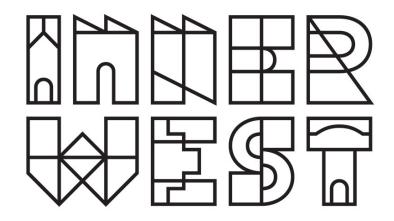
## **AGENDA**



# LOCAL TRAFFIC COMMITTEE MEETING MONDAY 21 OCTOBER 2024

11:00 AM



#### **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.

#### **Public Participation**

Members of the public or other stakeholders may address the Committee on agenda items to be considered by the Committee. The format and number of presentations is at the discretion of the Chairperson and is generally limited to 3 minutes per speaker. Committee debate on agenda items is not open to the public.

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#### **Late Items**

Nil at time of printing.

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Nil at the time of printing.

- 8 General Business
- 9 Close of Meeting



#### Minutes of Local Traffic Committee Meeting held on 16 September 2024

#### Meeting commenced at 11:01 AM

#### 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**

Manod Wickramasinghe IWC's Traffic and Transport Planning Manager (Chair) Graeme McKay Representative for Jo Haylen MP, Member for Summer Hill Eleanor Nurse Representative for Jenny Leong MP, Member for Newtown

Nina Fard Transport for NSW (TfNSW)

#### **NON VOTING MEMBERS IN ATTENDANCE**

Colin Jones Representative for the Inner West Bicycle Coalition (IWBC)

Michael Takla Representative for Transit Systems

IWC's Coordinator Traffic Engineering Services (North) Sunny Jo IWC's Coordinator Traffic Engineering Services (South) George Tsaprounis Jason Scoufis IWC's Coordinator Traffic Studies & Road Safety

**IWC's Business Administration Officer** Christy Li

#### **VISITORS**

John Parrington Resident (Item 4) Resident (Item 4) Kate Parrington

#### APOLOGIES:

Bill Holliday Representative for Kobi Shetty MP, Member for Balmain Ben Walters Representative for NSW Police – Inner West Police Area

Command

#### **DISCLOSURES OF INTERESTS:**

Nil.

#### **CONFIRMATION OF MINUTES**

That the Minutes of the Local Traffic Committee held on Monday, 19 August 2024 be confirmed.



#### MATTERS ARISING FROM COUNCIL'S RESOLUTION OF MINUTES

The Minutes of the Local Traffic Committee meeting held on 17 June 2024 were adopted at Council's meeting held on 03 September 2024 subject to the following:

a. That in reference to the Petersham North LATM Final Report, that Council allocate funding from the current budget for installation of the recommended raised pedestrian (zebra) crossings and speed humps on Brighton Street, in response to community concern about speeding and rat running, with funding to be diverted from another project in the Stanmore-Damun Ward.

The Minutes of the Local Traffic Committee meeting held on 15 July 2024 were adopted at Council's meeting held on 03 September 2024 subject to the following:

- b. That Council include the proposed resident parking scheme in Glassop Street between Punch and White Streets as part of the approved residential parking scheme; and
- c. That Council allocate funding for the proposed pedestrian crossing at Mary Street, Lilyfield in this year's budget, to be funded by substituting another project from the Balmain-Baludarri Ward.

The Minutes of the Local Traffic Committee meeting held on 19 August 2024 were adopted at Council's meeting held on 03 September 2024.

LTC0924(1) Item 1 The Boulevarde, Lilyfield - Proposed Streetscape improvements and Civil Works (Baludarri - Balmain Ward/Balmain Electorate/Leichhardt PAC)

#### **SUMMARY**

The Council is planning to undertake streetscape improvement works in The Boulevarde, Lilyfield. The works are intended to improve pedestrian and motorist safety at the intersection of the Boulevarde and Balmain Road by constructing kerb extensions as well as improving the general amenity of the street by providing in-road trees, including repairing the road and footpaths.

The proposal works does not change the existing parking spaces in the street.

#### Officers Recommendation:

That the attached detailed design plan No.10278-A for the proposed streetscape improvements and civil works on The Boulevarde between Balmain Road and Joseph Street, Lilyfield be approved.

#### **DISCUSSION:**

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the attached detailed design plan No.10278-A for the proposed streetscape improvements and civil works on The Boulevarde between Balmain Road and Joseph Street, Lilyfield be approved.

For Motion: Unanimous



LTC0924(1) Item 2 Derbyshire Road, Leichhardt - Sydney Secondary College Leichhardt - Proposed Kerb Extension (Baludarri-Balmain Ward/Balmain Electorate/Leichhardt PAC)

#### **SUMMARY**

This report outlines the pedestrian safety issues raised by Sydney Secondary College Leichhardt on Derbyshire Road, Leichhardt between Pioneer Memorial Park and the rear gate of the school. It is proposed that a kerb extension be installed as a long-term treatment to assist pedestrians crossing Derbyshire Road during community, sporting and school events. A short term proposed 'No Stopping' zone, warning signs and line marking is recommended to be installed as an interim measure.

#### Officers Recommendation:

- 1. That the proposed kerb extension, footpath, and ramps on Derbyshire Road, Leichhardt between Pioneer Memorial Park and the rear gate of Sydney Secondary College Leichhardt as shown in *Figure 1* be supported in principle and included for consideration in Council's Capital Works program.
- 2. That the interim measures, including a painted chevron, two W6-1A pedestrian warning signs, and an 8.0m length 'No Stopping' zone at the east side of Derbyshire Road, Leichhardt near the rear gate of Sydney Secondary College Leichhardt as shown in *Figure 2* be approved for installation.

#### **DISCUSSION:**

The Representative for the Inner West Bicycle Coalition questioned if Council could clean the grated gutter crossing at the entry to the footpath between the north side of the school and the sports field from Balmain Road and noted that the gutter on the south side gets covered in leaves. The Representative for the Inner West Bicycle Coalition added that the bollards are far placed that cyclists turning left onto Derbyshire Road tend to cut the corner and crash into the gutter.

Council Officers advised that they would investigate the issue as a separate matter and advised the Representative for the Inner West Bicycle Coalition to forward the related correspondence to Council Officers for review.

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

- 1. That the proposed kerb extension, footpath, and ramps on Derbyshire Road, Leichhardt between Pioneer Memorial Park and the rear gate of Sydney Secondary College Leichhardt as shown in *Figure 1* be supported in principle and included for consideration in Council's Capital Works program.
- That the interim measures, including a painted chevron, two W6-1A pedestrian warning signs, and an 8.0m length 'No Stopping' zone at the east side of Derbyshire Road, Leichhardt near the rear gate of Sydney Secondary College Leichhardt as shown in Figure 2 be approved for installation.

For Motion: Unanimous



LTC0924(1) Item 3 InnerWest@40 - Area 6 Enmore & Marrickville East; Area 7
Marrickville & Tempe - Proposed speed limit reduction from 50km/h to
40 km/h (Midjuburi-Marrickville & Damun-Stanmore Wards/ Heffron,
Summer Hill & Newtown Electorates/Inner West PAC)

#### **SUMMARY**

At the Council meeting on Tuesday 5 March 2024, Council adopted the *Inner West@40* "Investigation in Potential Local Road Speed Limit Reductions" Study and would seek approval and funding from Transport for NSW (TfNSW) to expedite the implementation of 40km/h speed limits on all local streets within the Inner West Local Government Area (LGA).

TfNSW have approved the reduction in speed limit from 50km/h to 40km/h on all local streets within the Inner West LGA and Council was successful in receiving grant funding (approximately \$1.8M) under the 2024-2025 Safe Speed Program to undertake the necessary implementation work (signage and linemarking) for two of the high priority areas: Area 6 – Enmore & Marrickville East and Area 7 – Marrickville & Tempe.

Proposed signs and linemarking plans are enclosed.

#### **Officers Recommendation:**

That the proposed signage and line marking plans for the reduction in posted speed limit from 50km/h to 40km/h in all local roads in Areas 6 and 7 of the Innerwest@40study of Enmore, Marrickville and Tempe be approved.

#### **DISCUSSION:**

The Representative for the Inner West Bicycle Coalition suggested that Council investigate implementing 30km/h speed limits due to narrow streets and high pedestrian and cyclist activities. Council Officers advised that the InnerWest@40 strategy was only recently adopted by Council and is still to be implemented across the LGA. It was noted that once the InnerWest@40 had been implemented, Council could then investigate 30km/h speed limits. The Representative for Transport for NSW advised that they required the work instructions for all the proposed signage changes so they could update their systems. Council Officers advised they will forward those documents to TfNSW.

The Representative for the Member of Summer Hill questioned what the proposed timeline was for the completion of this project. Council Officers advised that it was estimated that the project would be completed in early 2025.

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the proposed signage and line marking plans for the reduction in posted speed limit from 50km/h to 40km/h in all local roads in Areas 6 and 7 of the InnerWest@40study of Enmore, Marrickville and Tempe be approved.

For Motion: Unanimous

LTC0924(1) Item 4 Newtown South Local Area Traffic Management Plan (LATM) Final Report (Damun-Stanmore Ward/Newtown Electorate/Inner West PAC)

#### **SUMMARY**

This report outlines the findings of the Final Newtown South LATM Study report.



The final draft report was placed on public exhibition in May 2024. A total of 30 contributions were made through YSIW. An additional 39 emails were received regarding the final draft report during the public exhibition period. All recommendations noted in the final draft have been included in the final report with some adjustments.

The response results indicate that the community generally supported all the proposed changes with a support rate through Yoursay Inner West of 57% to 86% for each of the recommendations.

After considering the Public Exhibition feedback, a review on the proposed scheme was undertaken with adjustments made to a few of the LATM Study recommendations.

The recommended treatments will be included for consideration for funding in Council's Capital Works Program and submitted for State/Federal Government Funding Programs where possible. Minor changes to signs and linemarking will be funded out of Council's Operational Budgets.

#### Officers Recommendation:

That the treatments listed below from the Newtown South Local Area Traffic Management (LATM) Final Report be listed for consideration in Council's Traffic Facilities Program and Operational linemarking/signposting program and prioritised as identified in the attached report:

- a) Reconstruct the existing raised pedestrian (zebra) crossing incorporating kerb extensions in Alice Street west of Hawken Street.
- b) Upgrade the existing pedestrian refuge in Alice Street west of Pearl Street into a raised pedestrian (zebra) crossing.
- c) Upgrade the existing pedestrian refuge in Alice Street west of Walenore Avenue into a raised pedestrian (zebra) crossing and upgrade the median island in Walenore Avenue.
- d) That widened median island be installed to cross Dickson Street at King Street.
- e) That a continuous footpath treatment be installed to cross Wells Street at King Street.
- f) That a continuous footpath treatment be installed to cross Darley Lane at King Street.
- g) That a raised platform be installed at the John Street/Darley Street intersection including No Stopping at the intersection subject to a risk assessment to determine length of No Stopping.
- h) That a raised platform be installed at the John Street/Lord Street intersection including No Stopping subject to a risk assessment to determine length of No Stopping.
- i) That subject to TfNSW approval, a 10km/h Shared Zone be installed in Alice Lane between Walenore Avenue and Holmwood Street and Alice Lane be converted to one way eastbound between Pearl Lane and Walenore Avenue.
- j) The footpath be widened on the southern side of Lord Street between King Street and the railway station access.
- k) Install statutory 10 metres of No Stopping restrictions at the Pearl Street/Wells Street intersection.
- I) Install No Stopping restrictions at the Laura Street/Commodore Street intersection.
- m) Modify the existing timed parking restrictions from 'No Parking 8:30am-6:00pm Mon-Fri' to 'No Parking 8:30am-6:00pm Mon-Sat' on the eastern side of Edgeware Road between Llewellyn Street and Victoria Road.
- n) Install a raised pedestrian/cyclist crossing in Edgeware Road south of Bedwin Road with kerb extensions and median splitter island.
- o) Paint road bends red in Wells Street at Commodore Street and Wells Street at John Street and improve pedestrian connection through the road closure by removing step.
- p) Install Pedestrian Warning (I) sign and supplementary 'disabled' sign at Edgeware



- Road/Llewellyn Street/Alice Street intersection facing northbound motorists in Edgeware Road
- q) Replace existing road closure gate in Pearl Lane at Dickson Street to allow for cyclist's access through the road closure.
- r) Request TfNSW implement 40 km/h speed limit on Local Roads within the study area and a reduced speed limit on Regional Roads as per innerwest@40 study.
- s) Linemark additional bicycle logos in Alice Street, Pearl Street, John Street, Darley Street, Lord Street and Edgeware Road.
- t) Request TfNSW investigate installing a signalised pedestrian crossing on the southern leg of the King Street/Alice Street traffic signals.
- u) Further investigation into road safety improvements at the Victoria Road/Edgeware Road intersection to improve conditions for right turn movements from Victoria Road into Edgeware Road be undertaken.

#### **DISCUSSION:**

Public Speakers John Parrington and Kate Parrington entered the meeting at 11:04am.

Mr and Ms Parrington supported the recommendations made by Council however raised concerns regarding the recommendations that affect Alice Lane. Mr Parrington advised he supported the recommendation to convert Alice Lane to 'One Way' however, he was concerned regarding the position of the marked parking spaces outside of No. 8A/8B Alice Lane noting that having parked cars outside 8A Alice Lane affects the turning circle for garaged parking at his property, as well as impedes the front gate pedestrian access to his property. Mr Parrington noted that when he exits his property, he is unable to turn eastbound due to parked cars restricting sightlines and suggested the possibility of removing parking in front of their property. Ms Parrington also raised concerns regarding vehicles sometimes being parked too close to the kerb which further restricts pedestrian access and makes it harder for them to use the already narrow footpath.

Council Officers advised that they have received similar concerns from residents regarding access to Alice Lane and noted that the final recommendation takes into consideration these concerns by retaining 'two-way' traffic flow in Alice Lane between Walenore Avenue and Holmwood Street to improve resident access. Council Officers noted that the current recommendation is still conceptual and that once the detailed design is drafted, residents will be consulted and be provided a chance to have a say in the final design. It was also noted that Council will take into consideration the concerns raised by the residents and ensure that pedestrian and vehicular access is maintained when marking where parking is permitted.

Ms Parrington asked what plans Council had to highlight the proposed 'Shared Zone.' Council Officers advised that the entrance points will be signposted with 'Shared Zone' signage and that the pavement would be a different colour to assist with highlighting the 'Shared Zone.'

Mr Parrington suggested the possibility of looking into angled parking on one side of Walenore Avenue. Council Officers advised Council is looking into the possibility of angled parking in the area as part of another study.

Public Speakers John Parrington and Kate Parrington left the meeting at 11:15am.

Council Officers tabled correspondence submitted by a resident regarding concerns for the safety of cyclists on Alice Street, Newtown noting they had several near misses whilst taking their children to school by bike. The resident noted that in the final LATM report, suggestions for a separate cycleway along Alice Street were rejected to preserve parking and advised that this goes against the Road User Prioritisation Hierarchy which both the Inner West Council and Transport for NSW endorse, with pedestrians being the highest priority road user, followed by bikes, buses, and then private vehicles. The resident acknowledged that a separated cycleway is a major project and may be out of scope for this work, however,



simply adding painted bike symbols on a busy road does not increase safety. The resident requested that Council consider more impactful improvements such as lowering the speed limit or adding a protected bike lane.

Council Officers advised that the recommendation includes proposals for upgrades of level pedestrian crossings to raised pedestrian crossings on Alice Street which will assist with reducing the speed of travelling vehicles and enhancing pedestrian safety. It was noted that there were currently no plans for a separate cycleway as that would require the removal of a considerable number of parking spaces which will have a significant impact to the community. It was noted that the implementation of a cycle route would usually be a part of a larger project that will look into extending existing cycle routes.

Council Officers advised that Council is reviewing the Cycling Action Plan, and that the resident's suggestion can be forwarded to the Strategic Transport Planning team to be investigated as part of the Cycling Action Plan and review.

The Representative for the Inner West Bicycle Coalition raised concerns regarding vehicles speeding on Alice Street and Camden Street, Newtown. The Representative for the Inner West Bicycle Coalition noted that these streets were busy streets, with Camden Street also being quite narrow, and suggested reducing the speed limits to enhance pedestrian safety.

Council Officers advised that Camden Street will have its speed limit reduced to 40km/h as part of the InnerWest@40 project.

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the treatments listed below from the Newtown South Local Area Traffic Management (LATM) Final Report be listed for consideration in Council's Traffic Facilities Program and Operational linemarking/signposting program and prioritised as identified in the attached report:

- a) Reconstruct the existing raised pedestrian (zebra) crossing incorporating kerb extensions in Alice Street west of Hawken Street.
- b) Upgrade the existing pedestrian refuge in Alice Street west of Pearl Street into a raised pedestrian (zebra) crossing.
- c) Upgrade the existing pedestrian refuge in Alice Street west of Walenore Avenue into a raised pedestrian (zebra) crossing and upgrade the median island in Walenore Avenue.
- d) That widened median island be installed to cross Dickson Street at King Street.
- e) That a continuous footpath treatment be installed to cross Wells Street at King Street.
- f) That a continuous footpath treatment be installed to cross Darley Lane at King Street.
- g) That a raised platform be installed at the John Street/Darley Street intersection including No Stopping at the intersection subject to a risk assessment to determine length of No Stopping.
- h) That a raised platform be installed at the John Street/Lord Street intersection including No Stopping subject to a risk assessment to determine length of No Stopping.
- i) That subject to TfNSW approval, a 10km/h Shared Zone be installed in Alice Lane between Walenore Avenue and Holmwood Street and Alice Lane be converted to one way eastbound between Pearl Lane and Walenore Avenue.
- j) The footpath be widened on the southern side of Lord Street between King Street and the railway station access.
- k) Install statutory 10 metres of No Stopping restrictions at the Pearl Street/Wells Street intersection.



- I) Install No Stopping restrictions at the Laura Street/Commodore Street intersection.
- m) Modify the existing timed parking restrictions from 'No Parking 8:30am-6:00pm Mon-Fri' to 'No Parking 8:30am-6:00pm Mon-Sat' on the eastern side of Edgeware Road between Llewellyn Street and Victoria Road.
- n) Install a raised pedestrian/cyclist crossing in Edgeware Road south of Bedwin Road with kerb extensions and median splitter island.
- o) Paint road bends red in Wells Street at Commodore Street and Wells Street at John Street and improve pedestrian connection through the road closure by removing step.
- p) Install Pedestrian Warning (I) sign and supplementary 'disabled' sign at Edgeware Road/Llewellyn Street/Alice Street intersection facing northbound motorists in Edgeware Road
- q) Replace existing road closure gate in Pearl Lane at Dickson Street to allow for cyclist's access through the road closure.
- r) Request TfNSW implement 40 km/h speed limit on Local Roads within the study area and a reduced speed limit on Regional Roads as per innerwest@40 study.
- s) Linemark additional bicycle logos in Alice Street, Pearl Street, John Street, Darley Street, Lord Street and Edgeware Road.
- t) Request TfNSW investigate installing a signalised pedestrian crossing on the southern leg of the King Street/Alice Street traffic signals.
- u) Further investigation into road safety improvements at the Victoria Road/Edgeware Road intersection to improve conditions for right turn movements from Victoria Road into Edgeware Road be undertaken.

For Motion: Unanimous

LTC0924(1) Item 5 Marrickville Road at Despointes Street, Marrickville – Proposed new raised pedestrian crossing - Design Plan 10297 (MIDJUBURI-MARRICKVILLE WARD / SUMMER HILL ELECTORATE / INNER WEST PAC)

#### SUMMARY

Council is planning to improve safety in Marrickville Road, Marrickville by constructing a new raised pedestrian crossing near Despointes Street to replace the existing "at-grade" flat pedestrian crossing. The proposal aims to improve pedestrian safety by better defining the safe pedestrian crossing point and addresses concerns for pedestrian safety and driver behaviour at this location. It is noted that Council has received Blackspot funding to raise the crossing.

#### Officers Recommendation:

That the detailed design plan for the proposed new raised pedestrian crossing on Marrickville Road at Despointes Street, Marrickville and associated signs and line markings (as per Design Plan No.10297) be approved.

#### **DISCUSSION:**

The Representative for the Member of Summer Hill noted that the vegetation near the pedestrian crossing sometimes obstructs the driver's sightlines, making it difficult to spot pedestrians at times, and questioned if Council could trim the vegetation near the crossings.



Council advised they will have the vegetation near the crossing reviewed and trimmed back where necessary.

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the detailed design plan for the proposed new raised pedestrian crossing on Marrickville Road at Despointes Street, Marrickville and associated signs and line markings (as per Design Plan No.10297) be approved.

For Motion: Unanimous

LTC0924(1) Item 6 Clissold Street, between Queen Street and Victoria Street, Ashfield - Proposed removal of existing at-grade crossing and provide a new raised pedestrian (zebra) crossing (Djarrawunang-Ashfield Ward/Summer Hill Electorate/Burwood PAC)

#### **SUMMARY**

Council at its meetings on the 18 March 2024 (through its Traffic Committee 11 December 2023) approved in principle, subject to detailed design, a series of proposed pedestrian (zebra) crossings and kerb extension treatments (under concept) for improved pedestrian and road safety around and near to the Cardinal Freeman (Retirement) Village, Ashfield.

This report describes and shows the detailed design plan of one of the proposed treatments, i.e. install a proposed new raised pedestrian (zebra) crossing in Clissold Street, just east of gate No.11 to the Cardinal Freeman Village (near William Street), and the removal of the existing at-grade pedestrian crossing further east in Clissold Street, between Queen Street and Victoria Road. This work is programmed and envisaged to be constructed in the 2024/2025 financial year, subject to funding.

#### Officers Recommendation:

That the detailed design plan (10296) for the proposed new raised pedestrian (zebra) crossing in Clissold Street, just east of gate No.11 to the Cardinal Freeman Village (near William Street), and the removal of the at-grade pedestrian crossing further east in Clissold Street, between Queen Street and Victoria Road, Ashfield, as shown in *Attachment 1* be approved.

#### **DISCUSSION:**

The Representative for the Inner West Bicycle Coalition questioned if Council has resolved the issue regarding Guide Dogs not being able to sense the pedestrian crossing if there is no dip in the gutter. Council Officers advised that the designers were advised of the residents' concerns and that they have been taken into consideration for the detailed design.

Council Officers advised that the final design of the pedestrian crossings may vary depending on circumstances (i.e. height of the footpath, width of the footpath, width of the road, and the height of the raised pedestrian crossing).

It was noted that traffic treatments will be included in the design where possible so the guide dogs can differentiate the raised pedestrian crossing from the normal road. It was also noted that tactile dots were implemented into the design plan to assist vision-impaired pedestrians using canes. It was noted that tactile dots are used as a standard throughout the state at



present.

The Representative for the Member of Summer Hill raised concerns from a resident noting that the report for this agenda item does not mention the vision concerns being specifically addressed.

Council Officers advised they would pass on the concerns to the designers.

The Representative for Transit Systems advised that he had met with a Council Officer earlier in the year regarding the proposed pedestrian crossing. It was noted that the pedestrian crossing would not work unless the current bus stop was moved. The Representative for Transit Systems advised that there are still concerns with the specific location of the crossing and associated street furniture that need to be reviewed.

The Representative for Transport for NSW suggested that the item be deferred so that further investigations regarding the raised concerns can take place.

The Committee members agreed with the amended recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the proposed removal of existing at-grade crossing and construction of a new raised pedestrian (zebra) crossing at Clissold Street, between Queen Street and Victoria Street, Ashfield be deferred.

For Motion: Unanimous

LTC0924(1) Item 7 Flood Street, Leichhardt – Proposed Slow Point at Regent Street (GULGADYA-LEICHHARDT WARD/BALMAIN ELECTORATE/LEICHHARDT PAC)

#### **SUMMARY**

Council is planning to improve safety in Flood Street, Leichhardt by constructing a slow point treatment at Regent Street. The proposal aims to improve cyclist and motorist safety at the intersection by reducing vehicle speeds at this location.

The proposed slow point will have no impact on the existing parking arrangements in the street.

#### **Officers Recommendation:**

That the attached detailed design plan No.10269 for the proposed slow point on Flood Street at the intersection with Regent Street in Leichhardt be approved.

#### **DISCUSSION:**

The Representative for Transit Systems noted that Flood Street was a main thoroughfare for a few bus services and noted that with the upcoming Norton Street Festa event, bus services will be diverted down Flood Street. He questioned if the heavy vehicles would be able to fit through the proposed slow point.

Council Officers advised that the designers have done a swept path analysis and there should not be issues for heavy vehicles.

The Representative for Transport for NSW requested that moving forward, Council include



the swept path analysis in the reports.

The Representative for the Inner West Bicycle Coalition raised concerns regarding the provision of bicycle lanes being in the door zone of parked cars and requested that a mixed traffic arrangement be made for the whole route in Flood Street. The Chair advised that the existing arrangement has been installed in the past with consultation undertaken with the Bicycle User Groups. Changes to the bicycle route would be outside the scope of the proposed project and that this can be considered in the Cycling Strategy and Action Plan.

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the attached detailed design plan No.10269 for the proposed slow point on Flood Street at the intersection with Regent Street in Leichhardt be approved.

For Motion: Unanimous

LTC0924(1) Item 8 Alt Street, south of Albert Parade, Ashfield-Proposed raising of existing pedestrian (zebra) crossing adjacent to St. Vincent's College. (Gulgadya-Leichhardt Ward/Summer Hill Electorate/Burwood PAC)

#### **SUMMARY**

Council is planning to improve safety in Alt Street, Ashfield by constructing a new Raised Pedestrian Crossing near Albert Parade to replace the existing "at-grade" flat pedestrian crossing adjacent to St Vincent's College (formerly De La Salle College).

The proposal aims to improve pedestrian and motorist safety by better defining safe pedestrian crossing points and addresses pedestrian safety and driver behaviour at this location.

#### Officers Recommendation:

That the detailed design plan (10256) to raise the existing at-grade pedestrian (zebra) crossing with associated signs and markings in Alt Street, Ashfield, just south of Albert Parade and adjacent to St Vincent's College (including the 'No Stopping at other times' restriction at the rear of the part-time Bus zone being removed) be approved.

#### **DISCUSSION:**

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the detailed design plan (10256) to raise the existing at-grade pedestrian (zebra) crossing with associated signs and markings in Alt Street, Ashfield, just south of Albert Parade and adjacent to St Vincent's College (including the 'No Stopping at other times' restriction at the rear of the part-time Bus zone being removed be approved.

For Motion: Unanimous



# LTC0924(1) Item 9 Ryan Street, Lilyfield (at Joseph Street) – Proposed Landscaped Kerb Blister Island (BALUDARRI-BALMAIN WARD/BALMAIN ELECTORATE/LEICHHARDT PAC)

#### SUMMARY

Council is planning to construct a landscaped kerb blister island outside the property No. 62 Ryan Street, Lilyfield. The proposal aims to protect the heritage awning and its posts from turning vehicles at this intersection.

It is noted that there will be no loss of on-street parking due position of the kerb blister island being installed within the existing 'No Stopping' zone.

#### **Officers Recommendation:**

That the attached detailed design plan No.10299 for the proposed landscaped kerb blister island, bollards, road re-sheeting and associated new signage on Ryan Street at the intersection with Joseph Street, Lilyfield be approved.

#### **DISCUSSION:**

The Representative for the Inner West Bicycle Coalition raised concerns regarding nose-in angled parking and the dangers it poses to cyclists and requested a review of current nose-in angled parking.

Council Officers advised that generally all new angled parking restrictions are installed as 'rear to kerb parking', particularly on a cycle route however, there are some historic angled parking restrictions that were installed as 'front to kerb' such as Ryan Street. Council Officers advised that this would be reviewed as part of the next LATM.

The Committee members agreed with the Officer's recommendation.

#### **COMMITTEE RECOMMENDATION:**

That the attached detailed design plan No.10299 for the proposed landscaped kerb blister island, bollards, road re-sheeting and associated new signage on Ryan Street at the intersection with Joseph Street, Lilyfield be approved.

For Motion: Unanimous

#### **General Business**

#### Item 10 - Frederick Street and John Street, Ashfield traffic signal update

The Representative for the Member for Summer Hill requested an update on the traffic signals at the intersection of Fredrick Street and John Street, Ashfield. The Representative for Transport for NSW advised that the project is currently in the detailed design stage and that Transport for NSW has applied for funding for the next two financial years for construction. The Representative for Transport for NSW advised that the construction would have to be staged over two years as it is a difficult site for the construction of traffic signals.

#### Item 11 - Edward Street at Old Canterbury Road signalised intersection update

The Representative for the Bicycle Coalition requested an update on the traffic signals on the



intersection of Edward Street at Old Canterbury Road. Council Officers advised they are currently in the design stage and are currently negotiating final approvals with Transport for NSW. Council Officers noted that the works are proposed to be completed this financial year as part of the Greenway project.

Meeting closed at 12.05pm.

#### **CHAIRPERSON**

Manod Wickramasinghe



Item No: LTC1024(1) Item 1

Subject: INTERSECTION OF EVANS STREET AND NELSON STREET, ROZELLE -

PROPOSED KERB EXTENSIONS (BALUDARRI-BALMAIN WARD/BALMAIN ELECTORATE/LEICHHARDT PAC)

**Prepared By:** Amir Falamarzi - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### **RECOMMENDATION**

1. That the proposed kerb extensions in Evans Street, at Nelson Street, Rozelle be supported in principle and included in Council's Capital Works Program.

2. That the detailed design for the proposed kerb extensions be brought back to the Traffic Committee for consideration, including the results of Community Engagement.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

In October 2023, Council adopted the Balmain Local Area Traffic Management (LATM) Study for the Balmain precinct. One of the recommendations from the study was to further investigate the provision of kerb extensions at the intersection of Evans Street and Nelson Street, Rozelle. The proposal aims to improve traffic safety for pedestrian by shortening the crossing distance and enhancing visibility as well as enhancing driver sight distance for traffic exiting Nelson Street. Additionally, the work will provide opportunities for landscaping and kerbspace for on-street parking.

#### **BACKGROUND & DISCUSSION**

The Council's adopted Balmain LATM study in 2023 made several recommendations to improve safety in the Rozelle and Balmain area. The Balmain LATM study area is bounded by Victoria Road, Robert Street, Mullens Street, Montague Street, and Darling Street. One of the recommendations from the study was to further investigate kerb extensions on Evans Street at Nelson Street to improve intersection safety.

The proposed kerb extensions have several safety benefits, including shortening the crossing distance required for pedestrians, improved pedestrian visibility, opportunities for landscaping and increasing the kerbside parking capacity by approximately 4.8m. A concept plan of the proposed treatment is shown in *Figure 1*.

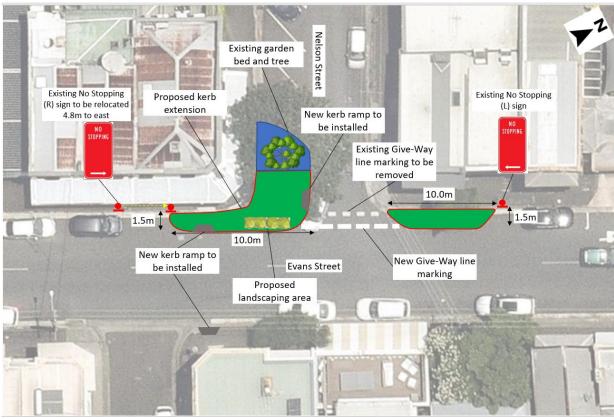


Figure 1. Proposed kerb extension at the intersection of Evans Street and Nelson Street

#### **PUBLIC CONSULTATION**

A public consultation was conducted with the affected residents along Evans Street and Nelson Street between 26 June 2024 and 12 August 2024 inviting to provide feedback on the proposal. At the time of this report one comment was received from The Welcome Hotel, which is immediately adjacent to the site, expressing their interest in a kerbside Loading Zone. This will be investigated in further detail and discussed with the hotel management prior to the development of the detailed design.

#### **FINANCIAL IMPLICATIONS**

Initial cost estimate of the proposed kerb extensions, ramps, and landscaping is estimated at \$40,000. Works are to be considered as part of Council's Capital Works Program for Traffic Facilities, with final costing to be finalized following the completion of detailed design.

#### **ATTACHMENTS**

Nil.



Item No: LTC1024(1) Item 2

Subject: TRAFFIC MANAGEMENT PLAN FOR THE 2024 NEW YEAR'S EVE

**EVENT (BALUDARRI-BALMAIN WARD) BALMAIN ELECTORATE** 

**LEICHHARDT PAC)** 

**Prepared By:** Amir Falamarzi - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### **RECOMMENDATION**

1. That the Traffic Management Plan (*Attachment 1*) detailing the traffic arrangements for the 2024 New Year's Eve be supported with the temporary modifications to bus stops being revised to also include:

- a) On Eaton Street:
  - i. Install a temporary 27m and 41m length 'Bus Zone' between Darling Street and Gladstone Street on the east and west side respectively;
  - ii. Install a temporary 65m and 54m length 'Bus Zone' between Gladstone Street and Darvall Street on the east and west side respectively;
- 2. That the Traffic Management Plan (Attachment 1) be forwarded to Council's Parks and Streetscapes Coordinator, Transport Management Centre and the Major Events & Incidents Group (NSW Police).

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

As part of the annual New Years Eve celebrations, Council implements a Traffic Management Plan to support NSW Police operations in the Balmain Peninsula.

This report outlines the traffic management plan for the 2024 New Year's Eve event including temporary road closures, 'Bus Zones' and 'No Stopping' zones. Following last year's event, there was a need to modify the TMP to address the following matters:

- Lack of an emergency access route during the Balmain NYE closures for NSW Ambulances
- Safety issues with crowds conflicting with buses turning around at the roundabout at the intersection of Darling Street and Curtis Road.

These matters are detailed in the report and resulted in the addition of an emergency access route via Mackenzie Street, Rozelle and a Bus Loop via Booth Street/Darvall Street/Eaton Street, Balmain as an alternative to turning buses at the congested Darling Street/Curtis Road roundabout.



#### **BACKGROUND**

As part of the annual New Year's Eve celebrations, Council implements a Traffic Management Plan to support NSW Police operations in the Balmain Peninsula.

Matters arising from the previous new Year's Event has been summarized below.

Lack of an emergency access route during the Balmain NYE has been highlighted by NSW ambulance during a joint meeting with the stakeholders involved in Balmain NYE.  It was raised that emergency vehicles to access the Balmain Peninsula need to use the roads manned by NSW Police officers.  As a result, these vehicles have to queue along the above roads with other vehicles, which can significantly affect their response time.  It was proposed that emergency vehicles access the Balmain Peninsula via Mackenzie Street, turning right into Mansfield Street and then turn left into Mullens Street. As part of Balmain NYE traffic management plan, the intersection of Mackenzie Street and Victoria Road will be barricaded.  In this regard, a traffic controller will be stationed at the intersection of Mackenzie Street and Victoria Road to maintain the access of emergency vehicles.  In addition, the existing TGS at the above intersection has been modified to include a traffic controller and an 'EMERGENCY' VEHICLES EXCEPTED' sign will be installed on the existing road barricade.  Safety issues with crowds conflicting with buses turning around at the roundabout at Darling Street and Curtis Road.  A new request from Transit Systems has been included for consideration to utilise Booth Street and Eaton Street as a turning point back to Darling Street. This will also require additional Bus Layover areas in Eaton Street as outlined in this report.	Stakeholders Comments	Officer Comments	
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Eaton Street as outlined in this report.		require additional Bus Layover areas in	
		Eaton Street as outlined in this report.	

#### **DISCUSSION**

#### **Traffic Management**

The following roads will be closed to all vehicular traffic between 3:00pm Tuesday, 31 December 2024 and 12:00am on Wednesday, 1 January 2025 to cater for the New Year's Eve celebrations:

- Brent Street at Evans Street intersection, Rozelle (both directions).
- Mansfield Street at Evans Street intersection, Rozelle (both directions).
- Hanover Street at Evans Street intersection, Rozelle (both directions).
- Mackenzie Street at Victoria Road intersection, Rozelle (both directions).
- Hartley Street at Victoria Road intersection, Rozelle (both directions).
- Joseph Street at Victoria Road intersection, Rozelle (both directions).
- Loughlin Street at Victoria Road intersection, Rozelle (both directions).
- Crescent Street at Robert Street intersection, Rozelle (both directions).
- Buchanan Street at Robert Street intersection, Balmain (both directions).



- Waragal Avenue at Terry Street intersection, Rozelle (both directions).
- McKell Street at Yeend Street intersection, Birchgrove (both directions).

In addition, the following roads will be closed to all vehicular traffic except State Transit Authority/Transit Systems buses, Taxis, Hire Cars and Balmain Access Permit holders and will be manned by NSW Police officers between 3:00pm Tuesday, 31st December 2024 and 12:00am on Wednesday, 1st January 2025:

- Terry Street at Wellington Street intersection, Rozelle (northbound direction).
- Darling Street at Nelson Street intersection, Rozelle (northbound direction).
- Darling Street at Ewenton Street intersection, Balmain (eastbound direction).
- Evans Street at Merton Street intersection, Rozelle (northbound direction).
- Evans Street at Nelson Street, Rozelle (both directions).
- Mullens Street at Robert Street intersection, Rozelle (both directions).
- Ballast Point Road at Lemm Street-Yeend Street intersection, Birchgrove (south and eastbound directions).
- Wharf Road at Grove Street intersection, Birchgrove (eastbound direction).
- Robert Street at Crescent Street, Rozelle (northbound direction).
- Grove Street at Rose Street, Birchgrove (eastbound direction).

The following plan indicates the road closure points:

A Traffic Management Plan including Traffic Control Plans outlining the above road closures and the bus route changes is attached in *Attachment 1*.

#### Taxi Access

As previously recommended, the NSW Taxi Council will again be requested to inform their members of the proposed taxi access restriction after 7pm to minimise traffic congestion in the peninsula and improve pedestrian safety. Taxis will therefore need to use the following drop-off point locations:

- Taxis entering Terry Street In the unrestricted parking on the eastern side of Terry Street or 'Bus Zone' and timed kerbside parking along Wellington Street.
- Taxis entering Darling Street In the ticket parking areas along Darling Street and Nelson Street.
- Taxis entering Robert Street In the restricted parking area and 'Bus Zone'.

#### Public Transport Access

Transit Systems will be scheduling additional services into the Balmain peninsula to cater for the New Year's Eve celebrations.

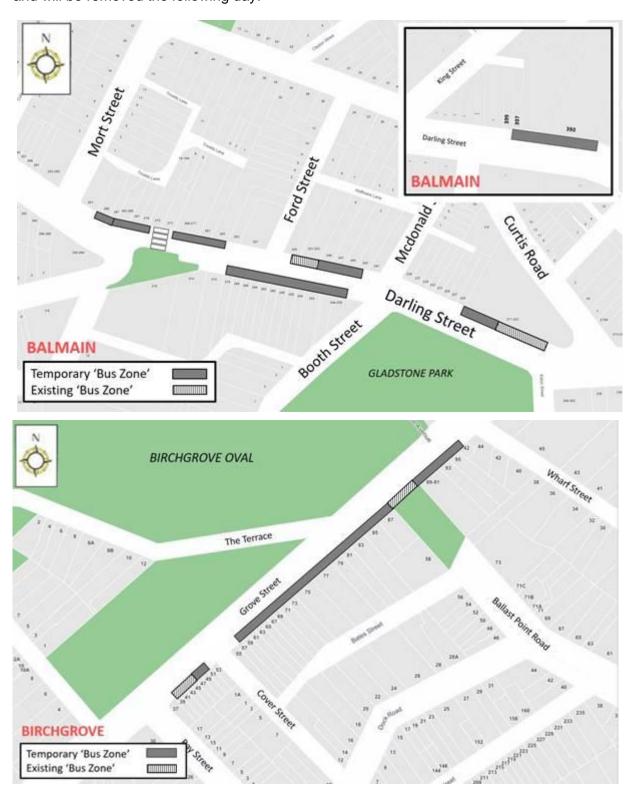
As such, temporary 'Bus Zones' will be installed at the following locations:

- Darling Street and the existing 'Bus Zones' on Darling Street between Mort Street and Curtis Road, Balmain.
- Eastern side of Grove Street between Wharf Road and Bay Street, Birchgrove.

The 'Bus Zones' on Grove Street will be used by Transit Systems and the Police to store buses on New Year's Eve. This is required for the safe bump out of the general public from Birchgrove as identified from a debrief from a previous New Year's Eve event conducted in the Balmain Peninsular.



The signs defining the temporary restrictions be in place after 12 Noon on 31 December 2024 and will be removed the following day.



In addition, to avoid delays at the Robert Street/Mullens Street intersection (which is a Police check point), buses entering Robert Street from Victoria Road are proposed to use Crescent Street and Parsons Street to access Mullens Street (see TCP 06/07 in *Attachment 1*).

It should be noted that Council will install variable message signs ("Balmain Peninsula is closed") on the main access roads into Balmain Peninsula a few days in advance of the event;



#### Request for a bus loop utilising Booth Street and Eaton Street

Feedback from Transit Systems and NSW Police have indicated that there has been some safety concerns at the roundabout of Darling Street and Curtis Road. Previously buses utilised the roundabout for bus turnarounds during the Balmain New Year's Eve. Due to the large crowds egressing the peninsula, it was deemed difficult to control crowds from spilling onto the roadway and obstructing buses. Transit Systems and Transport for NSW have advised that this has affected service times and the ability to efficiently move large crowds out of the area.

To address this issue, it has been proposed to utilise Booth Street, Darvall Street and Eaton Street as a turning route back to Darling Street. An adjustment to the Traffic Guidance Scheme will temporarily prevent northbound traffic flow in Booth Street at Darvall Street to ensure that Buses can freely circulate without opposing vehicle movements in Booth Street. The route around Gladstone Park is outlined below:

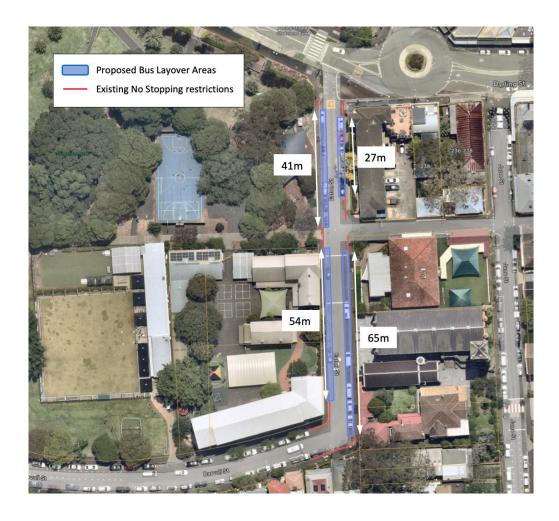


As part of this request on New Year's Eve:

- On-street parking spaces on both sides of Eaton Street, between Darling Street Darvall Street, will be temporarily replaced Bus Zone restriction from 3pm New Year's Eve until 3am New Year's Day.
- Temporary on-street Bus Zones in Darling Street, between McDonald Street and Mort Street, will continue unchanged to the previous year's arrangement.
- Traffic on Booth Street between Darling Street and Darvall Street, will be temporarily adjusted to discourage northbound movements in order to improve bus movements. This will include changes at Watson Lane and Booth Street.
- It is estimated that approximately 31 on-street parking spaces on Eaton Street will be temporarily changed to a Bus Zone.

The parking changes in Eaton Street is outlined in the diagram below:





Council has discussed this request with Transit Systems, NSW Police and Transport for NSW and identified the following for consideration:

- Community Consultation should be undertaken including Balmain Hospital and the affected businesses and residents along Booth Street/Darvall Street/Eaton Street and its side streets regarding parking removal and changes to traffic conditions.
- The crowd management strategy needs to be considered due to the potential conflicts between crowd movements at the intersections of Darling Street/Eaton Street and Darling Street/Booth Street with the new bus movements and the high volume of pedestrians. There is also a risk that the crowds may consider detouring through Gladstone Street which is a narrow residential laneway to access Gladstone Park and conflict with bus movements.
- Council has noted that the temporary Bus Zone may have enforcement issues especially considering that the event is on New Year's Eve. This will need to be observed during the upcoming event and consider possible future refinements for future events.

#### Temporary 'No Stopping' Restrictions

Following a previous year's event, the Sydney Buses representative advised that several vehicles parked on Montague Street out from the kerb thus narrowing the carriageway and preventing buses from passing each other. Therefore, it is proposed to install temporary 'No Stopping' zone on the eastern side of Montague Street between Darling Street and Beattie Street. The residents will be advised of this arrangement in advance of the event.



#### Resident Access

To ensure resident access is maintained, the following permits will be accepted for access to the Balmain / Rozelle peninsula:

- Inner West Council Resident Access Permit.
- Inner West Council current Resident Parking Scheme Permit for Areas; B1, B2, B3, B5, BE, BG, R1, R2, R3 & R4.
- Australian Mobility Parking Scheme permit

#### **NOTIFICATION**

The proposed road closures are currently being advertised on Council's website in accordance with the *Roads Act 1993* for a period of 28 days from 29 August 2024 to 26 September 2024. No comments have been received to date.

In December, the details of these traffic arrangements will be re-advertised on Council's website and via a mail out to all occupants in the Balmain peninsula.

The road closures and other event information will also be available on the Sydney New Year's Eve Event website.

#### **FINANCIAL IMPLICATIONS**

Funding for costs associated with New Year's Eve including labour, notifications and permits have been budgeted for in the 2024-25 operational plan.

#### **ATTACHMENTS**

1. New Year's Eve Fireworks. Balmain Peninsular Traffic Management 2024



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## 

## BALMAIN NEW YEARS EVE TRAFFIC CONTROL PLANS

TGS 01	Hanover St & Evans St ROZELLE
TGS 02	Mansfield & Evans ROZELLE
TGS 03	Brent St & Evans St ROZELLE
<b>TGS 04</b>	Victoria Mackenzie & Hartley ROZELLE
TGS 05	Victoria Joseph & Loughlin ROZELLE
TGS 06	Victoria Rd & Robert St ROZELLE
TGS 07	Robert & Mullens ROZELLE
TGS 08	Buchanan & Robert ROZELLE
TGS 09	Waragal Ave & Terry St ROZELLE
<b>TGS 10</b>	Terry St & Wellington St ROZELLE
<b>TGS 11</b>	McKell St & Yeend St BIRCHGROVE
<b>TGS 12</b>	Darling St & Nelson ST ROZELLE
TGS 13	Darling St & Ewenton St BALMAIN
TGS 14	Wha <mark>rf Rd &amp; Grove St BIRC</mark> HGROVE
<b>TGS 15</b>	Darling St & Curtis Rd BALMAIN
TGS 16	Temp Bus stops Darling St BALMAIN
TGS 17	Tem <mark>p No Stopp</mark> ing Mo <mark>ntag</mark> ue St Balmain
TGS 18	Rose St & Grove St BIRCHGROVE
TGS 19	Terry St & Margaret St ROZELLE
TGS 20	Darling St & Victoria Rd ROZELLE
TGS 21	Illoura Reserve, Weston St BALMAIN

As at 9th October 2023

PREPARED ON BEHALF OF

INNER WEST COUNCIL

BY

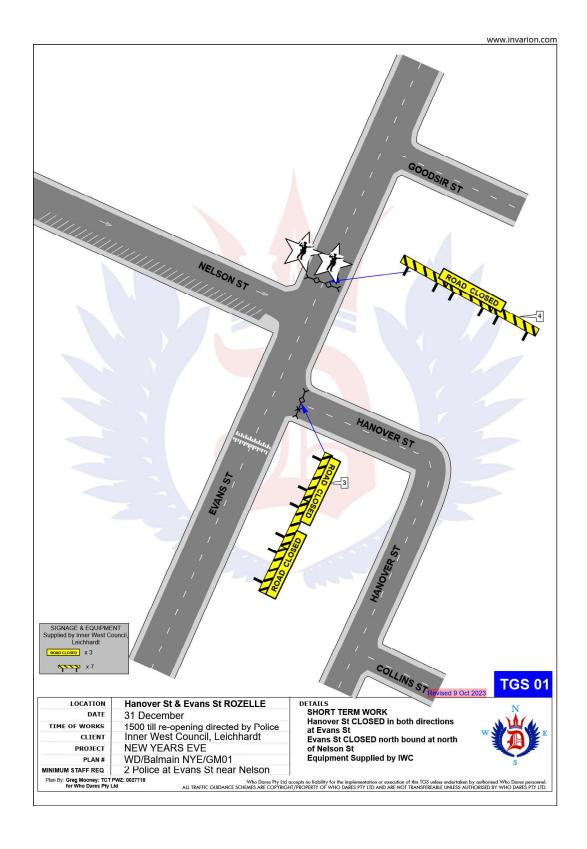
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TRAFFIC PLANNERS
SAFETY CONSULTANTS

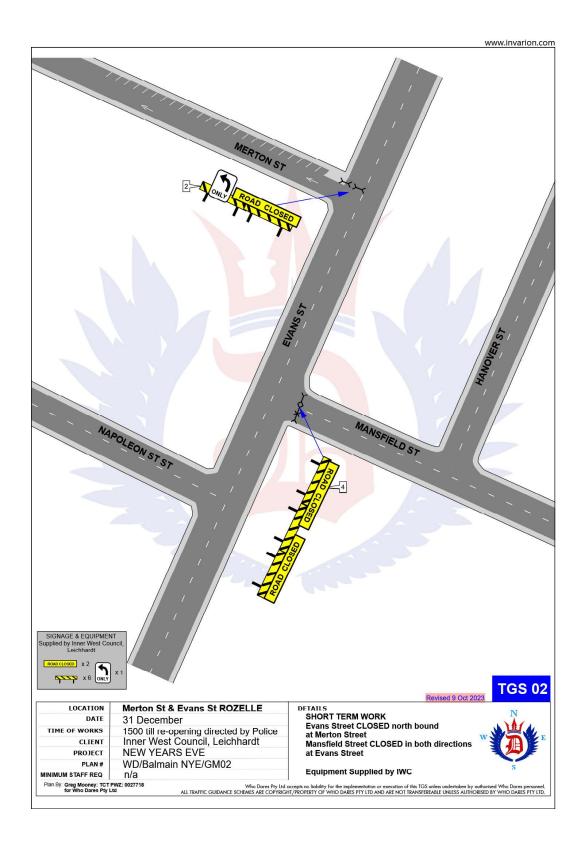
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Ph: 02 9569 9922

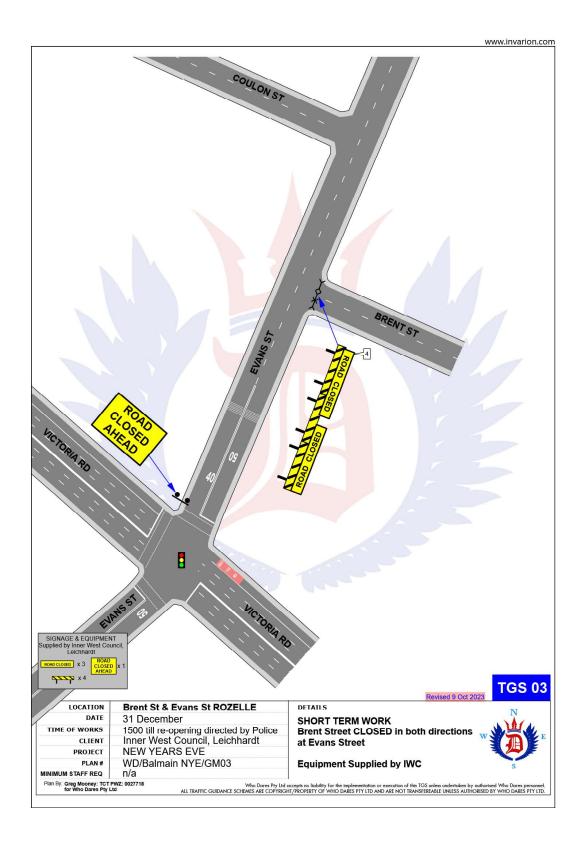


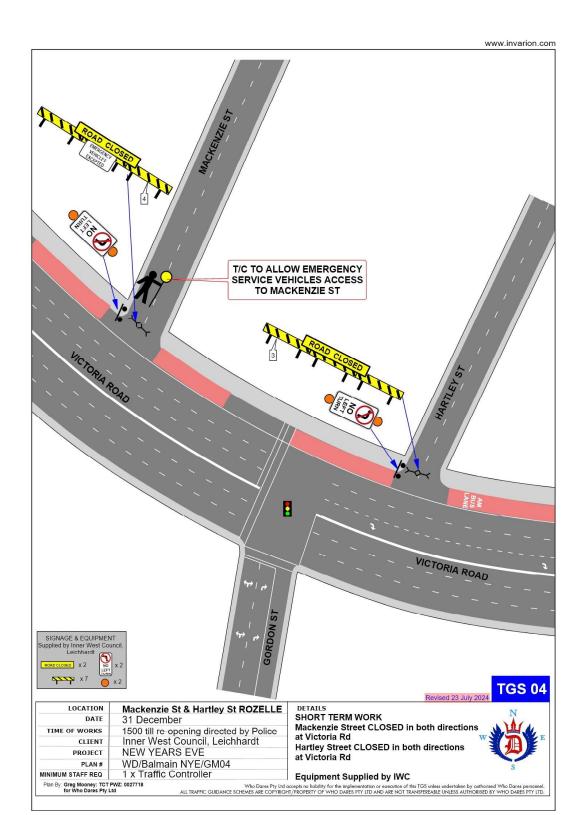




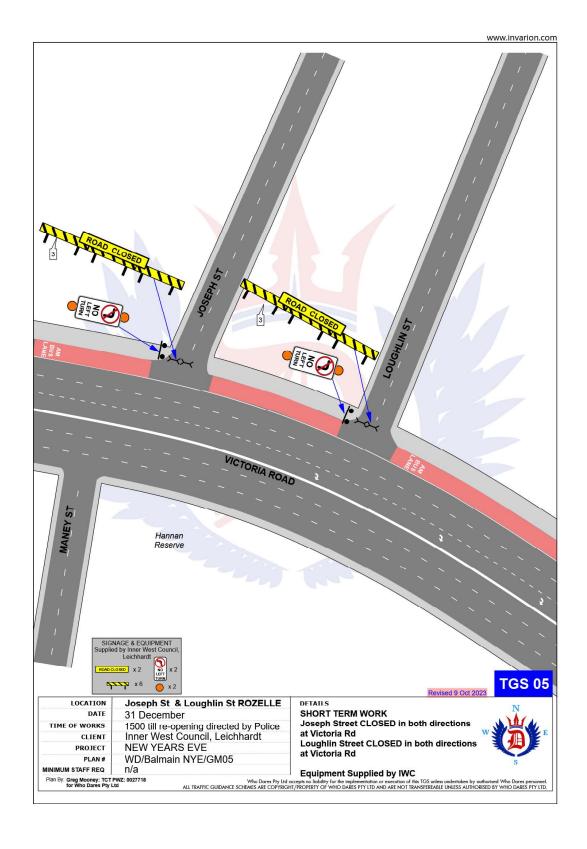




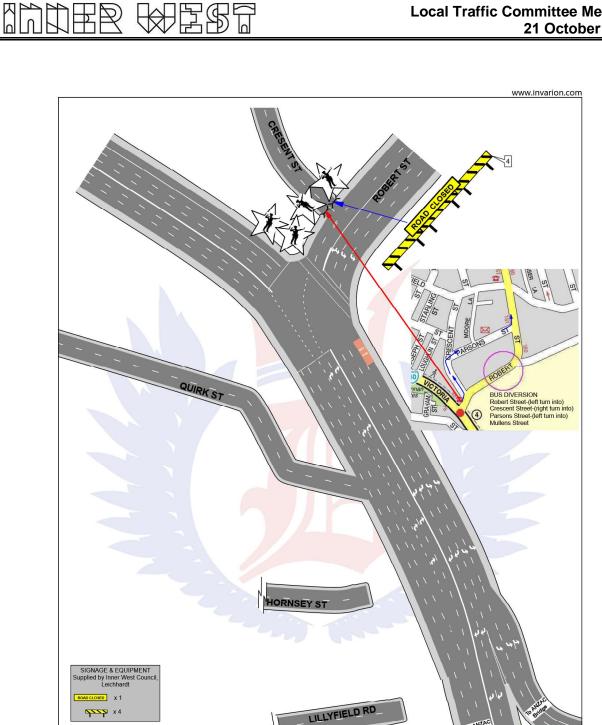








TGS 06



Crescent St & Robert St, ROZELLE

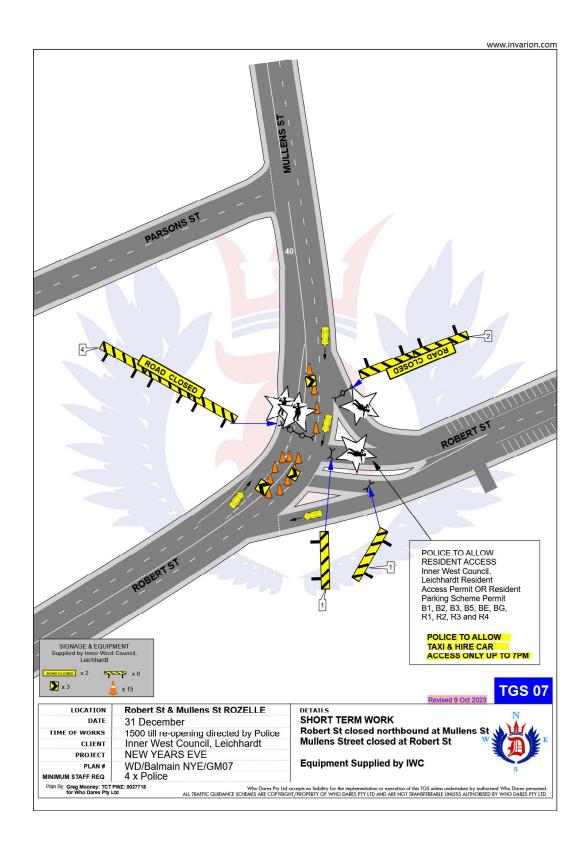
31 December

LOCATION

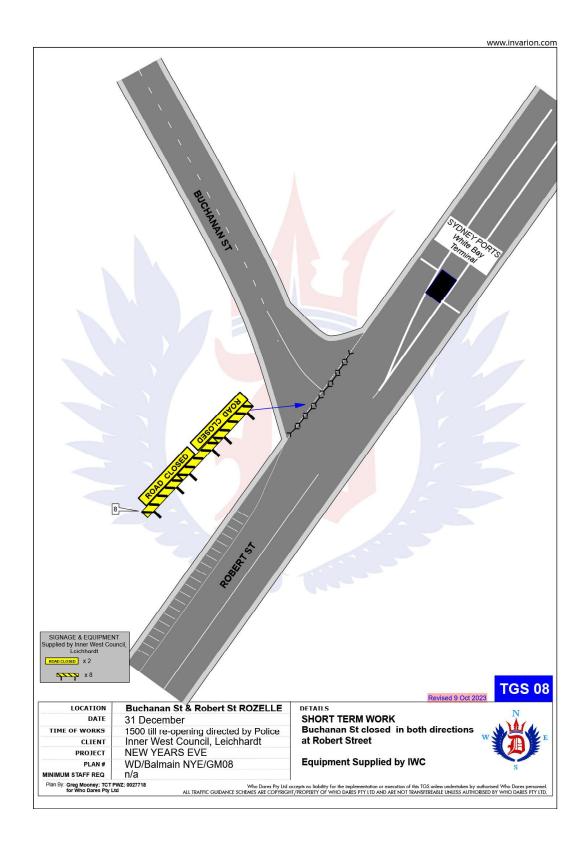
TIME OF WORKS

DATE

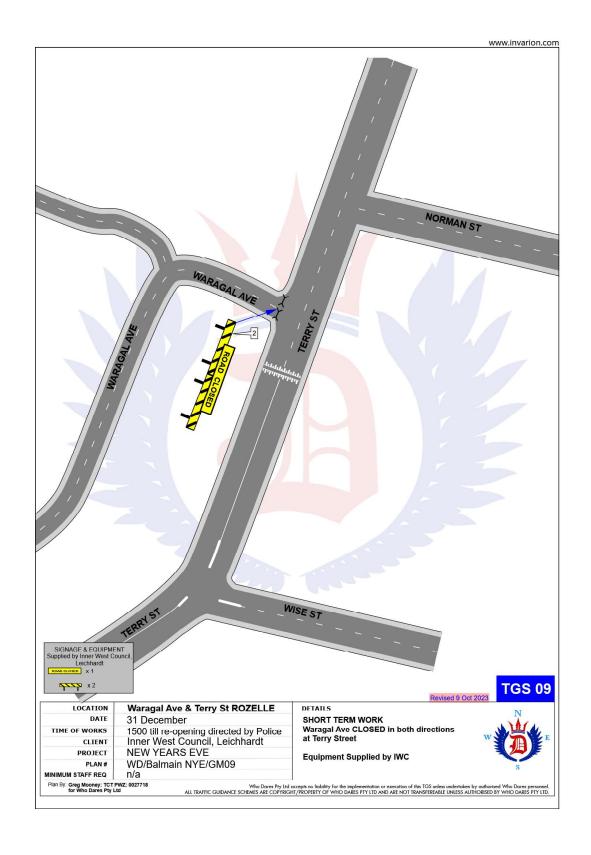




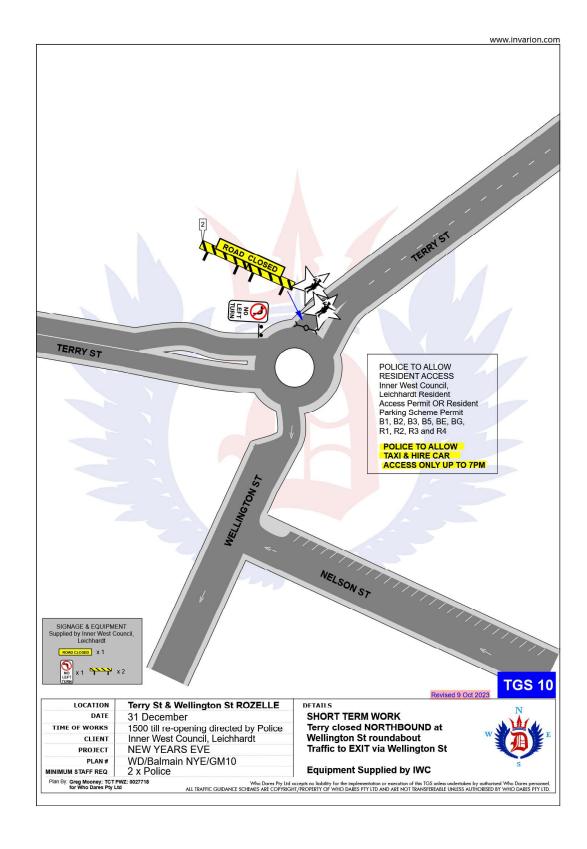




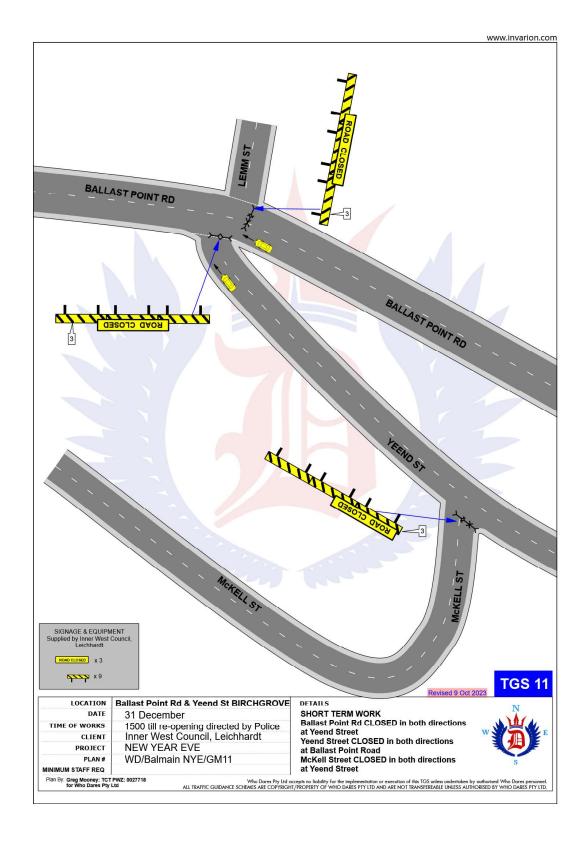




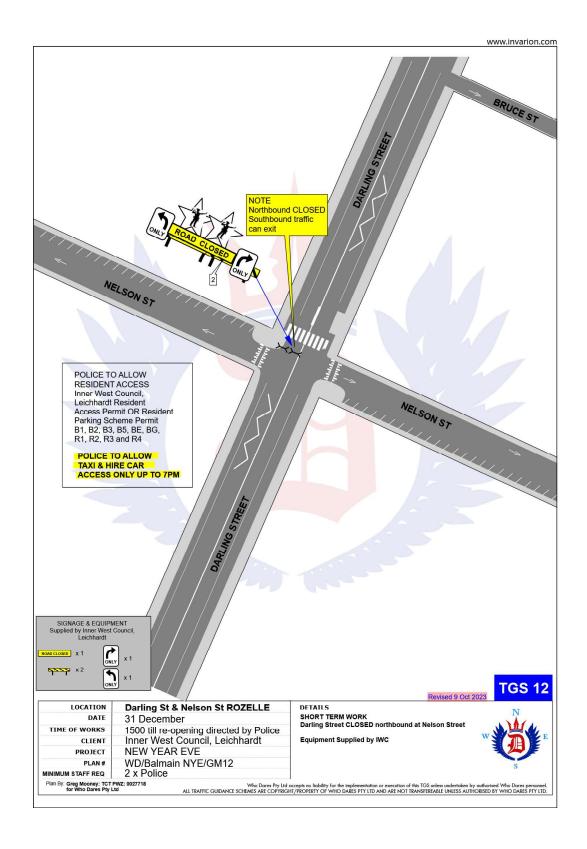


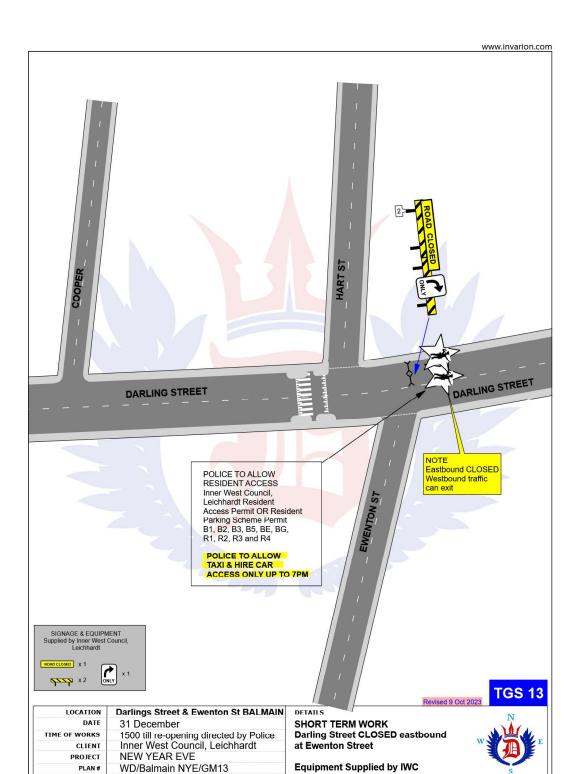












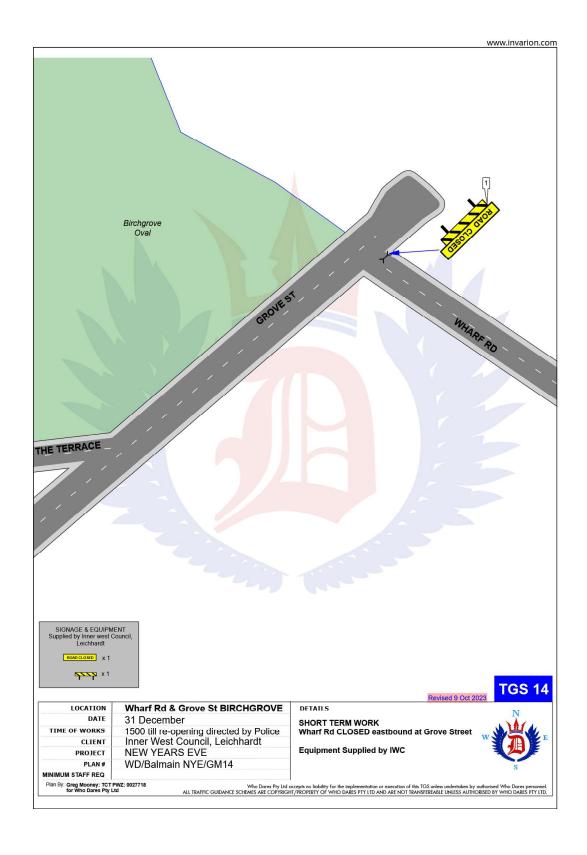
Who Dares Pty Ltd accepts no liability for the implementation or execution of this TGS unless undertaken by authorised Who Dares personnel ALL TRAFFIC GUIDANCE SCHEMES ARE COPYRIGHT/PROPERTY OF WHO DARES PTY LTD AND ARE NOT TRANSFEREABLE UNLESS AUTHORISED BY WHO DARES PTY LTD

MINIMUM STAFF REQ

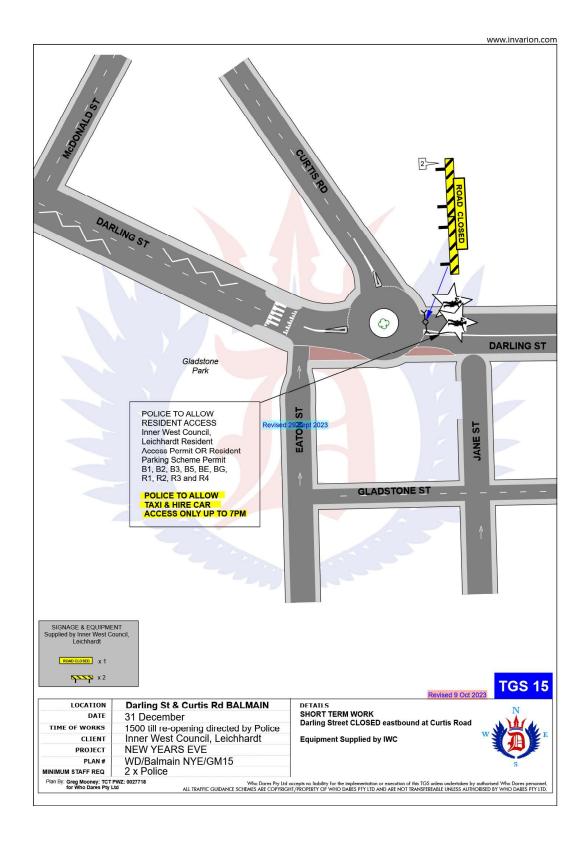
Plan By: Greg Mooney: TCT PW. for Who Dares Pty Ltd

2 x Police

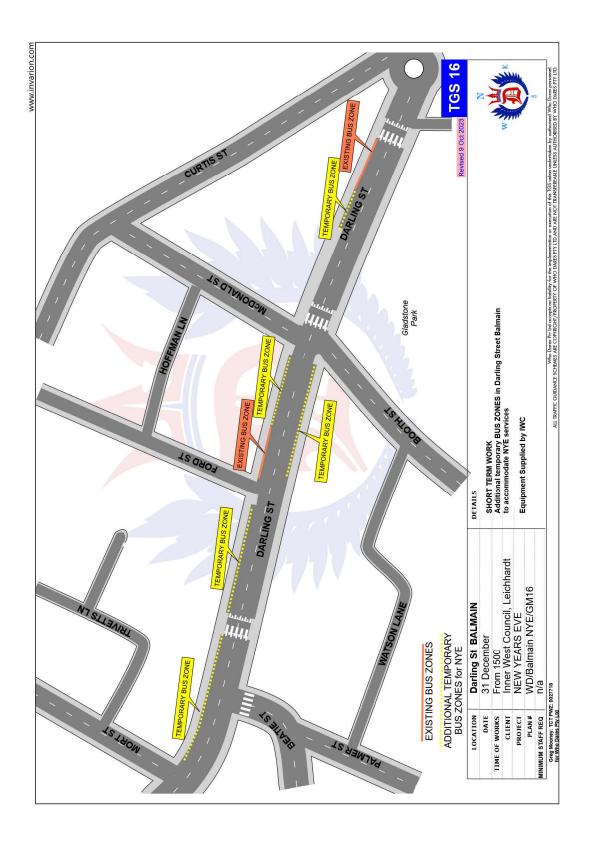




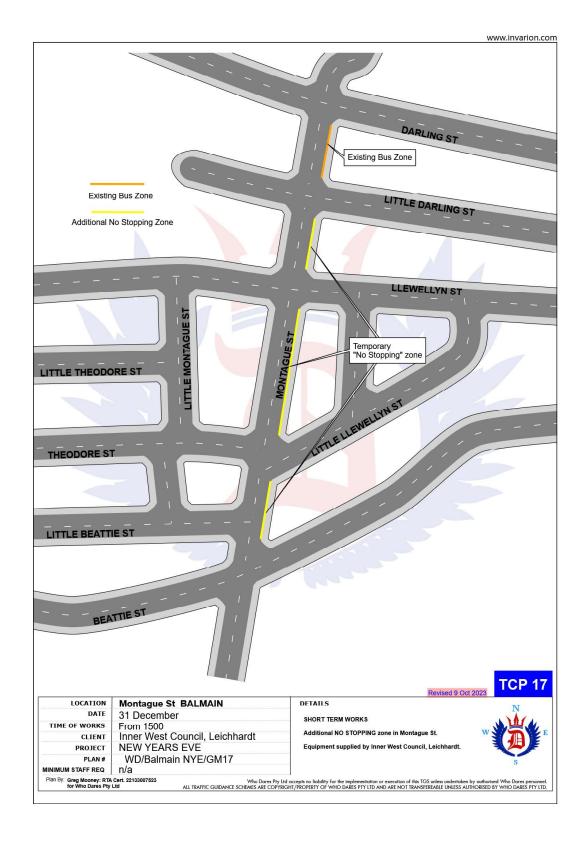




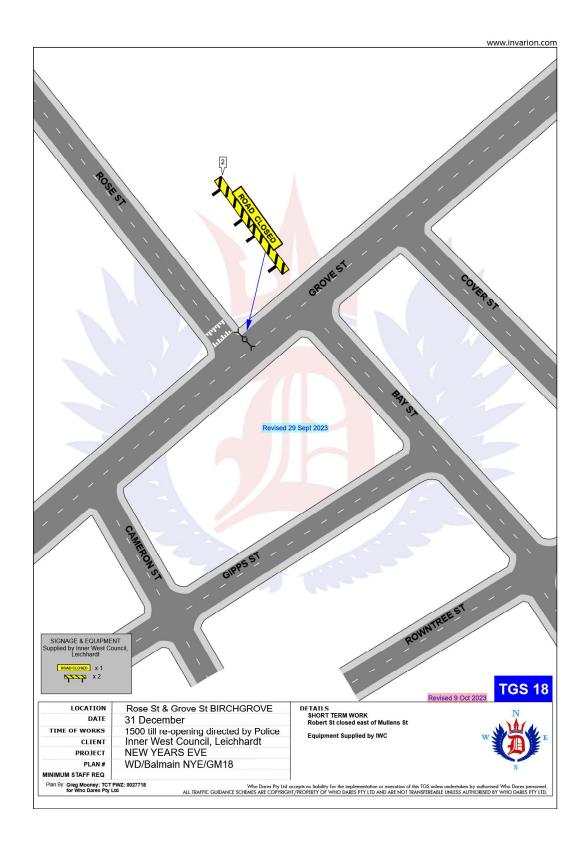




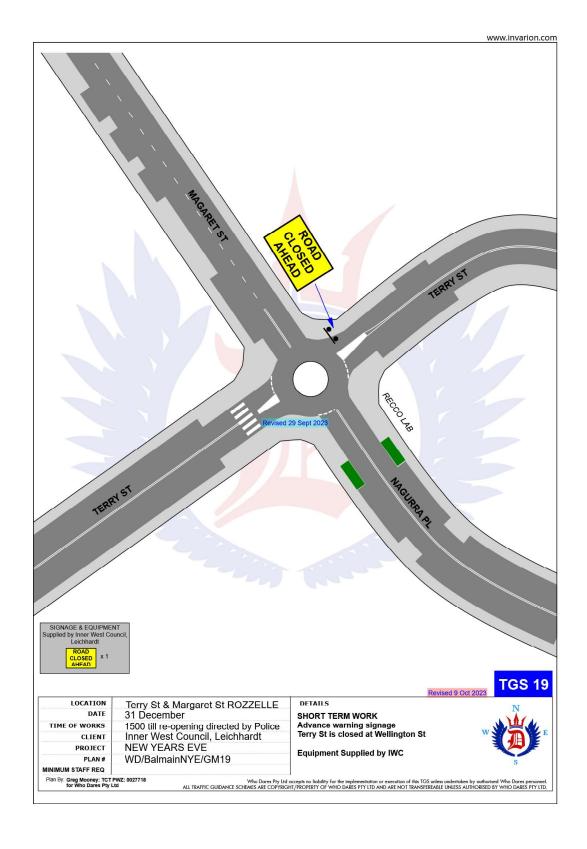




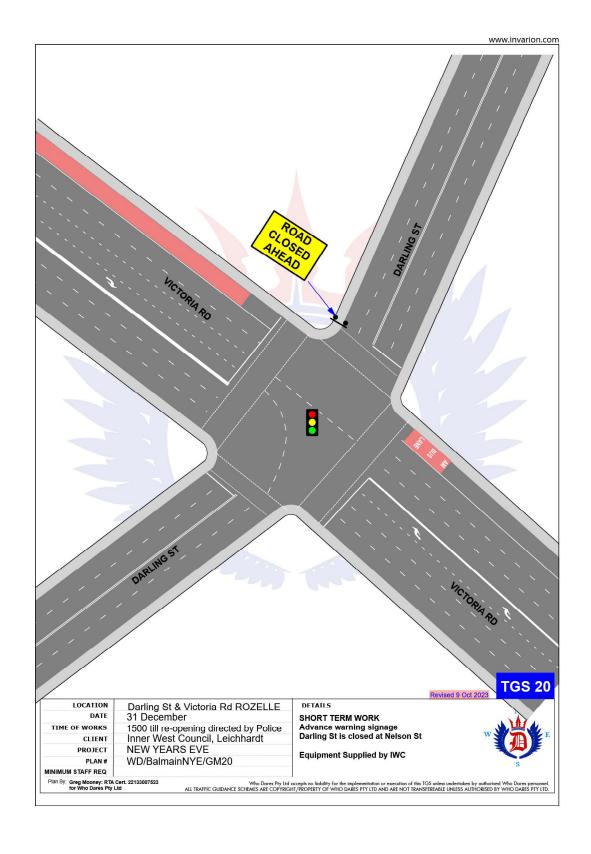




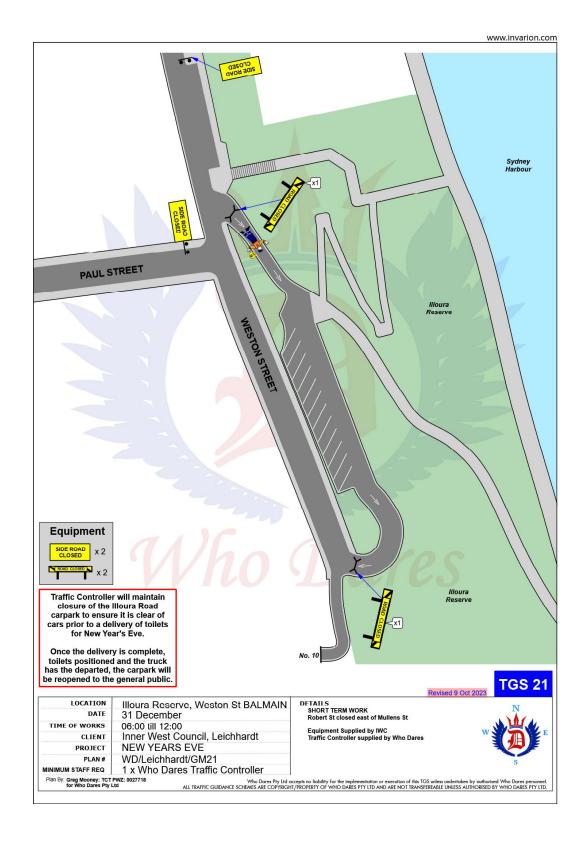














Subject: INTERSECTION OF GLASSOP STREET AND WHITE STREET, BALMAIN

- PROPOSED TREATMENT OF INTERSECTION FOR IMPROVED SIGHT

LINES (BALUDARRI-BALMAIN WARD/BALMAIN

**ELECTORATE/LEICHHARDT PAC)** 

**Prepared By:** Zara Helal - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### RECOMMENDATION

That the following treatment at the intersection of Glassop Street and White Street, Balmain be approved as follows:

- a) Linemark chevron islands on Glassop Street at the intersection of Glassop Street and White Street;
- b) Install a 'Give Way' (R1-2A) sign and supporting give way lines (TB & TB1) across White Street at Glassop Street; and
- c) Install 10m length double barrier lines (BB) in White Street commencing from Glassop Street.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

Council has received concerns from the community regarding insufficient visibility at the intersection of Glassop Street and White Street, Balmain.

This location formed part of the Rozelle North precinct where a Local Area Traffic Management (LATM) study was undertaken in 2022. The study recommended the installation of kerb extensions at the location at a medium priority, which was adopted by Council at the meeting held on 13 September 2022. As this project was not an immediate priority under the Council's Capital Works Program, an interim treatment has been proposed to address the safety issue.

The proposal sees the installation of painted kerb buildouts at the corners of Glassop Street at its intersection with White Street, and the introduction of 'Give Way' control for the White Street leg. The proposal aims to improve visibility at this intersection by bringing the give way line forward toward the Glassop Street travel lanes.

### **BACKGROUND**

During the initial community engagement undertaken as part of the Rozelle North LATM study, residents raised concerns regarding sight line obstructions at the intersection of Glassop Street and White Street. The intersection currently does not have any signposted 'No Stopping' restrictions or priority control.

The Rozelle North LATM study proposed the construction of physical kerb extensions at the corners of Glassop Street at its intersection with White Street, and the introduction of 'Give



Way' restrictions at White Street at its intersection with Glassop Street. This was supported by the community during the Public Exhibition of the report. Further concerns from the community have been received since the adoption of the LATM regarding safety at this intersection.

The interim proposal of painted kerb buildouts in place of the kerb extensions and introduction of 'Give Way' priority will improve visibility and safety at this intersection by ensuring that adequate visibility is maintained and vehicles give way when entering Glassop Street from White Street.

#### DISCUSSION

A concept plan for the proposed painted kerb build outs is provided in *Attachment 1* and features the following treatment:

- Linemark chevron islands at the intersection of Glassop Street and White Street,
- Install 'Give Way' (R1-2A) sign, give way lines (TB & TB1) across White Street at Glassop Street;
- Install 10m length double barrier lines (BB) in White Street commencing from Glassop Street;

The original concept design as recommended in the Rozelle North LATM is shown below.



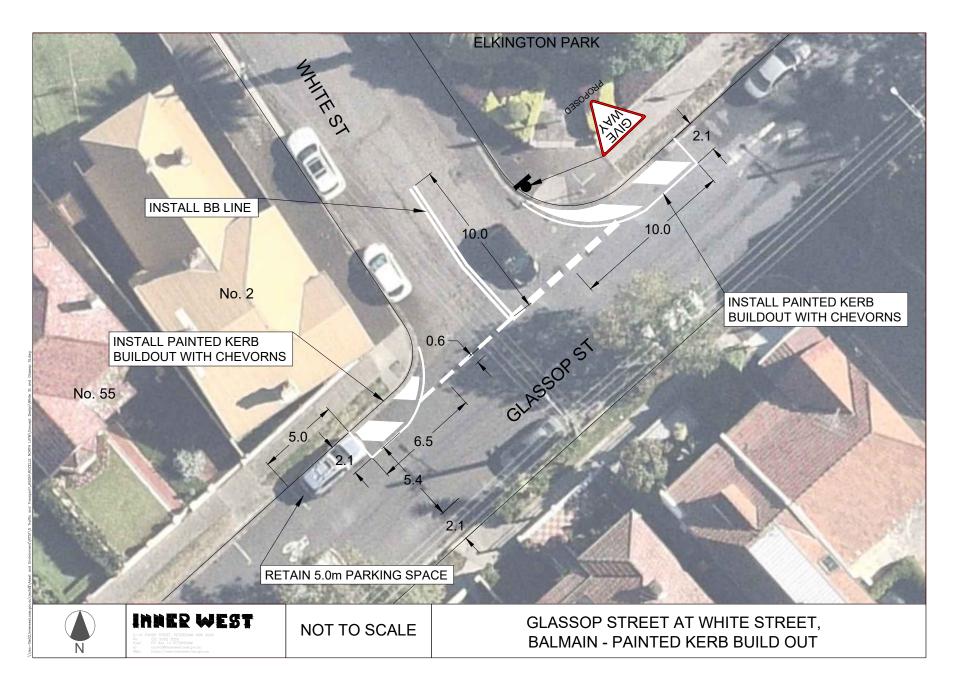
## **FINANCIAL IMPLICATIONS**

The proposed works at the intersection of Glassop Street and White Street will funded under the Council's general signs and line marking budget.

#### **ATTACHMENTS**

**1.** White Street and Glassop Street, Balmain - Painted Kerb Build Out Design







Subject: LILYFIELD ROAD, LILYFIELD - PROPOSED RAISED PEDESTRIAN AND

BICYCLE CROSSINGS (BALUDARRI-BALMAIN WARD/BALMAIN

**ELECTORATE/LEICHHARDT PAC)** 

**Prepared By:** Charbel El Kazzi - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

### **RECOMMENDATION**

That the attached detailed design plan (Attachment 1) for the proposed Raised Pedestrian and Bicycle crossings on Lilyfield Road at Ryan Street and Lilyfield Road approximately 80m east of Denison Street, Lilyfield be approved.

## STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

## **EXECUTIVE SUMMARY**

Detailed design plans for the two Raised Pedestrian and Bicycle crossings along Lilyfield Road has been prepared to improve pedestrians and bicycles connectivity to and from the Rozelle Parklands. There is ongoing work undertaken by Council to finalise the Plan of Management and revising the Masterplan for Rozelle Parklands and Eastern Park, which amongst many elements, includes pedestrian accessibility and safety in the vicinity at these parks. With the recognized need from the community to improve road safety, Council has expediated the design and development of two key crossing facilities in advance of the finalization of the Masterplan and the Lilyfield Road Cycleway design. The proposed two facilities will address key concerns from the community and Bicycle User Groups regarding the need to provide a safe interface point from Lilyfield Road into Rozelle Parklands and vice versa.

#### **BACKGROUND**

With the completion of the Rozelle Parklands in late 2023, Council has resolved to expediate the design and development of the key pedestrian and bicycle crossing locations to improve pedestrian and bicycle safety in Lilyfield Road. A Masterplan for the Rozelle Parklands is in development and is expected to include elements such as pedestrian and bicycle safety and connectivity. The Masterplan will also consider how the Parklands can be improved over time in addition to consideration for improvement of active transport links around the Parklands.

Two crossing points have been identified along Lilyfield Road as a safety concern from the community and bicycle user groups. These are the two locations:

- Lilyfield Road at Ryan Street, where the current pedestrian and bicycle shared paths terminate at the western end of the parkland.
- Lilyfield Road approximately 80m east of Denison Street, which connects existing paths from Easton Park directly to the Rozelle Parklands.

The traffic and roadway features of Lilyfield Road at Ryan Street and East of Denison Street is tabled below:



Street Name	Lilyfield Road
Kerb to Kerb Width (m)	Ranges between 13.0 and 13.3m
Carriageway Type	Two-way, one travel lane each direction. Combination of bicycle shoulder lane and bicycle logo mixed traffic arrangement.
Classification	Regional
Speed Limit	50km/h
85 <sup>th</sup> Percentile Speed	43.1km/h
Average Traffic Volume	6,000veh/day
Available TfNSW recorded crash history last 5 years (2018-2023)	No reported crashes on Lilyfield Road between Ryan Street and Gordon Street
Parking Arrangements	Parking permitted on both sides

#### DISCUSSION

The design plans shown in *Attachment 1* outline the proposed works on Lilyfield Road at the two locations which includes the following:

- Raised pedestrian and bicycle crossing thresholds with new flush gutter bridge and
   5.7m wide flat top to include separated bicycle crossing lanes;
- Kerb islands in the road adjacent to the new raised crossing as detailed within the attached plans;
- New concrete footpath linking crossings to existing footpaths as detailed in the attached plans;
- New kerb ramps to link on-road bicycle riders to access the crossings;
- Short lengths of Bicycle/Pedestrian Shared Paths on each side of the crossings, as indicated on the plans;
- Inclusion of a permanent mobility parking space adjacent to the parklands near Ryan Street;
- Associated signage and line marking as detailed in the attached plans.

The proposal will result in the loss of 7 on-street parking spaces for the crossing at Ryan Street, and 8 spaces for the crossing east of Denison Street. These spaces are not located directly in front of residential properties and as part of the Rozelle Parklands Masterplan, there are consideration to introduce angle parking in some sections of Lilyfield Road as the primary bicycle route will be through the Rozelle Parklands. This could potentially offset the loss of parking from the construction of the two crossings.

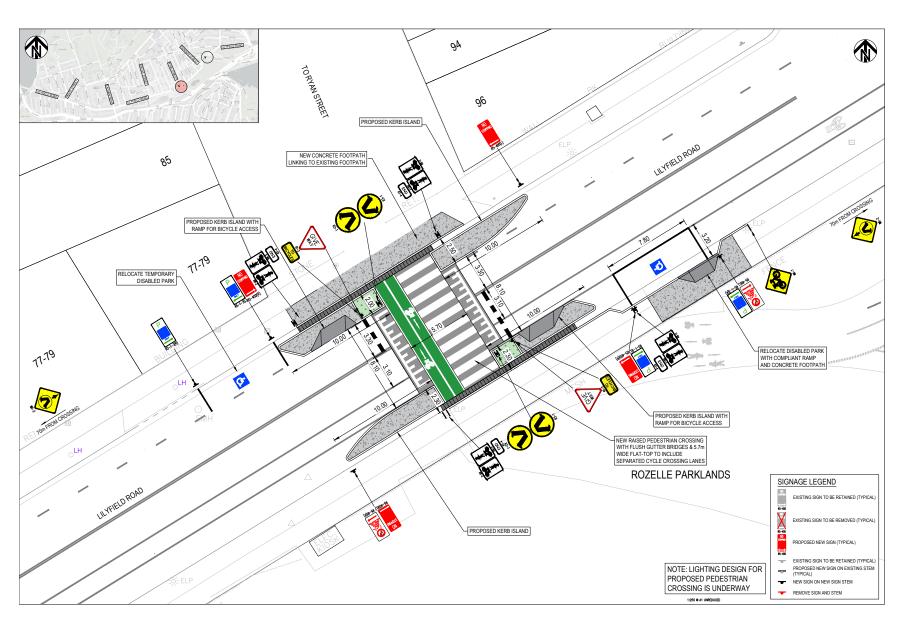
### FINANCIAL IMPLICATIONS

The works are expected to cost approximately \$192,000 ex. GST and are to be funded under Council's Capital Works Program with final costing to be finalised following completion of detailed design.

#### **ATTACHMENTS**

1. Lilyfield Road Pedestrian and Bicycle Crossing - Detailed Design Plan





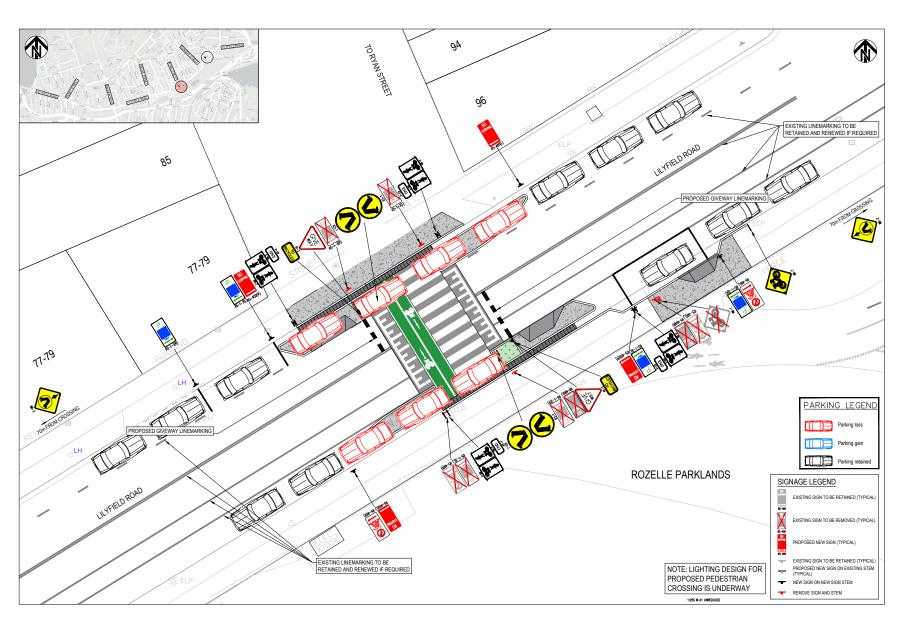


LILYFIELD ROAD CYCLEWAY - WOMBAT CROSSING 1 - (NEAR RYAN STREET)

LOCAL TRAFFIC COMMITTEE PLAN - GENERAL ARRANGEMENT



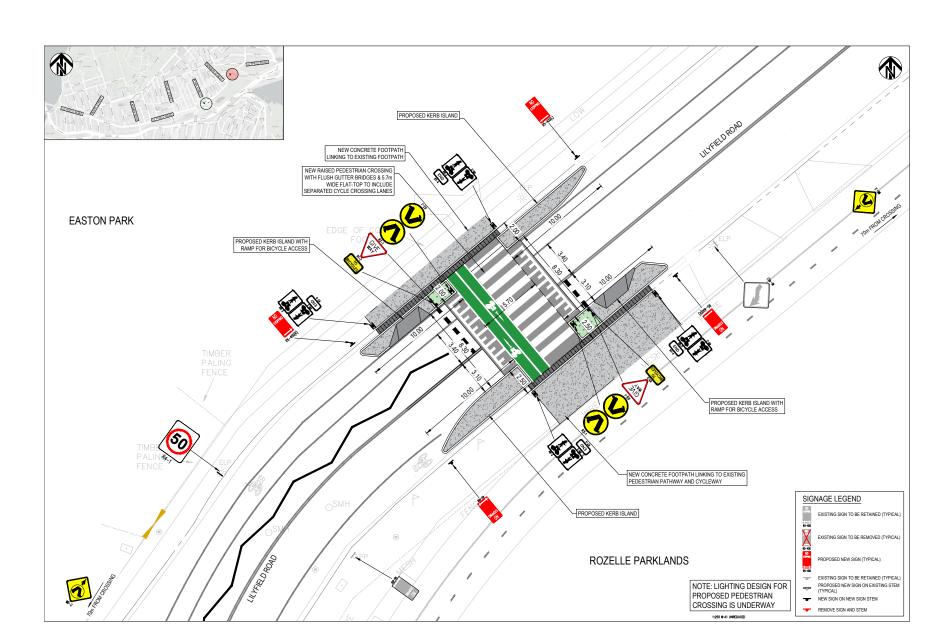






LILYFIELD ROAD CYCLEWAY - WOMBAT CROSSING 1 - (NEAR RYAN STREET)
LOCAL TRAFFIC COMMITTEE PLAN - SIGNAGE AND PARKING

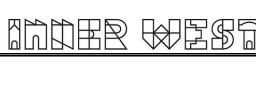


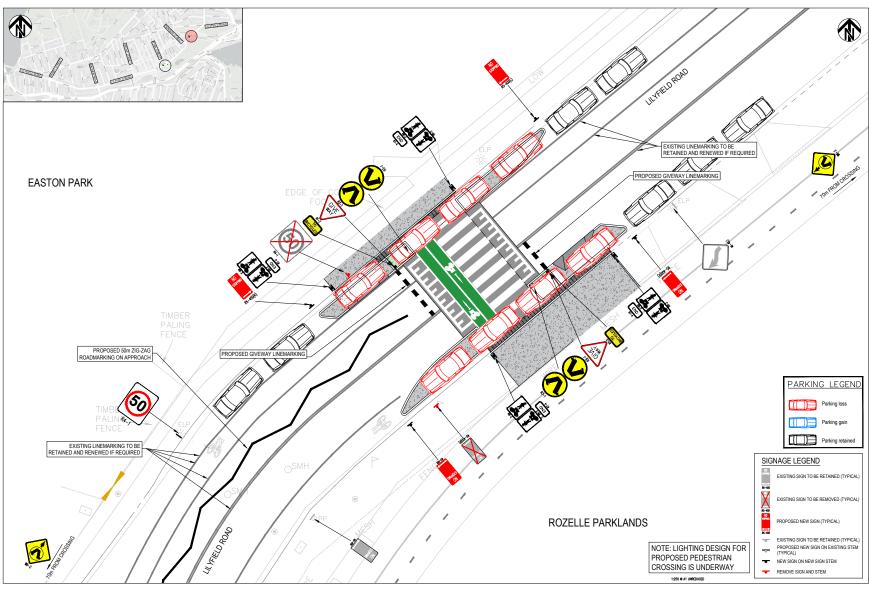




LILYFIELD ROAD CYCLEWAY - WOMBAT CROSSING 2 - (NEAR DENISON STREET)
LOCAL TRAFFIC COMMITTEE PLAN - GENERAL ARRANGEMENT



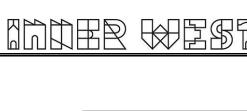


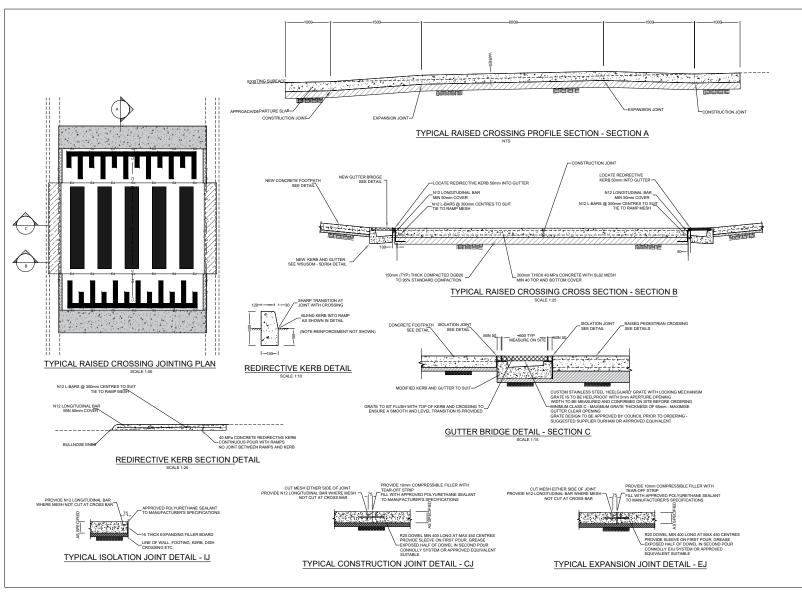




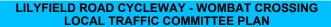
LILYFIELD ROAD CYCLEWAY - WOMBAT CROSSING 2 - (NEAR DENISON STREET)
LOCAL TRAFFIC COMMITTEE PLAN - SIGNAGE AND PARKING















Subject: MOYES STREET, MARRICKVILLE - PROPOSED 'NO STOPPING'

RELOCATION (MARRICKVILLE-MIDJUBURI/SUMMER HILL

**ELECTORATE/INNER WEST PAC)** 

**Prepared By:** James Nguyen - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

### **RECOMMENDATION**

That the existing 'No Stopping' restriction on the western side of Moyes Street, Marrickville (located approximately 17m from the bend) between Greenbank and Jersey Streets, be extended a further 13.5m (to the power pole adjacent to the driveway for 37 Moyes Street) to improve road safety in the vicinity of the bend.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

### **EXECUTIVE SUMMARY**

This report outlines current parking and road safety issues on Moyes Street, Marrickville between Greenbank and Jersey Streets. It outlines key findings from an assessment carried out and proposes parking changes to improve safety.

#### **BACKGROUND**

Council has received a request to relocate the existing 'No Stopping' restriction on the western side of Moyes Street, Marrickville between Jersey and Greenbank Streets due to safety concerns with allowing parking on the eastern side of Moyes Street, as it forces a northbound motorist to cross the opposing travel lane (southbound) just before the bend ahead. The concern is shown in *Figure 1* below:





Figure 1 - Moyes Street, Marrickville (facing west)

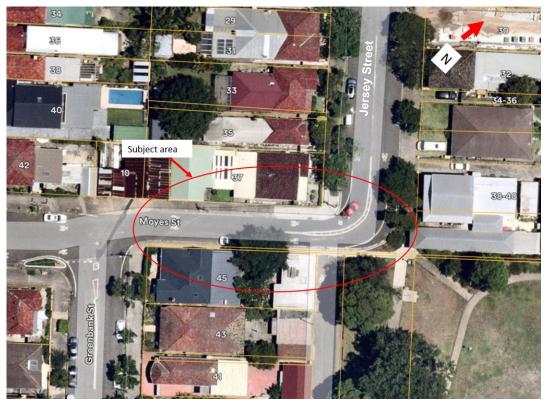


Figure 2 - Locality plan



# **DISCUSSION**

Moyes Street, Marrickville is approximately 6.7m wide between Greenbank Street and Jersey Street is with unrestricted parking on both sides. There are no recorded accidents within the last five (5) years at the bend in Moyes Street near Jersey Streets. As shown in *Figure 1*, the 'No Stopping' (right) restriction is installed up to the existing centre line before the bend. This leaves the kerb space south of this sign free for parking. The current restrictions allow for the parking configuration as shown in *Figure 3* below:



Figure 3 - Current permitted parking configuration

The current location of 'No Stopping' signs create the following issues:

- Forces a northbound vehicle travelling along Moyes Street to cross the centre line in
- to the southbound lane, as shown in Figure 1.
- Reduces the travel lane width to 2.7 metres, less than the desired 3.0-metre-wide lane width, and less than the width of a 2.8 metre width of a light vehicle.
- Reduces the sight distance of a pedestrian crossing Moyes Street at the existing kerb ramp on Moyes Street at the bend from the western side to McNeilly Park.

Accordingly, it is proposed to relocate the existing 'No Stopping' (right) sign on the western side of Moyes Street, further south along the kerb line. This is shown in *Figure 4* below:





Figure 4 - Proposed parking changes

This proposal will remove two (2) unrestricted parking spaces from the western side of Moyes Street. There are no changes proposed to the eastern side and three (3) parking spaces are retained.

This proposal will provide a 4.7-metre-wide passageway for two opposing road users to pass, and cyclists can occupy the road space closer to the kerb line. Whilst this is less than six (6) metres (3-metre-wide lane in each direction), the narrow road width will encourage lower vehicle speeds.

#### **PUBLIC CONSULTATION**

Council consulted with nearby affected residents. There were 30 letters sent with two (2) responses received supporting, one (1) response opposing and one (1) response neutral to the proposal.

The responses are noted in Table 1 below:

Support/object	Resident response	Officer response
Support	Vehicles parking on both sides of Moyes Street reduces the travel lane width and vehicle access – it is hard for larger vehicles to pass in some instances.	Noted.
	Vehicles sometimes park on the eastern side of Moyes Street occurs infrequently, when there is no other parking options nearby.	
	We have recently moved into Jersey Street and we were commenting about how unsafe the placement of the 'No Stopping' sign is, in terms of visibility when a car is parked right up to it. We would fully support the relocation	Noted.



of No Stopping sign to approx. 14m south as proposed

# Object

The reason for the change cited notes safety concerns, however there has never been an incident at the location when a car is parked on the western side of the street. The car acts as a traffic calming device which is needed in this section of the street.

Moyes street is a major access point to McNeally park and is used by many pedestrians, cyclists and children. It is a continuation of the cycleway through the park and a major point of conflict with the traffic that travels at high speed through this intersection. This is in our opinion a major risk for a potential incident causing injury or death. The removal of this parking space will exacerbate this problem.

We have repeatedly requested that traffic calming be implemented to ameliorate this problem and the lack of action exposes the Council to liability in the event of an incident.

An additional issue is that the parking in the general area, which is unrestricted, is increasingly taken up by commuters using Marrickville station. Resident permit parking will be required when the Station is converted to a Metro.

The proposal to relocate the 'No Stopping' sign on the western side of Moyes Street seeks to further improve safety and reduce the risk of a potential accident(s), as currently, motorists are forced to cross to the wrong side of the road at the bend.

In addition, this proposal will also improve sight lines for pedestrians crossing Moyes Street to McNeilly Park at the bend.

Council is proposing to introduce a 40 km/h speed limit on all local streets in Marrickville which includes Moyes and Jersey Streets. In combination, these treatments will improve safety for motorists, pedestrians and cyclists on Moyes and Jersey Streets.

Council can investigate a resident parking scheme on Moyes Street and Greenbank Street upon receipt of a minimum 10 requests from affected households.

This point should be closed to traffic to alleviate this risk, and not made worse by removing car spaces and resulting higher speeds. The road closure has been discussed in Council at a number of times, this action should be reconsidered because there is a serious risk of injury or fatality at this point, although it is very unlikely to be someone in a vehicle.

Given the good safety record at the subject location, and given that traffic volumes are likely to be within acceptable limits for a local road, a road closure at this location is not considered necessary. The current combination of centre rumble strips, line marking, and parking on the western side of Moyes Street provides adequate traffic calming.



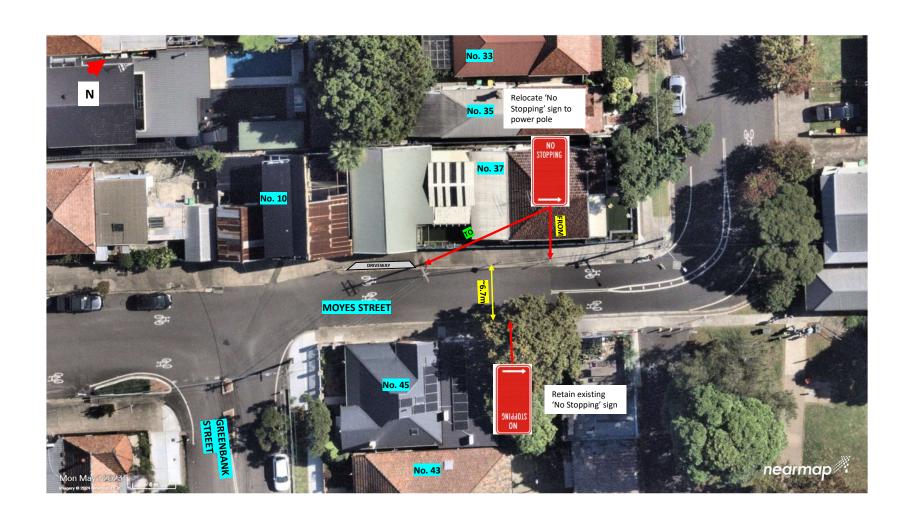
# **FINANCIAL IMPLICATIONS**

The of installation of the parking restrictions as recommended will be funded within Council's operational signs and line marking budget.

# **ATTACHMENTS**

1. Proposed parking change







Subject: PILGRIM AVENUE, MARRICKVILLE - PROPOSED 'NO PARKING'

RESTRICTIONS ON THE INNER BEND TO IMPROVE ACCESS

(MIDJUBURI - MARRICKVILLE WARD / SUMMER HILL ELECTORATE /

**INNER WEST PAC)** 

**Prepared By:** Jennifer Adams - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### RECOMMENDATION

That a 20-metre length 'No Parking' zone be installed on the inner bend in Pilgrim Avenue, Marrickville (eastern side starting from the boundary of No's 2 and 3 Pilgrim Avenue and extending 20m north around the bend) in order to improve access in the street.

### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

# **EXECUTIVE SUMMARY**

Currently large vehicles, including Council Waste Services vehicles, are having difficulty in manoeuvring around the bend in Pilgrim Avenue, Marrickville due to vehicles being parked near the bend therefore Council is proposing to install a 20-metre length of 'No Parking' restrictions on the inner side of the bend in Pilgrim Avenue, Marrickville to improve access in the street.

# **DISCUSSION**

It has been reported to Council that vehicles, at times, are having difficulty in manoeuvring around the bend in Pilgrim Avenue, Marrickville due to vehicles being parked near and/or on the bend. Pilgrim Avenue is a local street with two-way traffic and is approximately 7.3 metres in width with unrestricted parking permitted on both sides.

A consultation letter was sent out to adjoining properties informing them that Council is proposing to install a 20 metre length of 'No Parking' restriction on the inner side of the bend (eastern side of roadway) in Pilgrim Avenue, Marrickville to improve access in the street (refer to the plan below).

#### FINANCIAL IMPLICATIONS

The of installation of the parking restrictions as recommended will be funded within Council's operational signs and line marking budget.





# **PUBLIC CONSULTATION**

Eleven (11) letters were sent to owners / occupiers of properties in Pilgrim Avenue, Marrickville. Three (3) responses were received with all three (3) supporting the proposal. The general agreement was that motorists have difficulty negotiating the bend in the road when other vehicles are parked near or on the bend. One resident was concerned that cars in future may be parked too close to their driveway and they separately were given details of how to install driveway lines should they wish to do so. It is recommended that the 'No Parking' restrictions as proposed be approved and installed.

#### **ATTACHMENTS**

Nil.



Subject: CHURCH STREET, ASHFIELD, BETWEEN KNOCKLAYDE STREET AND

ALT STREET-PROPOSED RAISED THRESHOLDS & KERB BLISTER

ISLANDS (TRAFFIC CALMING)(GULGADYA-LEICHHARDT WARD/SUMMER HILL ELECTORATE/BURWOOD PAC).

**Prepared By:** Boris Muha - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### RECOMMENDATION

That the amended detailed design plans (10284-A) sheets 1-4 to propose raised concrete thresholds and kerb blister islands with associated line and marking in Church Street, Ashfield, between Knocklayde Street and Alt Street, as shown in Attachment 1 be approved.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

## **EXECUTIVE SUMMARY**

Council is planning to provide traffic calming measures to improve safety in Church Street, Ashfield by constructing new raised thresholds & landscaped kerb blisters along Church Street near Knocklayde St, Goenka St, Tawa St & Taringa Lane. The traffic calming proposal aims to slow traffic & improve road safety in this part of Church Street and helps address concerns relating to pedestrian safety and driver behaviour.

### **BACKGROUND**

The proposed treatments form a corridor for traffic calming along Church Street, between Croydon Road and Alt Street, Ashfield, as captured under the Ashfield Traffic Management Strategy 2017. There have also been continuing concerns raised by the community to reduce speeding in the street.

## **DISCUSSION**

The following information is provided in the discussion.





Figure 1. Locality Plan

Street Name	Church Street	
Oli cot Mairie	(Between Knocklayde Street to Alt	
	•	
Courie mousey saidtle (res)	Street)	
Carriageway width (m)	Approx. 10m	
kerb to kerb		
Carraigeway type	Two-way, one travel lane each	
	direction.	
Classification	Local	
Speed Limit	50	
km/h		
85 <sup>th</sup> percentile speed	43.7- 48.9	
km/h		
Vehicles per day (vpd)	2650-3690	
. , ,		
	6 recorded accidents as far back to	
	2017 in Church Street between	
	Knocklayde Street to Alt Street.	
	(4) of the recorded accidents were at	
	Lucy Street from 2017-2018.	
	(1)X2017, Rum 16, at Lucy Street,	
	left near-moderate injury.	
	(1)X 2018, Rum 20, at Lucy	
	Street, head on-minor /other	
	injury.	
	(1)X 2018, Rum 10, at Lucy	
	Street, cross traffic, minor/other	
	injury.	
	(1) X 2018, Rum 12, at Lucy	
	Street, left far, moderate	



	injury.  **Lucy Street has since been treated with kerb extension build outs in Church Street for traffic calming, and also assisting in bringing out the STOP into Church Street for improved sight view.  (1) X 2018, Rum 19, at Alt Street, vehicles from adjacent directions, tow-away(non-casualty).  (1) X 2021, Rum 1, at No 19 Church Street, Pedestrian near side,	
	moderate injury.	
Parking arrangements	Unrestricted parking to both sides of	
	the street. 'No Stopping' to corners	
	of all intersections.	
Side street(nearest)	Knocklayde Street, Goenka Street,	
	Tawa Street, Taringa Street	

Table 1. Road Network detail

### The Plan

The following works proposed is illustrated on the attached plans that were issued out under consultation as shown below (*figures 2-5*).

Church Street, Ashfield (from Knocklayde Street to Alt Street) - 4 Locations (Plan 10284):

# Near Knocklayde St

- Construct 1 new raised concrete threshold with 1 'full length' integrated landscaped kerb blister island;
- o Construct 1 new 'stand-alone' landscaped kerb blister island;
- Construct 1 new landscaped garden bed around an existing street tree within the footpath adjacent to the new raised threshold; and
- Adjust 1 existing 'No Stopping' sign in Church St by approx. 4m to accommodate the new raised threshold.

# Near Goenka St

- Construct 1 new raised concrete threshold with 2 'half length' integrated landscaped kerb blister islands;
- Construct 2 new stand-alone landscaped kerb blister islands;
- Construct 2 new landscaped garden beds around existing street trees within the footpath adjacent to the new raised threshold (both sides); and
- Adjust 1 existing 'No Stopping' sign in Church St by approx. 5m to accommodate the new landscaped kerb blister island.

# Near Tawa St

- Construct 1 new raised concrete threshold with 1 integrated landscaped kerb blister islands;
- o Construct 2 new 'stand-alone' landscaped kerb blister islands;
- Construct 1 new landscaped garden bed around an existing street tree within the footpath adjacent to the new raised threshold; and
- Adjust 1 existing 'No Stopping' sign in Church St by approx. 4m to accommodate the new landscaped kerb blister island

#### Near Taringa Lane

- Construct 1 new raised concrete threshold with 1 integrated landscaped kerb blister islands:
- Construct 1 new 'stand-alone' landscaped kerb blister island;
- Construct 1 new landscaped garden bed around an existing street tree within the footpath adjacent to the new raised threshold;



- Remove 1 redundant driveway and replace with new concrete kerb & gutter and footpath
- o Installation of edge line marking as well as new BB line marking; and
- o Install signage associated with the works as required and as shown on the plans.

# Generally

- o Install new edge line marking, new BB line marking; new 'Give-way' line marking; and
- Install signage associated with the works as required and as shown on the plans.

# **Parking Changes**

There are some minor adjustments proposed to the existing 'No Stopping' signs & zones in Church Street to facilitate implementation of the proposal. However, these changes will result in no change to existing on-street parking arrangements in the Street. Please refer to the attached plans.

# Streetlighting

The existing lighting is deemed adequate and therefore there will be no changes to the existing street lighting due to the proposed works.

# Other Information and proposed amendments to drawings following consultation.

The locations of the devices have been strategically placed at corners to intersections to utilise the 'No Stopping' zones to avoid the removal of parking. Vehicles can park over the sides of the raised threshold devices where no kerb blister islands are proposed.

The proposed kerb blister on the south-western corner side of Church Street and Goenka Street will be reduced back in length to the current 'No Stopping' distance to maintain or provide for 1-2 parking spaces, at the request of the resident, rather than providing one space between the lengthen kerb blister and the driveway to No 50, as initially proposed.

The deteriorated or damage kerb and footpath to the Goenka Street corners will be reconstructed and that a road surface correction will be carried out to eliminate or reduce the scraping effect of a DIP at the southern intersection of Church Street and Goenka Street.

All give way lines that are bought out close to traffic at the intersections are converted to 'STOP line' control.

The initial consultation plans are shown below. The amendment plans showing the above changes are shown in *Annexure 1*.



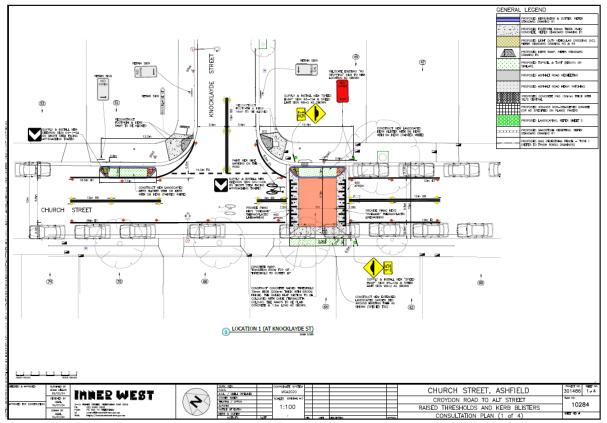


Figure 2. initial consultation plan 10284 (plan 1of 4)

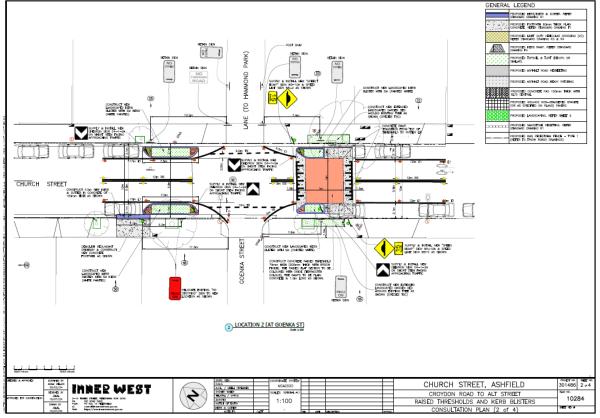


Figure 3. Initial consultation plan 10284 (plan 2 of 4)



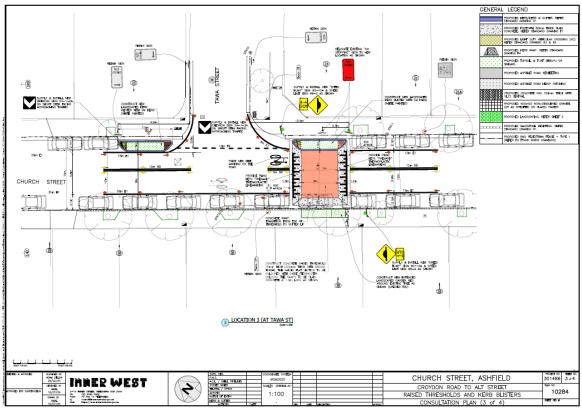


Figure 4. Initial consultation plan 10284 (plan 3 of 4)

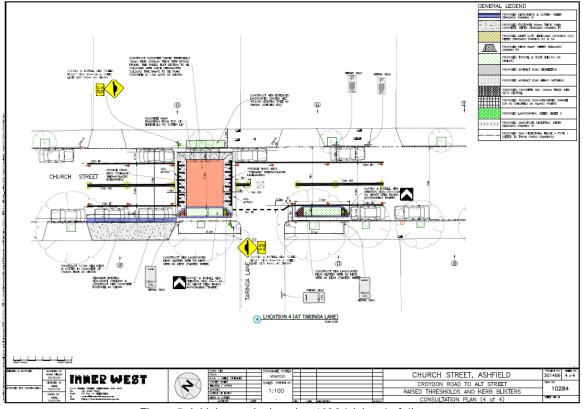


Figure 5. Initial consultation plan 10284 (plan 4 of 4)

#### FINANCIAL IMPLICATIONS

The project is listed on Council's Traffic Facilities Capital Works budget for works to be carried out in 2024/2025, subject to funding. The work is estimated at \$239,700.



#### **CONSULTATION**

A letter outlining the proposal was mailed out to (65) properties (338 letters) in Church Street, Ashfield, between Knocklayde Street and Alt Street requesting residents' views regarding the proposal. (see also map of consultation area *Figure 6*).



Figure 6. Map on Consultation Area

(6) Resident response was received with (4) expressing support with/without concerns or suggestions, and (2) expressing concerns.

The concerns raised by the resident are outlined below in the table.

Residents Comments	Officers Response
Request more signage in front of Robyn Taylor Childcare Centre. (65 Church Street).	This is outside the Scope of works. 'Children' warning signs will be considered in Church Street at the approaches to the childcare centre, under separate investigation.
Would support a pedestrian crossing at one of the raised speed humps proposed to allow children to cross the road more safely.	<ul> <li>Pedestrian crossings have not been identified under the Ashfield Traffic Management Strategy (ATMS) nor Council's Pedestrian Access Mobility Plan (PAMP) along Church Street. Pedestrians are generally observed to freely cross in varied locations along Church Street. It is considered in this case that the proposed traffic calming will reduce the speeds in the area to assist pedestrians in crossing</li> </ul>



	the road.
Like to see the island on Croydon Road at the top of Church Street converted to a raised pedestrian crossing.	The request to convert the island (existing pedestrian refuge) to a pedestrian crossing in Croydon Road at Church Street is outside the Scope of Works. However, the matter will be listed for consideration under a Local Area Traffic Management (LATM) investigation for Ashfield North.
Request to reduce length of the proposed kerb blister (outside 48 Church St).	The proposal has been amended by reducing the length of the kerb blister island at this location. The existing 'No Stopping' sign will be retained at its existing location.
<ul> <li>Request to extend scope of footpath reconstruction, and repair to damaged gutter at the intersection of Goenka Street with Church Street.</li> </ul>	The plans will be amended to include new concrete footpath on both sides of Goenka Street.
Ensure provision of drainage between garden and the kerb outside No.23.	<ul> <li>Council has ensured at least 0.6m gap is provided between the kerb and the back of the new kerb blister islands which will provide sufficient space for stormwater to pass during rain events.</li> </ul>
Request to line mark parking spaces outside No. 21	<ul> <li>Council is currently not looking to line-mark parking bays in residential streets. Bay markings do not always provide an increase in parking capacity. If the parking bays are to be line marked, the standard parking bay length needs to be used. However, it is often feasible to accommodate a greater number of small and medium size vehicles without the need of parking spaces being line marked.</li> </ul>
Concern regarding noise due to new speed humps. I hope that this large hump will assist in negating the noise of cars speeding up the street. In a reckless manner.	The device is so designed with intent to minimise noise, and control traffic behaviour in the street.
The Traffic doesn't need to be calmed in Church St as you cannot go faster than 40kms.	The last recorded traffic counts in Church Street registered speeds in the high 40's. Church Street has been identified under the (ATMS) and /or community concerns to traffic calm the street and further reduce the speeds. This will compliment



- The problem isn't with speed on Church St the main problem is speed on Alt Street in both directions. Concern is also raised with the visibility from Ilford Avenue, Henry Street Rectory Ave, Church Street, John Street and Albert Parade. The cars travel at such great speeds there are always screeching of breaks.
- The other problem with doing these raised thresholds and curb blisters is that there are many parking spaces being removed to accommodate them. There is limited parking in Church St as it is and to remove these will cause problems.

- with any proposed future reduction of the speed limit.
- Alt Street has also been recognised under the ATMS to traffic calm the street. This will be investigated separately and considered under an area wide LATM for the Ashfield North area.
- The location of the devices in this case have been strategically placed at corners to intersections to utilise the 'No Stopping' zones to avoid the removal of parking. Vehicles can park over the sides of the raised threshold devices where no kerb blister islands are proposed.

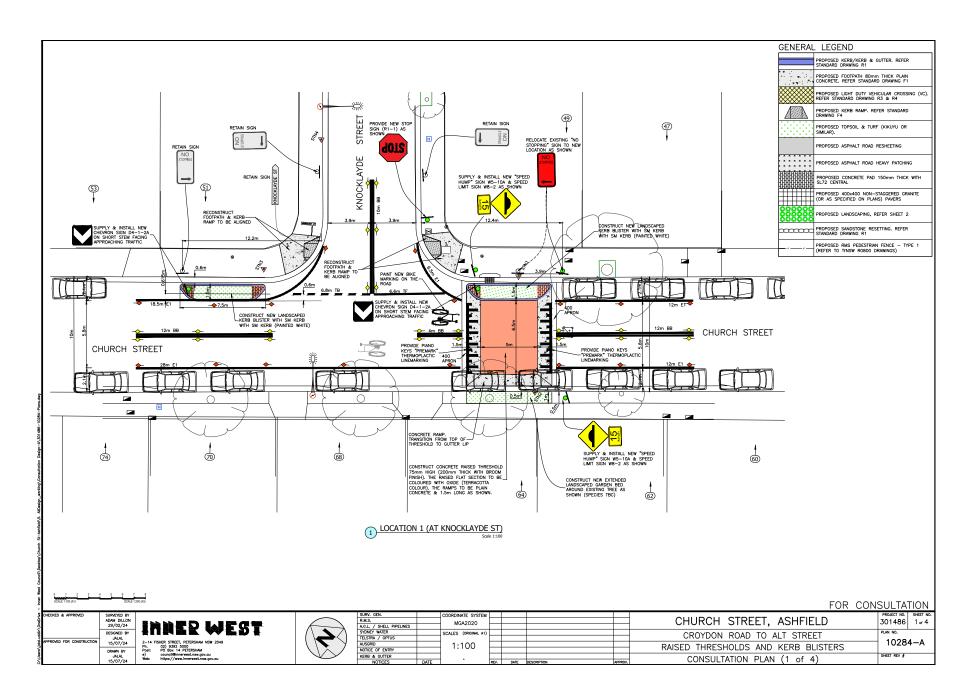
#### CONCLUSION

It is recommended that the amended detailed design plans (10284-A) sheets 1-4 to install proposed raised concrete thresholds and kerb blister islands with associated line and marking in Church Street, Ashfield, between Knocklayde Street and Alt Street, as shown in Attachment 1 be approved.

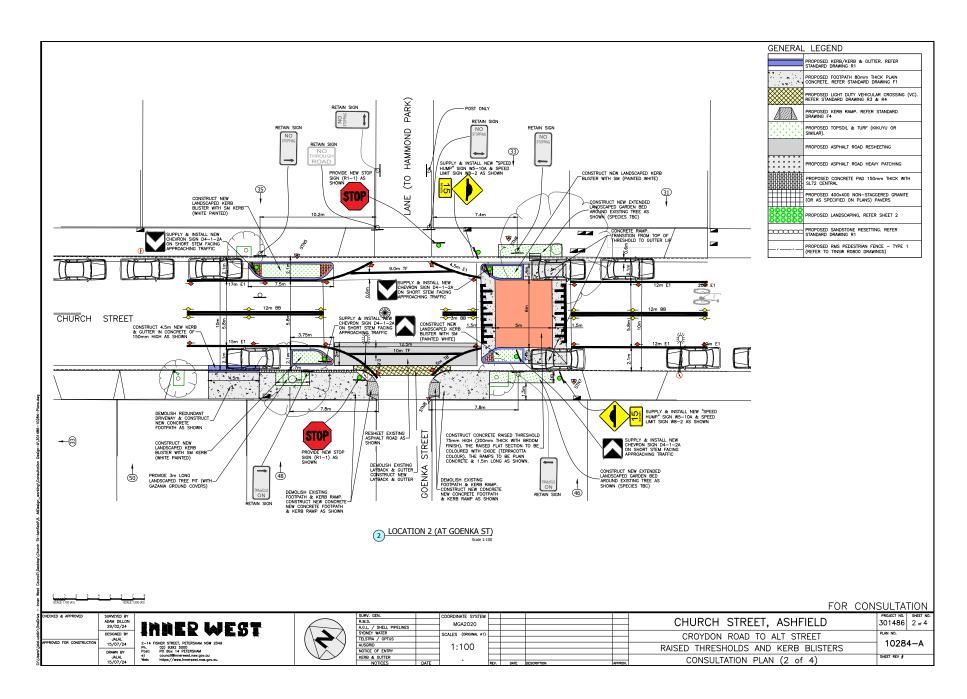
#### **ATTACHMENTS**

**1.** Amended detailed design plans (10284-A) -sheets 1 to 4.

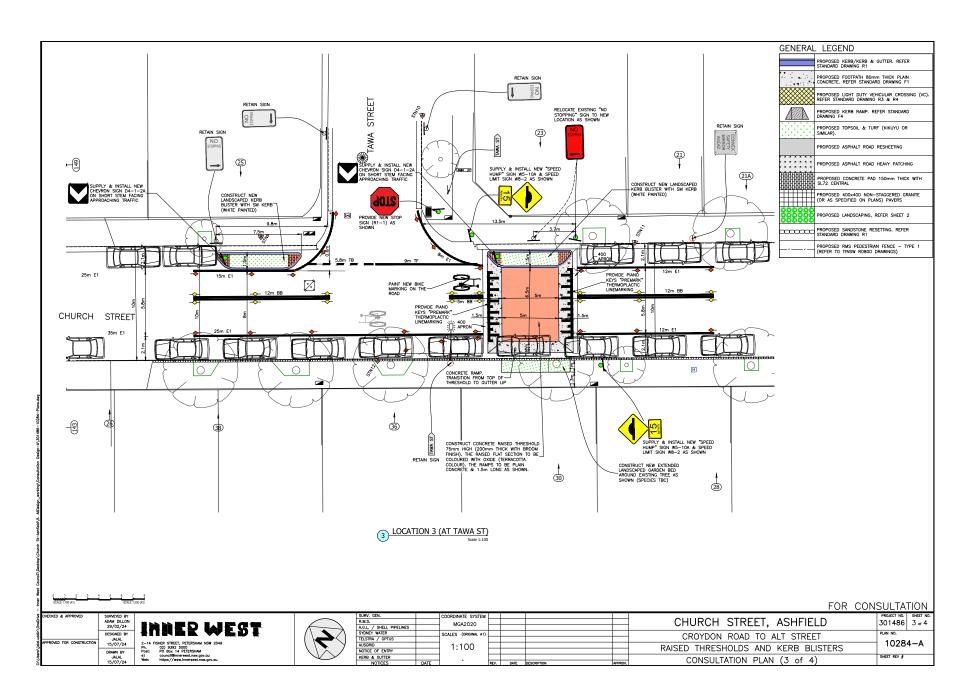


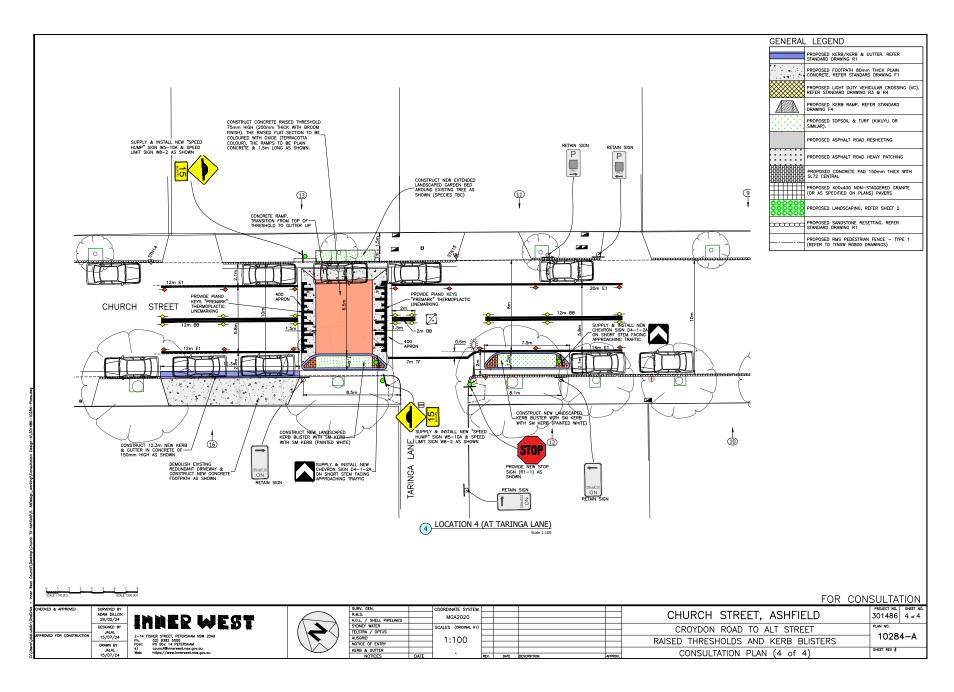














Item No: LTC1024(1) Item 8

Subject: RAMSAY STREET & DALHOUSIE STREET, HABERFIELD - 40KM/H

HIGH PEDESTRIAN ACTIVITY AREA (HPAA) (GALGADYA-LEICHHARDT

WARD/SUMMER HILL ELECTORATE/BURWOOD PAC)

**Prepared By:** Sunny Jo - Coordinator Traffic Engineering Services North

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### **RECOMMENDATION**

1. That the attached detailed design plan (Design Plan No.10312) for the proposed 40km/h High Pedestrian Activity Area (HPAA) treatments in Ramsay Street, Dalhousie Street, Gillies Avenue, Rawson Street, Dickson Street, Winchcombe Avenue, St Davids Road, and Kingston Street, Haberfield be approved.

2. That it should be noted that Council has submitted a Traffic Management Plan for the proposed 40km/h HPAA to Transport for NSW approval.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

Council is planning to improve safety for all road users in Ramsay Street and Dalhousie Street, Haberfield by establishing a 40km/h High Pedestrian Activity Area (HPAA) for the core commercial and retail areas of Haberfield.

The proposal feature a number of linemarking treatments to indicate a reduced 40km/h speed limit, with accompanying entry, repeater and exit HPAA signs. Additionally, a landscaped kerb blister island will be constructed at the intersection of Dalhousie Street and Winchcombe Avenue which will complement the proposed treatments for a lower speed road environment.

The project will not impact on any legal on-street parking spaces in the area.

#### **BACKGROUND**

In 2021 Council undertook a preliminary eligibility assessment (*Attachment 2*) in Ramsay Street and Dalhousie Street, Haberfield for a 40km/h High Pedestrian Activity Area. Transport for NSW had provided in-principle support for the proposed HPAA and provided funding to undertake this study. Subsequently a detail design has been completed and as shown in *Attachment 1*, which outlines the proposed works, including the following:

- 40 patches on entry and 'Duratherm' honeycomb linemarking pattern in Heritage Red on entry and exit carriageways in Ramsay Street, Dalhousie Street and Dickson Street.
- Entry '40 High Pedestrian Activity Area' sign (R4-237A) and 'End 40 Area, 50 Area' (R4-11A) at each HPAA boundaries.
- Construct new Landscaped Kerb Blister Island with mountable kerb at the intersection of Dalhousie Street and Winchcombe Avenue.



- New 'Give Way' sign (R1-2A) and lines across the throat of Winchcombe Avenue at Dalhousie Street.
- Additional linemarking and signage as shown in the attached design plan.

#### DISCUSSION

Ramsay Street is a regional road, estimated to have daily traffic volume of approximately 10,000 vehicles along with Dalhousie Street having an estimated daily traffic volume of approximately 6,000 vehicles.

The traffic data collected during the preliminary study revealed traffic speeds within both roads to be within the ranges of 40.5km/h and 44.0km/h which is considered suitable for the implementation of a 40km/h HPAA.

As the proposed treatments do not result in the loss of any on-street parking and no raised devices are being constructed, community consultation was not considered necessary at this time. Notification will be undertaken following final TfNSW approval and subject to allocation of grant funding.

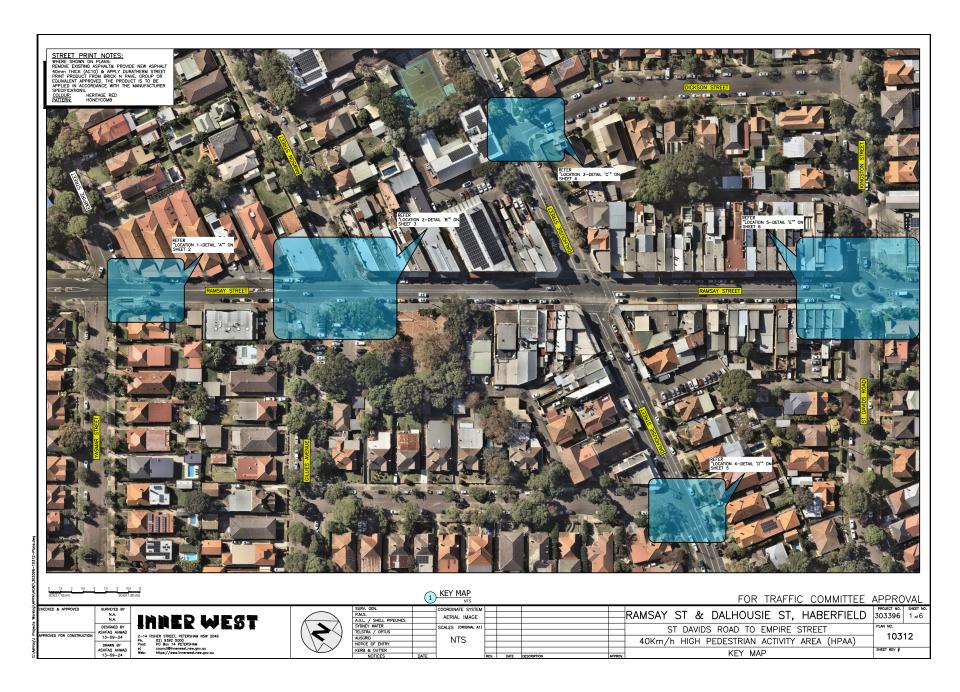
#### FINANCIAL IMPLICATIONS

The proposed project has an estimated cost of \$120,000 and is planned to be submitted for the 2025/26 Federal Black Spot Program.

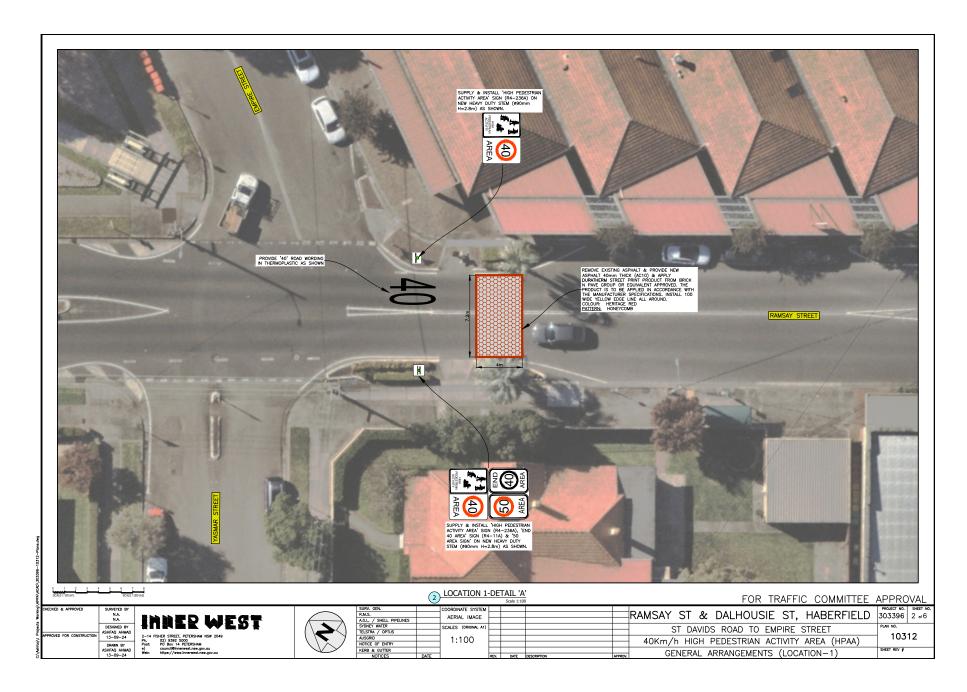
#### **ATTACHMENTS**

- 1. Haberfield HPAA Design Plan
- 2. Haberfield HPAA Feasibility Study

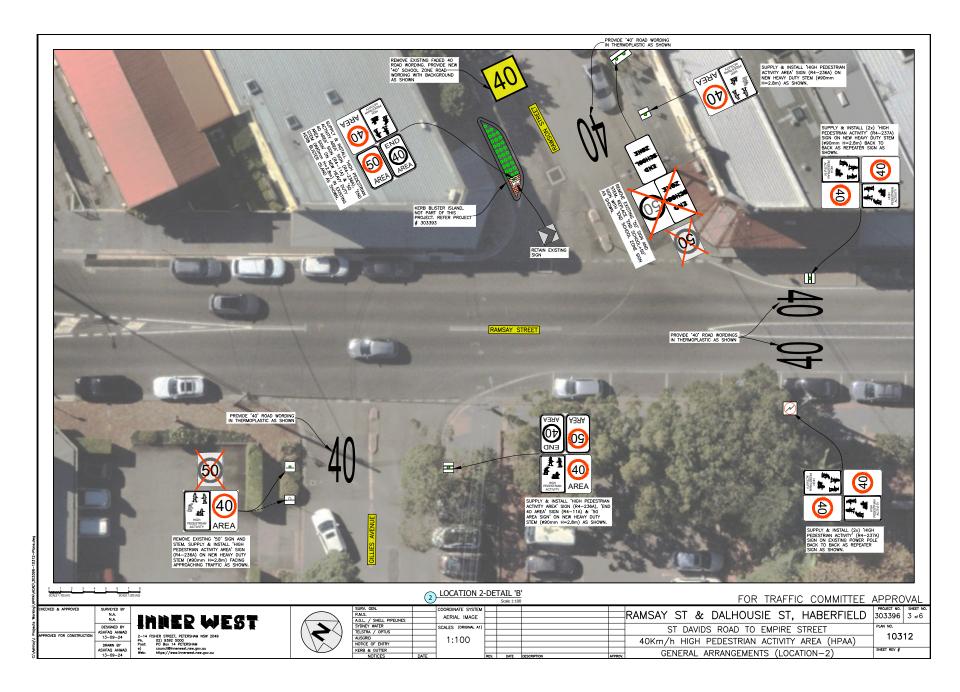




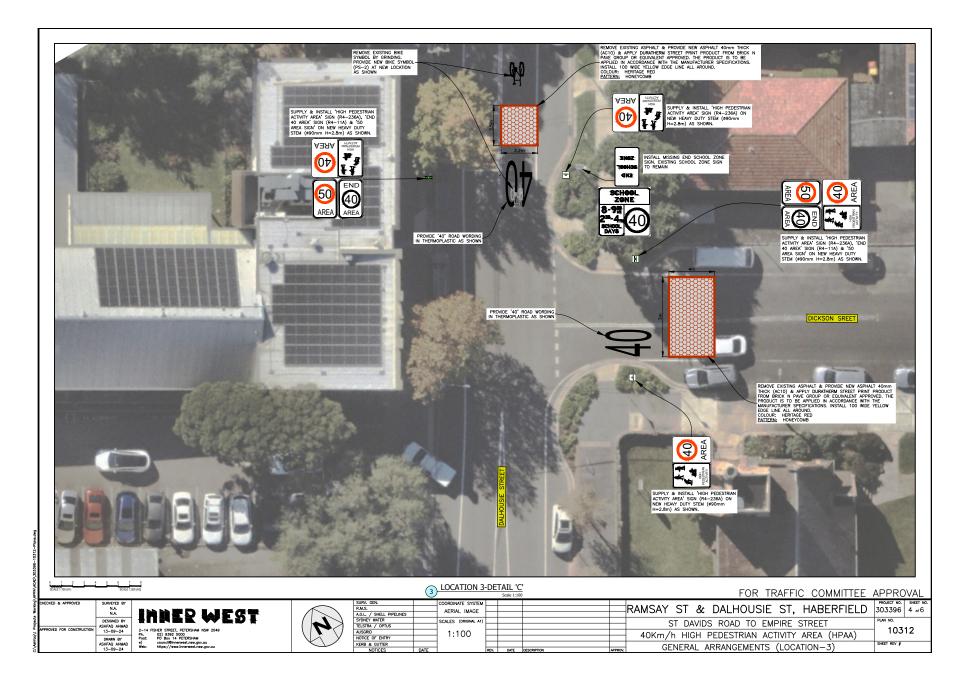


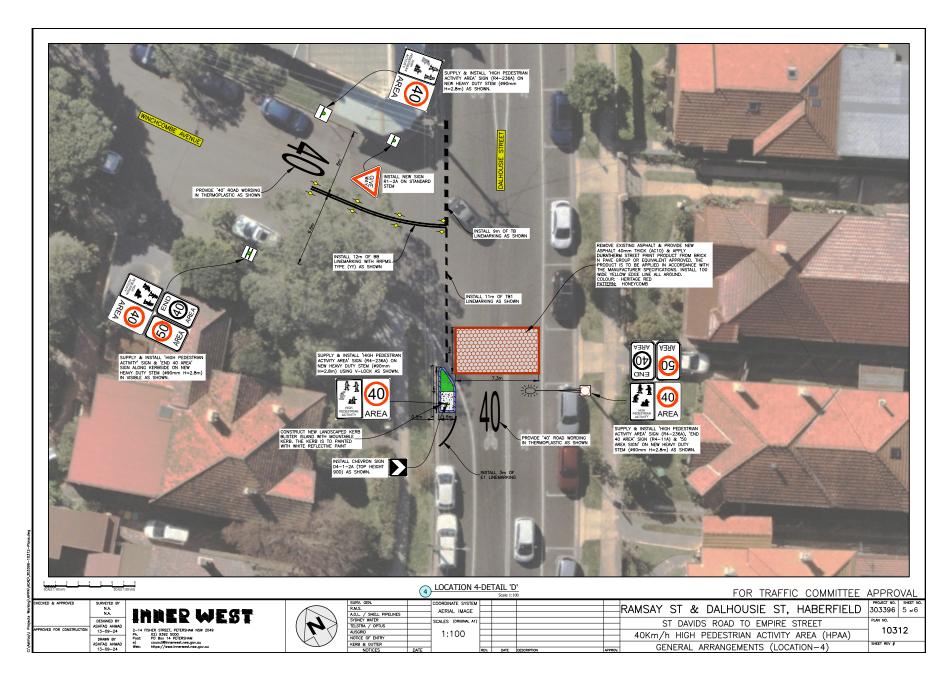




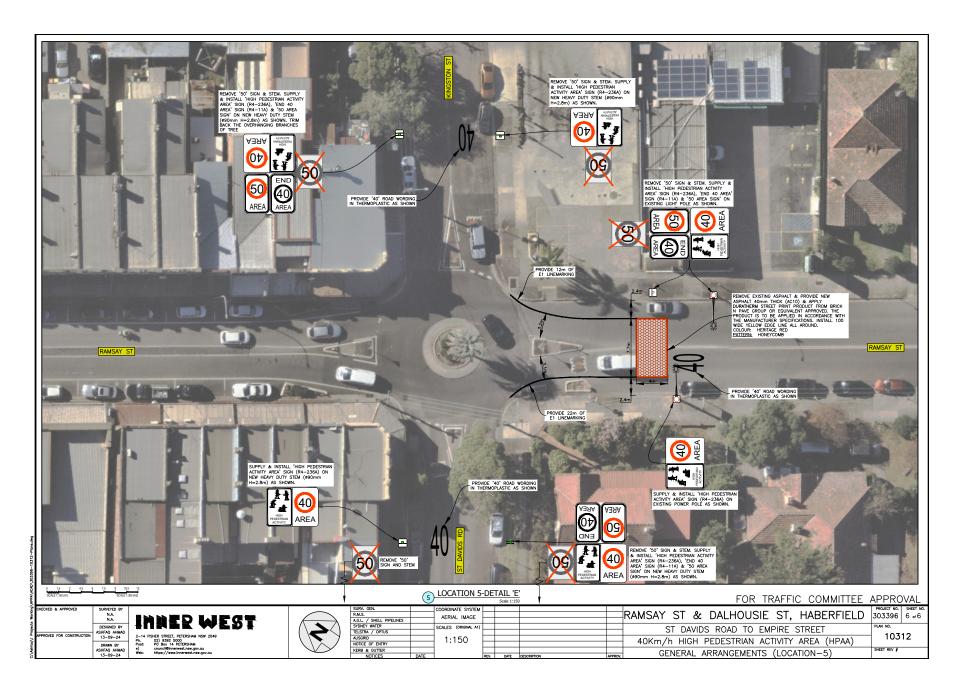














# Ramsay Street Dalhousie Street Haberfield

## **High Pedestrian Activity Area**

**Feasibility Assessment and Design** 



**Inner West Council** 

18 June 2021





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#### **Document Issue History**

Report File Name	Prepared	Reviewed	Issued	Date	Issued to
P5083.001R Ramsay Street Dalhousie Street Haberfield HPAA – Feasibility Study and Design	A. Liu, C. Mak, G. Yin	S. Brooke	G. Yin	28/05/2021	David Yu – Inner West Council, <i>via</i> email: david.yu@innerwest.nsw.gov.au
P5083.002R Ramsay Street Dalhousie Street Haberfield HPAA – Feasibility Study and Design	A. Liu,	G. Yin	G. Yin	18/06/2021	David Yu – Inner West Council, <i>via</i> email: david.yu@innerwest.nsw.gov.au









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#### **Appendices**

Appendix A: Traffic and Pedestrian Survey Data

Appendix B: Concept Design







## 1. Introduction

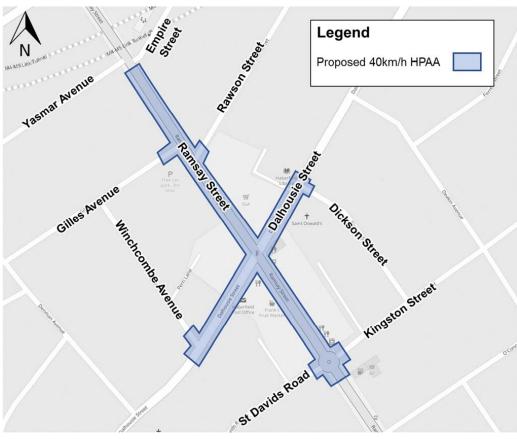
#### 1.1 Background

Bitzios Consulting has been commissioned by Inner West Council (Council) to undertake a speed limit review and assessment of a proposed 40km/h High Pedestrian Activity Area (HPAA) associated with Haberfield Village. Council is seeking to apply to Transport for NSW (TfNSW) to reduce the speed limit in this area to increase pedestrian safety and amenity.

#### 1.2 Site Location and Study Area

The proposed extent of the HPAA and study area includes the shopping and dining area centred on the crossroads of Ramsay Street and Dalhousie Street, Haberfield. The extent of the proposed HPAA and study area (shown in Figure 1.1) includes:

- Ramsay Street between Yasmar Avenue / Empire Street and St Davids Road / Kingston Street
- Dalhousie Street between Winchcombe Avenue and Dickson Street.



Source: OpenStreet Map

Figure 1.1: Proposed Extent of HPAA and Study Area







### 1.3 NSW Speed Zone Guidelines

#### 1.3.1 Standard Speed limits

Guidelines for implementing speed zones are found in the NSW Centre for Road Safety's *NSW Speed Zoning Guidelines (V4, 2011)*. In NSW, standard speed zones include:

- 110 km/h
- 100 km/h (rural roads)
- 90 km/h
- 80 km/h
- 70 km/h

- 60 km/h
- 50 km/h (local roads)
- 40 km/h (School Zones, Local Traffic Areas and High Pedestrian Activity Areas)
- 10 km/h (Shared Zones).

Under NSW Road Rules (2014), in the absence of signage or road marking, the default speed limit in urban areas is 50 km/h.

#### 1.3.2 40km/h Speed Limits

In NSW, the application of a 40 km/h speed limit includes:

- High Pedestrian Activity Areas
- Local Traffic Areas
- School zones (prescribed times)
- School bus black spots.

The speed limit within Haberfield Village is proposed to be designated at 40 km/h under the 'High Pedestrian Activity Area' (HPAA) category.

#### 1.4 Methodology / Criteria

The speed zone review and implementation procedure are shown in Figure 1.2. This HPAA feasibility study is considered for up to Step 6 of this speed zone procedure.

#### 1.4.1 40km/h High Pedestrian Activity Areas

For the implementation of a 40km/h speed limit under a HPAA, the section of road or area must satisfy criteria based on the requirements outlined RTA's 40 km/h High Pedestrian Activity Area Guidelines, also shown in Figure 1.3. The guideline includes a review of surrounding land uses and pedestrian attractor/generators, such as:

- Commercial or Business areas
- Shopping strip
- Dining precinct
- Medical centres and social services
- Recreation areas or sporting complexes
- Entertainment / Hotel areas
- Transport hubs / interchanges.







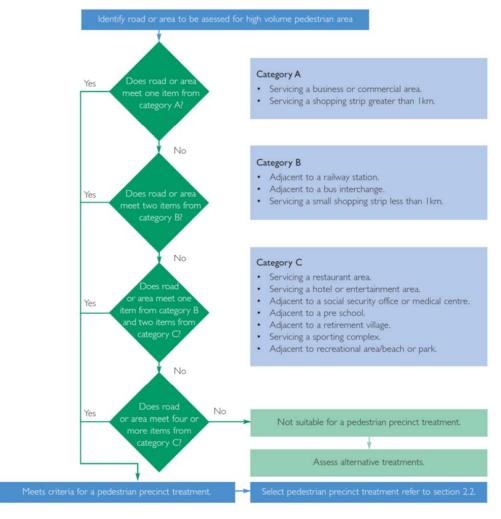
Source: Transport for NSW Centre for Road Safety - NSW Speed Zoning Guidelines

Figure 1.2: Speed Zone Review Process









Source: TfNSW 40 km/h High Pedestrian Activity Area Guidelines

Figure 1.3: Criteria Flowchart for Identification of High Pedestrian Activity Areas

The NSW Centre for Road Safety conducted an evaluation in 2018 on the effectiveness of 40km/h speed limits, including HPAAs. Key findings from the evaluation include:

- There have been statistically significant reductions in crashes following implementation of 40 km/h High Pedestrian Activity Areas
- Reduced casualties in High Pedestrian Activity Areas occurred for road users generally, not just for pedestrians
- It is likely that expanded coverage of 40 km/h High Pedestrian Activity Areas would generate further road safety benefits
- There are high levels of community support for 40 km/h zones
- Low speed zones achieve broader benefits, as well as safety benefits.







## 2. EXISTING ROAD NETWORK

#### 2.1 Land Use

The existing land use of the study area is shown in Figure 2.1.



Source: Ashfield Local Environment Plan 2013

#### Figure 2.1: Land Zoning Map

The study area primarily consists of 'local centre' uses made up of both dining and retail premises. A public recreation area (Federation Place) is located adjacent to Ramsay Street north and educational establishment (St Joan of Arc Primary School) is located to the east of the study area on Dalhousie Street. Most of the area outside the local centre is low density residential.

#### 2.2 Road Network

Characteristics and key features of Ramsay Street and Dalhousie Street are summarised in Table 2.1. This was confirmed during a site visit on Wednesday 12<sup>th</sup> May 2021. The road classification of the road network is also shown in Figure 2.2.







**Table 2.1: Existing Road Characteristics** 

Road	Classification	Speed Limit	Features
Ramsay Street	Regional	·	<ul> <li>One travel lane and one parking lane per direction</li> <li>Roundabout splitter refuge island at St Davids Road / Kingston Street</li> <li>Contrasting pavement and line marked median</li> <li>Pedestrian refuge island between Yasmar Avenue / Empire Street and Gillies Avenue</li> <li>Multiple kerb blisters with vegetation</li> <li>Bus route</li> </ul>
Dalhousie Street	Local	50km/h	<ul> <li>One travel lane and one parking lane per direction</li> <li>Contrasting pavement and line marked median</li> <li>Landscaped median on western leg</li> <li>Bicycle route</li> <li>Bus route</li> </ul>
Ramsay Street / Dalhousie Street	Signalised Intersection		One travel lane on all approaches and departures     Signalised pedestrian crossings on all legs



Source: NSW Road Network Classifications Map (Transport for NSW)

Figure 2.2: Road Classification



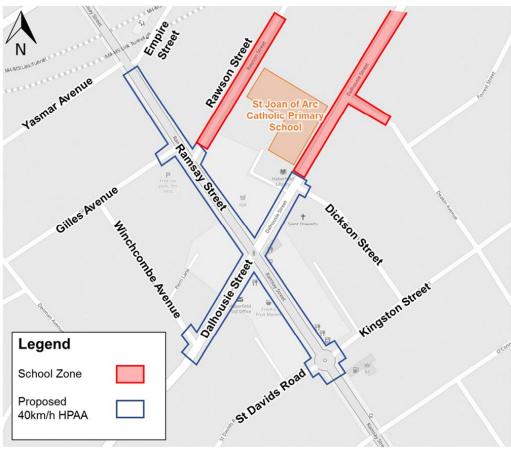




#### 2.2.1 School Zones

40km/h School Zones associated with St Joan of Arc Catholic Primary School are located adjacent to the proposed HPAA to the east on Dalhousie Street and Rawson Street. The school zone speed limits operate during typical school zone hours of 8:00am - 9.30am and 2.30pm - 4:00pm school days.

The school zone covers the section of Dalhousie Street east of Dickson Street and the section of Rawson Street east of Ramsay Street. The proposed HPAA will adjoin these existing school zone as shown in Figure 2.3.



Source: OpenStreet Map

Figure 2.3: School Zone





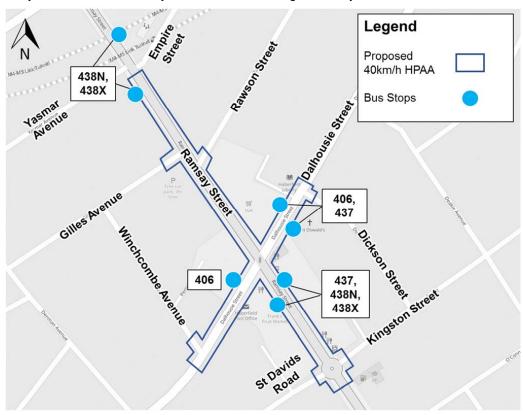


### 2.3 Public Transport

Ramsay Street and Dalhousie Street are serviced by four bus routes, including:

- 406 Five Dock to Hurlstone Park via Ashfield
- 437 City to Five Dock via Lilyfield
- 438X City to Abbotsford via Five Dock (express/limited stops)
- 438N all-stops night-time variant of 438X.

A number of bus stops are located along both Ramsay Street and Dalhousie Street shown in Figure 2.4. Peak frequency of these bus routes is presented in Table 2.2. The bus stops within the study area are also serviced by school bus routes during school days.



Source: OpenStreet Map

Figure 2.4: Bus Stop Locations

Table 2.2: Bus Services

Route No.	Route	Peak Frequency
406	Five Dock to Hurlstone Park via Ashfield	30 minutes
437	City to Five Dock via Lilyfield	15 minutes
438X	City to Abbotsford via Five Dock (express/limited stops)	5 minutes
438N	City to Abbotsford via Five Dock (all-stops night-time only)	30 minutes







## 3. CRASH ANALYSIS

#### 3.1 Crash History Data

The NSW Speed Zoning Guidelines recommend a minimum of three years of crash data for a statistical crash analysis. For this assessment, crash data between January 2015 and December 2019 was sourced from Council representing five years of data.

Nine (9) crashes were recorded within the extents of the study area.

#### 3.2 Crash Statistics

#### 3.2.1 Crash History

Figure 3.1 presents the number of crashes per year and severity of crashes between January 2015 and December 2019.

The overall crash trend was relatively high in 2015 with four crashes, with a consistently low number of crashes (one crash) from 2016 to 2019.

Crashes resulting in injuries varied greatly between each year, with up to three (3) crashes resulting in an injury recorded in 2015.

It should be noted that from October 2014, NSW Police ceased reporting tow-away crashes with the exception where there are any persons killed or injured, where a driver fails to swap details, or where a driver is suspected to be under the influence of drugs or alcohol.

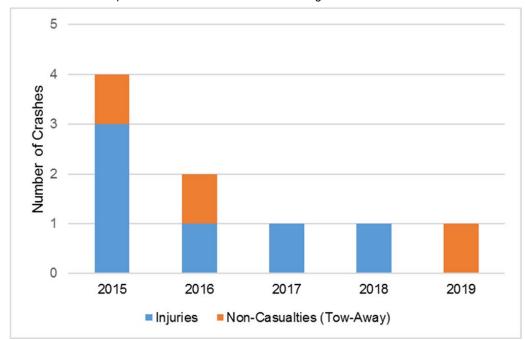


Figure 3.1: Crash History between January 2015 and December 2019

#### 3.2.2 Crash Severity

Figure 3.2 presents the location of crashes by severity, recorded between January 2015 to December 2019, including:







- 0 (0%) crashes resulted in a fatality
- 6 (66.7%) crashes resulted in an injury
- 3 (33.3%) crashes were non-casualty (tow-away).

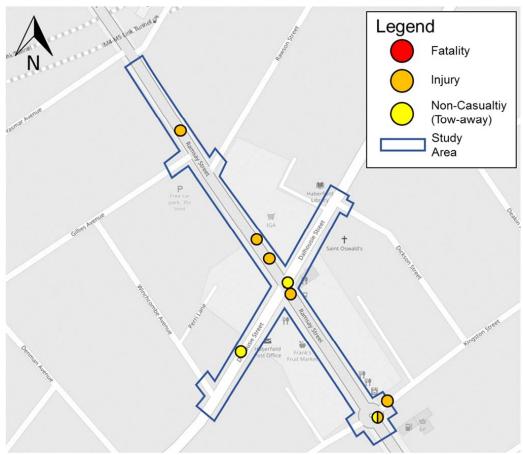


Figure 3.2: Crash Severity

#### 3.2.3 Vulnerable Road Users

Vulnerable road users (VRUs) include pedestrians, cyclists and motorcyclists. Figure 3.3 presents crashes involving VRUs between January 2015 and December 2019 within the study area.

Of the nine total crashes recorded, four (44%) crashes involved VRUs, detailed as follows:

- 3 (75%) crashes involved a pedestrian
- 0 (0%) crashes involved a bicycle rider
- 1 (25%) crash involved a motorcycle rider.







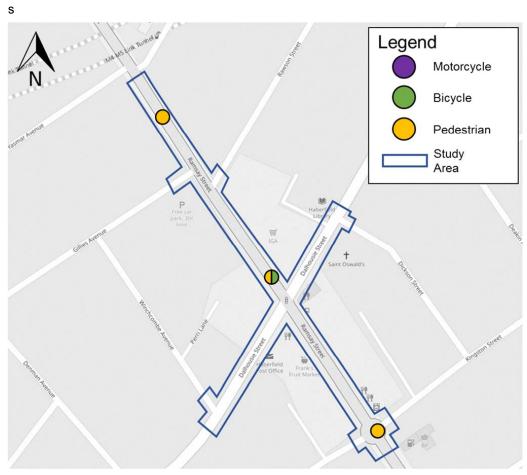


Figure 3.3: Crashes Involving Vulnerable Road Users

#### 3.2.4 Casualty Crash Rates

To determine roadways which may exhibit road safety or speed deficiencies, a comparison of casualty crash rates per road was undertaken against typical casualty crash rates presented in the *NSW Speed Zoning Guidelines*. A table of typical urban casualty rates is shown in Table 3.1.

Casualty crash rates are presented as casualties per kilometre per year.

The applicable 'benchmark' casualty rate for a 50km/h speed zone:

- Regional road is 0.102 casualties per km per year
- Local road is 0.446 casualties per km per year.

Table 3.2 summarises the number of casualty related crashes per year and calculated casualty crash rate for each section of road within the study area. The casualty crash rates are highlighted in red if they exceed the applicable typical rates as detailed in Table 3.1.







**Table 3.1: Typical Urban Casualty Rates** 

URBAN TYPICAL CASUA	LTY RATE	(casualties p	er km þer ye	ar)							
Pond satogomy		Speed zones									
Road category	50	60	70	80	90	100	110				
Motorway / freeway	-	_	0.049	0.039	0.463	0.148	1.219				
State highway	0.014	0.450	0.827	0.217	0.177	0.101	0.177				
Other classified road	0.102	1.351	1.361	0.360	0.253	0.111	0.007				
Unclassified road	0.446	0.874	0.376	0.154	0.077	0.064	0.008				

#### NOTE

- Discretion is needed in comparing these rates to the rate on a particular section of road. A specific road section may not fall comfortably into any single category.
- · The values do not suggest an acceptable level.

Source: Transport for NSW Centre for Road Safety - NSW Speed Zoning Guidelines (Section 3)

Table 3.2: Crash Summary and Casualty Rate

		Casualties							
Road Name	Length (km)	2015	2016	2017	2018	2019	Total	Crash Rate (per year)	Crash Rate (per km per year)
Ramsay Street	0.43	4	1	1	1	1	8	1.455	3.383
Dalhousie Street	0.33	0	1	0	0	0	1	0.182	0.551
Total		4	2	1	1	1		-	-

Key observations from Table 3.2 are:

- Both streets within the study area exceeds the applicable crash casualty rate for a 50 km/h road
- Ramsay Street presented the highest crash rate within the study area at 3.4 casualty crashes per km per year
- Dalhousie Street is a local road and presented only one casualty crash over the five-year period, however still exceeded the applicable crash casualty rate.

While the casualty rate is relatively high for both streets within the study area, it is noted that this process is not ideal for analysing short lengths of road as this increases the resultant crash rate. However, crash history and the resulting crash casualty rate suggests that a reduction of speed limit would be beneficial to increase road user and pedestrian safety in the area.







### 3.3 Analysis of Crash Trends and Contributing Factors

The nine crashes were classified into Road User Movement (RUM) codes, as shown in Table 3.3.

Table 3.3: Crash Data Classified into RUM Codes

Crash Type	RUM Code	No. of Crashes	Percentage of Total
Crashes involving pedestrians	00 - 09	3	33%
Crashes involving vehicles from adjacent directions	10 - 19	1	11%
Crashes involving vehicles from opposing directions	20 - 29	0	0%
Crashes involving vehicles from the same direction	30 - 39	1	11%
Crashes involving manoeuvring vehicles	40 - 49	1	11%
Crashes involving vehicles overtaking	50 - 59	0	0%
Crashes involving vehicles on path – vehicles hitting parked vehicles or objects on the roadway (e.g. animals, temporary objects)	60 - 69	0	0%
Crashes involving vehicles leaving the roadway on a straight length of road	70 - 79	2	22%
Crashes involving vehicles leaving the roadway on a curve	80 - 89	1	11%
Crashes involving vehicle passengers and miscellaneous crashes	90 - 99	0	0%
Total		9	100%

#### 3.3.1 Crashes Involving Pedestrians

The most predominant crash type for the Haberfield HPAA area involved pedestrians, making up 33% of the total crashes (three of the nine) in the study area.

It is noted that the crash rate of pedestrians is significantly higher than other crash classifications as the data obtained is comprised of only nine reported crashes within the study area.







# 4. TRAFFIC VOLUME AND TRAFFIC SPEED SURVEYS

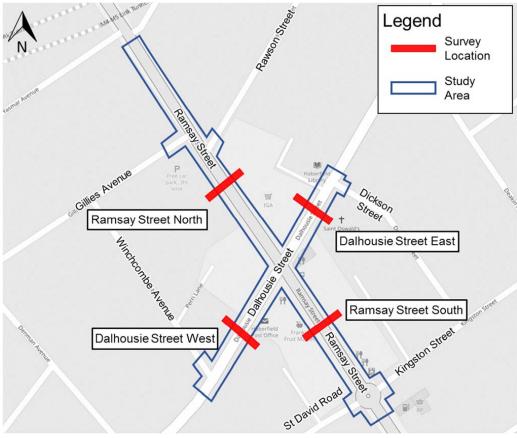
#### 4.1 Traffic Survey Locations

Traffic surveys were conducted at sites within the study area to determine vehicle volume and speeds at the following locations:

- Ramsay Street North between Gilles Avenue and Dalhousie Street
- Ramsay Street South between Dalhousie Street and Kingston Street / St Davids Road
- Dalhousie Street West between Winchcombe Avenue and Ramsay Street
- Dalhousie Street East between Ramsay Street and Dickson Street.

The surveyed data included Average Daily Traffic (ADT), 85<sup>th</sup> percentile vehicle speeds and heavy vehicle volumes.

Figure 4.1 shows the location of the sites. Detailed traffic volume and speed data is provided in **Appendix A.** 



Source: OpenStreet Map

Figure 4.1: Location of Traffic Data Sites







#### 4.2 Traffic Volumes

The Average Daily Traffic (ADT) and heavy vehicle composition by traffic direction at each site was analysed. Vehicle composition was classified in accordance with Austroads vehicle classes:

- Classes 1 and 2 defined as light vehicles
- Classes from 3 to 12 defined as heavy vehicles.

Figure 4.2, Figure 4.3 and Table 4.1 show the ADT volumes and the heavy vehicle composition within the study area.

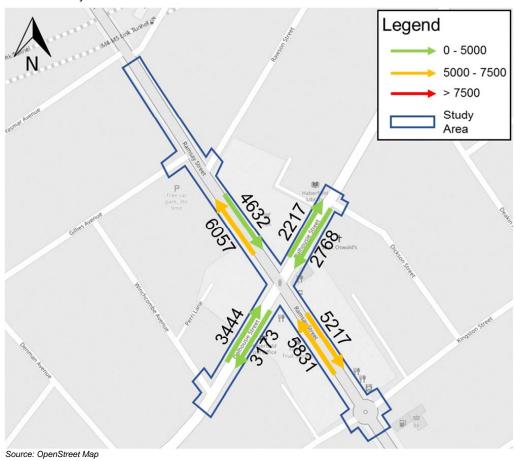
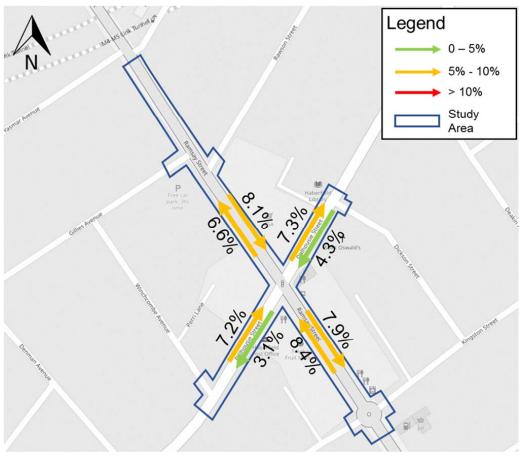


Figure 4.2: Average Daily Traffic









Source: OpenStreet Map

Figure 4.3: Heavy Vehicle Composition

Table 4.1: Traffic Volume and Heavy Vehicle Composition

Road Section	Traffic Volume (ADT)	Heavy Vehicle (%)
Ramsay Street North	6,057 (Northbound) 4,632 (Southbound)	6.6% (Northbound) 8.1% (Southbound)
Ramsay Street South	5,831 (Northbound) 5,217 (Southbound)	8.4% (Northbound) 7.9% (Southbound)
Dalhousie Street West	3,444 (Eastbound) 3,173 (Westbound)	7.2% (Eastbound) 3.1% (Westbound)
Dalhousie Street East	2,217 (Eastbound) 2,768 (Westbound)	7.3% (Eastbound) 4.3% (Westbound)







## 4.3 Speed

The 85th percentile (85%ile) vehicle speed in each direction was analysed and used to identify the current operating speed and determine the suitability of reducing the speed limit to 40 km/h in the current road environment.

For this analysis, locations which recorded 85%ile speeds of 43 km/h or under were judged to be capable of maintaining a 40 km/h speed limit, if drivers were informed of the speed limit via signage. The streets which recorded 85%ile vehicle speeds more than 43 km/h would require additional measures to achieve a self-regulating 40 km/h road environment.

The 85%ile speed at each site is shown in Figure 4.4. Table 4.2, lists the two-way 85%ile vehicle speeds in addition to the posted speed limit of that road, and whether the 85%ile speed exceeds 43 km/h.

The data shows that 85%ile speeds are all under the posted 50 km/h speed limit, with most sections presenting existing low speeds of around 40 km/h.



Source: OpenStreet Map

Figure 4.4:85th Percentile Speed







Table 4.2: 85th Percentile Vehicle Speed

Road Section 85 <sup>th</sup> Percentile Speed (kg		Greater than 43 km/h?	Speed Limit (km/h)	
Ramsay Street North	44.0 (Northbound) 43.2 (Southbound)	Yes		
Ramsay Street South	37.3 (Northbound) 37.4 (Southbound)	No	F0	
Dalhousie Street West  42.1 (Eastbound) 40.5 (Westbound)		No	50	
Dalhousie Street East	41.2 (Eastbound) 34.8 (Westbound)	No		







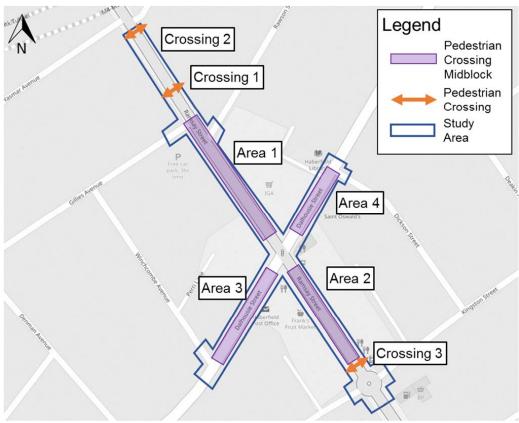
## 5. PEDESTRIAN SURVEY DATA

## 5.1 Pedestrian Survey Locations

Pedestrian surveys were conducted within the study area at existing crossing locations and midblock within the Village. Sites and areas where data was collected included:

- Area 1 Ramsay Street between Gilles Avenue and Dalhousie Street
- Area 2 Ramsay Street between Dalhousie Street and Kingston Street/ St Davids Road
- Area 3 Dalhousie Street between Winchcombe Avenue and Ramsay Street
- Area 4 Dalhousie Street between Ramsay Street and Dickson Street
- Crossing 1 Refuge Island at Ramsay Street between Gilles Avenue and Empire Street
- Crossing 2 Kerb Ramp at Ramsay Street between Gilles Avenue and Empire Street
- Crossing 3 Refuge Island at Ramsay Street between Dalhousie Street and Kingston Street/ St Davids Road.

Figure 5.1 shows the location of the sites.



Source: OpenStreet Map

Figure 5.1: Location of Pedestrian Survey Sites







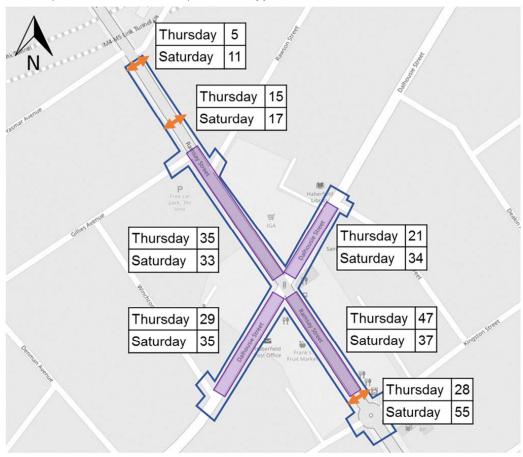
### 5.2 Pedestrian Volumes

The data was used to analyse the peak and average hourly pedestrian volumes. The pedestrian surveys were conducted on the following dates:

- Thursday 29<sup>th</sup> April 2021
- Saturday 1<sup>st</sup> May 2021.

Figure 5.2 illustrates the average hourly pedestrian bi-directional volumes at each survey site/area. Table 5.1 presents the peak and average hourly bi-directional pedestrian volumes.

Detailed pedestrian volume data is provided in Appendix A.



Source: OpenStreet Map

Figure 5.2: Average Hourly Pedestrian Volume - Bi-direction







Table 5.1: Peak and Average Hourly Pedestrian Volume – Bi-direction

Location	Thursday		Saturday		
	Peak	Average	Peak	Average	
Area 1	71	35	70	33	
Area 2	82	47	65	37	
Area 3	64	29	70	35	
Area 4	48	21	56	34	
Crossing 1	30	15	35	17	
Crossing 2	12	5	28	11	
Crossing 3	48	28	86	55	







# 6. SITE INSPECTIONS

#### 6.1 Overview

A site inspection was undertaken on Wednesday 12 May 2021 to gain an understanding of the current conditions and road environment within the study area. Surrounding land uses, existing traffic management devices and traffic / pedestrian behaviours were observed and recorded. Weather conditions during the site inspection was fine and dry.

## 6.2 Ramsay Street

Ramsay Street provides a major north south route through the study area and is primarily bordered by retail and dining premises. Several medical centres are also located along Ramsay Street. Kerbside parking is present on both sides of the road.

Existing LATM devices on Ramsay Street include:

- Painted median island
- Kerb blister islands and kerb extensions
- Refuge island
- Roundabout intersection at Ramsay Street/ Kingston Street/ St Davids Road with speed cushions.

Pedestrians were observed to cross Ramsay Street mostly at the signalised intersection at Dalhousie Street and at the crossing point near the Kingston Street and St David Road roundabout. Several pedestrians were also observed to cross mid-block at various locations.

#### 6.3 Dalhousie Street

Dalhousie Street within the study area provides a main east-west route through Haberfield, connecting the Village to Paramatta Road and residential areas to the north-east. Fewer store frontages and dining premises are located along Dalhousie Street. A 40km/h School Zone is located towards the east near Dickson Street. Kerbside parking is present on both sides of the road.

Existing LATM devices on Dalhousie Street include:

- Painted and landscaped median islands
- Kerb extensions
- Speed cushions and kerb blisters (east of the study area).

Most pedestrians were observed to cross Dalhousie Street at the signalised intersection with Ramsay Street. A small number of pedestrians were also observed to cross mid-block at various locations.







# 7. HPAA CRITERIA ASSESSMENT

## 7.1 40 km/h High Pedestrian Activity Areas

To convert a street or area to a 40 km/h HPAA, the criteria presented in *RTA 40 km/h Speed Limits in High Volume Pedestrian Areas*, *also* shown in Figure 1.3, needs to be met. The warrant assessment for the sections of Ramsay Street and Dalhousie Street within the study area is presented in Table 7.1.

Table 7.1: HPAA Criteria Assessment

Street Name	Street Section	Category A	Category B	Category C	Criteria Satisfied
Ramsay Street	Yasmar Avenue / Empire Street to Dalhousie Street	Services a business / commercial area	<ul> <li>Servicing a small shopping strip less than 1 km</li> </ul>	<ul> <li>Servicing a restaurant area</li> <li>Adjacent to social security or medical centre</li> <li>Adjacent to recreational area / beach or park</li> </ul>	Yes
	Dalhousie Street to St Davids Road / Kingston Street	Services a business / commercial area	Servicing a small shopping strip less than 1 km	<ul> <li>Servicing a restaurant area</li> <li>Adjacent to social security or medical centre</li> </ul>	Yes
Dalhousie	Winchcombe Avenue to Ramsay Street	Services a business / commercial area	Servicing a small shopping strip less than 1 km	<ul> <li>Servicing a restaurant area</li> <li>Adjacent to social security or medical centre</li> </ul>	Yes
Street	Ramsay Street to Dickson Street	Services a business / commercial area	Servicing a small shopping strip less than 1 km	<ul> <li>Servicing a restaurant area</li> <li>Adjacent to recreational area/ beach or park</li> </ul>	Yes

As shown above, the proposed HPAA along Ramsay Street and Dalhousie Street are appropriate for the implementation of a 40km/h HPAA speed limit.







## 8. TRAFFIC MANAGEMENT DEVICES

#### 8.1 Overview

The implementation of a 40 km/h speed limit needs to consider the control and self-enforcement methods of the lower speed environment. Certain combinations of road conditions can lead drivers to travel at speeds more than the speed limit if not controlled. These include long and straight sections and wide roadways. For successful implementation, the 40 km/h speed zone must be able to self-enforce and self-regulate the speed limit.

A review and assessment of the relevant streets was undertaken to appraise the existing road environment and to identify if the installation of additional traffic management infrastructure is required to reinforce the 40 km/h speed environment where necessary.

#### 8.2 Relevant Guidelines

As part of the development of various road treatments in this stage of the speed limit review, the following documents have been reviewed and referred to for the selection and design of appropriate road treatments across the study area:

- TfNSW NSW Speed Zoning Guidelines
- TfNSW 40 km/h Speed Limits in High Volume Pedestrian Areas
- Austroads Guide to Traffic Management: Part 8 Local Area Traffic Management
- Relevant TfNSW Technical Directions
- Australian Standard AS1742 MUTCD Part 2: Traffic Control Devices for General Use
- Australian Standard AS1742 MUTCD Part 4: Speed Controls
- Australian Standard AS1742 MUTCD Part 13: Local Area Traffic Management.

#### 8.3 Existing Infrastructure

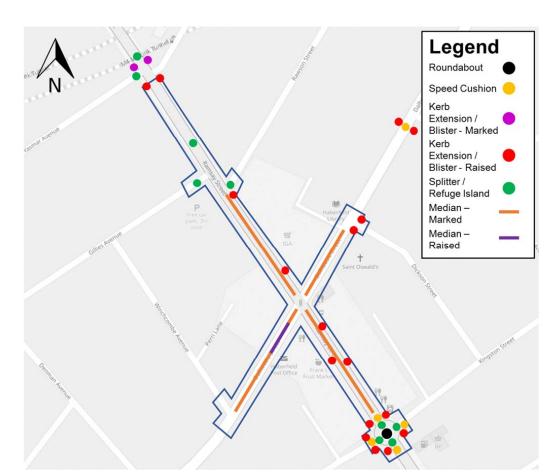
A number of traffic calming and management devices are already in use within the study area, including:

- Pedestrian refuge islands
- Speed cushions
- Painted and landscaped medians
- Kerb blisters and extensions
- Roundabout.

The locations of existing LATM devices (total of 31) are shown in Figure 8.1 and examples presented in Figure 8.2. Existing infrastructure adjacent to the study area is also shown to provide further context of the traffic calming measures used in the local area.







Source: OpenStreet Map

Figure 8.1: Existing LATM Device Locations



Left: Landscaped and Painted Median Island (Dalhousie Street West); Right: Speed Cushion and Kerb Blister (Ramsay Street South)

Figure 8.2: Existing Traffic Calming and Management Devices







## 8.4 Preliminary Investigation

A preliminary investigation was undertaken to determine recommended treatment locations. This was conducted as a high-level analysis and focused on potential locations which could benefit from additional traffic calming or management infrastructure.

#### 8.4.1 Speed Environment

As described in Section 4.3 and Table 4.2, it has been assessed that Ramsay Street North has an 85<sup>th</sup>ile speed higher than 43 km/h in both directions of traffic. It is recommended to implement additional traffic calming measure in this area to reinforce a 40 km/h HPAA.

Figure 8.3 shows the extent of the proposed HPAA with an  $85^{\text{th}}$  percentile speed exceeding 43 km/h.

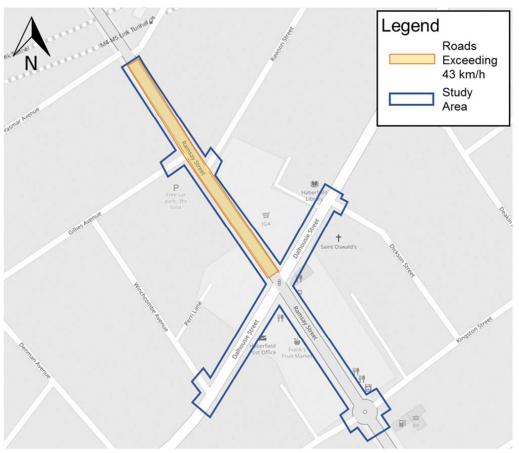


Figure 8.3: Proposed 40 km/h Roads with an 85th Percentile Speed Exceeding 43 km/h

#### 8.4.2 Pedestrian Facilities

Based on observations of the local environment, pedestrian behaviour and pedestrian crossing data at the midblock crossing locations, it is recommended to implement a pedestrian facility to improve pedestrian safety within the HPAA, which may include a pedestrian crossing (zebra or wombat crossing) or other pedestrian treatment.







#### 8.4.2.1 Pedestrian Crossing Warrant Assessment

To meet the warrant for a pedestrian crossing at the midblock crossing locations in Section 5.1, the criteria presented in *Roads and Maritime Supplement to Austroads Guide to Traffic Management Part 10* must be met. The criteria, for three separate one-hour periods in a day is:

- The pedestrian flow per hour (P) crossing the road is greater than or equal to 30, and
- The vehicular flow per hour (V) through the site is greater than or equal to 500, and
- The product (PV) is greater than or equal to 60,000.

Table 8.1 and Table 8.2 summarises the hourly pedestrian flow and average vehicular flow and product and assessment for three one-hour periods.

Table 8.1: Pedestrian and Vehicle Hourly Volumes - Thursday 29th April

Location	Hour	Р	V	PV	Yes / No
Area 1	11:00-12:00	65	729	47,376	No
	12:00-13:00	67	741	49,618	No
	13:00-14:00	67	714	47,838	No
Area 2	11:00-12:00	62	715	44,339	No
	12:00-13:00	62	738	45,774	No
	13:00-14:00	73	704	51,423	No
Area 3	08:00-09:00	41	493	20,225	No
	09:00-10:00	46	434	19,977	No
	11:00-12:00	64	472	30,181	No
Area 4	11:00-12:00	33	347	11,437	No
	12:00-13:00	48	364	17,472	No
	15:00-16:00	27	374	10,094	No

Table 8.2: Pedestrian and Vehicle Hourly Volumes - Saturday 1st May

Location	Hour	P	V	PV	Yes / No
Area 1	11:00-12:00	58	729	42,274	No
	12:00-13:00	64	741	47,397	No
	13:00-14:00	65	714	46,410	No
Area 2	10:00-11:00	65	718	46,698	No
	15:00-16:00	51	779	39,707	No
	17:00-18:00	42	865	36,336	No
Area 3	08:00-09:00	43	493	21,211	No
	09:00-10:00	70	434	30,400	No
	12:00-13:00	54	472	25,488	No
Area 4	12:00-13:00	42	364	15,288	No
	13:00-14:00	56	337	18,864	No
	15:00-16:00	41	374	15,328	No

Table 8.1 and Table 8.2 shows that the pedestrian crossing warrant is not met at any of the surveyed locations.







Although a mid-block pedestrian crossing along Ramsay Street does not meet the warrants, it would be beneficial to provide a pedestrian facility on Ramsay Street North due to the number of pedestrians crossing the road mid-block and the distance between available crossing locations.

#### 8.4.2.2 Existing Pedestrian Refuge

Site inspections showed that the existing refuge island north of Ramsay Street / Gillies Avenue, shown in Figure 8.4, does not comply with current TfNSW design requirements and does not provide sufficient waiting space within the refuge. An upgrade of the refuge island has previously been investigated, with designs completed by Council. The upgrade of the pedestrian refuge is further detailed in Section 8.5.



Figure 8.4: Existing Pedestrian Refuge

#### 8.4.2.3 Redundant Crossing Point

A redundant pair of kerb ramps were observed south of Ramsay Street / Empire Street, immediately adjacent to the kerb extensions and pair of kerb ramps, shown in Figure 8.5.

As the crossing point is adjacent to the existing crossing point with kerb extensions, and the kerb extension obstructs visibility of pedestrians from vehicles approaching southbound, it is recommended to remove these kerb ramps. Removal of these kerb ramps would reduce confusion and direct pedestrians to the preferred safer crossing point.

This issue has also been identified by the Council and will be removed as part of the pedestrian refuge upgrades, detailed in Section 8.5.









Figure 8.5: Redundant Kerb Ramps and Crossing Point

#### 8.4.2.4 Continuous Footpath

Considering the extent of shop fronts, public facilities and medical centre along Ramsay Street North, there is opportunity to consider an upgraded pedestrian treatment at the intersections of Rawson Street and Gillies Avenue with Ramsay Street. Site observations also show pedestrian activity was relatively high at these locations.

The implementation of a Continuous Footpath Treatment (CFT) would be one appropriate treatment improve pedestrian amenity and introduce a level of traffic calming at these intersections.

The implementation of a CFT is subject to warrants outlined in TfNSW's *Technical Direction TDT 2013/05 Continuous footpath treatments*.

The assessment and design of these treatments will be considered as part of a separate investigation by Council in the future, including traffic surveys as part of the warrant assessment and to determine the suitability of a CFT at the above intersections.

### 8.5 Proposed Upgrades

As of June 2021, Council has undertaken separate work projects in the local area, including Ramsay Street north and Dalhousie Street east. These upgrades include:

- Ramsay Street north of Gillies Avenue
  - Removal of the existing pedestrian refuge
  - Removal of associated kerb ramp (west side)







- Reconstruction of the existing pedestrian refuge island
- Construction of kerb blisters on both sides of Ramsay Street
- Construction of new kerb ramps
- Ramsay Street south of Empire Street
  - Removal of redundant kerb ramps near Empire Street
- Dalhousie Street east of Ramsay Street
  - Construction of a raised and landscaped median approx. 20m long

These future upgrades are to be considered as part of the development of the HPAA, and are illustrated in Figure 8.6 and Figure 8.7.

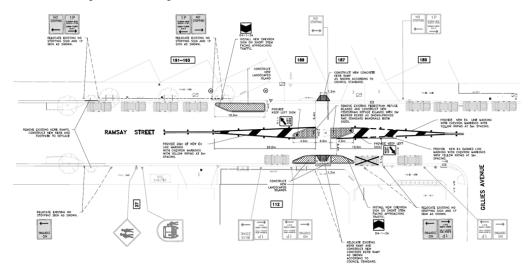


Figure 8.6: Refuge Island Reconstruction and Kerb Ramp Removal, Ramsay Street North (Inner West Council)

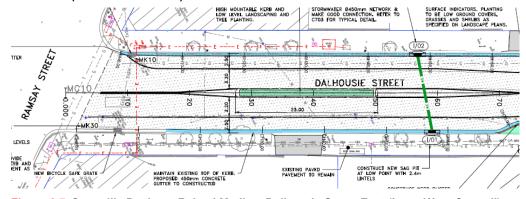


Figure 8.7: Council's Design – Raised Median, Dalhousie Street East (Inner West Council)





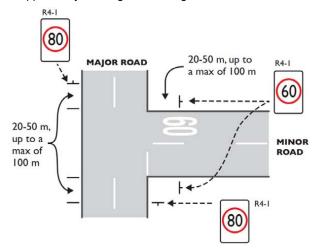


## 8.6 Traffic Management Devices

#### 8.6.1 Signage

The NSW Speed Zoning Guidelines outlines signage requirements and locations. The relevant guidelines used for this assessment are outlined as follows:

- At any change in speed limit, two (2) speed limit signs are to be installed, ideally on both sides
  of the carriageway
- For urban environments (which comprises the study area):
  - the vertical clearance between the ground and the base of a sign should ideally be at minimum 2.5 m
  - the lateral clearance between the edge line of the travel lane and the nearest edge of the sign should ideally be at minimum 0.6 m
  - the lateral clearance between the centre of the left (kerbside) travel lane and the edge of the sign should ideally not exceed 6.6 m.
- 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
  - 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 8.8 below for a diagram of these sign locations.
- For a 40 km/h zone the suggested spacing for repeater signs is 300 m for the first sign and 500 m for subsequent signs
- The minimum separation between speed limit signs and other signs is 50 m for a 40 km/h zone
- Road pavement marking should be located at the point of change in speed zone area, centrally located in each lane adjacent to the speed limit sign
- Any exceptions to the clearances (potentially necessary due to site constraints) are subject to approval by the Regional Manager.



Source: NSW Speed Zoning Guidelines

Figure 8.8: Typical Positioning of Speed Signs at Intersections

### 8.6.2 LATM Devices

The selection of an appropriate LATM is greatly dependent on the overall objective for the roadway, the local context of the road environment and the needs of local road users.







Austroads *Guide to Traffic Management (Part 8 - Local Area Traffic Management) 2016* provides a toolkit and selection system, which outlines the relative use of different LATM devices based on previous research and practice within Australia and New Zealand. The Austroads Toolkit is provided in Table 8.3.

Table 8.3 LATM Toolkit

Measure		Reduce speeds	Reduce traffic volume	Reduce crash risk	Increase pedestrian safety	Increase bicycle safety
Vertical deflection	Road humps	✓	✓	✓	<u></u>	-
devices (Section 7.2)	Road cushions	✓	✓	✓:	-	✓
	Flat-top road humps	✓	✓	✓	_	✓
	Wombat crossings	✓	✓	✓	✓	✓
	Raised pavements	✓	✓	✓	-	✓
Horizontal	Lane narrowings/kerb extensions	✓	-	-	✓	-
deflection devices (Section 7.3)	Slow points	✓	✓	-	-	-
	Centre blister islands	✓	✓	-	✓	-
	Driveway links	✓	✓	-	✓	✓
	Mid-block median treatments	✓	_	✓	✓	✓
	Roundabouts	✓	✓	✓	-	-
Diversion devices	Full road closure	-	✓	✓	✓	✓
(Section 7.4)	Half road closure	-	✓	✓	✓	✓
	Diagonal road closure	-	✓	✓	✓	✓
	Modified T-intersection	✓	✓	✓	✓	✓
	Left-in/left-out islands	-	✓	✓	✓	-
Signs, linemarking	Speed limit signs	✓	-	✓	✓	✓
and other treatments	Prohibited traffic movement signs	-	✓	✓	-	✓
(Section 7.5)	One-way (street) signs	-	✓	✓	✓	-
	Give-way signs	✓	✓	✓	✓	✓
	Stop signs	✓	✓	✓	✓	✓
	Shared zones	✓	✓	-	✓	✓
	School zones	✓	-	✓	✓	✓
	Threshold treatments	✓	✓	✓	-	✓
	Tactile surface treatments	✓	-	-	-	-
	Bicycle facilities	-	-	✓	-	✓
	Bus facilities	-	✓	-	-	-

Source: AustRoads Guide to Traffic Management - Part 8

Based on the toolkit presented in Table 8.3, site observations and pedestrian survey data, the following LATM devices may be appropriate to be implemented as part of the HPAA:

- Road cushions
- Lane narrowing / kerb extensions
- Mid-block median treatments.







## 9. RECOMMENDED TREATMENTS

#### 9.1 Treatment Selection

As outlined in Section 8.1, the road environment must be able to self-regulate the speed limit if a 40km/h speed limit is implemented. In addition to signage and pavement markings denoting the speed limit, a traffic calming device is required along Ramsay Street between Dalhousie Street and Gillies Avenue to provide the self-enforcing speed environment.

A detailed assessment of the LATM devices outlined in the Austroads Toolkit was undertaken and consideration has also been given to the road environment within the study area to determine potential treatments and locations.

Appropriate treatment types were initially selected based on their purposes, specifically to:

- Slow traffic
- Provide for pedestrian safety and crossing points where necessary.

Attention was also given to existing treatments in the surrounding environment and, when possible, preference was given to devices that were already in place near the area, to ensure greater legibility for drivers.

### 9.2 Signage and Pavement Marking

In accordance with TfNSW's 40 km/h High Pedestrian Activity Area Guidelines, the following signage treatments are proposed:

- Install entry/exit treatment at each boundary of the HPAA. The entry/exit treatment consists of:
  - 40 km/h speed limit High Pedestrian Activity Area (R4-236) sign
  - 40 km/h speed limit pavement markings
  - Pavement surface / threshold treatments to provide a visual contrast between the existing road conditions and the HPAA
  - End 40 Area (R4-11) sign in the outbound direction
- Install a 40 km/h End School Zone sign (R4-231N (40)) at the end of a school zone on Dalhousie Street east of Dickson Street
- Two repeater 40km/h HPAA (R4-273N) signs are proposed to be provided south of the Ramsay Street / Rawson Street intersection.

The proposed signage and marking treatments to supplement the 40 km/h HPAA area are presented in Table 9.1.





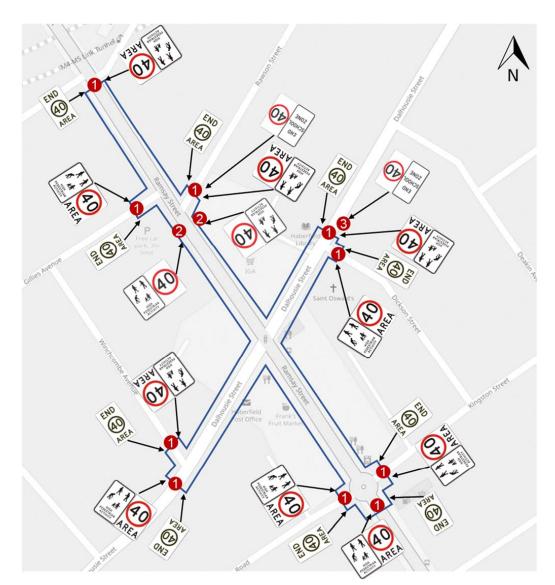
Table 9.1: 40 km/h Speed Limit Signage

No.	Image	Signage Type	Sign Code	Use
1	HIGH PEDESTRIAN ACTIVITY AREA	High Pedestrian Activity Area (40)	R4-236	
		Speed Limit Pavement Marking (40)		On the entries to the High Pedestrian Activity Area Used on road network or area.
		Threshold Treatment	-	
	END 40 AREA	End 40 Area	R4-11	At end of the High Pedestrian Activity Area onto a road with speed limit other than 40 km/h.
2	A A HIGH PEDESTRIAN ACTIVITY	High Pedestrian Activity (40)	R4-273N	Repeater sign within the High Pedestrian Activity Area
3	END SCHOOL ZONE	End School Zone (40)	R4-231N (40)	At end of a School Zone onto road with speed limit of 40 km/h

Location of the sign treatments from Table 9.1 are illustrated in Figure 9.1. Figure 9.2 illustrates a concept design of entry treatment at Dalhousie Street / Winchcombe Avenue. Similar designs are to be applied at other entry points of the HPAA. Detailed concept designs are provided in **Appendix B**.







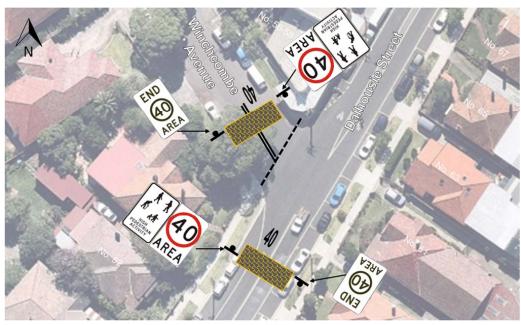
Source: OpenStreet Map

Figure 9.1: Signage Locations









Source: Nearman

Figure 9.2: Entry Treatment - Dalhousie Street / Winchcombe Avenue

### 9.3 Proposed LATM Devices

The proposed LATM devices selected to be used within the study area to create a 40 km/h HPAA zone are as follows:

- Speed Cushions and Median combination
- Lane narrowing / kerb extensions
- Median treatment

The advantages and disadvantages of the proposed LATM devices are described in Table 9.2. The recommended locations of proposed traffic management devices are presented in Figure 9.3.

Locations of proposed treatments and existing traffic management devices are presented in Figure 9.4, demonstrating the overall provision and spacing of treatments to provide a self-enforcing road environment across the proposed HPAA.

Detailed concept designs are provided in Appendix B.







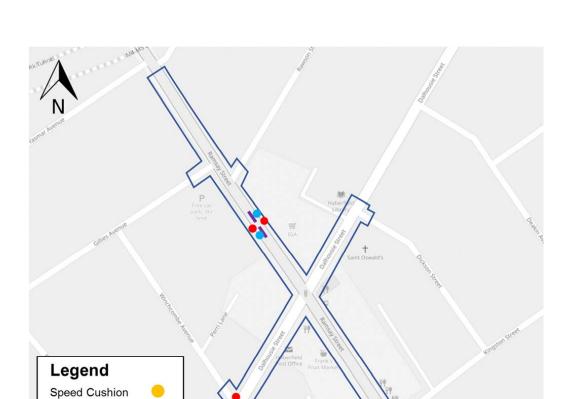


**Table 9.2: Proposed Treatments** 

Treatments	Advantages	Disadvantages
Speed Cushion	<ul> <li>Effective at slowing vehicles speeds when used in conjunction with a median or kerb side treatment</li> <li>Less likely to be mistaken as a pedestrian facility</li> <li>Bus and cycle route friendly</li> <li>Does not impact kerbside parking</li> </ul>	<ul> <li>Can be less effective at slowing vehicles in isolation</li> <li>Traffic noise level may increase</li> <li>Impact on vehicle passenger comfort</li> </ul>
Lane narrowing / kerb extensions	<ul> <li>Reduces available road width and slows vehicles down</li> <li>Expands available kerbside area</li> <li>Provides opportunity for landscaping and streetscaping improvements</li> <li>Provides a shorter crossing distance (if combined with a crossing point)</li> <li>Encourages pedestrians to cross at these locations (if combined with crossing point)</li> </ul>	<ul> <li>Reduces available kerbside parking</li> <li>May impact vehicle movements if placed close to driveways or intersections</li> <li>Bus friendly designs may not be effective at reducing vehicle speeds due to limited lane reduction</li> </ul>
Raised Median treatment	<ul> <li>Reinforces the reduced available road width</li> <li>Assists in reducing traffic speeds when used in conjunction with speed cushions</li> <li>Provides opportunity to provide a pedestrian refuge / crossing point</li> </ul>	<ul> <li>Relatively high cost</li> <li>May impact access to adjacent driveways and parking spaces if not located appropriately</li> </ul>







Source: OpenStreet Map

Blister Median Island

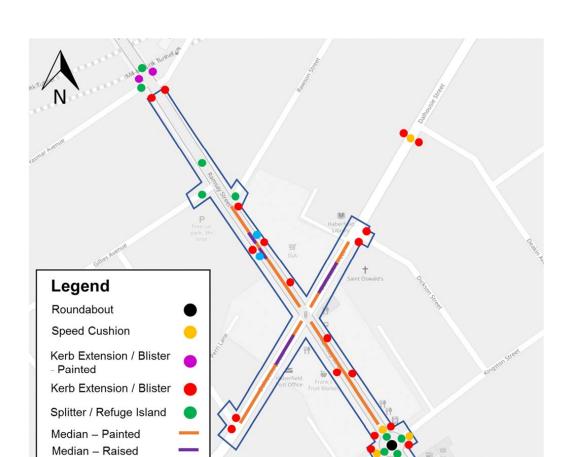
Kerb Extension /

Figure 9.3: Proposed Treatments Map









Source: OpenStreet Map

Figure 9.4: Proposed and Existing Treatments Map

#### 9.3.1 Kerb Extensions

Kerb extensions / blisters are recommended to be implemented at the following locations:

- Ramsay Street adjacent to Federation Place
  - To further reduce the lane width and work in conjunction with proposed speed cushions (Section 9.3.2) to reduce traffic speeds
  - Reduce crossing distance at proposed pedestrian crossing point
- Dalhousie Street at Winchcombe Avenue
  - Further enhance the entry/gateway treatments on Dalhousie Street west and Winchcombe Avenue on entry to the HPAA.
  - Reduce crossing distance at existing crossing point across Winchcombe Avenue.

A concept design of these treatments are also illustrated in Figure 9.5 and Figure 9.6.







#### 9.3.2 Speed Cushions and Median Treatment

A pair of speed cushions are recommended to be implemented along Ramsay Street, in combination with other road width reducing treatments, including kerb extensions and a median island.

This combination of treatments aims to:

- Reduce vehicle speeds along Ramsay Street north
- Reduce the road width for vehicles and crossing distance for pedestrians
- Provides a crossing point for pedestrians adjacent to Federation Plaza.

The reduction in vehicle speeds on approach to the crossing point will increase pedestrian safety by reducing the likelihood of a serious pedestrian injury in the event of a collision.

Asphalt speed cushions, similar to existing speed cushions in the local area (shown Figure 8.2, can be implemented for consistency.

To improve the effectiveness of the speed cushion treatment, it is also recommended to implement a short concrete median. This aims to:

- Provides a physical separation of two-way traffic
- Restrict all vehicles to stay on the correct side of the road when navigating the speed cushions (i.e. can't drive around the speed cushions)
- Provides for a staged pedestrian crossing movement

The concept design of this treatment is illustrated in Figure 9.5.

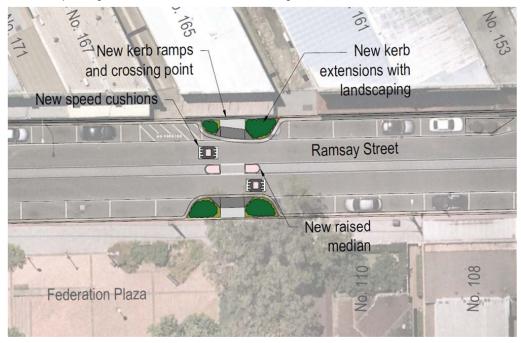


Figure 9.5: Concept Design - Kerb Extensions, Median and Crossing Point, Ramsay Street North





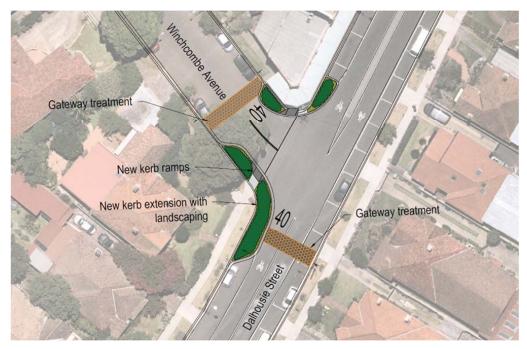


Figure 9.6: Concept Design – Kerb Extensions, Dalhousie Street / Winchcombe Avenue







## 10. IMPLEMENTATION COSTS

Based on the recommended traffic management devices and speed signage, Table 10.1 presents a concept level cost estimate, including an itemisation of treatments, quantity, costs, and overall project costs.

It should be noted that costs associated with traffic management or obtaining road occupancy licences have not been included. A 20% contingency and design fee has been included in the overall project cost.

Future / proposed upgrades under separate Council works programs (outlined in Section 8.5) have been excluded from the HPAA cost estimate.

The total cost for implementing the HPAA along Ramsay Street and Dalhousie Street is estimated at **\$161,100** (excl GST).

Table 10.1: Cost Estimate

Item No.	Туре	Quantity	Cost	Unit	<b>Total Cost</b>
1	Entry Treatment	10	\$6,700	each	\$67,000
2	Kerb Extension	4	\$13,000	each	\$52,000
3	Removal of 50km/h Sign	6	\$250	each	\$1,500
4	Replacement of End School Zone Sign	2	\$300	each	\$600
5	Repeater HPAA Signage	1	\$1,500	each	\$1,500
6	Double Barrier	10	\$20	m	\$200
7	Give Way (TB, TB1)	15	\$10	m	\$150
8	Asphalt Speed Cushions	2	\$5,000	each	\$10,000
9	Raised Median (4m)	1	\$1,300	each	\$2,800
Estimate F	Project Sum				\$135,750
20% Conti	ngency and Design				\$26,930
Estimate F	\$162,900				







## 11. SUMMARY AND CONCLUSION

A 40 km/h HPAA is proposed to be implemented within the study area in Haberfield in accordance with TfNSW guidelines. The HPAA area is proposed to include the following section of roads:

- Ramsay Street from Yasmar Avenue to Kingston Street/ St Davids Road
- Dalhousie Street from Winchcombe Avenue to Dickson Street

An assessment of the 40km.h HPAA guidelines indicated that the proposed area associated with Haberfield Village is suitable for a HPAA treatment.

A detailed assessment of LATM was undertaken to consider the control and enforcement methods to reinforce a 40 km/h road environment. The assessment considered the Austroads requirements, combined with the existing road environment and existing LATM devices within the area. Whenever possible, preference was given to devices that were already in place near the area, to ensure greater legibility for drivers.

Based on the range of potential LATM devices and the existing road environment, a number of treatments are proposed. These include:

- Signs
- Kerb Extensions
- Speed Cushions and Raised Median Combination
- Pavement and Line Marking.

The estimate cost of implementing the 40 km/h HPAA zone implementation is \$162,900 including a project 20% contingency.

The LATM devices proposed follow State and National guidelines and will create a self-enforcing 40 km/h speed limit and further improve the safety of pedestrians.









# **Appendix A: Traffic and Pedestrian Survey Data**



Client Bitzios
Location Haberfield
Date Thu, 29th April 2021
Survey Time 6:00 - 20:00 (14hrs)
Description Pedestrian Survey



Fime Period 6:00 to 6:15 6:15 to 6:30 6:30 to 6:45 6:45 to 7:00 7:00 to 7:15 7:15 to 7:30 7:30 to 7:45 7:45 to 8:00	NB 1 1 1 1 0 3 4 1	<b>SB</b> 0  0  0  0  0  0	1 1 1	JW 2 -  NB  7  5	Ramsay Si SB 4	t (East)	JW 3 - D	alhousie S		JW 4 - D	alhousie S		Grand Total
6:00 to 6:15 6:15 to 6:30 6:30 to 6:45 6:45 to 7:00 7:00 to 7:15 7:15 to 7:30 7:30 to 7:45	1 1 1 1 0 3	0 0 0 0	1 1 1	7		Total			-			_	7
6:15 to 6:30 6:30 to 6:45 6:45 to 7:00 7:00 to 7:15 7:15 to 7:30 7:30 to 7:45	1 1 0 3	0 0 0	1 1 1	5	4		EB	WB	Fota	EB	WB	Fota	Gran
6:30 to 6:45 6:45 to 7:00 7:00 to 7:15 7:15 to 7:30 7:30 to 7:45	1 1 0 3 4	0 0 0	1			11	0	1	1	0	1	1	14
6:45 to 7:00 7:00 to 7:15 7:15 to 7:30 7:30 to 7:45	1 0 3 4	0	1	6	5	10	0	0	0	2	2	4	15
7:00 to 7:15 7:15 to 7:30 7:30 to 7:45	0 3 4	0			5	11	0	2	2	0	0	0	14
7:15 to 7:30 7:30 to 7:45	3 4			7	7	14	1	3	4	1	0	1	20
7:30 to 7:45	4	0	0	5	4	9	4	5	9	1	2	3	21
			3	3	6	9	4	4	8	0	2	2	22
7:45 to 8:00	1	0	4	7	5	12	8	1	9	0	1	1	26
0.00 1. 0.45	,	0	1	5	7	12	2	10	12	0	0	0	25
8:00 to 8:15	2	1	3	2	3	5	6	4	10	2	0	2	20
8:15 to 8:30 8:30 to 8:45	4 5	1	8 6	7	3	10 5	3 7	7 5	10 12	2	2	3 4	31 27
8:30 to 8:45 8:45 to 9:00	4	6	10	12	8	20	3	6	9	1	4	5	44
9:00 to 9:15	6	5	11	6	8	14	6	8	14	3	4	7	46
9:15 to 9:30	9	4	13	10	3	13	6	2	8	5	3	8	42
9:30 to 9:45	4	4	8	6	5	11	6	4	10	3	1	4	33
9:45 to 10:00	6	0	6	7	9	16	3	11	14	2	6	8	44
10:00 to 10:15	6	4	10	6	5	11	3	1	4	2	3	5	30
10:15 to 10:30	3	3	6	5	9	14	2	2	4	6	3	9	33
10:30 to 10:45	8	2	10	8	3	11	6	2	8	3	3	6	35
10:45 to 11:00	7	7	14	8	11	19	7	7	14	2	1	3	50
11:00 to 11:15	12	4	16	9	3	12	9	6	15	4	4	8	51
11:15 to 11:30	6	10	16	4	2	6	6	7	13	4	4	8	43
11:30 to 11:45	10	5	15	10	11	21	8	9	17	6	6	12	65
11:45 to 12:00	8	10	18	10	13	23	10	9	19	1	4	5	65
12:00 to 12:15	10	8	18	12	12	24	3	5	8	9	7	16	66
12:15 to 12:30	11	6	17	6	8	14	3	4	7	6	5	11	49
12:30 to 12:45	5	9	14	5	7	12	6	4	10	7	5	12	48
12:45 to 13:00	10	8	18	6	6	12	3	1	4	4	5	9	43
13:00 to 13:15 13:15 to 13:30	12 9	7	16 16	8 7	5 7	13 14	4	6	3 10	5	2	7	39 47
13:30 to 13:45	10	11	21	15	11	26	6	3	9	4	1	5	61
13:45 to 14:00	8	6	14	9	11	20	2	3	5	2	1	3	42
14:00 to 14:15	9	11	20	7	6	13	4	3	7	5	2	7	47
14:15 to 14:30	5	10	15	11	5	16	7	4	11	0	1	1	43
14:30 to 14:45	12	6	18	4	5	9	2	4	6	5	2	7	40
14:45 to 15:00	7	4	11	1	0	1	3	5	8	2	6	8	28
15:00 to 15:15	5	4	9	5	3	8	2	5	7	5	4	9	33
15:15 to 15:30	5	4	9	4	4	8	1	7	8	4	2	6	31
15:30 to 15:45	8	3	11	5	5	10	7	2	9	5	2	7	37
15:45 to 16:00	5	1	6	12	5	17	6	2	8	3	2	5	36
16:00 to 16:15	5	3	8	3	6	9	1	5	6	3	2	5	28
16:15 to 16:30	5	7	12	3	7	10	4	2	6	6	1	7	35
16:30 to 16:45	3	6	9	4	4	8	3	0	3	2	0	2	22
16:45 to 17:00	3	2	5	4	5	9	2	2	4	6	3	9	27
17:00 to 17:15	2	1	3	3	3	6	0	2	2	3	0	3	14
17:15 to 17:30	1	1	2	4	6	10	2	3	5	0	1	1	18
17:30 to 17:45 17:45 to 18:00	0	2	7	1	6 2	10 3	3	4	7 8	3	2	2	28 15
18:00 to 18:15	1	- 1	2	5	4	a	- 1	0	1	0	2	2	15
18:15 to 18:30	1	3	4	3	2	5	1	0	1	2	2	4	14
18:30 to 18:45	3	1	4	6	0	6	2	0	2	7	0	7	19
18:45 to 19:00	1	0	1	12	11	23	0	0	0	4	2	6	30
19:00 to 19:15	0	1	1	2	2	4	1	4	5	1	2	3	13
19:15 to 19:30	3	0	3	5	3	8	4	5	9	1	4	5	25
19:30 to 19:45	2	2	4	8	2	10	2	0	2	1	0	1	17
19:45 to 20:00	1	3	4	9	1	10	1	4	5	3	0	3	22
Total	278	208	486	352	304	656	201	211	412	162	132	294	1,848



Time Period   NB   SB   \$\frac{1}{6}\$   NB   SB   \$\frac{1}{6}\$   NB   SB   \$\frac{1}{6}\$   EB   WB   \$\frac{1}{6}\$   EB	<b>Hourly Summary</b>													
100 to 7:00		JW 1 -	Ramsay St	(West)	JW 2 -	Ramsay St	t (East)	JW 3 - Dalhousie St (South) JW 4 - Dalhousie St (Nor				t (North)	Total	
Section   Color   Co	Time Period	NB	SB	otal	NB	SB	otal	EB	WB	otal	EB	WB	otal	Srand
E15 to 7:15							46							
EAST D 745	6:15 to 7:15	3	0	3	23	21	44	5	10	15	4	4		70
1.00 to 8:00   8	6:30 to 7:30	5	0	5	21	22	43	9	14	23	2	4	6	77
7.15         10         1         11         17         21         38         20         19         39         2         3         5         93           7.30         10         3.30         11         5         16         21         18         39         19         22         41         3         3         6         102           7.45         10         3.55         12         22         22         25         15         40         19         22         41         6         8         14         122           8.15         10         19         16         35         29         20         49         19         22         41         6         8         14         122           8.30         0.930         24         16         40         32         20         5         22         22         41         15         13         32         20         5         22         22         11         13         11         13         24         24         58         21         22         21         13         33         26         16         15         15         10         22         1	6:45 to 7:45	8	0	8	22	22	44	17	13	30	2	5	7	89
T-30 to 8-30	7:00 to 8:00	8	0	8	20	22	42	18	20	38	1	5	6	94
7.485 to 8.45         12         6         18         18         14         32         18         26         44         5         4         9         103           8:00 to 9:00         15         12         27         25         15         40         19         22         41         6         8         14         122           8:30 to 9:30         24         16         40         32         20         52         22         21         43         11         13         24         159           8:45 to 9:35         23         19         42         34         24         58         21         20         41         12         12         24         165           9:00 to 10:00         25         13         38         29         25         54         21         25         46         13         14         27         165           9:13 to 10:15         25         12         37         29         22         51         18         18         36         12         13         32         26         29         25         54         21         25         46         13         14         27         18 <td>7:15 to 8:15</td> <td>10</td> <td>1</td> <td>11</td> <td>17</td> <td>21</td> <td>38</td> <td>20</td> <td>19</td> <td>39</td> <td>2</td> <td>3</td> <td>5</td> <td>93</td>	7:15 to 8:15	10	1	11	17	21	38	20	19	39	2	3	5	93
£600 to 9.00         15         12         27         25         15         40         19         22         41         6         8         14         122           8:15 to 9:15         19         16         35         29         20         49         19         26         45         7         12         19         148           8:30 to 9:30         24         16         40         32         20         52         22         21         43         11         13         24         156           900 to 10:00         25         13         38         29         25         54         21         25         46         13         14         27         165           915 to 10:15         25         12         37         29         22         51         18         18         36         12         13         25         149           9:30 to 10:30         19         11         30         24         28         52         14         18         36         12         13         25         149           9:35 to 10:30         11:00         24         16         40         27         28         55	7:30 to 8:30	11	5	16	21	18	39	19	22	41	3	3	6	102
8:15 to 9:15         19         16         35         29         20         49         19         26         45         7         12         19         148           8:30 to 9:30         24         16         40         32         20         52         22         21         43         11         13         24         158           9:00 to 10:00         25         13         38         29         25         54         21         25         46         13         14         27         165           9:30 to 10:03         19         11         30         24         28         52         14         18         32         13         13         25         16         40           9:45 to 10:45         23         9         32         26         26         52         14         16         30         13         15         28         142           10:00 to 11:00         24         16         40         27         28         55         18         12         30         13         10         23         148           10:00 to 10:00         20         26         61         31         27         28	7:45 to 8:45	12	6	18	18	14	32	18	26	44	5	4	9	103
8:30 to 9:30         24         16         40         32         20         52         22         21         43         11         13         24         159           8:45 to 9:45         23         19         42         34         24         58         21         20         41         12         12         24         165           9:15 to 10:15         25         12         37         29         22         51         18         36         12         13         25         149           9:30 to 10:30         19         11         30         24         22         55         14         18         32         13         13         25         149           9:45 to 10:45         23         9         32         26         26         55         14         16         30         13         15         28         142           10:00 to 11:00         24         16         40         27         28         55         18         12         30         13         10         23         148           10:15 to 11:45         33         23         56         29         19         48         28         22	8:00 to 9:00	15	12	27	25	15	40	19	22	41	6	8	14	122
8:45 to 9:45         23         19         42         34         24         58         21         20         41         12         12         24         165           9:00 to 10:00         25         13         38         29         25         54         21         25         46         13         14         27         165           9:30 to 10:30         19         11         30         24         28         52         14         18         32         13         13         26         140           9:45 to 10:45         23         9         32         26         26         52         14         16         30         13         15         28         142           10:00 to 11:00         24         16         40         27         28         55         18         12         30         13         15         28         142           10:01 to 11:15         30         16         46         30         26         56         24         17         41         15         11         26         169           10:30 to 11:30         33         33         36         38         29         62         33 <td>8:15 to 9:15</td> <td>19</td> <td>16</td> <td>35</td> <td>29</td> <td>20</td> <td>49</td> <td>19</td> <td>26</td> <td>45</td> <td>7</td> <td>12</td> <td>19</td> <td>148</td>	8:15 to 9:15	19	16	35	29	20	49	19	26	45	7	12	19	148
9.00 to 10.000   25	8:30 to 9:30	24	16	40	32	20	52	22	21	43	11	13	24	159
9.15 to 10.15	8:45 to 9:45	23	19	42	34	24	58	21	20	41	12	12	24	165
930 to 1030   19	9:00 to 10:00	25	13	38	29	25	54	21	25	46	13	14	27	165
945 to 1045   23   9   32   26   26   52   14   16   30   13   15   28   142     1000 to 11:00   24   16   40   27   28   55   18   12   30   13   10   23   148     1015 to 11:15   30   16   46   30   26   56   24   17   41   15   11   26   169     10:30 to 11:30   33   23   56   29   19   48   28   22   50   13   12   25   179     10:45 to 11:45   35   26   61   31   27   58   30   29   59   16   15   31   209     10:30 to 11:30   36   29   65   33   29   62   33   31   64   15   18   33   24     11:15 to 12:15   34   33   67   36   38   74   27   30   57   20   21   41   239     11:30 to 12:30   39   29   68   38   44   82   24   27   51   22   22   44   245     11:45 to 12:15   34   33   67   36   38   74   27   30   57   20   21   41   239     11:30 to 12:30   39   29   68   38   44   82   24   27   51   22   22   44   245     11:45 to 12:15   34   33   67   33   40   73   22   22   44   23   21   44   228     12:00 to 13:00   36   31   67   29   33   62   15   14   29   26   22   48   206     12:15 to 13:15   38   27   65   25   26   51   13   11   24   22   17   39   179     12:30 to 13:30   36   28   64   26   25   51   14   13   27   19   16   35   177     12:45 to 13:45   41   30   71   36   29   65   14   12   26   16   12   28   190     13:30 to 14:30   39   28   67   39   34   73   13   14   27   14   8   22   197     13:30 to 14:30   32   38   70   42   33   75   19   13   32   11   5   16   193     13:45 to 14:45   34   33   67   31   47   47   47   47   47   47   47   4	9:15 to 10:15	25	12	37	29	22	51	18	18	36	12	13	25	149
10:00 to 11:00	9:30 to 10:30	19	11	30	24	28	52	14	18	32	13	13	26	140
10:15 to 11:15   30	9:45 to 10:45	23	9	32	26	26	52	14	16	30	13	15	28	142
10:30 to 11:30   33   23   56   29   19   48   28   22   50   13   12   25   179     10:45 to 11:45   35   26   61   31   27   58   30   29   59   16   15   31   209     11:00 to 12:00   36   29   65   33   29   62   33   31   64   15   18   33   224     11:15 to 12:15   34   33   67   36   38   74   27   30   57   20   21   41   239     11:30 to 12:30   39   29   68   38   44   82   24   27   51   22   22   24   24   24     11:45 to 12:45   34   33   67   36   38   44   82   24   27   51   22   22   24   24   24     11:45 to 12:45   34   33   67   33   40   73   22   22   44   23   21   44   228     11:45 to 13:00   36   31   67   29   33   62   15   14   29   26   22   48   206     12:15 to 13:15   38   27   65   25   26   51   13   11   24   22   17   39   179     12:30 to 13:30   36   28   64   26   25   51   14   13   27   19   16   35   177     12:45 to 13:45   41   30   71   36   29   65   44   12   26   16   12   28   190     13:00 to 14:00   39   28   67   39   34   73   13   14   27   14   8   22   189     13:15 to 14:15   36   35   71   38   35   73   16   15   31   14   8   22   197     13:30 to 14:30   32   38   70   42   33   75   19   13   32   11   5   16   193     14:45 to 15:45   24   33   31   64   23   16   39   16   16   32   12   11   23   158     14:15 to 15:15   29   24   53   21   13   34   14   18   32   12   11   23   158     14:15 to 15:15   29   24   53   21   13   34   14   18   32   12   11   23   158     14:15 to 15:30   29   18   47   14   12   26   8   21   29   16   14   30   129     15:00 to 16:00   23   12   35   26   17   43   16   18   11   29   17   7   24   136     15:45 to 16:45   23   11   34   44   49   23   14   5   19   121     15:00 to 16:00   7   7   7   14   12   17   29   9   13   22   6   4   10   75     17:15 to 18:15   10   13:00   7   7   14   12   17   29   9   13   22   6   4   10   75     17:15 to 18:15   10   13:00   7   7   14   12   17   29   9   13   22   6   4   10   75     17:15 to 18:15   6   7   13   14   18   32   10   11   21   3   7   10   76	10:00 to 11:00	24	16	40	27	28	55	18	12	30	13	10	23	148
10:45 to 11:45   35   26   61   31   27   58   30   29   59   16   15   31   209   11:00 to 12:00   36   29   65   33   29   62   33   31   64   15   18   33   324   11:15 to 12:15   34   33   67   36   38   74   27   30   57   20   21   41   239   11:30 to 12:30   39   29   68   38   44   82   24   27   51   22   22   24   44   245   11:45 to 12:45   34   33   67   33   40   73   22   22   44   23   21   44   228   12:00 to 13:00   36   31   67   29   33   62   15   14   29   26   22   48   206   21:15 to 13:15   38   27   65   25   26   51   13   11   24   22   17   39   179   12:30 to 13:30   36   28   64   26   25   51   14   13   27   19   16   35   177   12:45 to 13:45   41   30   71   36   29   65   14   12   26   16   12   28   190   13:00 to 14:00   39   28   67   39   34   73   13   14   27   14   8   22   189   13:15 to 14:45   36   35   71   38   35   73   16   15   31   14   8   22   189   13:30 to 14:30   32   38   70   42   33   75   19   13   32   11   5   16   193   13:45 to 14:45   36   35   71   38   35   73   16   15   31   14   8   22   189   13:45 to 14:45   36   35   71   38   35   73   16   15   31   14   8   22   189   13:45 to 14:45   36   35   71   38   35   73   16   15   31   14   8   22   189   13:45 to 14:45   36   35   71   38   35   73   36   39   36   31   44   30   32   38   70   42   33   75   19   13   32   11   5   16   193   13:45 to 14:45   36   35   71   38   35   73   36   39   36   32   31   32   31   32   33   33   34   34   34   34   33   36   37   37   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   37   38   35   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   36   38   38	10:15 to 11:15	30	16	46	30	26	56	24	17	41	15	11	26	169
11:00 to 12:00   36   29   65   33   29   62   33   31   64   15   18   33   224     11:15 to 12:15   34   33   67   36   38   74   27   30   57   20   21   41   239     11:30 to 12:30   39   29   68   38   44   82   24   27   51   22   22   24   44   224     12:05 to 13:05   38   37   33   40   73   22   22   24   44   23   21   44   228     12:00 to 13:00   36   31   67   29   33   62   15   14   29   26   22   48   206     12:15 to 13:15   38   27   65   25   26   51   13   11   24   22   17   39   179     12:30 to 13:30   36   28   64   26   25   51   14   13   27   19   16   35   177     12:45 to 13:45   41   30   71   36   29   65   14   12   26   16   12   28   190     13:30 to 14:40   39   28   67   39   34   73   13   14   27   14   8   22   189     13:15 to 14:15   36   35   71   38   35   73   16   15   31   14   8   22   197     13:30 to 14:30   32   38   70   42   33   75   19   13   32   11   5   16   193     13:45 to 13:45   34   33   67   31   27   58   15   14   29   12   6   18   172     14:00 to 15:00   33   31   64   23   16   39   16   16   32   12   11   23   158     14:15 to 15:15   29   24   53   21   13   34   14   18   32   12   13   25   144     14:30 to 15:30   29   18   47   14   12   26   8   21   29   16   14   30   132     15:00 to 16:00   23   12   35   26   17   43   16   16   32   17   10   27   137     15:15 to 16:15   23   12   35   26   17   43   16   16   32   17   10   27   137     15:15 to 16:15   23   14   37   23   23   46   18   11   29   17   7   24   136     15:45 to 16:45   18   17   35   22   22   44   14   9   23   16   14   30   129     15:00 to 16:00   23   14   37   23   23   46   18   11   29   17   7   24   136     15:45 to 16:45   18   17   35   22   22   44   14   9   23   16   14   30   129     15:15 to 16:15   23   11   34   24   20   44   15   16   31   15   8   23   132     15:30 to 16:30   29   18   47   14   12   26   8   21   29   17   7   24   136     15:45 to 16:45   18   17   35   22   22   44   4   4   9   23   14   5   9     17:00 to 18:00	10:30 to 11:30	33	23	56	29	19	48	28	22	50	13	12	25	179
11:15 to 12:15   34   33   67   36   38   74   27   30   57   20   21   41   239     11:30 to 12:30   39   29   68   38   44   82   24   27   51   22   22   24   24   24     11:45 to 12:45   34   33   67   33   40   73   22   22   24   23   21   24   228     11:45 to 12:45   34   33   67   33   40   73   22   22   24   23   21   24   228     12:00 to 13:00   36   31   67   29   33   62   15   14   29   26   22   24   26     12:15 to 13:15   38   27   65   25   26   51   13   11   24   22   17   39   179     12:30 to 13:30   36   28   64   26   25   51   14   13   27   19   16   35   177     12:45 to 13:45   41   30   71   36   29   65   14   12   26   16   12   28   190     13:00 to 14:00   39   28   67   39   34   73   13   14   27   14   8   22   189     13:15 to 14:15   36   35   71   38   35   73   16   15   31   14   8   22   197     13:30 to 14:30   32   38   70   42   33   75   19   13   32   11   5   16   193     13:45 to 14:45   34   33   67   31   27   58   15   14   29   12   6   18   172     14:00 to 15:00   33   31   64   23   16   39   16   16   32   12   11   23   158     14:15 to 15:15   29   24   53   21   13   34   14   18   32   12   13   25   144     14:30 to 15:30   29   18   47   14   12   26   8   21   29   16   14   30   132     15:00 to 16:00   23   12   35   26   17   43   16   16   32   17   10   27   137     15:15 to 16:15   23   11   34   24   20   44   15   16   31   15   8   23   132     15:30 to 16:30   23   14   37   23   23   46   18   11   29   17   7   24   136     15:45 to 16:45   18   17   35   22   22   24   44   14   9   23   14   5   19   12     16:00 to 17:00   16   18   34   14   22   36   10   9   19   17   6   23   112     16:15 to 17:15   13   16   29   14   19   33   9   6   15   17   4   21   98     16:30 to 17:30   9   10   19   15   18   33   7   7   11   18   12   5   17   8   17     17:45 to 18:15   6   7   13   14   18   32   10   11   21   3   7   10   76     17:45 to 18:45   5   7   12   15   8   23   8   4   4   8   4   4   8   4   4   6   20   76     18	10:45 to 11:45	35	26	61	31	27	58	30	29	59	16	15	31	209
11:30 to 12:30         39         29         68         38         44         82         24         27         51         22         22         44         245           11:45 to 12:45         34         33         67         33         40         73         22         22         44         23         21         44         228           12:00 to 13:00         36         31         67         29         33         62         15         14         29         26         22         48         206           12:15 to 13:15         38         27         65         25         26         51         13         11         24         22         17         39         179           12:30 to 13:30         36         28         64         26         25         51         14         12         26         16         12         28         190           13:00 to 14:00         39         28         67         39         34         73         13         14         27         14         8         22         189           13:15 to 14:40         33         70         42         33         75         19	11:00 to 12:00	36	29	65	33	29	62	33	31	64	15	18	33	224
11:45 to 12:45         34         33         67         33         40         73         22         22         44         23         21         44         228           12:00 to 13:00         36         31         67         29         33         62         15         14         29         26         22         48         206           12:15 to 13:15         38         27         65         25         26         51         13         11         24         22         17         39         179           12:30 to 13:30         36         28         64         26         25         51         14         13         27         19         16         35         117           12:45 to 13:45         41         30         71         36         29         65         14         12         26         16         12         28         190           13:00 to 14:00         39         28         67         39         34         73         16         15         31         14         8         22         189           13:15 to 14:15         36         35         71         38         35         73														
12:00 to 13:00         36         31         67         29         33         62         15         14         29         26         22         48         206           12:15 to 13:15         38         27         65         25         26         51         13         11         24         22         17         39         179           12:30 to 13:30         36         28         64         26         25         51         14         13         27         19         16         35         177           13:00 to 14:00         39         28         67         39         34         73         13         14         27         14         8         22         189           13:15 to 14:15         36         35         71         38         35         73         16         15         31         14         8         22         189           13:30 to 14:30         32         38         70         42         33         75         19         13         32         11         5         16         193           13:30 to 14:30         33         31         64         23         16         39         16														
12:15 to 13:15		34		67		40	73	22			23		44	228
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12:45 to 13:45         41         30         71         36         29         65         14         12         26         16         12         28         190           13:00 to 14:00         39         28         67         39         34         73         13         14         27         14         8         22         189           13:15 to 14:15         36         35         71         38         35         73         16         15         31         14         8         22         197           13:30 to 14:30         32         38         70         42         33         75         19         13         32         11         5         16         193           13:45 to 14:45         34         33         67         31         27         58         15         14         29         12         6         18         172           14:00 to 15:00         33         31         64         23         16         39         16         16         32         12         11         23         158           14:15 to 15:45         25         15         40         15         12         26         8 </td <td></td>														
13:00 to 14:00         39         28         67         39         34         73         13         14         27         14         8         22         189           13:15 to 14:15         36         35         71         38         35         73         16         15         31         14         8         22         197           13:30 to 14:30         32         38         70         42         33         75         19         13         32         11         5         16         193           13:45 to 14:45         34         33         67         31         27         58         15         14         29         12         6         18         172           14:00 to 15:00         33         31         64         23         16         39         16         16         32         12         11         23         158           14:15 to 15:15         29         24         53         21         13         34         14         18         32         12         11         23         151           14:45 to 15:45         25         15         40         15         12         27         13<														
13:15 to 14:15         36         35         71         38         35         73         16         15         31         14         8         22         197           13:30 to 14:30         32         38         70         42         33         75         19         13         32         11         5         16         193           13:45 to 14:45         34         33         67         31         27         58         15         14         29         12         6         18         172           14:00 to 15:00         33         31         64         23         16         39         16         16         32         12         11         23         158           14:15 to 15:15         29         18         47         14         12         26         8         21         29         16         14         30         132           14:45 to 15:15         29         18         47         14         12         26         8         21         29         16         14         30         132           15:00 to 16:00         23         12         35         26         17         43         16 </td <td></td>														
13:30 to 14:30         32         38         70         42         33         75         19         13         32         11         5         16         193           13:45 to 14:45         34         33         67         31         27         58         15         14         29         12         6         18         172           14:00 to 15:00         33         31         64         23         16         39         16         16         32         12         11         23         158           14:15 to 15:15         29         24         53         21         13         34         14         18         32         12         13         25         144           14:30 to 15:30         29         18         47         14         12         26         8         21         29         16         14         30         132           14:45 to 15:45         25         15         40         15         12         27         13         19         32         16         14         30         129           15:00 to 16:00         23         12         35         26         17         43         16														
13:45 to 14:45         34         33         67         31         27         58         15         14         29         12         6         18         172           14:00 to 15:00         33         31         64         23         16         39         16         16         32         12         11         23         158           14:15 to 15:15         29         24         53         21         13         34         14         18         32         12         13         25         144           14:30 to 15:30         29         18         47         14         12         26         8         21         29         16         14         30         132           14:45 to 15:45         25         15         40         15         12         27         13         19         32         16         14         30         129           15:00 to 16:00         23         12         35         26         17         43         16         16         32         17         10         27         137           15:30 to 16:30         23         14         37         23         23         46         1													_	
14:00 to 15:00     33     31     64     23     16     39     16     16     32     12     11     23     158       14:15 to 15:15     29     24     53     21     13     34     14     18     32     12     13     25     144       14:30 to 15:30     29     18     47     14     12     26     8     21     29     16     14     30     132       15:00 to 16:00     23     12     35     26     17     43     16     16     32     17     10     27     137       15:15 to 16:15     23     11     34     24     20     44     15     16     31     15     8     23     132       15:30 to 16:30     23     14     37     23     23     46     18     11     29     17     7     24     136       15:45 to 16:45     18     17     35     22     22     24     4     14     9     23     14     5     19     121       16:05 to 17:00     16     18     34     14     22     36     10     9     19     17     6     23     112       16:05														
14:15 to 15:15       29       24       53       21       13       34       14       18       32       12       13       25       144         14:30 to 15:30       29       18       47       14       12       26       8       21       29       16       14       30       132         14:45 to 15:45       25       15       40       15       12       27       13       19       32       16       14       30       129         15:00 to 16:00       23       12       35       26       17       43       16       16       32       17       10       27       137         15:15 to 16:15       23       11       34       24       20       44       15       16       31       15       8       23       132         15:30 to 16:30       23       14       37       23       23       46       18       11       29       17       7       24       136         15:45 to 16:45       18       17       35       22       22       44       14       9       23       14       5       19       121         16:00 to 17:00       16														
14:30 to 15:30         29         18         47         14         12         26         8         21         29         16         14         30         132           14:45 to 15:45         25         15         40         15         12         27         13         19         32         16         14         30         129           15:00 to 16:00         23         12         35         26         17         43         16         16         32         17         10         27         137           15:15 to 16:15         23         11         34         24         20         44         15         16         31         15         8         23         132           15:30 to 16:30         23         14         37         23         23         46         18         11         29         17         7         24         136           15:45 to 16:45         18         17         35         22         22         44         14         9         23         14         5         19         121           16:00 to 17:00         16         18         34         14         22         36         10 </td <td></td>														
14:45 to 15:45         25         15         40         15         12         27         13         19         32         16         14         30         129           15:00 to 16:00         23         12         35         26         17         43         16         16         32         17         10         27         137           15:15 to 16:15         23         11         34         24         20         44         15         16         31         15         8         23         132           15:30 to 16:30         23         14         37         23         23         46         18         11         29         17         7         24         136           15:45 to 16:45         18         17         35         22         22         44         14         9         23         14         5         19         121           16:00 to 17:00         16         18         34         14         22         36         10         9         19         17         6         23         112           16:15 to 17:15         13         16         29         14         19         33         9 <td></td>														
15:00 to 16:00         23         12         35         26         17         43         16         16         32         17         10         27         137           15:15 to 16:15         23         11         34         24         20         44         15         16         31         15         8         23         132           15:30 to 16:30         23         14         37         23         23         46         18         11         29         17         7         24         136           15:45 to 16:45         18         17         35         22         22         24         14         9         23         14         5         19         121           16:00 to 17:00         16         18         34         14         22         36         10         9         19         17         6         23         112           16:15 to 17:15         13         16         29         14         19         33         9         6         15         17         4         21         98           16:30 to 17:30         9         10         19         15         18         33         7														
15:15 to 16:15         23         11         34         24         20         44         15         16         31         15         8         23         132           15:30 to 16:30         23         14         37         23         23         46         18         11         29         17         7         24         136           15:45 to 16:45         18         17         35         22         22         44         14         9         23         14         5         19         121           16:00 to 17:00         16         18         34         14         22         36         10         9         19         17         6         23         112           16:15 to 17:15         13         16         29         14         19         33         9         6         15         17         4         21         98           16:30 to 17:30         9         10         19         15         18         33         7         7         14         11         4         15         81           16:45 to 17:45         10         7         17         15         20         35         7									-					
15:30 to 16:30         23         14         37         23         23         46         18         11         29         17         7         24         136           15:45 to 16:45         18         17         35         22         22         44         14         9         23         14         5         19         121           16:00 to 17:00         16         18         34         14         22         36         10         9         19         17         6         23         112           16:15 to 17:15         13         16         29         14         19         33         9         6         15         17         4         21         98           16:30 to 17:30         9         10         19         15         18         33         7         7         14         11         4         15         81           16:45 to 17:45         10         7         17         15         20         35         7         11         18         12         5         17         87           17:00 to 18:00         7         7         14         12         17         29         9														
15:45 to 16:45         18         17         35         22         22         44         14         9         23         14         5         19         121           16:00 to 17:00         16         18         34         14         22         36         10         9         19         17         6         23         112           16:15 to 17:15         13         16         29         14         19         33         9         6         15         17         4         21         98           16:30 to 17:30         9         10         19         15         18         33         7         7         14         11         4         15         81           16:45 to 17:45         10         7         17         15         20         35         7         11         18         12         5         17         87           17:00 to 18:00         7         7         14         12         17         29         9         13         22         6         4         10         75           17:15 to 18:15         6         7         13         14         18         32         10         11 </td <td></td>														
16:00 to 17:00         16         18         34         14         22         36         10         9         19         17         6         23         112           16:15 to 17:15         13         16         29         14         19         33         9         6         15         17         4         21         98           16:30 to 17:30         9         10         19         15         18         33         7         7         14         11         4         15         81           16:45 to 17:45         10         7         17         15         20         35         7         11         18         12         5         17         87           17:00 to 18:00         7         7         14         12         17         29         9         13         22         6         4         10         75           17:15 to 18:15         6         7         13         14         18         32         10         11         21         3         7         10         76           17:30 to 18:30         6         9         15         13         14         27         9         8														
16:15 to 17:15         13         16         29         14         19         33         9         6         15         17         4         21         98           16:30 to 17:30         9         10         19         15         18         33         7         7         14         11         4         15         81           16:45 to 17:45         10         7         17         15         20         35         7         11         18         12         5         17         87           17:00 to 18:00         7         7         14         12         17         29         9         13         22         6         4         10         75           17:15 to 18:15         6         7         13         14         18         32         10         11         21         3         7         10         76           17:30 to 18:30         6         9         15         13         14         27         9         8         17         5         8         13         72           17:45 to 18:45         5         7         12         15         8         23         8         4														
16:30 to 17:30         9         10         19         15         18         33         7         7         14         11         4         15         81           16:45 to 17:45         10         7         17         15         20         35         7         11         18         12         5         17         87           17:00 to 18:00         7         7         14         12         17         29         9         13         22         6         4         10         75           17:15 to 18:15         6         7         13         14         18         32         10         11         21         3         7         10         76           17:30 to 18:30         6         9         15         13         14         27         9         8         17         5         8         13         72           17:45 to 18:45         5         7         12         15         8         23         8         4         12         9         7         16         63           18:00 to 19:00         6         5         11         26         17         43         4         0 <t< td=""><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>				_										
16:45 to 17:45     10     7     17     15     20     35     7     11     18     12     5     17     87       17:00 to 18:00     7     7     14     12     17     29     9     13     22     6     4     10     75       17:15 to 18:15     6     7     13     14     18     32     10     11     21     3     7     10     76       17:30 to 18:30     6     9     15     13     14     27     9     8     17     5     8     13     72       17:45 to 18:45     5     7     12     15     8     23     8     4     12     9     7     16     63       18:00 to 19:00     6     5     11     26     17     43     4     0     4     13     7     20     78       18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     7     8     15     85       18:45 to 19:45     6     3     9													_	
17:00 to 18:00     7     7     14     12     17     29     9     13     22     6     4     10     75       17:15 to 18:15     6     7     13     14     18     32     10     11     21     3     7     10     76       17:30 to 18:30     6     9     15     13     14     27     9     8     17     5     8     13     72       17:45 to 18:45     5     7     12     15     8     23     8     4     12     9     7     16     63       18:00 to 19:00     6     5     11     26     17     43     4     0     4     13     7     20     78       18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85														
17:15 to 18:15     6     7     13     14     18     32     10     11     21     3     7     10     76       17:30 to 18:30     6     9     15     13     14     27     9     8     17     5     8     13     72       17:45 to 18:45     5     7     12     15     8     23     8     4     12     9     7     16     63       18:00 to 19:00     6     5     11     26     17     43     4     0     4     13     7     20     78       18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85														
17:30 to 18:30     6     9     15     13     14     27     9     8     17     5     8     13     72       17:45 to 18:45 to 19:00     6     5     7     12     15     8     23     8     4     12     9     7     16     63       18:00 to 19:00     6     5     11     26     17     43     4     0     4     13     7     20     78       18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85														
17:45 to 18:45     5     7     12     15     8     23     8     4     12     9     7     16     63       18:00 to 19:00     6     5     11     26     17     43     4     0     4     13     7     20     78       18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85														
18:00 to 19:00     6     5     11     26     17     43     4     0     4     13     7     20     78       18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85														
18:15 to 19:15     5     5     10     23     15     38     4     4     8     14     6     20     76       18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85									-					
18:30 to 19:30     7     2     9     25     16     41     7     9     16     13     8     21     87       18:45 to 19:45     6     3     9     27     18     45     7     9     16     7     8     15     85														
18:45 to 19:45 6 3 9 27 18 45 7 9 16 7 8 15 85														
Total 278 208 486 352 304 656 201 211 412 162 132 294 1,848													_	

[Peak Hour Sumi	nary]												
	JW 1 -	Ramsay St	(West)	JW 2 -	Ramsay S	t (East)	JW 3 - D	alhousie S	t (South)	JW 4 - D	alhousie S	t (North)	Total
Time Period	NB	SB	Total	NB	SB	Total	EB	WB	Total	EB	WB	Total	Grand
11:00 to 12:00	36	29	65	33	29	62	33	31	64	15	18	33	224
12:00 to 13:00	36	31	67	29	33	62	15	1/1	29	26	22	48	206



Client Bitzios
Location Haberfield
Date Thu, 29th April 2021
Survey Time 6:00 - 20:00 (14hrs)
Description Pedestrian Survey



		idir Sur V							iic and iid	
[15mins interval]										- E
		PC 1			PC 2			PC 3		1 Tot
Time Period	NB	SB	Fotal	NB	SB	rotal	NB	SB	Fotal	Grand Total
6:00 to 6:15	0	0	0	3	0	3	0	0	0	3
6:15 to 6:30	0	0	0	0	0	0	1	1	2	2
6:30 to 6:45	0	0	0	0	1	1	4	2	6	7
6:45 to 7:00	0	0	0	0	0	0	2	3	5	5
7:00 to 7:15 7:15 to 7:30	0	0	0	2	0	1	3	5	6 5	8 6
7:30 to 7:45	1	1	2	0	2	2	2	5	7	11
7:45 to 8:00	0	0	0	0	0	0	4	2	6	6
8:00 to 8:15	1	1	2	2	2	4	5	1	6	12
8:15 to 8:30	0	2	2	0	1	1	2	3	5	8
8:30 to 8:45	1	5	6	1	1	2	3	0	3	11
8:45 to 9:00	3	6	9	1	4	5	4	8	12	26
9:00 to 9:15 9:15 to 9:30	7	5 1	12 2	1	0	3	2	0	3 4	16 9
9:30 to 9:45	1	0	1	0	1	1	1	6	7	9
9:45 to 10:00	1	2	3	0	1	1	5	4	9	13
10:00 to 10:15	3	0	3	0	0	0	5	2	7	10
10:15 to 10:30	6	3	9	0	1	1	4	9	13	23
10:30 to 10:45	1	0	1	0	2	2	1	3	4	7
10:45 to 11:00	1	2	3	0	1	1	7	2	9	13
11:00 to 11:15 11:15 to 11:30	2	2	6 4	0	0	0	6 10	10	16 18	23
11:30 to 11:30	1	1	2	0	0	0	2	2	4	6
11:45 to 12:00	0	3	3	0	1	1	5	5	10	14
12:00 to 12:15	3	2	5	0	0	0	2	1	3	8
12:15 to 12:30	3	2	5	1	0	1	9	4	13	19
12:30 to 12:45	2	3	5	0	0	0	1	5	6	11
12:45 to 13:00	3	1	4	0	2	2	3	8	11	17
13:00 to 13:15	1	3	4	0	2	1	7 5	2	9	14
13:15 to 13:30 13:30 to 13:45	3	0	1 5	0	0	0	4	3	7	10 12
13:45 to 14:00	1	2	3	1	0	1	3	2	5	9
14:00 to 14:15	1	1	2	1	0	1	2	4	6	9
14:15 to 14:30	2	0	2	0	0	0	0	3	3	5
14:30 to 14:45	0	0	0	0	0	0	2	4	6	6
14:45 to 15:00	3	5	8	0	4	4	3	1	4	16
15:00 to 15:15	6 4	2	8	1	0	1	4	5	9	18
15:15 to 15:30 15:30 to 15:45	0	3	7	5 1	0	5 1	2	2 5	7	14 10
15:45 to 16:00	0	1	1	1	2	3	2	1	3	7
16:00 to 16:15	3	4	7	0	2	2	3	1	4	13
16:15 to 16:30	3	4	7	0	0	0	2	2	4	11
16:30 to 16:45	3	4	7	4	1	5	2	5	7	19
16:45 to 17:00	1	5	6	0	0	0	5	2	7	13
17:00 to 17:15	5	3	8	1	1	2	3	4	7	17
17:15 to 17:30 17:30 to 17:45	3	2	5 11	0	2	0	3	4	7 9	14 20
17:45 to 18:00	3	0	3	1	0	1	6	6 7	13	17
18:00 to 18:15	3	4	7	0	0	0	4	5	9	16
18:15 to 18:30	1	2	3	0	0	0	0	5	5	8
18:30 to 18:45	1	0	1	0	0	0	4	6	10	11
18:45 to 19:00	0	1	1	0	0	0	5	7	12	13
19:00 to 19:15	1	1	2	0	0	0	1	5	6	8
19:15 to 19:30	2	1	3	0	0	0	2	1	3	6
19:30 to 19:45 19:45 to 20:00	0	3	3	0	0	1	9	6	2 15	5 16
Total	102	104	206	30	38	68	184	204	388	662
				-						



<b>Hourly Summary</b>										
		PC 1			PC 2			PC 3		nd Total
Time Period	NB	SB	otal	NB	SB	otal	NB	SB	otal	Grand .
6:00 to 7:00	0	0	0	3	1	4	7	6	13	17
6:15 to 7:15	0	0	0	2	1	3	8	11	19	22
6:30 to 7:30	0	0	0	3	1	4	10	12	22	26
6:45 to 7:45	1	1	2	3	2	5	8	15	23	30
7:00 to 8:00	1	1	2	3	2	5	10	14	24	31
7:15 to 8:15	2	2	4	3	4	7	14	10	24	35
7:30 to 8:30	2	4	6	2	5	7	13	11	24	37
7:45 to 8:45	2	8	10	3	4	7	14	6	20	37
8:00 to 9:00	5	14	19	4	8	12	14	12	26	57
8:15 to 9:15	11	18	29	3	6	9	11	12	23	61
8:30 to 9:30	12	17	29	4	7	11	13	9	22	62
8:45 to 9:45	12	12	24	3	7	10	11	15	26	60
9:00 to 10:00	10	8	18	2	4	6	12	11	23	47
9:15 to 10:15	6	3	9	1	4	5	15	12	27	41
9:30 to 10:30	11	5	16	0	3	3	15	21	36	55
9:45 to 10:45 10:00 to 11:00	11	5	16	0	4	4	15	18	33	53 53
10:00 to 11:00 10:15 to 11:15	11	9	16 19	0	5	4 5	17 18	16 24	33 42	66
10:30 to 11:30	6	8	14	0	4	4	24	23	47	65
10:45 to 11:45	6	9	15	0	2	2	25	22	47	64
11:00 to 12:00	5	10	15	0	2	2	23	25	48	65
11:15 to 12:15	6	8	14	0	1	1	19	16	35	50
11:30 to 12:30	7	8	15	1	1	2	18	12	30	47
11:45 to 12:45	8	10	18	1	1	2	17	15	32	52
12:00 to 13:00	11	8	19	1	2	3	15	18	33	55
12:15 to 13:15	9	9	18	1	3	4	20	19	39	61
12:30 to 13:30	7	7	14	0	5	5	16	17	33	52
12:45 to 13:45	8	6	14	0	5	5	19	15	34	53
13:00 to 14:00	6	7	13	1	3	4	19	9	28	45
13:15 to 14:15	6	5	11	2	2	4	14	11	25	40
13:30 to 14:30	7	5	12	2	0	2	9	12	21	35
13:45 to 14:45	4	3	7	2	0	2	7	13	20	29
14:00 to 15:00	6	6	12	1	4	5	7	12	19	36
14:15 to 15:15	11	7	18	1	4	5	9	13	22	45
14:30 to 15:30	13	10	23	6	4	10	9	12	21	54
14:45 to 15:45	13	12	25 18	7	4	11	9	13	22 21	58
15:00 to 16:00 15:15 to 16:15	10 7	8 10	17	8 7	2	10 11	8 7	13 9	16	49 44
15:15 to 16:15 15:30 to 16:30	6	11	17	2	4	6	9	9	18	41
15:45 to 16:45	9	13	22	5	5	10	9	9	18	50
16:00 to 17:00	10	17	27	4	3	7	12	10	22	56
16:15 to 17:15	12	16	28	5	2	7	12	13	25	60
16:30 to 17:30	12	14	26	5	4	9	13	15	28	63
16:45 to 17:45	17	13	30	1	3	4	14	16	30	64
17:00 to 18:00	19	8	27	2	3	5	15	21	36	68
17:15 to 18:15	17	9	26	1	2	3	16	22	38	67
17:30 to 18:30	15	9	24	1	0	1	13	23	36	61
17:45 to 18:45	8	6	14	1	0	1	14	23	37	52
18:00 to 19:00	5	7	12	0	0	0	13	23	36	48
18:15 to 19:15	3	4	7	0	0	0	10	23	33	40
18:30 to 19:30	4	3	7	0	0	0	12	19	31	38
18:45 to 19:45	3	6	9	0	0	0	8	15	23	32
19:00 to 20:00	3	5	8	1	0	1	12	14	26	35
Total	102	104	206	30	38	68	184	204	388	662

[Peak Hour Sum	mary]									
		PC 1			PC 2			Total		
Time Period	NB	SB	Total	NB	SB	Total	NB	SB	Total	Grand
10:15 to 11:15	10	9	19	0	5	5	18	24	42	66
17:00 to 18:00	19	8	27	2	3	5	15	21	36	68



Client Bitzios
Location Haberfield
Date Sat, 1st May 2021
Survey Time 7:00 - 20:00 (13hrs)
Description Pedestrian Survey



[15mins interval]													
	JW 1 -	Ramsay St	(West)	JW 2 -	Ramsay S	t (East)	JW 3 - D	alhousie S	t (South)	JW 4 - D	alhousie S	t (North)	Total
Time Period	NB	SB	rotal	NB	SB	rotal	EB	WB	rotal	EB	WB	rotal	Grand Tota
7:00 to 7:15	0	0	0	4	2	6	3	1	4	1	1	2	12
7:15 to 7:30	3	0	3	3	3	6	3	4	7	1	1	2	18
7:30 to 7:45	1	7	8	6	7	13	4	3	7	5	2	7	35
7:45 to 8:00	6	2	8	3	3	6	1	5	6	5	2	7	27
8:00 to 8:15	1	1	2	5	0	5	4	4	8	0	4	4	19
8:15 to 8:30	9	6	15	1	2	3	3	4	7	2	2	4	29
8:30 to 8:45	11	5	16	3	4	7	8	9	17	3	6	9	49
8:45 to 9:00	5	5	10	5	3	8	4	7	11	7	4	11	40
9:00 to 9:15	3	2	5	4	5	9	7	14	21	2	7	9	44
9:15 to 9:30	8	2	10	3	1	4	4	10	14	3	3	6	34
9:30 to 9:45	3	4	7	3	11	14	4	11	15	10	7	17	53
9:45 to 10:00	7	3	10	7	2	9	9	11	20	6	4	10	49
10:00 to 10:15	3	2	5	10	9	19	2	7	9	0	3	3	36
10:15 to 10:30	8	1	9	8	10	18	2	2	4	3	2	5	36
10:30 to 10:45	2	8	10	7	7	14	6	3	9	3	3	6	39
10:45 to 11:00	1	4	5	8	6	14	2	9	11	4	3	7	37
11:00 to 11:15	6	8	14	2	4	6	1	5	6	7	5	12	38
11:15 to 11:30	11	4	15	6	6	12	3	13	16	1	3	4	47
11:30 to 11:45	11	5	16	6	2	8	6	5	11	4	3	7	42
11:45 to 12:00	9	4	13	5	2	7	0	8	8	3	5	8	36
12:00 to 12:15	9	7	16	3	3	6	2	5	7	6	6	12	41
12:15 to 12:30	12	11	23	1	5	6	10	9	19	8	3	11	59
12:30 to 12:45	10	4	14	2	3	5	6	7	13	2	7	9	41
12:45 to 13:00	4	7	11	5	2	7	7	8	15	7	3	10	43
13:00 to 13:15	14	7	21	7	3	10	4	3	7	10	3	13	51
13:15 to 13:30	21	3	24	2	6	8	5	2	7	9	8	17	56
13:30 to 13:45	7	3	10	5	4	9	10	4	14	9	5	14	47
13:45 to 14:00	7	3	10	6	5	11	4	2	6	7	5	12	39
14:00 to 14:15	8	4	12	2	6	8	2	4	6	4	1	5	31
14:15 to 14:30	10	5	15	2	9	11	2	3	5	1	2	3	34
14:30 to 14:45	3	6	9	5	2	7	5	14	19	3	2	5	40
14:45 to 15:00	4	4	8	7	6	13	3	1	4	4	4	8	33
15:00 to 15:15	9	8	17	11	8	19	2	1	3	12	4	16	55
15:15 to 15:30	1	8	9	6	7	13	2	1	3	5	7	12	37
15:30 to 15:45	4	1	5	6	7	13	1	1	2	5	4	9	29
15:45 to 16:00	2	4	6	4	2	6	2	2	4	3	1	4	20
16:00 to 16:15	2	7	9	3	7	10	2	1	3	5	3	8	30
16:15 to 16:30	5	0	5	5	6	11	0	2	2	6	6	12	30
16:30 to 16:45	1	1	2	6	5	11	9	0	9	2	6	8	30
16:45 to 17:00	0	4	4	4	4	8	3	3	6	2	2	4	22
17:00 to 17:15	0	3	3	9	4	13	1	1	2	3	2	5	23
17:15 to 17:30	1	2	3	2	8	10	2	5	7	8	4	12	32
17:30 to 17:45	0	2	2	4	9	13	1	1	2	3	8	11	28
17:45 to 18:00	2	1	3	3	3	6	5	3	8	3	1	4	21
18:00 to 18:15	0	0	0	6	3	9	6	6	12	4	3	7	28
18:15 to 18:30	0	0	0	3	1	4	2	1	3	8	2	10	17
18:30 to 18:45	2	1	3	5	1	6	8	2	10	16	4	20	39
18:45 to 19:00	0	0	0	1	3	4	2	6	8	1	1	2	14
19:00 to 19:15	1	0	1	3	4	7	5	1	6	9	1	10	24
19:15 to 19:30	2	0	2	6	1	7	0	0	0	3	8	11	20
19:30 to 19:45	2	1	3	6	5	11	14	9	23	5	1	6	43
19:45 to 20:00	0	0	0	2	3	5	3	6	9	4	10	14	28
Total	251	180	431	241	234	475	206	249	455	247	197	444	1,805
	•												



<b>Hourly Summary</b>													
	JW 1 -	Ramsay St	(West)	JW 2 -	Ramsay S	t (East)	JW 3 - D	alhousie S	t (South)	JW 4 - Dalhousie St (North)			Total
Time Period	NB	SB	Total	NB	SB	Total	EB	WB	Total	EB	WB	Total	Grand
7:00 to 8:00	10	9	19	16	15	31	11	13	24	12	6	18	92
7:15 to 8:15	11	10	21	17	13	30	12	16	28	11	9	20	99
7:30 to 8:30	17	16	33	15	12	27	12	16	28	12	10	22	110
7:45 to 8:45	27	14	41	12	9	21	16	22	38	10	14	24	124
8:00 to 9:00	26	17	43	14	9	23	19	24	43	12	16	28	137
8:15 to 9:15	28	18	46	13	14	27	22	34	56	14	19	33	162
8:30 to 9:30	27	14	41	15	13	28	23	40	63	15	20	35	167
8:45 to 9:45	19	13	32	15	20	35	19	42	61	22	21	43	171
9:00 to 10:00	21	11	32	17	19	36	24	46	70	21	21	42	180
9:15 to 10:15	21	11	32	23	23	46	19	39	58	19	17	36	172
9:30 to 10:30	21	10	31	28	32	60	17	31	48	19	16	35	174
9:45 to 10:45	20	14	34	32	28	60	19	23	42	12	12	24	160
10:00 to 11:00	14	15	29	33	32	65	12	21	33	10	11	21	148
10:15 to 11:15	17	21	38	25	27	52	11	19	30	17	13	30	150
10:30 to 11:30	20	24	44	23	23	46	12	30	42	15	14	29	161
10:45 to 11:45	29	21	50	22	18	40	12	32	44	16	14	30	164
11:00 to 12:00	37	21	58	19	14	33	10	31	41	15	16	31	163
11:15 to 12:15	40	20	60	20	13	33	11	31	42	14	17	31	166
11:30 to 12:30	41	27	68	15	12	27	18	27	45	21	17	38	178
11:45 to 12:45	40	26	66	11	13	24	18	29	47	19	21	40	177
12:00 to 13:00	35	29	64	11	13	24	25	29	54	23	19	42	184
12:15 to 13:15	40	29	69	15	13	28	27	27	54	27	16	43	194
12:30 to 13:30	49	21	70	16	14	30	22	20	42	28	21	49	191
12:45 to 13:45	46	20	66	19	15	34	26	17	43	35	19	54	197
13:00 to 14:00	49	16	65	20	18	38	23	11	34	35	21	56	193
13:15 to 14:15	43	13	56	15	21	36	21	12	33	29	19	48	173
13:30 to 14:30	32	15	47	15	24	39	18	13	31	21	13	34	151
13:45 to 14:45	28	18	46	15	22	37	13	23	36	15	10	25	144
14:00 to 15:00	25	19	44	16	23	39	12	22	34	12	9	21	138
14:15 to 15:15	26	23	49	25	25	50	12	19	31	20	12	32	162
14:30 to 15:30	17	26	43	29	23	52	12	17	29	24	17	41	165
14:45 to 15:45	18	21	39	30	28	58	8	4	12	26	19	45	154
15:00 to 16:00	16	21	37	27	24	51	7	5	12	25	16	41	141
15:15 to 16:15	9	20	29	19	23	42	7	5	12	18	15	33	116
15:30 to 16:30	13	12	25	18	22	40	5	6	11	19	14	33	109
15:45 to 16:45	10	12	22	18	20	38	13	5	18	16	16	32	110
16:00 to 17:00	8	12	20	18	22	40	14	6	20	15	17	32	112
16:15 to 17:15	6	8	14	24	19	43	13	6	19	13	16	29	105
16:30 to 17:30	2	10	12	21	21	42	15	9	24	15	14	29	107
16:45 to 17:45	1	11	12	19	25	44	7	10	17	16	16	32	105
17:00 to 18:00	3	8	11	18	24	42	9	10	19	17	15	32	104
17:15 to 18:15	3	5	8	15	23	38	14	15	29	18	16	34	109
17:30 to 18:30	2	3	5	16	16	32	14	11	25	18	14	32	94
17:45 to 18:45	4	2	6	17	8	25	21	12	33	31	10	41	105
18:00 to 19:00	2	1	3	15	8	23	18	15	33	29	10	39	98
18:15 to 19:15	3	1	4	12	9	21	17	10	27	34	8	42	94
18:30 to 19:30	5	1	6	15	9	24	15	9	24	29	14	43	97
18:45 to 19:45	5	1	6	16	13	29	21	16	37	18	11	29	101
19:00 to 20:00	5	1	6	17	13	30	22	16	38	21	20	41	115
Total	251	180	431	241	234	475	206	249	455	247	197	444	1,805

[Peak Hour Sum	mary]												
	JW 1 -	Ramsay St	(West)	JW 2 -	Ramsay S	t (East)	JW 3 - D	alhousie S	t (South)	JW 4 - D	alhousie S	t (North)	Total
Time Period	NB NB	SB	Total	N B	SB	Total	EB	WB	Total	EB	WB	Total	Grand
9:00 to 10:00	35	29	64	11	13	24	25	29	54	23	19	42	180
40 45 . 40 45					4.0								4.0=



Client Bitzios
Location Haberfield
Date Sat, 1st May 2021
Survey Time 7:00 - 20:00 (13hrs)
Description Pedestrian Survey



[15mins interval]										
		PC 1			PC 2			PC 3		Total
Time Period	NB	SB	Total	NB	SB	rotal	EB	WB	Fotal	Grand Tota
7:00 to 7:15	0	0	0	1	0	1	2	2	4	5
7:15 to 7:30	0	0	0	0	0	0	1	1	2	2
7:30 to 7:45	1	1	2	2	0	2	1	6	7	11
7:45 to 8:00	3	4	7	8	0	8	2	5	7	22
8:00 to 8:15	2	1	3	8	0	8	4	3	7	18
8:15 to 8:30	3	0	3	1	0	1	5	3	8	12
8:30 to 8:45	1	2	3	1	3	4	3	5	8	15
8:45 to 9:00	2	8	10	1	6	7	4	1	5	22
9:00 to 9:15	5	4	9	6	3	9	5	9	14	32
9:15 to 9:30	2	1	3	6	2	8	7	9	16	27
9:30 to 9:45	0	3	3	1	0	1	9	15	24	28
9:45 to 10:00	3	5	8	1	0	1	14	13	27	36
10:00 to 10:15	6	3	9	4	0	4	6	10	16	29
10:15 to 10:30	5	5	10	2	7	9	6	11	17	36
10:30 to 10:45	4	4	8	2	3	5	12	11	23	36
10:45 to 11:00	2	4	6	3	0	3	19	6	25	34
11:00 to 11:15	7	3	10	8	2	10	6	9	15	35
11:15 to 11:30	6	3	9	3	1	4	5	11	16	29
11:30 to 11:45	3	6	9	3	4	7	7	11	18	34
11:45 to 12:00	6	1	7	0	4	4	11	5	16	27
12:00 to 12:15	3	2	5	0	0	0	9	14	23	28
12:15 to 12:30	1	0	1	0	2	2	19	4	23	26
12:30 to 12:45	1	1	2	1	6	7	8	6	14	23
12:45 to 13:00	1	8	9	0	0	0	12	14	26	35
13:00 to 13:15	4	3	7	1	0	1	11	2	13	21
13:15 to 13:30	3	3	6	0	2	2	3	12	15	23
13:30 to 13:45	1	3	4	0	0	0	13	6	19	23
13:45 to 14:00	5	3	8	0	1	1	12	9	21	30
14:00 to 14:15	1	2	3	0	0	0	12	2	14	17
14:15 to 14:30	3	0	3	0	0	0	11	5	16	19
14:30 to 14:45	6	4	10	2	0	2	20	7	27	39
14:45 to 15:00	2	3	5	1	2	3	5	7	12	20
15:00 to 15:15	4	1	5	0	0	0	1	8	9	14
15:15 to 15:30	3	2	5	0	2	2	6	4	10	17
15:30 to 15:45	3	3	6	0	0	0	2	8	10	16
15:45 to 16:00	0	0	0	0	0	0	3	5	8	8
16:00 to 16:15	1	0	1	0	1	1	4	5	9	11
16:15 to 16:30 16:30 to 16:45	4	0	7	0	2	2	2	4	3	5 19
		3			5	6			6	
16:45 to 17:00	1	1	2	2	0	2	5	1	6	10
17:00 to 17:15 17:15 to 17:30	0	1	1	0	2	2	3	2	5	8
	0	0	0 5	2	2	2	7	5	12 11	14
17:30 to 17:45 17:45 to 18:00	0	2	2	0	1	1	8 12	3 4	16	18 19
		_	_	_	_		_			
18:00 to 18:15 18:15 to 18:30	0	0	0	0	0	0	5	6	12 11	15 11
18:30 to 18:45	0	0	0	0	1	1	11	3	14	15
18:45 to 19:00	0	0	0	0	0	0	4	2	6	6
19:00 to 19:15	1	1	2	1	0	1	3	9	12	15
19:15 to 19:30	0	0	0	0	1	1	4	10	14	15
19:30 to 19:45	0	2	2	2	3	5	14	5	19	26
19:45 to 20:00	0	0	0	0	0	0	8	10	18	18
Total	114	109	223	74	68	142	376	333	709	1,074
iotai	-17	103	-23		- 50		3/0	333	,05	1,074



Time Period	<b>Hourly Summary</b>										
Time Period			PC 1			PC 2			PC 3		Total
7.00 to 8.00	Time Period	NB	SB	[otal	NB	SB	rotal	EB	WB	rotal	Grand
7.30 to 8.30   9   6   15   19   0   19   12   17   29   6		4	5	9	11	0	11	6	14	20	40
7.45 to 8.45	7:15 to 8:15	6	6	12	18	0	18	8	15	23	53
8.00 to 9.00	7:30 to 8:30	9	6	15	19	0	19	12	17	29	63
8.15 to 9.15	7:45 to 8:45	9	7	16	18	3	21	14	16	30	67
8:30 to 9:30         10         15         25         14         14         28         19         24         43         9           9:00 to 10:00         10         13         23         14         5         19         35         46         81         12           9:00 to 10:00         10         13         23         14         5         19         35         46         81         12           9:15 to 10:15         11         12         23         12         2         14         36         47         83         12           9:30 to 10:30         14         16         30         8         7         15         35         49         84         12           9:45 to 10:45         18         17         35         9         10         19         38         45         83         13           10:00 to 11:00         17         16         33         11         10         21         43         38         81         13           10:30 to 11:30         19         14         33         16         6         22         42         37         79         13           10:04 to 11:00 <t< td=""><td>8:00 to 9:00</td><td>8</td><td>11</td><td>19</td><td>11</td><td>9</td><td>20</td><td>16</td><td>12</td><td>28</td><td>67</td></t<>	8:00 to 9:00	8	11	19	11	9	20	16	12	28	67
8.45 to 9.45   9	8:15 to 9:15	11	14	25	9	12	21	17	18	35	81
9:00 to 10:00	8:30 to 9:30	10	15	25	14	14	28	19	24	43	96
9:15 to 10:15	8:45 to 9:45	9	16	25	14	11	25	25	34	59	109
9:30 to 10:30	9:00 to 10:00	10	13	23	14	5	19	35	46	81	123
9.45 to 10:45	9:15 to 10:15	11	12	23	12	2	14	36	47	83	120
10:00 to 11:00	9:30 to 10:30	14	16	30	8	7	15	35	49	84	129
10:15 to 11:15	9:45 to 10:45	18	17	35	9	10	19	38	45	83	137
10:30 to 11:30	10:00 to 11:00	17	16	33	11	10	21	43	38	81	135
10:45 to 11:45	10:15 to 11:15	18	16	34	15	12	27	43	37	80	141
11:00 to 12:00   22	10:30 to 11:30	19	14	33	16	6	22	42	37	79	134
11:15 to 12:15	10:45 to 11:45	18	16	34	17	7	24	37	37	74	132
11:30 to 12:30	11:00 to 12:00	22	13	35	14	11	25	29	36	65	125
11:45 to 12:45         11         4         15         1         12         13         47         29         76         10           12:00 to 13:00         6         11         17         1         8         9         48         38         86         11           12:30 to 13:30         9         15         24         2         8         10         50         26         76         10           12:45 to 13:45         9         17         26         1         2         3         39         34         73         10           12:45 to 14:45         10         11         21         0         3         3         40         29         69         9           13:15 to 14:15         10         11         21         0         3         3         40         29         69         9           13:30 to 14:30         10         8         18         0         1         1         48         22         70         8           13:45 to 14:45         15         9         24         2         1         3         55         23         78         10           14:00 to 15:00         12	11:15 to 12:15	18	12	30	6	9	15	32	41	73	118
12:00 to 13:00 6 11 17 1 8 9 48 38 86 11 12:15 to 13:15 7 12 19 2 8 10 50 26 76 10 12:30 to 13:30 9 15 24 2 8 10 34 34 68 10 12:45 to 13:45 9 17 26 1 2 3 39 34 73 10 13:00 to 14:00 13 12 25 1 3 4 39 29 68 9 13:15 to 14:15 10 11 21 0 3 3 4 40 29 69 9 9 13:30 to 14:30 10 8 18 0 1 1 48 22 70 88 14:00 to 15:00 12 9 21 3 2 5 48 21 69 9 14:15 to 15:15 15 8 23 3 2 5 37 27 64 99 14:45 to 15:45 12 9 21 1 4 5 14 27 41 61 15:00 to 16:00 10 6 16 0 2 2 12 25 37 55 15:15 to 16:45 5 3 8 1 8 9 11 13 11 24 44 16:15 to 17:00 6 4 10 3 8 11 13 11 24 44 16:15 to 17:15 5 5 10 3 8 1 8 9 11 13 11 24 44 16:15 to 17:15 5 5 10 3 8 1 8 9 12 12 12 8 20 44 16:15 to 17:15 5 5 10 2 3 5 3 5 35 16 51 66 17:30 to 18:30 5 5 10 0 3 3 3 3 7 50 66 17:45 to 18:45 1 1 4 5 10 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	11:30 to 12:30	13	9	22	3	10	13	46	34	80	115
12:15 to 13:15	11:45 to 12:45	11	4	15	1	12	13	47	29	76	104
12:30 to 13:30       9       15       24       2       8       10       34       34       68       10         12:45 to 13:45       9       17       26       1       2       3       39       34       73       10         13:00 to 14:00       13       12       25       1       3       4       39       29       68       9         13:15 to 14:45       10       11       21       0       3       3       40       29       69       9         13:30 to 14:30       10       8       18       0       1       1       48       22       70       8         13:45 to 14:45       15       9       24       2       1       3       55       23       78       10         14:00 to 15:00       12       9       21       3       2       5       48       21       69       9         14:15 to 15:45       15       8       23       3       2       5       37       27       64       9         14:45 to 15:45       12       9       21       1       4       5       14       27       41       6	12:00 to 13:00	6	11	17	1	8	9	48	38	86	112
12:45 to 13:45       9       17       26       1       2       3       39       34       73       10         13:00 to 14:00       13       12       25       1       3       4       39       29       68       9         13:15 to 14:15       10       11       21       0       3       3       40       29       69       9         13:35 to 14:30       10       8       18       0       1       1       48       22       70       8         13:45 to 14:45       15       9       24       2       1       3       55       23       78       10         14:00 to 15:00       12       9       21       3       2       5       48       21       69       9         14:15 to 15:15       15       8       23       3       2       5       37       27       64       9         14:45 to 15:45       12       9       21       1       4       5       14       27       41       6         15:00 to 16:00       10       6       16       0       2       2       12       25       37       5	12:15 to 13:15	7	12	19	2	8	10	50	26	76	105
13:00 to 14:00         13         12         25         1         3         4         39         29         68         9           13:15 to 14:15         10         11         21         0         3         3         40         29         69         9           13:30 to 14:30         10         8         18         0         1         1         48         22         70         8           13:45 to 14:45         15         9         24         2         1         3         55         23         78         10           14:00 to 15:00         12         9         21         3         2         5         48         21         69         9           14:15 to 15:15         15         8         23         3         2         5         37         27         64         9           14:30 to 15:30         15         10         25         3         4         7         32         26         58         9           14:45 to 15:45         12         9         21         1         4         5         14         27         41         6           15:00 to 16:00         10 <td< td=""><td>12:30 to 13:30</td><td>9</td><td>15</td><td>24</td><td>2</td><td>8</td><td>10</td><td>34</td><td>34</td><td>68</td><td>102</td></td<>	12:30 to 13:30	9	15	24	2	8	10	34	34	68	102
13:15 to 14:15         10         11         21         0         3         3         40         29         69         9           13:30 to 14:30         10         8         18         0         1         1         48         22         70         8           13:45 to 14:45         15         9         24         2         1         3         55         23         78         10           14:00 to 15:00         12         9         21         3         2         5         48         21         69         9           14:15 to 15:15         15         8         23         3         2         5         37         27         64         9           14:30 to 15:30         15         10         25         3         4         7         32         26         58         9           14:45 to 15:45         12         9         21         1         4         5         14         27         41         6           15:00 to 16:00         10         6         16         0         2         2         12         25         37         5           15:30 to 16:30         4         3	12:45 to 13:45	9	17	26	1	2	3	39	34	73	102
13:30 to 14:30         10         8         18         0         1         1         48         22         70         8           13:45 to 14:45         15         9         24         2         1         3         55         23         78         10           14:00 to 15:00         12         9         21         3         2         5         48         21         69         9           14:15 to 15:15         15         8         23         3         2         5         37         27         64         9           14:45 to 15:30         15         10         25         3         4         7         32         26         58         9           14:45 to 15:45         12         9         21         1         4         5         14         27         41         6         15:00 to 16:00         10         6         16         0         2         2         12         25         37         5         5         15:15 to 16:15         7         5         12         0         3         3         11         19         30         4         15:45 to 16:45         5         3         8         1 </td <td>13:00 to 14:00</td> <td>13</td> <td>12</td> <td>25</td> <td>1</td> <td>3</td> <td>4</td> <td>39</td> <td>29</td> <td>68</td> <td>97</td>	13:00 to 14:00	13	12	25	1	3	4	39	29	68	97
13:45 to 14:45         15         9         24         2         1         3         55         23         78         10           14:00 to 15:00         12         9         21         3         2         5         48         21         69         9           14:15 to 15:15         15         8         23         3         2         5         37         27         64         9           14:45 to 15:45         15         10         25         3         4         7         32         26         58         9           14:45 to 15:45         12         9         21         1         4         5         14         27         41         6           15:00 to 16:00         10         6         16         0         2         2         12         25         37         5           15:15 to 16:15         7         5         12         0         3         3         15         22         37         5           15:30 to 16:30         4         3         7         0         3         3         11         19         30         4           15:45 to 16:45         5         3 <td>13:15 to 14:15</td> <td>10</td> <td>11</td> <td>21</td> <td>0</td> <td>3</td> <td>3</td> <td>40</td> <td>29</td> <td>69</td> <td>93</td>	13:15 to 14:15	10	11	21	0	3	3	40	29	69	93
14:00 to 15:00     12     9     21     3     2     5     48     21     69     9       14:15 to 15:15     15     8     23     3     2     5     37     27     64     9       14:30 to 15:30     15     10     25     3     4     7     32     26     58     9       14:45 to 15:45     12     9     21     1     4     5     14     27     41     6       15:00 to 16:00     10     6     16     0     2     2     12     25     37     5       15:15 to 16:15     7     5     12     0     3     3     15     22     37     5       15:30 to 16:30     4     3     7     0     3     3     11     19     30     4       16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     3     9     12     12     8     20     4       17:00 to 18:00     4     4	13:30 to 14:30	10	8	18	0	1	1	48	22	70	89
14:15 to 15:15     15     8     23     3     2     5     37     27     64     9       14:30 to 15:30     15     10     25     3     4     7     32     26     58     9       14:45 to 15:45     12     9     21     1     4     5     14     27     41     6       15:00 to 16:00     10     6     16     0     2     2     12     25     37     5       15:15 to 16:15     7     5     12     0     3     3     15     22     37     5       15:30 to 16:30     4     3     7     0     3     3     11     19     30     4       16:45 to 16:45     5     3     8     1     8     9     11     15     26     4       16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3	13:45 to 14:45	15	9	24	2	1	3	55	23	78	105
14:30 to 15:30     15     10     25     3     4     7     32     26     58     99       14:45 to 15:45     12     9     21     1     4     5     14     27     41     6       15:00 to 16:00     10     6     16     0     2     2     12     25     37     5       15:15 to 16:15     7     5     12     0     3     3     15     22     37     5       15:30 to 16:30     4     3     7     0     3     3     11     19     30     4       15:45 to 16:45     5     3     8     1     8     9     11     15     26     4       16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     <	14:00 to 15:00	12	9	21	3	2	5	48	21	69	95
14:45 to 15:45         12         9         21         1         4         5         14         27         41         6           15:00 to 16:00         10         6         16         0         2         2         12         25         37         5           15:15 to 16:15         7         5         12         0         3         3         15         22         37         5           15:30 to 16:30         4         3         7         0         3         3         11         19         30         4           15:45 to 16:45         5         3         8         1         8         9         11         15         26         4           16:00 to 17:00         6         4         10         3         8         11         13         11         24         4           16:15 to 17:15         5         5         10         3         9         12         12         8         20         4           16:30 to 17:30         5         5         10         5         7         12         17         12         29         5           16:45 to 17:45         5         3	14:15 to 15:15	15	8	23	3	2	5	37	27	64	92
15:00 to 16:00         10         6         16         0         2         2         12         25         37         5           15:15 to 16:15         7         5         12         0         3         3         15         22         37         5           15:30 to 16:30         4         3         7         0         3         3         11         19         30         4           15:45 to 16:45         5         3         8         1         8         9         11         15         26         4           16:00 to 17:00         6         4         10         3         8         11         13         11         24         4           16:15 to 17:15         5         5         10         3         9         12         12         8         20         4           16:30 to 17:30         5         5         10         5         7         12         17         12         29         5           16:45 to 17:45         5         3         8         4         4         8         23         11         34         5           17:00 to 18:30         4         4	14:30 to 15:30	15	10	25	3	4	7	32	26	58	90
15:15 to 16:15     7     5     12     0     3     3     15     22     37     5       15:30 to 16:30     4     3     7     0     3     3     11     19     30     4       15:45 to 16:45     5     3     8     1     8     9     11     15     26     4       16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     6       17:45 to 18:45     1     4     5     0     2     2     36     17     53     6       18:00 to 19:00     1     2     3 <td>14:45 to 15:45</td> <td>12</td> <td>9</td> <td>21</td> <td>1</td> <td>4</td> <td>5</td> <td>14</td> <td>27</td> <td>41</td> <td>67</td>	14:45 to 15:45	12	9	21	1	4	5	14	27	41	67
15:30 to 16:30     4     3     7     0     3     3     11     19     30     44       15:45 to 16:45     5     3     8     1     8     9     11     15     26     4       16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     6       17:45 to 18:45     1     4     5     0     2     2     36     17     53     6       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2 <td>15:00 to 16:00</td> <td>10</td> <td>6</td> <td>16</td> <td>0</td> <td>2</td> <td>2</td> <td>12</td> <td>25</td> <td>37</td> <td>55</td>	15:00 to 16:00	10	6	16	0	2	2	12	25	37	55
15:45 to 16:45     5     3     8     1     8     9     11     15     26     4       16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     6       17:30 to 18:30     5     5     10     0     3     3     33     17     50     6       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     3     22     24     46     5       18:45 to 19:45     1     3 <td>15:15 to 16:15</td> <td>7</td> <td>5</td> <td>12</td> <td>0</td> <td>3</td> <td>3</td> <td>15</td> <td>22</td> <td>37</td> <td>52</td>	15:15 to 16:15	7	5	12	0	3	3	15	22	37	52
16:00 to 17:00     6     4     10     3     8     11     13     11     24     4       16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     6       17:30 to 18:30     5     5     10     0     3     3     33     17     50     6       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	15:30 to 16:30	4	3	7	0	3	3	11	19	30	40
16:15 to 17:15     5     5     10     3     9     12     12     8     20     4       16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:05 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     6       17:30 to 18:30     5     5     10     0     3     3     33     17     50     6       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     66	15:45 to 16:45	5	3	8	1	8	9	11	15	26	43
16:30 to 17:30     5     5     10     5     7     12     17     12     29     5       16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     6       17:30 to 18:30     5     5     10     0     3     3     33     17     50     6       17:45 to 18:45     1     4     5     0     2     2     36     17     53     6       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	16:00 to 17:00	6	4	10	3	8	11	13	11	24	45
16:45 to 17:45     5     3     8     4     4     8     23     11     34     5       17:00 to 18:00     4     4     8     2     5     7     30     14     44     5       17:15 to 18:15     5     5     10     2     3     5     35     16     51     66       17:30 to 18:30     5     5     10     0     3     3     33     17     50     66       17:45 to 18:45     1     4     5     0     2     2     36     17     53     66       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	16:15 to 17:15	5	5	10	3	9	12	12	8	20	42
17:00 to 18:00     4     4     8     2     5     7     30     14     44     55       17:15 to 18:15     5     5     10     2     3     5     35     16     51     66       17:30 to 18:30     5     5     10     0     3     3     33     17     50     66       17:45 to 18:45     1     4     5     0     2     2     36     17     53     66       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	16:30 to 17:30	5	5	10	5	7	12	17	12	29	51
17:15 to 18:15     5     5     10     2     3     5     35     16     51     66       17:30 to 18:30     5     5     10     0     3     3     33     17     50     66       17:45 to 18:45     1     4     5     0     2     2     36     17     53     66       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	16:45 to 17:45	5	3	8	4	4	8	23	11	34	50
17:30 to 18:30     5     5     10     0     3     3     33     17     50     6       17:45 to 18:45     1     4     5     0     2     2     36     17     53     6       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	17:00 to 18:00	4	4	8	2	5	7	30	14	44	59
17:45 to 18:45     1     4     5     0     2     2     36     17     53     66       18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	17:15 to 18:15	5	5	10	2	3	5	35	16	51	66
18:00 to 19:00     1     2     3     0     1     1     28     15     43     4       18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	17:30 to 18:30	5	5	10	0	3	3	33	17	50	63
18:15 to 19:15     1     1     2     1     1     2     23     20     43     4       18:30 to 19:30     1     1     2     1     2     3     22     24     46     5       18:45 to 19:45     1     3     4     3     4     7     25     26     51     6	17:45 to 18:45	1	4	5	0	2	2	36	17	53	60
18:30 to 19:30	18:00 to 19:00	1	2	3	0	1	1	28	15	43	47
18:45 to 19:45 1 3 4 3 4 7 25 26 51 6	18:15 to 19:15	1	1	2	1	1	2	23	20	43	47
	18:30 to 19:30	1	1	2	1	2	3	22	24	46	51
1000 + 2000 1 2 4 2 2 20 21	18:45 to 19:45	1	3	4	3	4	7	25	26	51	62
	19:00 to 20:00	1	3	4	3	4	7	29	34	63	74
Total 114 109 223 74 68 142 376 333 709 1,0	Total	114	109	223	74	68	142	376	333	709	1,074

[Peak Hour Sum	mary]									
		PC 1			PC 2			PC 3		Total
Time Period	NB	SB	Total	NB	SB	Total	EB	WB	Total	Grand
10:15 to 11:15	18	16	34	15	12	27	43	37	80	141
12.00 to 12.00	1.5	٥	24	1	1	2	ГГ	22	70	112



Site Dalhousie Street

**Location** outside St Oswalds Church near Bus Stops

Site No dalhousie\_2
Start Date 5-May-21
Description Volume Summary

**Direction** Combined



Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	392	437	421	428	452	463	449	Ave	Ave
PM Peak	360	377	392	412	438	485	432	4861	4984
0:00	8	11	17	13	15	31	46	13	20
1:00	7	5	3	6	8	13	20	6	9
2:00	7	3	6	2	3	10	14	4	6
3:00	6	6	7	4	7	9	12	6	7
4:00	20	15	10	14	11	8	6	14	12
5:00	46	47	46	42	57	29	17	48	41
6:00	156	182	159	138	143	92	58	156	133
7:00	321	330	335	322	291	198	155	320	279
8:00	392	437	421	428	452	319	300	426	393
9:00	268	320	382	338	401	392	419	342	360
10:00	260	310	326	304	371	463	449	314	355
11:00	284	292	295	297	372	454	432	308	347
12:00	271	318	322	313	407	485	432	326	364
13:00	284	295	310	294	351	431	393	307	337
14:00	263	307	327	309	345	396	338	310	326
15:00	346	372	392	362	438	347	360	382	374
16:00	360	370	345	412	380	392	358	373	374
17:00	323	377	377	369	372	344	330	364	356
18:00	277	290	322	271	297	319	300	291	297
19:00	193	219	210	211	268	304	227	220	233
20:00	105	110	140	153	147	182	136	131	139
21:00	70	87	117	109	133	174	115	103	115
22:00	54	49	72	64	88	130	47	65	72
23:00	21	32	21	24	59	74	27	31	37
Total	4342	4784	4962	4799	5416	5596	4991	4861	4984
7-19	3649	4018	4154	4019	4477	4540	4266	4063	4160

7-19	3649	4018	4154	4019	4477	4540	4266	4063	4160
6-22	4173	4616	4780	4630	5168	5292	4802	4673	4780
6-24	4248	4697	4873	4718	5315	5496	4876	4770	4889
0-24	4342	4784	4962	4799	5416	5596	4991	4861	4984



Site Dalhousie Street

**Location** outside St Oswalds Church near Bus Stops

Site No dalhousie\_2
Start Date 5-May-21

**Description** Volume Summary

Direction EB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	197	219	178	199	230	212	195	Ave	Ave
PM Peak	165	161	163	188	195	207	191	2158	2217
0:00	6	4	8	8	9	13	30	7	11
1:00	4	3	2	2	4	3	10	3	4
2:00	4	1	3	1	1	4	8	2	3
3:00	3	3	3	3	6	4	6	4	4
4:00	8	6	4	5	4	2	3	5	5
5:00	23	18	20	17	26	14	8	21	18
6:00	65	77	73	61	59	37	30	67	57
7:00	119	131	122	111	111	96	84	119	111
8:00	197	219	178	199	230	142	157	205	189
9:00	119	145	176	147	177	179	181	153	161
10:00	126	152	157	156	179	212	191	154	168
11:00	135	151	134	149	168	204	195	147	162
12:00	120	161	124	150	195	207	191	150	164
13:00	127	135	148	130	159	200	186	140	155
14:00	130	148	163	142	158	155	155	148	150
15:00	138	156	163	158	191	146	151	161	158
16:00	165	135	150	188	165	183	155	161	163
17:00	115	132	142	158	137	136	124	137	135
18:00	110	135	129	107	114	146	135	119	125
19:00	92	120	89	107	94	142	112	100	108
20:00	49	52	56	61	71	80	49	58	60
21:00	28	39	53	53	74	80	56	49	55
22:00	33	22	33	37	39	59	25	33	35
23:00	11	14	14	9	31	26	13	16	17
Total	1927	2159	2144	2159	2402	2470	2255	2158	2217
7-19	1601	1800	1786	1795	1984	2006	1905	1793	1840

7-19	1601	1800	1786	1795	1984	2006	1905	1793	1840
6-22	1835	2088	2057	2077	2282	2345	2152	2068	2119
6-24	1879	2124	2104	2123	2352	2430	2190	2116	2172
0-24	1927	2159	2144	2159	2402	2470	2255	2158	2217



Site Dalhousie Street

**Location** outside St Oswalds Church near Bus Stops

Site No dalhousie\_2
Start Date 5-May-21

**Description** Volume Summary

Direction WB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	202	218	243	229	224	251	258	Ave	Ave
PM Peak	208	245	235	224	247	278	241	2702	2768
0:00	2	7	9	5	6	18	16	6	9
1:00	3	2	1	4	4	10	10	3	5
2:00	3	2	3	1	2	6	6	2	3
3:00	3	3	4	1	1	5	6	2	3
4:00	12	9	6	9	7	6	3	9	7
5:00	23	29	26	25	31	15	9	27	23
6:00	91	105	86	77	84	55	28	89	75
7:00	202	199	213	211	180	102	71	201	168
8:00	195	218	243	229	222	177	143	221	204
9:00	149	175	206	191	224	213	238	189	199
10:00	134	158	169	148	192	251	258	160	187
11:00	149	141	161	148	204	250	237	161	184
12:00	151	157	198	163	212	278	241	176	200
13:00	157	160	162	164	192	231	207	167	182
14:00	133	159	164	167	187	241	183	162	176
15:00	208	216	229	204	247	201	209	221	216
16:00	195	235	195	224	215	209	203	213	211
17:00	208	245	235	211	235	208	206	227	221
18:00	167	155	193	164	183	173	165	172	171
19:00	101	99	121	104	174	162	115	120	125
20:00	56	58	84	92	76	102	87	73	79
21:00	42	48	64	56	59	94	59	54	60
22:00	21	27	39	27	49	71	22	33	37
23:00	10	18	7	15	28	48	14	16	20
Total	2415	2625	2818	2640	3014	3126	2736	2702	2768
7-19	2048	2218	2368	2224	2493	2534	2361	2270	2321

7-19	2048	2218	2368	2224	2493	2534	2361	2270	2321
6-22	2338	2528	2723	2553	2886	2947	2650	2606	2661
6-24	2369	2573	2769	2595	2963	3066	2686	2654	2717
0-24	2415	2625	2818	2640	3014	3126	2736	2702	2768



Site Dalhousie Street

**Location** outside 69-71 Dalhousie Street

Site No dalhousie\_1
Start Date 5-May-21
Description Volume Summary

**Direction** Combined



Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	644	581	495	539	553	638	592	Ave	Ave
PM Peak	552	577	565	587	576	613	559	6644	6616
0:00	10	12	15	15	20	42	67	14	26
1:00	13	9	7	10	16	27	41	11	18
2:00	27	17	27	15	14	15	20	20	19
3:00	14	12	13	10	7	17	18	11	13
4:00	21	18	17	18	25	16	13	20	18
5:00	68	66	74	66	76	48	28	70	61
6:00	225	235	235	213	261	123	84	234	197
7:00	457	465	477	499	444	251	200	468	399
8:00	644	581	495	539	553	353	288	562	493
9:00	405	447	340	442	435	505	466	414	434
10:00	292	364	375	361	324	615	573	343	415
11:00	383	393	376	401	518	638	592	414	472
12:00	386	435	459	410	442	613	559	426	472
13:00	314	327	339	337	437	567	506	351	404
14:00	387	427	442	437	486	529	420	436	447
15:00	513	535	518	538	576	500	430	536	516
16:00	552	577	526	587	540	437	383	556	515
17:00	486	542	565	553	483	447	407	526	498
18:00	464	516	505	451	459	370	302	479	438
19:00	263	261	265	267	321	272	229	275	268
20:00	150	168	166	187	197	206	176	174	179
21:00	119	147	169	166	158	170	145	152	153
22:00	80	88	105	100	132	167	72	101	106
23:00	30	41	38	40	99	114	35	50	57
Total	6303	6683	6548	6662	7023	7042	6054	6644	6616
7-19 6-22	5283	5609	5417 6252	5555 6388	5697 6634	5825 6596	5126 5760	5512 6347	5502 6299

7-19	5283	5609	5417	5555	5697	5825	5126	5512	5502
6-22	6040	6420	6252	6388	6634	6596	5760	6347	6299
6-24	6150	6549	6395	6528	6865	6877	5867	6497	6462
0-24	6303	6683	6548	6662	7023	7042	6054	6644	6616



Site Dalhousie Street

**Location** outside 69-71 Dalhousie Street

Site No dalhousie\_1
Start Date 5-May-21
Description Volume Summary

Diverties FD

Direction EB



Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	359	359	318	321	307	344	324	Ave	Ave
PM Peak	244	278	260	265	277	325	299	3456	3444
0:00	5	3	5	6	11	24	45	6	14
1:00	9	7	5	7	8	17	28	7	12
2:00	20	7	16	10	8	10	13	12	12
3:00	5	4	4	5	3	7	9	4	5
4:00	15	11	11	12	19	10	9	14	12
5:00	42	39	48	38	36	27	11	41	34
6:00	149	156	159	145	168	65	50	155	127
7:00	251	268	271	285	244	153	124	264	228
8:00	359	359	318	321	307	191	166	333	289
9:00	259	285	224	249	232	275	251	250	254
10:00	169	208	214	206	185	333	291	196	229
11:00	208	223	203	223	282	344	324	228	258
12:00	197	230	223	221	241	325	299	222	248
13:00	171	182	187	182	215	285	240	187	209
14:00	199	212	227	214	219	265	216	214	222
15:00	222	232	230	238	277	242	199	240	234
16:00	234	239	232	246	239	213	188	238	227
17:00	224	260	260	265	215	220	190	245	233
18:00	244	278	238	222	206	192	158	238	220
19:00	124	117	111	122	140	147	127	123	127
20:00	78	82	80	95	99	112	98	87	92
21:00	52	68	80	80	77	86	65	71	73
22:00	45	45	51	53	64	74	34	52	52
23:00	22	26	27	26	47	55	18	30	32
Total	3303	3541	3424	3471	3542	3672	3153	3456	3444
7-19	2737	2976	2827	2872	2862	3038	2646	2855	2851

7-19	2737	2976	2827	2872	2862	3038	2646	2855	2851
6-22	3140	3399	3257	3314	3346	3448	2986	3291	3270
6-24	3207	3470	3335	3393	3457	3577	3038	3372	3354
0-24	3303	3541	3424	3471	3542	3672	3153	3456	3444



Site Dalhousie Street

**Location** outside 69-71 Dalhousie Street

Site No dalhousie\_1
Start Date 5-May-21
Description Volume Sumr

**Description** Volume Summary

Direction WB



			D	ay of Wee	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	285	222	206	218	246	294	282	Ave	Ave
PM Peak	318	338	305	341	301	288	266	3188	3173
0:00	5	9	10	9	9	18	22	8	12
1:00	4	2	2	3	8	10	13	4	6
2:00	7	10	11	5	6	5	7	8	7
3:00	9	8	9	5	4	10	9	7	8
4:00	6	7	6	6	6	6	4	6	6
5:00	26	27	26	28	40	21	17	29	26
6:00	76	79	76	68	93	58	34	78	69
7:00	206	197	206	214	200	98	76	205	171
8:00	285	222	177	218	246	162	122	230	205
9:00	146	162	116	193	203	230	215	164	181
10:00	123	156	161	155	139	282	282	147	185
11:00	175	170	173	178	236	294	268	186	213
12:00	189	205	236	189	201	288	260	204	224
13:00	143	145	152	155	222	282	266	163	195
14:00	188	215	215	223	267	264	204	222	225
15:00	291	303	288	300	299	258	231	296	281
16:00	318	338	294	341	301	224	195	318	287
17:00	262	282	305	288	268	227	217	281	264
18:00	220	238	267	229	253	178	144	241	218
19:00	139	144	154	145	181	125	102	153	141
20:00	72	86	86	92	98	94	78	87	87
21:00	67	79	89	86	81	84	80	80	81
22:00	35	43	54	47	68	93	38	49	54
23:00	8	15	11	14	52	59	17	20	25
Total	3000	3142	3124	3191	3481	3370	2901	3188	3173
7-19	2546	2622	2500	2002	2025	2707	2400	2057	2054
7-19 6-22	2546 2900	2633 3021	2590 2995	2683 3074	2835 3288	2787 3148	2480 2774	2657 3056	2651 3029
0 22	2500	3021	2333	3074	3200	3170	2//7	3030	3023

7-19	2546	2633	2590	2683	2835	2787	2480	2657	2651
6-22	2900	3021	2995	3074	3288	3148	2774	3056	3029
6-24	2943	3079	3060	3135	3408	3300	2829	3125	3108
0-24	3000	3142	3124	3191	3481	3370	2901	3188	3173



Site Ramsay Street

**Location** outside 167 Ramsay Street

Site No ramsay\_2
Start Date 5-May-21
Description Volume Summary

**Direction** Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	751	721	693	776	807	828	795	Ave	Ave
PM Peak	912	932	950	954	971	896	819	10882	10690
0:00	30	25	28	40	39	65	105	32	47
1:00	20	13	12	17	27	47	51	18	27
2:00	6	8	10	8	17	28	32	10	16
3:00	26	19	19	25	18	29	23	21	23
4:00	46	47	59	48	48	43	26	50	45
5:00	148	137	163	158	142	64	44	150	122
6:00	457	461	491	448	412	198	115	454	369
7:00	705	671	664	776	737	418	344	711	616
8:00	751	586	460	536	807	655	502	628	614
9:00	663	721	367	700	672	752	603	625	640
10:00	636	657	657	670	744	799	703	673	695
11:00	653	666	693	668	799	828	795	696	729
12:00	655	683	749	644	738	896	819	694	741
13:00	622	659	707	698	728	865	719	683	714
14:00	663	699	717	731	743	832	654	711	720
15:00	818	820	773	875	855	858	667	828	809
16:00	912	909	852	878	877	788	682	886	843
17:00	906	932	950	954	971	814	693	943	889
18:00	745	858	744	695	755	602	450	759	693
19:00	514	448	448	480	531	524	391	484	477
20:00	291	320	273	334	336	313	303	311	310
21:00	209	253	277	277	301	319	281	263	274
22:00	135	155	165	167	230	292	130	170	182
23:00	50	76	70	86	136	203	56	84	97
Total	10661	10823	10348	10913	11663	11232	9188	10882	10690

7-19	8729	8861	8333	8825	9426	9107	7631	8835	8702
6-22	10200	10343	9822	10364	11006	10461	8721	10347	10131
6-24	10385	10574	10057	10617	11372	10956	8907	10601	10410
0-24	10661	10823	10348	10913	11663	11232	9188	10882	10690



Site **Ramsay Street** 

Location outside 167 Ramsay Street

Site No ramsay\_2 Start Date 5-May-21

**Description** Volume Summary

Direction NB



Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	354	366	384	360	470	482	477	Ave	Ave
PM Peak	629	640	613	624	653	519	459	6185	6057
0:00	21	14	16	24	25	40	66	20	29
1:00	12	10	8	12	18	33	27	12	17
2:00	5	4	5	6	12	19	18	6	10
3:00	15	10	12	15	6	16	14	12	13
4:00	21	16	23	19	20	22	13	20	19
5:00	54	56	74	58	43	36	15	57	48
6:00	150	142	167	158	144	71	46	152	125
7:00	256	265	254	310	292	202	162	275	249
8:00	312	318	278	274	396	341	271	316	313
9:00	324	365	207	272	344	398	321	302	319
10:00	339	332	345	343	421	440	361	356	369
11:00	354	366	384	360	470	482	477	387	413
12:00	379	387	423	392	451	517	459	406	430
13:00	365	401	415	414	413	518	391	402	417
14:00	416	417	445	437	474	519	388	438	442
15:00	530	526	495	557	536	503	373	529	503
16:00	589	602	591	561	591	434	403	587	539
17:00	629	640	613	624	653	475	380	632	573
18:00	491	552	436	435	491	325	246	481	425
19:00	328	251	271	287	283	279	205	284	272
20:00	182	181	159	208	208	176	184	188	185
21:00	124	152	174	174	195	222	171	164	173
22:00	82	97	104	98	147	181	79	106	113
23:00	35	44	42	54	96	127	33	54	62
Total	6013	6148	5941	6092	6729	6376	5103	6185	6057
7-19 6-22	4984 5768	5171 5897	4886 5657	4979 5806	5532 6362	5154 5902	4232 4838	5110 5898	4991 5747
6-24	5768	6038	5803	5958	6605	6210	4838	6058	5921
0 27	3003	0030	3003	3330	0003	0210	7550	0030	3321

7-19	4984	5171	4886	4979	5532	5154	4232	5110	4991
6-22	5768	5897	5657	5806	6362	5902	4838	5898	5747
6-24	5885	6038	5803	5958	6605	6210	4950	6058	5921
0-24	6013	6148	5941	6092	6729	6376	5103	6185	6057



Site Ramsay Street

**Location** outside 167 Ramsay Street

Site No ramsay\_2
Start Date 5-May-21

**Description** Volume Summary

Direction SB



			D	ay of Wee	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	449	406	410	466	445	359	342	Ave	Ave
PM Peak	323	307	337	330	319	379	360	4697	4632
0:00	9	11	12	16	14	25	39	12	18
1:00	8	3	4	5	9	14	24	6	10
2:00	1	4	5	2	5	9	14	3	6
3:00	11	9	7	10	12	13	9	10	10
4:00	25	31	36	29	28	21	13	30	26
5:00	94	81	89	100	99	28	29	93	74
6:00	307	319	324	290	268	127	69	302	243
7:00	449	406	410	466	445	216	182	435	368
8:00	439	268	182	262	411	314	231	312	301
9:00	339	356	160	428	328	354	282	322	321
10:00	297	325	312	327	323	359	342	317	326
11:00	299	300	309	308	329	346	318	309	316
12:00	276	296	326	252	287	379	360	287	311
13:00	257	258	292	284	315	347	328	281	297
14:00	247	282	272	294	269	313	266	273	278
15:00	288	294	278	318	319	355	294	299	307
16:00	323	307	261	317	286	354	279	299	304
17:00	277	292	337	330	318	339	313	311	315
18:00	254	306	308	260	264	277	204	278	268
19:00	186	197	177	193	248	245	186	200	205
20:00	109	139	114	126	128	137	119	123	125
21:00	85	101	103	103	106	97	110	100	101
22:00	53	58	61	69	83	111	51	65	69
23:00	15	32	28	32	40	76	23	29	35
Total	4648	4675	4407	4821	4934	4856	4085	4697	4632
7.10	2745	2600	2447	2046	2004	2052	2200	2724	2744
7-19	3745	3690	3447	3846	3894	3953	3399	3724	3711

7-19	3745	3690	3447	3846	3894	3953	3399	3724	3711
6-22	4432	4446	4165	4558	4644	4559	3883	4449	4384
6-24	4500	4536	4254	4659	4767	4746	3957	4543	4488
0-24	4648	4675	4407	4821	4934	4856	4085	4697	4632



Site Ramsay Street

**Location** outside 86-88 Ramsay Street

Site No ramsay\_1
Start Date 5-May-21
Description Volume Summary

**Direction** Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	901	855	936	938	871	841	787	Ave	Ave
PM Peak	904	929	961	905	898	899	804	11369	11048
0:00	33	30	28	37	33	70	106	32	48
1:00	16	10	8	13	33	47	47	16	25
2:00	7	7	7	7	11	23	33	8	14
3:00	23	17	16	22	17	26	28	19	21
4:00	45	41	45	43	49	38	27	45	41
5:00	148	142	154	150	139	61	34	147	118
6:00	535	532	547	490	467	190	136	514	414
7:00	856	855	936	938	749	434	331	867	728
8:00	901	749	596	665	871	732	521	756	719
9:00	722	767	432	854	804	783	711	716	725
10:00	449	738	766	712	768	809	787	687	718
11:00	677	684	579	725	775	841	725	688	715
12:00	607	708	749	650	774	876	804	698	738
13:00	661	679	681	719	754	751	686	699	704
14:00	689	737	755	753	721	899	639	731	742
15:00	788	826	767	795	854	815	605	806	779
16:00	871	914	812	874	898	781	670	874	831
17:00	904	929	961	905	891	775	691	918	865
18:00	777	839	816	748	736	678	512	783	729
19:00	516	468	519	503	608	420	428	523	495
20:00	284	336	315	353	313	345	297	320	320
21:00	204	258	287	286	307	326	288	268	279
22:00	125	159	174	169	223	271	135	170	179
23:00	57	66	75	91	136	210	49	85	98
Total	10895	11491	11025	11502	11931	11201	9290	11369	11048

7-19	8902	9425	8850	9338	9595	9174	7682	9222	8995
6-22	10441	11019	10518	10970	11290	10455	8831	10848	10503
6-24	10623	11244	10767	11230	11649	10936	9015	11103	10781
0-24	10895	11491	11025	11502	11931	11201	9290	11369	11048



Site Ramsay Street

**Location** outside 86-88 Ramsay Street

Site No ramsay\_1
Start Date 5-May-21

**Description** Volume Summary

Direction NB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	358	357	365	372	423	457	391	Ave	Ave
PM Peak	583	611	597	563	585	501	427	5993	5831
0:00	22	17	17	24	21	38	65	20	29
1:00	9	6	6	9	22	31	25	10	15
2:00	5	2	3	4	7	15	18	4	8
3:00	12	9	9	12	7	12	17	10	11
4:00	21	11	15	19	20	21	12	17	17
5:00	51	51	64	49	44	35	13	52	44
6:00	155	157	147	145	153	74	61	151	127
7:00	279	284	331	347	268	209	159	302	268
8:00	358	326	316	286	392	360	257	336	328
9:00	330	325	224	283	340	391	358	300	322
10:00	219	354	365	324	393	409	372	331	348
11:00	337	357	285	372	423	457	391	355	375
12:00	326	388	395	363	424	457	427	379	397
13:00	376	394	379	400	403	424	360	390	391
14:00	409	435	449	443	450	501	355	437	435
15:00	470	492	479	482	495	447	305	484	453
16:00	559	586	511	535	572	430	369	553	509
17:00	583	611	597	563	585	423	365	588	532
18:00	499	526	452	433	470	343	268	476	427
19:00	318	260	293	299	299	215	230	294	273
20:00	165	184	175	211	181	172	169	183	180
21:00	120	157	175	174	191	220	168	163	172
22:00	81	99	100	103	136	160	83	104	109
23:00	38	35	45	58	91	130	29	53	61
Total	5742	6066	5832	5938	6387	5974	4876	5993	5831
7-19	4745	5078	4783	4831	5215	4851	3986	4930	4784

7-19	4745	5078	4783	4831	5215	4851	3986	4930	4784
6-22	5503	5836	5573	5660	6039	5532	4614	5722	5537
6-24	5622	5970	5718	5821	6266	5822	4726	5879	5706
0-24	5742	6066	5832	5938	6387	5974	4876	5993	5831



Site Ramsay Street

Location outside 86-88 Ramsay Street

Site No ramsay\_1 Start Date 5-May-21

**Description** Volume Summary

Direction SB



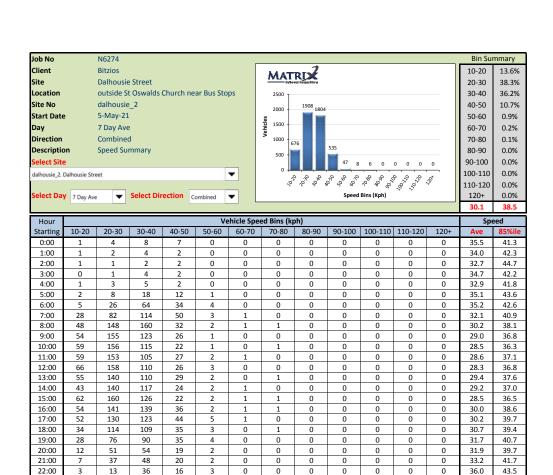
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	10-May	11-May	5-May	6-May	7-May	8-May	9-May	W'Day	7 Day
AM Peak	577	571	605	591	481	400	415	Ave	Ave
PM Peak	321	334	364	342	359	419	377	5376	5217
0:00	11	13	11	13	12	32	41	12	19
1:00	7	4	2	4	11	16	22	6	9
2:00	2	5	4	3	4	8	15	4	6
3:00	11	8	7	10	10	14	11	9	10
4:00	24	30	30	24	29	17	15	27	24
5:00	97	91	90	101	95	26	21	95	74
6:00	380	375	400	345	314	116	75	363	286
7:00	577	571	605	591	481	225	172	565	460
8:00	543	423	280	379	479	372	264	421	391
9:00	392	442	208	571	464	392	353	415	403
10:00	230	384	401	388	375	400	415	356	370
11:00	340	327	294	353	352	384	334	333	341
12:00	281	320	354	287	350	419	377	318	341
13:00	285	285	302	319	351	327	326	308	314
14:00	280	302	306	310	271	398	284	294	307
15:00	318	334	288	313	359	368	300	322	326
16:00	312	328	301	339	326	351	301	321	323
17:00	321	318	364	342	306	352	326	330	333
18:00	278	313	364	315	266	335	244	307	302
19:00	198	208	226	204	309	205	198	229	221
20:00	119	152	140	142	132	173	128	137	141
21:00	84	101	112	112	116	106	120	105	107
22:00	44	60	74	66	87	111	52	66	71
23:00	19	31	30	33	45	80	20	32	37
Total	5153	5425	5193	5564	5544	5227	4414	5376	5217
		10.17	1067	4505	1222	1000	2525	1000	1011
7-19 6-22	4157 4938	4347 5183	4067 4945	4507 5310	4380 5251	4323 4923	3696 4217	4292 5125	4211 4967
6-24	5001	5274	5049	5409	5383	5114	4217	5223	5074

7-19	4157	4347	4067	4507	4380	4323	3696	4292	4211
6-22	4938	5183	4945	5310	5251	4923	4217	5125	4967
6-24	5001	5274	5049	5409	5383	5114	4289	5223	5074
0-24	5153	5425	5193	5564	5544	5227	4414	5376	5217

43.9

38.5

36.5



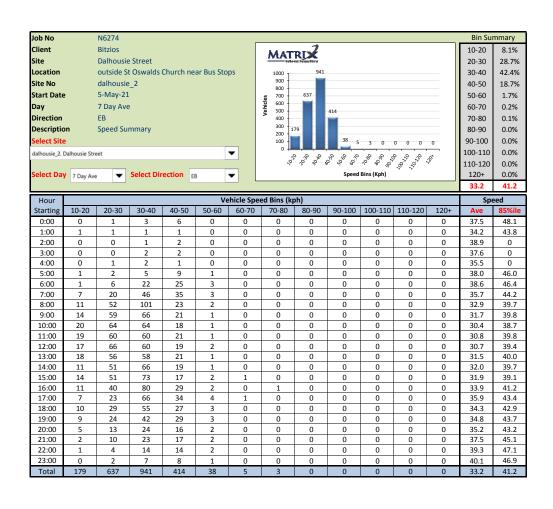
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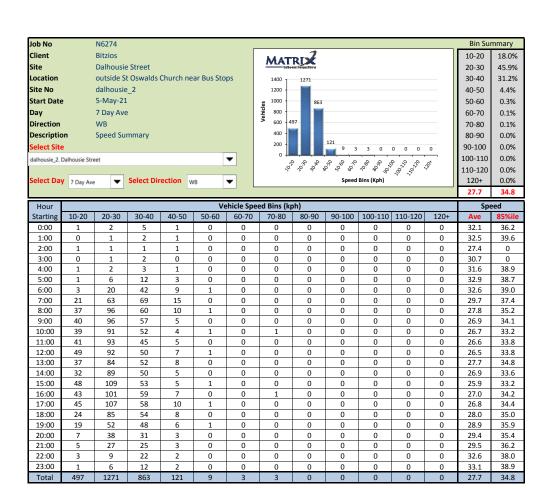
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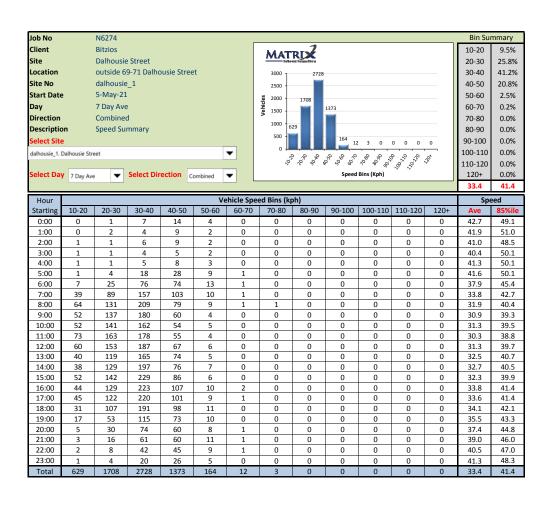
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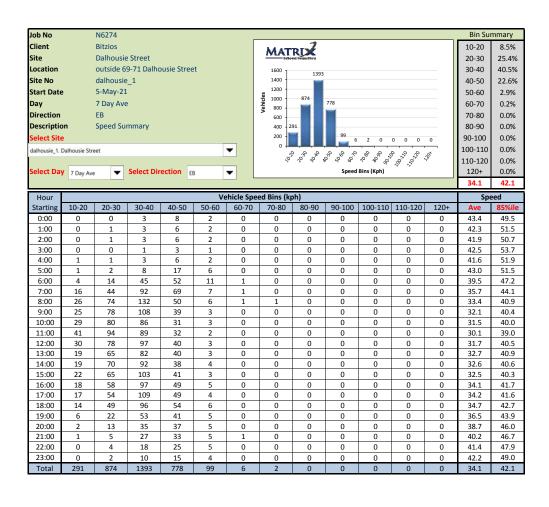
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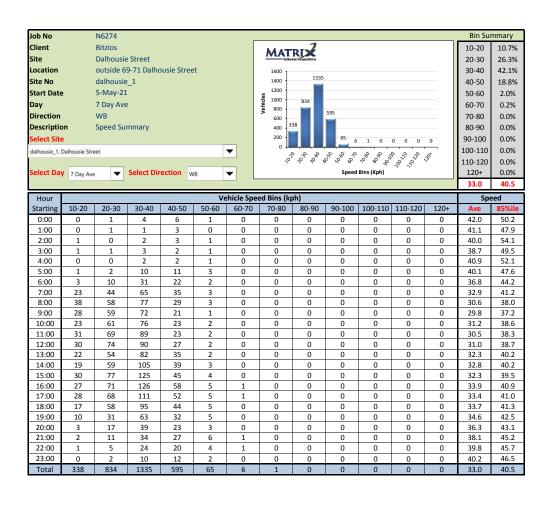




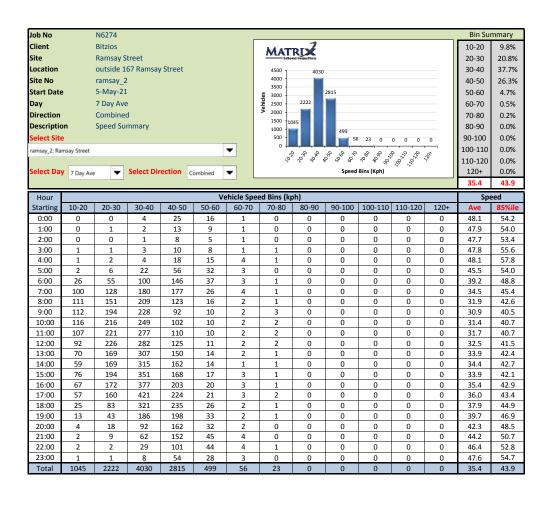


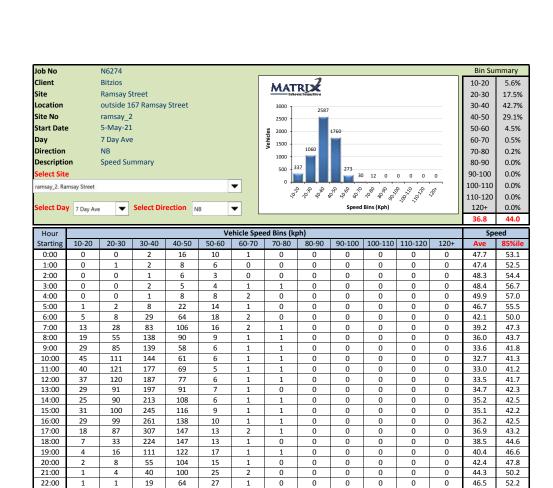












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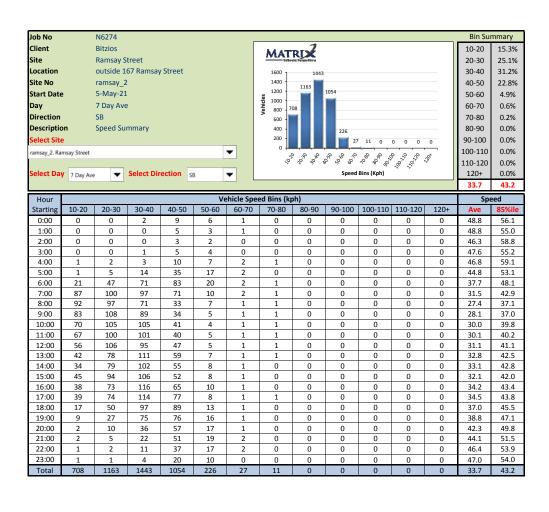
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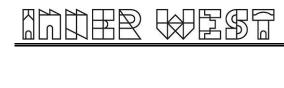
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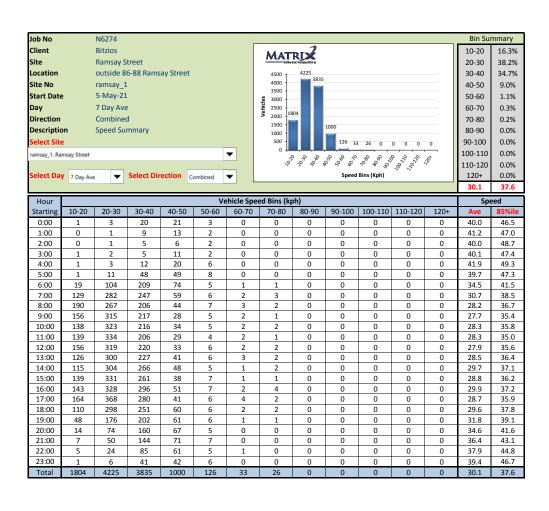
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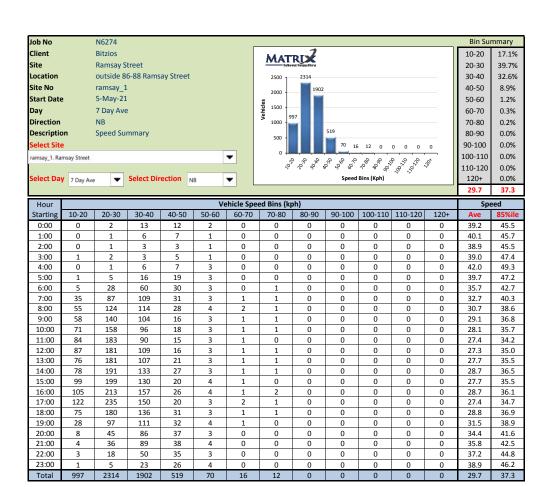
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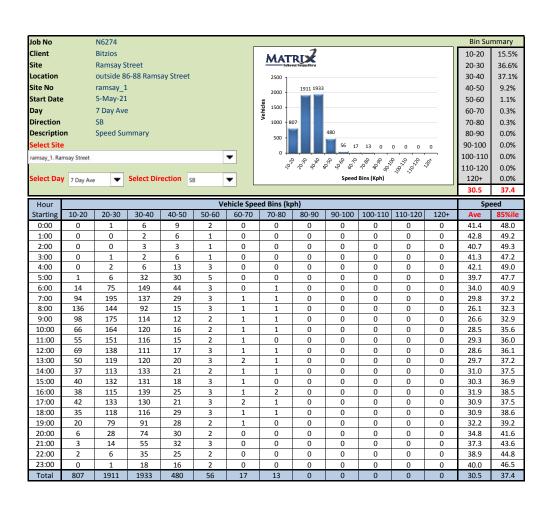


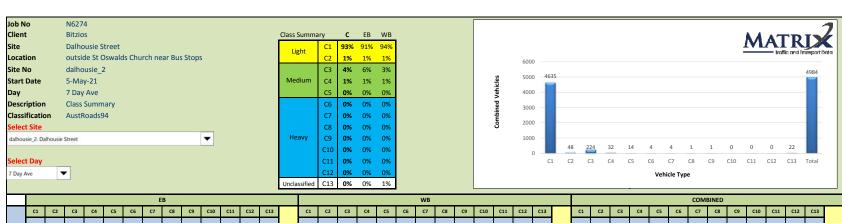








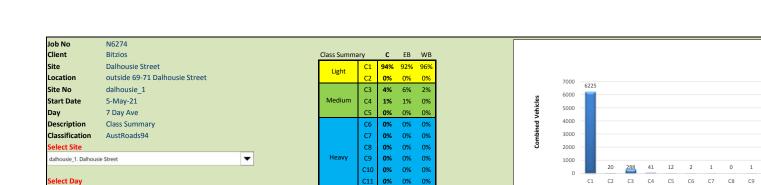




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Hour Starting	Short	Short Towing	2 axle Truck or bus	3 Axle Truck or Bus	4 or 5 Axle Truck	3 axle Articulated	4 Axle Articulated	5 Axle Articulated	6 Axle Articulated	B Double	Double Road Train	Triple Road Train	Unclassifiable	Total	Short	Short Towing	2 axle Truck or bus	3.Axle Truck or Bus	4 or 5 Axle Truck	3 axle Articulated	4 Axle Articulated	5 Axle Articulated	6 Axle Articulated	B Double	Double Road Train	Triple Road Train	Unclassifiable	Total	Short	Short Towing	2 axle Truck or bus	3 Axle Truck or Bus	4 or 5 Axle Truck	3 axle Articulated	4 Axle Articulated	5 Axle Articulated	6 Axle Articulated	B Double	Double Road Train	Triple Road Train	Unclassifiable	Total
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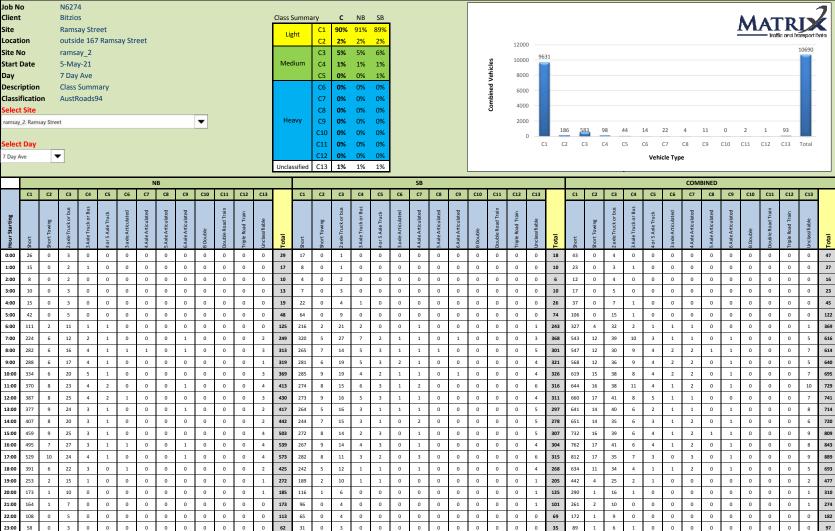
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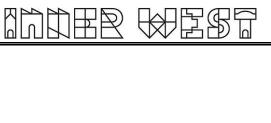
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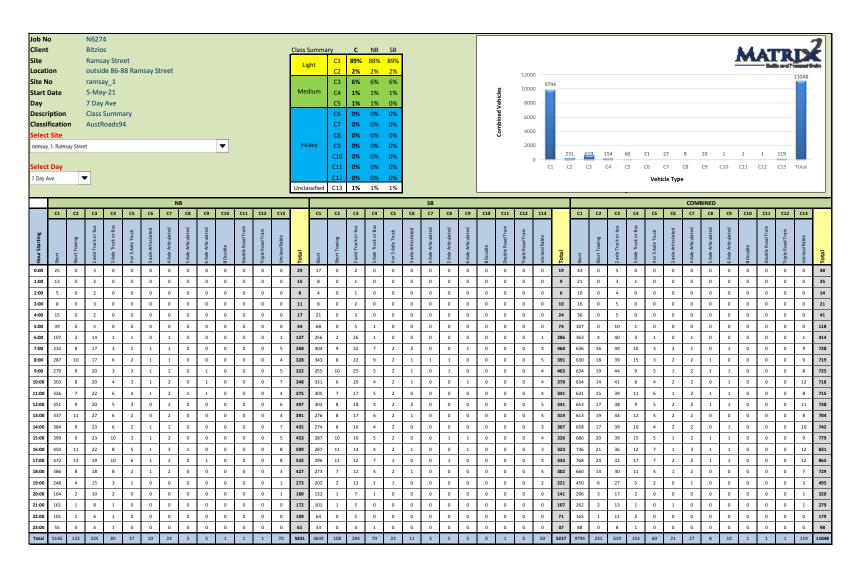
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Hour Starting	Short	Short Towing	2 axle Truck or bus	3 Axle Truck or Bus	4 or 5 Axle Truck	3 axle Articulated	4 Axle Articulated	5 Axle Articulated	6 Axle Articulated	B Double	Double Road Train	Triple Road Train	Unclassifiable	Total	Short	Short Towing	2 axle Truck or bus	3 Axle Truck or Bus	4 or 5 Axle Truck	3 axle Articulated	4 Axle Articulated	5 Axle Articulated	6 Axle Articulated	B Double	Double Road Train	Triple Road Train	Unclassifiable	Total	Short	Short Towing	2 axle Truck or bus	3 Axle Truck or Bus	4 or 5 Axle Truck	3 axle Articulated	4 Axle Articulated	5 Axle Articulated	6 Axle Articulated	B Double	Double Road Train	Triple Road Train	Unclassifiable	Total
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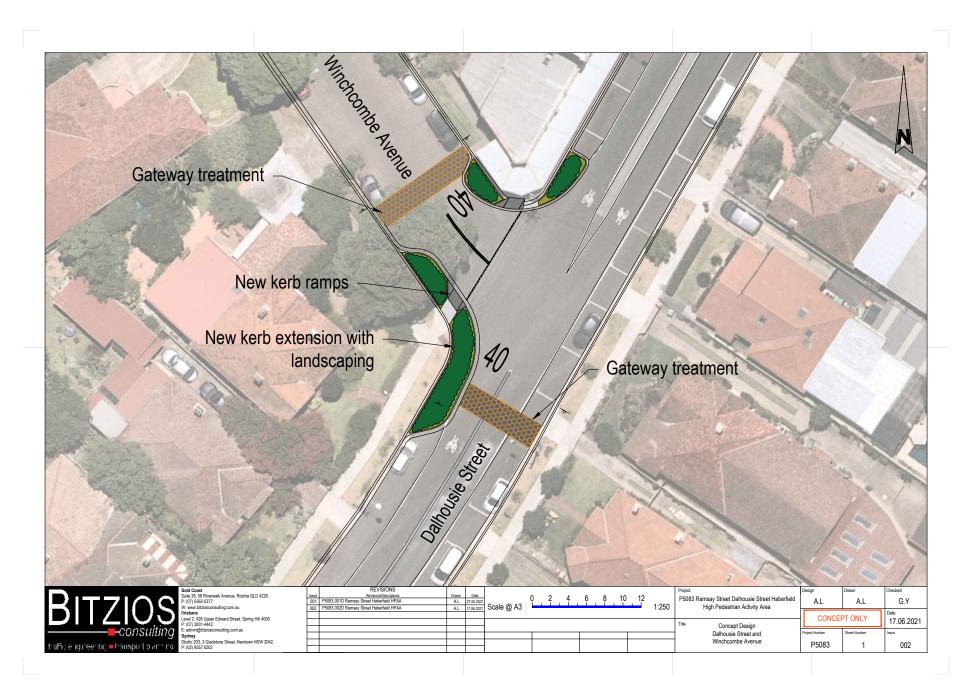




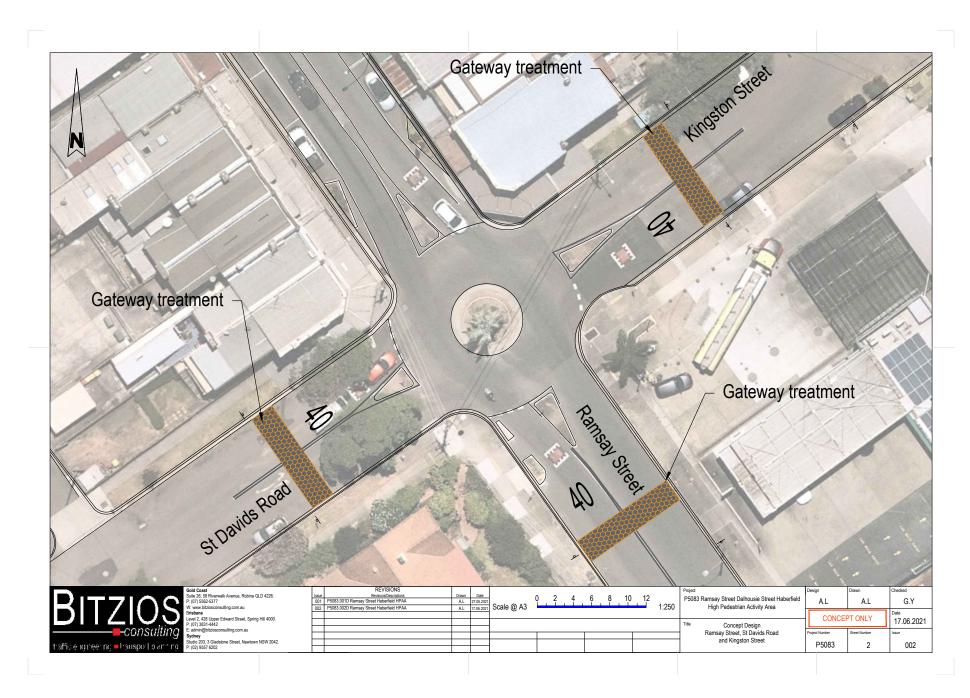


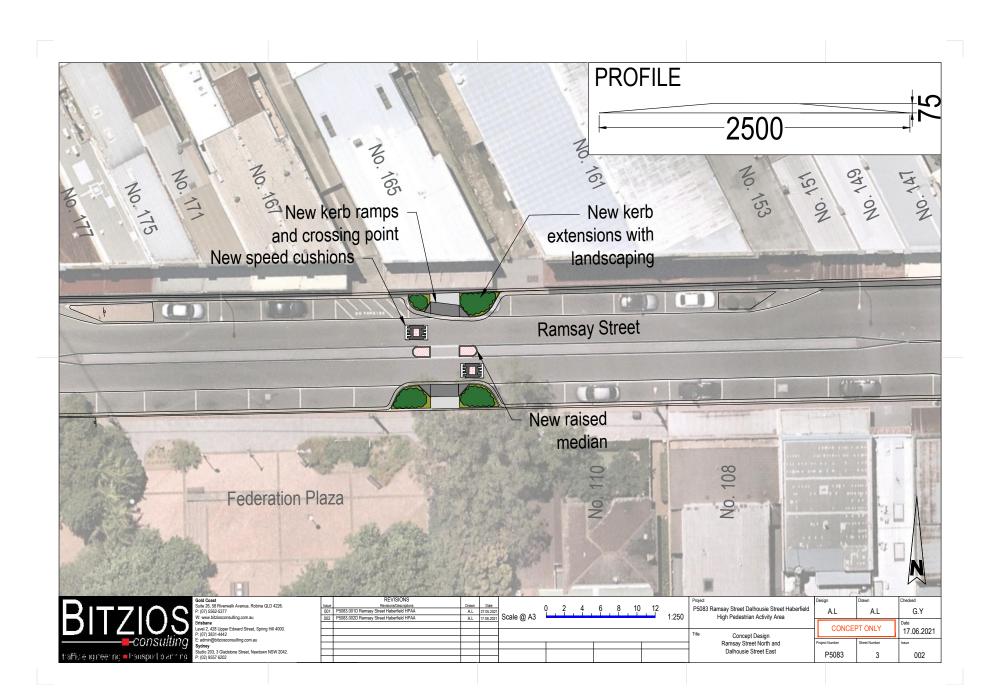
**Appendix B: Concept Designs** 



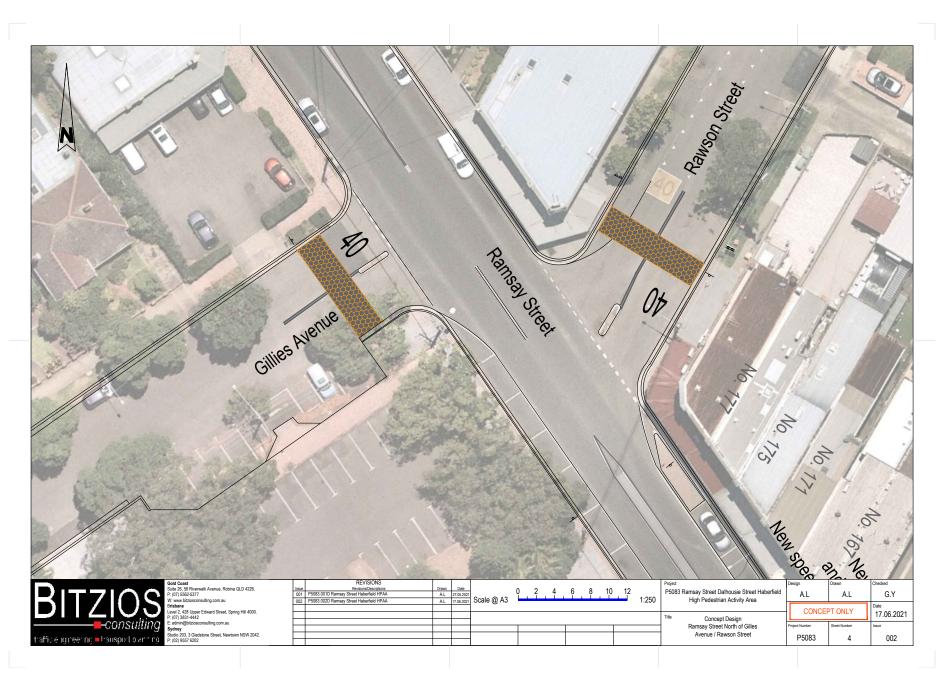


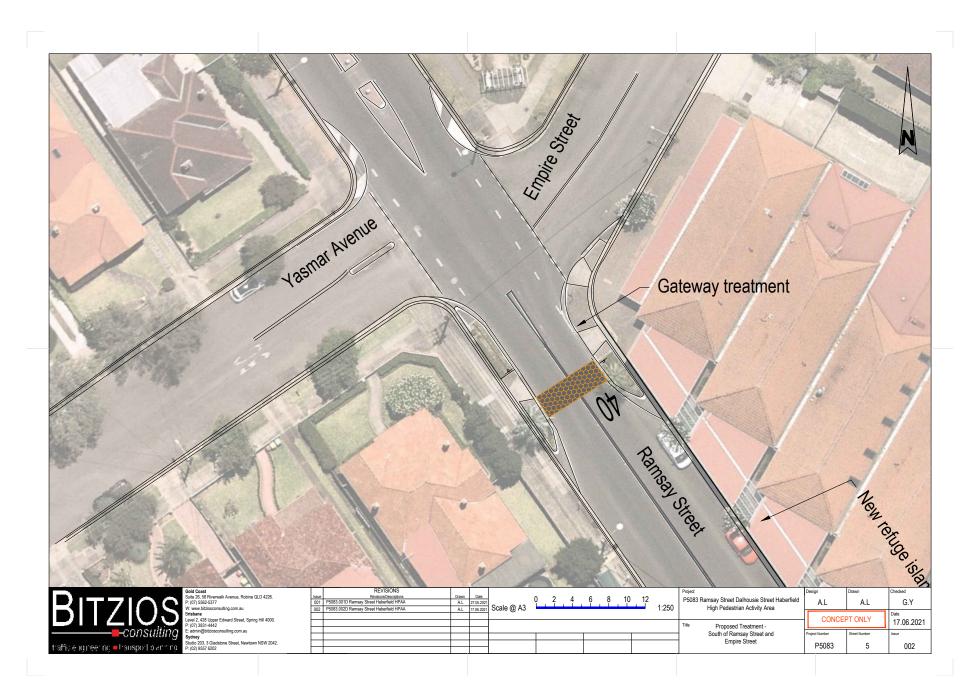




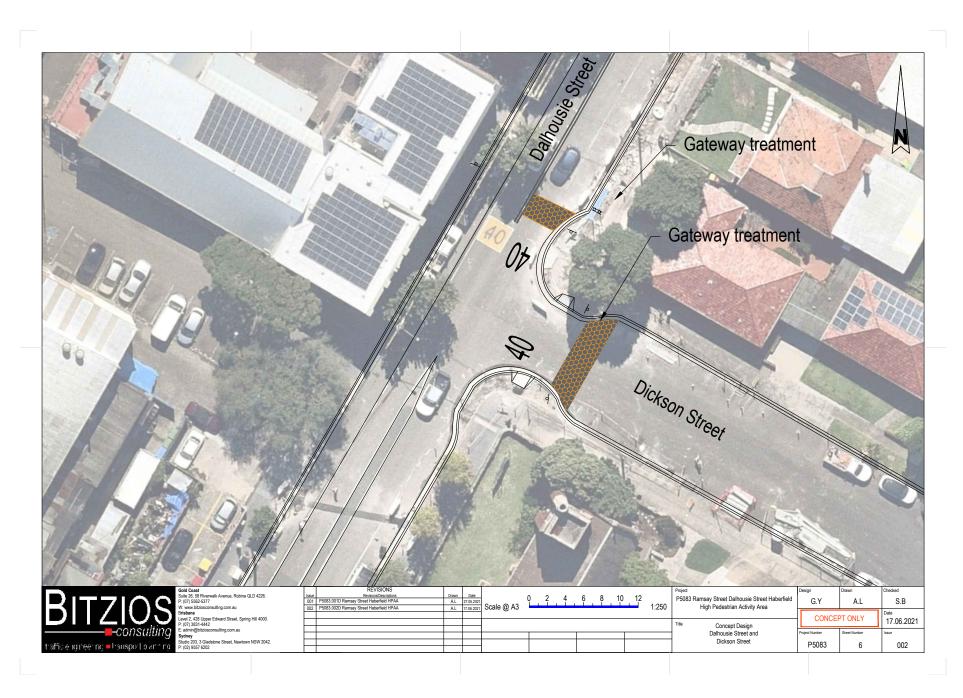














Item No: LTC1024(1) Item 9

Subject: CLISSOLD STREET, BETWEEN QUEEN STREET AND VICTORIA

STREET, ASHFIELD-PROPOSED REMOVAL OF EXISTING AT-GRADE CROSSING AND PROVIDE A NEW RAISED PEDESTRIAN(ZEBRA) CROSSING- DEFFERED ITEM FOR ADDITIONAL INFORMATION

(DJARRAWUNANG-ASHFIELD WARD/SUMMER HILL

**ELECTORATE/BURWOOD PAC)** 

Prepared By: Boris Muha - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

### **RECOMMENDATION**

That the detailed design plan (10296) for the proposed new raised pedestrian (zebra) crossing in Clissold Street, just east of gate No.11 to the Cardinal Freeman Village (near William Street), and the removal of the at-grade pedestrian crossing further east in Clissold Street, between Queen Street and Victoria Road, Ashfield, as shown in *Attachment 1* be approved.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

### **EXECUTIVE SUMMARY**

The detailed design plan for this proposed treatment was raised at the Local Traffic Committee (LTC) on the 16 September 2024 and deferred to provide additional information on the concerns raised by the representatives from Transit Systems Australia (TSA) and TFNSW on the existing Bus Stops and reduced 'No Stopping' length on approach to the new crossing. This additional information is provided below under *Discussion-Additional information in deferral of the item.* It should be noted that the remainder of the report is that which was presented at the September 2024 LTC meeting and is presented for information and context with regards to the recommendation.

Council at its meetings on the 18 March 2024 (through its Traffic Committee 11 December 2023) approved in principle, subject to detailed design, a series of proposed pedestrian (zebra) crossings and kerb extension treatments (under concept) for improved pedestrian and road safety around and near to the Cardinal Freeman (Retirement) Village, Ashfield.

This report describes and shows the detailed design plan of one of the proposed treatments, i.e. install a proposed new raised pedestrian (zebra) crossing in Clissold Street, just east of gate No.11 to the Cardinal Freeman Village (near William Street), and the removal of the existing at-grade pedestrian crossing further east in Clissold Street, between Queen Street and Victoria Road. This work is programmed and envisaged to be constructed in the 2024/2025 financial year, subject to funding.



### **BACKGROUND**

The Cardinal Freeman Village (currently known as Levande Cardinal Freeman) is bounded by Clissold Street to the north, Victoria Street to the east, Seaview Street to the south and Queen Street to the west.

The village caters to an independent living lifestyle however as the average age is over 82 years there are a significant number of residents with mobility issues that hinder their ability to move around freely.

Many of the elderly residents are capable, and desire to walk to and from various destinations outside of the village, and/or take other forms of public transportation (e.g., bus and train) to travel to other parts of Sydney.

This has prompted a general request from the elderly residents to improve pedestrian safety around the village to enable them to walk to various desired destinations and take public transport within the area.

Other Aged care facilities such as the Ashfield Baptist Homes, Bethel Nursing Homes, Ashfield Terrace Care Community, and other community facilities are also located adjacent or near to the Cardinal Freeman Village.

The proposed treatment in this report received a major (80% rate) support under a general community engagement consultation conducted through Council's 'Have Your Say' back in October 2023. The facility is viewed in benefit and supported by the community at large, and not only for the elderly of the Cardinal Freeman Village.

### DISCUSSION

The following information is provided in discussion.



Figure 1. Locality Plan



Street Name	Clissold Street (Near Victoria Street)
Carriageway width (m) kerb to kerb	Approx. 6.7-7.0m
Carriageway type	Two-way, one travel lane each direction.
Classification	Local
Speed Limit km/h	50
85 <sup>th</sup> percentile speed km/h	47.2
Vehicles per day (vpd)	2109
Last available 5 years	NIL in last 5 years in Clissold Street
of TfNSW recorded	(Queen Street to Victoria Street)
crash history	1 prior recorded accident in 2015
	resulted in pedestrian on
	carriageway being hit by vehicle in
	area of existing crossing (RUM 3) -
Darking arrangements	moderate injury.
Parking arrangements	Parking not permitted on both sides between William Street and Victoria
	Street. Parking permitted on north
	side between William Street and
	Queen Street.
Side street(nearest)	William Street

Table 1. Road Network detail

# The Plan

The following works are proposed and are illustrated on the attached plans:

Clissold Street (between William Street & Victoria Street), Ashfield (Plan No. 10296):

- Construct a new raised concrete pedestrian crossing with "gutter bridge" crossings closer to William Street to replace the existing "at-grade" flat pedestrian crossing approximately 35m to the east. The existing pedestrian crossing to the east and associated kerb ramps will be removed (refer to attached Plan):
- Construct new concrete kerb & gutter on the north side of Clissold Street where shown;
- Construct new concrete footpath in place of the existing damaged concrete footpath on the north side of Clissold Street where shown:
- Remove 1 existing street tree and transplant 1 existing street tree to a new location on the south side of Clissold Street to facilitate the construction of the new raised pedestrian crossing and to provide adequate site distances on the approach side;
- Relocate/adjust existing "No Stopping" & "Bus Zone" signage on the south side of Clissold Street to satisfy sight distance and bus zone length requirements;
- Provide new "edge" line markings either side of the new raised pedestrian crossing to provide guidance for the motorists;
- Install associated signage associated with the works as required and where shown on the Plans:
- Resurface the road pavement with new asphalt. Note: this will be subject to final budget allocations at the time of the project being implemented and may be undertaken at a later or prior date within the Local Roads Capital Program.



### **Parking Changes**

The existing Bus Zone and No Stopping Zones on the south side of Clissold Street will be adjusted slightly to accommodate the new raised pedestrian crossing. However, this will not impact on existing parking arrangements in the street. Please refer to the attached plan.

### Streetlighting

The new raised pedestrian crossing will require new flood lighting to be provided for it to comply with current standards. This will involve the provision of at least 1 floodlight (on a new power pole) or up to 2 floodlights (on 2 new power poles) typical of other locations with pedestrian crossings. At this stage, this design is not complete and will be undertaken by a specialist lighting consultant at a later stage.

### Other Information

The proposed raised pedestrian crossing to the east of gate 11 replaces the removed (at road level) zebra crossing at gate 12. The new raised pedestrian (zebra) crossing will be situated further west away of the conflict area of the Bus Stops and traffic turning in from Victoria Street and coming across Victoria Street from Clissold Street (east).

Access to the Bus stops can be attained via Gate 11 or 12 with the new crossing going in just east of gate 11. The new crossing location can also provide connection to the northern side of Clissold Street to link pedestrian movement towards Queen Street and Victoria Street.

Clissold Street is a Bus Route. The platform height of the crossing is 150mm high to blend in level with the footpath and provide appropriate 'gutter bridge' clearance over the kerb for drainage. The ramps are lengthened to 2.5m in this instance to provide appropriate bus rideability over the crossing.

# Additional information under deferral of the item

Council officers did meet on site with representatives of the TSA to discuss the proposal in removing the existing at-grade crossing and provide a new raised crossing further west in Clissold Street.

Both the Bus Stops in Clissold Street have not been moved. The Bus Zone signs to the bus stop on the southern side of Clissold Street are altered in length to accommodate the current fleet of 12.5m buses over that of the old 11m length buses.

There is 'No Stopping' either way of the bus zones, creating a clear draw in and draw out from the Bus Stops.

The TfNSW representative questioned the proposed 'No Stopping' length in approach to the new crossing from 20 metres down to 18m on the southern side of Clissold Street. The 'No Stopping' is measured to the beginning the Bus Zone which signposts the area of the Bus Stop to the southern side of Clissold Street. It should be noted that the 'flagpole' of the bus stop is not moved and is approx. 19.5 metres away of the crossing. Buses would pull up to the 'flagpole' not the beginning of the Bus Zone. Therefore, the clearance in standing a vehicle (i.e. Buses) away of the crossing is in tolerance of the 20metres. Moving the bus zone and bus stop will mean moving the 'flagpole' stand back into the path of a village gate entrance thereby hindering bus and pedestrian access.

In view of the above, the 18 metres of 'No Stopping' to the beginning of the Bus Zone, in this case, is considered acceptable. Bus stop patronage frequency in the area is low, with buses not pulling up that readily. Parking is not permitted with 'No Stopping' signposted on both sides of Clissold Street in the vicinity of the proposed new crossing.



Both the TSA and TfNSW representatives have in turn raised no objection to the proposal which maintains the bus stops at their current locations, and that 18m of 'No Stopping' zone signposted in approach to the new crossing instead of the standard 20m is considered acceptable in this case.

### **FINANCIAL IMPLICATIONS**

The project is listed in Council's Traffic Facilities Capital Works budget for works to be carried out in 2024/2025, subject to funding. The work is estimated to be around \$90,000.

### **CONSULTATION**

A letter outlining the proposal was mailed out to 8 properties (9 letters) in Clissold Street, Ashfield, between Queen Street and Victoria Street requesting residents' views regarding the proposal. (see also map of consultation area *Figure 2*).

A copy of the letter was also sent directly to the Manager of the Cardinal Freeman Village to distribute amongst its residents inviting them to comment also.

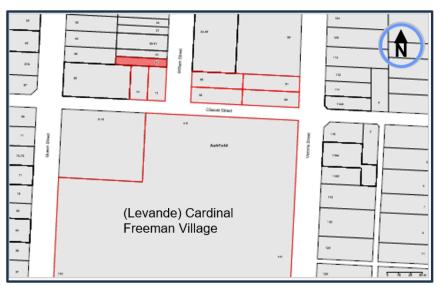


Figure 2. Map on Consultation Area

(1) Resident response was received concerning tree planting and floodlighting of the crossing.

The concerns raised by the resident are outlined below in the table.

Residents Comments	Officers Response
Request not to replant one existing tree in new location which might limit vision of oncoming traffic.	It is proposed to remove 1 tree just east of Gate 11 to make way for the new raised pedestrian crossing. It is also proposed to relocate (1) existing tree (between gate 11 and gate 12) to a new location east of Gate 12 to provide suitable unimpeded sight distance to the new pedestrian crossing.
Are floodlights really necessary? These will have an impact on nearby residents.	Trees are an important part of the overall landscape and provide much needed tree canopy cover to the footpath environment. The tree species has a moderately high canopy and therefore is considered



suitable for its new (transplanted) location.

 Council is required to provide lighting to all new pedestrian crossings compliant to the required Standards to ensure pedestrian safety - particularly at night. A lighting design will need to be prepared by a suitably qualified lighting consultant to meet this requirement. Council will endeavour to provide only the minimum required levels of lighting whilst still complying with the Standards.

### CONCLUSION

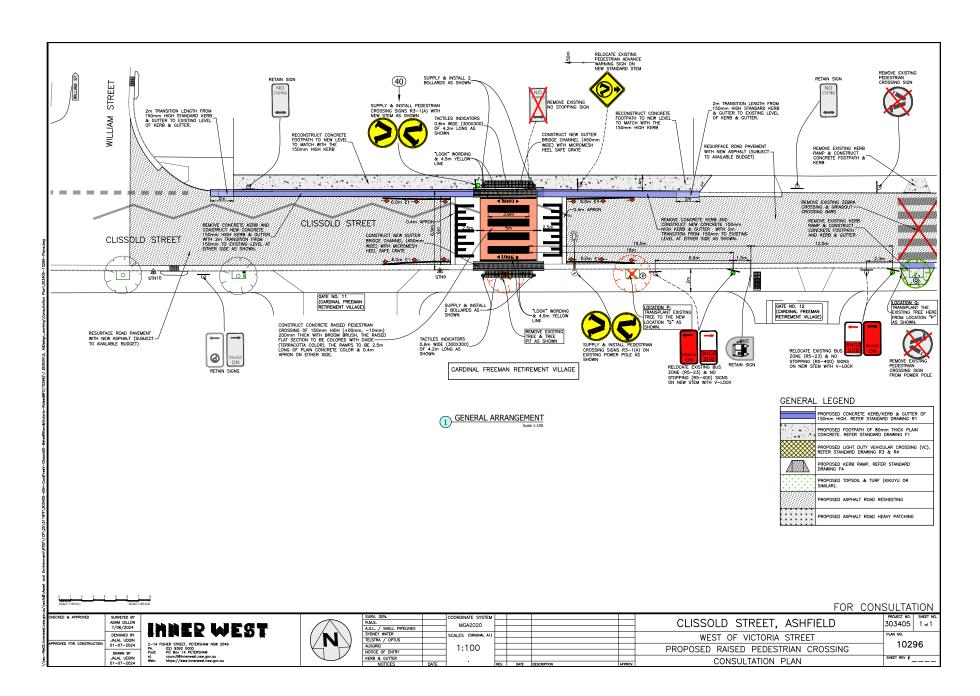
Additional information has been provided in this report to address the concerns raised by TSA and TfNSW in maintaining the Bus Stops 'No Stopping' restrictions on approach to the proposed new crossing in Clissold Street.

It is therefore recommended that the detailed design plan (10296) for the proposed new raised pedestrian (zebra) crossing in Clissold Street, just east of gate No.11 to the Cardinal Freeman Village (near William Street), and the removal of the at-grade pedestrian crossing further east in Clissold Street, between Queen Street and Victoria Road, Ashfield, as shown in *Attachment 1* be approved.

## **ATTACHMENTS**

**1.** Proposed plan 10296- Removal of at-grade crossing and construction of a new raised pedestrian (zebra) crossing in Clissold Street, Ashfield, between Queen Street and Victoria Street.







Item No: LTC1024(1) Item 10

Subject: VICTORIA STREET, ASHFIELD - INSTALLATION OF A 'KEEP CLEAR'

ZONE AT THE FRONT OF ASHFIELD POLICE STATION (DJARRAWUNANG-ASHFIELD WARD/SUMMER HILL

**ELECTORATE/BURWOOD PAC)** 

Prepared By: Daniel Li - Student/Graduate Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### RECOMMENDATION

That the installation of a 'Keep Clear' zone on Victoria Street, Ashfield at the main driveway for Ashfield Police Station be approved.

### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

### **EXECUTIVE SUMMARY**

This report outlines current emergency vehicle accessibility issues at Victoria Street between Liverpool Road and Norton Street and proposes the appropriate road treatment to improve police operations of Ashfield Police Station.

### **BACKGROUND**

Council has received a Councillor's request to install a 'Keep Clear' zone at the front of Ashfield Police Station, located at 14 Victoria Street, Ashfield due to excessive road traffic congestion during the morning and afternoon peak hours.

# **DISCUSSION**

The nature of police work often involves officers to urgently respond to local incidents, maintain public safety, enforcing laws and protecting the community. As a result of the identified congestion during the morning and afternoon peak hours, police officers have been unable to egress from the police station driveway perform their duties as public law enforcement.

Victoria Street provides an approximate pavement width of 13 metres, facilitating one lane of travel in the northbound and southbound directions as well as restricted 1P parking on the western side and unrestricted parking on the eastern side. Notwithstanding the above, this section of Victoria Street provides access to high traffic generating facilities such as Ashfield Boys High School, Ashfield Public School and Trinity Grammar School as well signalised access to Liverpool Road near Ashfield shopping strip thereby validating the identified traffic congestion during the peak morning and afternoon periods.

Whilst the installation of a 'Keep Clear' zone will vastly assist with the ingress and egress movements of police vehicles from the driveway, it should be noted that this section of Victoria Street is operating under a signalized control at its intersection with Liverpool Road and this fact in conjunction with the high traffic volumes would still result in police vehicles

queuing in the roadway for a brief period of time. However, it is proposed that a 10 metre 'Keep Clear' zone be installed in both travel lanes at the frontage of Ashfield Police Station to facilitate unrestricted ingress and egress movements for police operations. A concept plan of the proposed 'Keep Clear' marking is provided in the diagram below.



Figure 1. Proposed Concept Plan

## **PUBLIC CONSULTATION**

As the 'Keep Clear' zone is designated for the Ashfield Police Station, which is an emergency service and the "Keep Clear" was requested by the Police Service public consultation was not undertaken. According to Transport for NSW, a 'Keep Clear' marking is used to keep the road clear outside of areas of high traffic demand such as hospitals, fire stations and police stations.

### FINANCIAL IMPLICATION

The cost of installation of the line marking as recommended will be funded within Council's signs and line marking budget.

### **ATTACHMENTS**

Nil.



Item No: LTC1024(1) Item 11

Subject: PROPOSED EV KERBSIDE CHARGING LOCATIONS (ALL WARDS / ALL

**ELECTORATES / ALL PACS)** 

Prepared By: Sarah Guan - Graduate Strategic Transport Planner, James Nguyen - Traffic

Engineer and Felicia Lau - Traffic Engineer

**Authorised By:** Manod Wickramasinghe - Traffic and Transport Planning Manager

### **RECOMMENDATION**

1. That the EV charging sites identified in *Table 3* be supported for installation as per the signage and line marking plans provided in *Attachment 1*.

2. That the EV charging sites identified in *Table 2* be supported subject to targeted engagement and TfNSW approval as required.

### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

### **EXECUTIVE SUMMARY**

Council is committed to supporting and encouraging the use of electric vehicles (EVs) in the Inner West. Consequently, Council chose three kerbside public charging providers, as partners, through a Request for Quotation (RFQ) process. Subsequently, Council supported these partners in successfully applying for State Government funding.

Council's charging partners secured grant funding to roll-out 136 public EV charging ports; 95 of which is dedicated with signs and line marking, across our community by mid-April 2025.

The proposed initial network of EV kerbside charging port locations was publicly exhibited in July and August 2024, to gain community feedback. The overall proposal received 84% support from the community. In response to community feedback, on specific locations, the number of EV charging ports with dedicated kerbside spaces is proposed to be reduced from 95 to 81.

The community consultation included both dedicated and undedicated charging locations so that the community could understand the overall charging network proposed. In considering this it is important to note that; as chargers without dedicated spaces do not alter kerbside conditions and would be installed on existing AusGrid infrastructure, they could be installed without Council approval. Their installation could be carried out under the Transport and Infrastructure State Environmental Planning Policy (SEPP).

Proposed signs and line marking plans for the chargers with dedicated kerbside spaces are included in *Attachment 1*.



### **BACKGROUND**

In May 2023, Inner West Council adopted *POWERING AHEAD*, its Electric Vehicle Encouragement Strategy. This Strategy was prepared based on over three years of research and consultation, with the Community, adjacent councils and industry stakeholders. The Strategy was prepared in response to a number of factors including a worldwide commitment to conversion of internal combustion engine (ICE) vehicles to electric vehicles (EVs), rapidly growing demand from the Inner West Community, State and Federal Government policies targeting 50% of all new vehicles being sold in Australia to be electric by 2030, as well as Council's sustainability and net zero policies.

The Strategy contains 3 key actions relating to the implementation of public EV charging across the Inner West:

# Action 3 - Public kerbside charging partnerships

Council works with charging providers to develop pilot programs to initiate the phasedin provision of kerbside charging facilities to assist residents in areas where housing does not generally have driveways/off-street access (and consequently residents are unable to provide their own on-site charging facilities).

# Action 4 - Public car park charging partnerships

Council works with charging providers to develop pilot programs to initiate the phased-in provision of charging facilities in Council's public off-street parking areas. These programs should aim at providing a minimum of 2 bays (1 x double charging unit) dedicated to electric vehicle charging in off-street parking areas which have 20 or more car spaces, subject to considerations including existing infrastructure limitations and existing public domain projects.

# Action 6 - Light poles with charging

Council will endeavour to work with Ausgrid to ensure that, subject to the delivery of suitable lighting pole designs (e.g. recognising the local character including heritage considerations), at least 20% of new lighting poles in the Inner West LGA will be capable of accommodating EV charging facilities.

In response to the adoption of the Strategy by Council, and demand from the Community, an Expression of Interest (EOI) and a subsequent RFQ were initiated to attract charging providers to partner with Council to provide kerbside charging. As a result of the RFQ Council selected three partners to provide kerbside public charging - EVSE, EVX and PLUS ES.

Subsequently, an additional RFQ was also launched to attract partners to provide charging in council car parks.

In July 2023, The NSW Government launched Round One of its Electric Vehicle Kerbside charging grants. On 26 May 2024 it was announced that Council's charging partners were successful in acquiring grant funding for a total of 136 charging ports.

Conditions of the grant approval required all charging ports to be installed by mid-April 2025.

To provide the Community with a comprehensive overview of the proposed kerbside charging network, Council exhibited all 136 charging port locations between the 4 July and 11 August 2024. In summary, the overall network proposal received 84% support from the Community.



### DISCUSSION

On 26 May 2024, it was announced that Council's three charging partners were successful in acquiring grant funding for a total of 136 charging ports. Of the ports in the grant approval, 95 ports (a mix of dual and single port chargers) require dedicated kerbside spaces at 56 sites, and 41 single port "opportunity" chargers which do not require dedicated spaces. These 41 "opportunity chargers" will only be available able for charging if the associated kerbside is vacant. This will provide the Council and its partners with two different operational models for comparative analysis to inform future charger deployment.

The sites were selected by Council's charging providers, in conjunction with the State Government, using site selection criteria including:

- · Capacity of the electrical grid;
- Areas with projected high EV uptake and low access to off-street parking (as identified by the State Government and Council's charging partners);
- · Optimising access while minimising inconvenience for residents; and
- Safety and accessibility requirements.

In considering the proposed network, the following should be noted:

- Around 1,000 EVs are currently registered within the LGA;
- During 2023 the total number of EVs registered in the Inner West increased by 43%, and projections indicate that a similar growth rate is likely over the next three to five years;
- The current State and Federal Government target for conversion of the Australian fleet, is for 50% all new car sales to be electric by 2030;
- Recent projections supplied by the State Government indicate that the number of EVs registered in the Inner West is likely to rise to over 20,000 by 2030
- Approximately 65% of households in the Inner West cannot readily charge vehicles on site, it can be anticipated that demand for public charging in the Inner West will increase significantly over the next few years;
- The lead time for installing public EV charging units is between 6 and 8 months;
- In accordance with Council's adopted Road User Hierarchy, and implied through Council's net zero and sustainability policies, priority is to be provided to active and public transport ahead of private car use. Council's current position on private electric cars is that; if a private car must be used for a journey the preference is for that car to be and EV rather than an Internal Combustion Engined vehicle (ICE);
- The proposed 95 ports with spaces (56 sites) dedicated to EV charging should not be considered removal of a parking space, rather they are a transition from one type of parking to another. Further, because of the proposed 8.00am to 10.00pm restriction these spaces will be available to other vehicles between 10:00pm and 8:00am;
- As the dedication of the spaces for electric vehicle charging is simply a transition from one vehicle type to another no significant alteration of traffic patterns is anticipated; and



 The Inner West LGA is estimated to have approximately 130,000 kerbside spaces, with the proposed 95 ports with dedicated spaces representing less than 0.08% of all kerbside spaces in the LGA.

### **PUBLIC CONSULTATION**

Public consultation was undertaken between 4 July 2024 to 11 August 2024.

All proposed EV kerbside charging locations were presented to the Community for feedback.

The proposed charging locations include:

- 95 charging ports in 56 dedicated locations, and
- 41 single charging ports that is 'opportunity' (not dedicated to EV only) charging locations.

A total of 854 submissions were received through Your Say Inner West (YSIW) and an additional 156 emails received (33 also provided additional submissions via YSIW). The proposal received an overall support of 83% with the following (as shown in *Figure 1*):

- Dedicated sites (56 locations):
  - o 53 sites, support rate above 70%.
  - o One (1) site, support rate between 50%-69%.
  - Two (2) sites, support rate below 50%.
- Non-dedicated sites:
  - o 29 sites, support rate above 70%.
  - o Eight (8) sites, support rate between 50%-69%.
  - Seven (7) sites, support rate below 50%.

The community consultation included both dedicated and undedicated charging locations so that the community could understand the overall charging network proposed. It is important to note that; as chargers without dedicated spaces do not alter kerbside conditions and would be installed on existing AusGrid infrastructure, they could be installed without Council approval. Their installation could be carried out under the Transport and Infrastructure State Environmental Planning Policy (SEPP).

For the EV charging ports with dedicated kerbside spaces, the following rational has been applied:

- locations with a support rate below 50% are not recommended for installation (Table 1).
- locations with a support rate between 50%-69% have been reviewed to determine their suitability in response to community feedback and if an alternative site should be proposed (*Table 2*);
- locations that have received support rate above 70% are proposed, as is, for priority installation (*Table 3*).

Table 1: Proposed Dedicated Sites Not Recommended for Installation/Changes to Parking Restrictions.

Add	ress	Suburb	Side	No. of bays	Reason for omission
182 Anna	andale St	Annandale	W	1	EV charging provider has advised the power pole is not suitable.
3 Ave	Gallimore	Balmain East	Е	2	EV charging provider confirms that the footpath width is inadequate for the installation.
116	Rowntree	Birchgrove	N	1 Low community support.	



St							
Opposite 79 Pigott St	Dulwich Hill	N	2	EV charger provided have advised the pole is a private power pole.			
80 Norton St	Leichhardt	Е	2	Against Council's position to place AC chargers on main street.			
101 Lilyfield Rd	Lilyfield	S	2	Conflict with future cycle way.			
178 Evans St	Rozelle	S	1	Community objection in changing the parking restriction, installation continues but without changing the existing parking restriction on site.			
Tempe Reserve Park	EV charging provider have advised the			EV charging provider have advised the power pole does not have enough capacity for an EV charger.			

Figure 1 provides a map of the engagement results and a detailed Engagement Outcomes Report (EOR) is provided in *Attachment 2*.



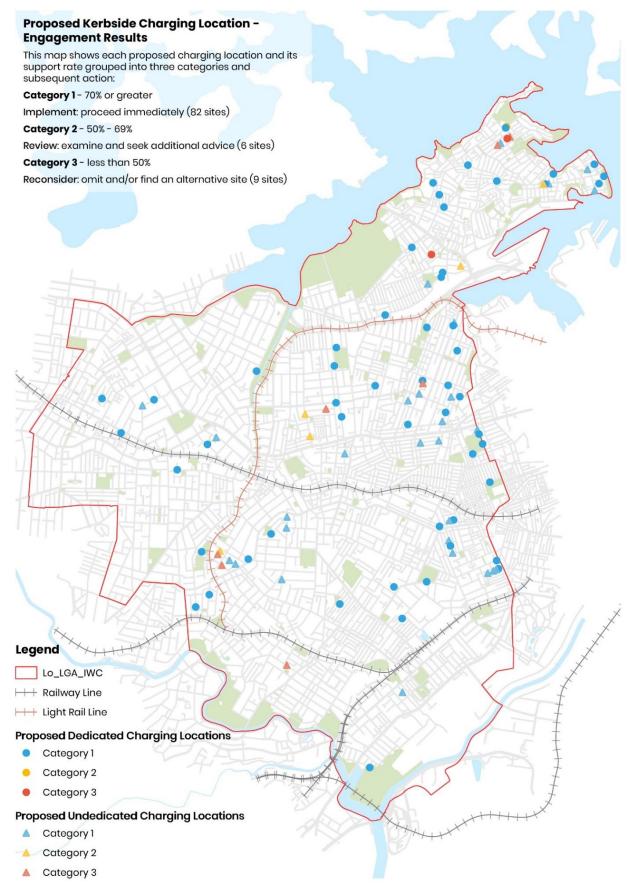


Figure 1: Engagement Result Map



Table 2: Alternative/Additional Proposed Dedicated EV Kerbside Charging Locations

Address	Suburb	Side	No. of	Existing Restriction	Proposed Restriction	Image
			Bays			Ref.
216 Darling Street	Balmain	South	2	2P 8am-10pm Permit holders	No Parking 8am-10pm EV vehicles	B10
_				excepted Area B2	Excepted While Charging	
146 Flood Street	Leichhardt	West	2	Unrestricted	No Parking 8am-10pm EV vehicles	L5
					Excepted While Charging	
2 Tebbutt Street	Leichhardt	East	2	Unrestricted	No Parking 8am-10pm EV Vehicles	L6
					Excepted While Charging	
770 Darling Street	Rozelle	South	2	Unrestricted	No Parking 8am-10pm EV vehicles	R7
_					Excepted While Charging	

Table 3: Proposed Dedicated EV Kerbside Charging Locations for Installation

Address	Suburb	Side	No. of	Existing restriction	Proposed restriction	Image
			bays			ref.
Opposite 24	Annandale	East	1	Unrestricted 90 Angle parking	No Parking 8am-10pm EV Vehicles	A1
Annandale Street					Excepted While Charging	
65 Booth Street	Annandale	North	2	1P 8am-8pm Permit Holder Excepted	, ,	A2
				Area A2	Excepted While Charging	
5 Hutchinson Street	Annandale	South	2	Unrestricted	No Parking 8am-10pm EV Vehicles	A3
					Excepted While Charging	
268 Johnston Street	Annandale	West	1	Unrestricted 45 Angle Parking	No Parking 8am-10pm EV Vehicles	A4
					Excepted While Charging	
50 Nelson Street	Annandale	West	1	Unrestricted 45 Angle Parking	No Parking 8am-10pm EV Vehicles	A5
					Excepted While Charging	
34C Taylor Street	Annandale	West	2	2P 8am-6pm Permit Holder Excepted	No Parking 8am-10pm EV Vehicles	A6
-				Area A1	Excepted While Charging	
239 Trafalgar Street	Annandale	East	1	Unrestricted 45 Angle Parking	No Parking 8am-10pm EV Vehicles	A7
			'		Excepted While Charging	,
10 Albert Parade	Ashfield	West	2	Unrestricted	No Parking 8am-10pm EV Vehicles	A8
					Excepted While Charging	

Address	Suburb	Side	No. of bays	Existing restriction	Proposed restriction	Image ref.
50 Chandos Street	Ashfield	North	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	A9
16 Charlotte Street	Ashfield	East	2	1P 8.30am-6pm Mon-Sun	No Parking 8am-10pm EV Vehicles Excepted While Charging; adjust existing 'BUS ZONE 6pm-11.30pm' increase from 6 metres to 7 metres	A10
13 Beattie Street	Balmain	North	2	4P Ticket 8am-10pm Permit Holders Excepted Area B2	No Parking 8am-10pm EV Vehicles Excepted While Charging	B1
176 Darling Street	Balmain	South	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	B2
2 King Street	Balmain	South	2	4P Ticket 8am-10pm Permit Holders Excepted Area B1	No Parking 8am-10pm EV Vehicles Excepted While Charging	B3
21 St Andrew Street	Balmain	North	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	B4
Opposite 26 Terry Street	Balmain	West	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	B5
5 Pearson Street	Balmain East	North	1	2P 8am-6pm Mon-Fri Permit Holders Excepted Area BE	No Parking 8am-10pm EV Vehicles Excepted While Charging	B6
3 Weston Street	Balmain East	East	2	2P 8am-6pm	No Parking 8am-10pm EV Vehicles Excepted While Charging	B7
Opposite 39 Grove Street	Birchgrove	North	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	B8
Opposite 55 Grove Street	Birchgrove	North	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	B9
8 Federation Road	Camperdown	South	2	4P 6am-6pm; 90 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	C1

Address	Suburb	Side	No. of bays	Existing restriction	Proposed restriction	Image ref.
15 Fowler Street	Camperdown	North	4	Unrestricted; 90 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	C2
Opposite 46-48 Mallett Street	Camperdown	East	1	2P 8.30am-5pm Mon-Fri, 8.30am- 12.30pm Sat	No Parking 8am-10pm EV Vehicles Excepted While Charging; Relocate existing 'No Stopping' and '2P 8.30am-6pm Mon-Fri; 8.30am-12.30pm Sat' restriction 3 metres further south	C3
Opposite 94 Mallett Street	Camperdown	East	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging, and 'P Motor Bikes Only' restriction	C4
61 Constitution Road	Dulwich Hill	North	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	D1
1 Myra Road	Dulwich Hill	West	4	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging; adjust existing bus zone (shift 0.7 metres further south)	D2
23 Terrace Road	Dulwich Hill	East	1	Unrestricted; 90 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	D3
8 Belmore Street	Enmore	South	1	1P 6pm-10pm Permit Holders Excepted Area M3	No Parking 8am-10pm EV Vehicles Excepted While Charging	E1
2 Cavendish Street	Enmore	South	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging and 'No Stopping'	E2
59 Metropolitan Road	Enmore	West	1	Unrestricted; 45 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	E3
170 Hawthorne Parade	Haberfield	West	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	H1

Address	Suburb	Side	No. of bays	Existing restriction	Proposed restriction	Image ref.
31 Coleridge Street	Leichhardt	East	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	L1
Near 2 Marion Street	Leichhardt	South	2	P15min 7am-9am, 4pm-6pm Mon-Fri; 2P Ticket 9am-4pm Mon-Fri, 8am- 6pm Sat; 4P Ticket 6pm-10pm Mon- Sat, 8am-10pm Sun Permit Holders Excepted L2	Excepted While Charging	L2
218 Norton Street	Leichhardt	West	2	2P 8am-10pm Mon-Fri, 6am-10pm Sat-Sun Permit Holders Excepted L2	No Parking 8am-10pm EV Vehicles Excepted While Charging	L3
1 William Street	Leichhardt	North	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	L4
Opposite 35 Gould Avenue	Lewisham	North	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	L5
Near 35 Fitzroy Street	Marrickville	South	2	Unrestricted; 90 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	M1
42 Malakoff Street	Marrickville	South	2	2P 8.30am-6pm, 8.30am-12.30pm Sat Permit Holders Excepted Area M2	No Parking 8am-10pm EV Vehicles Excepted While Charging	M2
1 Rich Street	Marrickville	North	2	Unrestricted; 90 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	M3
80 Victoria Road	Marrickville	North	2	Unrestricted; 90 degree angle parking rear to kerb vehicles under 6m only	No Parking 8am-10pm EV Vehicles Excepted While Charging	M4
2 Alice Street	Newtown	S	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	N1
7 Holmwood Street	Newtown	N	1	2P 8am-10pm, Permit Holders Excepted Area M14	No Parking 8am-10pm EV Vehicles Excepted While Charging	N2

Address	Suburb	Side	No. of bays	Existing restriction	Proposed restriction	Image ref.
6 Burt Street	Rozelle	North	1	2P 8am-6pm Mon-Fri Permit Holders Excepted Area R1	No Parking 8am-10pm EV Vehicles Excepted While Charging	R1
551 Darling Street	Rozelle	West	2	2P 8am-10pm, Permit Holders Excepted Area R2	No Parking 8am-10pm EV Vehicles Excepted While Charging	R2
Near 1 Denison Street	Rozelle	West	2	2P 8am-10pm Permit Holders Excepted Area R1	No Parking 8am-10pm EV Vehicles Excepted While Charging	R3
Opposite 103 Denison Street	Rozelle	East	1	2P 8am-6pm Mon-Fri 4P 8am-1pm Sat	No Parking 8am-10pm EV Vehicles Excepted While Charging	R4
90 Lilyfield Road	Rozelle	North	2	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	R5
Slade Street (Opposite 188 Beattie Street)	Rozelle	West	2	2P 8am-10pm Permit Holders Excepted Area R1	No Parking 8am-10pm EV Vehicles Excepted While Charging	R6
21-23 Corunna Road	Stanmore	South	1	Unrestricted (45-degree angle parking)	No Parking 8am-10pm EV Vehicles Excepted While Charging	S1
Opposite 2 Allman Avenue	Summer Hill	East	1	Unrestricted	No Parking 8am-10pm EV Vehicles Excepted While Charging	S2
Opposite 16 Gower Street	Summer Hill	North	1	2P 8am-6pm Mon-Fri Permit Holders Excepted Area 10	No Parking 8am-10pm EV Vehicles Excepted While Charging	S3

Post public consultation, further alternative/ additional locations were proposed by the EV charger provider that would require further community consultation where the outcome will be presented in the next LTC.



# FINANCIAL IMPLICATIONS

On 26 May 2024, Council's EV Kerbside Charging Partners, EVSE, EVX and PLUS ES, received funding from State Government's NSW EV Kerbside Charging Grant for 136 charging ports. This round of EV kerbside chargers is fully funded by NSW Government and our EV Kerbside Charging Partners.

# **ATTACHMENTS**

- 1. Signs and Line Marking Plan
- 2. Engagement Outcomes Report









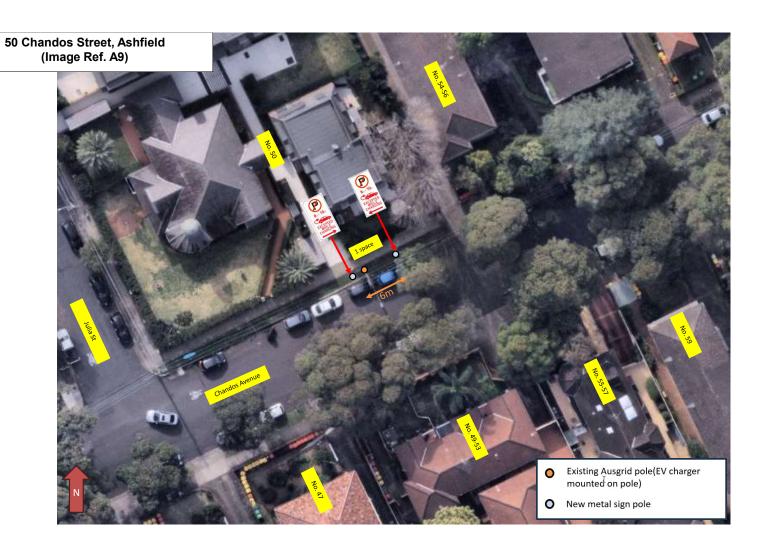


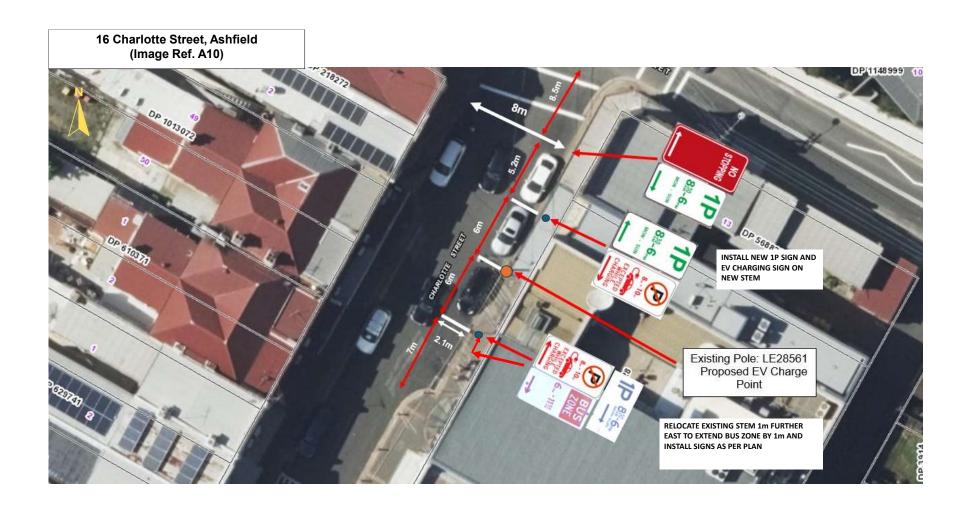
34C Taylor Street, Annandale (Image Ref. A6)





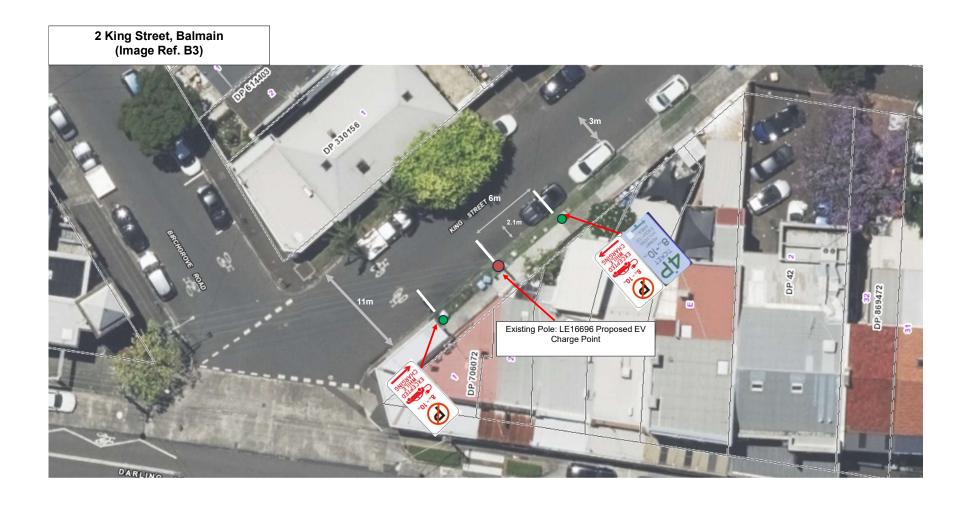








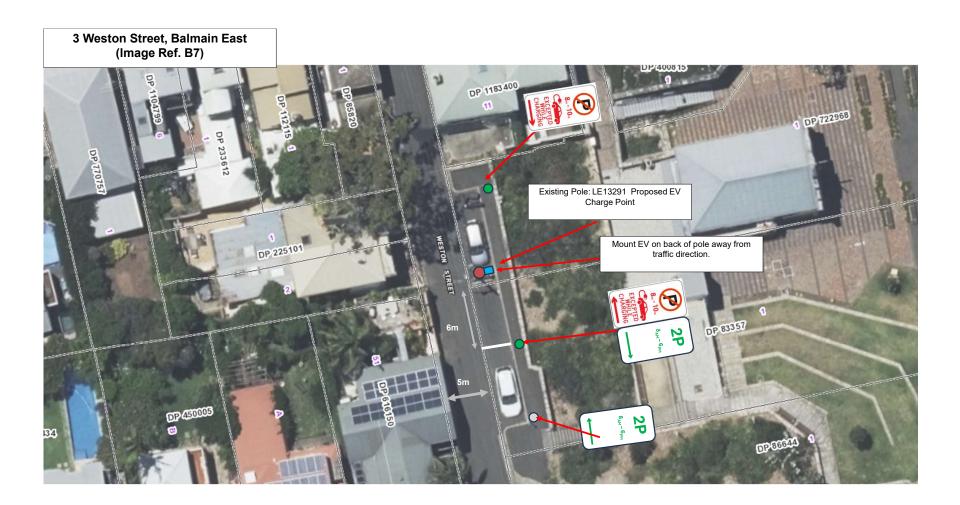












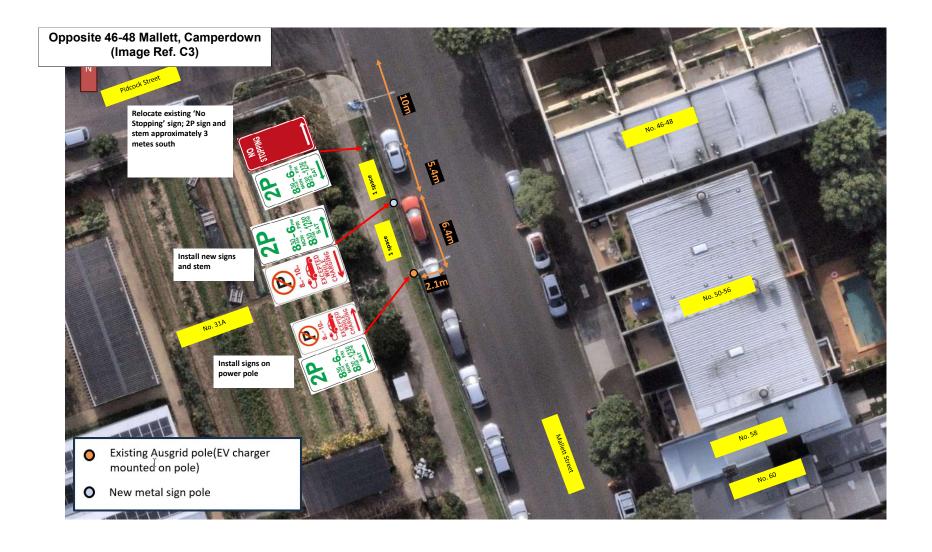


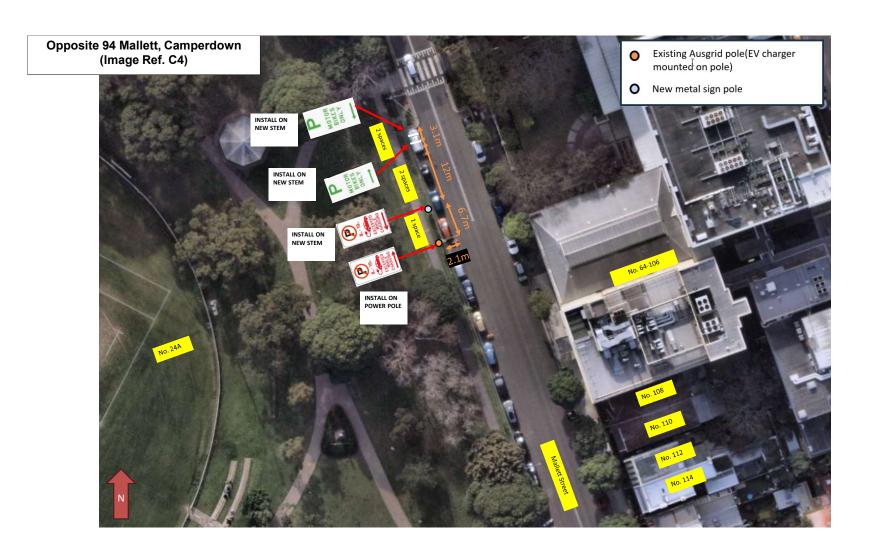








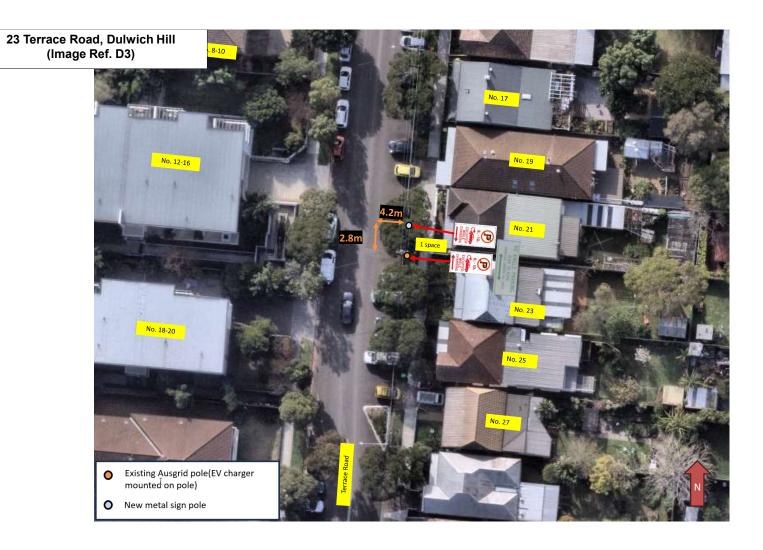










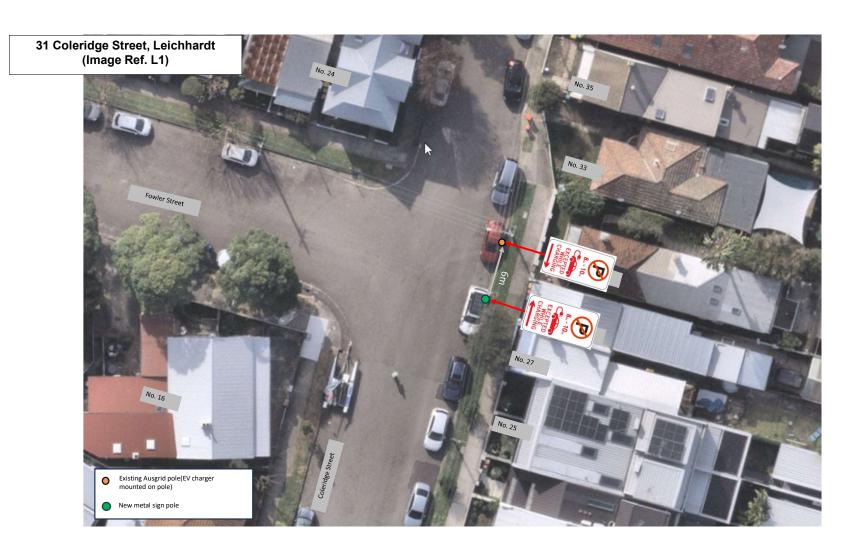


















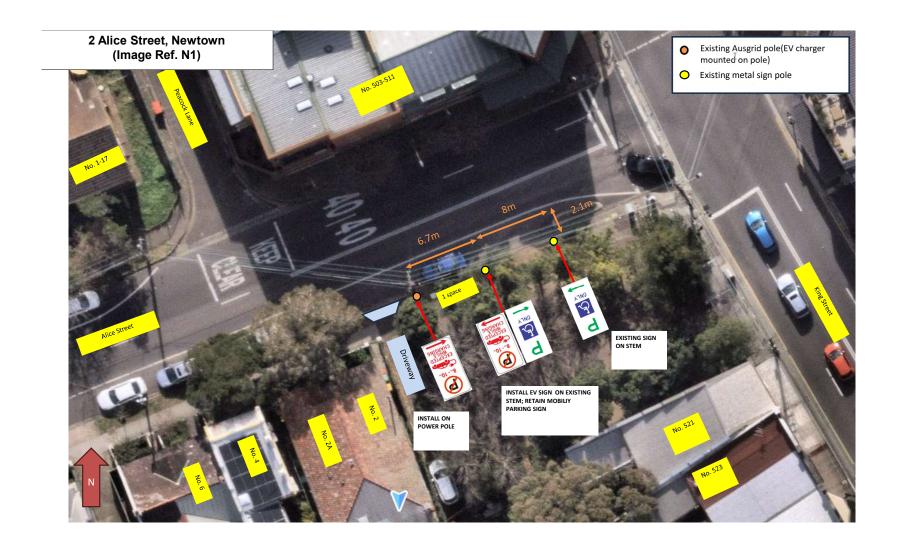


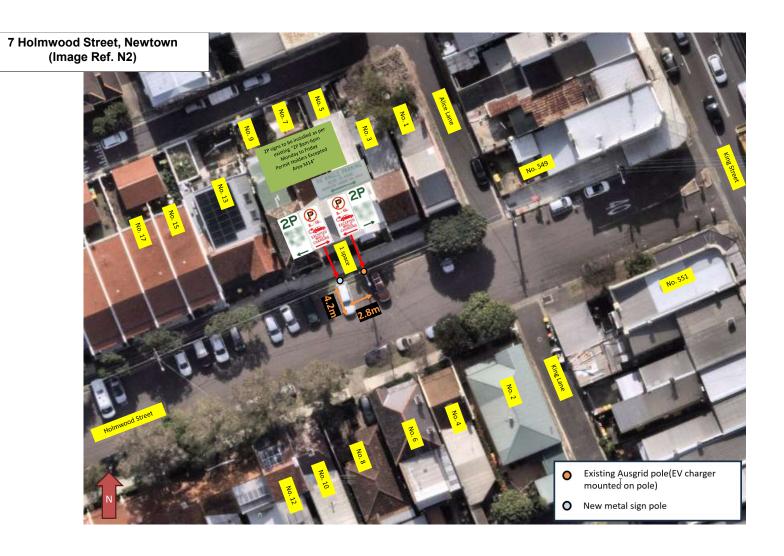




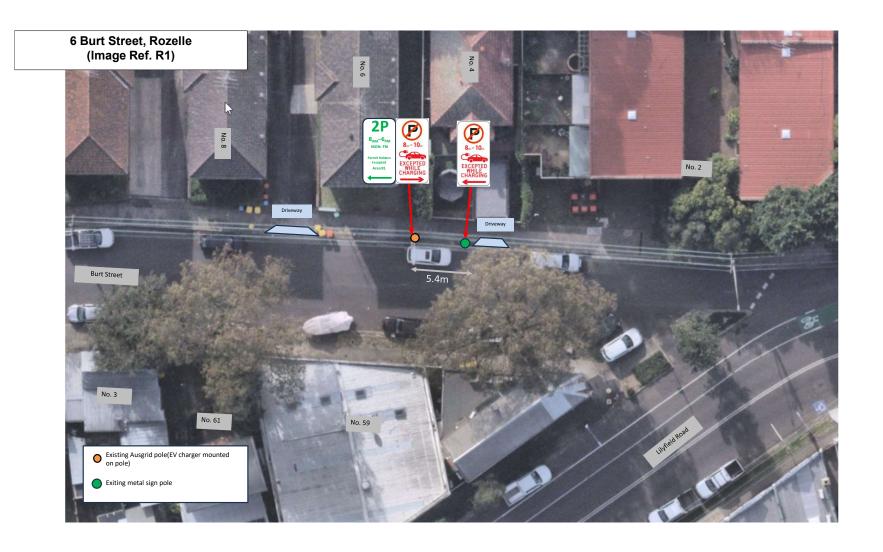


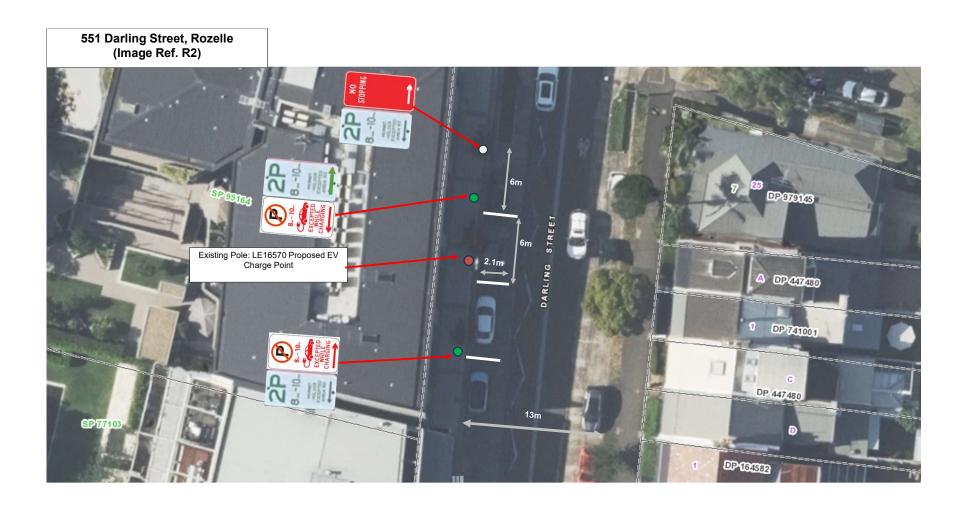








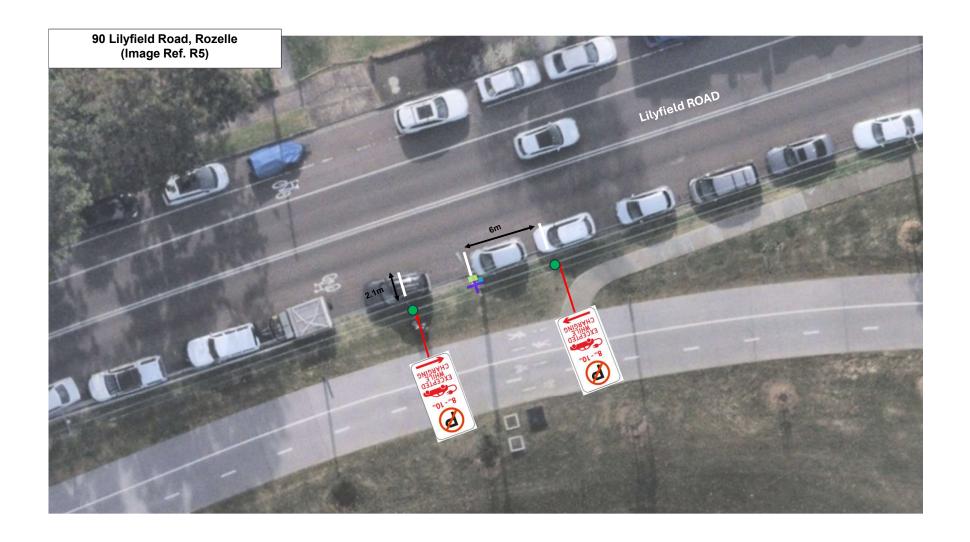


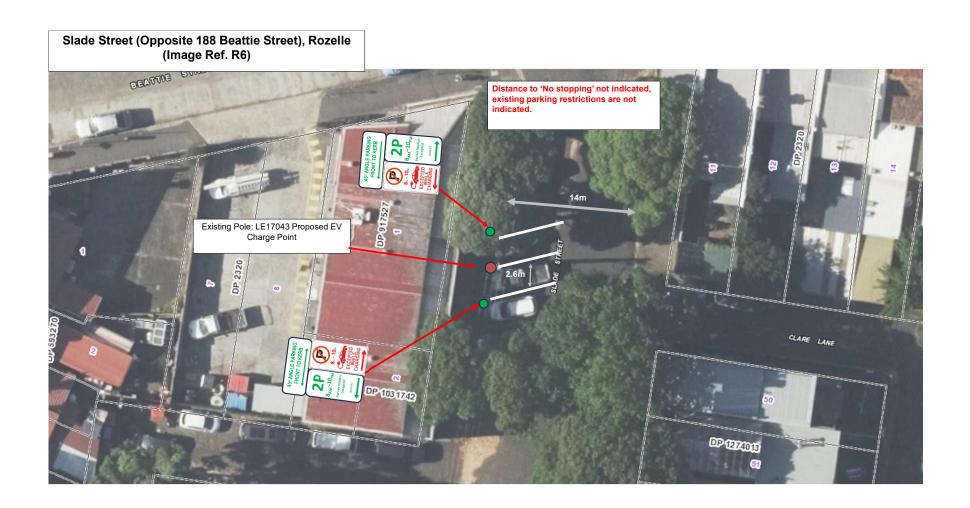


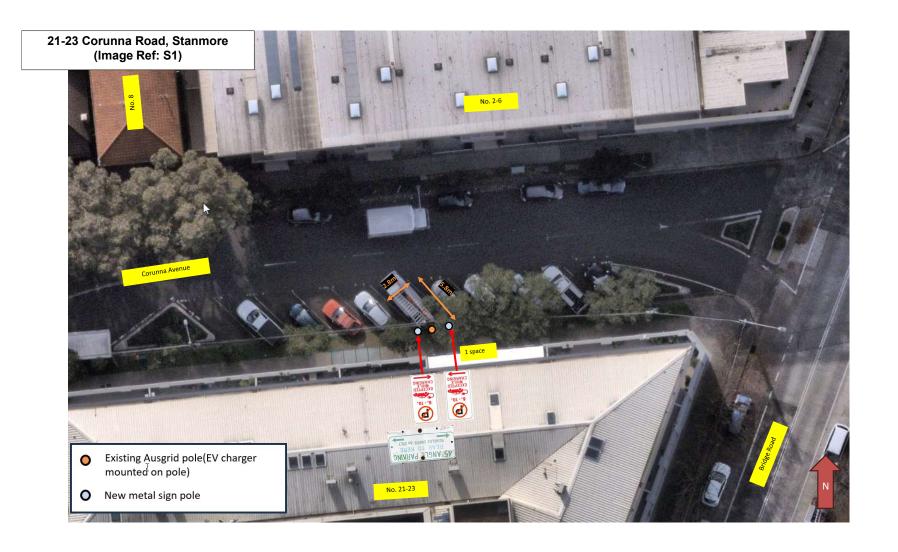
Near 1 Denison Street, Rozelle (Image Ref. R3)



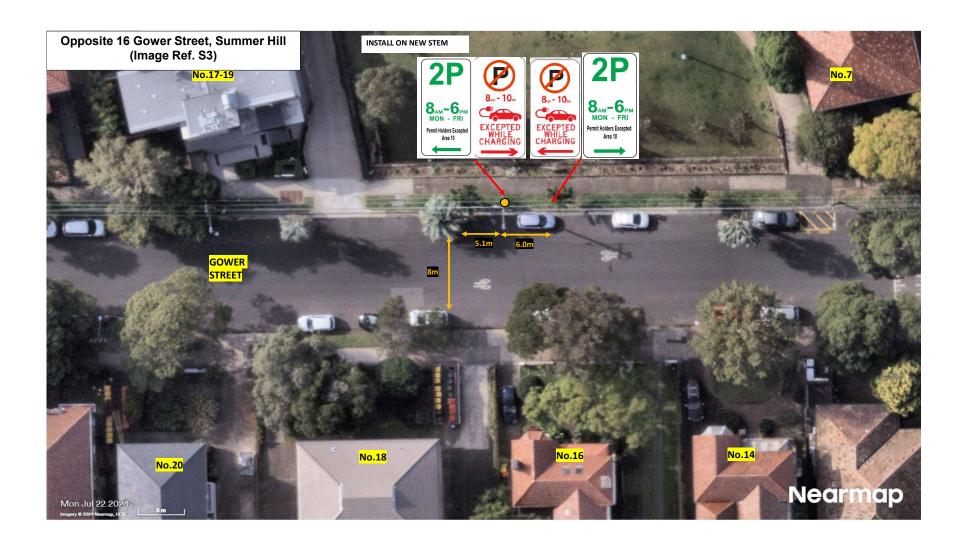
























# Proposed Electric Vehicle (EV) public kerbside charging locations

**Engagement Outcomes Report** 

4 July - 11 August 2024



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#### Summary

From 4 July to 11 August 2024, the Community was invited to provide feedback on changes to existing parking restrictions proposed to accommodate the public kerbside charging locations proposed by Council's EV charging partners, through State Government Grants and their own supplementary funding. The engagement was promoted through a letterbox drop and online campaign including Council's social media channels, the monthly e-news and the *Your Say Inner West* webpage.

During this time Council's *Your Say Inner West* (YSIW) project page was viewed 9,013 times, by 5,387 visitors, resulting in:

- 302 unique contributors made 854 contributions on the social mapping tool that identified the proposed kerbside locations
- 156 individual emails and/or calls regarding the project, 33 of these also included feedback on YSIW
- two submissions were received from stakeholder groups

Overall, there were a total of 854 submissions, 719 supportive and 135 unsupportive, a support rate of over 84%.

In total 85 chargers with 106 ports were proposed on existing Ausgrid poles and 15 chargers with 30 ports were proposed as stand-alone *kiosk-style* chargers. Of the sites proposed 95 ports would have dedicated kerbside spaces marked for EVs only when charging, with the remainder being unmarked "opportunity" charging spaces only used for charging if no other vehicle is parked there and consequently not altering on parking supply

In general, submissions which did not support either the overall proposal or individual locations indicated concern regarding:

- the inequitable distribution of chargers across the LGA
- "loss of parking" in areas already experiencing high levels of parking demand
- site specific concerns e.g., preference for the charger to be moved to another location
- inadequate understanding of how the "opportunity charging" approach would
- need for broader distribution of chargers across the LGA
- the mix of charging types provided

In response to these general concerns, it should be noted that:

• Council encouraged providers to include chargers throughout the LGA, however, in NSW Government's assessment of the applications priority was given to areas

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with predicted future EV uptake, suitable housing typology and adequate power grid capacity. This reduced the number of sites approved in the south and west of our LGA. It is worth noting that in Round 2 of the NSW Kerbside Charging Grant, taking into account current approvals, St Peters-Sydenham-Tempe have been prioritised.

- While the network of charging spaces proposed will result in a reduction of the
  total spaces available for Internal Combustion Engine (ICE) vehicles, the 95
  dedicated spaces represent less than 0.08% of the total number of kerbside
  spaces in the Inner West. In considering the impact of this conversion of spaces to
  dedicated EV spaces it is relevant to note that:
  - around 1,000 EVs are currently registered within the LGA, representing over
     1% of the total cars registered in the LGA
  - during 2023 the total number of EVs registered in the Inner West increased by 43%, and projections indicate that a similar growth rate is likely over the next three to five years
  - the current State and Federal Government target for conversion of the Australian fleet, is to achieve 50% EVs by 2030,
  - recent projections supplied by the State Government indicate that the number of EVs registered in the Inner West is likely to rise to over 20,000 by 2030
  - approximately 65% of households in the Inner West cannot readily charge vehicles on site, it can be anticipated that demand for public charging in the Inner West will increase significantly over the next few years
  - potential lead time for installing public EV charging units is between 6 and 9 months
  - technology is rapidly changing and, while only a limited number of EVs can currently charge at rates greater than 22kW/hr, in the future many models will be capable of charging at 200kW/hr or more. To future proof the Inner West charging network, it is essential to provide a diverse mix of charger types over the coming years.

## **Engagement Background**

On 26 May 2024, NSW Government announced its EV Kerbside Public Charging Program grant results, with the Inner West securing funding for 136 charging ports in conjunction with its three selected partners (EVSE, EVX and PLUs ES). All charging ports are being installed at no financial cost to Council, with Council's charging partners providing "topup" funding.

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In response to this announcement Council initiated this engagement, running between 4 July and 11 August 2024. The engagement included a brief survey and a mapping tool with all sites available for comment.

# Promotion and engagement methods

Promotion method	Stakeholders engaged
Project page on Your Say Inner West	5,387 people viewed the project page
Emails to key stakeholders	1,086 registered members on the Your Say Inner West platform
Letters to residents and business	118,698 letters to residences and business in the LGA.
Council's social media	1 Instagram advertisement with 563 link clicks.

Engagement method	Stakeholders engaged
Online survey/social map/posts on ideas wall/quick pool	854 contributions by 302 contributors
Direct contact from residents	Emails and calls from 156 individuals, of which 33 have also provided feedback on the interactive map.





## Summary of feedback

#### Engagement method - online, email and phone calls

The engagement revealed reoccurring themes on the proposed kerbside charging locations. While the themes are out of scope for this engagement, Council have provided responses on frequently mentioned concerns. These are shown below in Table 11.

Table 1: Themes

#	Theme	What we heard	Council Response
1.	Distribution of	Approximately 7% of all	This round of proposed kerbside
	chargers	contributors have expressed	chargers is fully funded by NSW
	across Inner	concern over inequitable	EV Kerbside Charging Grants and
	West LGA	distribution of chargers	our kerbside EV charging
		across the LGA with more	partners.
		chargers in Balmain, Balmain	
		East, Birchgrove, Rozelle,	Council encouraged providers to
		Annandale and Leichhardt.	propose a broad distribution of
			ports across the LGA including
		To a lesser extent,	areas to the South and West,
		contributors have raised	however these sites did not
		inequitable distribution of	successfully obtain funding from
		chargers specifically within	the State.
		Balmain and Rozelle.	
			The State Government used a
			"heatmap" of locations based on
			housing typology as well as
			current and predicted demand.
			The map showed a higher
			demand in the north and east of
			the Inner West LGA resulting in
			more grant funding for these
			areas.
			Council will continue to
			encourage additional public
			charging to include a more
			equitable distribution across
			Inner West, particularly in the
			south and west of the LGA.
2.	Future rollout	Contributors provided	Council is in the process of
	of public	alternative locations for	partnering with EV charging

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#	Theme	What we heard	Council Response
	kerbside	additional EV charging units.	providers to install, operate and
	chargers	Suggested sites included	maintain fast DC chargers in
		additional kerbside chargers,	council-owned carparks.
		mainly around parks and	All alternative locations have
		public transport nodes, and	been noted for future rollout.
		council-owned carparks.	
			Council will encourage greater
		Additionally, there is a desire	diversity in charger types
		for faster chargers amongst	(including future proofing for cars
		the Community.	capable of charging faster), as
			well as broader distribution of
			locations as demand grows.
3.	Site selection	Concern that chargers	The site selection hierarchy
	criteria	proposed in residential areas	contained in Council's Electric
		are counter to Council's	Vehicle Encouragement Strategy
		original site selection criteria,	was devised in 2021/22. At that
		included in its Electric Vehicle	time, EV uptake was relatively low
		Encouragement Strategy.	and there was a focus on public
			charging being provided in
			council car parks. Subsequently,
			demand significantly increased
			with many residents requesting
			direct access to kerbside EV
			charging, particularly in
			residential areas.
			This, in combination with the
			opportunity to access grant
			funding for kerbside charging,
			has meant that some aspects of
			the previous site selection
			hierarchy could not always be
			applied. This is particularly the
			case with residential streets,
			where residents wish to have
			access to charging but would
			prefer the sites not to be outside
			residential premises. Such an
			option has not always been
			available in a residential street.

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#	Theme	What we heard	Council Response
			Where possible residential
			frontages have been avoided for
			dedicated charging spaces,
			however the location of Ausgrid
			poles, the adjacent power supply,
			positioning of driveways and
			gradient of the street
			occasionally limit alternative
			locations.
			Where resident concern has been
			expressed Council's charging
			partners have been requested to
			look for alternative locations,
			nearby, which satisfy the various
			grant funding and operational
			criteria.
			In the case of "opportunity
			charging" (without marked
			spaces) it is considered that
			there should be no significant
			change in traffic and parking
			behaviour.
4.	Too many	Concern that some	With the exception of Grove
	chargers on	residential streets have an	Street, Birchgrove and Mallett
	one street	excessive number of	Street, Camperdown, where
		chargers proposed. In this	multiple chargers with dedicated
		instance the concern is	spaces have been proposed in a
		primarily focused on "loss of	residential street, only one
		parking" for residents.	dedicated space is proposed
			within any individual street block.
		For suggestions on	
		redistributing chargers across	In the case of Grove Street, both
		the LGA, refer to distribution of	charging spaces are proposed
		chargers across the Inner	on the Birchgrove Oval side of the
		West LGA and future rollout of	street. While in Mallet Street, the
		public kerbside chargers, and	dedicated spaces are on the
		dedicated spaces required	Camperdown Park side of the
		for all EV charging units in this	street.
		table.	

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Both streets w	vere identified as
high demand	areas by the State
Government,	indicating that the
transition to E	V from general
parking will be	e required sooner
than many ot	her areas in the LGA.
5. Dedicated For many undedicated Part of the print	ncipal behind
spaces spaces, there were deploying cha	argers with a mix of
required for all suggestions to have dedicated an	d non-dedicated
EV charging associated dedicated parking space	es, is to provide a
units charging spaces to prevent test case to e	xamine benefits of
ICE vehicles blocking the each operation	onal model. This
space for EV charging. examination v	would include
consideration	n of turnover rates
achieved and	l lost charging
opportunities	due to space is
being unavail	able.
The results of	this test, including a
comparative	analysis of turnover
and utilisation	n, could then inform
future operati	ional models.
6. High parking Concerns were raised about Dedicating ch	narging spaces will
demand installing EV chargers in areas not remove p	arking for the
with high parking demand as Community, r	ather they are
it will reduce the number of proposed to c	assist them in the
spaces available to ICE cars transition to E	Vs; noting State and
and may attract more EV Federal targe	ts, as well as current
drivers to the area, making it growth rates to	for EV ownership
harder for resident parking. within the Inne	er West, referred to
earlier.	
	charging" is based
on the provisi	on of multiple
chargers with	out dedicated
spaces, so the	at ICE parking is not
affected but E	
"opportunity"	when a space is
vacant. This w	vill permit analysis to
compare turn	nover and utilisation

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#	Theme	What we heard	Council Response
			with chargers that have
			dedicated spaces.
			In the case of "opportunity
			charging" it is considered that
			there should be no significant
			change in traffic and parking
			behaviour.
7.	Residential	Some contributors with	It is not anticipated that the
	Parking	chargers proposed on their	establishment of kerbside EV
	Scheme (RPS)	streets have also requested	charging spaces will increase
	, ,	establishment of Residential	parking demand, however
		Parking Schemes to help with	Council will continue reviewing
		the additional parking	Residential Parking Scheme
		demand.	gcross Inner West LGA.
			Additionally, monitoring of
			subject streets will be conducted
			after the charging ports have
			been installed, and user
			behaviour has stabilised.
8.	More	Some contributors suggested	This would reduce the diversity of
	chargers, at	that a larger number of lower	charging choice. Noting that's the
	lower wattage	wattage chargers 7kW should	proposed 22kW charges can
		be provided in place of the	readily scale down to 7kW, but
		22kW chargers currently	7kW chargers cannot provide
		proposed.	higher rates of charge without
			significant hardware and
		This suggestion is based on	software modification.
		the contributor's view of	
		constraints on then existing	Additionally, emerging charging
		power grid.	technologies will soon result in
			higher level chargers placing
			significantly less drain on the
			adjacent power grid.
9.	Overstaying	Concerns raised about EVs	Our EV charging providers will
	charging	overstaying their charging	implement penalty fees also
	period	period in dedicated EV	known as <i>idle</i> fees for EVs
	•	charging spaces, particularly	overstaying their charging period.
		in areas with high parking	
		demand.	In addition, Council's
			enforcement team will conduct
		<u> </u>	STREAM OF THE COURT WILL COLLEGE

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#	Theme	What we heard	Council Response
		Suggestions include	additional checks on EV charging
		improving enforcement and	spaces.
		having 2-hour timed parking.	
10.	Different	Concerns were raised about	All proposed 22kW chargers
	charger types	less common charger types	require EV owners to bring their
		on offer at public chargers. In	own cable. If required, EV owners
		particular the CHAdeMO	can purchase adapters to ensure
		charger has been requested.	compatibility with all chargers.

#### Assessment of Individual Sites with dedicated spaces

This section relates to feedback received about individual locations proposed with dedicated EV charging spaces, and so requiring alterations to existing kerbside parking controls.

In considering the feedback received it should be noted that:

- Limitations of the mapping tool inhibited the ability of some respondents to determine the exact location proposed.
- Some respondents did not clearly understand the concept of "opportunity charging", which does not require a dedicated charging space.
- The proposals for dedicated charging spaces would be a transition from a
  general parking space to an EV only space while charging and as such are not
  considered to significantly alter traffic or manoeuvring because the EVs would still
  be the same size as an ICE car.

**Table 2** summarises in-scope submissions received for each location. It should be noted that tThemes covered in **Table 1** are not detailled in **Table 2**.

Table 2: Feedback on proposed EVC units with dedicated EV charging parking spaces

Reference Point	Concerns Expressed	Council Response
ANNANDALE		
Opposite 24 Annandale Street 100% support (1 response)	Supportive of this location due to lack of off-street charging options.	Noted.
182 Annandale	Not supportive of a charger on	Further feedback from Ausgrid
Street	pole LE26132, but would support	revealed that neither pole

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Reference Point	Concerns Expressed	Council Response
71.43% support (7 responses)	a charger on pole LE26131 because of:     location is in front of     noise sensitive rooms     lighting available on pole     LE26131 improves safety     and	LE26132 nor LE26131 are suitable. Due to the high support rate, the provider is carrying out assessments to determine if a suitable alternative is available in the vicinity.
	heritage tree in front of 182 already reduces parking	In general terms, it is considered that a transition from a general parking space to an EV charging space would not significantly increase noise levels -chargers are silent and EV motors are quieter than ICEs.
65 Booth Street 88.89% support (9 responses)	Refer to Theme 6 Table 1.	Refer to Theme 6 Table 1.
5 Hutchinson Street	Suggests moving closer to Rozelle Bay Light Rail to	Noted, out of scope.
92.86% support (14 responses)	encourage light rail uptake.	It is generally considered that proximity to transport nodes is a secondary consideration as people using heavy and light rail generally travel for longer periods of time and as such would be more prone to overstay at a charger.  Node-based charging could be considered once EV ownership
268 Johnston	Refer to Theme 10 .	reaches a critical mass.  Refer to Theme 10 <b>Table 1</b> .
Street 100% support (9 responses)	Refer to memero.	Refer to meme to fuble I.
50 Nelson Street 100% support (4 responses)	Refer to Themes 1 and 2.	Refer to Themes 1 and 2 <b>Table 1</b> .
34C Taylor Street	This is an ideal location.	Noted.

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Reference Point	Concerns Expressed	Council Response
100% support (4 responses)		
239 Trafalgar Street 73.33% support (15 responses)	Having a charger near home encourages uptake. Would like more public chargers in Annandale.  Generally, supportive of this location as most residences along Trafalgar Street have offstreet parking access on Trafalgar Lane.  Responses with concerns mentioned:  • The charger is owned by a commercial enterprise and does not comply with Council zoning regulations.  • High parking demand for residents on Trafalgar Street including having to park further from home and increased traffic from EV owners queueing to charge.  • Noise emitted from the EV charger, particularly at night.	Noted.  Council has partnered with EV charging providers and as such the chargers comply with the State Environmental Planning Policy (Transport and Infrastructure) 2021.  Noted. Most residents have access to rear lane garages. It is not considered that the transition of existing parking spaces to EV charging will result in significant changes to parking or traffic conditions.  Noted. EVs are quieter than ICE vehicles and chargers do not generally emit noticeable sounds. Further, exclusive EV charging will be between 8am – 10pm, allowing residents to park any car in these spaces at night.
ASHFIELD		
10 Albert Parade 93.33% support (15 responses)	Will accommodate strata blocks nearby without off-street charging options.	Future rollout of public kerbside chargers will look at more diverse distribution across the LGA including Ashfield.
50 Chandos Street 75% support (4 responses)	Suggests relocating one of the chargers on Chandos Street closer to Ashfield Park rather	Only one of the chargers in Chandos Street will have a dedicated space, thus providing a mix of types for local residents.

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Reference Point	Concerns Expressed	Council Response
	than having two chargers close together.	These are also provided for comparative purposes to assist in developing future models for deployment.
16 Charlotte Street 100% support (13 responses)	Refer to Themes 1, 2, 8 and 9 .	Refer to Themes 1, 2, 8 and 9 <b>Table</b> 1.
BALMAIN		
13 Beattie Street 100% support (13 responses)	Refer to Themes 1, 2 and 9 .	Refer to Themes 1, 2 and 9 <b>Table 1</b> .
176 Darling Street 75% support (8 responses)	Concerns relating "loss of parking" in an area with high parking demand.  Suggest relocating chargers to area enclosed by Victoria Road, Beattie Street, Darling Street, Stephen Street and White Bay.	The current proposal does not remove parking, it transitions 1 space from ICE to EV. Given the growing demand in Balmain and the proportion of early adopters within the local community, the availability of EV spaces is considered essential.  Balmain has 13 charging ports currently proposed based on the NSW State grant funding criteria. Additional deployment is anticipated as demand increases.
2 King Street 87.50% support (16 responses)	King Street is a quiet street that is close to the shops on Darling Street. Support is given for a charger here.  Identifies a lack of off-street parking in this area resulting in high on-street parking demand. Contends that there are not enough public chargers proposed and would prefer onstreet private charging.	Noted.  Provision of private kerbside charging is outside the scope of this project and is being examined, separately, by Council.  Concerns regarding vandalism, different charger types, cover from rain and overstaying have been noted and will be discussed with providers.

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Reference Point	Concerns Expressed	Council Response
	Concerns were raised relating to vandalism, different charger types, cover from rain and overstaying.	The high support rate for this proposed charging location, negates the need to relocate it.
	Suggests relocating the charger onto Darling Street.	
21 St Andrew Street 86.67% support (15 responses)	Unsupportive submissions raised inequity in having the only 60kW charger in Balmain Peninsula rather than a more accessible area.	The 60kW charger has been proposed as part of the overall network mix to assist in examining opportunities for future deployment models.
	Suggestion to have a 7kW or 22kW backup in case of outages.	Council will encourage greater diversity in charger types including future proofing for cars capable of charging faster, as well as broader distribution of locations as demand grows.  Suggestion noted and passed onto EVSE.
Opposite 26 Terry Street 100% support (4 responses)	Refer to Theme 8 <b>Table</b> 1.	Refer to Theme 8 <b>Table 1</b> .
BALMAIN EAST		
3 Gallimore Avenue 83.33% support (12 responses)	Good location.  Concerns raised regarding confusing traffic conditions and	Concerns are noted. Traffic in Balmain East is being reviewed under a precinct LATM study.
	bottlenecks on Gallimore Avenue impacting the safety of the area.	The EV charging partner has confirmed that the footpath width is inadequate for an EV charger. The proposed charging location will be removed from consideration at the LTC.

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Support from residents due to lack of off-street charging options in the vicinity.	Reference Point	Concerns Expressed	Council Response
Geresponses   Options in the vicinity.	5 Pearson Street	Support from residents due to	Noted.
Concerns are noted. Traffic in Balmain East is being reviewed under a precinct LATM study. An EV charger in this location is not expected to significantly change the traffic and parking behaviour in this area.    BIRCHGROVE	83.33% support	lack of off-street charging	
Balmain East is being reviewed under a precinct LATM study. An EV charger in this location is not expected to significantly change the traffic and parking behaviour in this area.    BIRCHGROVE	(6 responses)	options in the vicinity.	
Concerns raised regarding confusing traffic conditions and bottlenecks on Weston Street impacting the safety of the area.  BIRCHGROVE  Opposite 39 Grove Street (10 responses)  High parking demand from dumped cars and trailers, as well as from sporting events at the Oval.  Request to make parking easier and more convenient for residents and visitors.  Refer to Themes 1, 6 and 8 Table  1.  Refer to Themes 1, 6 and 8 Table  1.  Refer to Themes 1, 6 and 8 Table  1.  Deposite 35 Grove Street (20 significantly change the traffic and parking behaviour in this area.  Team have been notified of dumped cars and trailers.  The charger is proposed in the public domain adjacent Birchgrove Oval to support EV charging for the Community visiting Birchgrove Oval and EV owners in the vicinity.  It is considered that the transitior of existing parking spaces to EV charging will generally not result in significant changes to parking or traffic conditions in the local area. Further, with this area identified as having potential for high levels of uptake, the provision of EV charging spaces is proposed to assist residents who do not have off-street parking.  Opposite 55 Grove Street 88.89% support	3 Weston Street	Good location.	Concerns are noted. Traffic in
confusing traffic conditions and bottlenecks on Weston Street impacting the safety of the area.  BIRCHGROVE  Opposite 39 Grove Street  60% support (10 responses)  High parking demand from dumped cars and trailers, as well as from sporting events at the Oval.  Request to make parking easier and more convenient for residents and visitors.  Refer to Themes 1, 6 and 8 Table 1.  Refer to Themes 1, 6 and 8 Table 1.  It is considered that the transitior of existing parking spaces to EV charging will generally not result in significant changes to parking or traffic conditions in the local area. Further, with this area identified as having potential for high levels of uptake, the provision of EV charging spaces is proposed to assist residents who do not have off-street parking.  Opposite 55 Grove Street  88.89% support			Balmain East is being reviewed
bottlenecks on Weston Street impacting the safety of the area.  BIRCHGROVE  Opposite 39 Grove Street 60% support (10 responses)  Request to make parking easier and more convenient for residents and visitors.  Refer to Themes 1, 6 and 8 Table 1.  Refer to Themes 1, 6 and 8 Table 2.  Refer to Themes 1, 6 and 8 Table 3.  Supportive responses included 7.  Opposite 55 Grove Street impacting the safety of the area.  BIRCHGROVE  A the Unique Cars and trailers, as well as from sporting events at the Oval.  Noted. Council's Enforcement Team have been notified of dumped cars and trailers.  Noted. Council's Enforcement Team have been notified of dumped cars and trailers.  The charger is proposed in the public domain adjacent Birchgrove Oval to support EV charging for the Community visiting Birchgrove Oval and EV owners in the vicinity.  It is considered that the transition of existing parking spaces to EV charging will generally not result in significant changes to parking or traffic conditions in the local area. Further, with this area identified as having potential for high levels of uptake, the provision of EV charging spaces is proposed to assist residents who do not have off-street parking.  Opposite 55 Grove Street 88.89% support	(16 responses)	,	
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Reference Point	Concerns Expressed	Council Response
	Suggested having two ports like the other chargers.	Each provider has different types of chargers and selected the sites for their chargers in line with State guidelines and local policies.
116 Rowntree Street 42.86% support (7 responses)	Refer to Themes 1 and 4 <b>Table</b> 1.	Due to the low support rate, the charging provider is no longer requesting a dedicated space for this charger.  The provider now proposes a dedicated space at the former "opportunity charger" proposed for 21–23 Corunna Road,
OAN ADEDDOMAN		Stanmore.
CAMPERDOWN 8 Federation	Refer to Theme 8 <b>Table 1.</b>	Refer to Theme 8 <b>Table 1.</b>
Road 100% support (11 responses)	Refer to meme ordine i.	Refer to meme ordine i.
15 Fowler Street 77.78% support (9 responses)	Chargers should be on the park side rather than the café side.	Chargers are proposed on the park side of Fowler Street.
·	This is a busy location with high parking demand. Parking enforcement is important particularly on weekdays.	Noted.
Opposite 46-48 Mallett Street 80% support (5 responses)	Concerns raised regarding impact of chargers impeding future cycleways on Mallett Street, suggest relocating elsewhere.  Ideal location however, there is high parking demand. Enforcement will be important.	Council's Road User Hierarchy places cycling above private vehicles. Council's current Cycling Strategy does not indicate any proposal for a dedicated cycleway on this section of Mallett Street, however, should a cycleway be proposed in the future, Council would work with charging providers to relocate charging spaces if required.

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Reference Point	Concerns Expressed	Council Response
		Noted.
Opposite 94 Mallett Street 80% support (5 responses)	Concerns raised about chargers impeding future safe, separated cycling route between Newtown, Camperdown and Annandale.  Parking enforcement is considered important due to high demand on weekdays.	Council's Road User Hierarchy places cycling above private vehicles. Council's current Cycling Strategy does not indicate any proposal for a dedicated cycleway on this section of Mallett Street, however, should a cycleway be proposed in the future, Council would work with charging providers to relocate charging spaces if required.
		Noted.
DULWICH HILL		
61 Constitution Road 91.67% support (12 responses)	Suggestions to relocate charger to park side of Constitution Road, to Arlington Oval or Arlington station because Constitution Road is too narrow and busy.	Charger is proposed on park side of Constitution Road.  This section of Constitution Road is approximately 10 metres wide and as parking is already available at this location it is considered that there would be no change to the manoeuvring or travel patterns resulting from transition office space to EV charging.
1 Myra Road 100% support (12 responses)	The location is considered good, particularly for residents without off-street parking, though there is concern about potential areas affected by flooding near The Parade.  Suggestions include pairing the installation with parking policies, enforcement, and	Noted. The contributor's concern regarding flooding has been referred to Council's Stormwater Team.  Noted, charger is proposed to support strata blocks without offstreet parking. It is also walking distance from the Greenway and

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Reference Point	Concerns Expressed	Council Response
	amenities to manage cars	local parks.
	waiting to charge.	
		Council is discussing
		opportunities for providers' apps
		to permit pre-booking of spaces
		to minimise inconvenience.
79 Pigott Street	The location is generally	After further investigation, the
93.75% support	supported, but a suggestion	pole nominated for a proposed
(16 responses)	was made to relocate closer to	charger is a private pole. Due to
	Lewisham Train Station or to the	the high support rate, Council is
	park side.	negotiating with the provider
	0	and alternate locations are
	Concern was expressed about	being considered.
	the charger being near a	Natari
	mobility parking and in a	Noted.
	Resident Parking Scheme (RPS)	
23 Terrace Road	zone.	Natad
	Support expressed especially as	Noted.
100% support (12 responses)	there will be a dedicated bay for charging.	
ENMORE	Tor charging.	
8 Belmore Street	Refer to Theme 9 in <b>Table</b> 1.	Refer to Theme 9 in <b>Table 1</b> .
100% support	Refer to Therne 3 in Tuble i.	Refer to meme 3 in Table I.
(6 responses)		
2 Cavendish	Support provided for proposed	Noted.
Street	charging locations due to	
100% support	proximity to shops.	Council will encourage greater
(10 responses)	. , .	diversity in charger types
	Suggestions for chargers in	including future proofing for cars
	south Stanmore and west of	capable of charging faster, as
	Enmore Road where there is a	well as broader distribution of
	lot of strata residential housing.	locations as demand grows.
		Refer to Theme 2 in <b>Table 1</b> .
59 Metropolitan	Good location due to low traffic	Noted.
Road	and its convenience to nearby	
75% support	amenities.	While there currently may only
(12 responses)		be limited demand from the
	It was suggested that the	residents of Metropolitan Road,
	location was inappropriate	this proposal aims to future proof

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	<u> </u>	
Reference Point	Concerns Expressed	Council Response
	because the lower half of Metropolitan Road does not have any EV owners.	EV charging infrastructure across Inner West to assist residents and the Community as demand grows.
	Concern was also expressed that there is already high parking demand on Metropolitan Road, resulting in traffic and parking issues for residents. Concerns about EV owners overstaying is also raised.	Concerns about traffic and parking issues are noted; however, it is not considered that transition of existing parking spaces to EV charging will result in significant changes to existing parking or traffic conditions.
	Fire risk from EVs is also raised.	A recent study out of Swinburne University indicates that ICE cars are 20 times more likely to catch fire than electric cars.
HABERFIELD		
170 Hawthorne Parade 83.33% support (12 responses)	Generally supported, however some responses referred to the street being too busy, and that the charger is located outside a house.  Concern also raised regarding the appropriateness of having EV chargers in a heritage area.	It is not considered that the transition of existing parking spaces to EV charging will result in significant changes to parking or traffic conditions. In addition, the house has approximately 25 metres of setback from the front property boundary.  The heritage concern has been referred to Council's heritage team.
LEICHHARDT		
31 Coleridge Street 100% support (5 responses)	Supportive of proposed location. There are many EVs seen in the area.	Noted.
Near 2 Marion Street 100% support (3 responses)	N/A	N/A

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Concerns Expressed	Council Response
Refer to Theme 8 <b>Table</b> 1.	Refer to Theme 8 in <b>Table 1</b> .
Suggestions for alternative locations provided.	As the support rate for this location is above 70%, the proposed location will be retained.
Supportive responses however concern was raised on the trade-off between having to pay for charging <i>and</i> parking.	While the proposed location received 100% support rate, it is located within Norton Street main street. Council's preference is to not have chargers located on main streets. Council is exploring opportunities to relocate this proposed charger to an alternative location nearby.
Supportive responses however preference is for the charger to be proposed on Norton Street, Leichhardt.	Council's preference is not to have kerbside chargers located on main streets.
Responses were generally supportive. Concerns were raised about parking impacts given existing issues with abandoned vehicles, trailers and a new dedicated mobility space on the street.	Council will monitor parking demand and investigate abandoned vehicles and trailers on Gould Avenue.
Generally supported, however concern raised regarding impacts on possible future Lilyfield Road Cycleway and potential local anti-social behaviour.	Lilyfield Road has been identified as "Prioritised cycling access" in Council's adopted Cycling Strategy.  Given the support for this proposed location, Council will renegotiate with the provider on relocating this charger to an adjacent street close to initial
	Refer to Theme 8Table 1.  Suggestions for alternative locations provided.  Supportive responses however concern was raised on the trade-off between having to pay for charging and parking.  Supportive responses however preference is for the charger to be proposed on Norton Street, Leichhardt.  Responses were generally supportive. Concerns were raised about parking impacts given existing issues with abandoned vehicles, trailers and a new dedicated mobility space on the street.  Generally supported, however concern raised regarding impacts on possible future Lilyfield Road Cycleway and potential local anti-social

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Reference Point	Concerns Expressed	Council Response
		indicates potential for the
		charger to impact on the
		proposed cycleway.
MARRICKVILLE		
Near 35 Fitzroy	Responses are supportive,	Noted. Refer to <b>Table 1</b> for future
Street	however, there is also a desire	rollout of kerbside EV charging.
100% support	for more chargers in this area.	
(5 responses)		Council will encourage greater
		diversity in charger types
		including future proofing for cars
		capable of charging faster, as
		well as broader distribution of
40.11.1.66		locations as demand grows.
42 Malakoff	Responders would like the	The charger location is already
Street	charger moved to the park side	proposed on the park side,
78.95% support	of Malakoff Street. Accessibility	consequently there are no
(19 responses)	issues were raised about	driveways affected.
	having chargers next to	
1 Rich Street	driveways.  Refer to Themes 1 and 2 <b>Table 1</b> .	Refer to Themes 1 and 2 <b>Table 1</b> .
100% support	Refer to memes rand 2 rable i.	Refer to memes rand 2 rable i.
(10 responses)		
80 Victoria Road	Many submissions highlight the	Noted.
100% support	high turnover rates at this	Notes.
(15 responses)	location, indicating frequent	
(10 100 por 1000)	use and demand.	
NEWTOWN		
2 Alice Street	Generally supported,	At this time a separated
71.43% support	concerned expressed	cycleway is not proposed for
(14 responses)	regarding impact on possible	Alice Street, however, should a
	future cycleway.	cycleway be proposed in the
		future there are cycle-friendly
		configurations that can be
		explored. Should these not be
		acceptable, chargers could be
		moved.
7 Holmwood	Responses are supportive.	Noted.
Street		
100% support		

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Reference Point	Concerns Expressed	Council Response
(9 responses)		
ROZELLE		
6 Burt Street 100% support (3 responses)	Refer to Theme 1 <b>Table 1</b> .	Refer to Theme 1 Table 11.
551 Darling Street 100% support (7 responses)	Supported, noting there are three apartment buildings nearby and one awaiting approval.	Noted.
Near 1 Denison Street 100% support (6 responses)	Refer to Theme 8 <b>Table 1</b> .	Refer to Theme 8 <b>Table 1</b> .
178 Evans Street 14.29% support (7 responses)	High parking demand on this street.  Suggestion to replace GoGet dedicated parking bay with EV charging parking bay.  Would like reassurance that chargers are not funded by ratepayers. Rates should be reinvested to making streets more resident car friendly instead.	Due to low support for dedicated charging space, the provider is no longer requesting a dedicated space for this charger. It will now be an "opportunity charger" with no marked space.  Inner West's Road User Hierarchy places active transport and public transport over car ownership. It also places carshare above private vehicles. Carshare dedicated parking spaces will not be removed for EV chargers as they are considered complementary elements of the overall transport network.  The chargers proposed are fully funded by a combination of State Government grants and the providers. Council funds were not required to implement the charging network currently proposed.

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Reference Point	Concerns Expressed	Council Response
90 Lilyfield Road 87.50% support (8 responses)	Generally supported, however, concern was expressed that the charger may impede on Lilyfield Road cycleway.	Lilyfield Road has been identified as "Prioritised cycling access" in Council's adopted Cycling Strategy.
		The proposed location of this charger will not affect the Lilyfield Road cycleway.
Slade Street (Opposite 188 Beattie Street) 100% support (5 responses)	Charger is close to shops and will be in high demand.  Suggestions for more chargers in this area, particularly at reserves, sport clubs and grounds.	Noted, though out of scope. Refer to Themes 2 and 8 <b>Table 1</b> .
SUMMER HILL		
Opposite 2 Allman Avenue 88.89% support (9 responses)	Generally supported however some concern was expressed that the location is not good enough for residents of Smith Street, Summer Hill, and so it should be relocated to a position further down Smith Street at John Paton Reserve.	The overall charging network proposal has been prepared in response to anticipated future demand in accordance with the growth rates discussed earlier.  Given the high support for this location, the site will remain unchanged. Other locations will be considered for future rollout.
Opposite 16 Gower Street 87.50% support (8 responses)	Generally supported, noting however that there is high parking demand on Allman Avenue. There was a suggestion to move charger elsewhere and have more chargers to support demand.	Proposed charging location will support visitors to Summer Hill shops and strata apartments on Allman Avenue. Most nearby houses have off-street parking opportunities, and it is not considered that the transition of existing parking spaces to EV charging will result in significant changes to parking or traffic conditions.
TEMPE		

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Reference Point	Concerns Expressed	Council Response
Tempe Reserve	Proposed location is close to	Noted.
Park	amenities and far away from	
100% support	residents.	
(18 responses)		

# Assessment of Individual Sites "Opportunity Charging" - without dedicated spaces

There were 41 charging ports proposed without dedicate spaces "Opportunity Charging". These ports do not require changes to the existing parking controls, and, under the Transport and Infrastructure SEPP; they do not require Council consent. Council included these ports in the overall exhibition to provide the Community with a better understanding of the proposed overall network and collected Community feedback with view to providing Council's charging partners with this feedback.

Table 3: Feedback on proposed EVC units without changes to parking restrictions

Reference	Concerns Expressed	Council Response
Point		
ANNANDALE		
91 Annandale Street 100% support (3 responses)	Refer to Theme 5 Table 1.	Refer to Theme 5 <b>Table 1</b> .
131 Annandale Street 42.86% support (14 responses)	There are currently no EVs on this street.  High parking demand on Annandale Street.	The overall charging network proposal has been prepared in response to anticipated future demand in accordance with the growth rates discussed earlier.  Most properties on Annandale Street have off street parking. The space is not dedicated and hence, resident parking is not impacted.
270 Johnston Street 88.89% support (9 responses)	Refer to Theme 5 <b>Table 1</b> .	Refer to Theme 5 <b>Table 1</b> .

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Reference	Concerns Expressed	Council Response
Point		
272 Johnston Street 100% support (6 responses)	Suggestion to move charger near GoGet parking spaces near Rozelle Bay light rail. It is less congested and EV owners can charge their cars without impacting residents.	Given 100% support rate, the location will remain unchanged.
26 Nelson Street 100% support (6 responses)	Responders do not have off- street parking options and thinks this proposal is a great initiative.	Noted.
118 Nelson Street 75% support (8 responses)	Objection to chargers on residential streets and would not like any trees removed. Concerns were also raised on "ancient power grid" and blackouts caused by kerbside chargers.	Noted. Council is also opposed to the removal trees. Providers are in discussion with Ausgrid to ensure sufficient power supply for public EV chargers.
136 Young Street 100% support (3 responses)	Suggestion to have 'superchargers'.	The kerbside chargers will have slow charging to support longer activities and resident charging overnight. Council is pursuing diversity of charger types in the longer term. Additionally, 'superchargers'/ultra-fats chargers place a significantly higher demand on the power grid and are consequently unsuitable for many locations.
ASHFIELD		,
34 Chandos Street 75% support (4 responses)	Will support the many old strata apartments in the area.  Suggestion to move the charger to Ashfield Park instead of having two chargers close to each other.	Noted.  The proposed chargers are located to cater for projected high demand in the immediate area.
BALMAIN		
164 Darling Street 90% support	Refer to Theme 5 <b>Table 1</b> .	Refer to Theme 5 <b>Table 1</b> .

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Reference Point	Concerns Expressed	Council Response
(10 responses)		
180 Darling Street 66.67% support (9 responses)	High parking demand. Suggestion to implement RPS on Darling Street should charger be installed.	Council is continuing to review RPS establishment in Inner West.  Refer to <b>Table</b> 1 for high parking demand.
BALMAIN EAST		demand.
20 Johnston Street 75% support (4 responses)	Refer to Theme 5 <b>Table 1</b> .	Refer to Theme 5 <b>Table 1</b> .
9 Nicholson Street 77.78% support (9 responses)	Refer to Themes 1, 5 and 9 <b>Table</b> 1.	Refer to Themes 1, 5 and 9 <b>Table 1</b> .
BIRCHGROVE		
90 Rowntree Street 100% support (5 responses)	Rowntree Street is wide, has convenient parking and is close to cafes and school.	Noted.
98 Rowntree Street 37.50% support (8 responses)	Opposed based on existing high parking demand and the street being busy and narrow.  Concern was also expressed that the site is too close to a bus stop and outside residence.  Suggestions provided on alternative locations to relocate proposed charger.  Conflicting feedback identified	It is not expected that "opportunity chargers" will change existing traffic and parking behaviour.  Refer to Theme 3 Table 1.
Street 50% support (8 submissions)	Rowntree Street as both wide and close to amenities, while also too narrow for EV charging.	
CAMPERDOWN		
31 Mallett Street 100% support (4 responses)	Refer to Themes 5 and 8 in Table 1.	Refer to Themes 5 and 8 <b>Table 1</b> .

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Reference	Concerns Expressed	Council Response
Point		
DULWICH HILL		
100 Constitution Road 45.45% support (11 responses)	Constitution Road is too busy and narrow for charger.	Constitution Road is a collector road. Together with the low support for this proposed location, Council will raise the concerns with the provider, however parking manoeuvres associated with EVs should be no different to existing manoeuvres by ICEs.
17 Dulwich Street 75% support (8 responses)	Suggestion to move chargers closer to Dulwich Hill shopping precincts due to lack of nontimed parking space on Dulwich Hill shops.	Refer to Theme 6 <b>Table 1</b> .  Given that the proposed charger will not have an associated dedicated charging bay, Council expects minimal impact on existing traffic and parking on Dulwich Street.
39 Dulwich Street 77.78% support (9 responses)	Refer to Theme 6 <b>Table 1</b> .	Refer to Theme 6 <b>Table 1</b> .
5 Grove Street 53.33% support (15 responses)	Concern has been expressed over the existing high parking demand. EV charger will introduce additional traffic onto Grove Street, especially since two chargers are proposed on Grove Street.  Concern also raised over safety, lack of space for bin collection, busy apartment block on Grove Street, no incentive to move the car once it is charged, no EV owners on the street, unequitable distribution of chargers and not meeting the site selection criteria.	Refer to Theme 6 Table 1.  There is predicted high demand for public EV chargers at this location. The provider has decided to retain the charging location as it is not expected that "opportunity chargers" will change existing traffic and parking behaviour.  As an "opportunity" charger, without a marked space, this charger will not reduce parking supply. Consequently, the provider has decided to retain the location and monitor its use.

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Reference	Concerns Expressed	Council Response
Point		
17 Grove Street 50% support (16 responses)	Concern has been expressed over the existing high parking demand. EV charger will	Refer to <b>discussion of</b> for high parking demand.
	introduce additional traffic onto Grove Street, especially since two chargers are proposed on Grove Street.	The overall charging network proposal has been prepared in response to anticipated future demand in accordance with the growth rates discussed earlier.
	Raised noise concerns, illegal occupation of parking bay, busy apartment block on Grove Street, no EV owners on the street, unequitable distribution of chargers and not meeting the site selection criteria.	There is predicted high demand for public EV chargers at this location. The provider has decided to retain the charging location as it is not expected that "opportunity chargers" will change existing traffic and parking behaviour.  As an "opportunity" charger, without a marked space, this charger will not reduce parking supply. Consequently, the provider has decided to retain the location and monitor its use.
ENMORE		
32 Belmore Street 100% support (4 responses)	N/A	N/A
35 Metropolitan Road 72.73% support (11 responses)	Refer to Theme 2 <b>Table 1</b> .	Refer to Theme 2 <b>Table 1</b> .
93 Metropolitan Road 77.78% support (9 responses)	Concern over existing high parking demand especially with two mobility parking spaces outside the Greek Church leading to traffic and parking problems and impacts on	Refer to Theme 6 <b>Table 1</b> .  It is not expected that "opportunity chargers" will change existing traffic and parking behaviour.

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Reference Point	Concerns Expressed	Council Response
	residents' ability to park near their homes.	A recent study out of Swinburne University indicates that ICE cars are 20 times more likely to catch
	Metropolitan Road can only be accessed from one direction.	fire than electric cars.
	Safety concerns regarding EV fires is raised.	
LEICHHARDT		
29 Day Street 50% support	Location is considered suitable as it is close to Norton Street and	Refer to Theme 6 <b>Table 1</b> .
(6 responses)	the top end of Cary Street.	It is not expected that "opportunity chargers" will
	Concerns raised about the existing lack of parking for residents.	change existing traffic and parking behaviour.
14 Elswick Street	Suggestion to move charger to	Council is continuing to review
66.67% support	the RPS on Jarrett Street instead	RPS in Inner West.
(3 responses)	to reduce parking pressure for residents on Elswick Street without access to parking permits.	Refer to Theme 6 <b>Table 1</b> .
86 Elswick	Supportive of EV chargers,	Council is currently reviewing RPS
Street 66.67% support	however not on Elswick Street.	in Inner West.
(6 responses)	Concern over the existing high parking demand due to	Refer to Theme 6 Table 1.
	abandoned vehicles and	It is not expected that
	parking permit holders parking	"opportunity chargers" will
	on Elswick Street.	change existing traffic and
LEMMOLIANA		parking behaviour.
LEWISHAM	Paramana and the title	Natad
3 Wardell Road 100% support	Responses suggested that this proposal is incentive enough for	Noted.
(9 responses)	the contributor to consider buying an EV.	Refer to Theme 6 <b>Table 1</b> .
	, ,	There are two other chargers
	Preference expressed for this charger to have a dedicated	proposed within a 5-minute walk from 3 Wardell Road.

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Reference	Concerns Expressed	Council Response
Point		
	space and there are no other chargers currently proposed in the vicinity.	
27 Wardell Road	Suggested that this will provide good opportunity for charging	Noted.
81.82% support (11 responses)	for local residents.	Refer to Theme 6 <b>Table 1</b> .
	Concern that there is an existing high parking demand due to abandoned vehicles and cars from local mechanic parked on Wardell Road. Losing parking space will cause inconvenience to the neighbourhood.  Safety and amenity concerns raised due to cars driving up to 70km/hr on Wardell Road and many young families residing on Wardell Road. In particular, walking across Wardell Road with a baby risks the lives of	Council is aware of safety issues on Wardell Road from vehicles driving at speed. This has been captured in InnerWest@40. Council is exploring funding mechanisms to implement InnerWest@40.  It is not expected that "opportunity chargers" will change existing traffic and parking behaviour.
	pedestrians involved.	
MARRICKVILLE		
<b>2 George Street</b> 88.89% support	George Street is full of strata buildings and a charger would	Noted.
(9 responses)	benefit its residents.	Refer to Theme 6 <b>Table 1</b> .
	Concerns were raised about the existing high level of parking demand being exacerbated by installing a kerbside charger.	
31 Warren Street	Raised safety concerns	Council have raised the safety
33.33% support	including narrow streets	issue with the provider,
(15 responses)	resulting with cars currently	requesting consideration of an
NEWTON	being scraped by trucks.	alternative location.
NEWTOWN		
17 Holmwood	There are low traffic volumes on	Noted. Refer to Themes 4 and 6
Street	Holmwood Street making it	Table 1.

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Reference	Concerns Expressed	Council Response
Point	Ochlochile Expressed	
72.73% support	suitable for EV charging.	
(11 responses)	However, concern was	The charger proposed here only
	expressed that there are too	has a single port and therefore
	many proposed on this street.	can only charge one car at a
		time consequently 90-degree
	Other suggestions included	parking would not be specifically
	having 90-degree parking	beneficial.
	spaces for the potential to	
	charge multiple cars with fewer	Noted. Non-dedicated EV
	chargers.	charging spaces will not change
	Carra material and a symmetric difference	existing parking restrictions. In
	Some preference expressed for timed restrictions on parking to	this instance, the RPS will remain in place.
	be removed for low-rate	in piace.
	charging.	
35 Holmwood	There are low traffic volumes on	Noted.
Street	Holmwood Street making it	
72.73% support	suitable for EV charging.	Council will monitor the site to
(11 responses)		examine whether there are
	Accessibility concerns raised as	impacts on the existing mobility
	it is placed next to a mobility	parking space.
	parking space and may impede	
	on the person's ability to get into	The contributor's concern
	the car.	regarding flooding has been
		referred to council's Stormwater
	Constant flooding on Holmwood Street is raised as a concern.	Team.
	Suggestion to implement rear to	Rear to kerb parking is not
	kerb parking.	generally favoured by Council or
	, none pariting.	the State.
59 Holmwood	There are low traffic volumes on	Refer to Themes 2 and 6 <b>Table 1</b> .
Street	Holmwood Street making it	
90% support	suitable for EV charging.	
(10 responses)		
	Alternate locations suggested	
	with the potential for	
	signposted/dedicated EV	
DETEROLIANA	charging parking space.	
PETERSHAM		

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Reference Point	Concerns Expressed	Council Response
9 Fort Street 80% support (5 responses)	General support for chargers in the area.  One contributor requested that fees and chargers are applied to use the chargers.	Noted.  Noted, all chargers will have user pays fees applied for using the chargers. Additionally, there is no change to parking restrictions associated with this charger.
ROZELLE		associated with this original.
Opposite 103 Denison Street 90% support (10 responses)	Request for this proposed charger to have dedicated spaces.  Wants to encourage higher turnover of cars using chargers particularly during children's sporting events.	Due to high support for dedicated charging spaces at Opposite 103 Denison Street, Rozelle, the provider has decided to move the dedicated charging bay from 178 Evans Street, Rozelle, to Opposite 103 Denison Street, Rozelle.
		Noted. Penalty fees will be implemented by providers when EVs overstay their charging periods.
17 Hornsey Street 60% support (5 responses)	Concern about high parking demand and a dedicated EV charging parking space will only create more demand. The street is also under an RPS.	Refer to Theme 6 <b>Table 1</b> , however, it should be noted that the proposed charger does not have an associated dedicated parking bay.
	Suggestion to move charger to the turning circle at the eastern end of Hornsey Street that is currently zoned "no parking".	The turning circle is signposted as "no parking" for safety reasons and acts as an access point for emergency vehicles. Council does not support permanent parking here.
STANMORE		
21-23 Corunna Road 100% support (5 responses)	Refer to Theme 5 <b>Table 1</b> .	In response to the high support for dedicated charging spaces at 21-23 Corunna Road, Stanmore, the provider proposes to give this charger a dedicated space (and to transition the charger at 116

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Reference	Concerns Expressed	Council Response
Point		
		Rowntree Street, Birchgrove, to undedicated.
75 Corunna	Concerns raised on existing	Refer to Theme 6 <b>Table 1</b> .
Road	difficulty to park on Corunna	
80% support	Road being exacerbated by	
(5 responses)	installing an EV charger.	
SUMMER HILL		
64 Kensington	Refer to Themes 5 and 8 <b>Table 1</b> .	Refer to Themes 5 and 8 <b>Table 1</b> .
Road		
100% support		
(4 responses)		
TEMPE		
88 Terry Street	Most contributors are	Noted for consideration of future
83.33% support	supportive, some would also like	chargers. Refer to Themes 2 and 6
(12 responses)	more in Tempe.	Table 1.
	Some concerns were raised	Kerbside chargers are to support
	about encouraging more traffic	the Community as a whole.
	onto Terry Road, which is already	
	difficult to find parking on. Most	
	houses here have off-street	
	parking and does not need to be	
	supported by kerbside chargers.	

# **Stakeholder Groups**

Two responses were received from a stakeholder groups: *Newtown Climate* and a petition from residents of Grove Street

# Newtown Climate

Newtown Climate is an incorporated community climate organisation based in Newtown. Its vision is for;

Newtown to become Australia's first inner-city zero emissions Community, through a transition that is fast, fair and fun.

The response received from Newtown Climate makes the following points:

- All new chargers should be paired with signposted, dedicated charging spaces.
- EV chargers should not be installed on active transport routes.

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 Electric vehicle ownership cannot be the only strategy for decarbonising local transport.

Petition from residents of Grove Street, Dulwich Hill

A petition with 22 signatures from 13 households was received on the undedicated chargers proposed on service poles outside 5 Grove Street and 17 Grove Street, Dulwich Hill.

The response received in this petition makes the following points:

- Concern over a major development over-providing on-site parking and not providing EV charging.
- Contention that no other residents have an EV and are not likely to get one in the future.
- Long-term residents in houses with bedrooms facing the street will experience reduced amenities such as privacy and sleep.
- Issues regarding footpath width and garbage bin placement.

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# **Next steps**

This engagement outcomes report will be used to inform the Local Traffic Committee report. Following the Local Traffic Committee's consideration and recommendations, its minutes will be presented to Council for endorsement.

Subsequently, any additional investigation required by the EV charging providers in response to internal advice (e.g., Councils traffic engineers and stormwater & drainage engineers) will be carried out.

Sites which achieve over 70% support or greater will be implemented as the first priority, Sites requiring further investigation (50%-70%) will be reviewed and implemented, relocated or omitted as appropriate.

Sites with less than 50% support will be omitted and/relocated based on internal advice and discussions with Ausgrid and Council's partner providers.

To satisfy the New South Wales State Government Kerbside EV Charging Grant Program all charging ports should be installed before the end of April 2025. Any charging ports not installed by this time are lose their funding.

Given the high level of support and request for additional charging Council will also work with its partner providers, Ausgrid and the State Government to examine opportunities for new low impact sites that respond to the Community's needs.

All community members who provided feedback will be notified when the final Policy and Guidelines will be considered by the Local Traffic Committee and Council at the following Council Meeting.

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Item No: LTC1024(1) Item 12

Subject: METROPOLITAN ROAD, ENMORE - PROPOSED CHANGES TO

MOBILITY PARKING (DAMUN-STANMORE WARD/NEWTOWN

**ELECTORATE/INNER WEST PAC)** 

**Prepared By:** James Nguyen - Traffic Engineer

**Authorised By:** Manod Wickramasinghe - Traffic and Transport Planning Manager

# **RECOMMENDATION**

That the drawing showing additional timed parking restriction, changes to the existing mobility parking space, kerb extension, 'STOP' control line and kerb ramps on Metropolitan Road, Enmore (drawing no. 10300 sheet 1 of 1 – Metropolitan Road, Enmore - proposed adjustment to accessible parking space) be approved.

## STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

## **EXECUTIVE SUMMARY**

This report outlines a proposal to improve an existing mobility parking space on Metropolitan Road between Enmore Road and Enmore Lane, and accessibility across Metropolitan Road.

# **BACKGROUND**

Council is proposing to adjust the existing angle parking layout and restrictions on the eastern side of Metropolitan Road, Enmore to improve access to the mobility parking space.

## **DISCUSSION**

The eastern side of Metropolitan Road between Enmore Road and Enmore Lane is 90 degree rear to kerb angle parking consisting of a mail zone, timed parking (1-hour), and a mobility parking space. The existing mobility parking space is substandard (2.8m wide) and does not have an accompanying kerb ramp or adjacent manoeuvre space (shared area) that is required for a mobility parking space. Accordingly, it is proposed to:

- Widen the existing mobility parking space from 2.8m to 3.2m;
- Provide 1.6-metre-wide line marked shared area;
- Provide a new concrete kerb ramp next to the mobility parking space:
- Install bollards to provide delineation between the mobility parking space and shared zone; and
- Install a new 'disability parking' logo.

In addition, it is also proposed to provide one (1) additional timed parking space signposted as '1P 8.30am-6pm Mon-Fri 8.30am-12.30pm Sat'.



The changes above will require reducing the existing kerb extension on the eastern side of Metropolitan Road, north of Enmore Lane. The kerb extension is currently 6m wide and it is proposed to reduce the length to 1.5m.

The proposed changes will improve the existing mobility parking space and provide an extra parking space in a high demand parking area.

In addition to the proposed parking changes are changes to the existing 'STOP' control holding line, which is proposed to be shifted 0.8m back from the existing location. This is to ensure vehicles stop slightly back from the edge of the travel lane to improve safety.

#### **PUBLIC CONSULTATION**

Council consulted with nearby affected residents. Consultation letters were sent out on 23 August 2024 and closed on 20 September 2024. A total of 28 letters were distributed to the community with no responses received.

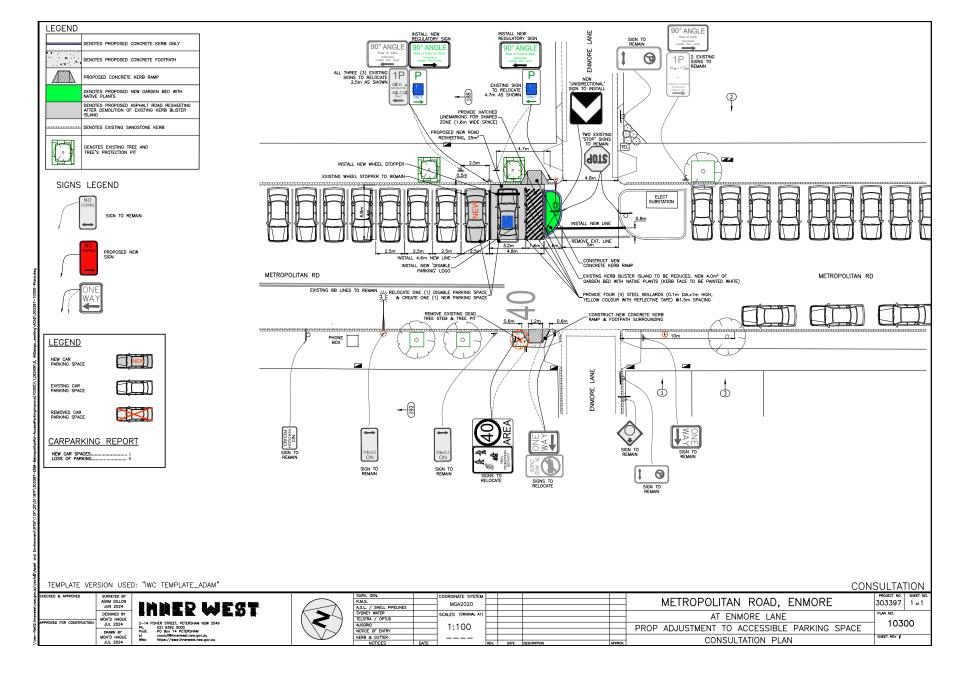
## FINANCIAL IMPLICATIONS

The proposal will be funded and delivered under Council's 2024/25 Traffic Capital Works Program.

## **ATTACHMENTS**

1. UCC Consultation plan

Item 12





Item No: LTC1024(1) Item 13

Subject: MEEKS LANE, MARRICKVILLE - PROPOSED 'NO STOPPING' AND 'NO

PARKING' RESTRICTIONS (MIDJUBURI-MARRICKVILLE WARD/SUMMER HILL ELECTORATE/INNER WEST PAC)

**Prepared By:** James Nguyen - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### **RECOMMENDATION**

That 'No Stopping' and 'No Parking' restrictions on the western side of Meeks Lane, Marrickville (i.e., along Boundary of 135 Meek Road) be installed as follows;

- 'No Stopping' restrictions extending for first 10m north of Meeks Road, and
- 'No Parking' restrictions extending 45m north from the proposed 'No Stopping' restrictions.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

This report outlines parking issues in Meeks Lane, Marrickville and identifies the appropriate parking treatment to address them. The proposed parking treatment will improve access to Meeks Lane for adjacent properties.

# **BACKGROUND**

Council has received a request for 'No Parking' restrictions on the western side of Meeks Lane, north of Meeks Road due to vehicles parking opposite existing driveways and obstructing access to Meeks Lane.

# **DISCUSSION**

Meeks Lane, Marrickville is a two-way laneway and approximately 4.3-metres-wide. A site inspection was completed on 23 July 2024 to assess parking conditions. The site inspection completed revealed motorists parking on the western side of Meeks Lane, opposite the rear driveway of no.133 Meeks Road. *Figures 1* and 2 below show the current parking conditions.





Figure 1 - Meeks Lane, Marrickville



Figure 2 - Meeks Lane Marrickville

When motorists park in the manner shown in Figures 1 and 2, access to Meeks Lane from the opposing rear driveway of no.133 Meeks Road is restricted as vehicles require the full length of the laneway to enter and exit.

Furthermore, given the narrow width of the laneway (4.3 metres) parking on one-side of the laneway reduces the through lane width to approximately 2.3 metres, and less than the desirable 2.8-3 metres minimum needed for a typical service vehicle.

Accordingly, a 'No Parking' restriction is considered at locations where motorists may park along the western kerb and proposed to commence 10 metres from the kerb line of Meeks Road and terminate at the property boundary between no. 376 and no. 378 Victoria Road. A



limit with 'No Parking' restrictions is

insufficient.

'No Stopping' restriction is proposed adjacent to the 'No Parking' restriction to ensure compliance with the NSW Road Rules. This consultation plan is shown in *Attachment 1*.

#### **PUBLIC CONSULTATION**

Council consulted on the proposal with affected residents. There were 39 letters sent with 10 responses supporting and two (2) responses opposing the proposal.

#### Officer comments **Resident comments** The responses supporting the proposal Noted. noted the need for 'No Parking' and 'No Stopping' restrictions as motorists parking on the northern side of Meeks Lane are affecting access into the laneway from Meeks Road and access to opposing rear-lane driveways. A response opposing the proposal Households who do not have off-street parking noted that these restrictions will reduce can request for Council to investigate the limited parking spaces needed for installation of permit parking restrictions outside resident on Meeks Road as parking or near their homes to assist with finding a spaces are occupied by workers during parking space near their residence, should parking opportunities be affected by external the day and affect households who parking demands. It is understood this street need to park close to their homes who do not have off-street parking. The block on Meeks Road does not have off-street response noted there is sufficient parking and there are no current permit parking access for households to enter and exit restrictions along their property frontage. their driveways when cars are parked opposite. The response requested for a It is recommended that this approach be taken reduction in the 'No Parking restriction over the current use of the northern side of Meeks Lane as a parking area which is affecting other to not include the kerb opposite no. 133 Meeks Road where the parallel parking residents. Given the narrow width of Meek Lane, spaces are located. through access can be affected as well as access to the opposite parking spaces. The response noted that drivers should be able to navigate laneways as is part of living in the Inner West/Inner City. and that If people require more space they should live in a more suburban area further away from the city. A response requested that the 'No Given this household does not use the Meeks Parking' restriction terminate at the rear Lane for long-term parking, and they have a of the property boundary of no.378 and mobility impairment, consideration should be no.380 Victoria Road. given to not allocate the 'No Parking' restriction to as sometimes needs to use the rear the kerb space (retain the existing) at the rear of access for dropping off and picking up their property to allow for them to drop-off and of goods. They advised of a mobility pick-up goods. impairment and that the 2-minute time

The 'No Parking' restriction has been amended to

terminate along the kerb space at the property boundary of no. 380 and no.378 Victoria Road.

However, should the existing parking issues



;	transfer further up along the laneway to this short section of kerb, Council engineer's may need to consider extending the 'No Parking' restriction to the property boundary of no.376 and no.378
,	Victoria Road.

## **FINANCIAL IMPLICATIONS**

The of installation of the parking restrictions as recommended will be funded within Council's operational signs and line marking budget.

# **ATTACHMENTS**

- 1.4 Consultation plan
- 2. Revised (final) proposal









Item No: LTC1024(1) Item 14

Subject: HUTCHINSON STREET, ST PETERS - PROPOSED 15-MINUTE TIMED

PARKING RESTRICTIONS (MARRICKVILLE-MIDJUBURI WARD/HEFFRON ELECTORATE/INNER WEST PAC)

**Prepared By:** James Nguyen - Traffic Engineer

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### RECOMMENDATION

That the proposed timed parking space (5.1m) signposted as 'P15 minute 7am-5pm Mon-Fri; 7am-12.30pm Sat' on the northern side of Hutchinson Street as shown in Attachment 1 be approved.

## STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

This report outlines parking issues in Hutchinson Street, St Peters and proposes 15-minute timed parking restrictions to provide short-term parking opportunities for nearby businesses.

# **BACKGROUND**

Council has received a request for 15-minute timed parking restrictions outside no 35-37 Hutchinson Street, St Peters to provide short-term parking opportunities for nearby businesses.

#### DISCUSSION

Hutchinson Street is approximately 5.6 metres wide and one-way eastbound. There are existing timed parking restrictions, loading zones and timed no parking restrictions on the northern side which provides various parking options to support residents and businesses. The southern side of Hutchinson Street is signposted as 'No Parking' to allow for drop-off and pick-up, and through access. These restrictions are shown in Figure 1 below:





Figure 1 - Existing parking restrictions - Hutchinson Street, St Peters

Currently, there are no existing short-term parking options for nearby businesses, with the shortest timed parking restriction to be the two-hour limit between no. 55 and no. 71. The existing 'No Parking 7am-5pm Mon-Fri' restriction outside businesses permits motorists two-minutes to drop-off and pick-up and an unviable option for short-term parking.

Accordingly, Council officers have received a request by businesses to consider short-term parking on Hutchinson Street where practical.

The existing 'No Parking 7am-5pm Mon-Fri' restriction on the northern side of Hutchinson Street, between no.35-37 and no.41-53 was installed to enable larger truck and trailers for trucks of no.45-47 Applebee Street to exit the driveway. However, this business is no longer operating from this building and there are now new building occupants.

Council officer's requested feedback from the new building occupiers to obtain the largest sized vehicle that exits the driveway to complete a swept path assessment and determine whether timed parking restrictions can be considered on the northern side of Hutchinson Street outside no. 35-37. Council has been advised by the building users that the largest sized vehicle exiting the driveway is an 8-metre-long vehicle.

Accordingly, a swept path assessment was completed for an 8.8-metre-long service vehicle with acceptable clearances provided with one (1) timed parking restriction outside no.35-37 Hutchinson Street.



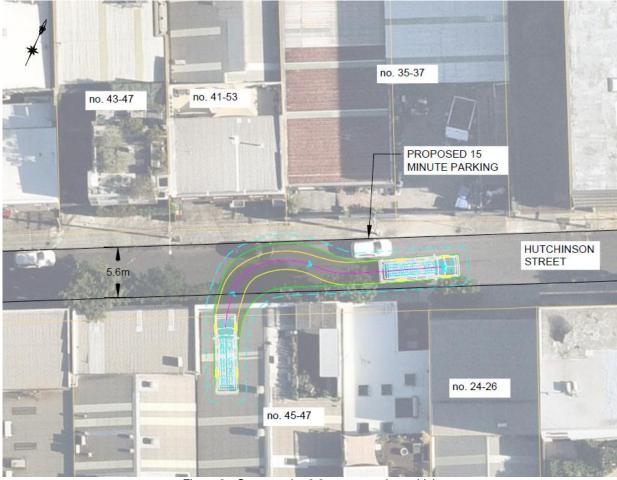


Figure 2 - Swept path - 8.8-metre service vehicle

Based on this swept path assessment, Council officer's developed a proposal to reallocate some of the existing 'No Parking 7am-5pm Mon-Fri' to short-term timed parking. Businesses requesting for the timed parking restriction had provided feedback to consider timed operation during business hours and on partial restrictions on weekends. This is shown in Figure 3 below.



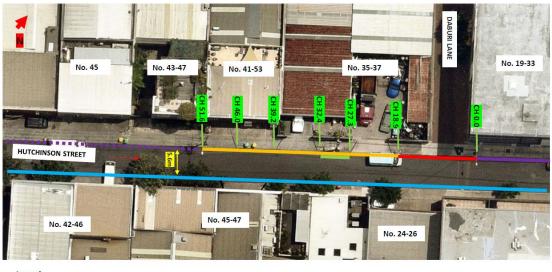




Figure 3 - Proposed parking changes

To consider business operating hours and ensure consistency with the adjacent 'No Parking 7am-5pm Mon-Fri' restrictions, it is proposed to reallocate a short section of kerb (5.1 metres) to time restricted parking signposted as 'P15 minute 7am-5pm Mon-Fri; 7am-12.30pm Sat'.

This proposal provides an additional short-term timed parking option in conjunction with the nearby two-hour timed parking restrictions, loading zones and no parking zones as shown in *Figure 1*.

# **PUBLIC CONSULTATION**

Council consulted with affected businesses and residents. Two (2) responses supporting, two (2) responses opposing, and two (2) responses undecided on the proposal. The community consultation responses are presented in Table 1 below:

Resident/business response	Officer response
Supportive of the proposal, suggest to	Given the limited number of spaces that are
increase the time limit to 1 hour or P30 as 15	being reallocated (1 space), a one (1) hour
minute is too short	time limit may not be appropriate. The
	proposed 15-minute time limit provides a
	higher turnover rate to support businesses.
	However, if it is found that 15-minutes may
	not be sufficient, consideration can be given
	to extending the time limit to P30 minute in
	the future. In addition there is two-hour timed
	permit parking restrictions between no. 57
	and no. 71 for those who require longer
	timed parking.
Not support due to limited parking on	The proposal (P15 minute 7am-5pm Mon-
Hutchinson Street which will further limit	Fri; 7am-12.30pm Sat) gains one parking
parking space	space on Hutchinson Street as the current
	parking restriction is 'No Parking 7am-5pm



	Mon-Fri. It is noted that the unrestricted hours between 7am-12.30pm Sat will be affected by this proposal, however there are adjacent parking spaces that are already unrestricted for parking on weekends. The time restriction on the Saturday morning seeks to support short-term parking needs for businesses that may be open.
Not support – trucks exiting 45-47 Applebee Street will not be able to turn out of the driveway – leave parking as it is	Council has been advised by the building strata/occupiers that the largest vehicle exiting the driveway of no.45-47 Applebee Street is an 8-metre-long vehicle. The swept path assessment completed (shown in Figure 2) suggests an 8.8-metre-long vehicle can clear a vehicle parked on the northern side where the P15 timed parking is proposed.

# **FINANCIAL IMPLICATIONS**

The of installation of the parking restrictions as recommended will be funded within Council's operational signs and line marking budget.

# **ATTACHMENTS**

1. Parking plan



# Legend Existing Loading Zone 7am-5pm Mon-Fri No Stopping No Parking 7am-5pm Mon-Fri Loading Zone 6am-5pm Mon-Fri; 7am-12.30pm Sat No Parking Proposed P15 minute 7am-5pm Mon-Fri; 7am-12.30pm Sat



Item No: LTC1024(1) Item 15

Subject: TEMPORARY SPEED REDUCTIONS TO 40 KM/H FOR SOUTHWEST

LINK

**Prepared By:** Ken Welsh - Coordinator Strategic Transport Planning

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

#### **RECOMMENDATION**

That it be noted that TfNSW will be implementing Traffic Guidance Schemes (TGS) to support the delivery of temporary speed zone reductions for the Southwest Link as outlined in the report.

#### STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

#### **EXECUTIVE SUMMARY**

During the 12-month closure of the T3 line (Sydenham to Bankstown), rail replacement Southwest Link bus services are expected to carry 56,000 (and up to 72,000) passengers a day, with the majority of passengers expected to transfer at Sydenham Station to access Metro and Train services to and from the CBD.

Temporary bus stops are being established at each station from Sydenham to Bankstown, resulting in a significant increase in pedestrian activity and footpath use.

As part of the Sydney Metro City & Southwest project, Transport for NSW is introducing temporary speed reductions at key locations to support safer streets around Southwest Link bus stops, cycling routes and to reduce noise impact on residents from replacement buses.

To support the temporary speed reductions in the Inner West Council area, Transport for NSW have procured traffic guidance schemes for the delivery of these changes.

# **BACKGROUND**

# **Proposed Scope Details**

- Introduce the temporary reductions for the full extent of the Southwest Link period, expected to be 12 months.
- The temporary changes will be reviewed throughout the project and can be adjusted as needed.
- Traffic counts to be collected throughout the temporary period to allow for evaluation and future decision-making.

# **Proposed changes**

The following locations have had traffic guidance schemes developed and are proposed to be reduced to 40km/h. Please see attached traffic guidance scheme for details.

Local Roads:

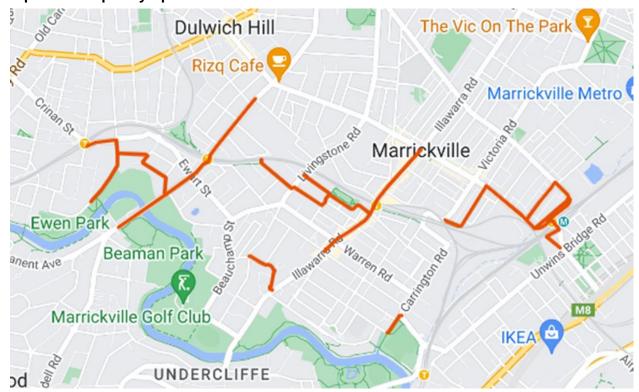


- 1. Garnett St, between Floss St and Tennent Pde (Council Boundary)
- 2. Ness Ave, between Garnett St and Tennyson St
- 3. Tennyson St, between Ness Ave and Riverside Cres
- 4. Riverside Cres, between Tennyson St and Wardell Rd
- 5. Albermarle St, between Kays Avenue E (shared path) and Livingstone Rd
- 6. Moncur St, between Livingstone Rd and Moyes St
- 7. Jersey St, between Livingstone Rd and Moyes St
- 8. Moyes St, between Jersey Street and Moncur St
- 9. Warburton St, between Moyes St and Illawarra Rd
- 10. Lower Railway Pde between Marrickville Rd and Sydenham Rd
- 11. Gleeson Ave, between Railway Pde and Burrows Ave
- 12. Burrows Ave, between Railway Rd and Gleeson Ave
- 13. Hill Road, between Illawarra Road and Livingstone Road
- 14. Carrington Road, between Richardsons Cres and Premier St, Marrickville

# State & Regional Roads:

- 1. Wardell Rd, between Lang Rd and Pine St
- 2. Illawarra Rd, between Harnett Ave and Marrickville Rd
- 3. Marrickville Rd, between Meeks Rd and Railway Pde
- 4. Buckley St, between Marrickville Rd and Sydenham Rd
- 5. Railway Pde, between and Marrickville Rd and Sydenham
- 6. Railway Rd, between Burrows Ave and Gleeson Ave

# **Proposed Temporary Speed Reduction Areas**





#### DISCUSSION

Transport for NSW have procured the traffic guidance schemes, planning and design work to determine the delivery of temporary speed reductions to support the Temporary Transport Plan. This has involved working with Inner West Council officers to explore options and seek input on suitable tactical improvements.

Temporary Speed Reductions will be co-located with Southwest Link Bus Stops to improve pedestrian safety outcomes during the Temporary Transport Plan. Other temporary speed reductions are designed to create a safer environment for using the Southwest Link riding routes in the Inner West. Additionally, a temporary speed reduction is proposed for Hill Street, Marrickville to reduce noise output from replacement buses and improve comfort for local residents.

The following benefits of the proposal are noted:

# Pedestrian and Cycling

- Speed reduction of roads adjacent to the SWL bus stops is required for pedestrian safety. There will be a significant increase in pedestrian activity and footpath use due to the temporary bus stops, increasing the risk of collision between pedestrians and vehicles.
- Encouraging cycling is a key aspect of the Southwest Link integrated transport plan. Where cyclists are proposed to ride on road, 40 km/h speed limits are required to improve safety outcomes.
- Offer opportunities for people to build their skills, confidence and desire to ride and walk more during the T3 Bankstown Line conversion period.

# Motorist Safety

- o Increase in regular buses stopping is an additional hazard for motorists, with reduced speeds mitigating risk of collision.
- The temporary 40 km/h zone will allow for buses to pull out into traffic more easily improving operations.
- Further, the temporary 40 km/h zones will ensure that motorists are not overtaking buses at a dangerous speed, complying with the law that a driver must not overtake or pass a bus with flashing lights at more than 40km/h.

#### • Bus movements

Southwest Link operations introduce a temporary bus layover facility on Lower Railway Parade, adjacent to Sydenham Station. Investigations have shown that there is a safety issue in this area relating to the sight distance available for buses exiting the layover area onto Sydenham Rd to access the Railway Parade bus stops. A decrease in the speed limit for traffic approaching this intersection will contribute to a significant reduction in the probability of an incident occurring.

## Noise mitigation

 Residents at Hill Street, Marrickville have raised concerns regarding the SWL buses route. A noise and vibration report was undertaken to assess the impacts of TTP buses. One of the recommendations out of this report to mitigate noise and vibration impacts to residents, was to reduce the speed limit to 40 km/h



# **FINANCIAL IMPLICATIONS**

The cost of the work will be absorbed by Transport for NSW.

Transport for NSW will work with IWC to retain assets and signage as suitable should permanent 40 km/h zones need to be considered before the completion of the temporary speed zone reductions as part of innerWest@40. Discussions regarding transfer of assets to IWC would then be undertaken as appropriate.

# **ATTACHMENTS**

1. Traffic Guidance System - Temporary Speed Reductions

