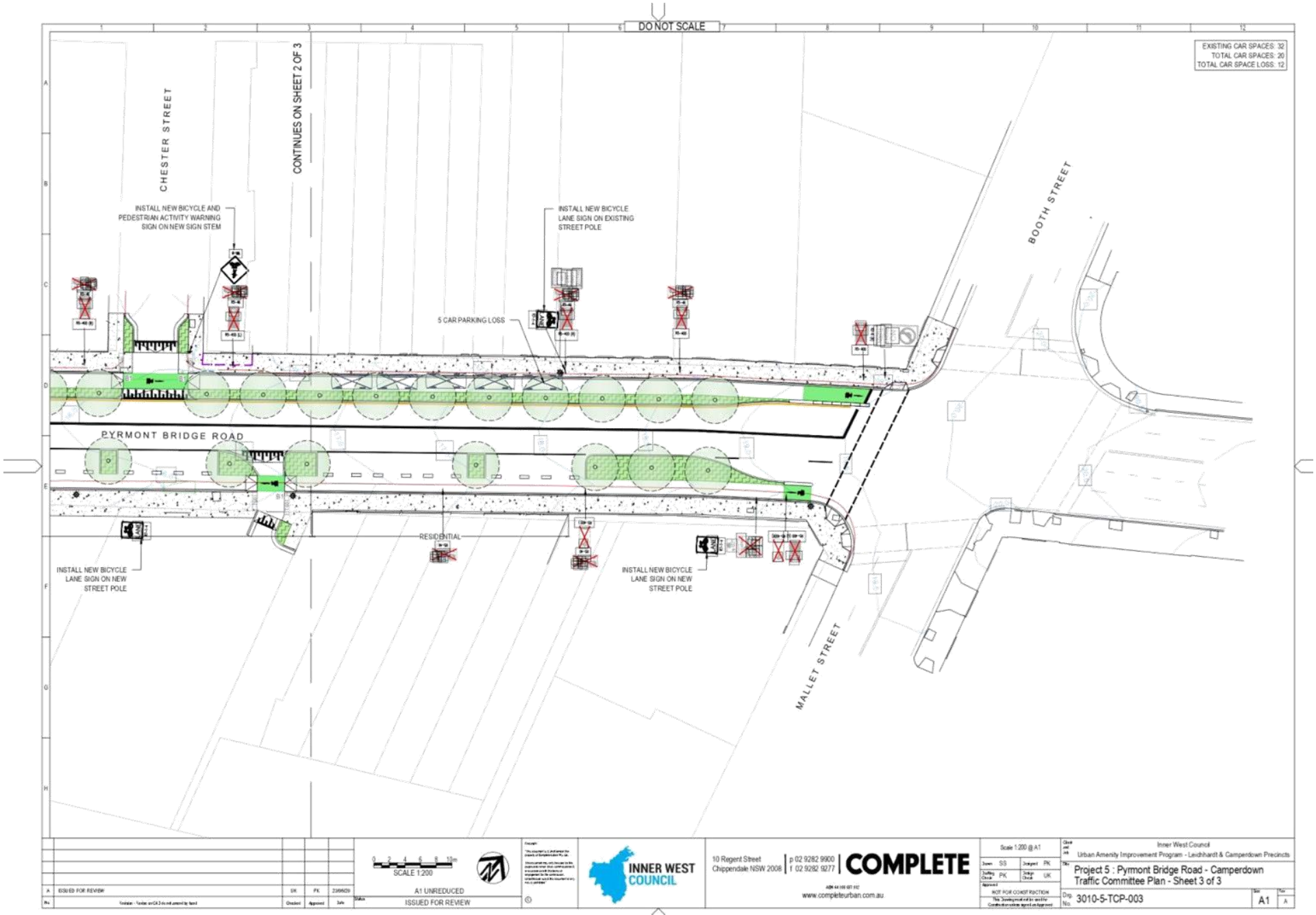
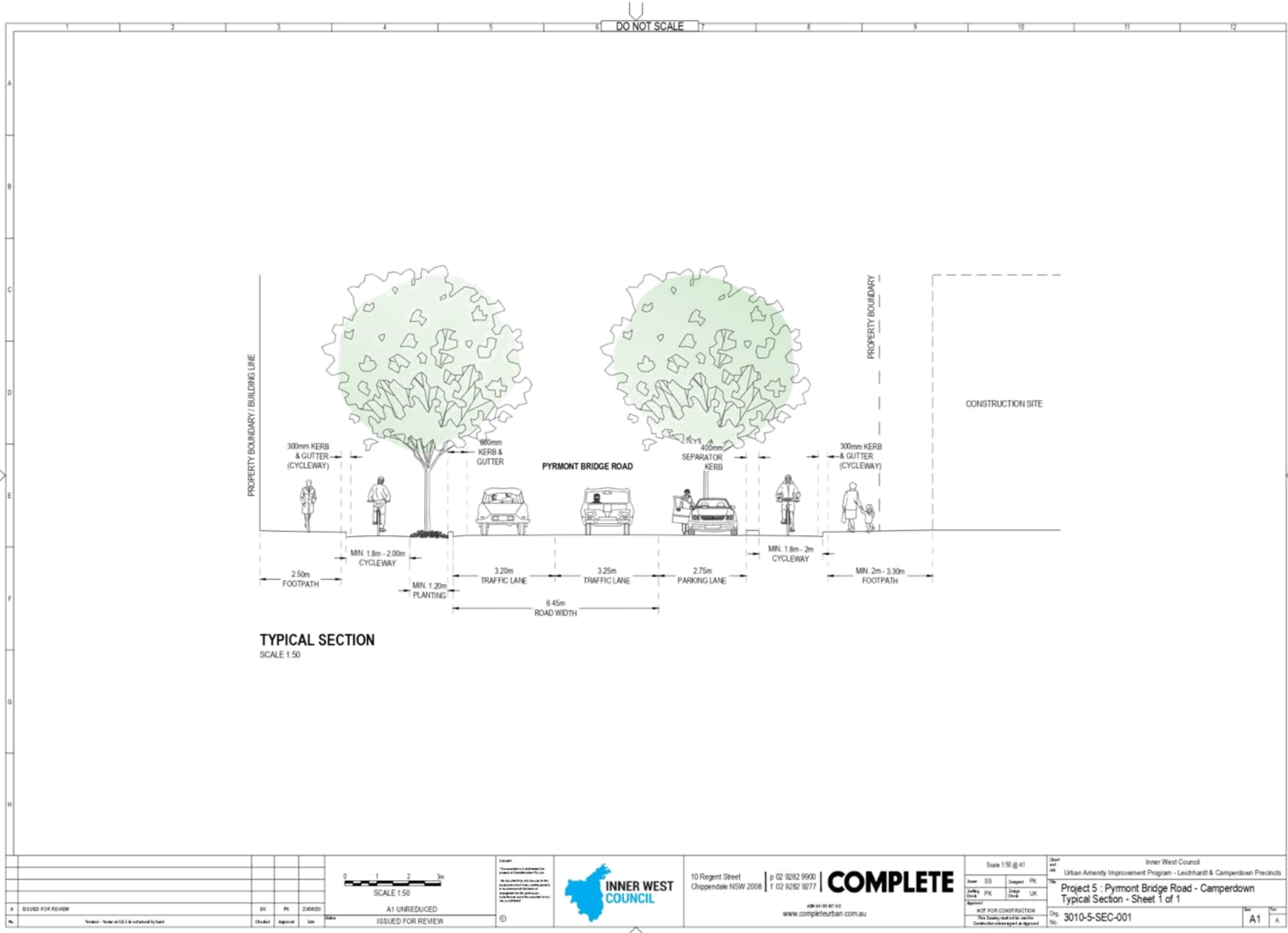

DO NOT SCALE
CHESTER STREET
CONTINUES ON SHEET 2 OF 3
EXISTING CAR SPACES: 32
TOTAL CAR SPACES: 20
TOTAL CAR SPACE LOSS: 12
INSTALL NEW BICYCLE AND PEDESTRIAN ACTIVITY WARNING SIGN ON NEW SIGN STEM
INSTALL NEW BICYCLE LANE SIGN ON EXISTING STREET POLE
BOOTH STREET
5 CAR PARKING LOSS
PYRMONT BRIDGE ROAD
RESIDENTIAL
INSTALL NEW BICYCLE LANE SIGN ON NEW STREET POLE
INSTALL NEW BICYCLE LANE SIGN ON NEW STREET POLE
MALLET STREET
SCALE 1:200
A1 UNREDUCED
ISSUED FOR REVIEW
INNER WEST COUNCIL
10 Regent Street
Chippendale NSW 2008
p 02 9282 9900
f 02 9282 9277
COMPLETE
www.completeurban.com.au
Scale 1:200 @ A1
Inner West Council
Urban Amenity Improvement Program - Leichhardt & Camperdown Precincts
Project 5 : Pyrmont Bridge Road - Camperdown
Traffic Committee Plan - Sheet 3 of 3
3010-5-TCP-003
A1


DO NOT SCALE
PROPERTY BOUNDARY / BUILDING LINE
PROPERTY BOUNDARY
CONSTRUCTION SITE
300mm KERB & GUTTER (CYCLEWAY)
600mm KERB & GUTTER
PYRMONT BRIDGE ROAD
400mm SEPARATOR KERB
300mm KERB & GUTTER (CYCLEWAY)
MIN. 1.8m - 2.00m CYCLEWAY
2.50m FOOTPATH
MIN. 1.20m PLANTING
3.20m TRAFFIC LANE
3.25m TRAFFIC LANE
2.75m PARKING LANE
MIN. 1.8m - 2m CYCLEWAY
MIN. 2m - 3.30m FOOTPATH
6.45m ROAD WIDTH
TYPICAL SECTION
SCALE 1:50
A ISSUED FOR REVIEW
SCALE 1:50
A1 UNREDUCED
ISSUED FOR REVIEW
INNER WEST COUNCIL
10 Regent Street Chippendale NSW 2008
p 02 9282 9900
f 02 9282 9277
COMPLETE
www.completeurban.com.au
Scale 1:50 @ A1
NOT FOR CONSTRUCTION
Inner West Council
Urban Amenity Improvement Program - Leichhardt & Camperdown Precincts
Project 5 : Pyrmont Bridge Road - Camperdown
Typical Section - Sheet 1 of 1
3010-5-SEC-001
A1

Item 6

Item No: **LTC0720 Item 6**

Subject: **GODDARD STREET, NEWTOWN - PROPOSED CONTINUOUS FOOTPATH TREATMENT IN GODDARD STREET AT KING STREET – FINAL SIGNAGE AND LINE MARKING PLAN 10134 (DAMUM - STANMORE WARD / NEWTOWN ELECTORATE / INNER WEST PAC)**

Prepared By: Jennifer Adams - Engineer – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

Council has finalised a design plan for a continuous footpath treatment in Goddard Street at King Street, Newtown. It is envisaged that the proposed works will have a positive impact on pedestrian and motorist safety and address concerns about pedestrian safety and driver behaviour in the area.

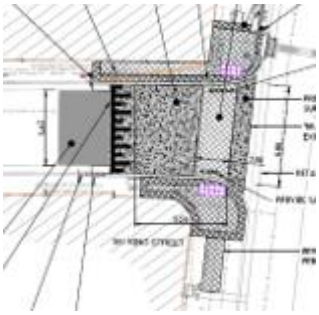
RECOMMENDATION

THAT the detailed design plan for the continuous footpath treatment and associated signs and line markings in in Goddard Street at King Street, Newtown (as per Design Plan No.10134) be approved.

BACKGROUND

Council is planning to construct a continuous footpath treatment in Goddard Street at King Street, Newtown to increase safety for pedestrians and motorists. At its meeting in September 2019, Council endorsed the final Newtown Local Area Traffic Management (LATM) report which included these works. The proposals within the report were based on community input and analysis undertaken during the Public Exhibition period in April 2019. There will be no parking loss.

OTHER STAFF COMMENTS



Proposed continuous footpath treatment

The works (shown in **Attachment 1**) aim to improve pedestrian safety and calm traffic in Goddard Street at King Street, Newtown. The proposed works include:

- Removal of existing kerb ramps and replacing with continuous paved footpath.
- Repairing paving surrounding the works (The paving shown on the plans are indicative only and will be finalised in the detailed design)
- Reconstructing kerb and gutter in Goddard Street.
- Installing associated signage.

As per RMS Technical directions for continuous footpath treatments, no more than 45 vehicle movements per hour were recorded in Goddard Street. A traffic count was undertaken on a typical weekday in March and this indicated that the AM, MID and PM peak traffic flows in Goddard Street were 28, 33 and 37 vehicle movements per hour respectively. Pedestrian volumes were noted to be high with 275, 365 and 403 pedestrian movements along the King Street footpath, past Goddard Street in the respective peak hours.

FINANCIAL IMPLICATIONS

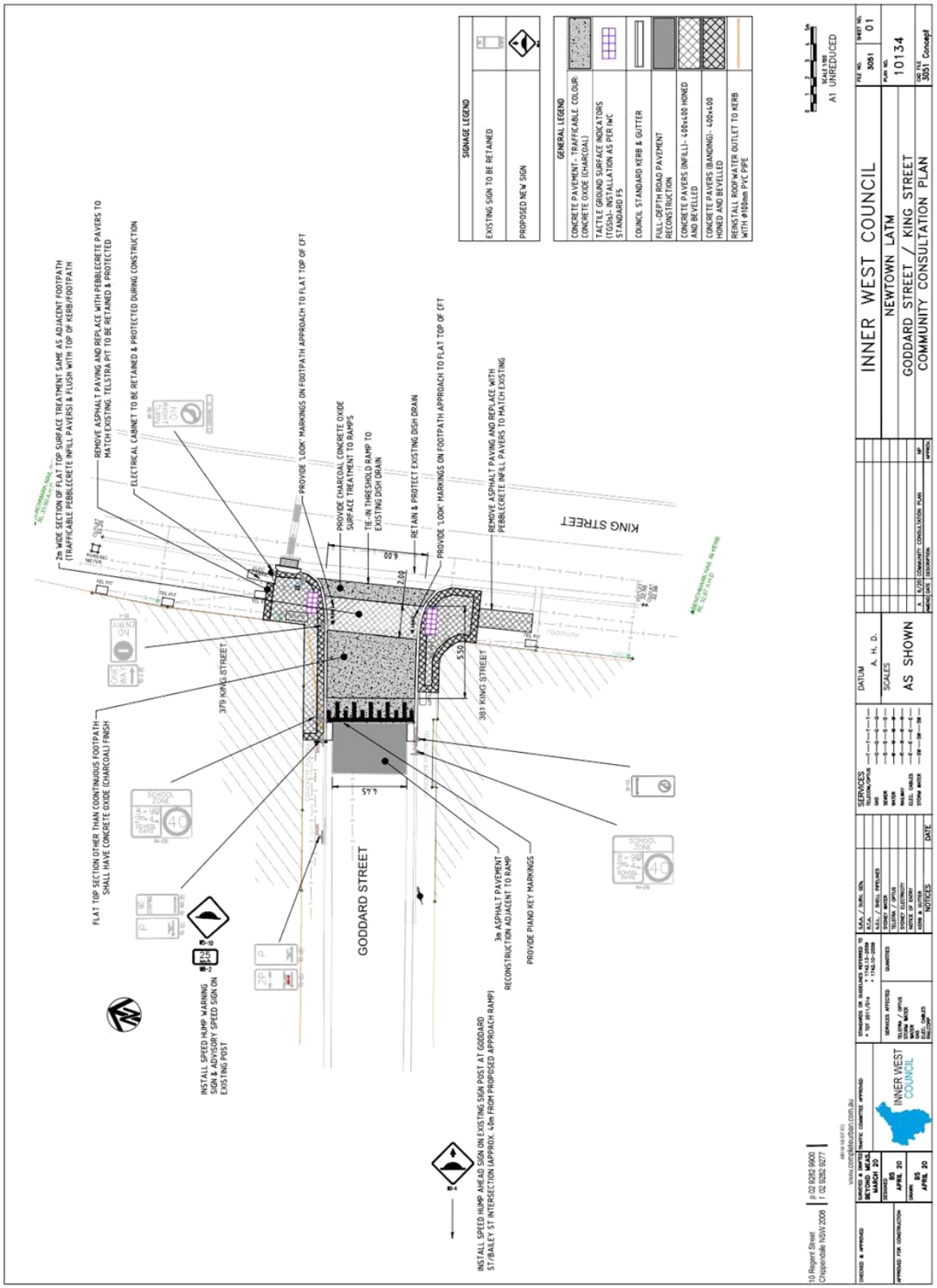
The Newtown LATM Scheme (Including Goddard Street at King Street) is scheduled for design completion in 2019/20 and for construction in 2021/22 as part of the Traffic Facilities Capital Works Program. The estimate cost of the project is $66,000.

PUBLIC CONSULTATION

Consultation was conducted between 3 June 2020 and 19 June 2020. Letters were delivered to 5 adjacent properties. There were no responses.

ATTACHMENTS

1.⇩ Newtown LATM Consultation- Goddard Street



Attachment 1

Item 6

Item No: **LTC0720 Item 7**

Subject: **DULWICH HILL STATION PRECINCT PUBLIC DOMAIN IMPROVEMENTS (DJARRAWUNANG-ASHFIELD WARD / SUMMER HILL ELECTORATE / INNER WEST PAC)**

Prepared By: George Tsaprounis - Coordinator – Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

A traffic and transport assessment for the detailed design of the Dulwich Hill Station Precinct Public Domain Improvements has now been undertaken.

The works will be delivered in 4 stages: Stage A, Stage B, Stage C and Stage D.

Stage A - Wardell Road - Dudley Street Intersection works, Dudley Street footpath works.
Stage B - Raised Entry Thresholds on Wardell Road, Bedford Cres and Wardell Road - Ewart Street intersection.
Stage C - Road works on Wardell Road from Wilga Ave to Ewart Street.
Stage D - Road works on Ewart Street between Murray Lane and Ewart Lane.

This assessment is only for Stage A of the Master Plan and the detailed design of Stage A has now been progressed. The following works are proposed to be undertaken within the Stage A:

- Raised signalised intersection at Wardell Road / Dudley Street for improved safety and pedestrian movement;
- A 40km/h High Pedestrian Activity Area proposed around the station precinct with relevant signage to further improve the safety of pedestrians;
- New in road trees, raingarden and footpath treatments; and
- Extended footpath areas to allow space for pedestrians, footpath dining, street gathering spaces, trees and planting;

Overall the upgrades for stage A aligns well with the existing and planned pedestrian and cycling networks and are expected to improve the safety and efficiency of the station precinct. In particular, the raised, signalised intersection at Wardell Road / Dudley Street will help to address safety issues at the existing pedestrian crossing where crashes have been recorded, particularly as pedestrian movement increases with the implementation of the Sydney Metro upgrades. The intersection is proposed to be a scramble crossing to maximise space for pedestrian movement and allow pedestrians to cross in any direction at once.

RECOMMENDATION

THAT the following proposed works to be undertaken as part of Stage A be APPROVED:

1. **Raised signalised intersection at Wardell Road / Dudley Street for improved safety and pedestrian movements (subject to separate TfNSW approval of TCS design);**

2. **A 40 km/hr High Pedestrian Activity Area along Wardell Road from Ewart Street to Keith Street, Dudley Street from Wardell Road to Bailey Street and Bedford Crescent from Wardell Road to cul-de-sac (subject to separate TfNSW approval of the speed limit reduction).**

3. **Extended footpath areas to allow space for pedestrians, footpath dining, street gathering spaces, trees and planting; and**

Item 7

4. New in-road trees, raingarden and footpath treatments.

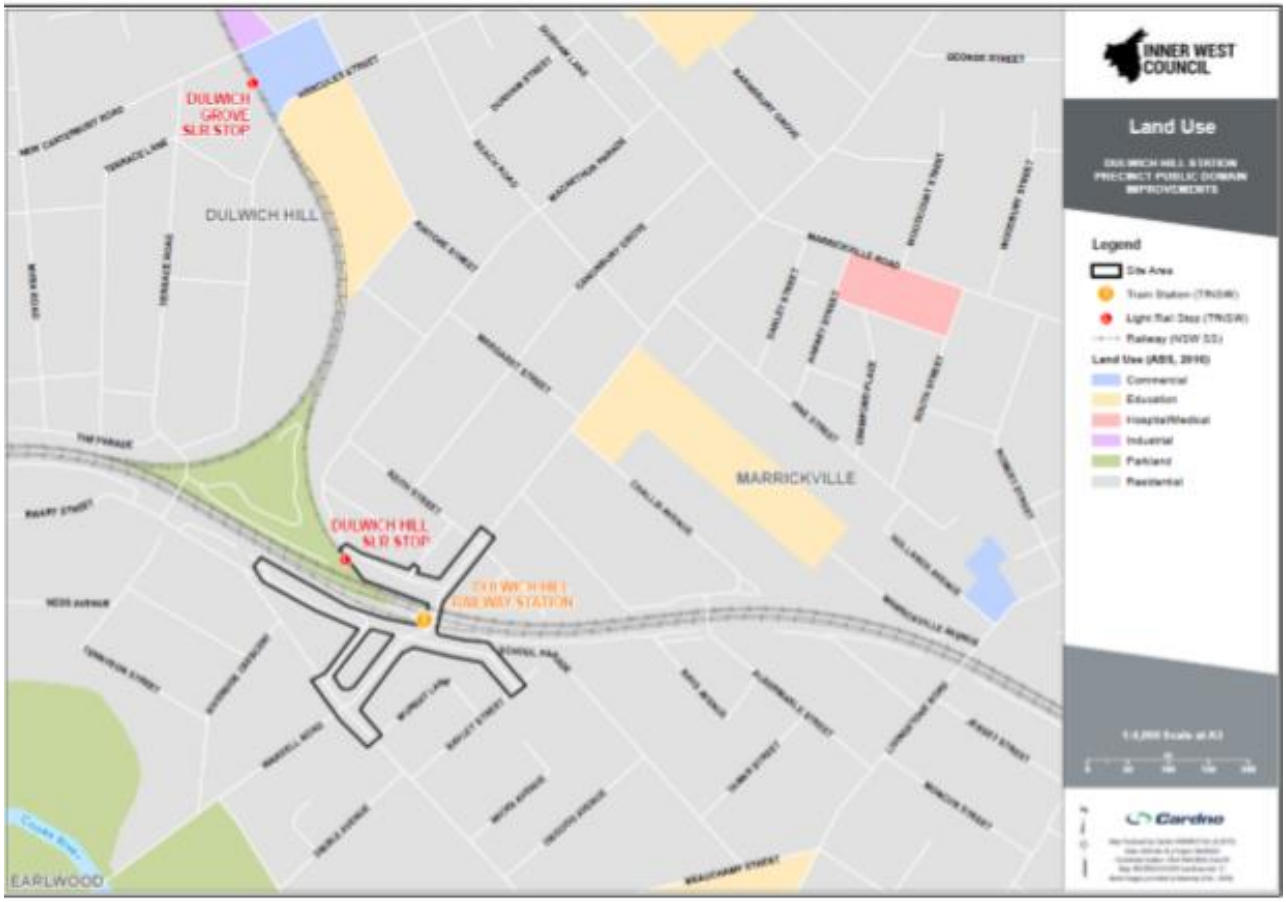
BACKGROUND

The Dulwich Hill Station Precinct (DHSP) site area includes:

- Wardell Road from Ewart Street to the north side of the Keith Street / Wilga Avenue intersection;
- Dudley Street;
- Ewart Street between Ewart Lane and Murray Lane; and
- Bedford Crescent.

The figure below illustrates the study area relative to the surrounding road network and different land uses around the study area. The study area consists of primarily residential along with some commercial/business area along Wardell Road between Ewart Street and Keith Street.

Figure 1-1 Study Area



OFFICER COMMENTS

In relation to the traffic and transport assessment, only Stage A of the Master Plan is being assessed (refer to **Attachment 2**). This includes the intersection at Wardell Road / Dudley Street and both sides of Dudley Street.

Many of the other upgrades will improve the safety and efficiency of pedestrians and cyclists throughout the precinct and facilitate access to and from the station. The summary of traffic and transport impact due to the proposed upgrades is listed below.

Table 1-1 Transport impacts of proposed Stage A precinct works

Proposed upgrade	Transport impacts	Issue(s) addressed
Raised signalised intersection at Wardell Road / Dudley Street	Improved pedestrian safety and connections	Lack of safe crossings of Wardell Road and Dudley Street
New in-road trees and footpath treatments on the southern side of Dudley Street	Improved pedestrian amenity	Pedestrian amenity
Kerb extension on the southern corner of the Wardell Road / Dudley Street intersection	Additional space for pedestrian circulation and queuing	Lack of footpath space for people to dwell, gather and dine, poor amenity

In particular, the raised, signalised intersection at Wardell Road / Dudley Street will help to address safety issues at the existing pedestrian crossing where crashes have been recorded, particularly as pedestrian movement increases with the implementation of the Sydney Metro upgrades. The intersection is proposed to be a scramble crossing to maximise space for pedestrian movement and allow pedestrians to cross in any direction at once (refer to **Attachment 2**).

The traffic modelling shows that the signalisation of Wardell Rd / Dudley St improves the performance of the intersection. Under the existing geometry (priority controlled), the performance of Wardell Rd/ Dudley St intersection is Level of Service (LoS) C in the AM peak and LoS D in the PM peak. Intersection performance at LoS D signifies that the intersection operates near capacity in the PM peak. Under the proposed signalised intersection scenario with scramble crossing, the intersection performs satisfactorily at LoS B in both AM and PM peaks.

Overall the upgrades align well with the existing and planned transport networks and are expected to improve the safety and efficiency of the station precinct. This proposed traffic management scheme also supports proposals by the Sydney Metro and South-West project to integrate the upgraded metro station with connections to Ewart Lane, Wardell Road and Bedford Crescent. Council will coordinate the design and development of Sydney Metro's Precinct Plans to avoid duplicities and ensure any work undertaken is consistent and builds upon Council's public domain master plan.

Furthermore, a HPAA scheme is proposed around the station precinct along Wardell Road, Dudley Street and Bedford Crescent with relevant signage to inform and remind drivers of the 40 km/h to speed limit within the precinct. Traffic calming measures and new pedestrian facilities proposed by the masterplan supplement the 40 km/h signage to create a self-enforcing speed limit environment and to further improve the safety of pedestrians (refer to **Attachment 3**).

FINANCIAL IMPLICATIONS

The project has been listed in Councils Capital Works Program and funding has been committed for stage A in the 2020/21 financial year budget.

PUBLIC CONSULTATION

At its meeting on 13 August 2019 Council considered community feedback and adopted the Master Plan for Dulwich Hill Station Precinct. The Master plan provides high level design for the future of the precinct. The current preliminary detailed design has been displayed for information on Councils ‘Your Say’ webpage as a project update.

ATTACHMENTS

1.⇩ Traffic and Transport Assessment
2.⇩ Signage Plan
3.⇩ Proposed HPAA zone and indicative location of signage

Traffic and Transport Assessment

Dulwich Hill Station Precinct Public Domain Improvements

80220023

Prepared for
Inner West Council

24 June 2020

Cardno

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Job Reference	80220023
Date	24 June 2020
Version Number	2

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1	1/05/2020	Issued for Council Comments	Sabal Sharma/Lukas Labutis	Ivo Pais
2	24/06/2020	Updates Based on Council Comments	Sabal Sharma	Lukas Labutis

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Appendices

Tables

Figures

1 Introduction

1.1 Background

Cardno has been commissioned by Inner West Council (Council) for a traffic and transport assessment for the detailed design of the Dulwich Hill Station Precinct Public Domain Improvements.

1.2 Objectives

The purpose of the study is to develop a traffic and transport assessment to inform the detailed design of the Dulwich Hill Station Precinct Public Domain Improvements. There are several key components to the preparation of the traffic and transport assessment. These include:

- Review background reports and strategies and summarise the findings;
- Review and map the available crashes in the study area involving pedestrians and vehicles;
- Assess the proposed active transport amendments within the study area;
- Review the wayfinding signage plans for the Dulwich Hill station;
- Undertake and review the traffic survey of the local traffic network including pedestrian volumes;
- Assess the performance of the existing local traffic network;
- Undertake a traffic signal warrant assessment for the proposed signalised intersection at Wardell Road / Dudley Street;
- Identify High Pedestrian Activity Areas appropriate for 40 km/h speed zones and determine appropriate signage; and
- Prepare a traffic management plan per the Traffic Management Plan (TMP) guidelines.

1.3 Study area

1.3.1 Dulwich Hill Station Precinct

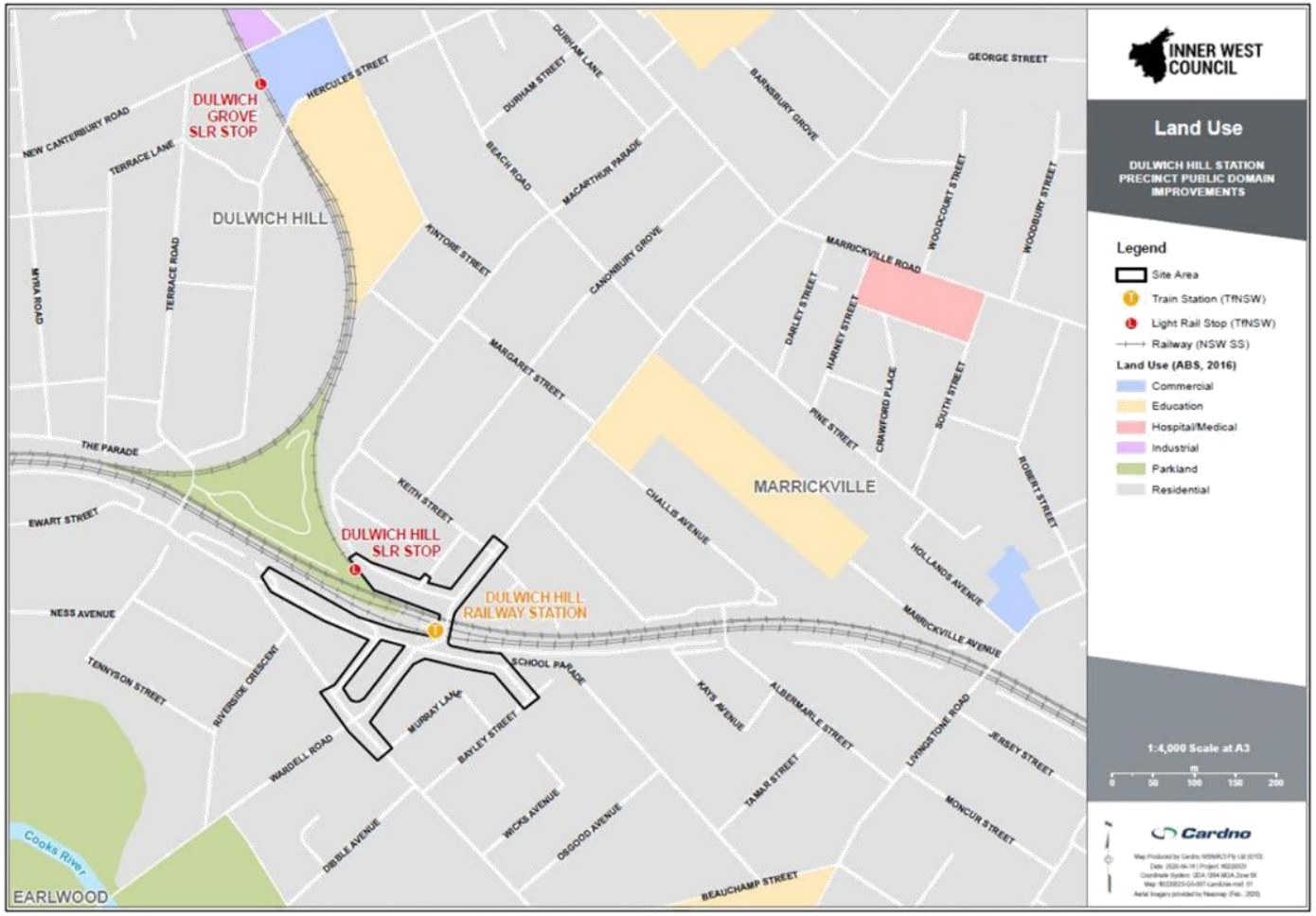
The Dulwich Hill Station Precinct (DHSP) is located in the inner west Sydney suburb of Dulwich Hill. The site area is located approximately 8km southwest from the Sydney CBD. The precinct is located close to the southern boundary of the Inner West LGA.

The DHSP site area includes:

- Wardell Road from Ewart Street to the north side of the Keith Street / Wilga Avenue intersection;
- Dudley Street;
- Ewart Street between Ewart Lane and Murray Lane; and
- Bedford Crescent.

Figure 1-1 illustrates the study area relative to the surrounding road network and different land uses around the study area. The study area consists of primarily residential along with some commercial/business area along Wardell Road between Ewart Street and Keith Street.

Figure 1-1 Study Area



1.3.2 Staging Plan

The detailed design of the Dulwich Hill Station Precinct Public Domain Improvements consists of the following stages described in **Table 1-1** and shown in **Figure 1-2** below.

Figure 1-2 Staging plan

Table 1-1 Staging plan

Stage	Part
A	Part 2. Dudley Street both sides
	Part 4. Raised signalised intersection for improved pedestrian movements
B	Part 3. Raised entry thresholds
C	Part 5a. Wardell Rd from Wilga Ave to Dudley St and to Dudley St
	Part 5a. Wardell Rd from Dudley St to Ewart Street
D	Part 5b. Paving, Kerb & Gutter, North side Ewart Street, Murray Lane to Wardell Rd
	Part 5b. Paving, Kerb & Gutter, North side Ewart Street, Ewart Lane to Wardell Rd
	Part 7. Ewart Lane

This assessment is only for Stage A of the Master Plan. This includes the intersection at Wardell Road / Dudley Street and both sides of Dudley Street,

2 Background review

2.1 Wayfinding guidelines

2.1.1 Wayfinding Planning Guide

Transport for NSW (TfNSW) has developed a comprehensive system of signage and wayfinding practices for different public transport modes. The *Wayfinding Planning Guide* (TfNSW, 2018) (the Guide) details the principles for wayfinding for stations and interchanges as well as the Sydney Metro product.

The Guide covers aspects such as suitability of signage size, positioning, visibility, and legibility. It justifies why certain standards are adopted and upheld, e.g. customers can miss signs that a poorly sized or placed at inappropriate heights, therefore size and height is best considered from the perspective of the average customer's own height and likely proximity, as they move along key corridors.

The Guide outlines wayfinding requirements for customers during the following stages and zones:

- Connect and welcome;
- Entry;
- Orientation and circulation;
- Platforms; and
- Exit.

The Guide also outlines various options for digital wayfinding signage and suggests how they could be used across the Sydney Metro network. Digital wayfinding signage can enhance directions to public transport services and provide streamlined information to aid customers in their decision-making.

2.1.2 City of Sydney Wayfinding Strategy

The aim of the *City of Sydney (CoS) Wayfinding Strategy* (City of Sydney, 2012) is to "provide a clear and coordinated framework to deliver consistent wayfinding components and information to direct people to their desired destinations, and to encourage people to walk with comfort and confidence".

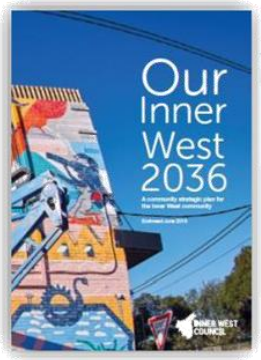
The strategy provides a strategic framework to inform future design development and implementation for pedestrian wayfinding in the CoS. This includes strategic directions, wayfinding system components, design development, signage information design and signage placement strategy.

As part of the development of the strategy, background research was undertaken and included test walk evaluations within the CoS, site evaluations and a benchmark review of best practice within Australia and worldwide. Many examples are provided for guidance and analysed to determine the effectiveness of wayfinding implementation.

The principles from the strategy have been adopted for this study to help provide a consistent, legible wayfinding system throughout the Dulwich Hill Station precinct.

2.2 Inner West Council documents

2.2.1 Community Strategic Plan



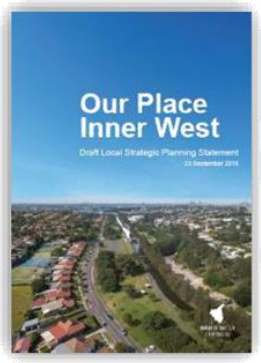
The *Community Strategic Plan* (Inner West Council, 2018) (CSP) was produced by Council with community input to identify a vision of how the Inner West Council might best evolve to satisfy community needs over the next two decades. The plan implementation will involve collaboration with key stakeholders and Council has committed to reporting back to the community every four years on progress.

This study can help to give effect to the CSP, particularly in regards to the strategic direction of unique, liveable and networked neighbourhoods. The relevant outcomes, strategies and indicators of this strategic direction are shown in **Table 2-1**.

Table 2-1 CSP outcomes and strategies for unique, liveable and networked neighbourhoods

No.	Outcome	Strategies	Indicators
2.3	Public spaces are high-quality, welcoming and enjoyable places, seamlessly connected with their surroundings.	▪ Plan and deliver public spaces that fulfil and support diverse community needs and life ▪ Ensure private spaces and developments contribute positively to their surrounding public spaces	▪ Community satisfaction with managing development in the area. ▪ Community satisfaction with long-term planning for Council area. ▪ Satisfaction with safety of public spaces. ▪ Satisfaction with access to public transport. ▪ People who travel to work by public transport. ▪ Satisfaction with Cycleways. ▪ Satisfaction with maintaining footpaths. ▪ Community satisfaction with management of parking.
2.5	Public transport is reliable, accessible, connected and enjoyable.	▪ Advocate for improved public transport services to, through and around Inner West. ▪ Advocate for, and provide, transport infrastructure that aligns to population growth.	
2.6	People are walking, cycling and moving around Inner West with ease.	▪ Deliver integrated networks and infrastructure for transport and active travel. ▪ Pursue innovation in planning and providing new transport options ▪ Ensure transport infrastructure is safe, connected and well maintained	

2.2.2 Local Strategic Planning Statement



The *Local Strategic Planning Statement* (Inner West Council, 2019) (LSPS) provides a land use planning framework for the Local Government Area (LGA) to achieve the vision set for the LGA in 2036:

> *"a place of creative, connected, sustainable and productive neighbourhoods as vibrant, innovative and diverse as our community".*

The LSPS presents six strategic themes:

1. An ecologically sustainable Inner West;
2. Unique, liveable, networked neighbourhoods;
3. Sustainable transport;
4. Creative communities and a strong economy;
5. Caring, happy, healthy communities; and
6. Progressive local leadership.

The transport and public domain related planning priorities and objectives of the LSPS are shown in **Table 2-2**.

Table 2-2 LSPS relevant planning priorities and objectives

No.	Planning priority	Objectives
7	Provide for a rich diversity of functional, safe and enjoyable urban spaces connected with and enhanced by their surroundings	▪ Provide urban spaces that support community needs and creative places
8	Provide improved and accessible sustainable transport infrastructure	▪ Safe, user-friendly active transport infrastructure forms an integral part of Inner West and supports all types of trips ▪ Public transport usage substantially increases because it serves all users and gets people where they need to go ▪ Shared transport forms an integral part of Inner West's transport network, reducing private vehicle ownership ▪ Inner West has an adaptive and responsive parking framework for private vehicles that responds to function, location and access to alternative transport ▪ Inner West embraces emerging transport technology that reduces our carbon footprint and improves travel information and services ▪ Land uses support freight, servicing and delivery corridors and reduce conflict between different land users ▪ A sustainable freight, delivery and service network that benefits Inner West
11	Provide accessible facilities and spaces that support active, healthy communities	▪ The community has access to a wide range of accessible high quality open spaces, community facilities, recreational and cultural spaces ▪ A Blue/Green Grid promotes active and healthy lifestyles

The LSPS also designates the area immediately south of Dulwich Hill Station as a local centre / urban hub. Future green links passing near or through Dulwich Hill Station are also shown connecting north-south along the anticipated GreenWay and east-west following the T3 Bankstown rail line.

2.2.3 Draft Integrated Transport Strategy

The Draft Integrated Transport Strategy reviews the previous strategies and plans from the three councils merged into Inner West Council (Ashfield, Leichhardt and Marrickville), the existing and future transport networks, and the travel demand and behaviour to present a multi-modal transport strategy for the entire LGA.

A vision was developed through stakeholder consultation as follows:

> *"Growing numbers of Inner West residents, workers and visitors prefer to walk, cycle and use public transport because it is safe, convenient, enjoyable and healthy. Everyone is connected to their community and local services, and can access educational, retail, cultural and recreational districts, as well as jobs and services across local and regional areas. The transport network enhances local economic vitality, with freight and goods movements are separated from people by space and/ or time".*

A modal hierarchy was developed and includes walking as the highest priority, followed by cycling, public transport, delivery services and freight, and private vehicles and taxis.

Core principles were developed based on the review of council strategies and plans, the vision and modal hierarchy and included the following:

- Plan land use to support active and sustainable transport for reduced travel times and distances;
- Improve safety, personal security, and provide equitable access for full community participation;
- Prioritise people in centres and main streets and revitalise key roads;
- Progress active transport infrastructure, services and programs;
- Encourage shift to public transport and shared transport from private vehicles by providing attractive alternatives, and reduce the impact of congestion and parking;
- Manage an efficient freight and goods delivery network to enhance Inner West liveability; and

> Harness technology to improve information, safety, travel choices and environmental outcomes.

The strategy identified potential core pedestrian and cycling networks, which align with the north-south and east-west cycling links near Dulwich Hill Station presented in the LSPS and show Wardell Road as a key pedestrian link.

2.2.4 Marrickville Bicycle Strategy (2007)

Marrickville's Bicycle Strategy sought to increase the appeal of cycling within the former Marrickville LGA, proposing a $7.2 million network of designated corridors. A supporting component is a gradual roll-out scheme of bicycle parking and end-of-trip facilities. The Bicycle Infrastructure Development Strategy for Marrickville, part of this report, was guided by four clear actions:

> Develop a bicycle network plan;

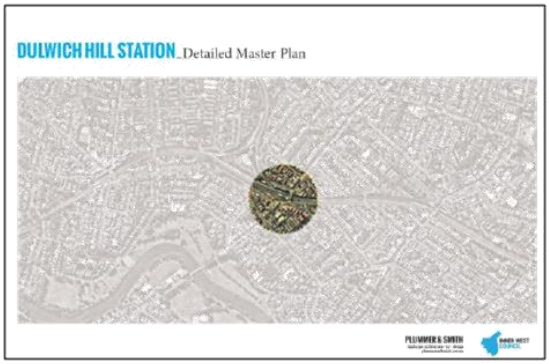
> Develop a bicycle parking plan;

> Integrate the cycling network with public transport; and

> Create bicycle friendly streets and neighbourhoods.

Although dated, the principles of the Bicycle Strategy have been considered in this study to inform the provision of cycling infrastructure.

2.2.5 Dulwich Hill Station Detailed Master Plan



The Dulwich Hill Station Public Domain Master Plan provides Inner West Council and the Dulwich Hill community with a ten-year plan to transform the streets and public spaces around the station into a pedestrian-oriented village. Plummer and Smith were engaged by Inner West Council in 2017 to undertake a detailed master plan for the public domain around the Dulwich Hill Station. A significant aim of the master plan was to develop a pedestrian-oriented village centre around Dulwich Hill Station. Improvements to the public domain help provide an environment that fosters spaces for the community to live their life including recreation, social activity and economic stimulus through encouraging pedestrians to linger and spend more money at local businesses as they pass through the village.

The Master Plan document comprises the following sections:

> Project context: this section provides an introduction and background to the project including existing Council policies supported by the plan, project objects and project methodology;

> Site Analysis: the physical characteristics of the site area and its context are described with analysis in plan, text, and images. The focus is on the physical site, but it also includes site and cultural history, sense of place and meaning to the community;

> Design Strategies: each of the proposed design strategies that help create a pedestrian-oriented village centre are described in plan, text, and images to articulate the desired outcome for the precinct;

> The Detailed Master Plan: the master plan compiled all the strategies to spatially illustrate the designed outcomes, supported by text and imagery; and

> Project Costs and Implementation: This section outlines the probable costs for the project and articulates a potential staging and implantation strategy. The master plan aims to deliver a pedestrian-oriented village centre around Dulwich Hill Station. The strategies to deliver this aim include:

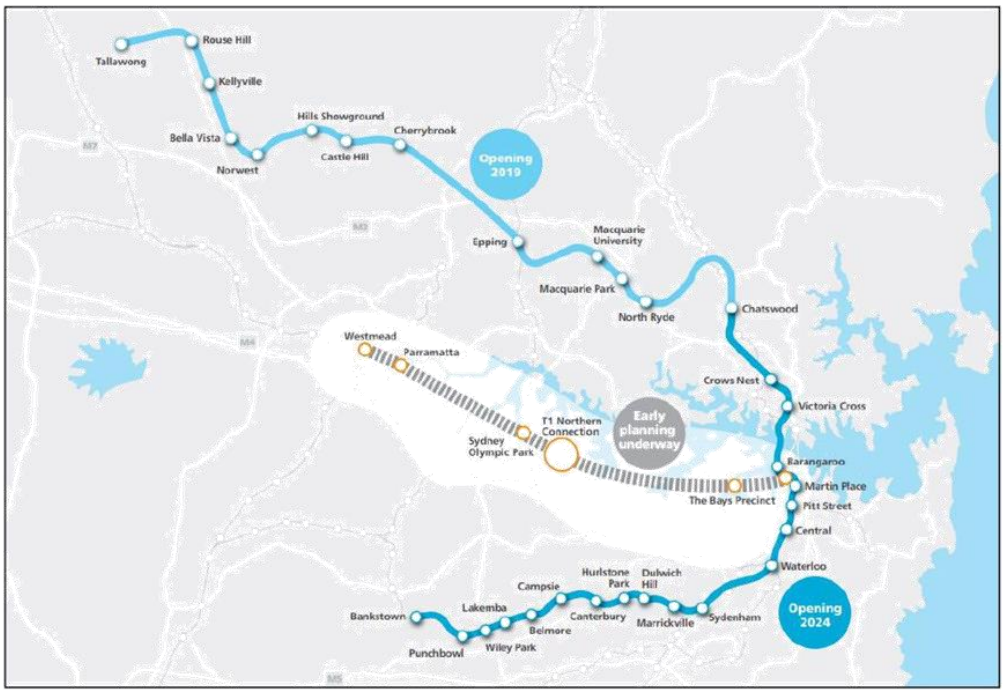
  - Provide raised threshold treatments to the entries along Wardell Road at Wilga Avenue and Ewart Street designed to slow traffic and define the village centre;
  - Provide pedestrian priority and connection across Bedford Crescent;
  - Install new pavement treatments to delineate a shared pedestrian zone in Ewart Lane.

2.3 NSW Government

2.3.1 Sydney Metro City & Southwest (Sydney Metro)

The New South Wales Government is committed to delivering the Sydenham to Bankstown City Metro and Southwest with a planned stop at Dulwich Hill Station.

Sydney Metro City & Southwest will operate fully segregated from the existing Sydney Trains railway between Sydenham and Bankstown. The State Government's proposed rail upgrades will provide an increased frequency of trains and faster access to the city and northern rail lines along with upgraded equal access at Dulwich Hill Station.



2.3.2 Sydenham to Bankstown Urban Renewal Corridor Strategy

Following the release of the revised draft Sydenham to Bankstown Urban Renewal Corridor Strategy in 2017, the community has provided clear and important feedback that it wants community values and place character at the heart of the planning process. The Department of Planning, Industry, and Environment (DPIE) has listened and is responding with a new approach through which the community's aspirations and Councils' vision underpin planning of the area.

DPIE with Inner West and Canterbury Bankstown Councils will develop a high-level, principle-based planning strategy for the corridor, which will address the community's aspirations and Councils' vision for their areas. The strategy will guide open space, transport, and community infrastructure investments as well as appropriate development in the corridor. It will contain a set of planning principles to ensure the local character is protected and enriched, and that the delivery of new homes, jobs, and services are well coordinated.

3 Crash data review

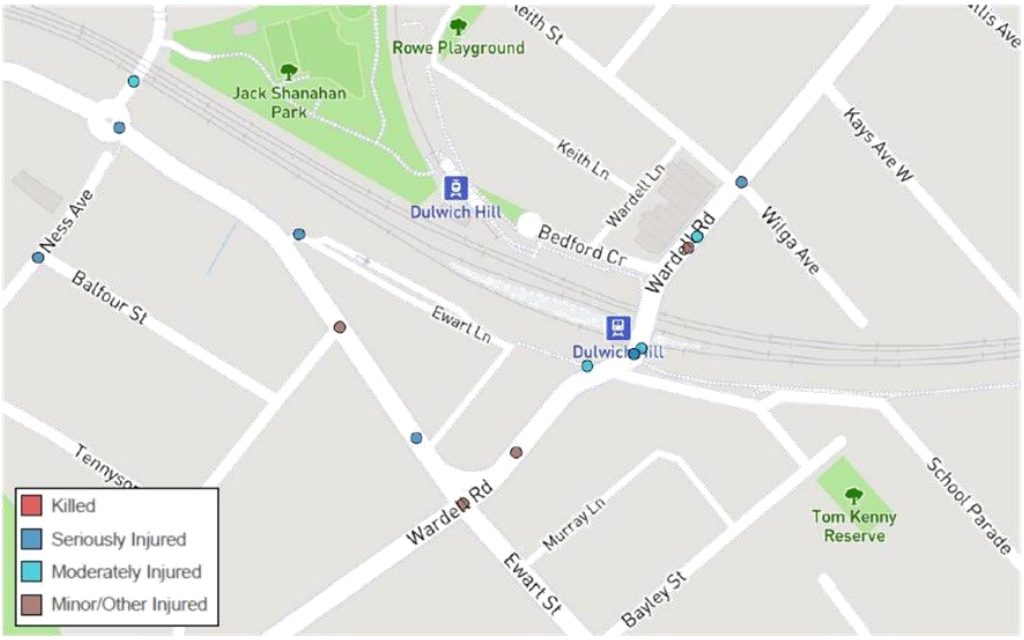
Crash data is reliant on incidents being reported to the NSW Police, either through police attendance at a crash scene or reporting by involved parties. It is generally understood that minor collisions without injuries are not reported. As such, analytics of all crashes is not possible. Notwithstanding, crash data does include more serious accidents. This allows analytics to identify trends in accidents and location issues/ crash clusters.

Five-year crash data history from TfNSW (the Centre for Road Safety) was analysed from 2014 to 2018 (inclusive).

3.1 Crash locations

The locations of crashes in the vicinity of Dulwich Hill Station are shown in **Figure 3-1**.

Figure 3-1 Crashes in the vicinity of Dulwich Hill Station



Source: Crash and casualty statistics, TfNSW via https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/nsw.html?tabnsw=7, viewed 24/03/2020

All crashes occurred along Wardell Road and Ewart Street, being the key north-south and east-west movement corridors within the vicinity of the station respectively. The key crash locations included:

- The pedestrian crossing at Dulwich Hill Station;
- Wardell Road between Bedford Crescent and Wilga Avenue; and
- Various intersections on Ewart Street with Wardell Road and side roads.

3.2 Crash severity and type

Overall, there were 16 crashes within proximity of Dulwich Hill Station. A summary of crashes by severity is shown in **Table 3-1** and by crash type in **Table 3-1**.

Table 3-1 Crash summary by severity

Crash severity	2014	2015	2016	2017	2018	Total
Non-casualty (tow-away)	1	2			1	4
Minor/other injury		1	3			4
Moderate injury		1	1	2		4
Serious injury	1	1	1	1		4
Total	**2**	**5**	**5**	**3**	**1**	**16**

Source: Crash and casualty statistics, TfNSW via https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tablga=4, viewed 24/03/2020

Table 3-2 Crash Summary by Road User Movement (RUM) code

RUM code and description	2014	2015	2016	2017	2018	Total
0 - Ped nearside			1	1		2
1 - Ped emerging	1					1
2 - Ped far side			1	1		2
12 - Left far			1			1
30 - Rear end		1	1			2
35 - Lane change left		1				1
39 - Other same direction			1			1
59 - Other overtaking		1				1
63 - Vehicle door		1				1
71 - Off rd left => obj					1	1
83 - Off rt/rt bnd=>obj		1				1
88 - Out of cont on bend				1		1
93 - Pkd vehicle runaway=>obj	1					1
Total	**2**	**5**	**5**	**3**	**1**	**16**

Source: Crash and casualty statistics, TfNSW via https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tablga=4, viewed 24/03/2020

There were no fatal crashes in the in the vicinity of Dulwich Hill Station in the reporting period, and 4 resulting in serious injury.

3.3 Crashes by road user

The crashes by road user for each year are shown in **Table 3-3**. The crashes are apportioned according to vulnerability and special vehicle types, for example, if a crash involved a motorcyclist and a truck, it is determined to be a motorcyclist crash. If a crash involved a car and pedestrian, it is determined to be a pedestrian crash.

Table 3-3 Crash involvement by road user

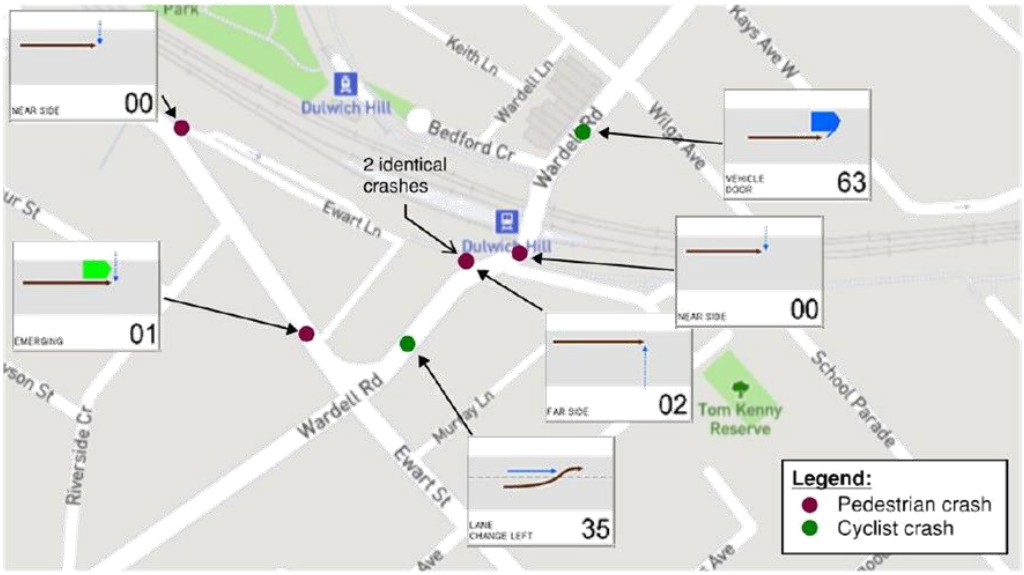
Road user	2014	2015	2016	2017	2018	Total
Pedestrian	1		2	2		5
Cyclist		2				2
Motorcycle			1	1		2
Car		2	2		1	5
Articulated truck	1	1				2
Total	**2**	**5**	**5**	**3**	**1**	**16**

Source: Crash data, Transport for NSW, supplied 2019

In total there were five pedestrian crashes and two cyclist crashes, comprising 31% and 13% of total crashes respectively. In combination this indicates that 44% of crashes involve vulnerable active transport modes.

The locations of the pedestrian and cyclist crashes, as well as the associated Road User Movement (RUM) codes, are shown in **Figure 3-2**.

Figure 3-2 Pedestrian and cyclist crashes with RUM codes



Source: Crash and casualty statistics, TfNSW via https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/nsw.html?tabnsw=7, viewed 24/03/2020

The data indicates that the most reported pedestrian and cyclist crashes occurred along Wardell Road. All of the pedestrian crashes along Wardell Road were pedestrian near side or far side crashes. The introduction of traffic management measures and a reduced speed limit may help to mitigate this, particularly at the intersection of Wardell Road and Dudley Street where a cluster of three pedestrian crashes were observed.

The two reported cyclist crashes in the study area were both observed along Wardell Road. One involved a collision with a vehicle door of a parked car, and the other involved a collision with a car changing lanes (from the travel lane to the parking lane in front of the retail tenancies). A contributing factor to these may have been the lack of a formal cycleway along Wardell Road. Given the mixed traffic arrangements for cyclists and vehicles, introduction of a reduced speed limit and raised threshold treatments to increase driver awareness of vulnerable road users may help to mitigate these safety issues.

3.4 Lighting conditions

The proportion of crashes under each lighting condition were the following:

- 56% of all crashes occurred in daylight;
- 25% of crashes occurred in darkness; and
- 19% of crashes occurred at dusk.

Overall the majority of crashes occurred in daylight conditions.

4 Active transport assessment

This section provides the outcomes of the active transport assessment of the proposed upgrades. At this stage only Stage A of the Master Plan is considered, which includes the intersection at Wardell Road / Dudley Street and both sides of Dudley Street. However, a review of the greater networks and overview of all Master Plan upgrades is detailed to provide context and demonstrate how the proposed upgrades align with the overarching vision for the precinct.

4.1 Pedestrian network

4.1.1 Network and destinations

4.1.1.1 Key destinations

Key destinations within the vicinity of the station generating or attracting pedestrian trips to / from the station include the following:

- The Dulwich Hill light rail stop;
- Bus stops on Dudley Street;
- The kiss and ride / taxi bays on Bedford Crescent;
- The commuter car park south-west of the station;
- Jack Shanahan Reserve;
- Tom Kenny Reserve;
- The Cooks River;
- The GreenWay;
- Marrickville Library;
- Dulwich Hill Public School;
- St Maroun's College;
- Marrickville West Primary School;
- Wardell Road;
- Dulwich Hill Village; and
- Maronite Sisters of the Holy Family Village (Maronite Sisters Village).

These key destinations are mapped together with the typical walking catchment of the station in **Figure 4-1**.

4.1.1.2 Existing network and infrastructure

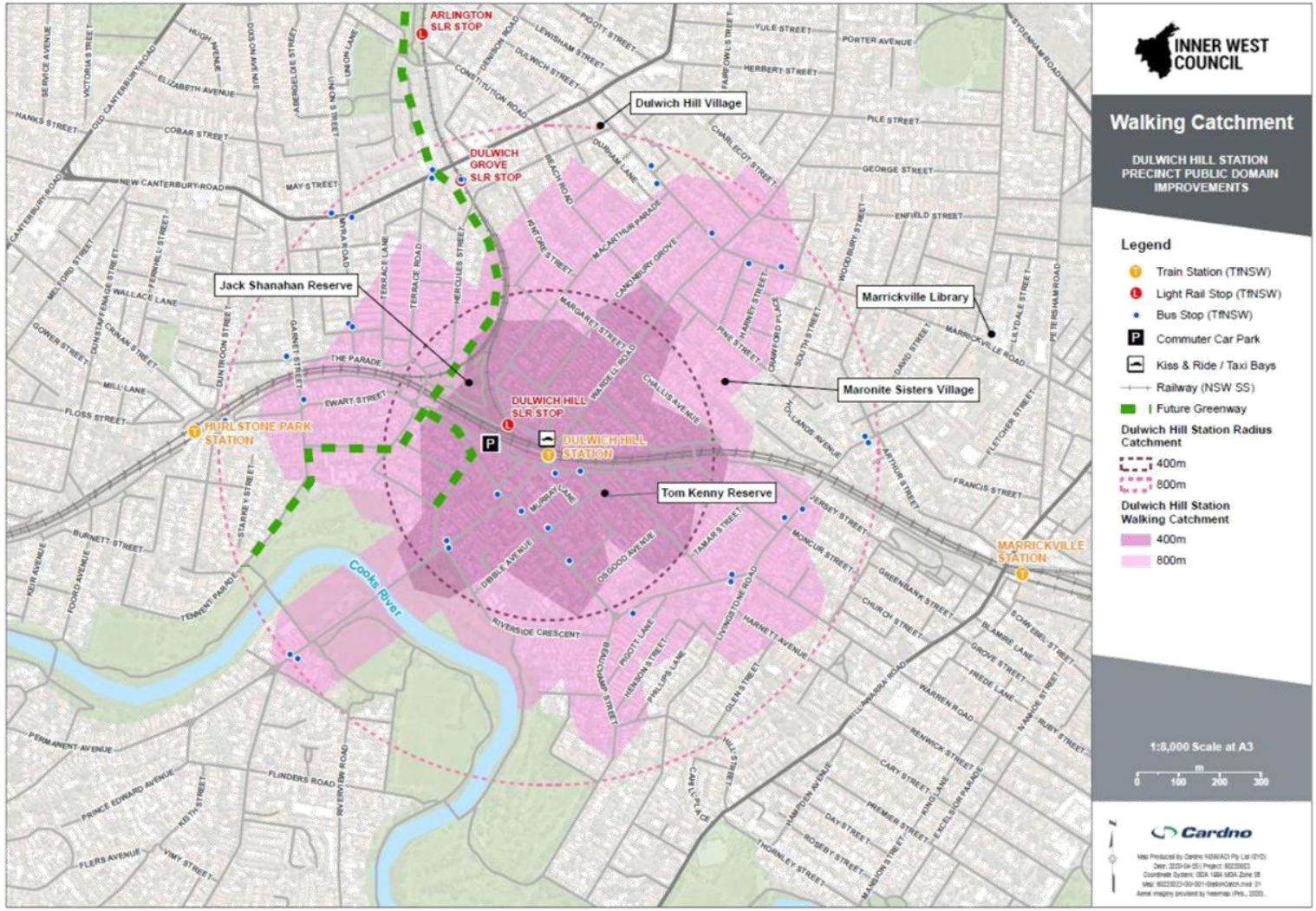
The Dulwich Hill Station precinct has an established footpath network with footpaths on all roads except Ewart Lane. The footpaths are generally wide along Wardell Road, however there is a pinch point immediately adjacent to the existing station entrance due to the constrained bridge geometry and pedestrian fencing. There are also some other minor pinch points along Wardell Road due to street furniture and outdoor dining.

A marked pedestrian crossing is provided immediately south of the station to facilitate pedestrian movement across Wardell Road. The intersection of Wardell Road and Ewart Street provides signalised crossings on all four approaches, accommodating movement in all directions to serve access to the station, retail strip along Wardell Road and surrounding residential areas.

Pedestrian refuges are provided on side roads at the connections to Wardell Road, including Dudley Street, Keith Street and Wilga Avenue. Another pedestrian refuge is provided on Wardell Road at the intersection with Keith Street and Wilga Avenue. No other crossings are provided on Wardell Road between the station and Keith Street / Wilga Avenue, which may encourage informal crossing near the station.

Some of the public domain has recently been upgraded by developers, including the southern side of Dudley Street adjacent to 2 Dudley Street, and the corner of Ewart Street / Wardell Road adjacent to 260-264 Wardell Road. These upgrades resulted in renewed pavement, street furniture and landscaping to improve public amenity.

Figure 4-1 Dulwich Hill Station walking catchment and key destinations



4.1.1.3 *Planned future works*

Significant changes to the pedestrian network will be implemented by Sydney Metro through the provision of an additional station concourse connecting Bedford Crescent to Ewart Lane and provision of a pedestrian plaza immediately south of the station. The concourse connection will be DDA-compliant and will allow paid pedestrian access (via the use of an Opal card or other linked card) across the rail line and to the train station and light rail stop. The new concourse is expected to become the main station entrance and will help to link the station to the interchange facilities.

The new concourse will also help to alleviate the footpath pinch point on the existing bridge and potential conflict between pedestrians and vehicles. Ramp or lift access will also be provided to accommodate a DDA-compliant route to the station from the south.

The pedestrian plaza will provide a new, high quality pedestrian space accommodating access to the station and improving the public domain. This will include works to extend the kerbline on Wardell Road and remove the disused bus stop.

The future GreenWay will also provide an enhanced shared path network, and is detailed further in **Section 4.2.1.3**.

4.1.1.4 *Summary of existing and planned pedestrian infrastructure*

The existing and planned pedestrian infrastructure within the study area is shown in **Figure 4-2**.

4.1.2 Pedestrian experience and key issues

The pedestrian experience throughout the Dulwich Hill Station precinct is mixed and the condition of the public domain varies. Some areas have poor amenity due to inconsistent or low quality pavements, excessive street furniture, vandalism and potential Crime Prevention Through Environmental Design (CPTED) issues while other areas are new and inviting due to recent development.

Retail tenancies provide activation along Wardell Road, particularly south of the station. Consistent pedestrian and vehicle movement along Wardell Road and Ewart Street provides passive surveillance in key areas, although some local roads and connections such as the link between Bedford Crescent and Keith Street (adjacent to the light rail line) have poor sightlines and possible security issues.

Key issues in the pedestrian environment include the following:

- Inconsistent and poor quality footpath pavements due to reinstatement works and lack of maintenance;
- Clutter on footpaths due to redundant signage, poles, fencing and excessive street furniture;
- Pinch points due to narrow footpaths or clutter on the footpath;
- Poor sightlines to wayfinding signage and transport facilities;
- Lack of a lift/ step free or DDA access to the train station;
- Steep grades to the station from Wardell Road to the south;
- Non DDA-compliant kerb ramps;
- Lack of a pedestrian crossing of Wardell Road north of the station;
- Potential safety issues and vehicle-pedestrian conflict along Wardell Road, particularly at the bridge across the rail line and crossing north of Dudley Street;
- CPTED concerns on links such as the connection from Bedford Crescent to Keith Street;
- Poor pedestrian amenity and lack of a footpath on Ewart Lane; and
- Long and indirect crossing via the refuge on Dudley Street at Wardell Road.

Some key pedestrian issues and features are shown in **Figure 4-3**.

Figure 4-2 Existing and planned pedestrian infrastructure

Figure 4-3 Key pedestrian issues and features

Potential CPTED issues at link between Bedford Crescent & Keith Street including sightlines, passive surveillance and lack of escape options

Constrained footpath on Wardell Road due to street furniture and landscaping

New bus stop, footpath and cycleway on northern side of Dudley Street

Poor amenity due to vandalism, construction hoarding and pedestrian fencing focused on accommodating vehicles

Poor amenity, pavement quality and footpath clutter on Ewart Street

Poor amenity, pavement quality and lack of footpath on Ewart Lane

4.2 Cycling network

4.2.1 Network and destinations

4.2.1.1 Key destinations

Key destinations within the vicinity of the station generating or attracting cycling trips to / from the station are similar to that of pedestrians but also include links to the Cooks River cycleway and Marrickville Station. These connections and the areas served are further detailed in the following sections.

4.2.1.2 Existing network and infrastructure

A separated bidirectional cycleway was recently constructed on the northern side of Dudley Street and leads towards Marrickville Station. This route is inconsistent, requiring cyclists to dismount east of School Parade and transition to on-road cycling routes further to the east. The route passes through low-traffic local streets until it reaches Illawarra Road and connects to Marrickville Station. The existing marked pedestrian crossing on Wardell Road also requires cyclists to dismount from this route to cross the bridge to access Dulwich Hill Station, and may result in potential conflict if cyclists choose to continue cycling through.

Ewart Street is designated as a cycle route in the *Staying Active in Marrickville Map* published on Inner West Council's website, however, it is a mixed traffic route, a 50 kilometre per hour speed limit with infrastructure is limited to bicycle stencils located in the parked vehicle door opening zone east of Wardell Road.

Bike parking is provided in numerous places in the precinct in the form of bike racks, including the following locations:

- The southern side of Bedford Crescent near Wardell Road (share bikes only – 6 spaces);
- The end of Bedford Crescent (10 spaces);
- Immediately south of the station on the western side of Wardell Road (8 spaces);
- The northern side of Dudley Street near Wardell Road adjacent to the cycleway (4 spaces);
- The northern side of Dudley Street adjacent to the bus stop (6 spaces); and
- Various poles along Wardell Road, mostly south of the station (5 spaces).

The bike parking was observed to be moderately utilised, particularly south of the station. The share bike parking also appeared to be utilised by private bikes instead of share bikes.

No other cycling infrastructure is present in the study area, however the Cooks River cycleway is located further to the south. This is predominantly a recreational cycling route that follows the Cooks River and provides access from Dulwich Hill to areas to the east such as Sydney Airport and Wolli Creek, and areas to the west such as Canterbury and suburbs towards Strathfield.

4.2.1.3 Planned future works

The future GreenWay will be a regionally significant active transport route and ecological corridor linking the Cooks River in Earlwood to the Parramatta River at Iron Cove. It will consist of a 5.5 kilometre long shared path, primarily for recreation, generally following the alignment of Hawthorne Canal. It will link the established Bay Run shared path around Iron Cove to the Cooks River shared path. The GreenWay will also provide a key north-south connection linking Dulwich Hill to the Cooks River and areas to the north including Haberfield and Leichhardt.

The works will include new and upgraded shared paths and crossings, and renewal and improvements to the natural environment along the corridor.

The GreenWay will be a short distance from Dulwich Hill Station, passing across Ewart Street from Terrace Road to Ness Avenue, and could be accessible via Ewart Lane and Ewart Street.

The draft Inner West Council Integrated Transport Strategy also indicates a proposed route from School Parade east towards Marrickville Station, and from Dulwich Hill Station west towards the future GreenWay. This would help to provide a continuous east-west cycling route.

4.2.1.4 Summary of existing and planned cycling infrastructure

The existing and planned pedestrian infrastructure within the study area is shown in **Figure 4-4**.

Figure 4-4 Existing and planned cycling infrastructure

4.2.2 Experience and key issues

The cycling experience throughout the Dulwich Hill Station precinct is mixed due to inconsistent and varied infrastructure. Cycling to / from the east is a safe and a comfortable experience along Dudley Street due to the new separated cycleway. However, the connection points are inconvenient and potentially unsafe – the marked pedestrian crossing immediately to the west of the cycleway requires cyclists to dismount, and may result in conflict if a cyclist approaches at high speed. The connection to the east also requires cyclists to dismount to join a narrow footpath.

The cycling experience on other routes is poor since cyclists are required to mix with vehicle traffic and there is limited infrastructure to support on-road cycling. Grades on Wardell Road approaching the station are steep and may result in safety issues for cyclists travelling northbound. Traffic volumes are significant along Wardell Road and Ewart Street, both with posted 50 kilometre per hour limits, which may result in safety issues and discourage many cyclists from using the on-road environment.

Key issues in the cycling environment include the following:

- A lack of cycling infrastructure provided;
- Inconsistent cycling infrastructure;
- Lack of connectivity to other cycling routes and key destinations;
- Potentially unsafe and inconvenient connection points; and
- Poor sightlines to cyclists on Dudley Street.

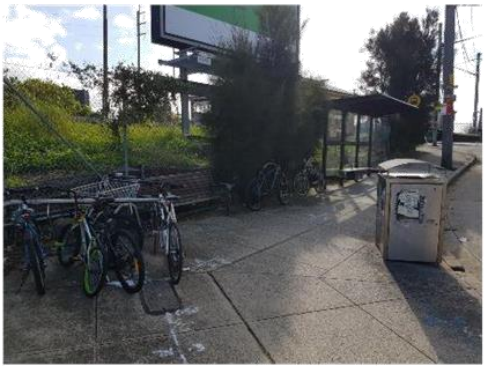
Some key cycling issues and features are shown in **Figure 4-5**.

Figure 4-5 Key cycling issues and features

New separated bi-directional cycleway along Dudley Street

Poor sightlines to cyclist from Dudley Street approaching the pedestrian crossing on Wardell Road

Connection from Dudley Street cycleway to the east, forcing cyclists to dismount onto a narrow footpath



Highly utilised bike parking on the southern side of the station, with poor amenity.

Share bike parking on Bedford Crescent, appearing to be utilised by private bikes

Bike parking with spare capacity further west on Bedford Crescent

4.3 Station precinct public domain active transport improvements

The proposed upgrades to the Dulwich Hill Station precinct public domain will transform the public spaces surrounding the station into a pedestrian oriented village. Many of the upgrades were developed to improve pedestrian and cyclist safety and efficiency throughout the precinct, and facilitate access to and from the station.

The proposed improvements impacting active transport as part of the overall Master Plan for the Dulwich Hill Station Precinct include the following:

- Raised entry thresholds at:
  - Wardell Road north of Keith Street (designed to accommodate buses);
  - Bedford Crescent at Wardell Road; and
  - The intersection of Wardell Road / Ewart Street (designed to accommodate buses);
- A raised, signalised intersection at Wardell Road / Dudley Street;
- New footpath treatments along the southern side of Dudley Street;
- A kerb extension on the southern side of Dudley Street at the intersection with Wardell Road;
- Resurfacing of Ewart Lane (south of the station) and conversion to a shared zone;
- A kerb extension on the north corner of the Wardell Road / Ewart Street intersection; and
- Footpath widening on the western side of Wardell Road along the bridge (via timber deck extension and minor relocation of the station building).

The proposed improvements in the context of the existing and planned active transport infrastructure are shown in **Figure 4-6**.

The upgrades will improve safety and efficiency of pedestrian and cycling movement in various ways. The raised entry thresholds will signify to vehicles the change in environment and start of a pedestrian-oriented village, and will reduce vehicle travel speeds. Kerb extensions will also narrow road geometry to help reduce vehicle speeds and provide additional footpath space for pedestrians to circulate and queue. The additional footpath space can also be utilised for outdoor dining and street furniture for improved amenity.

The raised, signalised intersection at Wardell Road / Dudley Street will provide additional crossings for pedestrians and cyclists, and will include cycle lanterns to accommodate a continuous cycle route from Dudley Street towards Ewart Lane. This will improve safety compared to the existing pedestrian crossing and decrease the potential for conflict between pedestrians, cyclists and vehicles.

The renewal of Ewart Lane will improve a key link to the new station concourse constructed by Sydney Metro, with increased safety due to the implementation of a shared zone. This and other public domain works will refurbish footpath and road pavements, providing consistent and high quality materials to enhance the public space and revitalise zones for people.

Figure 4-6 Proposed Dulwich Hill Station precinct improvements

For this study, only Stage A of the Master Plan is being assessed. This includes the intersection at Wardell Road / Dudley Street and both sides of Dudley Street, including the following items:

- Item 7 – a raised, signalised intersection at Wardell Road / Dudley Street;
- Item 11 – footpath treatments and tree plantings on the southern side of Dudley Street; and
- Item 12 – a kerb extension on the southern side of Dudley Street at the intersection with Wardell Road.

A summary of the active transport impacts of these proposed works and the pedestrian and cycling issues addressed are shown in **Table 4-1**.

Table 4-1 Active transport impacts of proposed Stage A precinct works

Item	Proposed upgrade	Active transport impacts	Issue(s) addressed
7	Raised signalised intersection at Wardell Road / Dudley Street	Improved pedestrian safety and connections	Lack of safe crossings of Wardell Road and Dudley Street
11	New in-road trees and footpath treatments on the southern side of Dudley Street	Improved pedestrian amenity	Pedestrian amenity
12	Kerb extension on the southern corner of the Wardell Road / Dudley Street intersection	Additional space for pedestrian circulation and queuing	Lack of footpath space for people to dwell, gather and dine, poor amenity

In particular, the raised, signalised intersection at Wardell Road / Dudley Street will help to address safety issues at the existing pedestrian crossing where crashes have been recorded, particularly as pedestrian movement increases with the implementation of the Sydney Metro upgrades. The intersection is proposed to be a scramble crossing to maximise space for pedestrian movement and allow pedestrians to cross in any direction at once.

Overall the upgrades align well with the existing and planned pedestrian and cycling networks, and are expected to improve the safety and efficiency of the station precinct.

5 Wayfinding site audit

A site audit was undertaken on the morning of 12 March 2020 to review the site area and existing wayfinding signage. The audit focused on existing signs within the study area, assessing the provision, legibility, destinations signed and general conditions of the pedestrian network.

To audit the site, 'wayfinding walks' were undertaken from the station to the immediate surrounds to understand the typical pedestrian journeys, experience and need for signage. The presence of existing signage was documented along these walks with key issues identified.

The results of the wayfinding walks and a summary of the key findings are provided in the following sections.

5.1 Wayfinding walks

5.1.1 Overview of the wayfinding walks

The following wayfinding walks were undertaken to cover the study area:

1. Dulwich Hill Station to Bedford Crescent and light rail stop;
2. Bedford Crescent to Keith Street;
3. Dulwich Hill Station to School Parade and Tom Kenny Reserve;
4. Dudley Street to Ewart Street; and
5. Wardell Road to Ewart Lane and commuter car park.

A map of the wayfinding walks is shown in **Figure 5-1**.

The key findings and pictures of site conditions and provided in the following sections.

Figure 5-1 Wayfinding walks undertaken

5.1.2 Wayfinding walk 1 – Dulwich Hill Station to Bedford Crescent and light rail stop

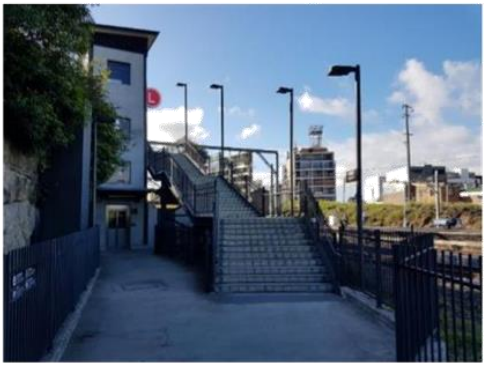
Location	Dulwich Hill Station exit
Observation	No visible signage – unclear which direction pedestrians should follow.

Location	Wardell Road facing north
Observation	Signage to interchange facilities obscured by poles. Interchange facilities themselves cannot be seen due to foliage.

Location	Wardell Road at Bedford Crescent
Observation	Signage to station & bus stops vandalised. Signage to light rail not visible from key angles.

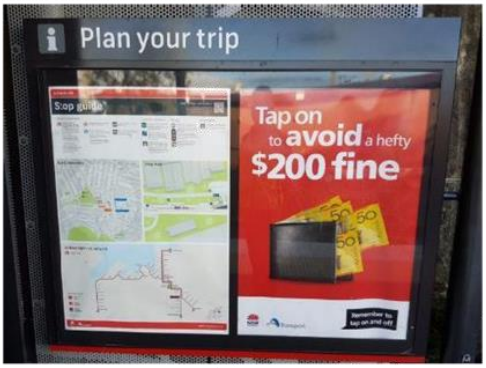
Location	Bedford Crescent facing west
Observation	Existing kiss and ride kerbside designation sign.

Location	Bedford Crescent adjacent to the light rail stop.
Observation	Light rail mode ID is clearly visible.



Location	Light rail stop.
Observation	Signage to the train station and buses is difficult to see due to the sign angle. The lift is clearly visible and does not require signage.

Location	Adjacent to the light rail stop.
Observation	Local area guide map and mode ID.



Location	At the light rail stop.
Observation	Stop guide map.

Location	Bedford Crescent at the light rail stop.
Observation	Signage to the train station and buses is available but can be difficult to see during the morning due to the location of the sun.

Location	End of Bedford Crescent.
Observation	No signage and unclear sightlines.

Location	West of Bedford Crescent.
Observation	Choice of paths without signage for guidance. Facilities obscured by foliage.

Location	Bedford Crescent facing east.
Observation	Light rail mode ID clearly visible.

Location	Bedford Crescent adjacent to the light rail.
Observation	Signage to the train station and buses difficult to see and legibility is obscured by foliage shadows.

Location	Corner of Wardell Road / Bedford Crescent.
Observation	Signage to the train station and buses obscured by foliage until immediately next to the sign.

5.1.3 Wayfinding walk 2 – Bedford Crescent to Keith Street

Location	Wardell Road north of Bedford Crescent.
Observation	No existing wayfinding signage.

Location	Wardell Road at Keith Street (facing north).
Observation	No existing wayfinding signage aside from road names.

Location	Wardell Road at Keith St (facing south).
Observation	No existing wayfinding signage on approach to the station.

Location	Wardell Road facing south.
Observation	Lack of signage on approach to the train station.

Location	Wardell Road near Dulwich Hill station.
Observation	Lack of visible train mode ID sign.

Location	Wardell Road near Dudley Street.
Observation	No signage to bus stops on Dudley Street.

5.1.4 Wayfinding walk 3 – Dulwich Hill Station to School Parade and Tom Kenny Reserve

Location	Corner of Wardell Road / Dudley Street (facing east).
Observation	Bus stop on the southern side of Dudley Street is visible. No wayfinding signage.

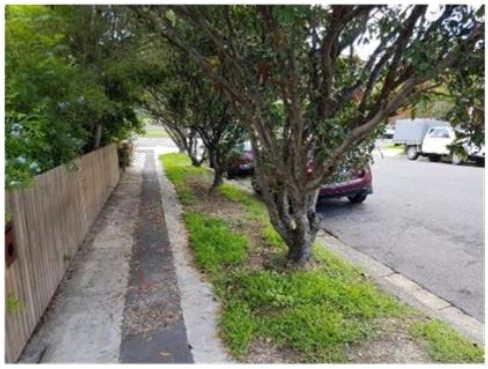
Location	Corner of Wardell Road / Dudley Street (facing east).
Observation	Bus stop on the southern side of Dudley Street is visible, but not on the northern side. No wayfinding signage.

Location	Corner of Wardell Rd / Dudley St (facing NE).

Location	Dudley Street facing east.

Observation	Bicycle signage to Marrickville along dedicated cycleway.

Location	Dudley Street near School Parade.
Observation	No wayfinding signage.



Location	Dudley Street near Bayley Street.
Observation	No wayfinding signage aside from street name signs.

Location	Dudley Street north of Bayley Street.
Observation	No wayfinding signage on approach to the train station.

Observation	Bus stop post becomes visible.

Location	School Parade facing west.
Observation	No wayfinding signage. Bus stop post is almost visible.

Location	Bayley Street at Tom Kenny Reserve.
Observation	Signage indicating Tom Kenny Reserve. No other wayfinding signage.

Location	Dudley Street near School Parade facing west.
Observation	Bus stop and train station begin to become visible from a distance.

Location	Dudley Street facing west.
Observation	Bus stop post and train station are visible in the distance. No wayfinding signage present.

Location	Dudley Street facing west.
Observation	Good visibility to the train station.

Location	Dudley Street at Wardell Road (facing north).
Observation	Station is clearly visible but pedestrian access may encourage informal crossing.

5.1.5 Wayfinding walk 4 – Dudley Street to Ewart Street

Location	Wardell Road facing south.
Observation	No wayfinding signage. Local retail visible.

Location	Wardell Road near Ewart Street.
Observation	No wayfinding signage aside from street signs at the intersection.

Location	Ewart Street facing east.
Observation	Bus stop post visible but vandalised. No other wayfinding signage.

Location	Wardell Road / Ewart Street intersection facing north.
Observation	No signage on approach to the train station.

Location	Wardell Road / Ewart Street intersection facing north.
Observation	Existing signage indicating Jack Shanahan Park. No other wayfinding signage aside from street names.

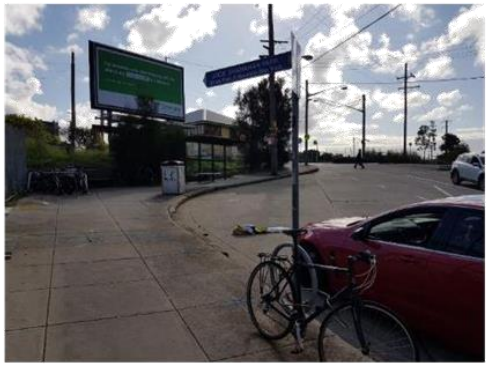
Location	Ewart Street facing west.
Observation	Night bus stop signage obscured by shelter. No other wayfinding signage.

Location	Ewart Street / Ewart Lane intersection.
Observation	Existing signage to Ewart Lane. Poor pedestrian infrastructure quality and amenity.

Location	Ewart Lane facing north.
Observation	To become a revitalised lane leading towards the new station entrance.

Location	Wardell Road near Ewart Street facing north.
Observation	Station mode ID is barely visible from a distance. No other wayfinding signage.

Location	Wardell Road facing north.
Observation	Station mode ID is visible from a distance.



Location	Wardell Road near the train station.
Observation	Existing signage indicating Jack Shanahan Park. Station mode ID no longer visible. Advertising sign dominates view.

Location	Wardell Road near the train station facing west.
Observation	Existing narrow path to Ewart Lane due to construction hoarding. To be improved through master plan works.

Location	Wardell Road / Dudley Street intersection.
Observation	Station clearly marked on final approach.

5.1.6 Wayfinding walk 5 – Wardell Road to Ewart Lane and commuter car park

Location	Ewart Lane facing south.
Observation	No wayfinding signage. Poor pedestrian amenity and safety. To be revitalised.

Location	Ewart Lane facing west.
Observation	Lack of signage and pedestrian provision to commuter car park.

Location	Ewart Lane facing west.
Observation	No wayfinding signage. Lack of pedestrian footpath.

Location	Ewart Lane at Ewart Street.
Observation	No wayfinding signage for pedestrians. Lack of pedestrian footpath.

Location	Ewart Street near Ewart Lane.
Observation	No wayfinding signage for pedestrians. Small commuter car park sign for vehicles with low legibility. No visibility to the train station.

5.2 Summary of key site audit observations

Key observations from the wayfinding site audit included the following:

- There are limited destinations currently signed – these include the light rail stop, bus stops, train station (from Bedford Crescent only) and Jack Shanahan Reserve;
- Many signs have poor visibility and are obscured by foliage, structures or graffiti;
- There is no wayfinding signage immediately visible at the exit of the station;
- Some signs do not face the direction of pedestrian flow and are therefore visible from limited angles; and
- There is limited signage on approach to the station.

5.3 Existing signage

A list of all existing wayfinding signs within the study area is shown in **Table 5-1**.

Table 5-1 List of existing wayfinding signs within the Dulwich Hill Station precinct

Detail	Content	Picture
Sign ID	**Ex-FI-01**	
Sign type	Finger	
Location	SW Corner of Wardell Road / Bedford Crescent	
Destinations signed	Dulwich Hill Station Bus stops Wardell Road	
Sign ID	**EX-FI-02**	
Sign type	Finger	
Location	SW Corner of Wardell Road / Bedford Crescent	
Destinations signed	Dulwich Hill light rail stop	
Sign ID	**EX-PY-01**	
Sign type	Pylon	
Location	Light rail access on Bedford Crescent	
Destinations signed	Local area map	

Detail	Content	Picture
Sign ID	EX-FI-03	
Sign type	Finger	
Location	Light rail access on Bedford Crescent	
Destinations signed	Dulwich Hill Station Bus stops Wardell Road	
Sign ID	EX-FI-04	
Sign type	Finger	
Location	Light rail stop	
Destinations signed	Dulwich Hill Station Bus stops Bedford Crescent	
Sign ID	EX-WA-01	
Sign type	Wall-mounted	
Location	Light rail stop	
Destinations signed	Local area map	
Sign ID	EX-FI-05	
Sign type	Finger	
Location	Eastern corner of Wardell Road / Dudley Street	
Destinations signed	Marrickville Station	
Sign ID (left)	EX-FL-01	 
Sign type	Flag	
Location	Northern side of Wardell Road	
Destinations signed	Bus stop ID	
Sign ID (right)	EX-FL-02	
Sign type	Flag	
Location	Southern side of Wardell Road	
Destinations signed	Bus stop ID	

Detail	Content	Picture
Sign ID (left)	EX-JP-01	
Sign type	J-pole	
Location	Northern side of Ewart Street, west of Murray Lane	
Destinations signed	Bus stop ID	
Sign ID (right)	EX-JP-02	
Sign type	J-pole	
Location	Southern side of Ewart Street, west of Wardell Road	
Destinations signed	Bus stop ID	
Sign ID	EX-FI-06	
Sign type	Finger	
Location	SW corner of Wardell Road / Ewart Street	
Destinations signed	Jack Shanahan Park Skate park & mountain bike track	
Sign ID	EX-FI-07	
Sign type	Finger	
Location	Western side of Wardell Road, opposite Dudley Street	
Destinations signed	Jack Shanahan Park Skate park & mountain bike track	
Sign ID	EX-MD-01	
Sign type	Mode ID	
Location	Western side of Wardell Road, south of Dulwich Hill Station	
Destinations signed	Bus stop mode ID	

Detail	Content	Picture
Sign ID (left)	EX-MD-02	
Sign type	Mode ID	
Location	Western side of Wardell Road, south of Dulwich Hill Station	
Destinations signed	Dulwich Hill Station mode ID	
Sign ID (right)	EX-JP-03	
Sign type	J-pole	
Location	Eastern side of Wardell Road, opposite Bedford Crescent	
Destinations signed	School bus stop ID	
Sign ID	EX-FL-03	
Sign type	Flag	
Location	Southern side of Bayley Street, opposite Dudley Street	
Destinations signed	Tom Kenny Reserve	
Sign ID	EX-MD-03	
Sign type	Mode ID	
Location	Southern side of Bedford Crescent at the light rail access	
Destinations signed	Light rail mode ID	
Sign ID	EX-MD-04	
Sign type	Mode ID	
Location	Light rail access at the top of the stairs	
Destinations signed	Light rail mode ID	

Note: street name signs have been excluded

The existing signs within the study area are mapped in **Figure 5-2**.

Figure 5-2 Map of existing wayfinding signs within the Dulwich Hill Station precinct

6 Station precinct wayfinding assessment

6.1 Principles and approach

Wayfinding signage is important to allow people to easily find their way to their destination. Wayfinding in combination with the surrounding environment facilitates people in their decision making and helps them to read, understand and navigate through the area.

High quality wayfinding systems allow people to arrive at their destination easily and quickly by providing the right information at the right time. Effective wayfinding signage will help people know where they currently are, where they need to go and how to get there.

The principles and approach of the wayfinding signage assessment are provided in the following sections.

6.1.1 Wayfinding principles

Wayfinding principles for this study were adapted from the *CoS Wayfinding Strategy*, with consideration of the differing context of the Inner West Council LGA and the Dulwich Hill Station precinct area.

The strategic directions and principles underpinning the wayfinding assessment are outlined in **Table 6-1**.

Table 6-1 Wayfinding strategic directions and principles

Strategic direction	Principles	Description
Consistency	Consistent design language	The design of wayfinding signage will be consistent, providing a reliable wayfinding system which is connected by a single identity and an integrated whole-of-journey approach.
	Sign elements familiarity	The signage will be easily recognisable and familiar to pedestrians, including the colour, proportions, graphics and other features.
	Modularity approach	Signage modules will allow for flexibility of application, so that signs can be located primarily for wayfinding outcomes and balanced with site constraints. Modules will make updates to signs easier and provide a consistent design, finish, graphics and features to provide a recognisable wayfinding system.
	Primary character	The primary character (main colour) of the system will be consistent with other council products, an appropriate background for graphics and help to identify the group of wayfinding signs.
Accessibility	Comprehendible	The information displayed on signs will be easy to read and be understood as quickly as possible.
	Pre-journey planning	Websites and third-party apps can facilitate pre-journey planning to support wayfinding signage. An accessible map or other information could be distributed via Council's website to support an inclusive wayfinding system.
	Use of logos and international symbols	Plain English language will be used in conjunction with internationally recognised pictograms and standard pictograms used by TfNSW.
	Signage design	Signs will be compliant with accessible design standards and incorporate ergonomic principles such as viewing distance, letter height and placement of information on signs. Braille and tactile indicators will be included as relevant on pylon signs.
	Visible and recognisable	Signs will be visible and recognisable through consistent locations and messages for visually-impaired people.
	Typeface	The typeface used on signs will be legible and used against a background with a minimum of 30% luminance contrast.
	Languages	Plain English will be displayed on signs, and other languages can be accommodated using mobile and digital technology.
	Signage placement	Signs will be located at decision points and along the routes as reassurance signs, with consideration of pedestrian flow and sign elements. Signs will face the direction of pedestrian flow to maximise legibility.

Strategic direction	Principles	Description
	Ease of orientation	Orientation will be considered in the sign design and placement to help pedestrians understand where they are. Maps will be placed "heads-up" in accordance with best practice.
	Use of multi-media	Multi-media information can be used to complement signage and may include digital, web, print and people.
	Communications and marketing	A communications and marketing campaign can help inform residents, commuters and visitors. Printed and online newsletters and other material can be distributed prior to and during the implementation of wayfinding signage to facilitate public knowledge of the system.
Sustainability	Quality and life cycle	Signs should be designed for the long term, with consideration of the need for future updates, maintenance (especially due to vandalism) and the life span of the system. Signs will be designed for high quality and durability.
	Cost-effectiveness and updates	Cost-effectiveness could be achieved through a specific method of fabrication, assembly, installation and fixing. A register of all signs should be established and maintained to facilitate cost-effective maintenance programs.
Legibility	Integration with the public domain	Clutter should be minimised to increase legibility and comprehension. Content will be minimised to display essential information only, and messages will be short, simple and unambiguous. Signs should integrate with the public domain and facilitate the pedestrian-oriented village character.

6.1.2 Station precinct wayfinding approach

The overarching approach to developing a proposed wayfinding solution for the Dulwich Hill Station precinct included the following steps:

1. Undertake a site audit of existing conditions and wayfinding signage;
2. Identify key destinations within a typical walking catchment of the station;
3. Determine key origin-destination (O-D) routes for pedestrians between the station and these destinations;
4. Identify gaps in the current wayfinding system; and
5. Determine a proposed wayfinding solution.

The results of the site audit are documented in **Section 5**. The remainder of the steps are detailed in the following sections.

6.2 Key destinations

The key destinations within the station walking catchment (taken roughly as an 800 metre radius from the station) are consistent with the active transport assessment (refer to **Section 4.1.1.1**). These are also mapped together with the O-D routes in **Figure 6-1**.

6.3 O-D routes

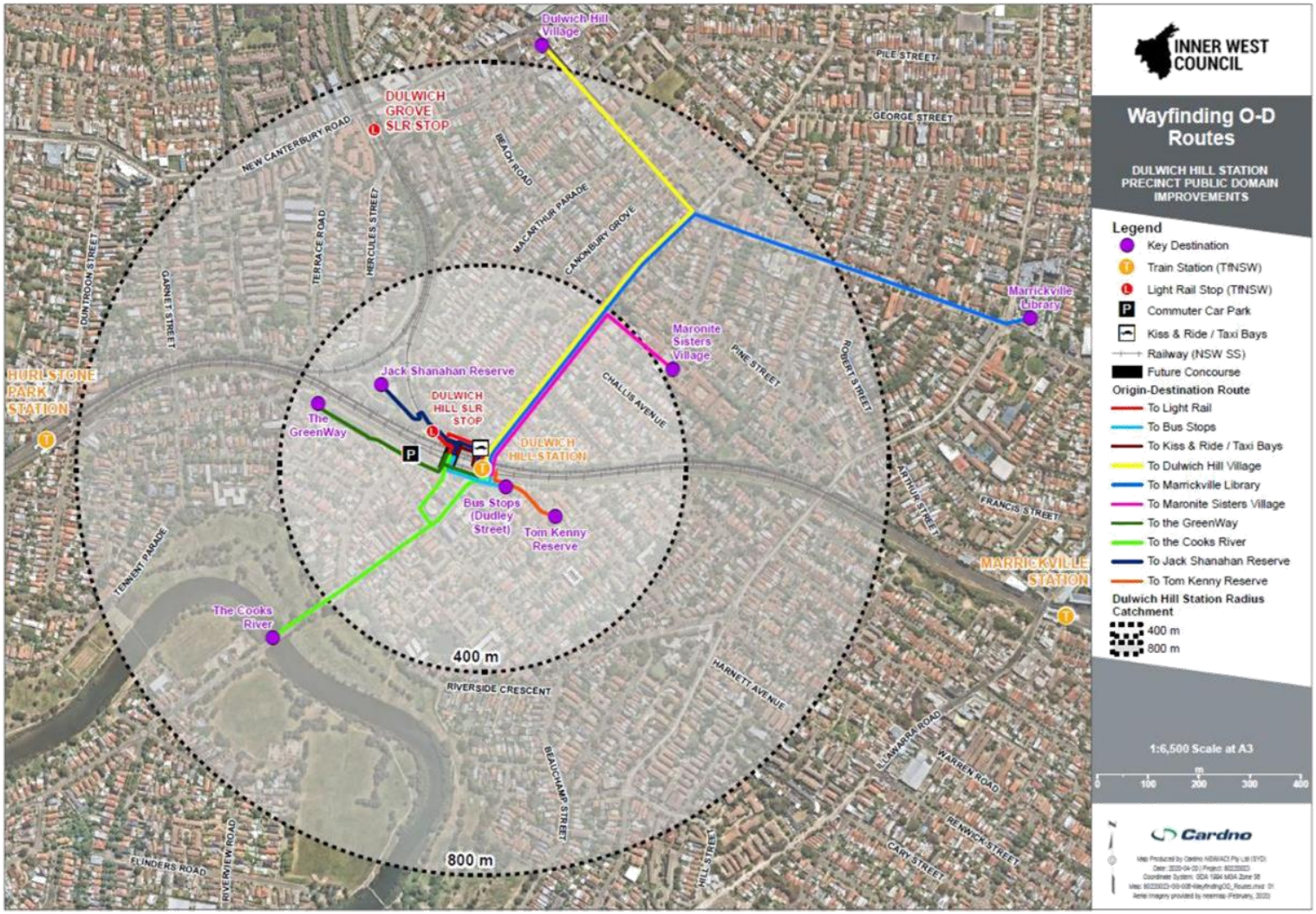
Origin-Destination (O-D) routes were developed to identify the key paths between Dulwich Hill Station and the surrounding destinations. The routes were based on the following key principles:

- **Existing and planned infrastructure**: The routes align with existing and planned pedestrian infrastructure to accommodate key movement paths;
- **Key land uses and points of interest**: The routes cater for outbound movements from Dulwich Hill Station to destinations and trip attractors of local significance, in addition to the inbound movements directing customers to the station. The destinations were identified in collaboration with Council;
- **Directness and desire lines**: The routes are direct as possible, avoiding the need for significant deviations to be made, and provide good connectivity between the station and key land uses;
- **Ease of navigation at decision points**: Where a decision point is required, such as a change in the direction of travel, the routes allow for clear placement of signage; and

> **Amenity and safety**: The routes provide a pleasant and accessible walking environment, and provide opportunities for passive and active surveillance to improve personal safety.

The O-D routes to and from the key destinations identified for the provision of wayfinding signage are shown in **Figure 6-1**.

Figure 6-1 O-D routes identified for wayfinding signage



6.4 Gap analysis

As a result of the O-D routes identified and the site audit of existing wayfinding signage, wayfinding signage gaps within the Dulwich Hill Station precinct were identified. These included points where wayfinding signage was not provided, or where signage was limited.

Various gaps were identified and are outlined in **Table 6-2**.

Table 6-2 Wayfinding gaps

Destination	Inbound signage (towards station)	Outbound signage (away from station)
Dulwich Hill Light Rail Stop	Provided but limited visibility	Provided but limited visibility
Bus stops (Dudley Street)	Nil – but partial visibility of station from bus stops	Only provided at corner of Wardell Road / Bedford Crescent
Kiss and ride / taxi bays	Nil	Nil
Commuter car park	Nil	Nil
Jack Shanahan Reserve	Nil	Provided in limited locations
Tom Kenny Reserve	Nil	Identifier only
Cooks River	Nil	Nil
GreenWay	Nil	Nil
Marrickville Library	Nil	Nil
Dulwich Hill Village	Nil	Nil
Maronite Sisters Village	Nil	Nil

Key issues included:

- Limited or no signage on many routes;
- Obscured signage on routes to / from the light rail stop and bus stops; and
- Key decision points with limited or no wayfinding provision to guide pedestrians.

6.5 Types of signs considered

This study is focused on the provision of two types of signs; pylons (free-standing or surface-mounted) and flags and finger signs (fixed to a post). Flags and finger signs provide directional guidance at key decision points, while pylons typically contain local area maps and other general information. Example uses of these signs are shown in **Figure 6-2**.

Figure 6-2 Examples of pylons, flag signs and finger signs

Source: Adapted from Legible Sydney – Volume 1 Wayfinding Strategy, City of Sydney, 2012

To avoid clutter, opportunities to use existing structures for flag and finger signs were considered, and most signs were proposed as flag or finger signs rather than pylons.

6.6 Proposed wayfinding scheme

Based on the gap analysis, a proposed wayfinding solution was developed to ensure the provision of high quality wayfinding signage throughout the Dulwich Hill Station precinct, including pylons, flags and finger signs.

The proposed new wayfinding signs, or relocated existing signs, are listed in **Table 6-3**.

Table 6-3 Proposed wayfinding signs

Sign ID	Sign type	Location	Destinations signed	Notes
EX-FI-02	Finger	Corner of Wardell Road and Bedford Crescent	Dulwich Hill light rail stop, Jack Shanahan Reserve, kiss and ride / taxi bays	Post relocated from the western side of the footpath.
PR-FI-12	Finger	Corner of Wardell Road and Bedford Crescent	Jack Shanahan Reserve, kiss and ride / taxi bays	Can be mounted on the existing relocated pole.
EX-FI-03	Finger	Bedford Crescent at light rail stop	Dulwich Hill Station, bus stops on Dudley Street	Relocated from the opposite corner for visibility.
PR-FI-01	Finger	NW corner of Wardell Road / Dudley Street	Bus stops on Dudley Street, Tom Kenny Reserve	
PR-FI-02	Finger	Immediately east of the eastbound bus stop on Dudley Street	Dulwich Hill Station	
PR-FI-03	Finger	Western side of Wardell Road opposite Dudley Street	Commuter car park, GreenWay	To be coordinated with Sydney Metro.
PR-PY-01	Pylon	New station plaza near Ewart Lane	Local area map, commuter car park, Cooks River, GreenWay	To be coordinated with Sydney Metro. Assumed the new station concourse will be visible from this point.
PR-FI-04	Finger	Bedford Crescent at light rail stop	Jack Shanahan Reserve	To point towards the light rail stop since access is provided via this route. Sydney Metro to provide internal station signage to help direct pedestrians once on the new station concourse.
PR-FI-05	Finger	Bedford Crescent at light rail stop	Dulwich Hill Station	To point to the new station concourse. To be coordinated with Sydney Metro.
PR-PY-02	Pylon	South-east corner of Jack Shanahan Reserve	Local area map, Dulwich Hill Station, light rail stop, bus stops on Dudley Street	Good location for a local area map with interchange information.
PR-FI-06	Finger	Immediately east of the eastbound bus stop on Dudley Street	Tom Kenny Reserve	
PR-PY-03	Pylon	North-west end of Tom Kenny Reserve	Local area map, Dulwich Hill Station, light rail stop, bus stops on Dudley Street	
PR-FI-07	Finger	Western side of Wardell Road opposite Dudley Street	Cooks River	
PR-FI-08	Finger	Eastern corner of Ewart Lane / Ewart Street	Cooks River	
PR-FI-09	Finger	Northern island of Wardell Road / Ewart Street intersection	Cooks River	
PR-FI-10	Finger	Southern side of Wardell Road at Beaman Park entrance	Dulwich Hill Station	

Sign ID	Sign type	Location	Destinations signed	Notes
PR-FI-11	Finger	Northern island of Wardell Road / Ewart Street intersection	Dulwich Hill Station	
PR-PY-04	Finger	Eastern corner of Ewart Street / Terrace Road	Dulwich Hill Station	
PR-FI-13	Finger	Bedford Crescent at light rail stop	Marrickville Library, Dulwich Hill Village, Maronite Sisters Village, kiss and ride / taxi bsys	
PR-FI-14	Finger	Corner of Wardell Road and Bedford Crescent	Marrickville Library, Dulwich Hill Village, Maronite Sisters Village	
PR-FI-15	Finger	Northern corner of Wardell Road / Marrickville Road	Marrickville Library	
PR-FI-16	Finger	North-east corner of Livingstone Road / Marrickville Road	Dulwich Hill Station	
PR-FI-17	Finger	Northern corner of Wardell Road / Marrickville Road	Dulwich Hill Station	
PR-FI-18	Finger	Northern corner of Wardell Road / Marrickville Road	Dulwich Hill Village	
PR-FI-19	Finger	Western side of Wardell Road north of Margaret Street	Maronite Sisters Village	
PR-FI-20	Finger	Western side of Wardell Road north of Margaret Street	Dulwich Hill Station	
PR-FI-21	Finger	Eastern corner of New Canterbury Road / Marrickville Road	Dulwich Hill Station	

In total the wayfinding solution proposes:

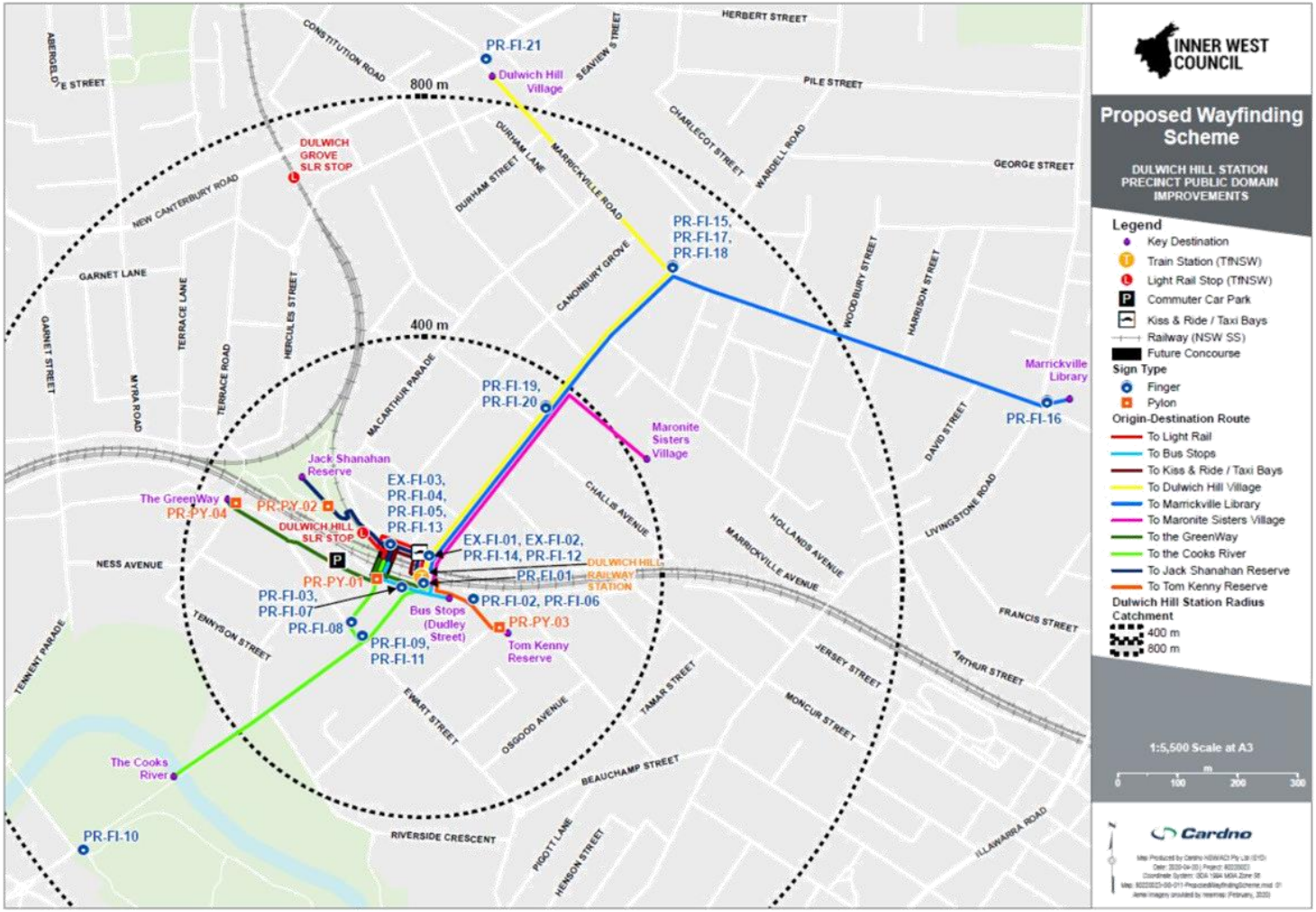
- 22 new finger signs;
- 3 new pylon signs; and
- 2 relocated existing signs.

Wayfinding signs within the Sydney Metro scope of works should be coordinated with Sydney Metro, and it is assumed that signage within the station itself will be provided by Sydney Metro as part of the station upgrade.

It is also recommended that one existing sign is removed, EX-FI-07. This is located at the western side of Wardell Road opposite Dudley Street and points to Jack Shanahan Reserve. However this sign does not align with the O-D routes developed, directs pedestrians along a longer route, and is redundant since sign PR-FI-12 (located at the corner of Wardell Road / Bedford Crescent) would assist pedestrians travelling northbound or southbound along the most desirable route.

The proposed wayfinding scheme is mapped in **Figure 6-3**.

Figure 6-3 Proposed wayfinding scheme



7 Traffic modelling

Traffic modelling was undertaken using SIDRA Network version 8 software for the assessment of the existing condition. This allows evaluation of the road network performance and operational issues at the intersection level. Traffic signal data such as cycle time was observed from the video footage obtained during intersection count and applied to the SIDRA models.

7.1 Intersection counts

Traffic surveys were undertaken on **Wednesday 19 February 2020** to obtain intersection counts for typical weekday AM and weekday PM peak periods. The counts were undertaken at the following locations between 6:00 am – 10:00 am for the AM peak and 3:00 pm – 7:00 pm for the PM peak.

- Wardell Road/Dudley Street; and
- Wardell Road/Ewart Street.

The surveys counted light vehicles, heavy vehicles, and pedestrians. The weather was sunny and no unusual occurrences were noted. Based on the cumulative traffic volumes of the two intersections, the AM and PM peak hours for critical assessment purposes were calculated to be:

- AM Peak Hour: 8:00 am to 9.00 am; and
- PM Peak Hour: 5.00 pm to 6.00 pm.

The data was used to inform the traffic modelling by providing traffic under existing conditions.

Figure 7-1 and **Figure 7-2** show the AM and PM peak hour volumes at the intersection.

Figure 7-1 2020 AM Peak

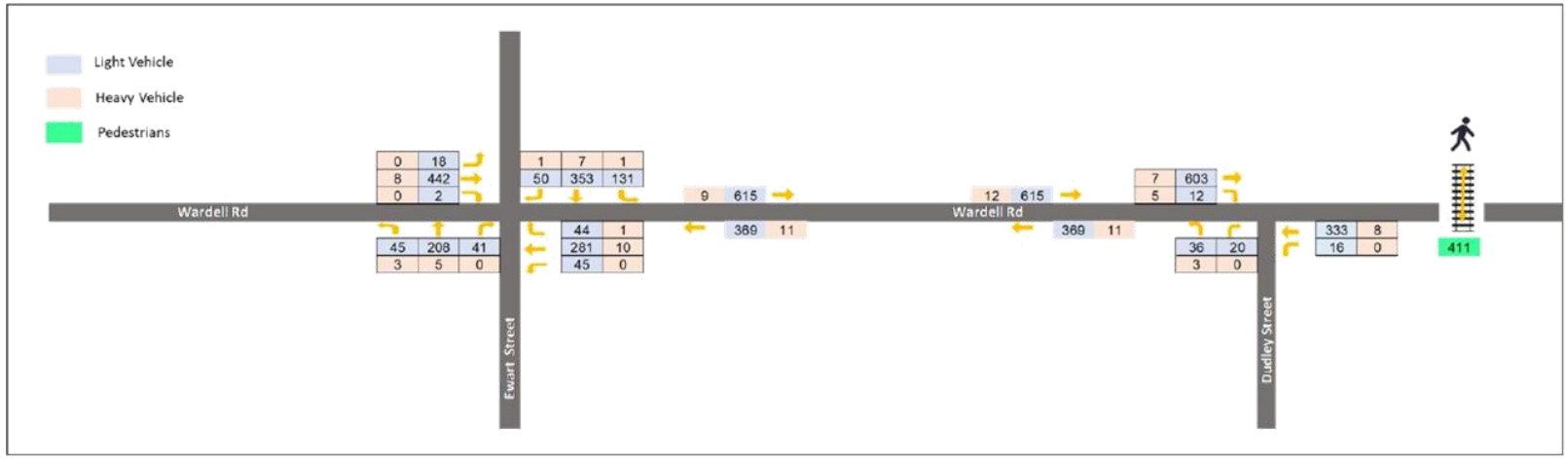
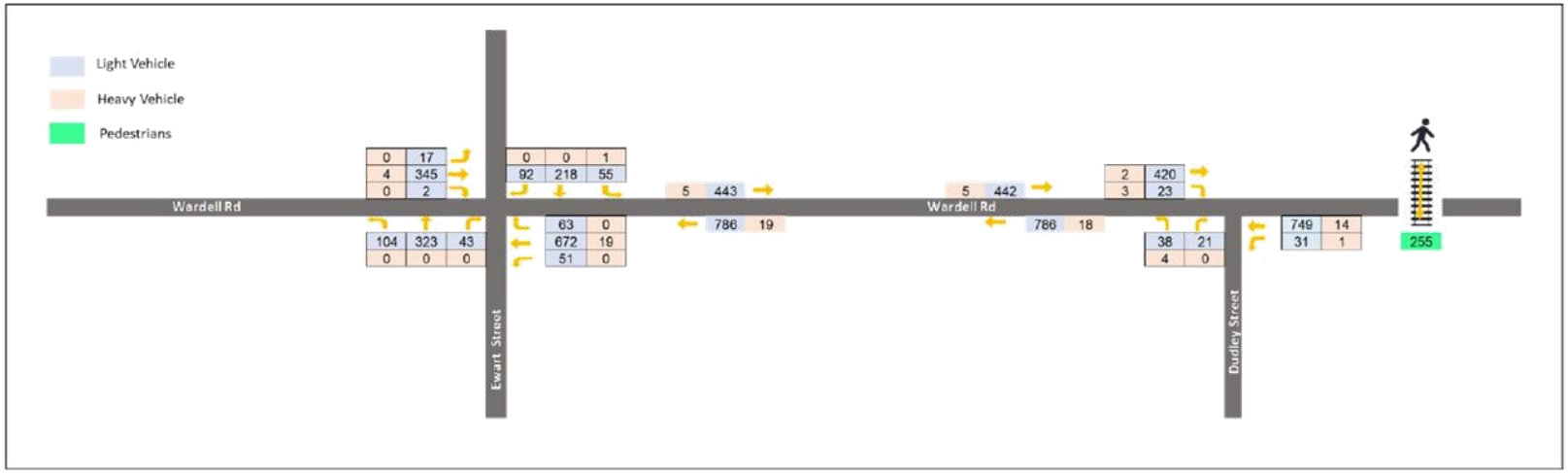


Figure 7-2 2020 PM Peak



7.2 Interpretation of modelling results

The intersection performance assessment was undertaken using SIDRA Intersection version 8 software. This software identifies several parameters to identify the performance of intersections. These parameters include Degree of Saturation (DoS), Average Delay in seconds and Level of Service (LoS).

Level of Service (LoS) is the standard measure used to assess the operational performance of the network and intersections. Level of Service is ranked from LoS A to LoS F, with LoS A representing the best performance and LoS F the worst. The assessment of intersection operation is based on criteria defined by TfNSW (formerly RMS) as outlined in **Table 7-1**.

Table 7-1 Level of Service Criteria for Intersections

Level of Service	Average Delay per Vehicle (sec/veh)	Traffic Signals, Roundabout	Giveway & Stop Signs
A	< 14	Good Operation	Good Operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near Capacity & accident study required
E	57 to 70	At Capacity, at signals incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode
F	> 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires additional capacity.

Source: Guide to Traffic Generating Developments (RMS, 2002)

Average Delay (Delay) provides a measure of the operational performance of an intersection and determines the LoS when applying the TfNSW method. It should be noted that the delay should be taken as a guide only as longer delays could be tolerated in some locations (i.e. inner-city conditions) and on some roads (i.e. minor side street intersecting with a major arterial route). For traffic signals, the weighted average delay over all movements is used. For roundabouts and priority control intersections (sign control) the critical movement for assessing LoS should be the movement with the highest average delay.

Degree of Saturation (DoS) is another measure of the operational performance of individual intersections. It is ideal to operate with a DoS of less than 0.9, with DoS of up 0.8 considered satisfactory. Intersections are considered to be close to capacity as the DoS approaches 1.0, with queue lengths increasing.

7.3 Existing conditions intersection performance results

Intersection modelling was undertaken for key intersections using SIDRA Network software. The intersection assessment has been undertaken using SIDRA v8 network input parameters. This is to enable the model to see the impact of queue propagation which occurs in reality.

7.3.1 Wardell Road/Ewart Street Intersection

Figure 7-3 illustrates the existing SIDRA layouts for Wardell Road/Ewart Street intersection along with the operational performance results summarised in **Table 7-2**.

Figure 7-3 Wardell Road/Ewart Street SIDRA geometry

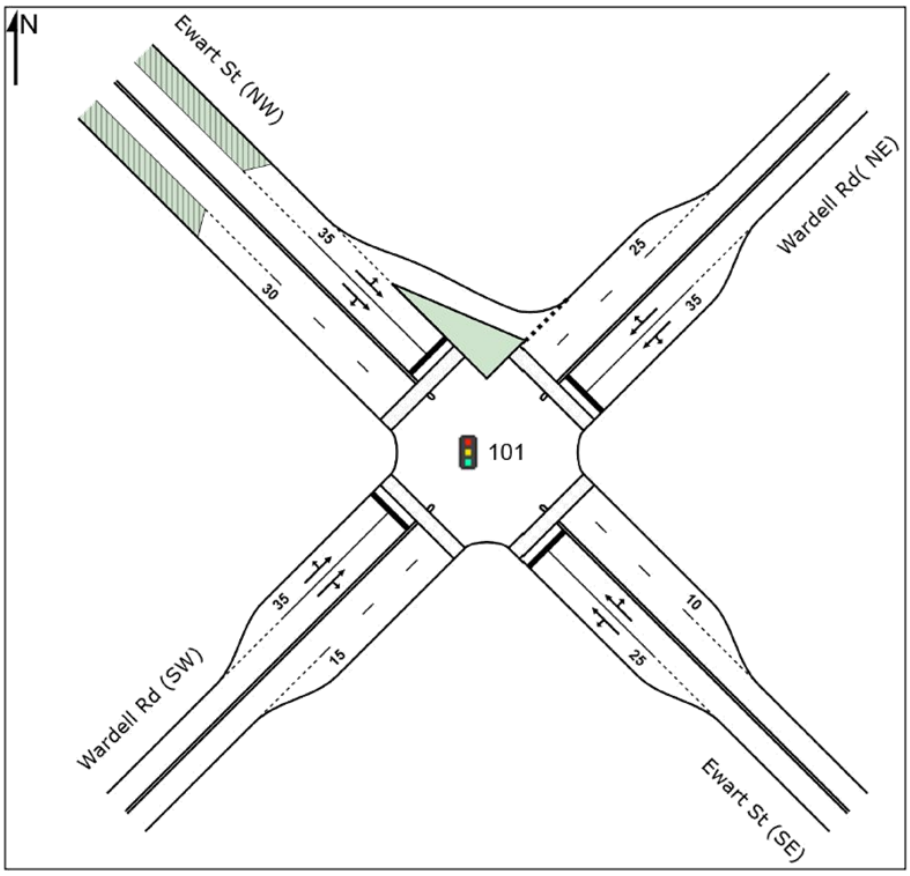


Table 7-2 summarises the intersection performance for Wardell Road/Ewart Street intersection under the existing scenario.

Table 7-2 Wardell Road/Ewart Street SIDRA Results

Peak	DoS	Delay (sec)	LoS	95th %ile Queue(m)	Approach*
AM Peak	0.894	36.5	C	93.3 m	NW (Ewart St)
PM Peak	0.891	32.3	C	100 m	NE(Wardell Rd)

* Corresponds to the longest queue

Intersection performance shows that under the existing scenarios, the performance of Wardell Road/ Ewart Street is LoS C in both AM and PM peak. This demonstrates acceptable performance during both peak hours.

7.3.2 Wardell Rd/ Dudley St Intersection

Figure 7-4 illustrates the existing SIDRA layouts for Wardell Rd/ Dudley St intersection.

Figure 7-4 Wardell Road/Dudley Street SIDRA geometry

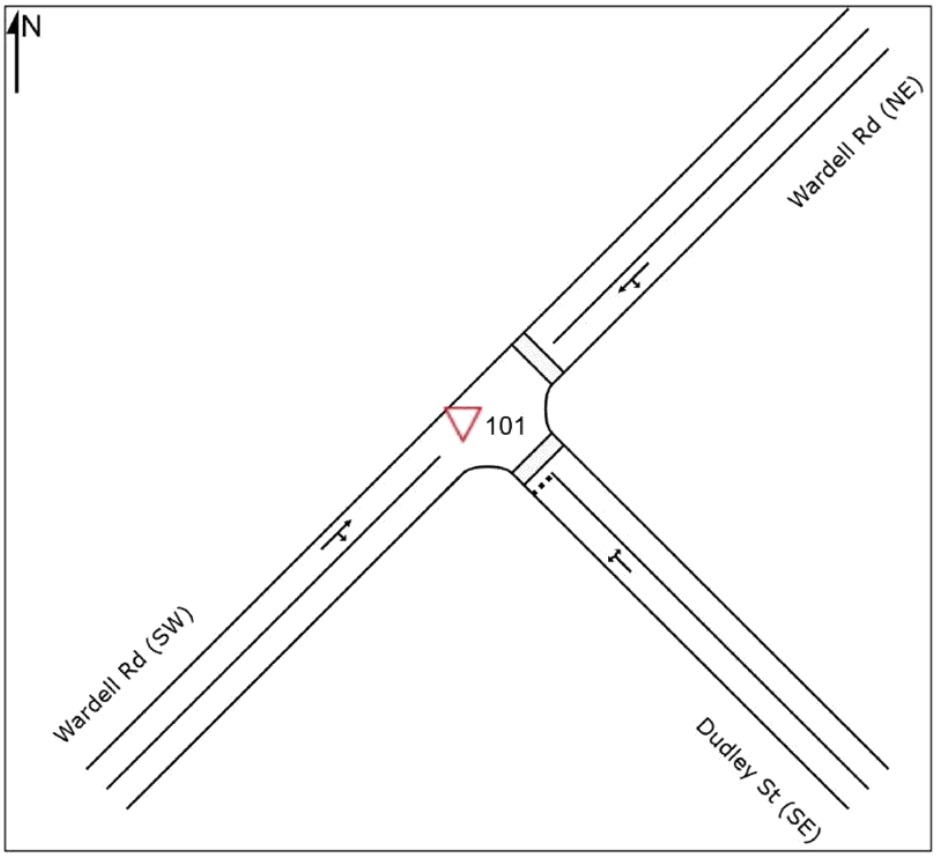


Table 7-3 summarises the intersection performance for Wardell Rd/ Dudley St intersection under the existing scenario.

Table 7-3 Wardell Road/Ewart Street SIDRA Results

Peak	DoS	Delay (sec)	LoS	95th %ile Queue(m)	Approach*
AM Peak	0.963	35.1	C	75.5 m	SW (Wardell Rd)
PM Peak	0.988	44.2	D	142 m	NE (Wardell Rd)

* Corresponds to the longest queue

Intersection performance shows that under the existing scenarios, the performance of Wardell Rd/ Dudley St intersection is LoS C in the AM peak and LoS D in the PM peak. Intersection performance at LoS D signifies Wardell Rd/ Dudley St intersection operates near capacity in the PM peak.

8 Traffic signal warrants

The proposed upgrades to the Dulwich Hill Station precinct public domain includes signalised intersection at Wardell Road / Dudley Street. A signal warrant assessment has been undertaken to determine whether the intersection meets the RMS warrants for traffic signals, as per the *RMS Traffic Signal Design – Section 2 – Warrants*.

8.1 Turning movement volumes

The intersection counts explained in **Section 7.1** were used to inform the demand for the warrants.

8.2 Signal warrant assessment

RMS Traffic Signal Design: Section 2 – Warrants provides detailed guidelines on the criteria/warrants that need to be satisfied for an intersection to be converted into a traffic signal operated intersection. Section 2.3 of the instructions document specifies that the various warrants in terms of traffic flow and/or pedestrian safety need to be met before installing traffic signals. The following warrants for the installation of traffic signals are set out:

(a) Traffic demand:

For each of four one-hour periods of an average day:

(i) The major road flow exceeds 600 vehicles/hour in each direction; and

(ii) The minor road flow exceeds 200 vehicles/hour in one direction.

OR

(b) Continuous Traffic

For each of the four one-hour periods of an average day:

(i) The major road flow exceeds 900 vehicles/hour in each direction; and

(ii) The minor road flow exceeds 100 vehicles/hour in one direction; and

(iii) The speed of traffic on the major road or limited sight distance from the minor road causes undue delay or hazard to the minor road vehicles; and

(iv) There is no other nearby traffic signal site easily accessible to the minor road vehicles.

OR

(c) Pedestrian Safety

For each of four-one hour periods of an average day:

(i) The pedestrian flow crossing the major road exceeds 150 persons/hour; and

(ii) The major road flow exceeds 600 vehicles/hour in each direction or, where there is a central median of at least 1.2 m wide, 1000 vehicles/hour in each direction.

OR

(d) Pedestrian Safety-high speed road

For each of four-one hour periods of an average day:

(i) The pedestrian flow crossing the major road exceeds 150 persons/hour; and

(ii) The major road flow exceeds 450 vehicles/hour in each direction or, where there is a central median of at least 1.2m wide, 750 vehicles/hour in each direction; and

(iii) The 85th percentile speed on the major road exceeds 75 km/hr.

OR

(e) Crashes:

(i) The intersection has been the site of an average of three or more reported tow- away or causality traffic accidents per year over a three year period, where the traffic accidents could have been prevented by traffic signals; and

(ii) The traffic flows are at least 80% of the appropriate flow warrants.

8.2.1 Traffic demand

The results of the warrant assessment based on traffic demand are shown in **Table 8-1** below.

Table 8-1 Signalised Intersection Warrant Assessment (Traffic Demand)

Traffic Demand Warrant	Approach	Observed Traffic								Warrant Met
Each of four one-hour periods of an average day		06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	
(i) The major road flow exceeds 600 vehicles / hour in each direction;	Wardell Rd North	130	261	356	294	685	736	824	647	✓
	Wardell Rd South	563	657	615	560	425	411	435	443	×
(ii) The minor road flow exceeds 200 vehicles/hour in one direction.	Dudley St East	27	44	59	51	65	61	64	62	×

As seen in **Table 8-1** there is not sufficient traffic demand for the signalised intersection warrant criteria to be met at Wardell Rd / Dudley St. Although the traffic volumes of the Wardell Rd North approach satisfies the required warrant criteria, the traffic volumes of Wardell Rd South and Dudley St East approach do not satisfy the criteria. As the traffic demand category has not been satisfied, the warrant based on continuous traffic has been assessed.

8.2.2 Continuous traffic

The results of the warrant assessment based on continuous traffic are shown in **Table 8-2** below.

Table 8-2 Signalised Intersection Warrant Assessment (Continuous Traffic)

Traffic Demand Warrant	Approach	Observed Traffic								Warrant Met
For each of the four one-hour periods of an average day:		06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	
(i)The major road flow exceeds 900 vehicles/hour in each direction; and	Wardell Rd North	130	261	356	294	685	736	824	647	×
	Wardell Rd South	563	657	615	560	425	411	435	443	×
(ii) The minor road flow exceeds 100 vehicles/hour in one direction; and	Dudley St East	27	44	59	51	65	61	64	62	×

(iii)The speed of traffic on the major road or limited sight distance from the minor road causes undue delay or hazard to the minor road vehicles; and	There is a steep descending grade on Wardell Road (South) which leads to higher relative speeds to the vehicle going southbound.	✓
(iv)There is no other nearby traffic signal site easily accessible to the minor road vehicles.	This condition is not met. A signalised intersection is located approximately 115 m west of the proposed signalised intersection which is easily accessible to the minor road vehicles thorough side streets such as Bayley Street.	×

As seen in **Table 8-2** the warrant for continuous traffic is not satisfied based on continuous traffic flow hence the warrant based on pedestrian safety been assessed.

8.2.3 Pedestrian safety

The results of the warrant assessment based on pedestrian safety are shown in **Table 8-3** below.

Table 8-3 Signalised Intersection Warrant Assessment (Pedestrian Safety)

Traffic Demand Warrant	Approach	Observed Traffic								Warrant Met
Each of four one-hour periods of an average day		06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	
(i)The pedestrian flow crossing the major road exceeds 150 persons/hour; and	Wardell Rd North	97	296	411	128	224	159	255	259	✓
(ii)The major road flow exceeds 600 vehicles/hour in each direction or, where there is a central median of at least 1.2 m wide, 1000 vehicles/hour in each direction.	Wardell Rd North	130	261	356	294	685	736	824	647	✓
	Wardell Rd South	563	657	615	560	425	411	435	443	×

Table 8-3 shows that traffic volumes for Wardell Rd South do not meet the required criteria although the traffic volumes for Wardell Road North were satisfied based on pedestrian and traffic volumes. As the warrant for this category has not been satisfied, the other categories have been assessed as shown below.

8.2.4 Pedestrian safety-high speed road

The results of the warrant assessment based on pedestrian safety-high speed road are shown in **Table 8-4** below.

Table 8-4 Signalised Intersection Warrant Assessment (Pedestrian Safety-high speed road)

Traffic Demand Warrant	Approach	Observed Traffic								Warrant Met
Each of four one-hour periods of an average day		06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	
(i)The pedestrian flow crossing the major road exceeds 150 persons/hour; and	Wardell Rd North	97	296	411	128	224	159	255	259	✓
(ii)The major road flow exceeds 450 vehicles/hour in each direction or, where there is a central median of at least 1.2m wide, 750 vehicles/hour in each direction; and	Wardell Rd North	130	261	356	294	685	736	824	647	✓
	Wardell Rd South	563	657	615	560	425	411	435	443	✓
(iii)The 85th percentile speed on the major road exceeds 75 km/hr.	This condition is not met. The speed limit of Wardell Rd is 50 km/hr.									×

Table 8-4 shows that Wardell Rd / Dudley St does not meet the warrant criteria based on Pedestrian safety high-speed road.

8.2.5 Crashes

The results of the warrant assessment based on crashes are shown in **Table 8-5** below.

Table 8-5 Signalised Intersection Warrant Assessment (Crashes)

Traffic Demand Warrant	Approach	Observed Traffic Demand	Warrant Met
(i) The intersection has been the site of an average of three or more reported tow-away or causality traffic accidents per year over a three year period, where the traffic accidents could have been prevented by traffic signals; and		Five-year crash data history from TfNSW (the Centre for Road Safety) was assessed from 2014 to 2018 (inclusive). It was found that a total of three crashes were recorded which were in the 2016- 2017 period. According to the RUM codes, all the three crashes at the intersection of Wardell Rd / Dudley St involved pedestrians. However, the requirement of an average of three or more reported tow- away or causality traffic accidents per year over three years is not met.	×
(ii) The traffic flows are at least 80% of the appropriate flow warrants.	This condition is not met the average traffic flows of Dudley St East(minor road) is 54 veh/hr which is only 27 % of the recommended 200 veh/hr.		×

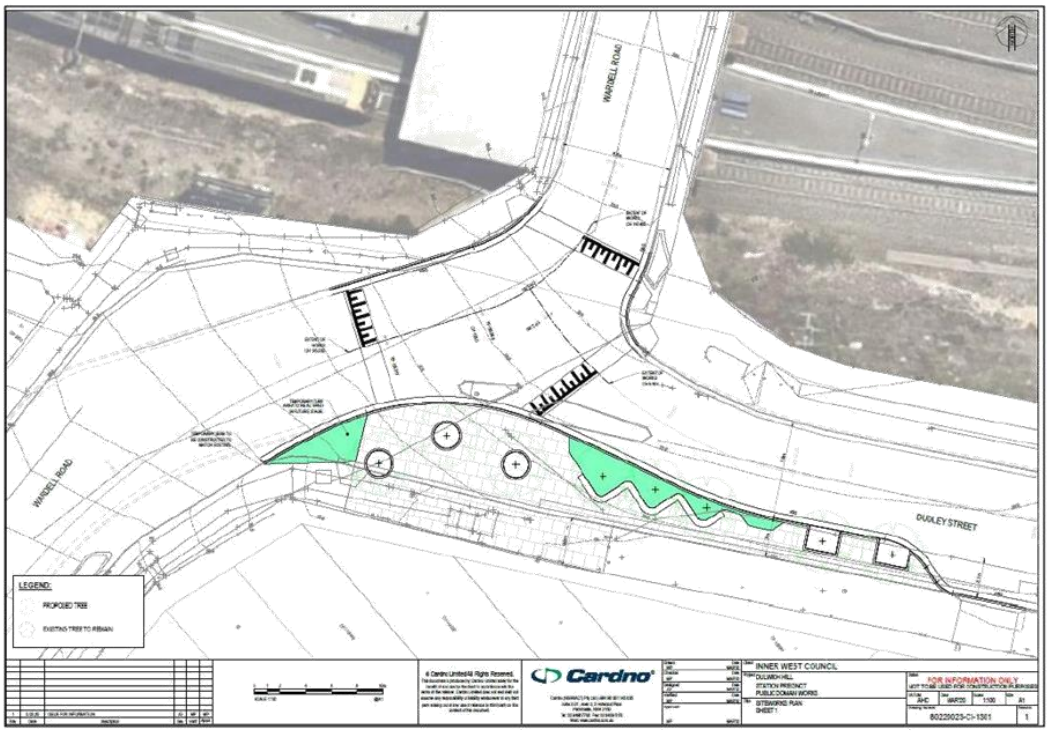
Hence Wardell Rd / Dudley St does not meet the warrant for traffic signal based on crashes as the traffic flow is not satisfied.

Based on the analysis, the intersection of Wardell Rd / Dudley St does not satisfy any of the traffic signal warrant criteria. Cardno understands that Council intends to implement the signalsed intersection at Wardell Rd / Dudley St given the proximity of the intersection to the existing Dulwich Hill station and proposed Sydney Metro Station. Signalising the intersection would offer improved safety for all modes, especially pedestrian movements. Council proposes to implement a signalised intersection with a scramble crossing to offer more crossing opportunities for pedestrians and cater to the anticipated increase in pedestrian demand due to Sydney Metro. Council met with TfNSW to discuss the proposed signalised intersection at Wardell Rd / Dudley St and TfNSW was supportive of the proposal.

8.3 Proposed signalised intersection

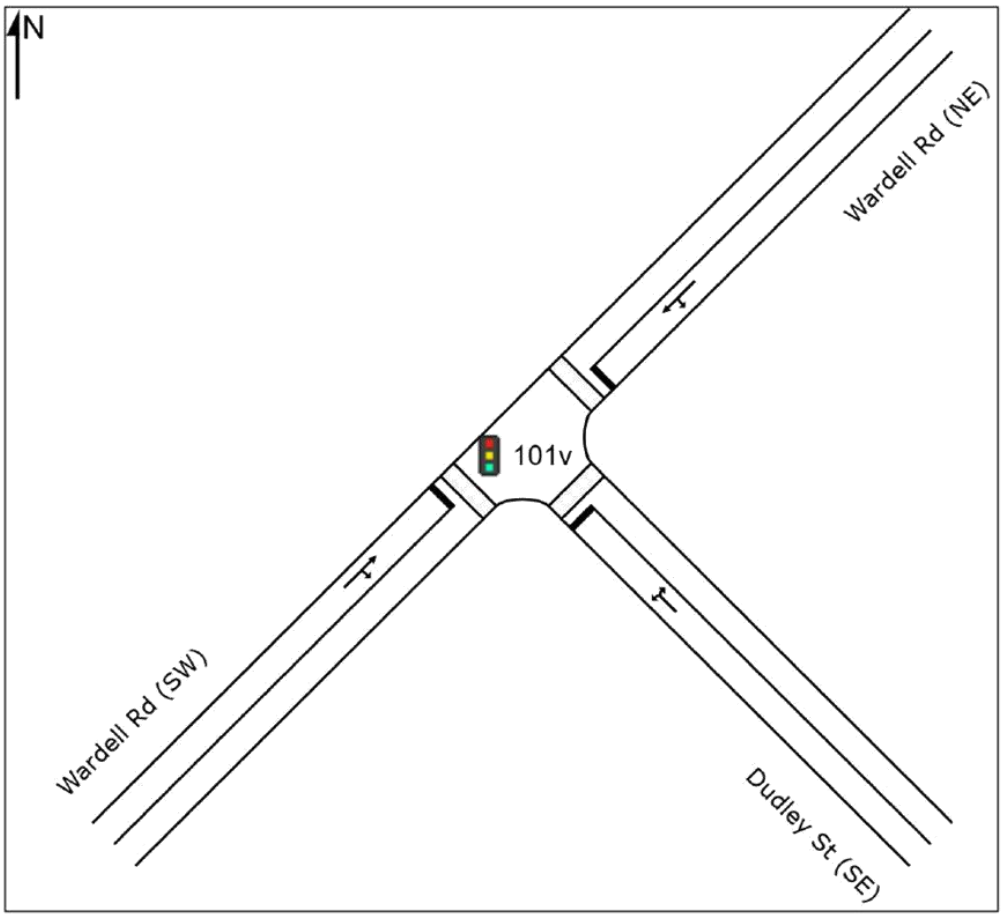
The design for the proposed intersection of Wardell Rd and Dudley St is shown in **Figure 8-1**.

Figure 8-1 Design of intersection of Wardell Rd/Dudley St



The SIDRA layout for the proposed signalised intersection is illustrated in **Figure 8-2**.

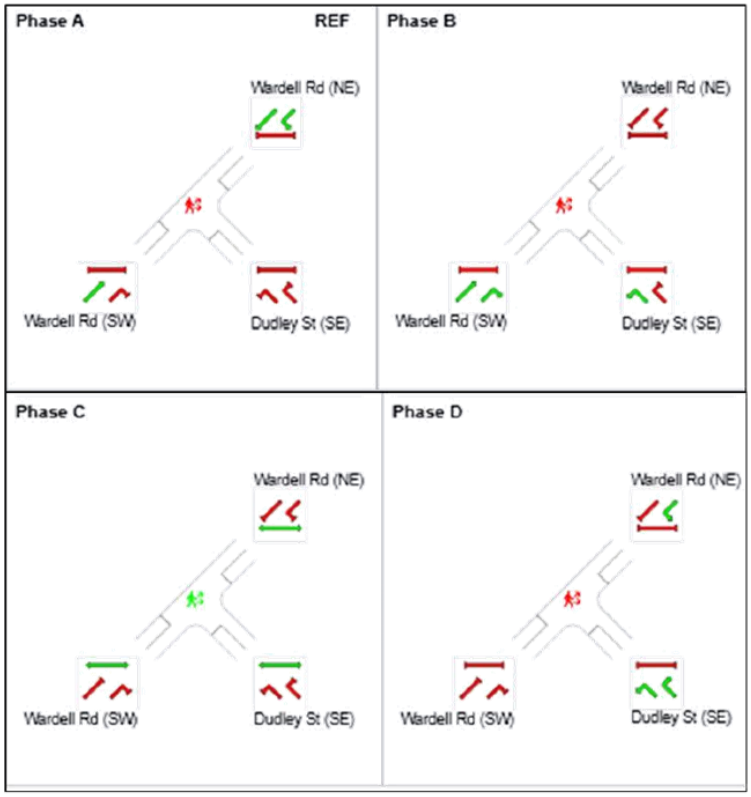
Figure 8-2 SIDRA Layout of Wardell Rd/Dudley St Signalised intersection



Cardno has been directed by Council to proceed with pedestrian movements operating in a scramble pedestrian phase at Wardell Rd / Dudley Street.

The phasing arrangements of the signalised intersection including the scramble pedestrian phase are shown in **Figure 8-3.** However, it should be noted that the final TCS design is still being prepared by B-Line sub-consultants.

Figure 8-3 Scramble Crossing TCS Phasing Arrangements



The results for the proposed signalised intersection are summarised in **Table 8-6**. A 100 second cycle time was adopted for the Wardell Rd/Dudley St signalised intersection to accommodate coordination with the Wardell Rd/Ewart St intersection (based on the observation of video footage obtained during the intersection counts).

Table 8-6 Wardell Rd/Dudley St signalised intersection Result Summary

Peak	DoS	Delay (sec)	LoS	95th %ile Queue(m)	Approach*
AM Peak	0.624	15.7	B	65.8	NE (Wardell Rd)
PM Peak	0.789	19.6	B	130.5	NE (Wardell Rd)

* Corresponds to the longest queue

Intersection performance shows that under the proposed signalised intersection scenarios, Wardell Rd/ Dudley St intersection performs satisfactorily at LoS B in both AM and PM peak respectively.

It should be noted that the results of the modelling are subject to change based on the final geometry, phasing, and cycle times implemented.

In order to assess the network impacts the intersection performance of Wardell Rd/Ewart St due to the signalisation of Wardell Rd/ Dudley St is shown in **Table 8-7** below.

Table 8-7 Signalisation impact on Wardell Rd/Ewart St intersection Result Summary

Peak	DoS	Delay (sec)	LoS	95th %ile Queue(m)	Approach*
AM Peak	0.844	32.5	C	86.9	SW(Wardell Rd)
PM Peak	0.901	32.7	C	100.0	NE (Wardell Rd)

* Corresponds to the longest queue

A comparison of **Table 7-2** and **Table 8-7** shows that the intersection performance of Wardell Rd/Ewart St performance remains unchanged due to the signalisation of Wardell Rd/ Dudley St with LoS C under both existing and proposed signalisation of Wardell Rd/ Dudley St scenario.

8.3.2 Results comparison

Table 8-8 summarises and compares the average delay and LOS for the existing condition and proposed signalised intersection at Wardell Rd/Dudley St intersection.

Table 8-8 Wardell Rd/Dudley Street average delay and LOS comparison

Wardell Rd/Dudley Street	Existing Scenario		Proposed Signalised Intersection	
	AM	PM	AM	PM
Average Delay(sec)	35.1	44.2	15.7	19.6
LOS	C	D	B	B

It is observed from **Table 8-8** that the signalisation of Wardell Rd / Dudley St improves the performance of the intersection. Under the proposed signalised intersection scenario LoS B is achieved in both AM and PM peak respectively.

Table 8-9 compares the queueing between the existing scenario and the proposed signalised intersection scenario at Wardell Rd/Dudley St intersection.

Table 8-9 Queuing Comparison

Approach	Existing Scenario		Proposed Signalised Intersection	
	AM	PM	AM	PM
South East (Dudley Street)	1.6 m	3.8 m	7.9 m	10.9 m
North East (Wardell Road)	14.0 m	142.0 m	65.7 m	130.5 m
South West (Wardell Road)	75.5 m	14.7 m	43.1 m	63.4 m

It can be observed from **Table 8-9** that proposed signalisation does not directly result in a decrease in queuing. It is observed that the queue increases in the SW approach (Wardell Road) in the PM peak from 14.7 m to 63.4 m however this is not an issue as the distance of the upstream signalised intersection Wardell Road/ Ewart Street is approximately 100 m (more than the queue length observed). The increase in queue length is due to the traffic signals balancing out delays and queues experienced at each approach based on signal phasing timings (i.e. – vehicles waiting for the green light).

8.4 Conclusion

The intersection of Wardell Rd / Dudley St does not satisfy the traffic signal warrant criteria. Cardno understands that Council intends to implement the signalsed intersection at Wardell Rd / Dudley St given the proximity of the intersection to the existing Dulwich Hill station and proposed Sydney Metro Station. Signalising the intersection would offer improved safety for all modes, especially pedestrian movements. Council proposes to implement a signalised intersection with a scramble crossing to offer more crossing opportunities for pedestrians and cater to the anticipated increase in pedestrian demand due to Sydney Metro. Council met with TfNSW to discuss the proposed signalised intersection at Wardell Rd / Dudley St and TfNSW was supportive of the proposal.

The traffic modelling shows that the signalisation of Wardell Rd / Dudley St improves the performance of the intersection. Under the existing geometry (priority controlled), the performance of Wardell Rd/ Dudley St intersection is LoS C in the AM peak and LoS D in the PM peak. Intersection performance at LoS D signifies that the intersection operates near capacity in the PM peak. Under the proposed signalised intersection scenario with scramble crossing, the intersection performs satisfactorily at LoS B in both AM and PM peaks.

It should be noted that the results of the modelling are subject to change based on the final geometry, phasing, and cycle times implemented.

9 40 km/hr high pedestrian activity area

A 40 km/h High Pedestrian Activity Area (HPAA) is an area of high pedestrian activity, in town centres and near railway stations, bus interchanges, and services such as medical centres and schools. The maximum speed limit is 40 km/h at all times and makes drivers more aware of the presence of pedestrians moving about or near the road. This creates a safer road environment for all road users, particularly for pedestrians, cyclists and children.

A 40 km/h HPAA is established in conjunction with a suitable local area traffic management scheme with physical devices or treatments to create a self-enforcing 40 km/h speed environment. Typically, the speed limits are complemented with physical traffic calming devices and threshold treatments.

Benefits of providing 40km/h speed limits are listed below:

- Travelling at slower speeds improves the driver's ability to stop at a safer distance to avoid crashes, otherwise reduce the severity of a crash; and
- Statistics show that there was a 33% reduction in crashes causing serious injuries and deaths between 2005 and 2015 where 40km/h zones have been introduced.
- Reduction in Pedestrian Accidents.

The potential for implementing 40km/h speed limits have been identified by relevant RMS guidelines and taking into consideration surrounding land uses.

9.1 Existing road network

9.1.1 Land use zoning

The study area consists of primarily residential along with some commercial/business area along Wardell Road between Ewart Street and Keith Street.

9.1.2 Road network

The road network within the station precinct is detailed in **Table 9-1**.

Table 9-1 Key Roads

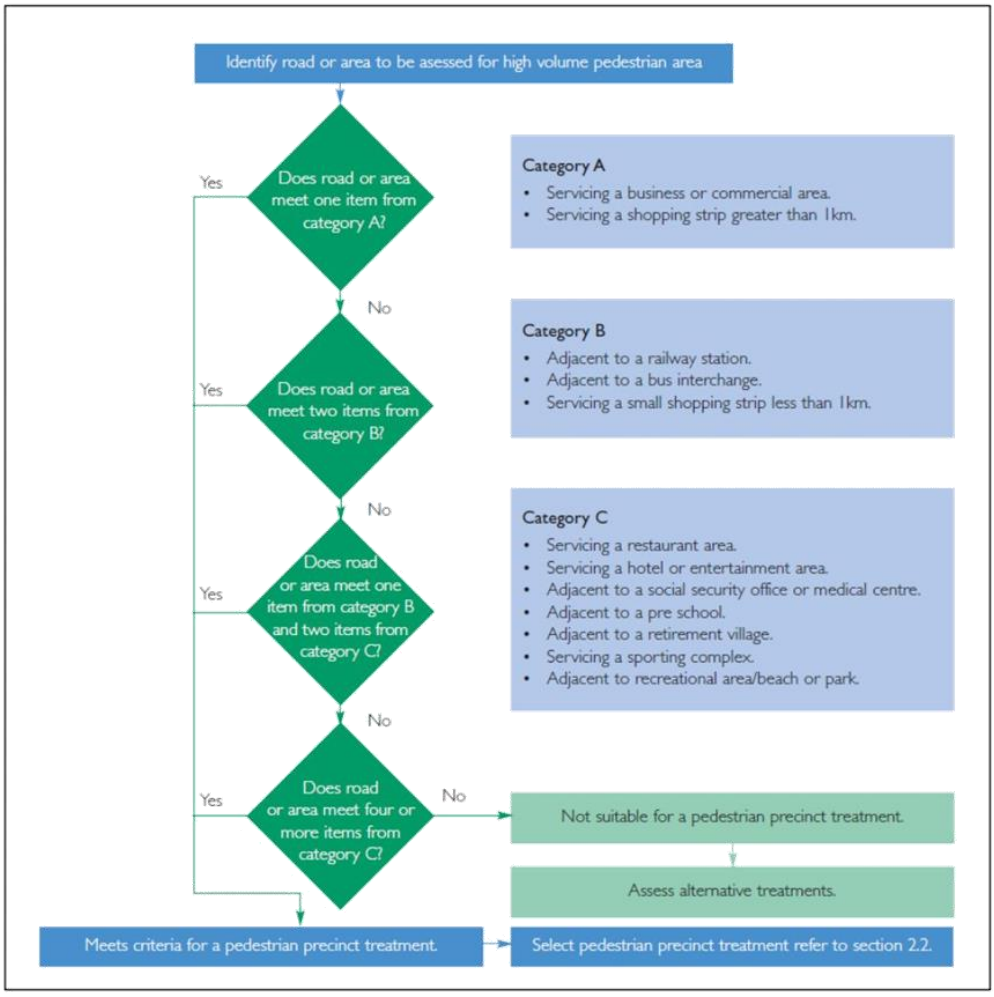
Road Name	Road Classification	Managing Authority	Number of Lane	Speed Limit
Wardell Road	Local Road	Inner West Council	2 travel lanes	50 km/hr
Ewart Street	Local Road	Inner West Council	2 travel lanes	50 km/hr
Dudley Street	Local Road	Inner West Council	2 travel lanes	50 km/hr
Ewart Lane	Local Road	Inner West Council	1 travel lanes	50 km/hr
Bedford Crescent	Local Road	Inner West Council	2 travel lanes	50 km/hr

9.2 Candidate 40 km/hr HPAA

9.2.1 Identification of high volume pedestrian areas

The RMS guideline for 40 km/h speed limits in high volume pedestrian areas specifies the criteria for 40km/h speed limits areas as shown in **Figure 9-1.**

Figure 9-1 40km/h HPAA criteria flowchart



As described in **Figure 9-1** a warrant must be met before the implementation of HPAA. The warrant assessment for roads in the study area is shown in **Table 9-2**. It should be noted that Ewart Ln is proposed as a shared zone as per the masterplan.

Table 9-2 HPAA Warrants

Location	Category A	Category B	Category C	Criteria Satisfied
Wardell Road	Servicing a Business or Commercial Area between Ewart Street and Keith Street	N/A	N/A	One Item from Category A
Bedford Crescent	N/A	Bedford Crescent is an interchange area	N/A	**Note 1**
Ewart Street	N/A	N/A	N/A	N/A
Dudley Street	Servicing a Business or Commercial Area between Wardell Road and School Parade	N/A	N/A	One Item from Category A

Note 1 Bedford Crescent is adjacent to a railway station and a light rail station and was therefore considered that it meets Category B.

Hence based on the warrant assessment for the roads in the study area Wardell Road, Bedford Crescent and Dudley Street have been selected for the implementation of HPAA.

9.3 Traffic management devices

9.3.1 Overview

The implementation of a 40 km/hr speed limit needs to consider the control and enforcement methods of the lower speed limit. Certain combinations of road conditions can lead drivers to travel at certain speeds more than the limit if not controlled. These include long and straight sections and wide roadways. For successful implementation, the 40 km/hr speed zone must be able to self-enforce and self-regulate the speed limit.

As assessment of the relevant streets was undertaken to appraise the existing road environment and to identify the installation of additional traffic management infrastructure required to reinforce the 40 km/hr speed environment.

9.3.2 Relevant guidelines/documents

As a part of the development of various road treatments in this stage, various documents have been reviewed and referred for the road treatments across the study area:

- NSW Speed Zoning Guidelines; and
- Dulwich Hill Station Precinct Masterplan.

9.3.3 Existing infrastructure

Several existing traffic calming devices and treatments are already in use within the study area. The location of the existing traffic management infrastructure was received from the Council and was mapped in **Figure 9-2**.

Figure 9-2 Existing traffic management infrastructure

As seen in **Figure 9-2** there are many pedestrian refuge and chokers within the study area, however there are no existing raised threshold treatments for traffic calming in the study area.

9.3.4 Treatment locations

Dulwich Hill Station precinct upgrades

The masterplan includes traffic calming treatments to the road environment that will create a self-enforcing 40km/h speed environment. This includes raised entry thresholds that will signify to vehicles the change in environment and will reduce vehicle travel speeds. Kerb extensions will also narrow road geometry to help reduce vehicle speeds as well.

The raised, signalised intersection at Wardell Road / Dudley Street will provide additional crossings for pedestrians and cyclists and is also a traffic calming measure that aims to improve safety for pedestrians.

The masterplan proposed traffic calming treatment locations along the precinct are shown in **Table 9-3**.

Table 9-3 Masterplan Proposed Treatments

No.	Proposed Masterplan Treatment	Traffic Calming Impacts
1	Entry threshold (raised) on Wardell Road north of Keith Street	Reduce vehicle travel speeds. Entry thresholds will create a safe environment for pedestrians, with traffic calming creating self-enforcement for the 40km/h area
4	Entry threshold (raised) on Bedford Crescent at Wardell Road	Reduce vehicle travel speeds. Entry thresholds will create a safe environment for pedestrians, with traffic calming creating self-enforcement for the 40km/h area
7	Raised signalised intersection at Wardell Road / Dudley Street	Reduce vehicle speeds at the crossing point. The raised threshold will create a safe environment for pedestrians, with traffic calming creating self-enforcement for the 40km/h area
12	Kerb extension on the southern corner of the Wardell Road / Dudley Street intersection	Reduce vehicle turning speeds
20	The raised threshold at the Wardell Road / Ewart Street intersection	Reduce vehicle travel speeds. Entry thresholds will create a safe environment for pedestrians, with traffic calming creating self-enforcement for the 40km/h area
21	Kerb extension on the northern corner of the Wardell Road / Ewart Street intersection	Reduce vehicle turning speeds

Overall the upgrades proposed by the masterplan are expected to improve the safety and efficiency of the station precinct.

The Dulwich Hill Station Precinct upgrades are shown in **Figure 9-3.**

Figure 9-3 Dulwich Hill Station Precinct Upgrades

9.3.5 Proposed Infrastructure

9.3.5.1 Signage

The 40km/hr HPAA speed limit within the HPAA area, supplemented with signage as shown in **Table 9-4**.

Table 9-4 40 km/hr HPAA Signage

Image	Signage Type	Sign Code	Use
	High Pedestrian Activity Area (40 km/hr)	R4-236	On the entry to a High Pedestrian Activity Area.
	End 40 km/hr HPAA	R4-11	At the end of HPAA onto the road with speed limit other than 40 km/hr road.

The principles adopted in assessing the signage requirement are outlined below:

- "High Pedestrian Activity Area" signs provided on entry into HPAA;
- "End 40 km/hr Area" signs provided on exit out of HPAA; and
- The NSW speed zoning guidelines recommend the distance of the first repeater sign to be 300 m from the start of the zone hence it was assessed that the repeater "High Pedestrian Activity Area 40km/hr" signs are not required given that the proposed HPAA is less than 300 m in length from the start of the zone.

9.3.5.2 Location of Signs

The *NSW speed zoning guidelines* outline the location for signage requirements. The summary of the relevant guidelines are outlined below:

- At each change of speed limit, two-speed restriction signs are to be provided. Ideally on both sides of the carriageway.

For urban environments

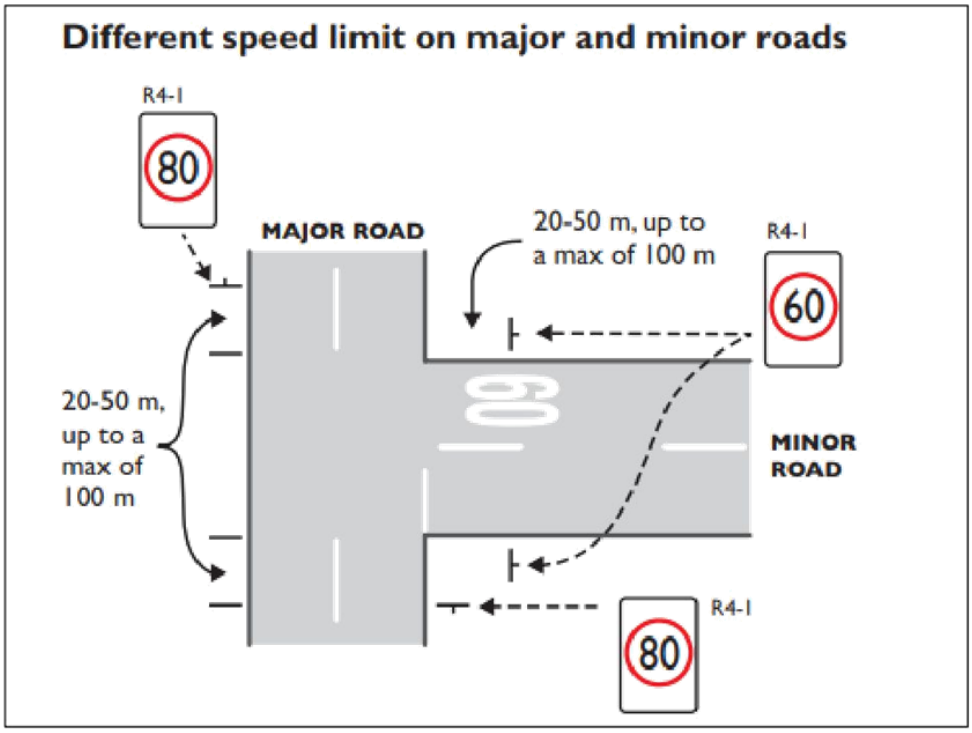
- The preferred minimum clearances between the ground and the bases of the signs should be 2.5 metres;
- The minimum lateral clearance between the edge line of the travel lane and the edge of the sign is 0.6 metres; and
- The maximum lateral clearance between the centre of the left travel lane and the edge of the sign should not exceed 6.6 metres.

Speed limit signs at intersections of major and minor roads should be:

- On the major road, located 20-50 m up to a maximum of 100 m before and after the edge of the minor road; and
- On the minor road, located 20-50 m up to a maximum of 100 m before and after the edge of the major road.

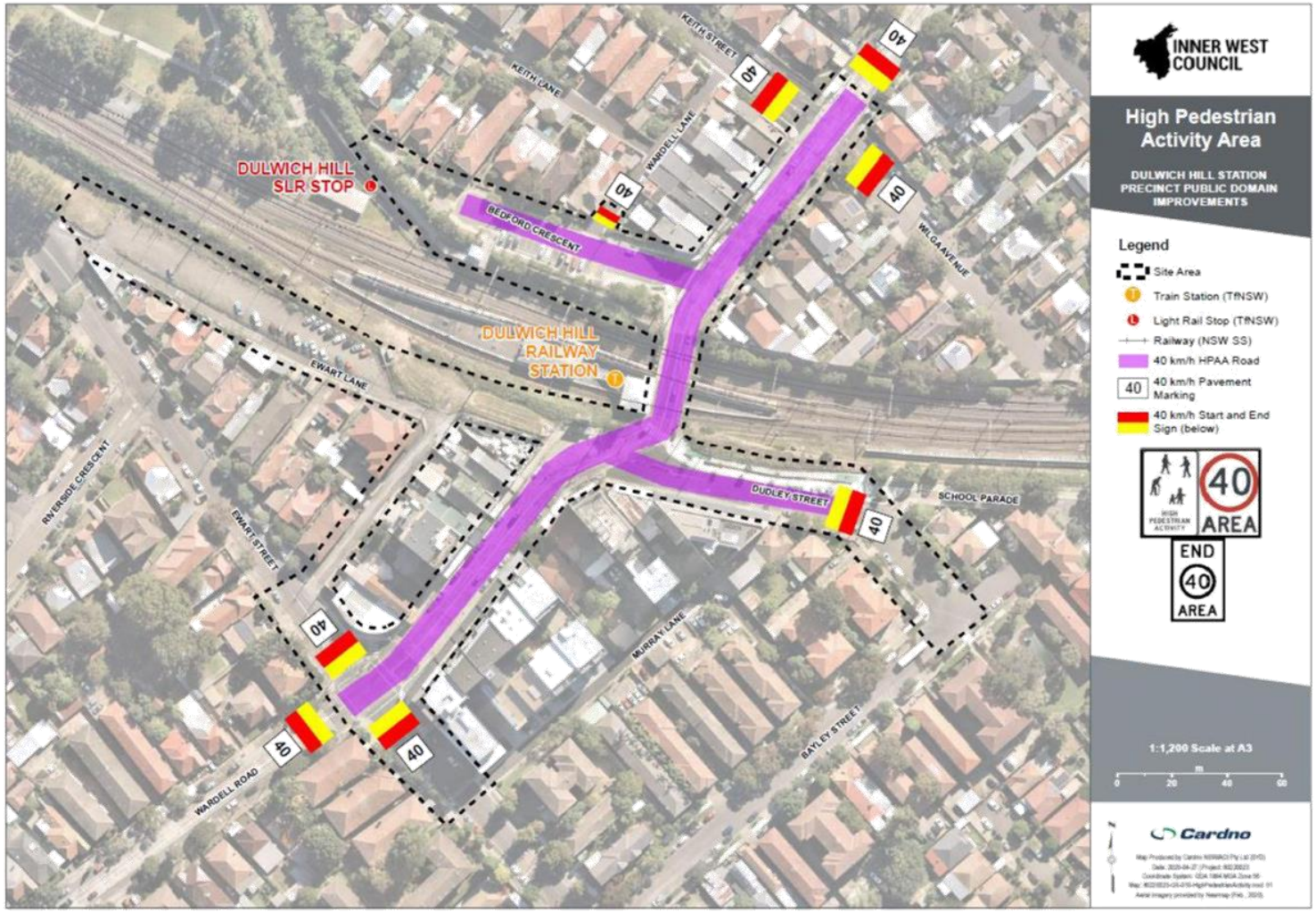
See **Figure 9-4** for a diagram of typical sign locations.

Figure 9-4 The typical position of speed signs at intersections



The indicative location for signage for the implementation of 40 km/hr HPAA is shown in **Figure 9-5**.The locations of these signs are indicative only, due to variance in the road environment.

Figure 9-5 Proposed HPAA zone and indicative location of signage



9.4 Summary statement

An HPAA scheme is proposed around the station precinct along Wardell Road, Dudley Street and Bedford Crescent with relevant signage to inform and remind drivers of the 40 km/hr to speed limit within the precinct. Traffic calming measures and new pedestrian facilities proposed by the masterplan supplement the 40 km/hr signage to create a self-enforcing speed limit environment and to further improve the safety of pedestrians.

APPENDIX A

TRAFFIC SURVEY RESULTS

Traffic Information Specialist

Location	Wardell Road	Duration	6:00 - 10:00
	Dubley Street		15:00 - 19:00
	Wardell Road		-
	-	Day/Date	Wednesday, 19 February 2020
Suburb	DULWICH HILL	Weather	-

All Vehicles Time Per 15 Mins	NORTH Wardell Road											EAST Dubley Street										
	L			T			R					L			T			R				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL
6:00 - 6:15	0	0	0	20	2	22				22	14	2	1	3				0	1	1	4	6	107	7	114
6:15 - 6:30	0	0	0	35	0	35				35	14	1	1	2				6	0	6	8	7	180	3	183
6:30 - 6:45	1	0	1	32	1	33				34	34	3	0	3				5	0	5	8	13	202	4	206
6:45 - 7:00	2	0	2	36	1	37				39	35	2	2	4				3	0	3	7	19	204	13	217
7:00 - 7:15	1	0	1	54	0	54				55	50	2	0	2				3	1	4	6	25	219	6	225
7:15 - 7:30	2	1	3	63	0	63				66	62	6	1	7				4	0	4	11	26	240	5	245
7:30 - 7:45	3	0	3	61	0	61				64	80	13	0	13				2	0	2	15	33	245	1	246
7:45 - 8:00	2	0	2	69	5	74				76	104	9	1	10				2	0	2	12	49	237	9	246
8:00 - 8:15	5	0	5	75	0	75				80	119	14	0	14				8	0	8	22	52	242	5	247
8:15 - 8:30	1	0	1	97	1	98				99	155	11	1	12				7	0	7	19	59	242	4	246
8:30 - 8:45	8	0	8	74	5	79				87	85	6	0	6				4	0	4	10	40	264	7	271
8:45 - 9:00	2	0	2	86	2	88				90	52	5	2	7				1	0	1	8	23	259	7	266
9:00 - 9:15	9	0	9	83	1	84				93	53	4	0	4				3	0	3	7	16	261	2	263
9:15 - 9:30	2	0	2	78	2	80				82	32	4	1	5				1	0	1	6	21	240	5	245
9:30 - 9:45	5	0	5	55	2	57				62	33	12	2	14				5	0	5	19	11	195	7	202
9:45 - 10:00	2	0	2	53	2	55				57	10	15	1	16				3	0	3	19	21	188	7	195
Period End	45	1	46	971	24	995				1041	932	109	13	122				57	2	59	181	421	3525	92	3617
15:00 - 15:15	7	0	7	149	6	155				162	37	18	0	18				7	0	7	25	9	285	9	294
15:15 - 15:30	4	0	4	186	5	191				195	76	6	2	8				2	0	2	10	24	307	11	318
15:30 - 15:45	5	0	5	155	4	159				164	48	8	4	12				1	0	1	13	15	264	9	273
15:45 - 16:00	7	0	7	152	5	157				164	63	13	1	14				3	0	3	17	16	281	9	290
16:00 - 16:15	3	0	3	147	0	147				150	30	13	0	13				4	0	4	17	6	264	5	269
16:15 - 16:30	6	0	6	184	2	186				192	40	10	2	12				6	0	6	18	19	291	6	297
16:30 - 16:45	7	0	7	201	5	206				213	44	8	2	10				3	0	3	13	18	316	8	324
16:45 - 17:00	9	0	9	170	2	172				181	45	7	0	7				6	0	6	13	26	313	5	318
17:00 - 17:15	10	0	10	190	3	193				203	59	7	1	8				2	0	2	10	28	315	6	321
17:15 - 17:30	7	0	7	187	6	193				200	65	8	1	9				4	0	4	13	30	279	7	286
17:30 - 17:45	7	1	8	210	2	212				220	36	11	1	12				6	0	6	18	19	354	6	360
17:45 - 18:00	7	0	7	191	3	194				201	95	13	1	14				9	0	9	23	39	351	5	356
18:00 - 18:15	7	0	7	158	1	159				166	86	14	0	14				2	0	2	16	30	297	3	300
18:15 - 18:30	4	0	4	179	3	182				186	66	6	2	8				1	0	1	9	26	291	7	298
18:30 - 18:45	2	0	2	145	1	146				148	43	7	1	8				8	0	8	16	21	261	2	263
18:45 - 19:00	8	0	8	136	3	139				147	64	10	2	12				9	0	9	21	42	285	6	291
Period End	100	1	101	2740	51	2791				2892	897	159	20	179				73	0	73	252	368	4754	104	4858

All Vehicles Time Per 15 Mins	SOUTH Wardell Road											WEST -										
	L			T			R					L			T			R				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL
6:00 - 6:15				83	2	85	2	1	3	88	0												107	7	114
6:15 - 6:30				137	2	139	1	0	1	140	0												180	3	183
6:30 - 6:45				155	2	157	6	1	7	164	0												202	4	206
6:45 - 7:00				160	9	169	1	1	2	171	0												204	13	217
7:00 - 7:15				157	4	161	2	1	3	164	1												219	6	225
7:15 - 7:30				161	2	163	4	1	5	168	0												240	5	245
7:30 - 7:45				164	0	164	2	1	3	167	0												245	1	246
7:45 - 8:00				149	2	151	6	1	7	158	0												237	9	246
8:00 - 8:15				139	3	142	1	2	3	145	0												242	5	247
8:15 - 8:30				125	1	126	1	1	2	128	0												242	4	246
8:30 - 8:45				166	1	167	6	1	7	174	0												264	7	271
8:45 - 9:00				161	2	163	4	1	5	168	0												259	7	266
9:00 - 9:15				157	0	157	5	1	6	163	0												261	2	263
9:15 - 9:30				147	2	149	8	0	8	157	0												240	5	245
9:30 - 9:45				112	1	113	6	2	8	121	1												195	7	202
9:45 - 10:00				109	3	112	6	1	7	119	0												188	7	195
Period End				2282	36	2318	61	16	77	2395	2												3525	92	3617
15:00 - 15:15				101	2	103	3	1	4	107	0												285	9	294
15:15 - 15:30				104	3	107	5	1	6	113	0												307	11	318
15:30 - 15:45				93	0	93	2	1	3	96	0												264	9	273
15:45 - 16:00				103	2	105	3	1	4	109	0												281	9	290
16:00 - 16:15				95	3	98	2	2	4	102	0												264	5	269
16:15 - 16:30				81	0	81	4	2	6	87	0												291	6	297
16:30 - 16:45				97	0	97	0	1	1	98	0												316	8	324
16:45 - 17:00				114	2	116	7	1	8	124	0												313	5	318
17:00 - 17:15				101	1	102	5	1	6	108	0												315	6	321
17:15 - 17:30				70	0	70	3	0	3	73	0												279	7	286
17:30 - 17:45				115	1	116	5	1	6	122	0												354	6	360
17:45 - 18:00				122	0	122	9	1	10	132	0												351	5	356
18:00 - 18:15				113	2	115	3	0	3	118	0												297	3	300
18:15 - 18:30				97	1	98	4	1	5	103	0												291	7	298
18:30 - 18:45				97	0	97	2	0	2	99	0												261	2	263
18:45 - 19:00				115	0	115	7	1	8	123	0												285	6	291
Period End				1618	17	1635	64	15	79	1714	0												4754	104	4858

Traffic Information Specialist

Location	Wardell Road		Duration	6:00 - 10:00	
	Dubley Street			15:00 - 19:00	
	Wardell Road			-	
	-		Day/Date	Wednesday, 19 February 2020	
Suburb	DULWICH HILL		Weather	-	

All Vehicles Time Per Hour	NORTH Wardell Road											EAST Dubley Street										
	L			T			R					L			T			R				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL
6:00 - 7:00	3	0	3	123	4	127				130	97	8	4	12				14	1	15	27	45	693	27	720
6:15 - 7:15	4	0	4	157	2	159				163	133	8	3	11				17	1	18	29	64	805	26	831
6:30 - 7:30	6	1	7	185	2	187				194	181	13	3	16				15	1	16	32	83	865	28	893
6:45 - 7:45	8	1	9	214	1	215				224	227	23	3	26				12	1	13	39	103	908	25	933
7:00 - 8:00	8	1	9	247	5	252				261	296	30	2	32				11	1	12	44	133	941	21	962
7:15 - 8:15	12	1	13	268	5	273				286	365	42	2	44				16	0	16	60	160	964	20	984
7:30 - 8:30	11	0	11	302	6	308				319	458	47	2	49				19	0	19	68	193	966	19	985
7:45 - 8:45	16	0	16	315	11	326				342	463	40	2	42				21	0	21	63	200	985	25	1010
8:00 - 9:00	16	0	16	332	8	340				356	411	36	3	39				20	0	20	59	174	1007	23	1030
8:15 - 9:15	20	0	20	340	9	349				369	345	26	3	29				15	0	15	44	138	1026	20	1046
8:30 - 9:30	21	0	21	321	10	331				352	222	19	3	22				9	0	9	31	100	1024	21	1045
8:45 - 9:45	18	0	18	302	7	309				327	170	25	5	30				10	0	10	40	71	955	21	976
9:00 - 10:00	18	0	18	269	7	276				294	128	35	4	39				12	0	12	51	69	884	21	905
Period End																									
15:00 - 16:00	23	0	23	642	20	662				685	224	45	7	52				13	0	13	65	64	1137	38	1175
15:15 - 16:15	19	0	19	640	14	654				673	217	40	7	47				10	0	10	57	61	1116	34	1150
15:30 - 16:30	21	0	21	638	11	649				670	181	44	7	51				14	0	14	65	56	1100	29	1129
15:45 - 16:45	23	0	23	684	12	696				719	177	44	5	49				16	0	16	65	59	1152	28	1180
16:00 - 17:00	25	0	25	702	9	711				736	159	38	4	42				19	0	19	61	69	1184	24	1208
16:15 - 17:15	32	0	32	745	12	757				789	188	32	5	37				17	0	17	54	91	1235	25	1260
16:30 - 17:30	33	0	33	748	16	764				797	213	30	4	34				15	0	15	49	102	1223	26	1249
16:45 - 17:45	33	1	34	757	13	770				804	205	33	3	36				18	0	18	54	103	1261	24	1285
17:00 - 18:00	31	1	32	778	14	792				824	255	39	4	43				21	0	21	64	116	1299	24	1323
17:15 - 18:15	28	1	29	746	12	758				787	282	46	3	49				21	0	21	70	118	1281	21	1302
17:30 - 18:30	25	1	26	738	9	747				773	283	44	4	48				18	0	18	66	114	1293	21	1314
17:45 - 18:45	20	0	20	673	8	681				701	290	40	4	44				20	0	20	64	116	1200	17	1217
18:00 - 19:00	21	0	21	618	8	626				647	259	37	5	42				20	0	20	62	119	1134	18	1152
Period End																									

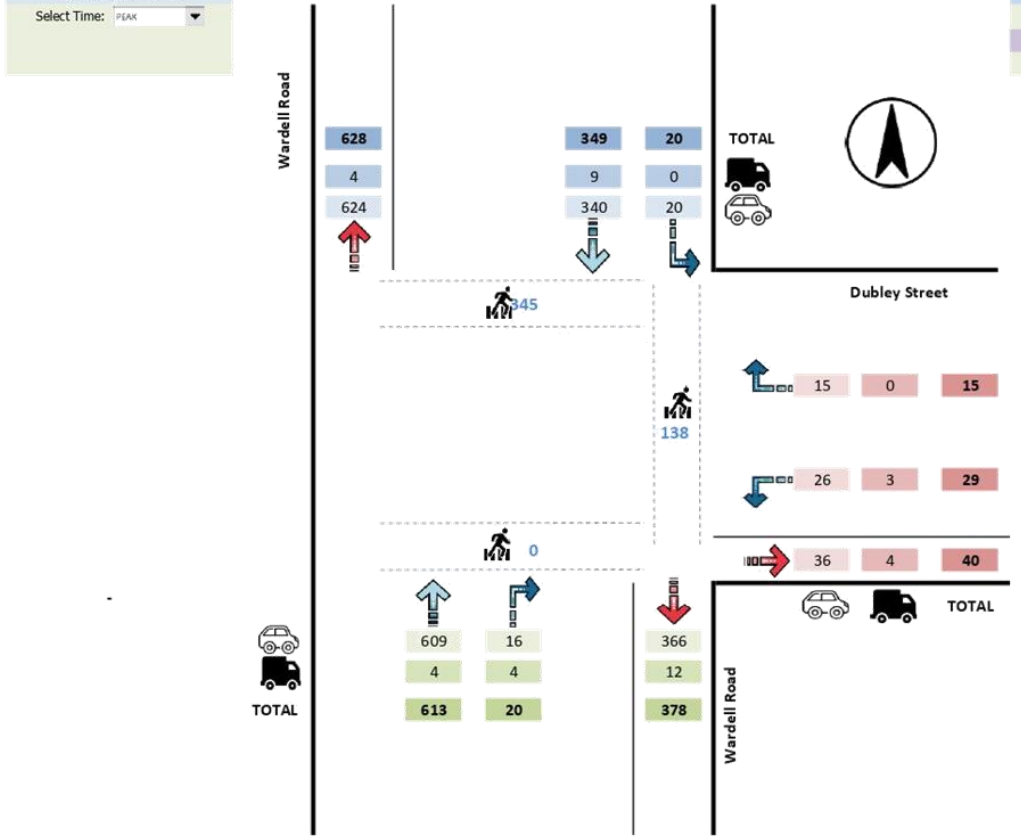
All Vehicles Time Per Hour	SOUTH Wardell Road											WEST -										
	L			T			R					L			T			R				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL
6:00 - 7:00				535	15	550	10	3	13	563	0												693	27	720
6:15 - 7:15				609	17	626	10	3	13	639	1												805	26	831
6:30 - 7:30				633	17	650	13	4	17	667	1												865	28	893
6:45 - 7:45				642	15	657	9	4	13	670	1												908	25	933
7:00 - 8:00				631	8	639	14	4	18	657	1												941	21	962
7:15 - 8:15				613	7	620	13	5	18	638	0												964	20	984
7:30 - 8:30				577	6	583	10	5	15	598	0												966	19	985
7:45 - 8:45				579	7	586	14	5	19	605	0												985	25	1010
8:00 - 9:00				591	7	598	12	5	17	615	0												1007	23	1030
8:15 - 9:15				609	4	613	16	4	20	633	0												1026	20	1046
8:30 - 9:30				631	5	636	23	3	26	662	0												1024	21	1045
8:45 - 9:45				577	5	582	23	4	27	609	1												955	21	976
9:00 - 10:00				525	6	531	25	4	29	560	1												884	21	905
Period End																									
15:00 - 16:00				401	7	408	13	4	17	425	0												1137	38	1175
15:15 - 16:15				395	8	403	12	5	17	420	0												1116	34	1150
15:30 - 16:30				372	5	377	11	6	17	394	0												1100	29	1129
15:45 - 16:45				376	5	381	9	6	15	396	0												1152	28	1180
16:00 - 17:00				387	5	392	13	6	19	411	0												1184	24	1208
16:15 - 17:15				393	3	396	16	5	21	417	0												1235	25	1260
16:30 - 17:30				382	3	385	15	3	18	403	0												1223	26	1249
16:45 - 17:45				400	4	404	20	3	23	427	0												1261	24	1285
17:00 - 18:00				408	2	410	22	3	25	435	0												1299	24	1323
17:15 - 18:15				420	3	423	20	2	22	445	0												1281	21	1302
17:30 - 18:30				447	4	451	21	3	24	475	0												1293	21	1314
17:45 - 18:45				429	3	432	18	2	20	452	0												1200	17	1217
18:00 - 19:00				422	3	425	16	2	18	443	0												1134	18	1152
Period End																									

tis Traffic Information Specialist

Location	Wardell Road	Duration	6:00 - 10:00
	Dubley Street		15:00 - 19:00
	Wardell Road		-
	-	Day/Date	Wednesday, 19 February 2020
Suburb	DULWICH HILL	Weather	-

DATA SELECTION
Select Time: PEAK

TIME RANGE
PEAK - AM
PEAK
8:15 - 9:15



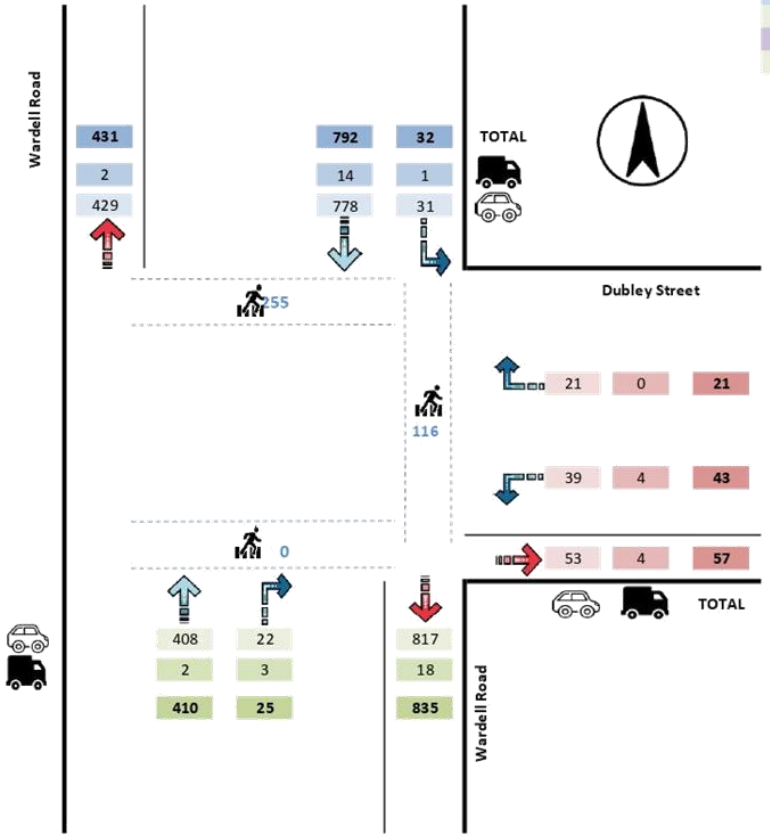
Traffic Information Specialist
ABN: 42 613 389 923
Email info@tistraffic.com.au

tis Traffic Information Specialist

Location	Wardell Road	Duration	6:00 - 10:00
	Dubley Street		15:00 - 19:00
	Wardell Road		-
	-	Day/Date	Wednesday, 19 February 2020
Suburb	DULWICH HILL	Weather	-

DATA SELECTION
Select Time: PEAK

TIME RANGE
PEAK - PM
PEAK
17:00 - 18:00



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Traffic Information Specialist
ABN: 42 613 389 923
Email info@tistraffic.com.au

Traffic Information Specialist

Location	Wardell Road		Duration	6:00 - 10:00	
	Ewart Street			15:00 - 19:00	
	Wardell Road			-	
	Ewart Street		Day/Date	Wednesday, 19 February 2020	
Suburb	DULWICH HILL		Weather	-	

All Vehicles Time Per 15 Mins	NORTH EAST *Wardell Road*											EAST *Ewart Street*											
	L			T			R					L			T			R					TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	TOTAL
6:00 - 6:15	4	0	4	20	4	24	7	0	7	35	1	5	0	5	12	0	12	5	0	5	22	5	212	9	221
6:15 - 6:30	6	1	7	26	0	26	2	0	2	35	0	9	0	9	10	0	10	2	0	2	21	2	270	5	275
6:30 - 6:45	5	1	6	28	2	30	2	1	3	39	4	6	0	6	25	0	25	5	0	5	36	3	292	17	309
6:45 - 7:00	4	0	4	49	0	49	6	0	6	59	3	5	0	5	20	0	20	4	0	4	29	9	302	6	292
7:00 - 7:15	2	0	2	51	1	52	5	0	5	59	3	5	1	6	26	0	26	4	0	4	36	10	304	9	313
7:15 - 7:30	10	0	10	56	0	56	6	0	6	72	6	11	1	12	57	1	58	5	0	5	75	6	380	5	385
7:30 - 7:45	7	0	7	64	4	68	11	0	11	86	1	6	0	6	39	0	39	6	0	6	51	15	397	8	405
7:45 - 8:00	6	1	7	70	1	71	8	0	8	86	2	8	1	9	56	0	56	8	0	8	73	15	390	9	399
8:00 - 8:15	12	0	12	76	1	77	13	0	13	102	0	16	1	17	64	2	66	9	0	9	92	16	441	8	449
8:15 - 8:30	12	0	12	66	2	68	13	1	14	94	3	6	0	6	50	1	51	12	0	12	69	6	408	8	416
8:30 - 8:45	13	0	13	75	5	80	11	0	11	104	3	10	1	11	44	2	46	5	0	5	62	6	425	12	437
8:45 - 9:00	8	0	8	65	2	67	7	0	7	82	7	13	1	14	50	0	50	16	0	16	80	7	400	8	408
9:00 - 9:15	10	0	10	60	2	62	7	0	7	79	9	17	1	18	35	0	35	5	0	5	58	8	365	4	369
9:15 - 9:30	10	1	11	48	3	51	9	0	9	71	6	11	0	11	31	0	31	3	0	3	45	8	283	12	295
9:30 - 9:45	7	0	7	55	3	58	17	0	17	82	1	12	0	12	35	1	36	5	0	5	53	3	312	11	323
9:45 - 10:00	5	0	5	45	2	47	7	1	8	60	6	8	0	8	27	0	27	3	0	3	38	3	243	6	249
Period End	121	4	125	854	32	886	131	3	134	1145	55	148	7	155	581	7	588	97	0	97	840	122	5424	137	5545
15:00 - 15:15	6	2	8	179	6	185	22	0	22	215	3	32	2	34	47	0	47	16	1	17	98	8	456	14	470
15:15 - 15:30	2	0	2	124	7	131	13	0	13	146	2	28	0	28	60	0	60	6	0	6	94	13	384	8	392
15:30 - 15:45	8	0	8	161	9	170	21	0	21	199	3	23	0	23	61	3	64	7	0	7	94	8	461	15	476
15:45 - 16:00	7	0	7	139	1	140	11	0	11	158	5	25	1	26	49	0	49	6	0	6	81	8	400	7	407
16:00 - 16:15	8	1	9	153	3	156	13	0	13	178	4	29	0	29	47	2	49	6	0	6	84	7	400	10	410
16:15 - 16:30	10	0	10	172	6	178	16	1	17	205	4	25	0	25	62	1	63	6	0	6	94	9	436	9	445
16:30 - 16:45	7	0	7	170	3	173	11	0	11	191	4	22	1	23	59	0	59	9	0	9	91	3	483	7	490
16:45 - 17:00	9	0	9	158	2	160	16	1	17	186	4	21	0	21	72	2	74	8	0	8	103	10	465	7	472
17:00 - 17:15	10	0	10	162	9	171	18	0	18	199	4	31	0	31	83	0	83	4	0	4	118	13	473	9	482
17:15 - 17:30	9	0	9	171	2	173	11	0	11	193	10	29	0	29	79	0	79	8	0	8	116	18	483	4	487
17:30 - 17:45	18	0	18	172	5	177	24	0	24	219	4	20	0	20	78	0	78	20	0	20	118	23	526	6	532
17:45 - 18:00	12	0	12	143	3	146	8	0	8	166	4	24	0	24	83	0	83	11	0	11	118	16	487	5	492
18:00 - 18:15	14	0	14	144	5	149	13	0	13	176	5	16	0	16	71	0	71	8	0	8	95	9	442	6	448
18:15 - 18:30	13	0	13	139	1	140	14	0	0	153	1	12	0	12	56	0	56	10	0	10	78	7	405	2	393
18:30 - 18:45	6	0	6	120	4	124	15	0	15	145	5	20	1	21	53	0	53	9	0	9	83	14	409	6	415
18:45 - 19:00	10	0	10	90	4	94	11	0	11	115	4	22	0	22	37	1	38	7	0	7	67	8	322	9	331
Period End	149	3	152	2397	70	2467	237	2	225	2844	66	379	5	384	997	9	1006	141	1	142	1532	174	7032	124	7142

All Vehicles Time Per 15 Mins	SOUTH WEST *Wardell Road*											WEST *Ewart Street*											
	L			T			R					L			T			R					TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	TOTAL
6:00 - 6:15	1	0	1	112	3	115	0	1	1	117	1	9	0	9	36	1	37	1	0	1	47	4	212	9	221
6:15 - 6:30	8	1	9	148	3	151	0	0	0	160	0	11	0	11	40	0	40	8	0	8	59	4	270	5	275
6:30 - 6:45	1	0	1	148	10	158	0	1	1	160	2	12	0	12	52	1	53	8	1	9	74	12	292	17	309
6:45 - 7:00	7	0	7	135	6	141	3	0	3	151	3	16	0	0	45	0	45	8	0	8	53	8	302	6	292
7:00 - 7:15	4	0	4	142	5	147	0	0	0	151	1	12	0	12	46	2	48	7	0	7	67	9	304	9	313
7:15 - 7:30	4	0	4	147	1	148	0	0	0	152	3	23	0	23	52	2	54	9	0	9	86	21	380	5	385
7:30 - 7:45	2	0	2	141	2	143	0	1	1	146	3	25	0	25	87	1	88	9	0	9	122	7	397	8	405
7:45 - 8:00	4	0	4	104	5	109	0	0	0	113	9	26	0	26	90	1	91	10	0	10	127	3	390	9	399
8:00 - 8:15	6	0	6	80	3	83	1	0	1	90	2	42	0	42	109	1	110	13	0	13	165	14	441	8	449
8:15 - 8:30	5	0	5	109	2	111	1	0	1	117	1	42	0	42	77	2	79	15	0	15	136	13	408	8	416
8:30 - 8:45	2	0	2	131	1	132	0	0	0	134	3	27	1	28	91	2	93	16	0	16	137	11	425	12	437
8:45 - 9:00	5	0	5	131	2	133	0	0	0	138	4	23	0	23	76	2	78	6	1	7	108	7	400	8	408
9:00 - 9:15	8	0	8	142	0	142	0	0	0	150	0	11	1	12	60	0	60	10	0	10	82	10	365	4	369
9:15 - 9:30	6	1	7	93	4	97	0	0	0	104	0	16	1	17	47	1	48	9	1	10	75	8	283	12	295
9:30 - 9:45	4	0	4	108	1	109	0	0	0	113	1	18	1	19	42	3	45	9	2	11	75	5	312	11	323
9:45 - 10:00	3	0	3	93	2	95	0	0	0	98	4	17	1	18	27	0	27	8	0	8	53	7	243	6	249
Period End	70	2	72	1964	50	2014	5	3	8	2094	37	330	5	319	977	19	996	146	5	151	1466	143	5424	137	5545
15:00 - 15:15	3	0	3	83	3	86	0	0	0	89	1	11	0	11	34	0	34	23	0	23	68	10	456	14	470
15:15 - 15:30	5	0	5	76	1	77	0	0	0	82	6	6	0	6	39	0	39	25	0	25	70	3	384	8	392
15:30 - 15:45	5	0	5	95	2	97	0	0	0	102	5	10	0	10	49	1	50	21	0	21	81	4	461	15	476
15:45 - 16:00	4	0	4	79	3	82	0	0	0	86	1	18	1	19	38	1	39	24	0	24	82	5	400	7	407
16:00 - 16:15	7	0	7	61	4	65	0	0	0	72	11	16	0	16	40	0	40	20	0	20	76	23	400	10	410
16:15 - 16:30	3	0	3	69	1	70	0	0	0	73	1	9	0	9	41	0	41	23	0	23	73	4	436	9	445
16:30 - 16:45	5	0	5	109	3	112	0	0	0	117	1	19	0	19	46	0	46	26	0	26	91	6	483	7	490
16:45 - 17:00	8	0	8	81	2	83	0	0	0	91	2	10	0	10	55	0	55	27	0	27	92	10	465	7	472
17:00 - 17:15	5	0	5	75	0	75	0	0	0	80	1	10	0	10	55	0	55	20	0	20	85	9	473	9	482
17:15 - 17:30	7	0	7	84	2	86	1	0	1	94	8	19	0	19	44	0	44	21	0	21	84	26	483	4	487
17:30 - 17:45	2	0	2	102	0	102	0	0	0	104	2	16	1	17	57	0	57	17	0	17	91	10	526	6	532
17:45 - 18:00	3	0	3	94	2	96	1	0	1	100	6	12	0	12	62	0	62	34	0	34	108	12	487	5	492
18:00 - 18:15	7	0	7	84	1	85	0	0	0	92	1	18	0	18	43	0	43	24	0	24	85	18	442	6	448
18:15 - 18:30	5	0	5	77	1	78	0	0	0	83	1	14	0	14	42	0	42	23	0	23	79	15	405	2	393
18:30 - 18:45	3	0	3	91	1	92	0	0	0	95	0	27	0	27	47	0	47	18	0	18	92	13	409	6	415
18:45 - 19:00	8	0	8	72	2	74	0	0	0	82	0	10	0	10	40	2	42	15	0	15	67	11	322	9	331
Period End	80	0	80	1332	28	1360	2	0	2	1442	47	225	2	227	732	4	736	361	0	361	1324	179	7032	124	7142

Traffic Information Specialist

Location	Wardell Road		Duration	6:00 - 10:00	
	Ewart Street			15:00 - 19:00	
	Wardell Road			-	
	Ewart Street		Day/Date	Wednesday, 19 February 2020	
Suburb	DULWICH HILL		Weather	-	

All Vehicles Time Per Hour	NORTH EAST *Wardell Road*											EAST *Ewart Street*											
	L			T			R					L			T			R					
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL
6:00 - 7:00	19	2	21	123	6	129	17	1	18	168	8	25	0	25	67	0	67	16	0	16	108	19	1076	37	1097
6:15 - 7:15	17	2	19	154	3	157	15	1	16	192	10	25	1	26	81	0	81	15	0	15	122	24	1168	37	1189
6:30 - 7:30	21	1	22	184	3	187	19	1	20	229	16	27	2	29	128	1	129	18	0	18	176	28	1278	37	1299
6:45 - 7:45	23	0	23	220	5	225	28	0	28	276	13	27	2	29	142	1	143	19	0	19	191	40	1383	28	1395
7:00 - 8:00	25	1	26	241	6	247	30	0	30	303	12	30	3	33	178	1	179	23	0	23	235	46	1471	31	1502
7:15 - 8:15	35	1	36	266	6	272	38	0	38	346	9	41	3	44	216	3	219	28	0	28	291	52	1608	30	1638
7:30 - 8:30	37	1	38	276	8	284	45	1	46	368	6	36	2	38	209	3	212	35	0	35	285	52	1636	33	1669
7:45 - 8:45	43	1	44	287	9	296	45	1	46	386	8	40	3	43	214	5	219	34	0	34	296	43	1664	37	1701
8:00 - 9:00	45	0	45	282	10	292	44	1	45	382	13	45	3	48	208	5	213	42	0	42	303	35	1674	36	1710
8:15 - 9:15	43	0	43	266	11	277	38	1	39	359	22	46	3	49	179	3	182	38	0	38	269	27	1598	32	1630
8:30 - 9:30	41	1	42	248	12	260	34	0	34	336	25	51	3	54	160	2	162	29	0	29	245	29	1473	36	1509
8:45 - 9:45	35	1	36	228	10	238	40	0	40	314	23	53	2	55	151	1	152	29	0	29	236	26	1360	35	1395
9:00 - 10:00	32	1	33	208	10	218	40	1	41	292	22	48	1	49	128	1	129	16	0	16	194	22	1203	33	1236
Period End																									
15:00 - 16:00	23	2	25	603	23	626	67	0	67	718	13	108	3	111	217	3	220	35	1	36	367	37	1701	44	1745
15:15 - 16:15	25	1	26	577	20	597	58	0	58	681	14	105	1	106	217	5	222	25	0	25	353	36	1645	40	1685
15:30 - 16:30	33	1	34	625	19	644	61	1	62	740	16	102	1	103	219	6	225	25	0	25	353	32	1697	41	1738
15:45 - 16:45	32	1	33	634	13	647	51	1	52	732	17	101	2	103	217	3	220	27	0	27	350	27	1719	33	1752
16:00 - 17:00	34	1	35	653	14	667	56	2	58	760	16	97	1	98	240	5	245	29	0	29	372	29	1784	33	1817
16:15 - 17:15	36	0	36	662	20	682	61	2	63	781	16	99	1	100	276	3	279	27	0	27	406	35	1857	32	1889
16:30 - 17:30	35	0	35	661	16	677	56	1	57	769	22	103	1	104	293	2	295	29	0	29	428	44	1904	27	1931
16:45 - 17:45	46	0	46	663	18	681	69	1	70	797	22	101	0	101	312	2	314	40	0	40	455	64	1947	26	1973
17:00 - 18:00	49	0	49	648	19	667	61	0	61	777	22	104	0	104	323	0	323	43	0	43	470	70	1969	24	1993
17:15 - 18:15	53	0	53	630	15	645	56	0	56	754	23	89	0	89	311	0	311	47	0	47	447	66	1938	21	1959
17:30 - 18:30	57	0	57	598	14	612	59	0	45	714	14	72	0	72	288	0	288	49	0	49	409	55	1860	19	1865
17:45 - 18:45	45	0	45	546	13	559	50	0	36	640	15	72	1	73	263	0	263	38	0	38	374	46	1743	19	1748
18:00 - 19:00	43	0	43	493	14	507	53	0	39	589	15	70	1	71	217	1	218	34	0	34	323	38	1578	23	1587
Period End																									

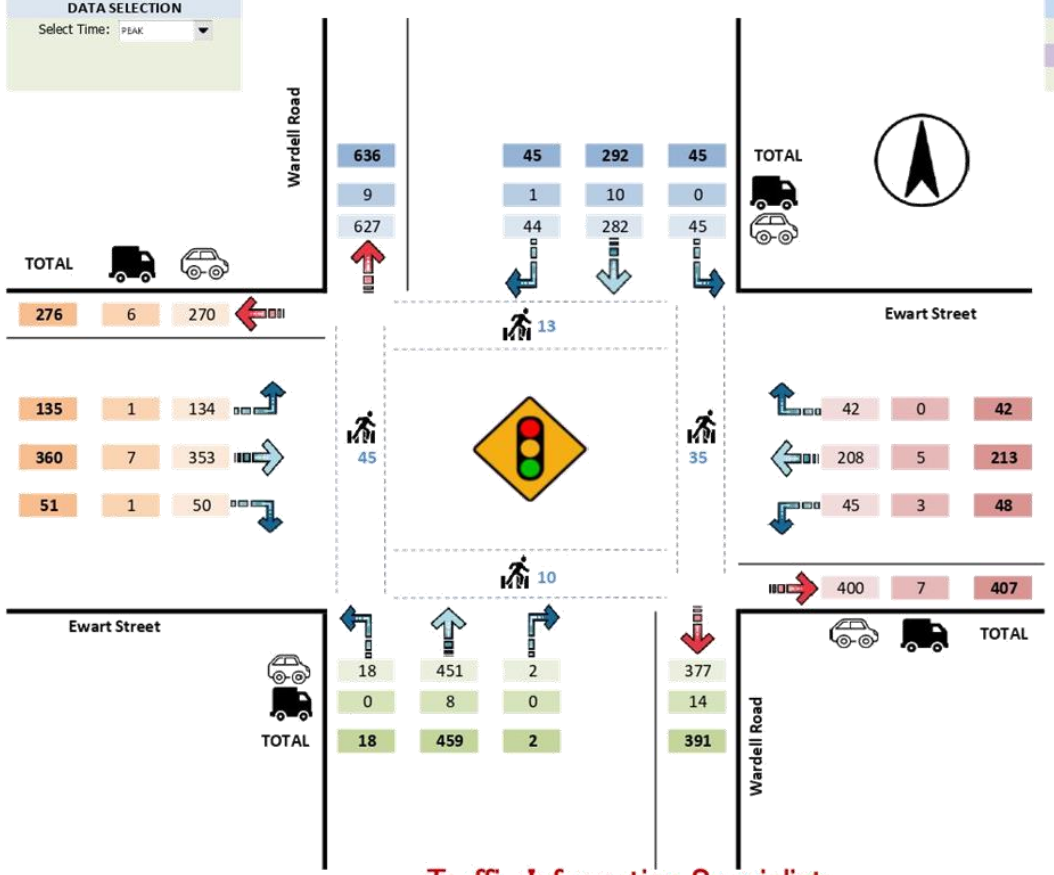
All Vehicles Time Per Hour	SOUTH WEST *Wardell Road*											WEST *Ewart Street*											
	L			T			R					L			T			R					
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL
6:00 - 7:00	17	1	18	543	22	565	3	2	5	588	6	48	0	32	173	2	175	25	1	26	233	28	1076	37	1097
6:15 - 7:15	20	1	21	573	24	597	3	1	4	622	6	51	0	35	183	3	186	31	1	32	253	33	1168	37	1189
6:30 - 7:30	16	0	16	572	22	594	3	1	4	614	9	63	0	47	195	5	200	32	1	33	280	50	1278	37	1299
6:45 - 7:45	17	0	17	565	14	579	3	1	4	600	10	76	0	60	230	5	235	33	0	33	328	45	1383	28	1395
7:00 - 8:00	14	0	14	534	13	547	0	1	1	562	16	86	0	86	275	6	281	35	0	35	402	40	1471	31	1502
7:15 - 8:15	16	0	16	472	11	483	1	1	2	501	17	116	0	116	338	5	343	41	0	41	500	45	1608	30	1638
7:30 - 8:30	17	0	17	434	12	446	2	1	3	466	15	135	0	135	363	5	368	47	0	47	550	37	1636	33	1669
7:45 - 8:45	17	0	17	424	11	435	2	0	2	454	15	137	1	138	367	6	373	54	0	54	565	41	1664	37	1701
8:00 - 9:00	18	0	18	451	8	459	2	0	2	479	10	134	1	135	353	7	360	50	1	51	546	45	1674	36	1710
8:15 - 9:15	20	0	20	513	5	518	1	0	1	539	8	103	2	105	304	6	310	47	1	48	463	41	1598	32	1630
8:30 - 9:30	21	1	22	497	7	504	0	0	0	526	7	77	3	80	274	5	279	41	2	43	402	36	1473	36	1509
8:45 - 9:45	23	1	24	474	7	481	0	0	0	505	5	68	3	71	225	6	231	34	4	38	340	30	1360	35	1395
9:00 - 10:00	21	1	22	436	7	443	0	0	0	465	5	62	4	66	176	4	180	36	3	39	285	30	1203	33	1236
Period End																									
15:00 - 16:00	17	0	17	333	9	342	0	0	0	359	13	45	1	46	160	2	162	93	0	93	301	22	1701	44	1745
15:15 - 16:15	21	0	21	311	10	321	0	0	0	342	23	50	1	51	166	2	168	90	0	90	309	35	1645	40	1685
15:30 - 16:30	19	0	19	304	10	314	0	0	0	333	18	53	1	54	168	2	170	88	0	88	312	36	1697	41	1738
15:45 - 16:45	19	0	19	318	11	329	0	0	0	348	14	62	1	63	165	1	166	93	0	93	322	38	1719	33	1752
16:00 - 17:00	23	0	23	320	10	330	0	0	0	353	15	54	0	54	182	0	182	96	0	96	332	43	1784	33	1817
16:15 - 17:15	21	0	21	334	6	340	0	0	0	361	5	48	0	48	197	0	197	96	0	96	341	29	1857	32	1889
16:30 - 17:30	25	0	25	349	7	356	1	0	1	382	12	58	0	58	200	0	200	94	0	94	352	51	1904	27	1931
16:45 - 17:45	22	0	22	342	4	346	1	0	1	369	13	55	1	56	211	0	211	85	0	85	352	55	1947	26	1973
17:00 - 18:00	17	0	17	355	4	359	2	0	2	378	17	57	1	58	218	0	218	92	0	92	368	57	1969	24	1993
17:15 - 18:15	19	0	19	364	5	369	2	0	2	390	17	65	1	66	206	0	206	96	0	96	368	66	1938	21	1959
17:30 - 18:30	17	0	17	357	4	361	1	0	1	379	10	60	1	61	204	0	204	98	0	98	363	55	1860	19	1865
17:45 - 18:45	18	0	18	346	5	351	1	0	1	370	8	71	0	71	194	0	194	99	0	99	364	58	1743	19	1748
18:00 - 19:00	23	0	23	324	5	329	0	0	0	352	2	69	0	69	172	2	174	80	0	80	323	57	1578	23	1587
Period End																									

Traffic Information Specialist

Location	Wardell Road	Duration	6:00 - 10:00
	Ewart Street		15:00 - 19:00
	Wardell Road		-
	Ewart Street	Day/Date	Wednesday, 19 February 2020
Suburb	DULWICH HILL	Weather	-

DATA SELECTION
Select Time: PEAK

TIME RANGE		
PEAK	-	AM
PEAK		
8:00	-	9:00



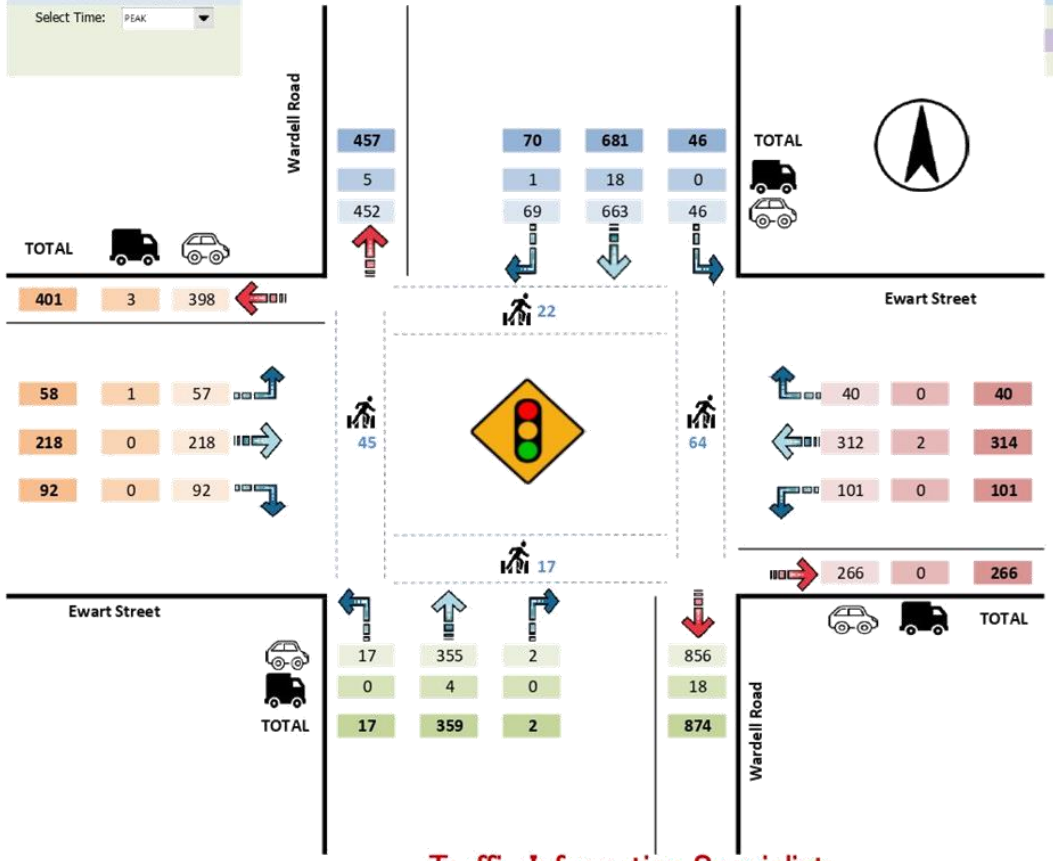
Traffic Information Specialists
ABN: 42 613 389 923
Email info@trafficinfospecialist.com.au

tis Traffic Information Specialist

Location	Wardell Road	Duration	6:00 - 10:00
	Ewart Street		15:00 - 19:00
	Wardell Road		-
	Ewart Street	Day/Date	Wednesday, 19 February 2020
Suburb	DULWICH HILL	Weather	-

DATA SELECTION
Select Time: PEAK

TIME RANGE		
PEAK	-	PM
PEAK		
17:00	-	18:00



Traffic Information Specialists
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Email info@trafficinfospecialist.com.au

APPENDIX B

SIDRA MODELLING OUTPUTS

MOVEMENT SUMMARY

▽ Site: 101 [Wardell Rd/ Dudley St]

Network: N101 [Network1]

2020 AM Base
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Dudley St (SE)														
21	L2	41	7.7	41	7.7	0.169	7.1	LOS A	0.2	1.6	0.69	0.82	0.69	36.9
23	R2	21	0.0	21	0.0	0.169	25.1	LOS B	0.2	1.6	0.69	0.82	0.69	41.7
Approach		62	5.1	62	5.1	0.169	13.2	LOS A	0.2	1.6	0.69	0.82	0.69	39.1
NorthEast: Wardell Rd (NE)														
24	L2	17	0.0	17	0.0	0.552	11.1	LOS A	2.0	14.0	0.72	0.88	1.12	44.8
25	T1	359	2.3	359	2.3	0.552	7.6	LOS A	2.0	14.0	0.72	0.88	1.12	41.3
Approach		376	2.2	376	2.2	0.552	7.7	NA	2.0	14.0	0.72	0.88	1.12	41.6
SouthWest: Wardell Rd (SW)														
31	T1	642	1.1	642	1.1	0.963	30.6	LOS C	10.6	75.5	0.95	2.12	3.61	29.4
32	R2	18	29.4	18	29.4	0.963	35.1	LOS C	10.6	75.5	0.95	2.12	3.61	28.6
Approach		660	1.9	660	1.9	0.963	30.7	NA	10.6	75.5	0.95	2.12	3.61	29.4
All Vehicles		1098	2.2	1098	2.2	0.963	21.8	NA	10.6	75.5	0.86	1.63	2.59	33.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Wardell Rd/ Ewart St]

Network: N101 [Network1]

2020 AM Base
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Ewart St (SE)														
21	L2	51	6.3	51	6.3	0.147	20.6	LOS B	2.1	15.5	0.60	0.58	0.60	39.8
22	T1	224	2.3	224	2.3	0.591	28.8	LOS C	5.0	35.5	0.80	0.70	0.80	35.4
23	R2	43	0.0	43	0.0	0.591	40.0	LOS C	5.0	35.5	0.91	0.77	0.91	25.2
Approach		318	2.6	318	2.6	0.591	29.0	LOS C	5.0	35.5	0.79	0.69	0.79	35.0
NorthEast: Wardell Rd(NE)														
24	L2	47	0.0	47	0.0	0.116	24.7	LOS B	1.6	11.5	0.66	0.63	0.66	32.8
25	T1	306	3.4	306	3.4	0.572	29.2	LOS C	7.9	57.2	0.86	0.73	0.86	29.8
26	R2	47	2.2	47	2.2	0.572	35.1	LOS C	7.9	57.2	0.89	0.74	0.89	29.0
Approach		401	2.9	401	2.9	0.572	29.3	LOS C	7.9	57.2	0.84	0.72	0.84	30.0
NorthWest: Ewart St (NW)														
27	L2	139	0.8	139	0.8	0.179	10.2	LOS A	1.3	9.3	0.51	0.62	0.51	39.9
28	T1	379	1.9	379	1.9	0.894	44.7	LOS D	13.1	93.3	0.90	1.01	1.19	30.8
29	R2	54	2.0	54	2.0	0.894	52.4	LOS D	13.1	93.3	0.93	1.04	1.24	29.9
Approach		572	1.7	572	1.7	0.894	37.1	LOS C	13.1	93.3	0.81	0.92	1.03	31.7
SouthWest: Wardell Rd (SW)														
30	L2	19	0.0	19	0.0	0.227	38.5	LOS C	2.4	17.0	0.85	0.69	0.85	33.6
31	T1	474	1.8	474	1.8	0.883	46.8	LOS D	13.0	92.3	0.97	1.00	1.20	22.1
32	R2	2	0.0	2	0.0	0.883	53.9	LOS D	13.0	92.3	0.99	1.06	1.27	29.7
Approach		495	1.7	495	1.7	0.883	46.5	LOS D	13.0	92.3	0.97	0.99	1.19	22.7
All Vehicles		1785	2.1	1785	2.1	0.894	36.5	LOS C	13.1	93.3	0.85	0.85	0.99	29.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P5	SouthEast Full Crossing	37	44.2	LOS E	0.1	0.1	0.94	0.94
P6	NorthEast Full Crossing	14	44.2	LOS E	0.0	0.0	0.94	0.94
P7	NorthWest Full Crossing	47	44.3	LOS E	0.1	0.1	0.94	0.94
P8	SouthWest Full Crossing	11	44.2	LOS E	0.0	0.0	0.94	0.94
All Pedestrians		108	44.2	LOS E			0.94	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

▽ Site: 101 [Wardell Rd/ Dudley St]

Network: N101 [Network1]

2020 PM Base
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Dudley St (SE)														
21	L2	44	9.5	44	9.5	0.604	32.1	LOS C	0.5	3.8	0.91	1.06	1.28	25.3
23	R2	22	0.0	22	0.0	0.604	44.2	LOS D	0.5	3.8	0.91	1.06	1.28	33.0
Approach		66	6.3	66	6.3	0.604	36.1	LOS C	0.5	3.8	0.91	1.06	1.28	28.6
NorthEast: Wardell Rd (NE)														
24	L2	34	3.1	34	3.1	0.988	43.5	LOS D	20.0	142.0	1.00	2.41	3.93	32.0
25	T1	803	1.8	803	1.8	0.988	40.0	LOS C	20.0	142.0	1.00	2.41	3.93	23.9
Approach		837	1.9	837	1.9	0.988	40.2	NA	20.0	142.0	1.00	2.41	3.93	24.4
SouthWest: Wardell Rd (SW)														
31	T1	444	0.5	444	0.5	0.584	4.9	LOS A	2.1	14.7	0.50	0.56	0.75	44.2
32	R2	27	11.5	27	11.5	0.584	19.7	LOS B	2.1	14.7	0.50	0.56	0.75	42.7
Approach		472	1.1	472	1.1	0.584	5.8	NA	2.1	14.7	0.50	0.56	0.75	44.1
All Vehicles		1375	1.8	1375	1.8	0.988	28.2	NA	20.0	142.0	0.82	1.71	2.71	29.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: CARDNO (QLD) PTY LTD | Processed: Friday, 24 April 2020 1:05:45 PM
Project: \\cardno.corp\global\AU\NSW\DirectoryStructure\Parramatta\Projects\802\FY20\023_Dulwich Hill Public Domain\Des-An\Traffic\SIDRA\Dulwich Hill PM Peak Base.sip8

MOVEMENT SUMMARY

Site: 101 [Wardell Rd/ Ewart St]

Network: N101 [Network1]

2020 PM Base
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Ewart St (SE)														
21	L2	109	0.0	109	0.0	0.197	24.1	LOS B	2.9	20.1	0.67	0.68	0.67	37.8
22	T1	340	0.0	340	0.0	0.792	36.5	LOS C	9.7	67.8	0.90	0.86	1.01	33.1
23	R2	45	0.0	45	0.0	0.792	43.6	LOS D	9.7	67.8	0.93	0.89	1.06	24.2
Approach		495	0.0	495	0.0	0.792	34.4	LOS C	9.7	67.8	0.85	0.82	0.94	33.4
NorthEast: Wardell Rd(NE)														
24	L2	54	0.0	54	0.0	0.200	22.3	LOS B	3.0	21.7	0.64	0.59	0.64	34.5
25	T1	727	2.7	727	2.8	0.891	34.8	LOS C	14.0	100.0	0.86	0.90	1.03	27.8
26	R2	66	0.0	66	0.0	0.891	42.6	LOS D	14.0	100.0	0.90	0.96	1.10	26.5
Approach		847	2.4	847	2.4	0.891	34.6	LOS C	14.0	100.0	0.85	0.89	1.01	28.1
NorthWest: Ewart St (NW)														
27	L2	59	1.8	59	1.8	0.175	17.2	LOS B	2.2	15.6	0.65	0.60	0.69	36.1
28	T1	229	0.0	229	0.0	0.877	35.2	LOS C	7.5	52.4	0.83	0.85	1.06	33.2
29	R2	97	0.0	97	0.0	0.877	58.3	LOS E	7.5	52.4	0.99	1.06	1.38	28.2
Approach		385	0.3	385	0.3	0.877	38.3	LOS C	7.5	52.4	0.84	0.87	1.08	31.9
SouthWest: Wardell Rd (SW)														
30	L2	18	0.0	18	0.0	0.086	20.6	LOS B	1.2	8.7	0.59	0.52	0.59	40.2
31	T1	367	1.1	367	1.1	0.373	18.8	LOS B	6.1	43.0	0.68	0.59	0.68	33.1
32	R2	2	0.0	2	0.0	0.373	23.9	LOS B	6.1	43.0	0.70	0.60	0.70	39.2
Approach		387	1.1	387	1.1	0.373	18.9	LOS B	6.1	43.0	0.68	0.59	0.68	33.7
All Vehicles		2115	1.2	2114[N1]	1.2	0.891	32.3	LOS C	14.0	100.0	0.82	0.81	0.95	31.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P5	SouthEast Full Crossing	74	44.3	LOS E	0.2	0.2	0.94	0.94
P6	NorthEast Full Crossing	23	44.2	LOS E	0.1	0.1	0.94	0.94
P7	NorthWest Full Crossing	60	44.3	LOS E	0.2	0.2	0.94	0.94
P8	SouthWest Full Crossing	18	44.2	LOS E	0.0	0.0	0.94	0.94
All Pedestrians		175	44.3	LOS E			0.94	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Organisation: CARDNO (QLD) PTY LTD | Processed: Friday, 24 April 2020 1:05:45 PM
Project: \\cardno.corp\global\AU\NSW\DirectoryStructure\Parramatta\Projects\802\FY20\023_Dulwich Hill Public Domain\Des-An\Traffic\SIDRA\Dulwich Hill PM Peak Base.sip8

MOVEMENT SUMMARY

Site: 101v [Wardell Rd/ Dudley St - Signalisation]

Network: N101 [Network Option 2 - Scramble Pedestrian]

AM Peak
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Dudley St (SE)														
21	L2	41	7.7	41	7.7	0.358	29.6	LOS C	1.1	7.9	0.96	0.75	0.96	27.8
23	R2	21	0.0	21	0.0	0.358	29.5	LOS C	1.1	7.9	0.96	0.75	0.96	35.1
Approach		62	5.1	62	5.1	0.358	29.6	LOS C	1.1	7.9	0.96	0.75	0.96	31.1
NorthEast: Wardell Rd (NE)														
24	L2	17	0.0	17	0.0	0.624	32.4	LOS C	9.2	65.8	0.87	0.76	0.87	35.8
25	T1	359	2.3	359	2.3	0.624	27.8	LOS B	9.2	65.8	0.87	0.76	0.87	28.4
Approach		376	2.2	376	2.2	0.624	28.0	LOS B	9.2	65.8	0.87	0.76	0.87	28.9
SouthWest: Wardell Rd (SW)														
31	T1	642	1.1	584	1.2	0.594	6.3	LOS A	6.1	43.1	0.37	0.34	0.37	43.6
32	R2	18	29.4	16	29.6	0.594	11.2	LOS A	6.1	43.1	0.37	0.34	0.37	41.7
Approach		660	1.9	601 N1	1.9	0.594	6.5	LOS A	6.1	43.1	0.37	0.34	0.37	43.6
All Vehicles		1098	2.2	1038 N1	2.3	0.624	15.7	LOS B	9.2	65.8	0.58	0.52	0.58	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P5	SouthEast Full Crossing	183	44.5	LOS E	0.5	0.5	0.95	0.95
P6	NorthEast Full Crossing	433	45.0	LOS E	1.2	1.2	0.96	0.96
P8	SouthWest Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
PD	Diagonal Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		721	44.8	LOS E			0.95	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Organisation: CARDNO (QLD) PTY LTD | Processed: Friday, 24 April 2020 1:13:53 PM
Project: \\cardno.corp\global\AU\NSW\DirectoryStructure\Parramatta\Projects\802\FY20\023_Dulwich Hill Public Domain\Des-An\Traffic\SIDRA

\Dulwich Hill AM Peak - Signalised(Wardell-Dudley).sip8

MOVEMENT SUMMARY

Site: 101v [Wardell Rd/ Dudley St - Signalisation]

Network: N101 [Option 1 - Scramble Pedestrian]

PM Peak
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Dudley St (SE)														
21	L2	44	9.5	44	9.5	0.533	35.0	LOS C	1.5	10.9	0.98	0.78	1.03	25.7
23	R2	22	0.0	22	0.0	0.533	34.9	LOS C	1.5	10.9	0.98	0.78	1.03	33.4
Approach		66	6.3	66	6.3	0.533	35.0	LOS C	1.5	10.9	0.98	0.78	1.03	29.0
NorthEast: Wardell Rd (NE)														
24	L2	34	3.1	34	3.1	0.789	24.6	LOS B	18.3	130.5	0.80	0.73	0.80	38.8
25	T1	803	1.8	803	1.8	0.789	20.0	LOS B	18.3	130.5	0.80	0.73	0.80	32.3
Approach		837	1.9	837	1.9	0.789	20.2	LOS B	18.3	130.5	0.80	0.73	0.80	32.7
SouthWest: Wardell Rd (SW)														
31	T1	444	0.5	444	0.5	0.684	16.1	LOS B	9.0	63.4	0.68	0.61	0.68	36.4
32	R2	27	11.5	27	11.5	0.684	20.8	LOS B	9.0	63.4	0.68	0.61	0.68	35.4
Approach		472	1.1	472	1.1	0.684	16.4	LOS B	9.0	63.4	0.68	0.61	0.68	36.4
All Vehicles		1375	1.8	1375	1.8	0.789	19.6	LOS B	18.3	130.5	0.77	0.69	0.77	33.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P5	SouthEast Full Crossing	122	44.4	LOS E	0.3	0.3	0.94	0.94
P6	NorthEast Full Crossing	268	44.7	LOS E	0.7	0.7	0.95	0.95
P8	SouthWest Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
PD	Diagonal Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		496	44.5	LOS E			0.95	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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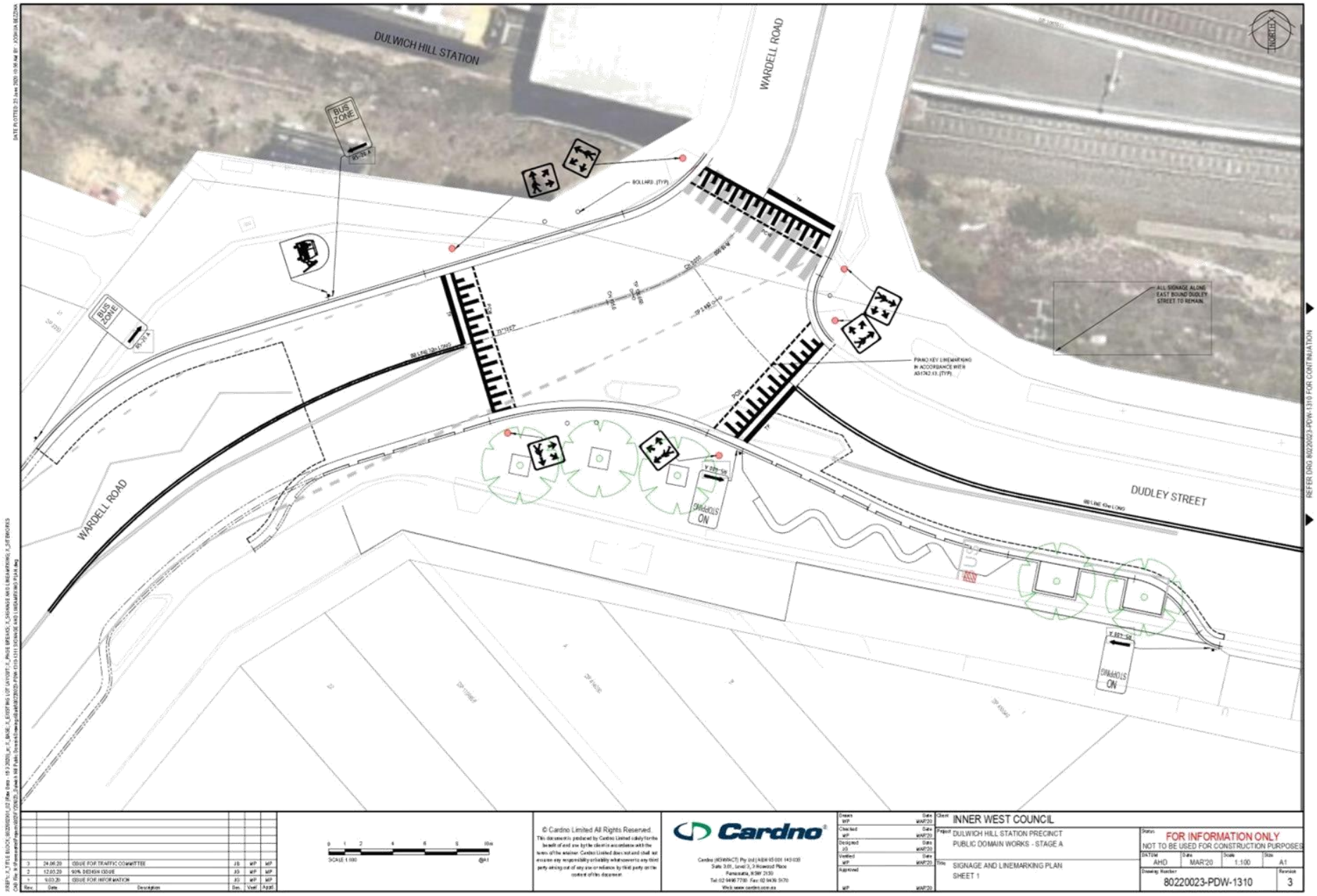
Project: \\cardno.corp\global\AU\NSW\DirectoryStructure\Parramatta\Projects\802\FY20\023_Dulwich Hill Public Domain\Des-An\Traffic\SIDRA \Dulwich Hill PM Peak Base -Signalised(Wardell-Dudley).sip8


DULWICH HILL STATION
WARDELL ROAD
BUS ZONE
BOLLARD (TYP)
ALL SIGNAGE ALONG EAST BOUND DUDLEY STREET TO REMAIN
DUDLEY STREET
WARDELL ROAD
SHADOWS ON
SHADOWS ON
REFER DRG 80220023-PDW-1310 FOR CONTINUATION
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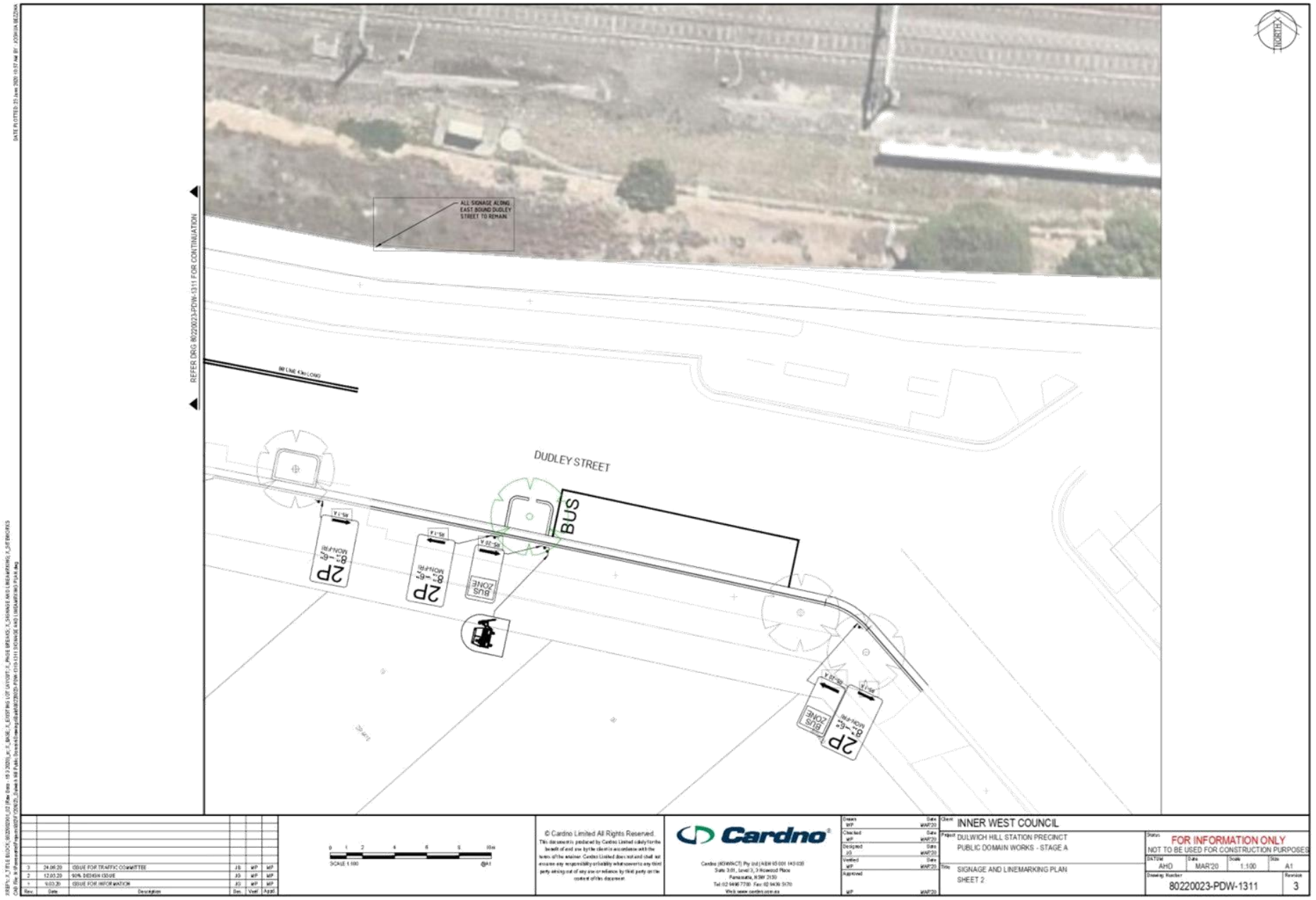
Cardno
INNER WEST COUNCIL
DULWICH HILL STATION PRECINCT
PUBLIC DOMAIN WORKS - STAGE A
SIGNAGE AND LINEMARKING PLAN
SHEET 1
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES
80220023-PDW-1310
3
ISSUE FOR TRAFFIC COMMITTEE
90% DESIGN ISSUE
ISSUE FOR INFORMATION


ALL SIGNAGE ALONG EAST BOUND DUDLEY STREET TO REMAIN
REFER DRG 80220023-PDW-1311 FOR CONTINUATION
DUDLEY STREET
BUS
2P
BUS ZONE
NORTH
INNER WEST COUNCIL
DULWICH HILL STATION PRECINCT
PUBLIC DOMAIN WORKS - STAGE A
SIGNAGE AND LINEMARKING PLAN
SHEET 2
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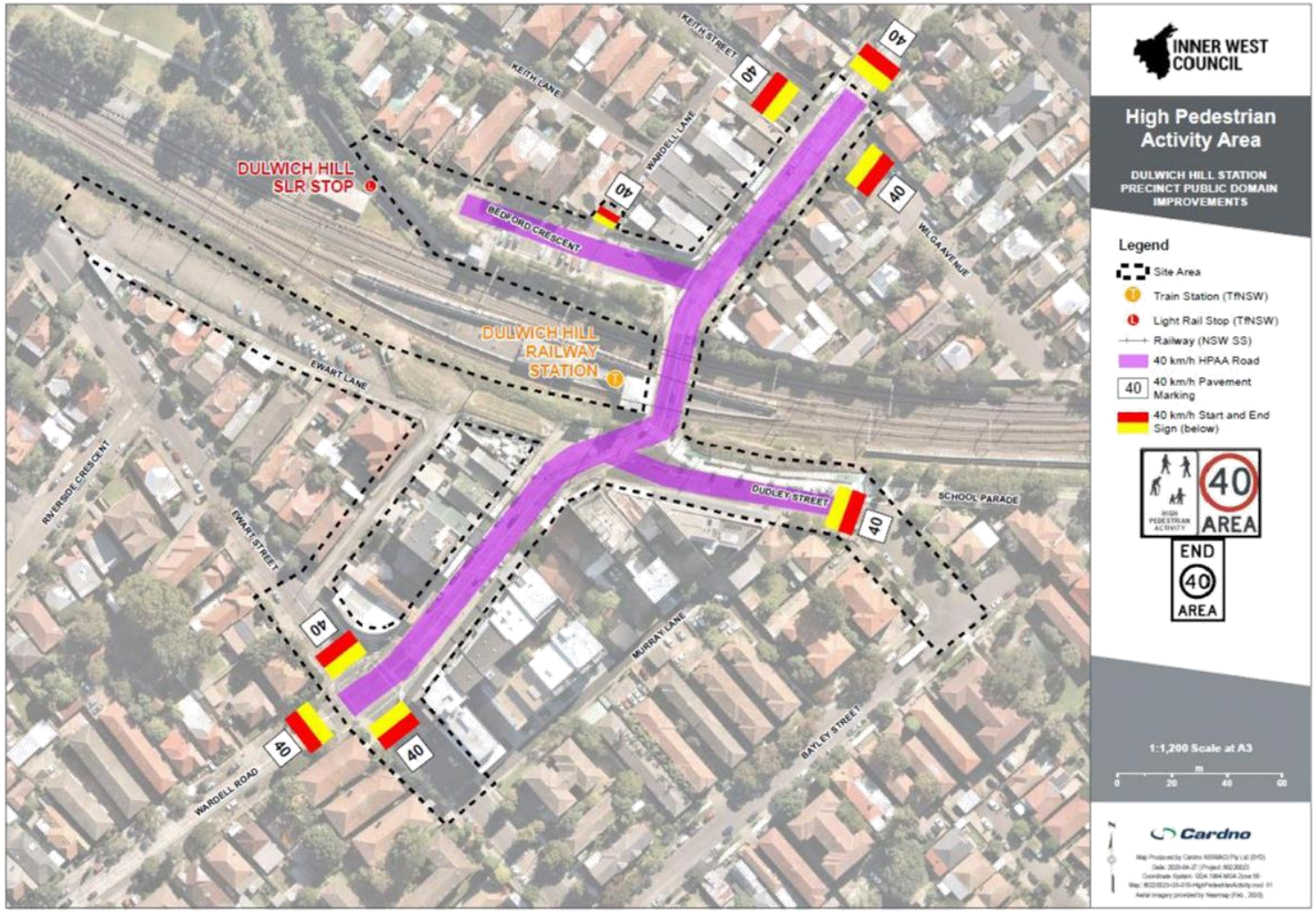
Attachment 3 Proposed HPAA zone and indicative location of signage



Item No: **LTC0720 Item 8**

Subject: **FLOOD STREET, LEICHHARDT - ROAD OCCUPANCY (GULGADYA WARD/ BALMAIN ELECTORATE/ LEICHHARDT PAC)**

Prepared By: Vinoth Srinivasan - Engineer - Traffic and Parking Services

Authorised By: David Yu - Acting Coordinator Traffic Engineer Services (North)

SUMMARY

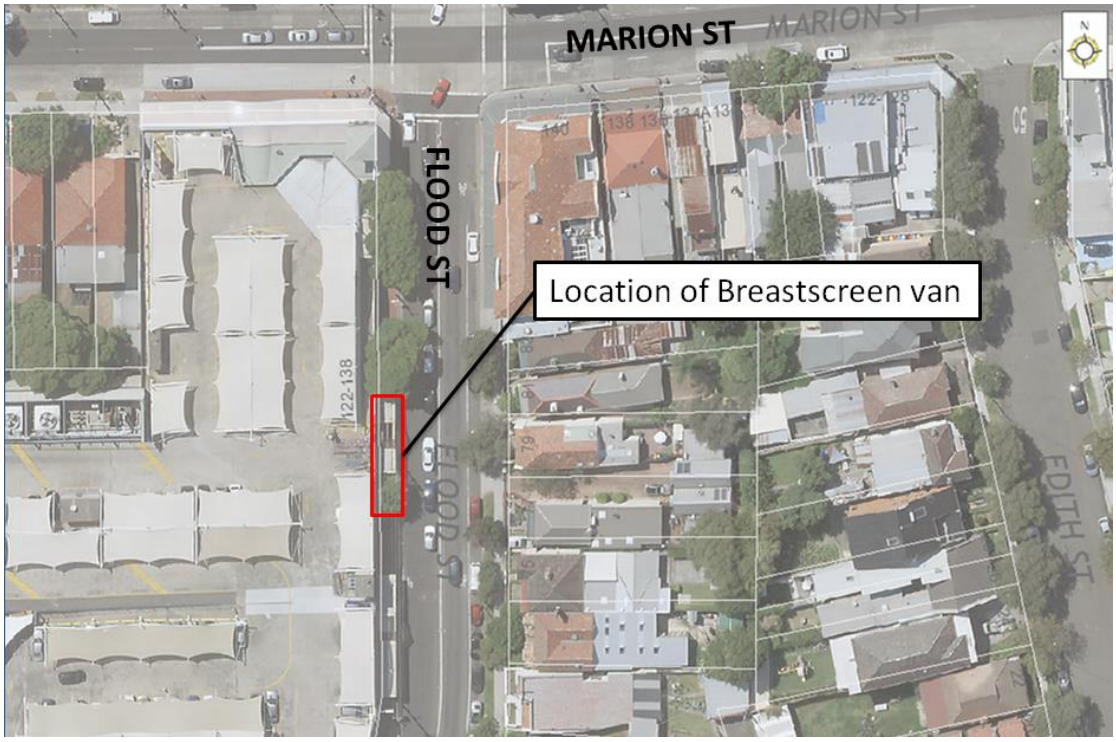
This report considers a request received from BreastScreen NSW for the temporary placement of their mobile lab unit on the western side of Flood Street adjacent to Leichhardt Market Place within the existing 'Taxi Zone', for the duration of eight (8) weeks starting from Friday, 7 August to Saturday, 3 October 2020.

RECOMMENDATION

THAT the road occupancy for the BreastScreen NSW mobile lab unit on the western side of Flood Street, adjacent to Leichhardt Market Place within the existing 'Taxi Zone', for the duration of eight (8) weeks starting from Friday, 7 August to Saturday, 3 October 2020 be supported.

BACKGROUND & OTHER STAFF COMMENTS

BreastScreen NSW has requested approval to locate a mobile lab unit on the western side of Flood Street, adjacent to Leichhardt Market Place within the existing 'Taxi Zone' for the duration of eight (8) weeks from Friday, 7 August to Saturday, 3 October 2020. The mobile lab unit will operate for screening from 8.45am to 4.00pm Monday to Friday. This location has been used in previous years with concurrence from the NSW Taxi Council and would not affect any businesses, see proposed location below:



Note that the applicant has been requested to provide a copy of their public risk insurance.

FINANCIAL IMPLICATIONS

Nil.

ATTACHMENTS

Nil.

Item No: **LTC0720 Item 9**

Subject: **SEVEN BRIDGES WALK - SPECIAL EVENT (GULGADGA - LEICHHARDT & BALUDARRI - BALMAIN WARD/ BALMAIN ELECTORATE/ LEICHHARDT PAC)**

Prepared By: Vinoth Srinivasan - Engineer - Traffic and Parking Services

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

SUMMARY

The Cancer Council NSW Seven Bridges Walk event will be held on Sunday, 25 October 2020 at various locations in Sydney, including areas within the Inner West Council. The Event is in its fifteenth year of operation and the applicant seeks approval again in 2020.

RECOMMENDATION

THAT the Cancer Council NSW Seven Bridges Walk to be held on Sunday, 25 October 2020 be approved, subject to a current Public Liability Insurance Policy which includes the Inner West Council being an interested party being submitted by the event organiser prior to the event.

BACKGROUND

The Cancer Council NSW Seven Bridges Walk concept was created and developed by the Pedestrian Council of Australia (PCA) who will remain the owner of the event. The PCA has engaged Mothership Events to deliver the Event Operations and manage the marketing of the Event on behalf of PCA. The Cancer Council NSW Seven Bridges Walk can be regarded as an active opportunity to further enhance the councils' and stakeholders' charter toward promoting walking as a healthy activity and as an increasingly important means of active transport. In addition, the event will provide a significant contribution to the Cancer Council NSW (CCNSW).

FINANCIAL IMPLICATIONS

All costs associated with the Seven Bridges Walk are funded by the event organisers.

OTHER STAFF COMMENTS

Event Details

The course of CCNSW Seven Bridges Walk will open at 7:00am, and close at 4:30pm and it is estimated that it may attract up to 15,000 participants. The walking route is approximately 27km in length and is a closed loop circuit that utilises pathways around the inner metropolitan region of Sydney that skirts the Sydney Harbour and includes the crossing of seven bridges. Special event buses will operate in both directions around the course and will be provided free of charge to everyone holding an ‘event passport’.

Event Overview

Event Name: Cancer Council NSW Seven Bridges Walk [www.7bridgeswalk.com.au]

Event Owner: Pedestrian Council of Australia Ltd (PCA)

Date: Sunday, 25 October 2020

Course Opens: 7:00am via one of the 6 Villages located around the course

Course Closes: 4:30pm

Participation Target: 12,000 people throughout the day (Maximum capacity of 15,000 walkers)

Course Description:
The walking route is approximately 27km in length and is a closed loop circuit that utilises pathways around the inner metropolitan region of Sydney that skirts the Sydney Harbour and includes the crossing of Seven Bridges.

The Seven Bridges are:

1. Sydney Harbour Bridge
2. Pyrmont Bridge
3. ANZAC Bridge
4. Iron Cove Bridge
5. Gladesville Bridge
6. Tarban Creek Bridge
7. Fig Tree Bridge

Village Locations:

Event 'Villages' are located around the course and will be used as check-in locations, First Aid points, drink stations, light catering and entertainment.

The 6 villages are:

1. Milsons Point Village (Burton Street at Alfred Street, Milsons Point)
2. Pyrmont Village (at Pyrmont Bay Park, Pirrama Rd, opposite The Star Casino)
3. Rozelle Village (at Waterfront Drive Sporting Ground - Callan Park)
4. Hunters Hill Village (at Hunters Hill Scout Hall, Durham St near the Church St overpass on Burns Bay Road, Hunters Hill)
5. Lane Cove Village (Blaxlands Corner – Central Park, William Edward St and Kenneth St, Lane Cove)
6. Wollstonecraft Village (at Brennan Park, Hazelbank St at King St, Wollstonecraft)

Impact on the Inner West LGA

The route through the Inner West LGA is via:

- ANZAC Bridge to Victoria Road
- Pedestrian bridge over Victoria Road
- Lilyfield Road
- Burt Street
- Denison Street
- Cheltenham Street
- O'Neill Street
- Cecily Street
- Through Callan Park to King George Park
- Byrnes Street to Victoria Road

Traffic and Pedestrian Management Plan (TMP)

This event does not require closure of any roads in the Inner West LGA. As the participants will be using footpaths and crossing the street network with assistance of traffic controllers, the Event does not cause significant impacts on traffic and transport systems. Therefore, the Event can be considered as Class 3. Hence, Council's approval for the Traffic & Transport Management Plan is adequate.

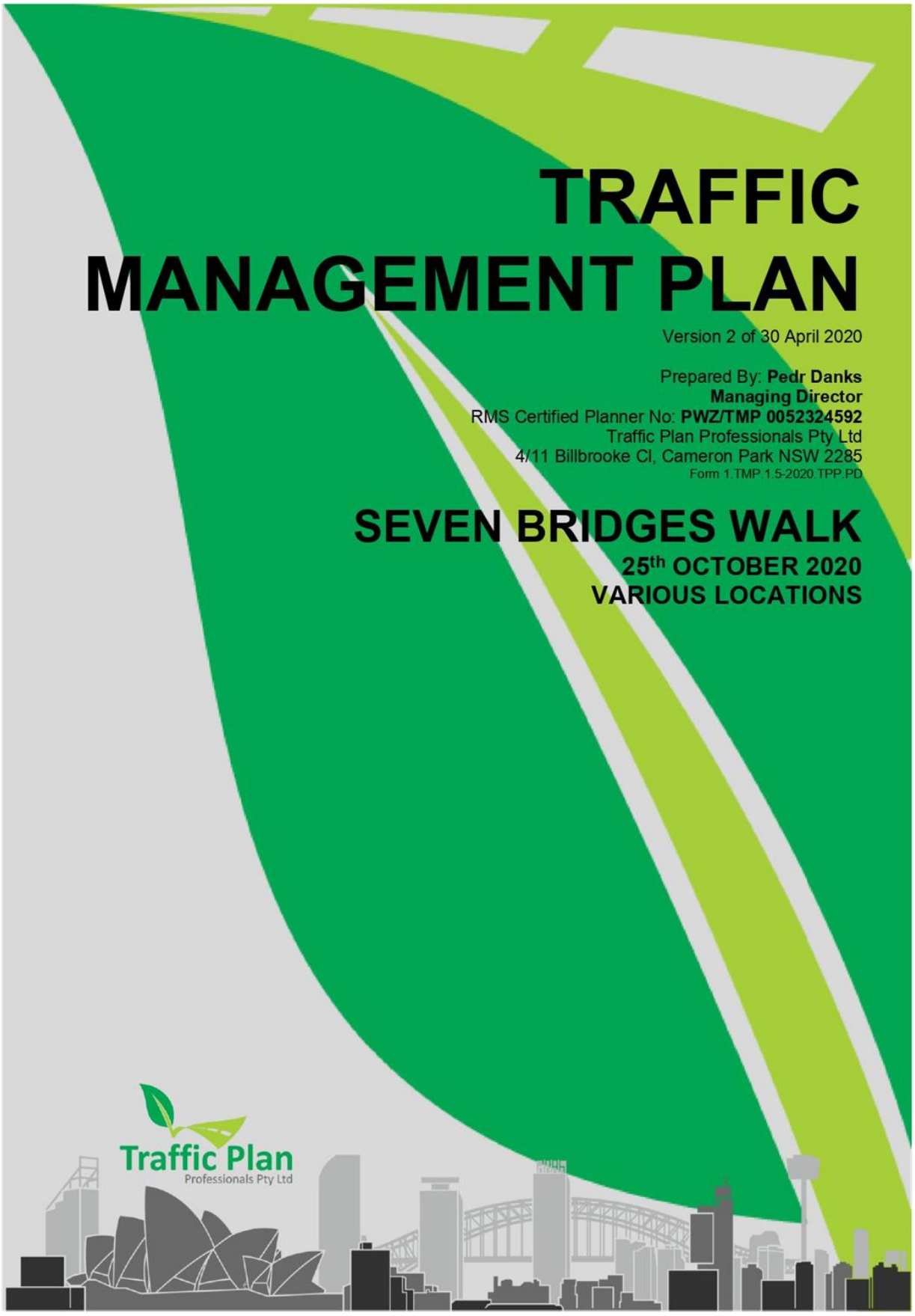
The attached Pedestrian and Traffic Management Plan (TMP), when approved by the relevant authorities, becomes the prime document detailing with the traffic and transport arrangements under which this event is to proceed.

In case of emergencies, or for the management of incidents, the Police are not subject to the conditions of the TMP but will make every effort to inform the other agencies of the nature of the incident and the Police response.

The route for the proposed Seven Bridges Walk and the Traffic Control Plans (TCP) and Traffic Management Plan for Inner West Council LGA are attached.

ATTACHMENTS

1.⇩ Traffic Management Plan - Seven Bridges Walk 2020
2.⇩ Traffic Control Plan - Seven Bridges Walk 2020


TRAFFIC
MANAGEMENT PLAN
Version 2 of 30 April 2020
Prepared By: Pedr Danks
Managing Director
RMS Certified Planner No: PWZ/TMP 0052324592
Traffic Plan Professionals Pty Ltd
4/11 Billbrooke Cl, Cameron Park NSW 2285
Form 1.TMP.1.5-2020.TPP.PD
SEVEN BRIDGES WALK
25th OCTOBER 2020
VARIOUS LOCATIONS
Traffic Plan
Professionals Pty Ltd

CONTENT

Traffic Plan
Professionals Pty Ltd

Item 9

Attachment 1

1 DOCUMENT AUTHOR

Prepared By	Pedr Danks, Managing Director. Traffic Plan Professionals Pty Ltd
Signature	**RMS Certification - PWZ/TMP 0052324592**
	
Date	
30 April 2020	

2 DOCUMENT HISTORY

Reviewed By	Version	Date	Comments

3 DISTRUBUTION

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6 TERMS AND DEFINITIONS

Terms	Definitions
RMS	Roads & Maritime Services
PAX	Persons Amount X
ADT	Average Daily Traffic
AS/NZS	Australian Standards/New Zealand Standards
LAC	Local Area Command
LGA	Local Government Area
PWZ/TMP	Prepare a Work Zone/Traffic Management Plan
VMS	Variable Message Sign
TCP	Traffic Control Plan
TMP	Traffic Management Plan
HVA	Hostile Vehicle Attack
HVMP	Hostile Vehicle Mitigation Plan
THD	Target Hardening Device

7 EXECUTIVE SUMMARY

The purpose of the TMP is to provide an overview of the Traffic operation that will require to be implemented for the 15th annual Seven Bridges Walk to be held on Sunday 25th October 2020 at various locations in Sydney.

The walk is promoted as "not a race and everyone is a winner". You can start at any of the seven event Villages and walk clockwise around as much or little of the 27km (approx.) closed loop circuit as you like. As part of the offerings for the Cancer Council NSW Seven Bridges Walk, there will be food, music and activities at each of the seven Villages. The TMP has been updated based on feedback from previous years events.

8 SCOPE

This plan addresses traffic management for the proposed works only and the document has been prepared following consultation and assessments from the respective stakeholders listed within this document.

The document includes the provision for the safe movement of vehicular and pedestrian traffic, the protection of workers from passing traffic, the design, installation and removal of any necessary temporary detours, the provision of traffic controllers, the installation of temporary advance warning signs and safety barriers.

Where possible road closures have been minimised to maintain regular traffic flow.

Various traffic control devices/measures have been used whilst creating the relevant Traffic Control Plan.

This document should be read in conjunction with the following:

#	Document	Version
1	RMS Guide to Transport & Management for Special Events	3.4
2	RMS Traffic Control at Worksites Manual	5.0
3	AS/NZS	2890.6-2009.
4	Local Government Act 1993	No 30
5	Roads Act 1993	No 33
6	Australian Standard	1742
7	The Use of Variable Message Sign (VMS) RMS Policy	10.408

9 OBJECTIVES

The core objectives with respect to the Traffic Management Plan are to:

1. Ensure the safety of its employees, contractors, the general public, RMS personnel, pedestrians, cyclists and traffic,
2. Keep traffic delays to a minimum,
3. Maintain satisfactory property access,
4. Minimise disruption to businesses,
5. For works near speed cameras, traffic lights & traffic counters etc:
   a) Inform the RMS Representative and
   b) Not damage the equipment,
   c) Make suitable arrangements where required.
   d) When required, obtain approvals and licenses such as Road Occupancy, Direction to Restrict (DTR for Speed Limit Sign Authorisation) and Traffic Signals,
6. Minimise disturbance to the environment,
7. Design temporary roadways and detours in accordance with RMS Road Design Guide and
8. Meet the requirements of RTA G10 Traffic management, RMS G11M Road Occupancy Provisions and the RTA Traffic Control at Worksites Manual.

10 MANAGEMENT OF THE TMP

Traffic Plan Professionals Pty Ltd has undertaken that it will provide both the Traffic Management Plans & Traffic Controllers for this event.

It is required by Council/RMS and/or consenting authorities that all traffic control works to be carried out by RMS certified and accredited personnel.

11 IMPLEMENTATION

Traffic Management for work and/or events sites will be in accordance with the RMS Traffic Control at Work Sites Manual as modified to site conditions.

The implementation of these plans is the responsibility of Traffic Plan Professionals and shall be carried out by RMS certified and accredited personnel.

12 PLANNING STRATEGIES

Following preparation of the final draft plans, assessment and approvals is required by the following:

Agency	Area
NSW Police	LAC
Council	Various
Roads & Maritime Services	TMC
Event Promoter	Mothership Events

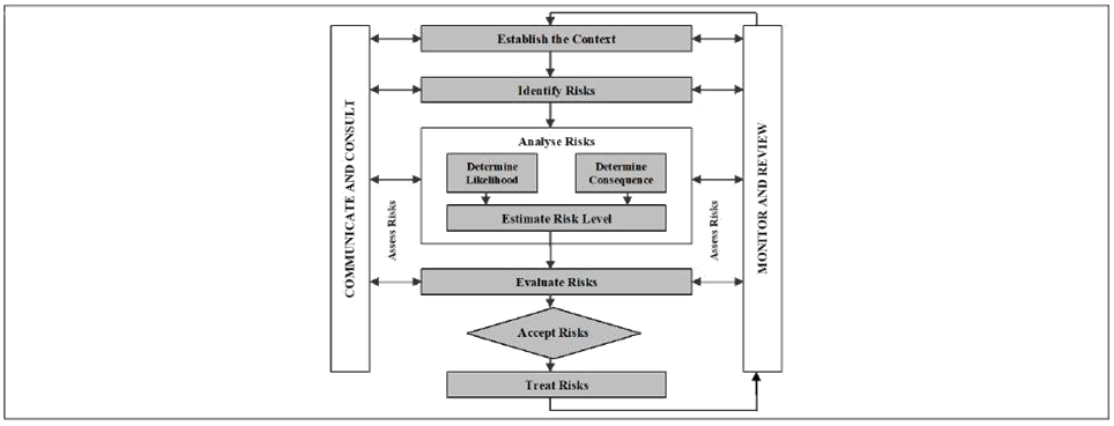
13 RISK MANAGEMENT

13.1 RISK ASSESSMENT PLAN (RISK REGISTER)

A Master risk assessment has been created for the event, included within that document are the respective traffic risks.

13.2 RISK MANAGEMENT PROCESS

Throughout the Risk Management process, we will link activities to the Australian Standards (AS/NZS 31000:2009). These standards provide a systematic approach to the Risk Management.



13.3 Risk Tolerance

A risk rating determined to be higher than a "low" or a "moderate" level (see: "Risk Assessment Tool" below for descriptions of these terms) should result in senior management assessing the viability of implementing the suggested additional control measures.

Even where a residual risk of a "low" or moderate" level exists, senior management should evaluate, where it is viable, to further reduce the likelihood or consequences of that stated risk.

13.4 Risk Assessment Tool

The risk assessment tool acts as a guide to determine an appropriate rating for each risk. It is important to note that risk is subjective and therefore any ratings applied should be considered in this context.

Likelihood	Consequences				
	Insignificant (1) *(Minor problem easily handled by normal day to day processes)*	**Minor (2)** *(Some disruption possible, e.g. damage equal to $500k)*	**Moderate (3)** *(Significant time/resources required, e.g. damage equal to $1 million)*	**Major (4)** *(Operations severely damaged, e.g. damage equal to $10 million)*	**Catastrophic (5)** *(Business survival is at risk damage equal to $25 million)*
Rare (1) *(e.g. <3% chance)*	2	3	4	5	6
Unlikely (2) *(e.g. between 3% and 10% chance)*	3	4	5	6	7
Moderate (3) *(e.g. between 10% and 50% chance)*	4	5	6	7	8
Likely (4) *(e.g. between 50% and 90% chance)*	5	6	7	8	9
Almost certain (5) *(e.g. >90% chance)*	6	7	8	9	10

13.5 Risk Score Evaluation

Risk Score	Risk Level	Response
2-4	Low	Manage through routine procedures
5-6	Moderate	Specific procedures and monitoring required, specify management responsibility
7-8	High	Action plan required, specific senior management attention and specify responsibility
9-10	Extreme	Immediate action required, senior management required with detailed plan and Senior Management responsibility noted

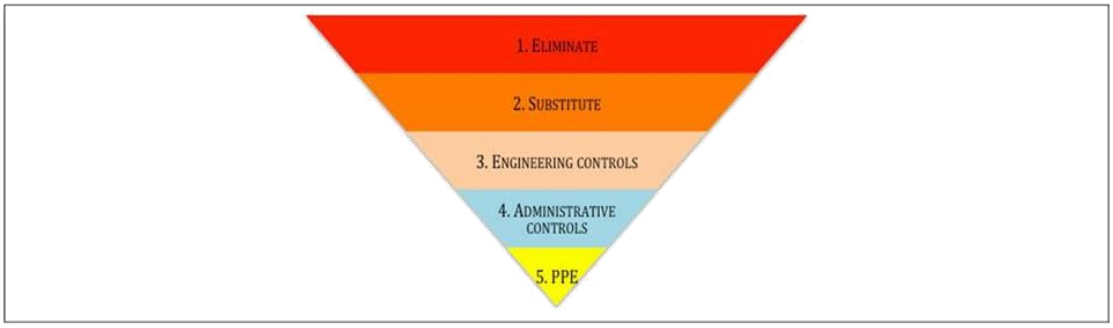
13.6 Risk Treatments

Treatment of the risks associated with hazards identified will involve appropriately selecting a treatment option as indicated below.

The Hierarchy of Hazard Controls is recommended as the best-practice approach to addressing the source of real/safety risks and thus eliminating of minimising such risks. When a hazard is identified it shall be:

1. Eliminated (designed out, eliminated),
2. Substituted (i.e. if a hazardous work practice exists it should be replaced with non-hazardous or less hazardous work practice),
3. Isolated (if nothing could be done in short term the hazard should be isolated, so it does not impose a risk to a person),
4. Controlled through engineering methods (guarded away using covers etc.),
5. Controlled through Administrative means (procedures/practices, inductions, instructions, workplace training etc.),
6. Persons protected by PPE (Personal Protective Equipment).

The controls should be used in order as indicated - starting from Eliminate as the best approach and then working down the options. A combination of hazard controls from the list above could be used to address any one hazard at one time - a hazard control on its own is not exhaustive and can be used in a combination with one or more other controls.



The primary aim of risk control is to eliminate the risk; the best way of achieving this is to eliminate the hazard. If this is not possible the risk must be minimised by utilising the ALARP principle.

Nomination	Multiplier	Outcome
A	=	As
L	=	Low
A	=	As
R	=	Reasonably
P	=	Practicable

HB205:2004 states that the most effective form of risk control is to eliminate the hazard, however if this is not reasonably practicable to eliminate the hazard, the risk must be minimised to the lowest reasonably practicable level by taking the following measures in the order and as determined by the risk assessment (Hierarchy of Controls).

If no single control is appropriate, a combination of the above controls will be taken to minimised the risk to the lowest reasonably practicable level.

14 EVENT DETAILS

Event Name	**Seven Bridges Walk**
Event Owner/Promoter	Cancer Council NSW
Event Date(s)	25th October 2020
Event Time(s)	07:00 – 16:30hrs
Bump In/Out Date(s) & Time(s)	23rd October – 26th October
Venue(s)	Various locations/bridges throughout Sydney
Pax	Maximum 15,000 Walkers throughout the day
Demographic	Mixed ages & Families

15 TRAFFIC MANAGMENT

During the event traffic safety will be managed by the implementation of specifically tailored TCPs that have been designed to meet with event specific operations. This plan has been prepared to safely manage traffic with minimal impact on non-event stakeholders as recommended in the RMS Guide to Traffic and Transport Management for Special Events.

In the risk management context, the RMS Guide to Traffic and Transport Management for Special Events reads that a TCP be a Risk Management Plan for traffic, however a TCP shall not be an acceptable form of risk management and the event organiser should seek a separate risk review.

At its core the prepared TCPs implement various short-term road closures to safety manage vehicular and pedestrian flow within the precinct.

15.1 Road Closures

Short term roads closures and control points shall be implemented at the following locations.

1) Burton Street, Milsons Point
2) Durham Street, Hunters Hill
3) Central Ave, Callan Park
4) Waterfront Drive, Callan Park
5) North Crescent, Callan Park
6) Military Drive, Callan Park

The Event road closures shall commence on the 25th October from 06:00hrs through to 16:00hrs (exact times please refer to TCP's)

Callan Park Closures will commence 05:00am on 25th October and run through to 16:30hrs at the latest.

15.2 Village Locations

There will be six Villages around the course that participants must pass through to complete the circle walk, each of the Villages will provide information, registration, first aid and toilets plus food, refreshments and entertainment.

The locations for the Villages will be clearly marked on the course map and can be found at:

1. Milsons Point Village - Burton Street, Milsons Point
2. Pyrmont Village - Pyrmont Bay Park, Pyrmont
3. Rozelle Village – Waterfront Drive Sporting Ground, Rozelle
4. Hunters Hill Village - Hunters Hill Scout Hall, Hunters Hill
5. Lane Cove Village – Central Park, Blaxland's Corner, Lane Cove
6. Wollstonecraft Village - Brennan Park, Wollstonecraft

Toilet facilities in between villages will be marked on the course map.

15.3 Bridge Locations

There are the 7 bridge locations that we will cross as part of the course:

1.	Sydney Harbour Bridge	5.	Gladesville Bridge
2.	Pyrmont Bridge	6.	Tarban Creek Bridge
3.	Anzac Bridge	7.	Figtree Bridge
4.	Iron Cove Bridge		

15.4 COURSE INFORMATION

Participants can register and start at any Village, where they can pick up their Event Passport which includes a course map and official event wristband.

The course/facilities will be open from 7.00am - 4.30pm on event day and all participants are held at each stamp point until 07:00hrs to ensure a managed exit from the Village, all participants must travel on the course in a CLOCKWISE direction only, this will assist with reducing overcrowding at any crossing point. This is how the event has operated in the past without issue.

There is water available at stations in each Village for participants to fill up their own water bottles, participants are also reminded to utilise existing pathways for this walk and that they should abide by normal road rules.

Site map available from Event Organiser, on event day same will be available online.

15.5 ROUTE MAP

To be updated

15.6 Event Transport Information

A FREE event bus service traveling around the course will be available on event day only for event participants. To be able to use this free transport system you will need to show your Event Passport. No dogs are allowed on free event transport, except for guide and companion dogs.

The FREE event bus service will run from Milsons Point in both a clockwise (c) and anti-clockwise (a) directions around the course, so look out for a bus stop on either side of the road. The first buses will leave Milsons Point at approximately 8.30am and the last at approximately 4.30pm. Buses will be available from each bus stop approximately every 20 minutes in the morning and every 15 minutes in the afternoon.

Clockwise Bus Stops (C)

Bus Stop 1	Milsons Point	Outside Milsons Point Village on Alfred St South outside Milsons Point Train Station
Bus Stop 9	Pirrama Rd, Pyrmont	Pirrama Rd opposite Pyrmont Village, outside the Star Casino
Bus Stop 8	Victoria Rd, Rozelle	Victoria Rd near Toelle
Bus Stop 7	Drummoyne	Victoria Rd near Lyons Rd, opposite the Drummoyne Post Office
Bus Stop 6	Burns Bay Rd, Hunters Hill	On the north bound exit ramp to Church St, Hunters Hill
Bus Stop 5	Burns Bay Rd, Linley Point	On Western side of Burns Bay Rd opposite intersection of View St
Bus Stop 4	River Rd West, Blaxlands Corner	On Northern side of River Rd, near William Edward St
Bus Stop 3	Bus Stop River Rd, Greenwich	On Northern side of River Rd, opposite Greenwich Hospital
Bus Stop 2	King St, Wollstonecraft	King St, opposite side of the road to Wollstonecraft Village (Brennan Park)

Anti-Clockwise Bus Stops (A)

Bus Stop 1	Milsons Point	Alfred St South opposite side of the road to Milsons Point Trains
Bus Stop 2	King St, Wollstonecraft	King St, outside Wollstonecraft Village (Brennan Park)
Bus Stop 3	River Rd, Greenwich	On Southern side of River Rd, outside Greenwich Hospital

Bus Stop 4	River Rd West, Blaxlands Corner	On Southern side of River Rd, near William Edward St
Bus Stop 5	Burns Bay Rd, Linley Point	On Eastern side of Burns Bay Rd, south of intersection of View St
Bus Stop 6	Burns Bay Rd, Hunters Hill	On the south bound exit ramp to Church St, Hunters Hill
Bus Stop 7	Victoria Rd, Drummoyne	Victoria Rd near Lyons Rd, outside the Drummoyne Post Office
Bus Stop 8	Victoria Rd, Rozelle	Victoria Rd at Terry St
Bus Stop 9	Pirrama Rd, Pyrmont	Pirrama Rd outside Pyrmont Village

NB: there are bus stops located near to 6 of the 7 villages as well as 3 additional bus stops (points 5, 7 & 9) on both sides of the road and in some cases they are not directly opposite each other. Further information is available at each of the villages re same.

For a clockwise bus service, please use the Bus Stop number with a 'c' after the number.

For an anti-clockwise bus service please use the Bus Stop number with an 'a' after the number.

On the day if you are unsure please see the Information Point at the nearest village.

15.7 TARGET HARDENING

See the Hostile Vehicle Mitigation Plan (HVMP) for further information.

15.8 PUBLIC NOTIFICATIONS

Public notifications shall be undertaken as part of the Event DA from each respective Council, this will be organised by Mothership Events and/or a third party provider to the impacted residents/business affected by the closures via a letter box drop 7 days prior to the event.

15.9 TCP'S

TCP NO:	DESCRIPTION
7344	Burton St / Alfred St Sth Milsons Point
7345	Alfred St Sth Milsons Point
7346	Sydney Harbour Bridge Stairs Cumberland St The Rocks
7347	Watson St Millers Point
7348	Argyle St Millers Point
7349	High St Millers Point
7350	Kent St Millers Point
7351	Naploeon St / Kent St Millers Point
7352	Erskine St Sydney

7353	Pirrama Rd Pyrmont
7354	Bowman St Pyrmont
7355	Anzac Bridge Ramp Pyrmont
7356	James Craig Rd off ramp Pyrmont
7357	James Craig Rd Pyrmont
7358	James Craig Rd / The Crescent Lilyfield
7359	Lilyfield Rd / Victoria Rd Lilyfield
7360	Lilyfield Rd / Gordon St Lilyfield
7361	Denison St / Cheltenham St Rozelle
7362	O'Neill St / Cecily St Rozelle
7363	Cecily St / Balmain Rd Lilyfield
7364	Callan Park (Internal)
7365	Victoria Rd Drummoyne
7366	Victoria Rd Drummoyne
7367	Victoria Rd / Park Ave Drummoyne
7368	Lyons Rd / Wrights Rd Drummoyne
7369	Wolseley St Drummoyne
7370	Durham St / Church St Hunters Hill
7371	Burns Bay Rd off ramp walking access to The Avenue Linley Point
7372	Haughton St Linley Point
7373	View St Linley Point
7374	Riverview St / Kooyong Rd Riverview
7375	Riverview St Riverview
7376	Riverview St / Tambourine Bay Rd Riverview
7377	Flamount Ave / Roman Ave Riverview
7378	Warraroon Rd Yallambee Rd Riverview
7379	William Edward St River Rd West Longueville
7380	Kenneth St / Northwood Rd Lane Cove
7381	Northwood Rd / Fleming St Lane Cove
7382	River Rd Lane Cove (Installed by RMS).
7383	River Rd Lane Cove (Greenwich Hospital)
7384	Gore St Greenwich
7385	Greenwich Rd / Oscar St Greenwich
7386	Glenview St Greenwich
7387	Milner Cr Greenwich
7388	Newlands St / Morton St Wollstonecraft
7389	Hazelbank Rd / Morton St Wollstonecraft
7390	King St / Carr St Wollstonecraft
7391	Carr St / Crows Nest Rd Waverton
7392	Carr St / Euroka St / Woolcott St Waverton
7393	Blues Point Rd / Union St North Sydney

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7394	Lavender St / Walker St Lavender Bay
7395	Alfred St Soutth / Lavender St Lavender Bay

16 CONSULTATION & CONTACT LIST

The below list are the practitioners consulted as documents owners, stakeholders and/or approval authorities for this document.

NAME	ORGANISATION	PHONE
Pedr Danks	Traffic Plan Professionals Pty Ltd	(02) 8002 0918
Drew Ferguson-Tait	Traffic Plan Professionals Pty Ltd	(02) 8002 0919
Graham Lugsdin	Cancer Council NSW	
Justin Nyker	Mothership Events	(02) 9280 0557
Craig Tyson	Mothership Events	(02) 9280 0557
	Police	
	Buses	
Heather Palmisani	Innerwest Council	
Brooke Morris	Callan Park	(02) 9995 5973
Sinisa Mrdalj	TMC	

17 APPENDIX

The below appendices form part of the TMP and should be read in part or/and in whole when reviewing the above information.

#	Document Name
1	RMS/TMC Format
2	Traffic Control Plan set

APPENDIX 1

TMP FORMAT

A. Description or detailed plan of proposed measures.

Is a detailed plan of the proposed measures necessary? YES refer to TCP's that show the changed road conditions and detours etc.

B. Identification and assessment of impact of proposed measures.

Is a detailed assessment required? NO – There is minimal delay for traffic and only in several locations that are within local council area.

C. Measures to ameliorate the impact of re-assigned traffic

Is an assessment required? NO, this is an annual event and has occurred for many years without any traffic flow issues.

D. Assessment of public transport services affected.

Is an assessment required? NO, Bus services are engaged as part of the event to assist participants with reaching the various locations if they choose not to walk.

E. Details of provision made for emergency vehicles, heavy vehicles, cyclists and pedestrians.

Are these details required? Not applicable.

F. Assessment of effect on existing and future developments with transport implications in the vicinity of the proposed measures.

Is an assessment required? Not applicable.

G. Assessment of effect of proposed measures on traffic movements in adjoining Council areas.

Is an assessment required? NO, event has been operating for many years without issue.

H. Public consultation process

Is a public consultation process required? NO, event has been assessed by Council's Planning previously.

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APPENDIX 2 – TRAFFIC CONTROL PLANS

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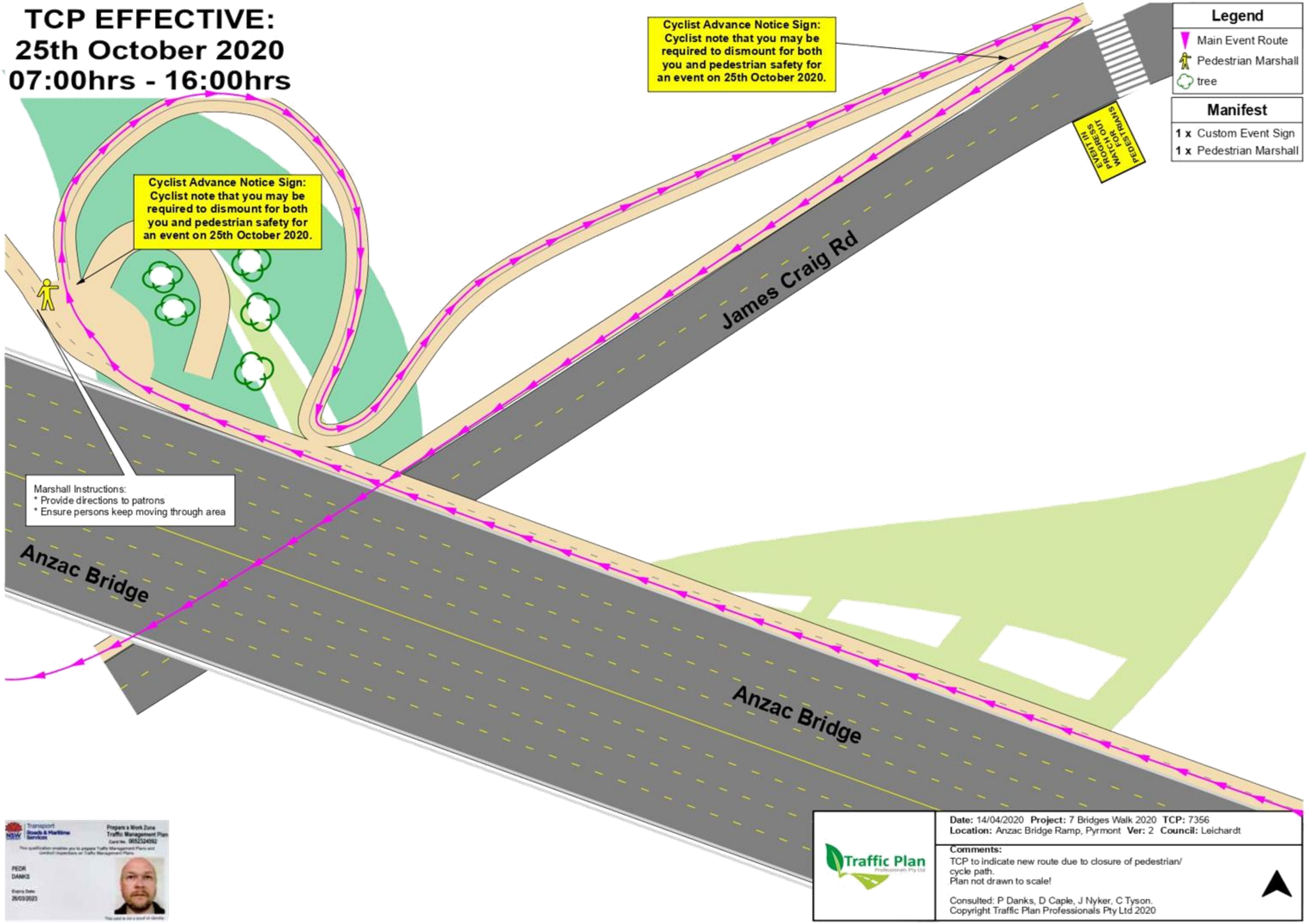
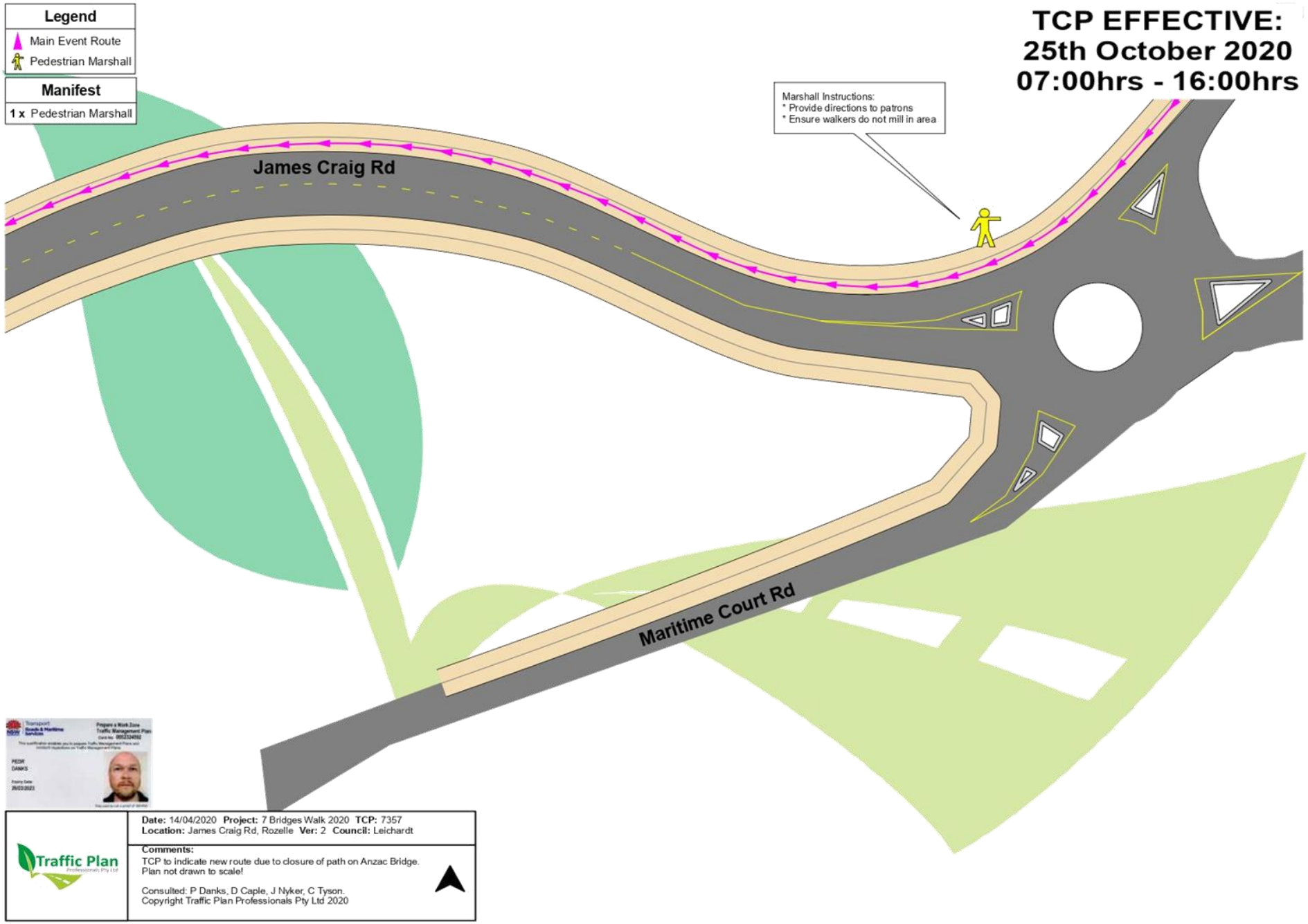

TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Cyclist Advance Notice Sign:
Cyclist note that you may be required to dismount for both you and pedestrian safety for an event on 25th October 2020.
Cyclist Advance Notice Sign:
Cyclist note that you may be required to dismount for both you and pedestrian safety for an event on 25th October 2020.
Legend
Main Event Route
Pedestrian Marshall
tree
Manifest
1 x Custom Event Sign
1 x Pedestrian Marshall
James Craig Rd
Marshall Instructions:
* Provide directions to patrons
* Ensure persons keep moving through area
Anzac Bridge
Anzac Bridge
Traffic Plan
Date: 14/04/2020 Project: 7 Bridges Walk 2020 TCP: 7356
Location: Anzac Bridge Ramp, Pyrmont Ver: 2 Council: Leichardt
Comments:
TCP to indicate new route due to closure of pedestrian/ cycle path.
Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
Copyright Traffic Plan Professionals Pty Ltd 2020


Legend
Main Event Route
Pedestrian Marshall
Manifest
1 x Pedestrian Marshall
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Marshall Instructions:
* Provide directions to patrons
* Ensure walkers do not mill in area
James Craig Rd
Maritime Court Rd
Traffic Plan
Date: 14/04/2020 Project: 7 Bridges Walk 2020 TCP: 7357
Location: James Craig Rd, Rozelle Ver: 2 Council: Leichardt
Comments:
TCP to indicate new route due to closure of path on Anzac Bridge.
Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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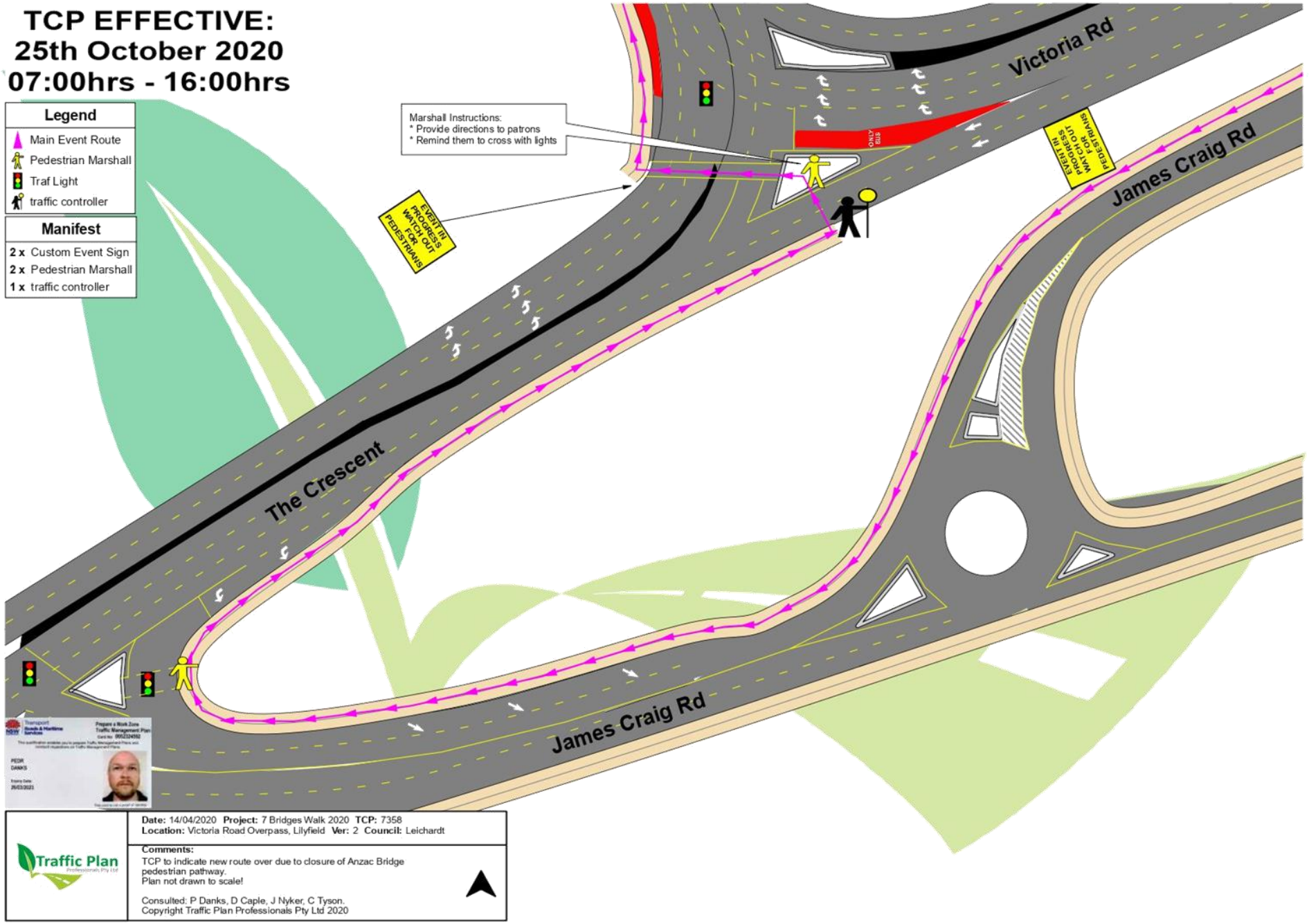
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Legend
Main Event Route
Pedestrian Marshall
Traf Light
traffic controller
Manifest
2 x Custom Event Sign
2 x Pedestrian Marshall
1 x traffic controller
Marshall Instructions:
* Provide directions to patrons
* Remind them to cross with lights
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
Victoria Rd
James Craig Rd
The Crescent
James Craig Rd
Traffic Plan
Date: 14/04/2020 Project: 7 Bridges Walk 2020 TCP: 7358
Location: Victoria Road Overpass, Lilyfield Ver: 2 Council: Leichardt
Comments:
TCP to indicate new route over due to closure of Anzac Bridge pedestrian pathway.
Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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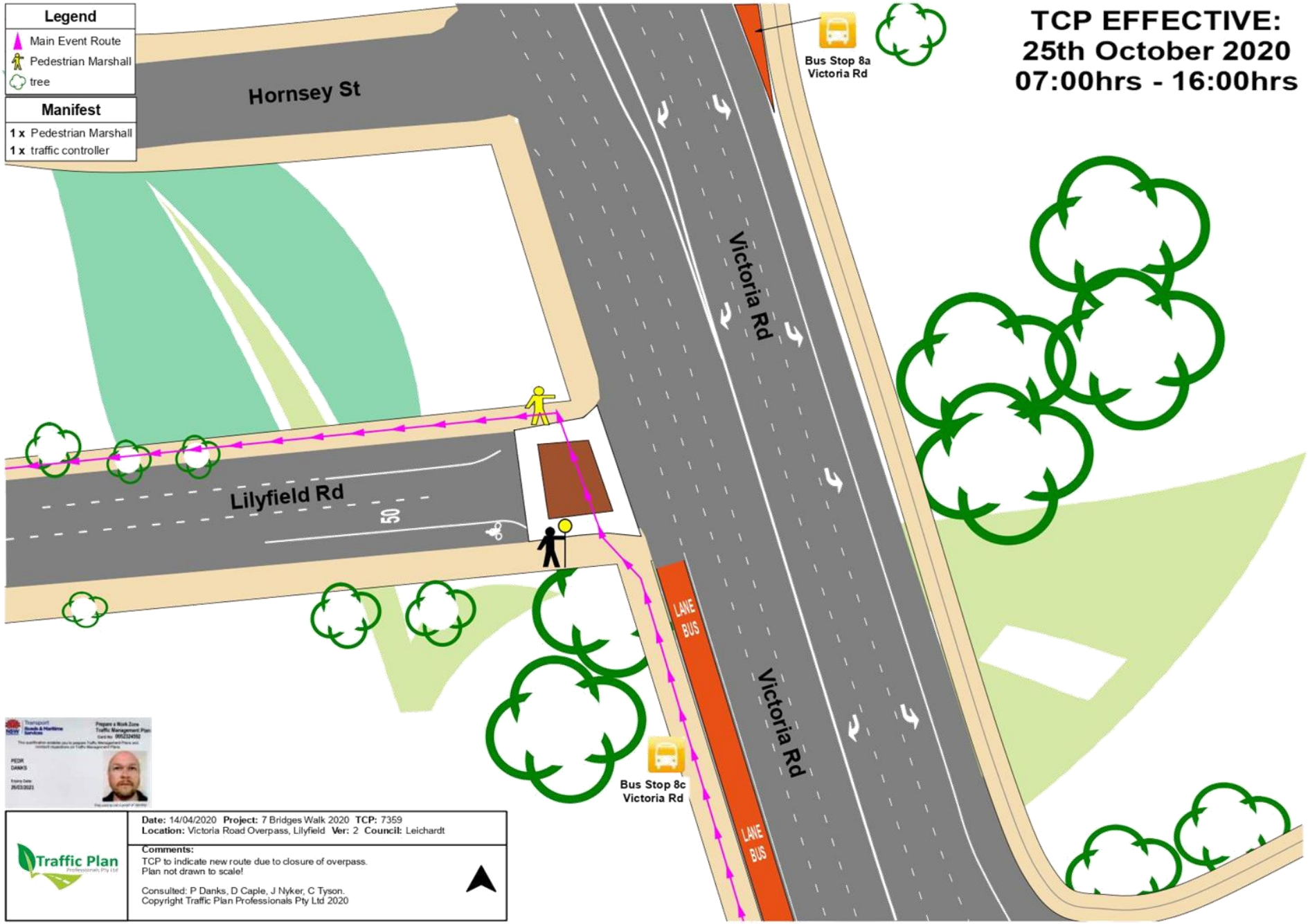
Legend
Main Event Route
Pedestrian Marshall
tree
Manifest
1 x Pedestrian Marshall
1 x traffic controller
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Hornsey St
Bus Stop 8a
Victoria Rd
Victoria Rd
Lilyfield Rd
50
LANE
BUS
Victoria Rd
LANE
BUS
Bus Stop 8c
Victoria Rd
Traffic Plan
Date: 14/04/2020 Project: 7 Bridges Walk 2020 TCP: 7359
Location: Victoria Road Overpass, Lilyfield Ver: 2 Council: Leichardt
Comments:
TCP to indicate new route due to closure of overpass.
Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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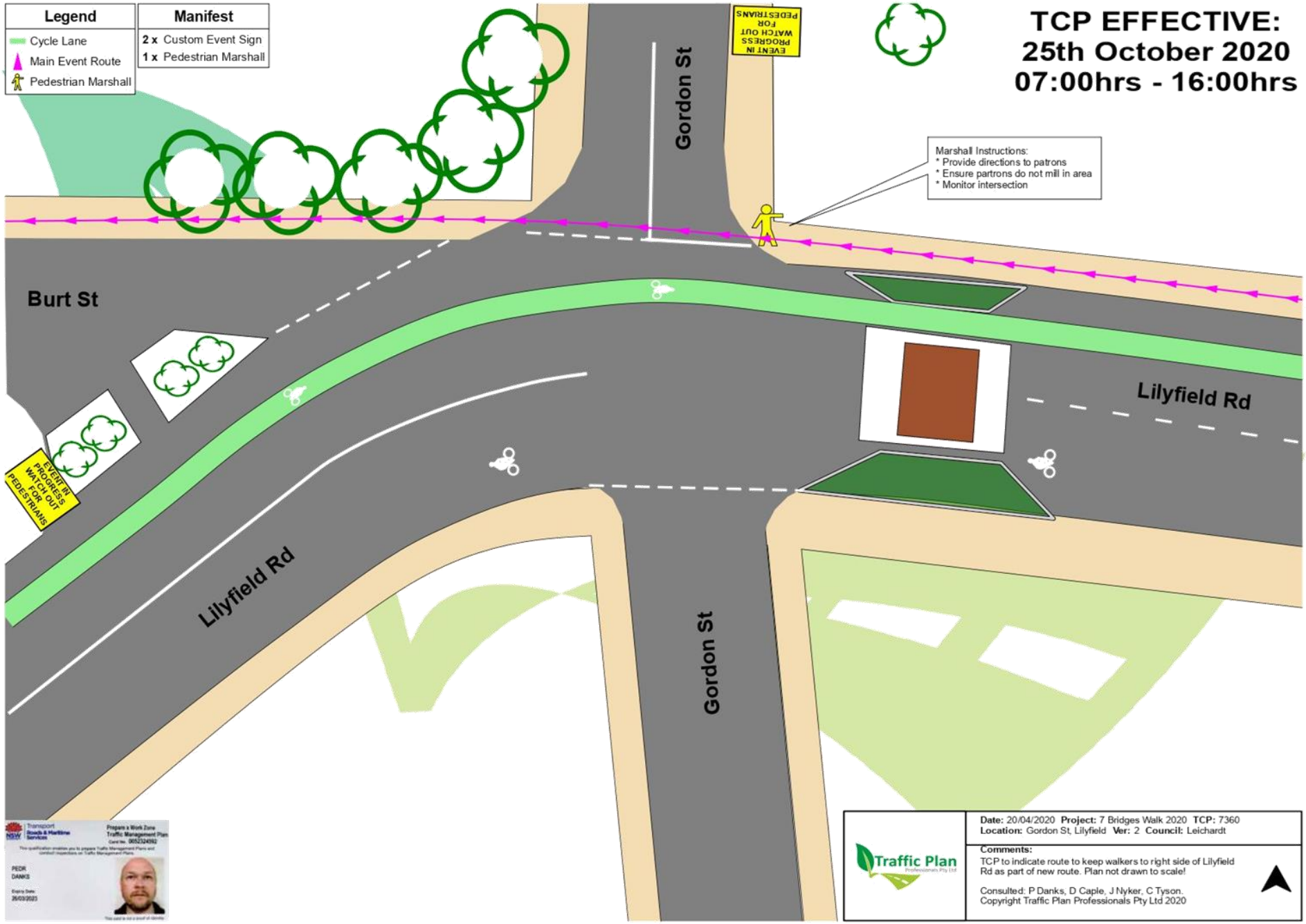
Legend
Cycle Lane
Main Event Route
Pedestrian Marshall
Manifest
2 x Custom Event Sign
1 x Pedestrian Marshall
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Gordon St
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
Marshall Instructions:
* Provide directions to patrons
* Ensure partrons do not mill in area
* Monitor intersection
Burt St
Lilyfield Rd
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
Lilyfield Rd
Gordon St
Traffic Plan
Date: 20/04/2020 Project: 7 Bridges Walk 2020 TCP: 7360
Location: Gordon St, Lilyfield Ver: 2 Council: Leichardt
Comments:
TCP to indicate route to keep walkers to right side of Lilyfield Rd as part of new route. Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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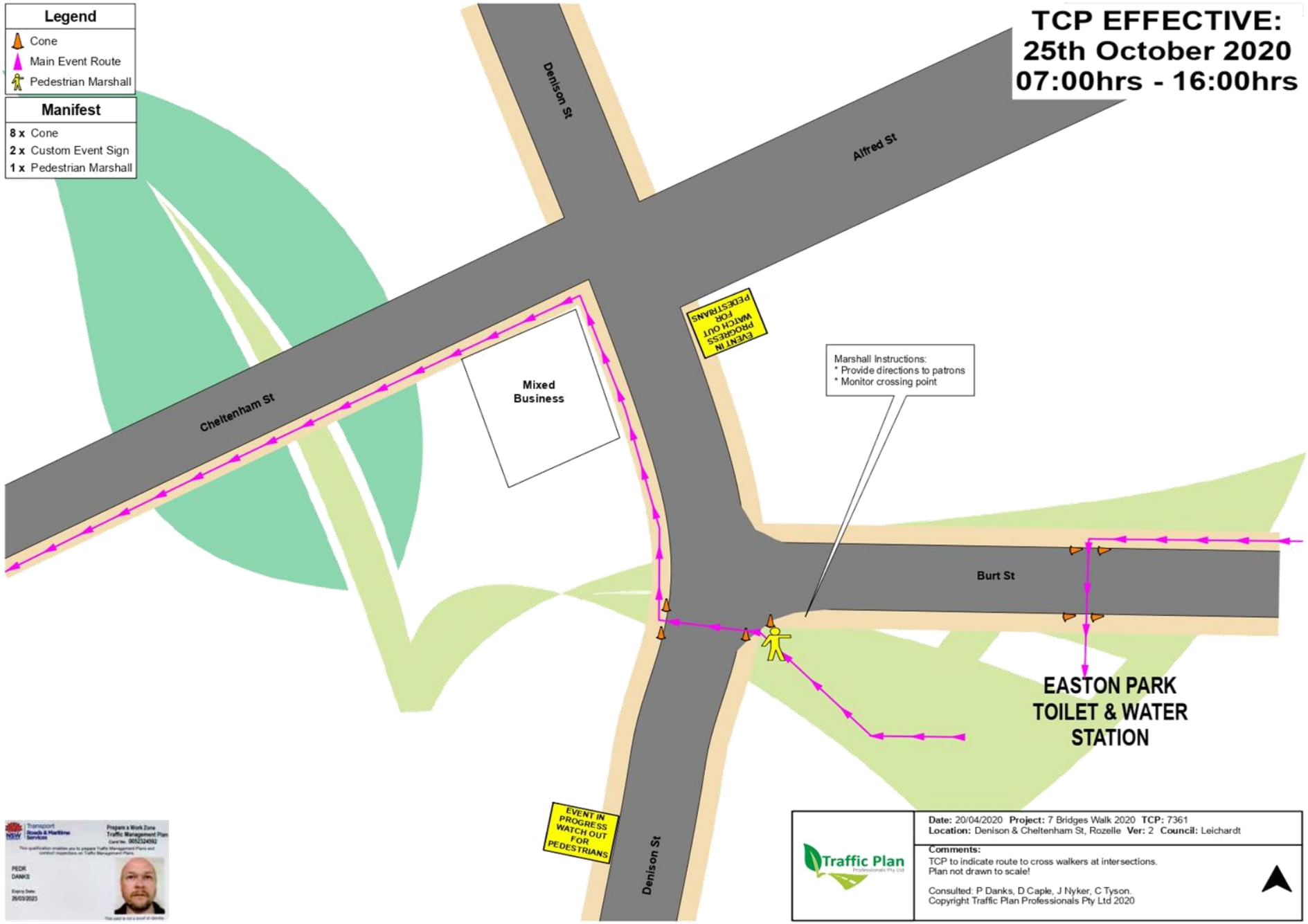
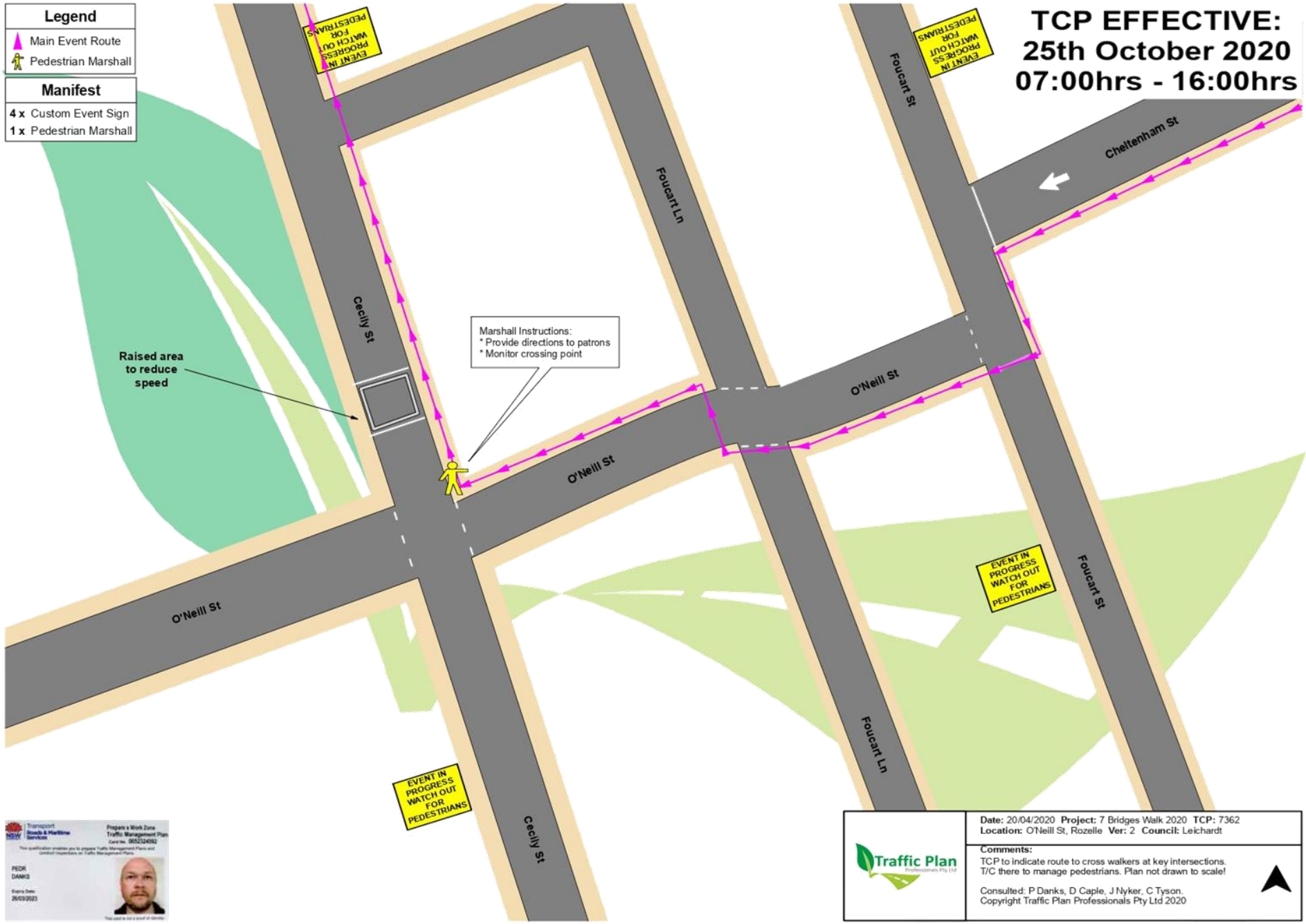

Legend
Cone
Main Event Route
Pedestrian Marshall
Manifest
8 x Cone
2 x Custom Event Sign
1 x Pedestrian Marshall
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Denison St
Alfred St
Cheltenham St
Mixed Business
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
Marshall Instructions:
* Provide directions to patrons
* Monitor crossing point
Burt St
EASTON PARK
TOILET & WATER
STATION
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
Denison St
Traffic Plan
Date: 20/04/2020 Project: 7 Bridges Walk 2020 TCP: 7361
Location: Denison & Cheltenham St, Rozelle Ver: 2 Council: Leichardt
Comments:
TCP to indicate route to cross walkers at intersections.
Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
Copyright Traffic Plan Professionals Pty Ltd 2020


Legend
Main Event Route
Pedestrian Marshall
Manifest
4 x Custom Event Sign
1 x Pedestrian Marshall
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Raised area to reduce speed
Marshall Instructions:
* Provide directions to patrons
* Monitor crossing point
Cecily St
Foucart Ln
Foucart St
Cheltenham St
O'Neill St
EVENT IN PROGRESS WATCH OUT FOR PEDESTRIANS
Traffic Plan
Date: 20/04/2020 Project: 7 Bridges Walk 2020 TCP: 7362
Location: O'Neill St, Rozelle Ver: 2 Council: Leichardt
Comments:
TCP to indicate route to cross walkers at key intersections.
T/C there to manage pedestrians. Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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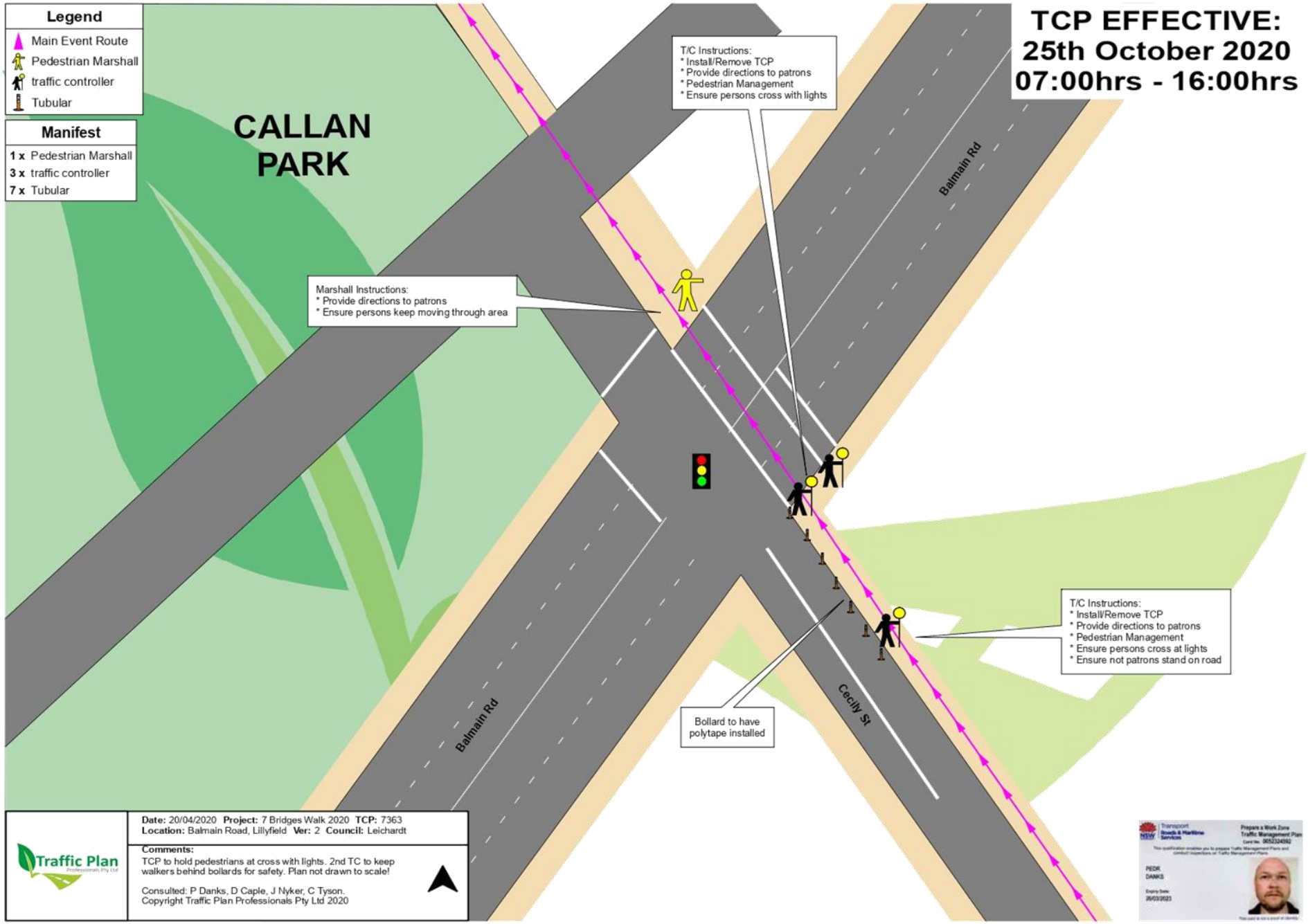
Legend
Main Event Route
Pedestrian Marshall
traffic controller
Tubular
Manifest
1 x Pedestrian Marshall
3 x traffic controller
7 x Tubular
CALLAN PARK
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
T/C Instructions:
* Install/Remove TCP
* Provide directions to patrons
* Pedestrian Management
* Ensure persons cross with lights
Marshall Instructions:
* Provide directions to patrons
* Ensure persons keep moving through area
Balmain Rd
Balmain Rd
Cecily St
T/C Instructions:
* Install/Remove TCP
* Provide directions to patrons
* Pedestrian Management
* Ensure persons cross at lights
* Ensure not patrons stand on road
Bollard to have polytape installed
Traffic Plan
Date: 20/04/2020 Project: 7 Bridges Walk 2020 TCP: 7363
Location: Balmain Road, Lillyfield Ver: 2 Council: Leichardt
Comments:
TCP to hold pedestrians at cross with lights. 2nd TC to keep walkers behind bollards for safety. Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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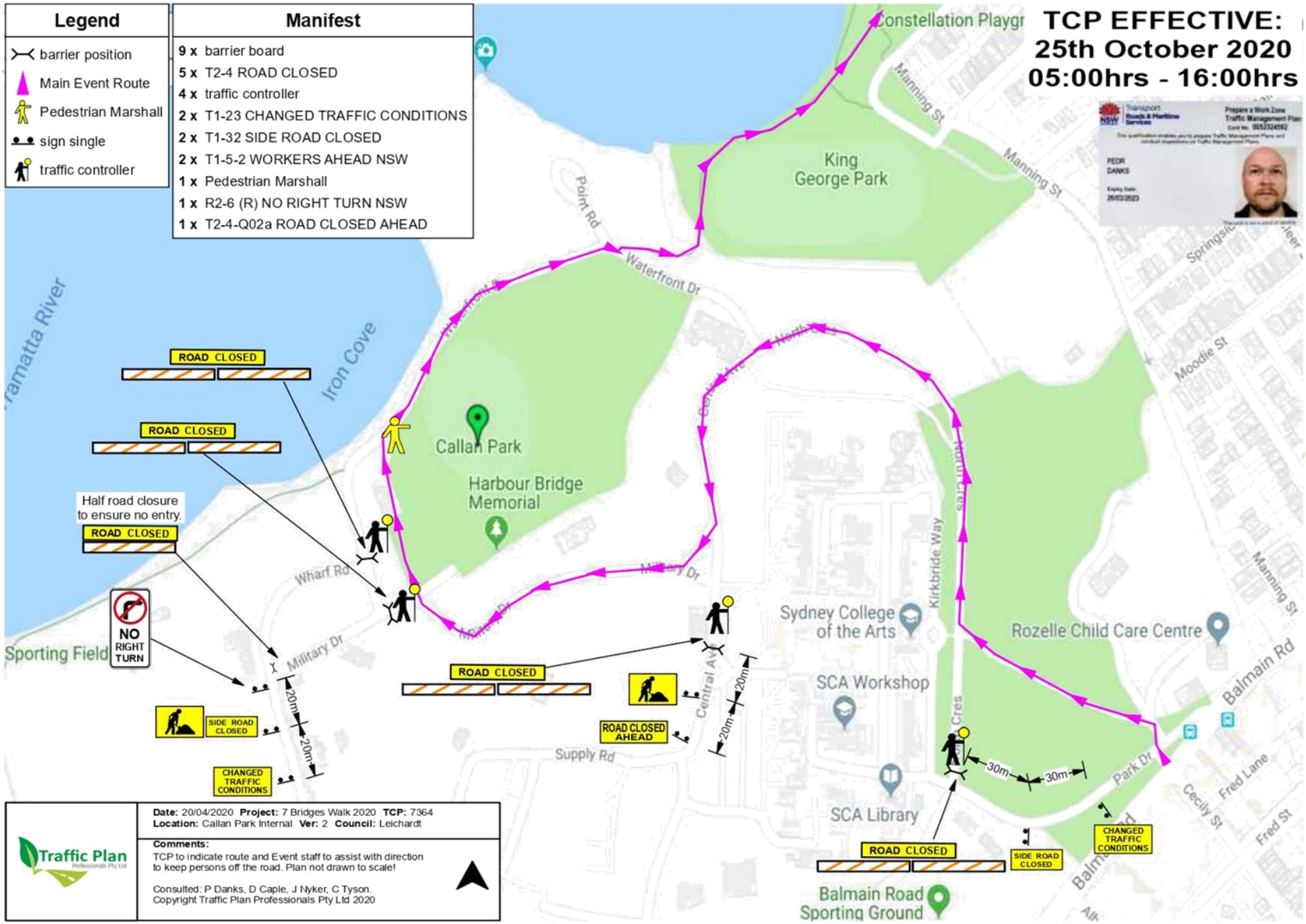
Legend
barrier position
Main Event Route
Pedestrian Marshall
sign single
traffic controller
Manifest
9 x barrier board
5 x T2-4 ROAD CLOSED
4 x traffic controller
2 x T1-23 CHANGED TRAFFIC CONDITIONS
2 x T1-32 SIDE ROAD CLOSED
2 x T1-5-2 WORKERS AHEAD NSW
1 x Pedestrian Marshall
1 x R2-6 (R) NO RIGHT TURN NSW
1 x T2-4-Q02a ROAD CLOSED AHEAD
TCP EFFECTIVE:
25th October 2020
05:00hrs - 16:00hrs
Constellation Playgr
Manning St
King George Park
Point Rd
Waterfront Dr
Iron Cove
ROAD CLOSED
ROAD CLOSED
Half road closure to ensure no entry.
ROAD CLOSED
Callan Park
Harbour Bridge Memorial
Wharf Rd
Military Dr
NO RIGHT TURN
Sporting Field
SIDE ROAD CLOSED
CHANGED TRAFFIC CONDITIONS
20m
20m
ROAD CLOSED
ROAD CLOSED AHEAD
Supply Rd
Central Ave
20m
20m
Sydney College of the Arts
Kirkbride Way
Rozelle Child Care Centre
SCA Workshop
Balmain Rd
Park Dr
SCA Library
30m
30m
ROAD CLOSED
SIDE ROAD CLOSED
CHANGED TRAFFIC CONDITIONS
Balmain Road Sporting Ground
Moodie St
Fred Lane
Cecily St
Fred St
Traffic Plan
Date: 20/04/2020 Project: 7 Bridges Walk 2020 TCP: 7364
Location: Callan Park Internal Ver: 2 Council: Leichardt
Comments:
TCP to indicate route and Event staff to assist with direction to keep persons off the road. Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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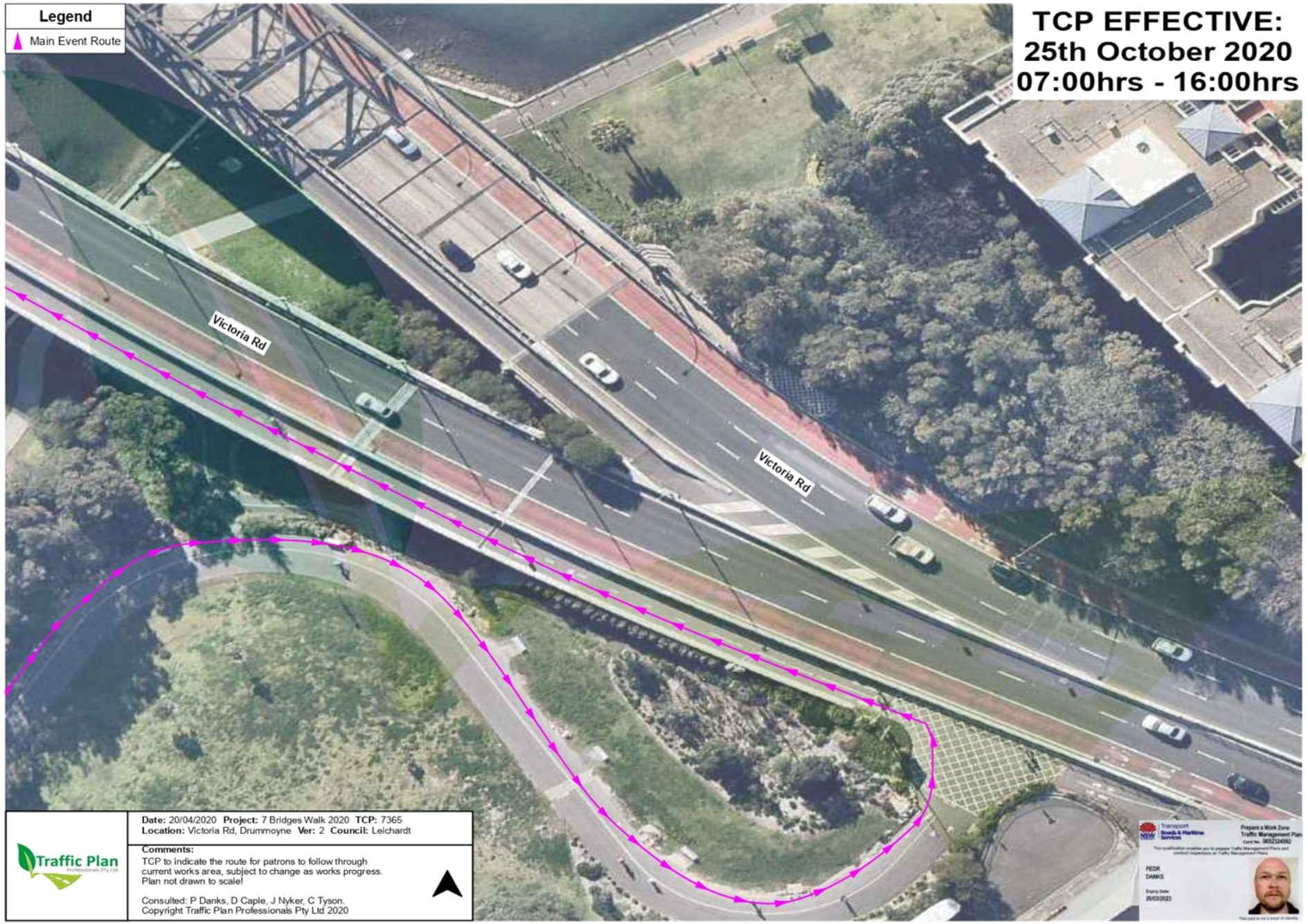
Legend
Main Event Route
TCP EFFECTIVE:
25th October 2020
07:00hrs - 16:00hrs
Victoria Rd
Victoria Rd
Traffic Plan
Date: 20/04/2020 Project: 7 Bridges Walk 2020 TCP: 7365
Location: Victoria Rd, Drummoyne Ver: 2 Council: Leichardt
Comments:
TCP to indicate the route for patrons to follow through current works area, subject to change as works progress.
Plan not drawn to scale!
Consulted: P Danks, D Caple, J Nyker, C Tyson.
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Transport
Roads & Maritime Services
Prepare a Work Zone Traffic Management Plan
PEDR
DANKS