

TRAFFIC ENGINEERING ADVISORY GROUP MEETING

THURSDAY 21 JANUARY 2021

AGENDA

APOLOGIES:

DECLARATIONS OF CONFLICT OF INTEREST:

CONFIRMATION OF THE MINUTES OF MEETING HELD ON 5 NOVEMBER 2021:

BUSINESS ARISING:

SECTION B ITEMS:

ITEM NO.

2101 B1 **INTERIM GUIDELINES FOR INSTALLING MARKED PEDESTRIAN CROSSINGS ON LOCAL ROADS WITHIN THE PARRAMATTA LGA ON STREETS WITH SPEED LIMITS OF 50KM/H OR LESS**

File: F2021/00077

Ward: All

State Electorate: All

Recommendation to the Traffic Engineering Advisory Group:

1. That Council adopt the Interim Guidelines for Installing Marked Pedestrian Crossings on Local Roads within the Parramatta LGA on Streets with Speed Limits of 50km/h or less that are detailed in Table 2 of this report.
2. That City of Parramatta Council distribute this report to interested Councils to prompt discussion and debate that may be used to make future improvements to the guidelines.
3. That Council review and update its ranking process for prioritization of funding to undertake pedestrian treatments and provide a report back to the Traffic Engineering Advisory Group and Council.

2101 B2 **PROPOSED TRAFFIC SIGNALS AT THE INTERSECTION OF CARLINGFORD ROAD AND HEPBURN AVENUE, EPPING**

File: F2021/00077

Ward: Epping

State Electorate: Epping

Recommendation to the Traffic Engineering Advisory Group:

That Council note that Transport for NSW (TfNSW) supports installation of traffic signals at the intersection of Carlingford Road and Hepburn Avenue, Epping.

2101 B3

FYALL AVENUE AT DARCY ROAD, WENTWORTHVILLE – REQUEST FOR A PEDESTRIAN CROSSING

File: F2021/00077

Ward: Parramatta

State Electorate: Seven Hills

Recommendation to the Traffic Engineering Advisory Group:

1. That Council note that Fyall Avenue at Darcy Road, Wentworthville is suitable for the installation of a raised pedestrian crossing based on Council's Interim Guidelines for installing marked pedestrian crossings on local roads with speed limits of 50km/h or less.
2. That Council note that there is currently no funding available for this project.
3. That the head petitioner be advised of Council's resolution regarding the request for the installation of a raised pedestrian crossing in Fyall Avenue at Darcy Road, Wentworthville.

2101 B4

BETTINGTON ROAD AT YORK STREET, OATLANDS – UPDATE ON COMMUNITY CONSULTATION FOR A SPEED CUSHION ON THE NORTHBOUND APPROACH TO THE ROUNDABOUT

File: F2021/00077

Ward: Dundas

State Electorate: Parramatta

Recommendation to the Traffic Engineering Advisory Group:

1. That the speed cushion proposed on the northbound approach of the newly constructed roundabout at the intersection of Bettington Road and York Street, Oatlands not be installed.
2. That Council monitor traffic conditions at the new roundabout in Bettington Road at York Street, Oatlands.

2101 B5

AUTOMATED PEDESTRIAN SIGNALS AND USE OF SENSORS – TRANSPORT FOR NSW RESPONSE

File: F2021/00077

Ward: All

State Electorate: All

Recommendation to the Traffic Engineering Advisory Group:

That Transport for NSW's response to Council regarding automated pedestrian crossing and the use of sensors be received and noted.

2101 B6

PROJECTS RECENTLY COMPLETED, PROJECTS CURRENTLY FUNDED, AND PROJECTS LISTS FOR CONSIDERATION OF FUTURE FUNDING

File: F2021/00077

Ward: All

State Electorate: All

Recommendation to the Traffic Engineering Advisory Group:

1. That Council note that two (2) traffic projects have been completed between November and December 2020.
2. That the information regarding progress on currently funded projects be received and noted.
3. That the Projects Lists for proposed traffic works be received and noted.

2101 B7

OUTSTANDING WORKS INSTRUCTIONS

File: F2021/00077

Ward: Various

State Electorate: Various

Recommendation to the Traffic Engineering Advisory Group:

That the information in relation to outstanding Works Instructions over the 3-month period between August and October 2020 be received and noted.

BUSINESS ITEMS:



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO: 2101 B1

SUBJECT: Interim Guidelines for Installing Marked Pedestrian Crossings on Local Roads within the Parramatta LGA on Streets with Speed Limits of 50km/h or less

APPLICANT: City of Parramatta Council

REPORT OF: Traffic and Transport Team Leader and Traffic and Transport Manager

WARD: All

SED: All

PURPOSE

This report proposes guidelines for installing marked pedestrian crossings on local roads with speed limits of 50km/h or less in regards to the number of pedestrians and vehicles required for a pedestrian crossing to be installed. These guidelines would replace the Transport for NSW (TfNSW) requirements for pedestrian and traffic volumes.

OFFICER'S RECOMMENDATION:

1. That Council adopt the Interim Guidelines for Installing Marked Pedestrian Crossings on Local Roads within the Parramatta LGA on Streets with Speed Limits of 50km/h or less that are detailed in Table 2 of this report.
2. That City of Parramatta Council distribute this report to interested Councils to prompt discussion and debate that may be used to make future improvements to the guidelines.
3. That Council review and update its ranking process for prioritization of funding to undertake pedestrian treatments and provide a report back to the Traffic Engineering Advisory Group and Council.

Background

The Transport for NSW (TfNSW) requirements for the numbers of pedestrians and vehicles needed for a pedestrian crossing to be approved has been a concern for City of Parramatta Council due to its impact on Council's ability to install pedestrian crossings. However, TfNSW has recently advised of the following information:

TfNSW supplements to the standards and guidelines have been written for state road application and do not apply to local roads. Therefore, the pedestrian crossing warrants do not apply to local roads and Council has discretion to install pedestrian crossings just referring to the Australian standard and the Austroads guides. Council may choose to use the warrants however are under no obligation to do so.

TfNSW previously generally only supported installation of marked (zebra) pedestrian crossings at locations that met the requirements set out in the TfNSW Supplement for AS1742 (part 10, section 6). Proposed pedestrian crossings that did not meet these requirements could be opposed by TfNSW through the Local and Regional Traffic Committee processes. The TfNSW requirements are detailed below:

i) *Normal warrant:*

In each of three separate one hour periods in a typical day:

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

ii) *Reduced Warrant for sites used predominantly by school children and by aged or impaired pedestrians:*

If the crossing is used predominantly by school children, is not suitable site for a Children's Crossing and in two counts of one-hour duration immediately before and after school hours:

- a) the pedestrian flow per hour (P) crossing the road is greater than or equal to 30 and*
- b) the vehicular flow per hour (V) through the site is greater than or equal to 200*

These warrants resulted in pedestrian crossings not being approved in locations where they would have improved pedestrian amenity and encouraged walking as a mode of transport.

It is also important to emphasize that there are concerns regarding pedestrian safety at locations where there is a low number of pedestrians. This concern is reflected in requirements for minimum pedestrian volumes as detailed further on in this report. Treatments in addition to signs and linemarking, such as raising the pedestrian crossing can mitigate against this risk.

It is proposed that Council replace the TfNSW requirements with its own set of guidelines in relation to the number of pedestrians and vehicles for a pedestrian crossing to be installed. These guidelines would consider factors that are not included in the TfNSW warrants such as the speed of traffic, and whether the crossing is raised or not. Other TfNSW design related requirements for pedestrian crossings would still apply.

To develop these guidelines, a review of relevant Australian Standards, Austroads Guidelines and guidelines used by other state road authorities has been undertaken. The findings of the review are provided below.

Australian Standard AS 1742.10-2009 – Manual of Uniform Traffic Control Devices (Part 10: Pedestrian Control and Protection)

Australian Standard AS 1742.10 classifies pedestrian facilities into 4 groups (refer to Table 1). Pedestrian crossings are classified as a time separated facility.

AS 1742.10 emphasizes that there needs to be a realistic demand for pedestrian facilities. It advises that facilities that are used infrequently may, in the case of time separated facilities, come to be ignored, or in the case of physical facilities, become an unnecessary obstruction in the roadway.

The standard omits traffic and pedestrian volume warrants and notes that these are considered to be policy matters to be determined by each road authority. AS1742.10 does provide other guidelines for where a pedestrian crossing can be installed (refer to Attachment 1).

Table 1: Classification of pedestrian facilities (source: AS 1742.10-2009)

Classification	Objectives	Treatments
Time separated facilities	To minimise conflict between pedestrians and vehicles by allotting short time periods for use of section of road by pedestrians, alternating with	<ul style="list-style-type: none">- Pedestrian crossing (zebra)- Children's crossings- Pedestrian's actuated traffic signals (mid-block)

Classification	Objectives	Treatments
	periods for use by vehicles	<ul style="list-style-type: none"> - Pelican crossings - Pedestrians at signalized intersections
Physical pedestrian facilities	To increase the safety of pedestrians by use of physical aids within the roadway to reduce conflict between vehicles and pedestrians and simplify the decisions which both pedestrians and drivers have to make.	<ul style="list-style-type: none"> - Pedestrian refuges - Traffic islands - Medians - Kerb extensions - Loading islands - Safety zones - Pedestrian fencing
Grade separation	To increase the safety of pedestrians by eliminating conflict between vehicles and pedestrians	<ul style="list-style-type: none"> - Subways - Bridges
Warning signs	To warn the presence of pedestrians or pedestrian facilities ahead.	

Austrad's Pedestrian Facility Selection Tool

Austrads has developed the Pedestrian Facility Selection Tool which is an on-line application to provide guidance on the selection of appropriate pedestrian facilities. The application considers time separated and physical pedestrian facilities at mid-block and intersection locations. Queensland and Victorian road authorities encourage the use of the application for the selection of pedestrian crossing facilities.

This application does not have minimum numbers of pedestrians or vehicles required to justify a pedestrian crossing. Austrads advises that a pedestrian crossing (without a raised surface, median island or road narrowing) does not result in any reduction or increase in collisions in Australia (Austrads notes that further research on this matter would be beneficial and for New Zealand the figure was set at a 28% increase in accidents). However, for a pedestrian crossing that is raised the accident reduction is 80%; for a pedestrian crossing with kerb extensions it is a 35% reduction; and a pedestrian crossing with a median island provides a 15 % reduction.

The application assesses speed limits, 85th percentile speed, crash data, vehicle and pedestrian volumes, number of travel lanes, existence of on-street parking/shoulder lanes and roadway crossing width and provides a feasibility assessment recommending whether the proposed pedestrian crossing facilities are appropriate for the traffic environment. Feasible facilities can then be evaluated, with outputs of pedestrian and vehicle delay, safe sight distances, pedestrian level of service and economic evaluation outcomes. Figure 1 shows an overview of the methodology used in the application for the selection of a pedestrian crossing facility. The decision trees that are used to assess the feasibility of different pedestrian crossing facilities are detailed in Attachment 2.

The application does not assess the feasibility of pedestrian (zebra) crossings at intersections and on slip lanes. The Queensland road authority considers pedestrian (zebra) crossings at intersections are a valid treatment when designed in accordance with Austrads Guidelines and suggests that the location be set as midblock for the pedestrian crossing to be assessed using the application.

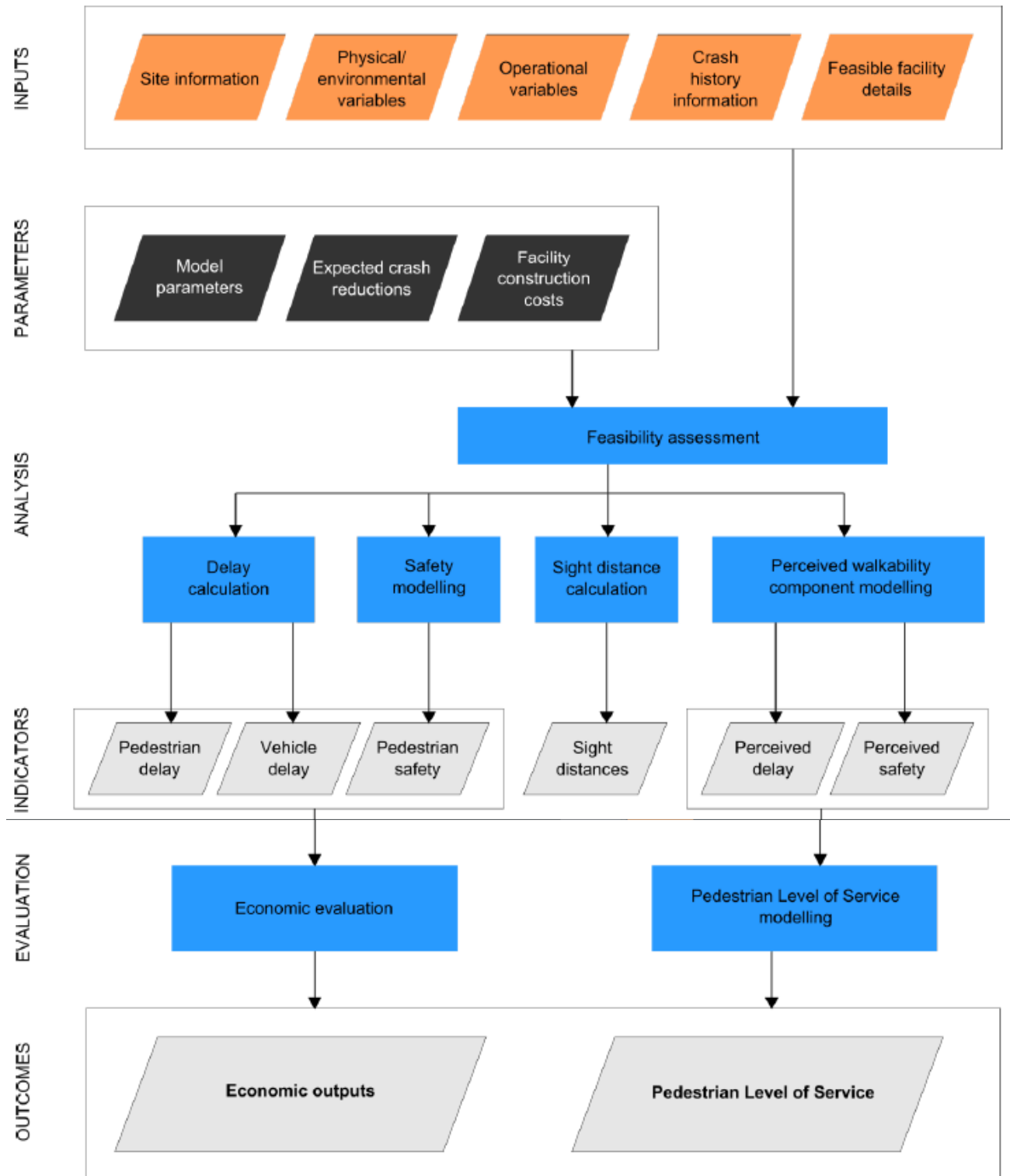


Figure 1: Methodology used in the Pedestrian Selection Tool to determine the appropriate pedestrian crossing facility

Selection of Pedestrian Facilities by Other State Road Authorities

VicRoads

VicRoads Supplement to AS 1742.10:2009 Manual of uniform traffic control devices (Part 10: Pedestrian control and protection) encourages practitioners to use the Austroads Pedestrian Facility Selection Tool to determine the appropriate facility for a site and suggests that the following principles be used in the decision making process:

- Provide for pedestrians to cross roads while minimising the road safety risk involved (including for pedestrians with disabilities)
- Minimise delays to pedestrians and road vehicles
- Treatment to be consistent with the Network Operating Plan for the road section
- Treatments should be cost-effective therefore there needs to be a concentrated demand to justify the facility and the treatment needs to be safe and effective and the effectiveness of the facility needs to be consistent with its cost.

For example, a pedestrian crossing (zebra) may be appropriate on low speed roads where pedestrians are a high priority. This facility is not recommended on high speed roads where the priority is for through traffic and zebra crossings on high speed roads are unlikely to be safe.

However as a general guideline, VicRoads Supplement to Austroads Guide to Traffic Management (Part 6: Intersections, Interchanges and Crossings 2013) suggests that a pedestrian crossing (zebra) can be installed at location where:

- Pedestrian volumes of 20 or more per hour (each older person, person with a disability and unaccompanied child of primary school age are counted as two)
- Vehicle volumes of 200 or more per hour for the same hour.
- Speed limit of 50 km/h or less.
- Vehicle speeds of 60 km/h (85th percentile) or less.

It is understood that the requirement for 200 vehicles per hour relates to prioritization of funds and is not related to safety.

In shopping streets or commercial areas, VicRoads suggests the installation of pedestrian crossings with flashing lights. The general guidelines for this facility are:

- for any one hour of an average weekday, the number of pedestrians crossing within 20 m of the proposed site exceeds 60 persons per hour (each older person, person with a disability and unaccompanied child of primary school age are counted as two) and the number of vehicles per hour which pedestrians have to cross in one bound exceeds 500.
- traffic speeds are lower (due to congestion, traffic management devices or restricted carriageway widths) and drivers are more aware of pedestrians in these situations.

However, if pedestrian and vehicle volume guidelines are met but traffic speeds are higher, pedestrian operated signals should be considered.

The provision of a children's crossing may be considered at locations where during any hour on a normal school day, 20 or more children cross the road within 20m of the proposed crossing location and the vehicle flow during the same hour exceeds 50 vehicles per hour.

Department of Transport and Main Roads (DTMR), Queensland

The Department of Transport and Main Roads' (DTMR) Supplement to Traffic and Road Use Management Volume 1 – Guide to Traffic Management (Part 6: Intersections, Interchanges and Crossings 2019) recommends the use of Austroads Pedestrian Facility Selection Tool to determine

the appropriate facility for a site. DTMR recommends pedestrian crossing only on low speed roads but does not set minimum pedestrian numbers for a crossing to be installed.

DTMR recommends that pedestrian crossings (zebra) are suitable for two-lane two-way low speed roads (for example, ≤ 40 km/h) that have high vehicle volumes or insufficient gaps, and high entry angle left-turn slip lanes at arterial road intersections. Raised pedestrian crossings (wombat) are suitable on one-way or two lane, low volume, low speed roads where there is a high crossing use, good sight distance and need for speed reductions. DTMR also considers pedestrian crossings (zebra) are valid treatments for intersections and set the location in Austroads Tool as midblock for the facility to be assessed.

DTMR, advises that any option with a Benefit Cost Ratio (BCR) less than 1 (as determined by the Austroads selection tool) does not automatically warrant the installation of a pedestrian facility. Likewise, the option with the greatest BCR may not be the most appropriate facility to implement at the site being assessed. A network operation plan applicable to the site can guide which output factors should take precedence in facility selection.

Department of Planning, Transport and Infrastructure (DPTI), South Australia

In South Australia, raised pedestrian crossings (wombat) are the only acceptable form of pedestrian crossing on public roads. At grade pedestrian crossings are considered to be an unsuitable treatment.

The Department of Planning, Transport and Infrastructure (DPTI) recommends that an on-street wombat crossing may be provided on a local street where:

- In two separate one hour periods of any day (including Saturday and Sunday), 40 or more pedestrians per hour actually cross the road and could reasonably be expected to use the crossing; and 200 or more vehicles per hour pass the site where the pedestrians cross during the same two hours;
- During eight hours of any day, on average 20 or more pedestrians per hour cross the road (a total of 160 or more in eight hours) and could be reasonably be expected to use the crossing; and 200 or more vehicles per hour pass the site during the same eight hours (a total of 1600 or more in eight hours)

DPTI's Manual of Legal Responsibilities and Technical Requirements for Traffic Control Devices (Part 2 - Code of Technical Requirements) recommends installation of raised pedestrian crossings (wombat) on roads with a speed limit of 50 km/h or less. A low speed environment with mean speeds in the order of 40 km/h or less (based on engineering judgement) should occur 30 m to 50 m before the crossing on each approach. This may be achieved through the use of local area traffic management devices. Where this requirement is not met, a full-time 40 km/h speed limit shall be signposted. Consideration should be given for the installation of continuously operating twin alternating flashing yellow signals where it is necessary to increase the visibility of the crossing, the Annual Average Daily Traffic volume is greater than 5000 vehicles, the crossing provides a direct link to an off-road shared path or the crossing is located near a school.

Department of Infrastructure, Energy and Resources (DIER), Tasmania

The Department of Infrastructure, Energy and Resources (DIER) considers that pedestrian crossing (zebra) does not operate with consistent reliability. Pedestrians report near misses caused by vehicles not stopping, and nose-to-tail collisions occur on the approaches when vehicles stop unexpectedly. DIER advises that the sense of safety that a pedestrian may feel when using a zebra crossing will quickly prove to be illusory if the vehicle fails to stop. Furthermore, any collision between a pedestrian and a vehicle will invariably result in the pedestrian being injured – regardless of who was legally at fault.

DIER considers that other types of pedestrian facility, such as pedestrian refuges, where the pedestrian takes responsibility for identifying a gap in the traffic to cross the road operate more safely

than pedestrian crossings. Accordingly, most mid-block pedestrian crossings (zebra) in Tasmania have now been removed or replaced with other types of facilities. For examples, the city centres and busy shopping zones have been provided with signal controlled intersections and mid-block pedestrian operated signals. Many neighbourhood shopping zones and urban arterials have been provided with pedestrian refuges and median treatments.

DIER advises that lower vehicle speeds improve pedestrian safety, they make it easier for pedestrians to identify gaps in the traffic to safely cross the road, and they reduce the likely severity of any collisions that do occur. As a result, DIER encourages Council to apply for grants for the installation of Traffic Management Schemes to improve pedestrian safety.

Main Roads Western Australia (MRWA)

Main Roads Western Australia's (MRWA) Planning and Designing for Pedestrians Guidelines provide the below numerical warrants for the installation of pedestrian crossings (zebra):

- A pedestrian crossing (zebra or wombat) may be considered if in two separate hours on an average weekday,
 - the number of pedestrians crossing in close proximity of the site (generally within 30 m) exceeds 60 per hour and
 - the number of vehicles exceeds 600 per hour (total both directions) and
 - the product of the number of pedestrians crossing and vehicles passing the site exceeds 90,000 in the same hour.
- A pedestrian crossing (zebra) should be installed across slip lanes where in the same hour:
 - Pedestrian volumes exceed 20 per hour
 - Vehicular traffic exceeds 200 per hour

MRWA notes that all warrants should be used as a guide only, with the final decision based on an understanding of local conditions and experience.

Proposed Interim Guidelines for the Selection of Pedestrian Crossing Facilities in the Parramatta Local Government Area on Streets with a Speed Limit of 50km/h or less

It is recommended that City of Parramatta Council base its guidelines for the minimum number of pedestrians on the requirements set in Victoria. It is considered that these volumes are adequate to show that there is a pedestrian demand for the facility (as discussed in the Australian Standards); to improve pedestrian amenity; and encourage walking.

Pedestrian crossings should generally be raised to increase awareness of the crossing, improve visibility of the pedestrian; to slow traffic speeds, and to address safety concerns, except on narrow streets with low speeds as detailed in the guidelines.

TfNSW has a Technical Direction that sets guidelines for continuous footpath treatments. This includes a requirement for a maximum number of vehicles of 45 in any one hour. If a requirement is set for minimum number of vehicles at a pedestrian crossing, and it is greater than 45, then there may be circumstances where neither a pedestrian crossing nor continuous footpath could be installed.

State road authorities set minimum requirements for the number of vehicles to justify a pedestrian crossing. This is considered to be in relation to rationing funds to locations where it is more difficult to cross rather than being directly related to safety at the location being considered for the facility. Given that a continuous footpath can cost a similar amount as a raised pedestrian crossing (and more than an at-grade pedestrian crossing) it is considered that minimum vehicle numbers are not required for the purpose of rationing funds and that prioritization can be determined through another process.

The interim guidelines detailed below in Table 2 address the issues discussed above.

Table 2: Interim Guidelines for the Selection of Pedestrian Crossing Facilities within the Parramatta LGA on Streets with a Speed Limit of 50km/h or less

Continuous footpath treatment	<ul style="list-style-type: none"> – A maximum of 45 vehicles per hour moving through the treatment – There should be few, if any, heavy vehicles frequenting the treatment – There is no minimum requirements for pedestrian volume – The width of driveway laybacks must be $\leq 7\text{m}$ 	<ul style="list-style-type: none"> – Used in NSW on side streets at intersections in a low volume and low speed street environment – These requirements are the same as set by TfNSW
Pedestrian crossing (zebra)(at grade)	<ul style="list-style-type: none"> – A minimum of 20 pedestrians per hour crossing the road – Roadway crossing width is less than 6m and 85th percentile speed is less than 40km/h at a distance 30m from the proposed crossing location. 	<ul style="list-style-type: none"> – Each older person, person with a disability and unaccompanied child of primary school age are counted as two. – Crossings will generally require new kerb ramps and upgraded lighting
Raised pedestrian crossing (wombat)	<ul style="list-style-type: none"> – A minimum of 20 pedestrians per hour crossing the road 	<ul style="list-style-type: none"> – Each older person, person with a disability and unaccompanied child of primary school age are counted as two.
Pedestrian refuge islands	<ul style="list-style-type: none"> – At other locations where pedestrian volume does not meet the minimum numerical requirements or where a pedestrian crossing is not considered safe for pedestrians and motorists 	
Children's Crossing	<ul style="list-style-type: none"> – TfNSW warrants apply, but Children's Crossings are only installed in combination with a Pedestrian Crossing 	

The 85th percentile speed should not be more than 10km/h above the speed limit. If this is not met then consideration should be given for the installation of traffic calming on the approach to the crossing or a pedestrian refuge island can be considered as the preferred treatment.

Design requirements such as sight distance and the number of lanes remain the same as the Australian Standards, Austroads Guidelines, and TfNSW supplements.

Next Steps

It is recommended that Council distribute this report to interested Councils to prompt discussion and debate that may be used to make future improvements to the guidelines. It is understood that at least one other Council has had similar concerns to City of Parramatta Council regarding the TfNSW requirements for pedestrian crossings and is looking to develop its own guidelines. City of Parramatta is not aware of other Councils having developed their own pedestrian crossing warrants at this stage. Ideally, there would be one set of guidelines for local roads across a region, state, or country, rather than individual Councils having their own guidelines. However, this may take a long time to happen, or may never happen, therefore it is recommended that Council adopt its own interim guidelines. The

guidelines are described as 'interim' on the basis that they may be modified over time if more Councils wish to work together to prepare a common set of guidelines.

It is also recommended that Council review and update its ranking process for prioritization of funding to undertake pedestrian treatments and provide a report back to the Traffic Engineering Advisory Group and Council.

Further reports on specific locations will be provided if the recommendations in this report are adopted. These locations include, but are not limited to, the following:

1. Alfred Street at Alice Street, Harris Park.
2. Caroline Chisholm Drive at Winston Hills Shopping Centre.
3. Rembrandt Street at Carlingford Shopping Centre.
4. Intersection of George Street and Horwood Place, Parramatta CBD.
5. Intersection of Erby Place and Phillip Street, Parramatta CBD.

FINANCIAL IMPLICATIONS

This report provides guidelines for the installation of pedestrian crossing facilities within the Parramatta LGA. It does not recommend any specific projects or provide a timeline or schedule for works. This report may affect future projects however the details of this are not yet known.



Saniya Sharmeen

Traffic and Transport Investigations Engineer



Richard Searle

Traffic and Transport Manager

13/01/2021

- Attachments** – 1. Guidelines for the installation of pedestrian facilities as detailed in AS1742.10
2. Australian Pedestrian Facility Selection Tool – Decision trees use to assess the feasibility of different type of pedestrian crossing facilities

Attachment 1: Guidelines for the installation of pedestrian facilities as detailed in AS1742.10

Demand:

It needs to be established that there is a realistic demand for pedestrian facilities. Facilities that are used infrequently may, in the case of time separated facilities, come to be ignored, or in the case of physical facilities, become an unnecessary obstruction in the roadway. Where the demand is excessive for the type or size of facility provided, the facility may become a safety hazard for pedestrians or a disruption to vehicular traffic flow.

Safe Operation:

Safe operation of a pedestrian crossing is dependent upon the driver being able to see both a pedestrian on or about to use the crossing and the signs and markings associated with the crossing in time for vehicle to be able to be stopped if necessary to give way to the pedestrian. This requires attention to the placement of the crossing in the vicinity of curves, intersections or other roadway features likely to obstruct sight. It also requires that adequate sight distance be provided to pedestrians at or near the kerbside and about to use the crossing.

For improved visibility for approaching drivers the crossing may be installed as a raised pedestrian crossing.

Requirements for time separated pedestrian facilities (unsignalised) on local roads:

Mid-block crossing

- No more than one lane of moving traffic in any one direction
- There shall be adequate sight distance between approaching vehicles and pedestrians.
- The speed limit on the approach to the crossing shall be 50km/h or lower and the 85th percentile speed shall not exceed 60kmh.
- A pedestrian crossing may be supervised during the time when it is used by significant number of school children, in which case it shall be supervised as specified for children's crossings.
- If any of the above requirements are not met, pedestrian actuated traffic signals (mid-block) or a pedestrian refuge without zebra markings may be more appropriate.

Children's crossing

- In addition to the conditions specified for mid-block crossings, children's crossings are to be operated by trained adult supervisors.
- If the requirements are not met, pedestrian actuated traffic signals (mid-block) or a pedestrian refuge without zebra markings may be more appropriate.

Crossing on slip lane

- The conditions specified for mid-block crossings also apply for crossings on slip lanes except there is no restriction on speed limit but the 85th percentile speed on the slip lane shall not exceed 60km/h.
- If any of the above requirements are not met, a signalized slip lane crossing may be appropriate.

Other locations

- Crossings may be provided at other locations by following the principles given for mid-block crossings and provided that the safety of pedestrians and other road users at these crossings is assessed as adequate.

Requirements for physical pedestrian facilities on local roads:

Pedestrian refuge island

- Where 4 or more traffic lanes have to be crossed, or at signalized crossings where the pedestrian interval is insufficient to guarantee all pedestrians time to cross the full width of the roadway.
- Where overtaking and speeding can put pedestrians at risk.
- Where two-way traffic volumes are so high that they make crossing the road difficult or dangerous.

- Where there are concentrations of pedestrian crossings.
- Where pedestrian signals are poorly used.
- Where persons with mobility impairment are known to cross the road.

Kerb extension

Kerb extensions can be constructed at any point along a kerb where the kerbside lane is required neither for moving traffic nor as a cycle lane. However, they are most common at intersections and at mid-block sites where a crossing facility exists. They minimise the width of roadway to be crossed, and they usually place the pedestrian in a position where visibility of approaching traffic is not impeded by kerbside obstacles or parked vehicles.

Loading islands and safety zones

Loading islands constitutes a special form of pedestrian refuge and should be provided wherever large numbers of pedestrians board or leave public transport vehicles other than from the footway. The safety zone is a particular form of loading island at which special traffic regulations apply. Pedestrian refuges or loading islands may be designated as safety zones by the installation of 'Safety Zone' sign on the island facing towards approaching traffic.

Pedestrian fencing

Fencing may be used at the kerbside direct pedestrians to a crossing point and to prevent pedestrians from crossing at other nearby points. It discourages motorists from parking close to a crossing point.

Fencing may also be used on medians and loading islands to control pedestrian movements.

Particular attention should be given to the type, height and placement of the fence so that it does not obstruct sightlines between drivers and children about to cross the road.

Attachment 2: Australian Pedestrian Facility Selection Tool – Decision trees used to assess the feasibility of different type of pedestrian crossing facilities

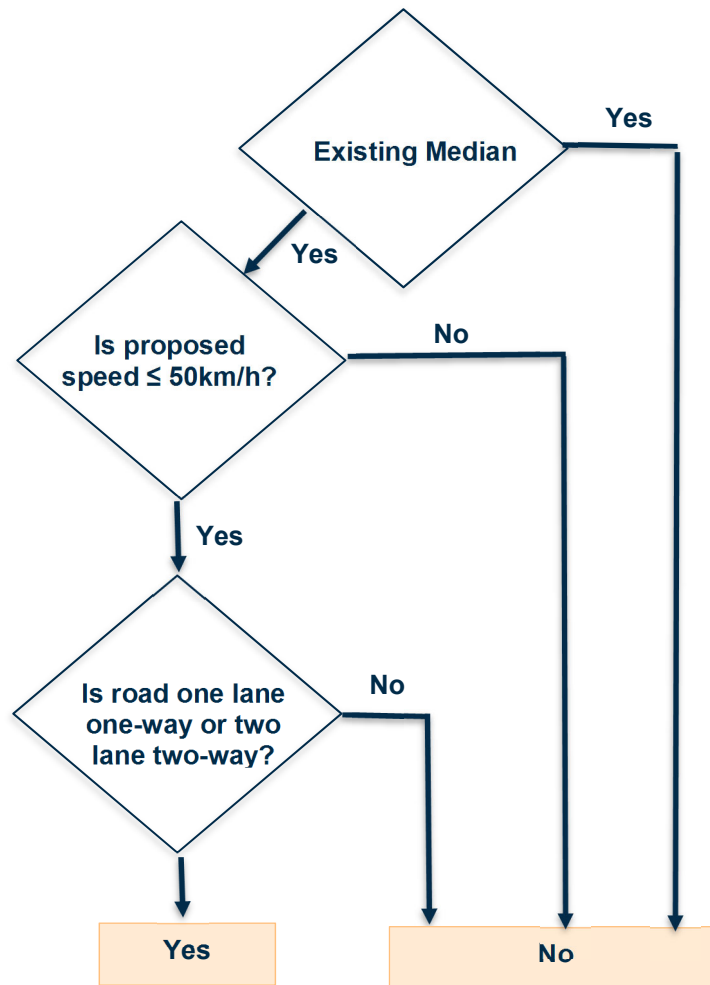


Figure A2-1: Platform feasibility decision tree

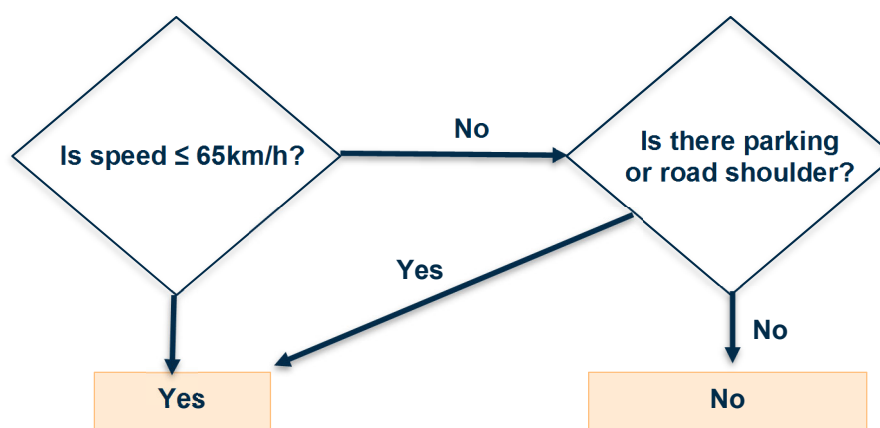


Figure A2-2: Kerb extension feasibility decision tree

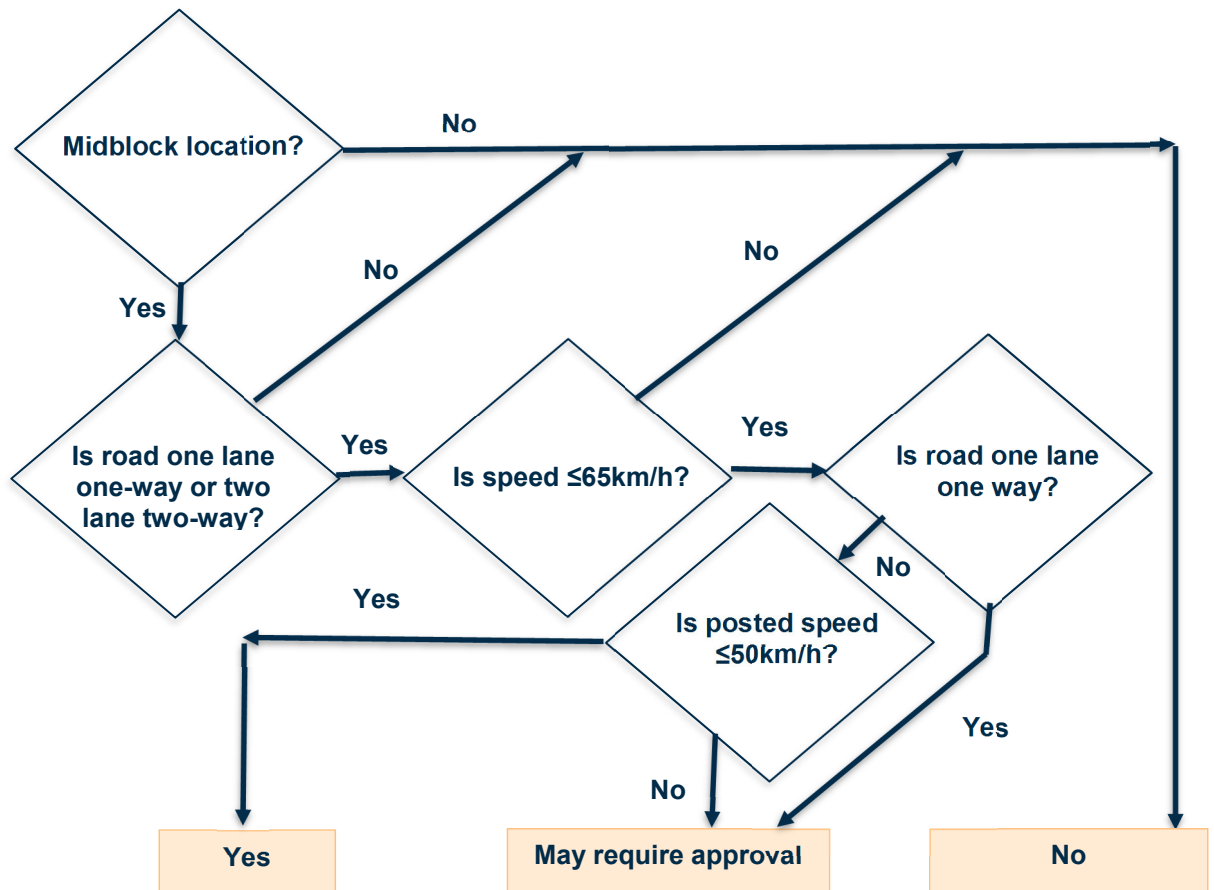


Figure A2-3: Pedestrian crossing feasibility decision tree



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO:	2101 B2
SUBJECT:	Proposed Traffic Signals at the Intersection of Carlingford Road and Hepburn Avenue, Epping
APPLICANT:	Residents of George Street, Epping
REPORT OF:	Traffic and Transport Team Leader
WARD:	Epping
SED:	Epping

Purpose

This report is in response to Council's resolution dated 14 September 2020 in relation to a request for relocation of the proposed new traffic signals from the intersection of Carlingford Road and Hepburn Avenue to the intersection of Carlingford Road and Pennant Parade, Epping.

OFFICER'S RECOMMENDATIONS:

That Council note that Transport for NSW (TfNSW) supports installation of traffic signals at the intersection of Carlingford Road and Hepburn Avenue, Epping.

Background

The Parramatta Traffic Engineering Advisory Group (TEAG) at its meeting held on 13 August 2020 considered a report regarding a request to install traffic calming in George Street, Epping. Council at its meeting on 14 September 2020 considered the PTC recommendation and resolved, in part:

That Council note that the request for the relocation of proposed traffic signals from Carlingford Road/Hepburn Avenue to Carlingford Road/Pennant Parade, Epping will be referred to Transport for NSW (TfNSW) and a report will be referred to the Traffic Engineering Advisory Group meeting upon receiving a response from TfNSW.

As detailed in Council's resolution, City of Parramatta Council wrote to Transport for NSW (TfNSW) requesting a review of the request received from local residents for relocation of the proposed traffic signals from Carlingford Road/Hepburn Avenue to Carlingford Road/Pennant Parade, Epping. Council has received the below reply from TfNSW:

The traffic study undertaken by Hornsby Council in 2015 states:

- 1. Signalising the intersection of Carlingford Road with Pennant Parade instead of the intersection of Carlingford Road with Hepburn Avenue as suggested by others was not considered as it involves an area and number of streets that are under the jurisdiction of Parramatta Council. Notwithstanding, this option is undesirable as it would encourage Carlingford Road Precinct traffic to use local streets thereby increasing the vehicle kilometres travelled on local roads. Under the current traffic arrangement, only left turn movements are permitted into and out of Pennant Parade in Hornsby LGA. This arrangement is required to prevent 'rat runs' in the area and should remain as is even if signals are provided at Pennant Parade. Signalising the intersection of Carlingford Road with Pennant Parade will also make the route along Tomah Street and Pennant Parade*

more attractive to through traffic avoiding the congestion of Pennant Hills Road/Carlingford Road intersection.

In addition to the above, Carlingford Rd is on a crest and bend eastbound on approach to Pennant Parade. This could result in increase in rear end crashes from queued traffic on approach to signals. If the signals to be relocated to Pennant Parade, Council will either need to design for a right turn bay at Pennant Parade with two effective lane travelling eastbound on Carlingford towards Epping (same arrangement currently at Hepburn Avenue) or ban the right turn in to Pennant Parade. This is to ensure safety and efficiency at this location.

Based on the above, Transport is supportive of the approved signals at Hepburn Avenue.

Traffic signals and Carlingford Road are under the care and control of TfNSW. According to the comments provided by TfNSW, three (3) eastbound travel lanes including a dedicated right turn lane are required for the installation of traffic signals at the intersection of Carlingford Road and Pennant Parade, Epping.

At present there are two travel lanes in each directions in Carlingford Road at Pennant Parade (refer to Figure 1). Provision of three travel lanes in the eastbound direction would therefore require road widening, land acquisition and service relocations. These works are expensive and are not recommended. Note that there is already a dedicated right turn lane in Carlingford Road at Hepburn Avenue (refer to Figure 2).

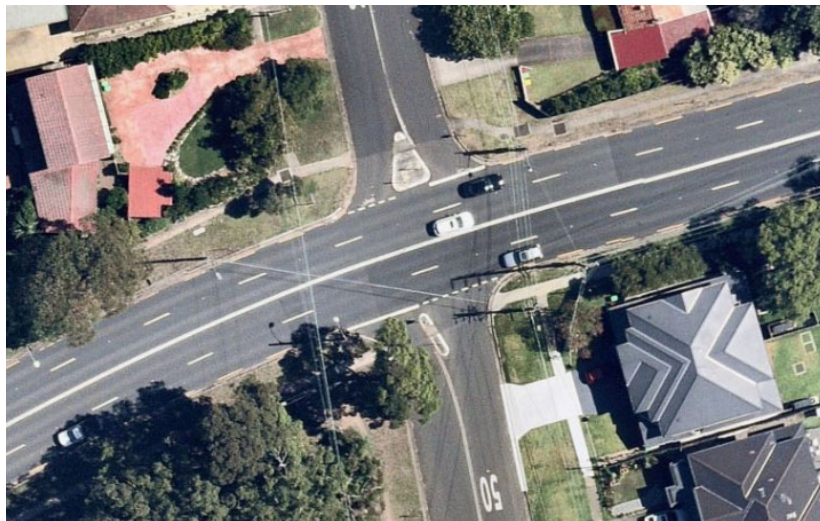


Figure 1: Aerial view of the intersection of Carlingford Road and Pennant Parade, Epping

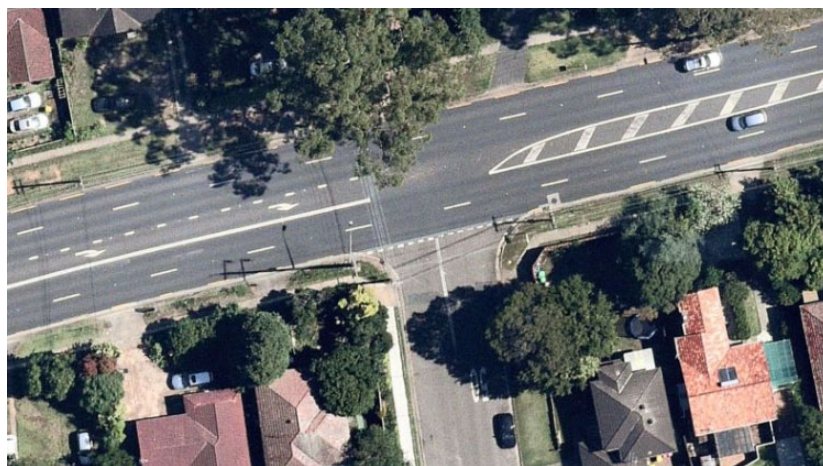


Figure 2: Aerial view of the intersection of Carlingford Road and Hepburn Avenue, Epping

A traffic study undertaken by Hornsby Council also stated that:

Traffic modelling and analysis has established that the existing performance of the intersection of Carlingford Road with Hepburn Avenue is unsatisfactory during the morning peak period. This is mainly due to peak hour traffic congestion in Carlingford Road which limits the number of vehicles that can turn right out of Hepburn Avenue. This review has established that traffic generated from the Carlingford Road Precinct will further impact on existing conditions and performance of the intersection of Carlingford Road with Hepburn Avenue.

Traffic signals at the intersection of Carlingford Road with Hepburn Avenue will encourage traffic exiting the new high residential precinct to use Carlingford Road instead of the local road system.

In light of the above, it is proposed that Council continue to plan and design for the installation of traffic signals at the intersection of Carlingford Road and Hepburn Avenue, Epping.

FINANCIAL IMPLICATIONS

This report provides a response received from TfNSW regarding the relocation of the proposed traffic signals from Carlingford Road/Hepburn Avenue to Carlingford Road/Pennant Parade, Epping. The report is for project planning purposes only. Therefore, this matter has no financial impact upon Council's budget. The construction work is currently not programmed or funded and this report does not provide a final approval for the project to proceed.



Saniya Sharmeen

Traffic and Transport Team Leader

13/01/2021



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO: 2101 B3

SUBJECT: Fyall Avenue at Darcy Road, Wentworthville – Request for a pedestrian crossing

APPLICANT: Darcy Road Public School P&C

REPORT OF: Traffic and Transport Team Leader

WARD: Parramatta

SED: Seven Hills

Purpose

This report is in response to a petition received by Council at its meeting on 9 November 2020 requesting installation of a marked (zebra) pedestrian crossing in Fyall Avenue at Darcy Road, Wentworthville.

OFFICER'S RECOMMENDATION:

1. That Council note that Fyall Avenue at Darcy Road, Wentworthville is suitable for the installation of a raised pedestrian crossing based on Council's Interim Guidelines for installing marked pedestrian crossings on local roads with speed limits of 50km/h or less.
2. That Council note that there is currently no funding available for this project.
3. That the head petitioner be advised of Council's resolution regarding the request for the installation of a raised pedestrian crossing in Fyall Avenue at Darcy Road, Wentworthville.

Background

Council at its meeting held on 9 November 2020 considered a petition submitted by the Parent and Citizens (P&C) of Darcy Road Public School requesting installation of a marked (zebra) pedestrian crossing in Fyall Avenue at Darcy Road, Wentworthville and resolved:

That the petition be received and a copy of the petition be circulated to all Councillors.

The petition reads:

We have observed a significant increase in pedestrian and motor vehicle traffic near Darcy Road Public School during last 6 months. Many students who used to catch school bus are now being dropped either by their parents by car or they are walking to school.

At the junction of Fyall Avenue and Darcy Road, there is a kids park on one corner and a community center on another corner. There is also a childcare across the road on Darcy Road at this juncture. All of this results in increased pedestrian traffic specially during the school times.

There are number of families and students crossing the road at this junction in very unsafe conditions. Childcare staff carry the children to the Cumberland highway Red light in order to cross at the signal. P&C executives have been at this junction and noticed the pedestrian traffic on multiple occasions.

As a result P&C is raising an online petition in this matter which will be presented to council to propose a new elevated zebra crossing at this place. This will create a more safer space for our kids, students and families who lives in the vicinity."

The petition includes 192 signatures from 180 parents or carers of Darcy Road Public School students and 12 community members.

Location Description

The intersection of Fyall Avenue and Darcy Road is located 250m east of Darcy Road Public School at 98A Darcy Road, Wentworthville. Frank Hayes Park, Karabi Community Development Services and Reg Byrne Community Centre is located on the south side of Darcy Road at Fyall Avenue and Wiggles & Giggles Child Care Centre on the north side of the street near this intersection. Figure 1 shows the map of the area near the intersection of Darcy Road and Fyall Avenue.

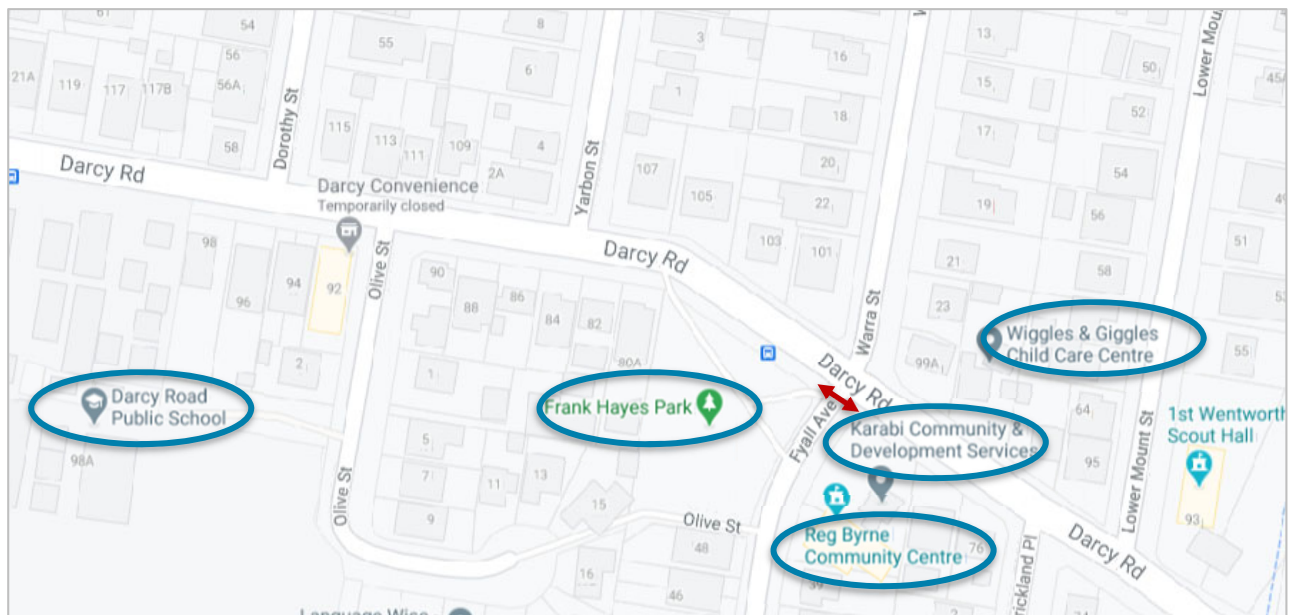


Figure 1: A map of the area near the intersection of Fyall Avenue and Darcy Road, Wentworthville

According to the school catchment map in Figure 2, the catchment area for Darcy Road Public School is located on both sides of Cumberland Highway, which is a state road. High-density residential developments are located near the eastern part of the catchment area (Westmead). As a result, a large portion of the school community lives on the east side of Cumberland Highway and use the existing traffic signals at Darcy Road to cross Cumberland Highway to walk to the school.

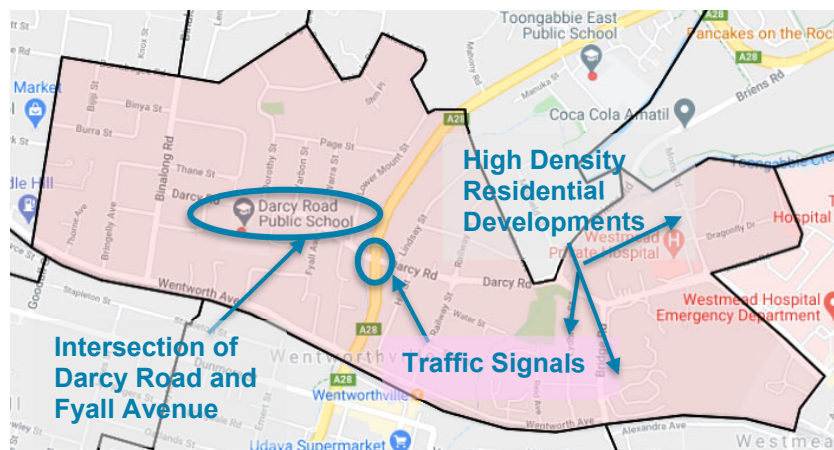


Figure 2: School Catchment Area for Darcy Road Public School (source: www.schoolzones.net.au)

The vehicle and pedestrian volume count survey undertaken in July 2020 for Fyall Avenue at Darcy Road, Wentworthville is provided below (refer to Table 1).

	Vehicle Volume (V)	Pedestrian Volume (P)		
		Adults	Children	Total
8:15am-9:15am	100	31	21 (40%)	52
2:30pm-3:30pm	78	22	39 (64%)	61

Table 1: Vehicle and pedestrian volume counts undertaken in Fyall Avenue at Darcy Road, Wentworthville in July 2020

A report has been included in this Traffic Engineering Advisory Group (TEAG) agenda to develop guidelines for the installation of a pedestrian crossings on local roads. According to the report, a raised pedestrian crossing can be installed at locations where the pedestrian volume is 20 or more in a one-hour period. Based on the pedestrian volume counts in Table 1, Fyall Avenue at Darcy Road, Wentworthville is suitable for the installation of a raised pedestrian crossing.

FINANCIAL IMPLICATIONS

This report identifies that a raised pedestrian crossing in Fyall Avenue at Darcy Road, Wentworthville as the preferred pedestrian treatment to improve pedestrian safety at this location. However, funding is currently not available to undertake the work and there is no schedule or timeframe for the work.



Saniya Sharmeen

Traffic and Transport Team Leader

13/01/2021

Attachments – Nil.



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO: 2101 B4

SUBJECT: Bettington Road at York Street, Oatlands – Update on community consultation for a speed cushion on the northbound approach to the roundabout

APPLICANT: City of Parramatta Council

REPORT OF: Traffic and Transport Team Leader

WARD: Dundas

SED: Parramatta

Purpose

In accordance with Council's resolution dated 7 December 2020, this report provides an update on the consultation undertaken with affected residents in relation to the installation of a speed cushion on the northbound approach to the roundabout at the intersection of Bettington Road and York Street, Oatlands.

OFFICER'S RECOMMENDATIONS:

1. That the speed cushion proposed on the northbound approach of the newly constructed roundabout at the intersection of Bettington Road and York Street, Oatlands not be installed.
2. That Council monitor traffic conditions at the new roundabout in Bettington Road at York Street, Oatlands.

Background

As a result of a request from an affected resident, the Parramatta Traffic Committee (PTC) at its meeting held on 5 November 2020 considered a report regarding installation of a speed cushion on the northbound approach to the approved roundabout at the intersection of Bettington Road and York Street, Oatlands. Council at its meeting on 7 December 2020 considered the PTC recommendation and resolved:

1. *That the design of the approved roundabout at the intersection of Bettington Road at York Street, Oatlands be altered to include a speed cushion on the northbound approach to the roundabout.*
2. *That a PS-2 bicycle logo be installed in Bettington Road on the southbound approach to the intersection with York Street, Oatlands.*
3. *That recommendation 1 is subject to consultation being undertaken with the affected residents of 117-119 and 128 Bettington Road, Oatlands with no objections being received.*
4. *That a report be referred to the next Parramatta Traffic Committee if any objection is received from the affected residents regarding the installation of a speed cushion in Bettington Road, Oatlands as detailed in recommendation 1.*

The construction of the roundabout has been completed in December 2020. Figure 1 shows the photo of the recently installed roundabout in Bettington Road at York Street.



Figure 1: Photo showing the northbound approach to the new roundabout at the intersection of Bettington Road and York Street, Oatlands

In accordance with part 3 of Council's resolution, consultation letters were sent to the affected residents of Bettington Road from 117 to 123 and 126 to 130 on 9 and 10 December 2020. Residents were requested to provide feedback on the installation of a speed cushion for northbound traffic in Bettington Road at York Street by 22 December 2020.

Council only received one response. This was from a resident of 117-119 Bettington Road opposing the proposal (see attached) on the basis that motorists are already slowing down to travel through the roundabout.

Council Officers have visited the new roundabout and noted that the kerb extension provides deflection and encourages motorists to slow down on the northbound approach to the roundabout.

No reply was received from the original complainant and Council has sent a follow-up email requesting feedback on traffic conditions after the installation of the roundabout. However, at the time of writing this report, Council had not received a reply.

Accordingly, at this stage it is not proposed to install the speed cushion in Bettington Road south of York Street, Oatlands. However, Council would monitor traffic conditions at the new roundabout and if required a report will be referred to the Parramatta Traffic Committee seeking approval for the installation of the speed cushion.

FINANCIAL IMPLICATIONS

This report recommends that the speed cushion proposed in Bettington Road at York Street, Oatlands not be installed, therefore there is no cost to Council from the report. The estimated cost of the speed cushion is \$3,500.

Saniya Sharmeen

Saniya Sharmeen

Traffic and Transport Team Leader

13/01/2021

Attach: Response from a resident of 117-119 Bettington Road

ATTACHMENT

Response from resident of 117-119 Bettington Road, Oatlands

With regards to the proposed speed cushion in front of our property at Bettington Road (Resident Ref TS2020 92, Council Ref F2020/00058), just prior to the entry of the roundabout, I think it is completely unnecessary.

As a resident living in the townhouse complex for nearly 9 years, and my office also at Oatlands, at Belmore Street East less than 1 km away, I drive along this section of Bettington Road multiple times a day every day. I have a very clear idea about the traffic flow along this section of the road at any time of the day and night (peak/non peak/school days/holidays and after hours).

Honestly, I am still very baffled with regards to the decision of having a roundabout installed at the T-junction at York Street and Bettington Road. I believe roundabout is to control traffic flow. There is definitely more traffic trying to turn right into York Street on school days when families take children to the school or college at Gibbon street in the morning. However, it does not really hold up traffic usually as the lanes at Bettington Road are wide enough on northbound side to allow one car to go past and continue going uphill toward Pennant Hills Road and the other car can wait to turn right into York Street. There are cars from the west that will drive through northbound Bettington Road to the Hills area, and usually there are more cars in the evening when people heading back home but at this time not much will turn right into York Street. So, if the roundabout is to improve traffic flow, it is clear now every car will have to be in one lane to go through the roundabout. Since the finishing installation of the roundabout last week, traffic approaching the roundabout has been slow, very slow and how it affects the area will be hard to tell as it is school holiday now!

Maybe I was wrong, I was told by other neighbours that the roundabout was installed to prevent speeding and avoid any accident that may happen again. However, my understanding of the accident that happened in February was a result of being under the influence of Alcohol and drugs, no speed cushion, roundabout will prevent a motorist driving under influence.

The PTC report (in the letter the council sent to us residents) stated the speed deflection in the northbound direction is less than desirable. So if this is the case, why install a speed cushion that may cause more harm than any benefits? However, I will explain below why I believed it is unnecessary as a motorist who drives through this section regularly before and after the installation of Roundabout at York Street.

As I drive and run along this section of Bettington Road on a very regular basis, I have a very clear understanding of the slope of Bettington Road around my home and office. From Belmore Street East/Prindle street roundabout, the Northbound section of Bettington Road is going uphill till Ellis street roundabout. From Ellis street roundabout it is slightly downhill towards north along 5 blocks of houses. The road plateau at my townhouse complex driveway and then it is all uphill again. This is not a long stretch and that is not enough distance for speeding to happen immediately at Ellis Street. I noticed motorists have been putting their brakes on as their car starts going downhill along Bettington Road at Ellis Street past weeks. That is motorists indeed have slowed down already as it arrives plateau region in front of my complex. So what is the point of putting a speed cushion at the uphill slope just after the plateau? Motorist are already in a slow down position at this point, in fact they will have to be on accelerator if there is a speed cushion so that they can drive through the roundabout.

If Parramatta Council and the Traffic Committee is really taking the safety of Bettington Road seriously, may I suggest attention should also be focused on the items left opposite to the house 111 and 113 Bettington Road. I have raised the issue multiple times in the past. Really

another accident is simply waiting to happen at the same spot in the near future. I have personally seen on many occasions while driving or walking along this strip of Bettington Road that motorists have been deliberately have their vehicle slowly down or in a complete stop and turn their head towards the Golf course fence to look at the photos and religious statues at the site, disregarding whether there are cars driving along the road behind them. I am sure the Council and the Traffic Committee is aware of the issue.

Honestly the neighbours along this strip including me and my family all have gone through a lot of stressors since February. We want to leave things in peace and let things go but then we are facing the ongoing disturbances. I have mentioned and contacted the council multiple times regarding the distraction with items left opposite to the house 111 and 113 Bettington Road. Very disappointed the lack of response I received by the Council. It is more than emotional trauma to us neighbours whom are forced to endure every day till now. There are always new items left at the site, fresh flowers that got rotten, glow in dark candles and last Saturday afternoon, a large Christmas wreath that flashes in the dark too, and on this Monday 4 Christmas Stockings hanged on the fence. I am lost with the intention of people leaving items at this site. The level of distraction is getting out of control.

I saw a distressed pregnant patient last week - she was in a near accident as she drove down along Bettington Road from Carlingford taking her son to school. The car in front of her suddenly stopped in front of this 'tombstone' without any warning. She nearly hit the back of this car and is still scared about it. All I can say is that it has been lucky no accident has happened till now but this is something waiting to happen and no roundabout or speed cushion will prevent it.

Us who live on this strip of road has had enough disturbance past 10 months. Most of us (including myself) were also first respondents, we have been forced to live with this horrible memories every day as we past this area or even to some of us when look through our windows at home. We just want to move on and let go of this matter that we are not responsible with. As a local doctor in the Oatlands Community, I am still seeing patients emotionally traumatised and disturbed as they or their family members are forced to face the reminders as they drive through Bettington Road as part of their day to day routine. A lot of neighbours felt bad to make a complaint but this does not mean we agree what is left on the road like this indefinitely. People do memorial at Cemetery, at their home, at church but not accident sites as time has passed long enough. The council also has a responsibilities looking after us all as a whole in the community. Please keep this road safe and free of distraction and understand all of us living along this strip of Bettington Road simply have enough by now.



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO: 2101 B5

SUBJECT: Automated Pedestrian Signals and Use of Sensors – Transport for NSW Response

APPLICANT: Councillor Pandey and Councillor Barrak

REPORT OF: Road Safety Officer, Traffic and Transport

WARD: All

SED: All

Purpose

This report outlines Transport for NSW's (TfNSW) response to Council's Notice of Motion on 10 August 2020 regarding automated pedestrian crossings and the use of sensors.

OFFICER'S RECOMMENDATIONS:

1. That Transport for NSW's response to Council regarding automated pedestrian crossing and the use of sensors be received and noted.

Background

Council considered a Notice of Motion on 10 August 2020 regarding automated pedestrian crossings and the use of sensors and resolved as follows:

- (a) **That** Council write to Transport for NSW to extend its Automated Pedestrian Crossings Program to identify high use pedestrian crossings in the City of Parramatta around universities, schools and the Parramatta CBD and automate these pedestrian crossings to reduce the risk of infection due to touch of the pedestrian buttons.
- (b) **That** given the current COVID-19 crisis, Council write to Transport for NSW advocating for contactless interactions throughout the City, particularly in high pedestrian traffic areas, including within the public domain, and specifically for pedestrians wanting to cross signalised intersections.
- (c) **Further, that** Council write to Transport for NSW asking them to consider the installation of sensors to activate the control at signalised intersections as soon as possible.

Prior to the Covid-19 pandemic, automatic pedestrian crossings were already in operation in the Sydney Central Business District between 7am-7pm. As a result of the Covid-19 pandemic, TfNSW worked with NSW Health to identify key locations to install automated pedestrian signal crossings in March 2020. TfNSW focused on health precincts with the purpose of helping to limit the spread of Covid-19 within the community while protecting healthcare workers and vulnerable pedestrians such as those with compromised health and the elderly.

Under typical crossing situations, pedestrians press the 'push' button to activate the pedestrian signal. Automated pedestrian signals provide pedestrians opportunity to cross the road without having to contact high-touch surfaces.

Automated pedestrian signals installed at active sites (such as health precincts) function 24hrs a day, 7 days a week, while automated pedestrian signals located at temporary clinic sites are active 6am to 10pm daily. From 8 August 2020, TfNSW installed durable semi-permanent plastic covers over the 'push' button to assist pedestrians in identifying intersections with automated crossings (see figure1 below).



Figure 1: A semi-permanent plastic cover installed over the 'push' button

Automated pedestrian signals are currently operating 24/7 at the below locations within the City of Parramatta Council LGA and the immediate vicinity of Westmead Hospital (refer to figure 2 below).

- Darcy Road at Westmead Hospital Entrance
- Darcy Road at Farm House Road
- Darcy Road at Hawkesbury Road
- Darcy Road at Bridge Road
- Hawkesbury Road at Alexandra Avenue
- Alexandra Avenue at Hassall Street
- Mons Road at Briens Road
- Mons Road at Dragonfly Drive
- Mons Road at Darcy Road



Figure 2 TfNSW Location Map of 24/7 Automated pedestrian signals at Westmead Private Hospital and the Children's Hospital at Westmead

There is currently no capacity to introduce the automatic pedestrian crossing phase to any additional traffic signals in the City of Parramatta Council LGA and at this stage, TfNSW has advised any further roll out of the automated pedestrian crossings would be limited to additional health precincts only, in consultation from NSW Health.

As part of another TfNSW initiative, sensors were trialled at a single intersection in Burwood in June 2020 however, there is no intention to expand this initiative until the trial outcomes are assessed by TfNSW.

FINANCIAL IMPLICATIONS

Automated pedestrian signals are under the care and control of TfNSW, therefore this matter has no financial impact upon Council.

Tracey Holman

Road Safety Officer, Traffic and Transport

04/01/2020

Attachments – TfNSW response letter to Council Ref: Customer Case Number: 1106574

16 December 2020

MR Richard Searle
PO Box 32
PARRAMATTA NSW 2124

Dear Mr Searle

RE: Automated Pedestrian Crossing and the Use of Sensors

Thank you for your letter regarding the automated pedestrian crossing initiative implemented by Transport for NSW in conjunction with NSW Health.

We are continuing to work closely with NSW Health in determining locations where the automated pedestrian crossing would be most effective in limiting the spread of COVID-19.

In the Sydney CBD area, pedestrian crossings were already automated during daytime hours and this initiative only extended the existing automation to a 24/7 operation. Outside of the CBD, automated pedestrian crossings have been rolled out to intersections in the immediate vicinity of major hospitals and clinics specifically to protect our most vulnerable community and frontline health workers.

While there are many intersections in local areas with high pedestrian activity, there are various other factors that need to be considered before opting to change the crossings to automatic – this includes impacts on road safety, traffic flow efficiency for general motorists, emergency vehicles, public transport and freight, as well as community amenity.

Within Parramatta City Council Local Government Area, the pedestrian crossing phase at the following intersections in the immediate vicinity of Westmead Hospital are currently automated 24/7 as part of the initiative:

- Darcy Rd at Westmead Hospital Entrance
- Darcy Rd at Farm House Rd
- Darcy Rd at Hawkesbury Rd
- Darcy Rd at Bridge Rd
- Hawkesbury Rd at Alexandra Ave
- Alexandra Ave at Hassall St
- Mons Rd at Briens Rd
- Mons Rd at Dragonfly Dr
- Mons Rd at Darcy Rd

There is currently no current scope to introduce the automatic pedestrian crossing phase to any additional traffic signals in the Parramatta City Council LGA. The touch-less sensors were trialled in June 2020 at a single intersection in Burwood as part of another Transport for NSW initiative. There is currently no intention to expand the rollout of these sensors until outcomes of the trial are known and assessed.

At this stage any further rollout of the automated pedestrian crossings would be limited to additional health precincts only, with input and consultation from NSW Health, to continue to protect frontline staff and those who are most vulnerable

Kind regards,

Transport for NSW



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO: 2101 B6

SUBJECT: Projects Recently Completed, Projects Currently Funded, and Projects Lists for Consideration of Future Funding

APPLICANT: City of Parramatta Council

REPORT OF: Traffic and Transport Team Leader

WARD: All

SED: All

Purpose

This report provides information on traffic and pedestrian projects recently completed or currently funded and projects lists that City of Parramatta Council maintains for budget planning purposes.

OFFICER'S RECOMMENDATION:

1. That Council note that two (2) traffic projects have been completed between November and December 2020.
2. That the information regarding progress on currently funded projects be received and noted.
3. That the Projects Lists for proposed traffic works be received and noted.

Background

Information on recently completed projects is provided below.

Projects Completed by Council

1. Intersection of Bettington Road and York Street, Oatlands

Project Details: Installation of a roundabout

Total cost of the project: \$392,948

Funding Details: 100% funded by Council



2. Bettington Road near Windsor Avenue, Carlingford and Statham Avenue north of Meckiff Avenue, North Rocks - Vehicle Activated Signs

Project Details: Installation of Vehicle Activated Signs

Total cost of the project: \$39,608.50

Funding Details: 100% funded by NSW Government



Bettington Road near Windsor Avenue

Projects Completed by Council



Information regarding the progress on currently funded projects is provided at the start of the attachment to this report

Traffic projects that are to be considered for future funding are categorized into one of four lists as detailed below:

Traffic Projects List - outside the Parramatta City Centre

This list is prioritised in three categories (high (5 years), medium (5 -10 years) and low (10-20 years)). This work is proposed to be funded from Developer Contributions, unless grant funding, a Voluntary Planning Agreement, or other source of funding is obtained.

This new list is being used as the basis for Developer Contributions planning which is currently being undertaken. The Developer Contributions Plan is reviewed and set approximately every 5 years. Therefore, the new 'Traffic Projects List – outside the Parramatta City Centre' would also be set and fixed every 5 years at the same time the Developer Contributions Plan is approved by Council. The only opportunity to change the list (including adding to it) would be if a project on the list was funded from another source.

These projects have a range of purposes such as improving pedestrian safety and amenity; preventing corner cutting; improving sight distance (or reducing speed where sight distance is limited); upgrading an existing facility; reducing congestion; guard rail or barriers; reducing illegal or unsafe driving and other requirements. The list includes projects that would be on the Black Spot list except they have a low Benefit Cost Ratio and would not attract grant funds.

Traffic Projects List – within the Parramatta City Centre

This list includes projects that are located within the Parramatta City Centre. These projects will generally be funded from the Parramatta City Centre Section 94A Contribution Plan (known as Civic Improvement Plan, CIP), unless otherwise noted.

Black Spot Projects List

This list is for the projects where funding is being or is proposed to be sought, from the State or Federal Government under their Black Spot and Safer Roads Programs.

The Black Spot locations have a high number of collisions and the proposed work is forecast to have a significant reduction on accidents. Projects under Black Spot Program are ranked on Benefit Cost Ratio (BCR); whereas projects under Safer Roads Programs are ranked on Safety Performance Indicator (SPI). The individual funding programs also have different criteria regarding the number of accidents with injuries that have occurred. At present, a minimum of 2 injury accidents over a 5-year period is required for a project to be eligible for funding.

List of Traffic Projects Supported by Community Petition

This list was previously known as the Road Safety and Amenity List. This list includes locations where Council has received requests from at least 50% of households within the street for traffic calming to be installed in the street or part of the street. This support can be in the form of a petition or letters. Meeting this requirement demonstrates that the local community wants this treatment in the street. This eligibility requirement is in place as members of the community have raised concerns regarding the installation of traffic calming, particularly in regards to perceptions of noise, loss of parking, and prioritisation of funds. These streets often do not have a specific hazard, crash history, or concentration of vulnerable road users such as pedestrians.

Developer Contribution Funds are not suitable for these projects as these projects are not related to supporting the growth in the area. Councillors may wish to use part of the ward initiatives budget to deliver these projects.

New Projects Included in the Lists

Nil

FINANCIAL IMPLICATIONS:

Council's Traffic and Transport Services maintains four (4) projects list with the funding options as detailed below:

- Traffic Projects List - outside the Parramatta City Centre:

These projects have been grouped into 3 categories of priority (high, medium and long term). It is proposed to deliver the high priority projects within the next 5 years (2020/21 to 2025/26) using developer contributions fund for part, or all projects.

Applications will also be lodged for State and Federal Government funding for projects that would meet the requirements of funding applications at the time of lodgment. Applications are lodged between August and October each year for consideration under these programs.

- Traffic Projects List – within the Parramatta City Centre:

These projects will generally be funded from the Parramatta City Centre Section 94A Contribution Plan (known as Civic Improvement Plan, CIP), unless otherwise noted.

- Black Spot Projects List:

These projects will generally be funded from the State or Federal Government under their Blackspot and Safer Roads Programs. Applications are lodged between August and October each year for consideration under these programs.

- List of Traffic Projects Supported by Community Petition:

These projects could be funded from General Revenue. Councillors may wish to use part of the ward initiatives budget to deliver these projects.

Approved Funding for the 2020/21 Projects are detailed below:

Internal Funding

- Council's Draft Delivery Program and Operational Plan allocates funding for the below projects in 2020/21.
 - \$1.5 million per year for the Active Transport Program over four financial years (2020/21 – 2023/24) for the delivery of traffic projects using Developer Contributions Funds.
 - \$3,850,000 for the installation of traffic signals at the intersection of North Rocks Road and Alkira Road, Carlingford.
 - \$400,000 for the installation of a roundabout in Bettington Road and York Street, Oatlands
 - \$100,000 in 2020/21 for the design of traffic upgrade works at the intersections of Parkes Street with Wigram Street and Harris Street, Parramatta

External Funding

- Council has received a 100% funding offer totaling \$38,700 under the Australian Government Black Spot Program for the installation of vehicle activated signs in Bettington Road, Carlingford and Statham Avenue, North Rocks.
- Council has received a 100% funding offer totaling \$635,000 under the NSW Government Active Transport Program for the construction of a pedestrian refuge island and continuous footpath treatments in Wentworth Avenue at the laneways opposite Toongabbie Railway Station; and footpath and kerb ramps on Cooyong Crescent.

It is to be noted that State Government has made changes to the guidelines for funding applications under this program. According to the new guidelines, eligible infrastructure projects including the construction of new pedestrian paths/routes that improve connectivity and livability associated with places. Eligible infrastructure projects must include the construction of either:

- New footpaths or widening of existing footpaths that are part of a wider place making project or provide a direct access to a school (within 200m of a school access point)
- Continuous footpath treatments, or
- Shared zones.

As part of the above eligible infrastructure projects, construction of new or upgrades to existing pedestrian crossing facilities and Traffic Control Signals (TCS) can be installed as part of a wider place making project. As a result of the new guidelines, many of the Council pedestrian projects are not eligible for funding under Active Transport Program.

Funding for the 2021/22 Projects are detailed below:

External Funding

- Applications have also been lodged to Transport for NSW (TfNSW) in September 2020 for six (6) projects under the 2021/22 Federal and State Government's Black Spot and Safer Roads Programs. The outcome of the applications is expected to be available by June 2021.



Saniya Sharmeen

Traffic and Transport Team Leader

13/01/2021

Attachments - Project Lists

2020/21 Projects

(2019/20 Projects; Projects Completed;)

Location	Treatment Type	Estimated Cost	Comments
Ward: Dundas; SED: Parramatta			
Bettington Road at Fulton Road, Carlingford	Install a pedestrian refuge island	\$250,000	<p>This project is approved by Council on 7 December 2020.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>This location is near shops and The Kings School.</p> <p>Relocation of bus stop and bus shelter, realignment of kerb and gutter, street lighting upgrade and drainage works are required to be undertaken as part of this project.</p>
Bettington Road at York Street, Oatlands	Install a roundabout	\$400,000 Final cost: \$392,947.90	<p>Complete.</p> <p>This project is 100% funded by Council through Developer Contributions.</p> <p>This project is in accordance with Council resolution dated 10 February 2020</p>
Evans Road at Yates Avenue, Dundas Valley	Install raised thresholds at Yates Avenue	\$200,000	<p>This project is approved by Council on 7 December 2020.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>To improve safety and ease traffic congestion related to motorists turning right from Yates Avenue into Evans Road (ref. TEAG 1911 B2 report).</p>
Sturt Street east of Evans Road, Telopea	Install a roundabout with pedestrian refuge islands in Sturt Street and Evans Road	\$500,000	<p>This is 2019/20 project. Construction commenced, however the project is running behind schedule due to relocation of electric power pole.</p> <p>Note relocation of power pole is scheduled to occur in February 2021 and construction of the roundabout will recommence in March 2021.</p>
Ward: Epping; SED: Epping			
Carlingford Road at Hepburn Avenue, Carlingford	Design and cost estimate for new traffic signals; construction is proposed to be undertaken in 2020/21.	\$70,000	<p>This is 2019/20 project. Design is in progress.</p>
Pembroke Street east of Essex Street roundabout, Epping	Raise existing pedestrian crossing	\$240,000	<p>This project is approved by Council on 7 December 2020.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>This location is near Epping Public School. There were three accidents at the roundabout involving westbound vehicles.</p> <p>Realignment of kerb and gutter is required to be undertaken as part of this</p>

Location	Treatment Type	Estimated Cost	Comments
			project.
Ryde Street between Angus Avenue and Carlingford Road, Epping	Install a one-way (northbound) restriction. As part of the project the existing pedestrian refuge island is to be removed and road narrowing to be installed for pedestrians to cross.	\$80,000	<p>This project is approved by Council on 7 December 2020. Note that 'One Way' restriction is yet to be approved by TfNSW.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>This project is Epping West Public School and will improve set-down/pick-up facilities for the school by increasing the number of on-street car parking spaces by 13.</p>
Wards: North Rocks; SED: Parramatta			
Post Office Street west of Young Road, Carlingford	Pedestrian refuge island	\$200,000	<p>Deferred to 2021/22.</p> <p>Funding is not yet confirmed. This project is subject to confirmation of funding from Council through Developer Contributions.</p> <p>To address community concerns in relation to pedestrian safety near Larry Bolitho Reserve.</p>
Bettington Road, Carlingford and Statham Avenue, North Rocks	Install '50km/h' vehicle activated signs	\$38,700 Final cost: \$39,608.50	<p>Complete.</p> <p>To address adverse crash history north of Pennant Hills Road.</p>
Ward: Parramatta; SED: Seven Hills			
Darcy Road, Wentworthville (outside Darcy Road Public School)	Raise existing pedestrian crossing	\$240,000	<p>This project is approved by Council on 7 December 2020.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>This location is outside Darcy Road Public School.</p> <p>Realignment of kerb and gutter is required to be undertaken as part of this project.</p>
Darcy Road, Westmead (outside Parramatta Marist High School)	Install pedestrian fence	\$25,000	<p>Construction deferred due to PLR work.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>To discourage students from walking on the busy road. There are two high school on Darcy Road and therefore high volume of students use the footpath outside the school to walk to T-way bus stops or Westmead railway station. Some of these students walk on the road to pass students.</p>

Location	Treatment Type	Estimated Cost	Comments
Westbound bus stop on Darcy Road, Westmead (east of Bridge Road) -	Expand concrete pad and install a bus seat	\$5,000	<p>Concept plan is currently being prepared.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>To provide extended the hard surface area for pedestrians to pass bus patrons. Note that Council has received a complaint regarding overcrowding at this bus stop and pedestrians are walking on the road to pass bus patrons.</p>
Fitzwilliam Road between Binalong Road and Reynolds Street, Old Toongabbie	Design and cost estimate for upgrading existing traffic signals for road narrowing and installation of a channelized right-turn treatment at Reynolds Street; construction is proposed to be undertaken in 2020/21.	\$70,000	This is 2019/20 project. Design is in progress.
Kleins Road south of Moss Street, Northmead	Install a raised threshold	\$100,000	<p>This project is approved by Council on 7 December 2020.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>To reduce vehicle speed near Northmead Public School. It is to be noted that according to a speed count survey undertaken in 2015, the speed at which 85% of southbound vehicles travelled at or below in Kleins Road was 55.1km/h and 54.6km/h for northbound vehicles. The proposed raised threshold would also reduce speed of vehicles that are turning left from Kleins Road (Northmead) into Moss Street and improve safety of pedestrians that are crossing Moss Street. Note that according to a vehicle and pedestrian volume count survey undertaken in March 2020, 140 children crossed Moss Street between 8:15 and 9:15 am on a school day. During this period, 154 vehicles turned left from Kleins Road into Moss Street.</p>
Wentworth Avenue, Barangaroo Road and Cooyong Crescent, Toongabbie (near Toongabbie railway station)	Install a pedestrian refuge island in Barangaroo Road at Wentworth Avenue; Continuous footpaths in Wentworth Avenue at the laneways on the north and south sides of 485 Wentworth Avenue; and Footpath and kerb ramps on Cooyong Crescent	\$635,000	<p>Community consultation is complete. A report will be referred to the Paarramatta Traffic Committee meeting to be held on 21 January 2021 and Council meeting on 22 February 2021.</p> <p>Received 100% funded by NSW Government's under Active Transport Program.</p>
Ward: Parramatta; SED: Parramatta			
Houison Place, Parramatta (adjacent to 18 Horwood Place)	Remove widened footpath to provide on-street parking.	\$40,000	<p>Supplier selected and construction will commence shortly.</p> <p>This project is 100% funded by Council under Active Transport Program.</p> <p>This location is within Parramatta CBD. The purpose of the proposal is to increase the number of on-street car parking spaces by 2. It is to be noted that</p>

Location	Treatment Type	Estimated Cost	Comments
			the construction of Parramatta Light Rail has removed on-street parking from Church Street and Macquarie Street.
Parramatta CBD, and parts of North Parramatta, Westmead and Harris Park	Install '40km/h High Pedestrian Activity Area' restrictions	\$250,000	This is 2019/20 project. Supplier selected and construction will commence shortly.
Ward: North Rocks; SED: Baulkham Hills			
North Rocks Road at Alkira Road, North Rocks	Construct traffic signals	\$3,850,000	Contract awarded. Construction will commence in January 2021. This project is 100% funded by Council under Active Transport Program. This project was included in the 2019/20 Traffic Projects List. However, construction of this project could not start due to various approvals required before commencement of works.
Ward: Rosehill; SED: Granville			
Franklin Street south of Railway Street, Parramatta	Convert existing median island to a pedestrian crossing and install 2 x 36m long Pedestrian fence	\$250,000	Will be constructed by the Department of Education as part of the expansion of Parramatta West Public School. This project will now be delivered by the Department of Education as part of the Conditions of Consent issued on 2 December 2019 by the Minister of Planning and Public Spaces for the redevelopment of Parramatta West Public School..
Parramatta Road at Marsh Street, Clyde	Construction of pedestrian/cyclist legs on existing signals at Parramatta Road-Marsh Street along with connecting shared paths along Parramatta Road between M4 Cycleway/Duck River/Parkline	\$1,039,222	Design is in progress. Also received 100% funding from NSW Government's Active Transport Program for its construction in 2020/21.
Ward: Rosehill; SED: Parramatta			
Alfred Street south of Alice Street, Harris Park	Install pedestrian refuge island	\$320,000	In accordance with Council's resolution of 13 July 2020, this matter was referred to the Minister for Transport and Road and/or his delegate for consideration of a pedestrian crossing. Council has now received a reply. A report has therefore been included in this TEAG agenda to develop guidelines for the installation of a pedestrian crossings on local roads. A report on this project will be referred to the PTC meeting once the guideline is approved by Council.
Parkes Street at Wigram Street and at Harris Street, Parramatta	Design and cos estimates for the installation of dedicated eastbound left turn lane at Harris Street; eastbound right turn bay at Wigram Street; and a dual right turn from Harris Street	\$200,000 (2019/20 & 2020/21)	Design in progress. This is a 2-year project and 100% funded by Council under Civic Improvement Plan.

Location	Treatment Type	Estimated Cost	Comments
	(southbound) into Parkes Street		
Ward: Rosehill; SED: Auburn			
Hill Road at Bennelong Parkway, Wentworth Point (subject to advice from PLR regarding Stage 2 alignment)	Design and cost estimate for new traffic signals subject to TfNSW providing adequate information on the design for Parramatta Light Rail Stage 2; construction is proposed to be undertaken in 2020/21.	\$70,000	This is 2019/20 project. Design is in progress.

Traffic Projects – Outside the Parramatta City Centre

(Combined Pedestrian and General Traffic Projects List; **Blue: to be delivered in 2020/21**)

Project Type	Suburb	Ward	SED	Description	Estimated Cost
Short Term (0-5yrs)					
Pedestrian	Beecroft	Epping	Epping	Pedestrian refuge island, Beecroft - Intersection of Orchard St, North Rocks Rd and Plympton St, Beecroft - Upgrade existing median island to pedestrian refuge island	\$200,000
Pedestrian	Carlingford	Epping	Epping	Pedestrian refuge, Carlingford - Alamein Avenue west of Bardia Road, Carlingford - Install a pedestrian refuge island	\$220,000
General	Carlingford	Epping	Epping	New traffic signals, Carlingford - Carlingford Road/Hepburn Avenue, Carlingford - Install Traffic Signals	\$1,000,000
General	Carlingford	North Rocks	Baulkham Hills	Modifications to existing roundabout, Carlingford - Murray Farm Road at Oakes Road, Carlingford - Reconstruct the annulus of the roundabout to increase deflection and reduce the size of the lip	\$150,000
Pedestrian	Carlingford	North Rocks	Parramatta	Pedestrian refuge, Carlingford - Post Office Street at Young Road, Carlingford - Install pedestrian refuge Island	\$200,000
Pedestrian	Carlingford	North Rocks	Parramatta	Baker Street north of Dunmore Avenue, Carlingford (near Cumberland High School) – Upgrade existing pedestrian refuge island to comply with current standards and to allow school buses to turn left from Dunmore Avenue to Baker Street without mounting the footpath or the refuge island	\$200,000
Pedestrian	Carlingford	North Rocks	Parramatta	Pedestrian refuge island, Carlingford - Bettington Road south of Felton Road, Carlingford - Convert existing splitter island to a pedestrian refuge island <i>Included in 2020/21 Traffic Projects List for construction.</i>	\$250,000
Pedestrian	Carlingford	North Rocks	Parramatta	New Pedestrian Refuge Islands, Carlingford - Install 2 pedestrian refuge islands in Post Office Street, Carlingford (in addition to the island proposed near Young Street)	\$400,000
General	Constitution Hill	Parramatta	Seven Hills	New median island, Constitution Hill - install a new concrete median island at Emma Crescent near Greenleaf Street, Constitution Hill	\$115,000
General	Dundas Valley	Dundas	Parramatta	Raised threshold, Dundas Valley - Evans Road at Yates Avenue, Dundas Valley - install raised threshold <i>Included in 2020/21 Traffic Projects List for construction.</i>	\$180,000
Pedestrian	Dundas Valley	Dundas	Parramatta	Yates Avenue, Dundas Valley (near shops between Alexander Street and McKay Street) - Two pedestrian refuge islands and a continuous footpath	\$985,000
General	Epping	Epping	Epping	Traffic calming, Epping - Epping Avenue, Epping (between Chesterfield Road and Yaraan Avenue) - Install concrete median island with a tree	\$80,000
Pedestrian	Epping	Epping	Epping	Pedestrian refuge, Epping - Midson Road at Grant Close, Epping - Install pedestrian refuge Island	\$200,000
Pedestrian	Epping	Epping	Epping	New pedestrian refuge, Epping - Boronia Avenue east of Ryde Street, Epping - Install a pedestrian refuge island	\$200,000
Pedestrian	Epping	Epping	Epping	Upgrade pedestrian crossing, Epping - Pembroke Street east of Essex Street, Epping -	\$250,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
				Raise existing pedestrian crossing in Pembroke Street on the westbound approach to the roundabout to reduce traffic speeds. <i>Included in 2020/21 Traffic Projects List for construction.</i>	
Pedestrian	Epping	Epping	Epping	New pedestrian refuge island, Epping - Ray Road west of Kent Street, Epping - Install a pedestrian refuge island	\$250,000
General	Ermington	Dundas	Parramatta	New roundabout, Ermington - Spurway Street at Woodward Street /Pearce Street, Ermington - Install a roundabout	\$200,000
General	Ermington	Dundas	Parramatta	New roundabout, Ermington - Spurway Street/ Betty Cuthbert Avenue/ Jackson Street, Ermington - Install a Roundabout and median island	\$700,000
General	Granville	Rosehill	Granville	Traffic calming, Granville - Bold Street at Cowper Street, Granville - Install raised thresholds and a concrete median Island between Railway Bridge and Parramatta Road, with a gap at Cowper Street	\$400,000
Pedestrian	Melrose Park	Rosehill	Parramatta	Hope St west of Waratah St, Melrose Park – upgrade existing pedestrian refuge island to current standard (near Melrose Park Public School)	\$200,000
Pedestrian	Newington	Rosehill	Auburn	Pedestrian refuge, Newington - Avenue of Oceania at Louis Sauvage Pathway, Newington - Install a pedestrian refuge island	\$180,000
Pedestrian	Newington	Rosehill	Auburn	Upgrade pedestrian refuge, Newington - Avenue of Oceania north of Newington Blvd, Newington - Convert existing splitter island to a pedestrian refuge island	\$180,000
General	North Parramatta	Dundas	Parramatta	New roundabout, North Parramatta - install 2 new roundabouts at Gladstone Street at Brickfield St and at Buller Street, North Parramatta	\$700,000
General	North Parramatta	Parramatta	Parramatta	Traffic Management, North Parramatta - Prince Street, North Parramatta - install traffic management scheme	\$200,000
General	North Rocks	North Rocks	Baulkham Hills	Roundabout, North Rocks - North Rocks Road/ Loyalty Road, North Rocks - Install a Roundabout	\$375,000
General	Northmead	Parramatta	Seven Hills	Traffic calming, Northmead - Kleins Road south of Moss Street, Northmead - Raised threshold to reduce speed near school. <i>Included in 2020/21 Traffic Projects List for construction.</i>	\$100,000
General	Old Toongabbie	Parramatta	Seven Hills	Modifications to existing traffic signals, Old Toongabbie - Fitzwilliam Road at Binalong Road and Reynolds Street, Old Toongabbie - Channelized right turn treatment for Reynolds Street motorist; this project also requires upgrading of traffic Signals at Binalong Road (refer to TEAG 1903 B1 report)	\$1,000,000
General	Parramatta	Parramatta	Parramatta	New roundabout, Parramatta - Thomas Street at Morton Street, Parramatta - Install a roundabout	\$350,000
Pedestrian	Parramatta	Parramatta/ Rosehill	Granville	Pedestrian refuge, Parramatta - Good Street at Great Western Highway, Parramatta - Upgrade existing median island to a pedestrian refuge island	\$200,000
Pedestrian	Parramatta	Rosehill	Granville	Pedestrian crossing, Parramatta - Franklin Street south of Railway Street, Parramatta - Convert existing median island to a pedestrian crossing and install 2 x 36m long Pedestrian fence <i>To be delivered by Parramatta West Public School in 2020/2021.</i>	\$250,000
Pedestrian	Pendle Hill	Parramatta	Seven Hills	New pedestrian refuge, Pendle Hill - Bungaree Road north of Hallmark Street, Pendle Hill -	\$200,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
				Install pedestrian refuge island near Melrose Retirement Village	
Pedestrian	Pendle Hill	Parramatta	Seven Hills	Upgrade pedestrian crossing, Pendle Hill - Bungaree Road at Cornock Avenue, Pendle Hill - Raise the existing pedestrian crossing	\$200,000
Pedestrian	Pendle Hill	Parramatta	Seven Hills	Bungaree Road at Bethel Street, Pendle Hill - Install a pedestrian refuge island and continuous footpath near shops	\$700,000
Pedestrian	Rosehill	Rosehill	Parramatta	Pedestrian Fence, Rosehill - Install pedestrian fence on Virginia Street outside the gate of Rosehill Public School	\$15,000
General	Sydney Olympic Park	Rosehill	Auburn	New traffic signals, Wentworth Point - Bennelong Parkway / Hill Road, Wentworth Point - Install Traffic Signals	\$3,850,000
General	Toongabbie	Parramatta	Seven Hills	Traffic calming, Toongabbie - Station Road at Piquet Place, Toongabbie - Blister Island or kerb realignment in eastbound approach parking lane	\$25,000
Pedestrian	Toongabbie	Parramatta	Seven Hills	Pedestrian refuge, Toongabbie - Fitzwilliam Road at Bungaree Road, Toongabbie - upgrade existing pedestrian refuge island to current standard	\$200,000
Pedestrian	Toongabbie	Parramatta	Seven Hills	Pedestrian refuge, Toongabbie - Fitzwilliam Road east of Willmot Avenue, Toongabbie - Upgrade existing pedestrian refuge island to current standard	\$200,000
General	Toongabbie	Parramatta	Seven Hills	Roundabout, Toongabbie - Bulli Road at Bungaree Road, Toongabbie - Install a roundabout	\$275,000
General	Toongabbie	Parramatta	Seven Hills	Burrabogee Road and Ballandella Road, Toongabbie – install a roundabout	\$300,000
General	Toongabbie	Parramatta	Seven Hills	New roundabout, Toongabbie - Fitzwilliam Road at Tucks Road, Toongabbie - Install a roundabout	\$900,000
Pedestrian	Toongabbie	Parramatta	Seven Hills	Wentworth Avenue, Barangaroo Road and Cooyong Crescent, Toongabbie (near Toongabbie railway station) - a pedestrian refuge island in Barangaroo Road at Wentworth Avenue; Continuous footpaths in Wentworth Avenue at the laneways on the north and south sides of 485 Wentworth Avenue; and Footpath and kerb ramps on Cooyong Crescent <i>Included in 2020/21 Traffic Projects List for construction. 100% funded by NSW Government's Active Transport Program.</i>	\$1,000,000
General	Wentworthville	Parramatta	Seven Hills	Intersection upgrade (Design Only), Wentworthville - Darcy Road / Cumberland Highway, Wentworthville - Upgrade existing Traffic Signals (this includes land acquisition to provide left turn lane for westbound motorists on Darcy Road, Wentworthville (Stage 1 - Design)	\$100,000
Pedestrian	Wentworthville	Parramatta	Seven Hills	Raised Pedestrian Crossing, Wentworthville - Raise existing pedestrian crossing in Darcy Road, Wentworthville (outside Darcy Road Public School) <i>Included in 2020/21 Traffic Projects List for construction. 100% funded by Council from Developers Contribution funds.</i>	\$250,000
Pedestrian	Westmead	Parramatta	Seven Hills	Pedestrian refuge, Westmead - Park Parade south side of railway line at pedestrian underpass to Parramatta Park, Westmead - install a pedestrian refuge island with street light upgrade or install a footpath on the north side of Park parade to connect between the pedestrian refuge island and railway underpass	\$500,000
Pedestrian	Winston Hills	North Rocks	Seven Hills	Pedestrian refuge, Winston Hills - Junction Road (outside No. 122; Bellotti Avenue – Jerome Avenue), Winston Hills - Install Pedestrian Refuge Island for M2 Bus Commuters	\$200,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
Medium Term (5-10yrs)					
General	Carlingford	Epping/North Rocks	Parramatta	New traffic signals, Carlingford - Pennant Hills Road / Moseley Street, Carlingford - Install a Traffic Signals	\$1,500,000
General	Carlingford	North Rocks	Parramatta	Traffic Management, Carlingford - Baker Street between Jenkins Road and Felton Road, Carlingford - Vehicle activated warning signs for bend	\$30,000
General	Carlingford	North Rocks	Parramatta	Traffic management, Carlingford - Baker Street at Sun Valley Place, Carlingford - Vehicle activated warning signs for bend	\$40,000
General	Carlingford	North Rocks	Baulkham Hills	Traffic calming, Carlingford - Oakes Road south of Lynette Avenue, Carlingford - Install concrete median Island	\$50,000
General	Carlingford	North Rocks	Parramatta	New roundabout, Carlingford - Install new roundabout at intersection of Jenkins Road and Post Office Street, Carlingford	\$375,000
Pedestrian	Epping	Epping	Epping	New signalised pedestrian crossing, Epping - Rawson Street, Epping - Replace existing pedestrian crossing with pedestrian signals	\$450,000
General	Epping	Epping	Epping	Carparking, Epping - Cambridge Street north of Surrey St, Epping - 45° angle car parking spaces on the west side	\$150,000
Pedestrian	Epping	Epping	Epping	Upgrade existing pedestrian facility, Epping - Essex Street, Oxford Street and Chester Street, Epping - Upgrade existing pedestrian facilities and kerb ramps to current standards	\$600,000
General	Epping	Epping	Epping	New Road, Epping - New link road between Rawson Street and Carlingford Road	\$5,000,000
General	Granville	Rosehill	Parramatta/Granville	New Traffic Signals, Granville - Parramatta Road at Alfred Street (new extended section), Granville - Stage 1 Install traffic signals (changed this from short term to medim term)	\$1,000,000
Pedestrian	Lidcombe	Rosehill	Auburn	New pedestrian crossing, Lidcombe - new mid-block signalised pedestrian crossing – Hill Road –at the east-west spine – new item	\$500,000
Pedestrian	Lidcombe	Rosehill	Auburn	New refuge islands, Lidcombe - Carter Street, Lidcombe - install 1 x pedestrian refuge island	\$250,000
Pedestrian	Melrose Park	Rosehill	Parramatta	New pedestrian refuge island, Melrose Park - Waratah Street, Melrose Park (outside Melrose Park Public School)	\$200,000
Pedestrian	North Parramatta	Dundas	Parramatta	Pedestrian refuge, North Parramatta - Macarthur Street at Albert Street, North Parramatta - Upgrade the existing pedestrian refuge island to current standard	\$160,000
Pedestrian	North Parramatta	Dundas	Parramatta	New pedestrian refuge/road widening, North Parramatta - Pennant Hills Road at Bellevue Street, North Parramatta - Install a pedestrian refuge island – require Street Light upgrade and road widening	\$500,000
Pedestrian	North Parramatta	Dundas	Parramatta	New pedestrian refuge, North Parramatta - Pennant Street at Symonds Avenue, North Parramatta - Install a pedestrian refuge island including removal of the existing median and concrete blister island	\$200,000
Pedestrian	North Parramatta	Dundas	Parramatta	New pedestrian refuge, North Parramatta - Pennant Street at Isabella Street, North Parramatta - Install pedestrian refuge island including removal of the existing median and concrete blister island	\$200,000
Pedestrian	Northmead	Parramatta	Seven Hills	Pedestrian refuge, Northmead - Kleins Road north of Balmoral Road, Northmead - Install a pedestrian refuge island	\$200,000
Pedestrian	Parramatta	Parramatta/	Parramatta	Signalised pedestrian crossing, Parramatta - Macarthur Street at Gasworks Bridge,	\$700,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
		Rosehill		Parramatta - Replace the existing raised pedestrian crossing with a signalised pedestrian crossing. This is required to improve traffic efficiency	
Pedestrian	Parramatta	Rosehill	Granville	New pedestrian refuge, Parramatta - Franklin Street north of Railway Street, Parramatta - Install a pedestrian refuge island. <i>To be delivered by Parramatta West Public School in 2020/21..</i>	\$180,000
General	Parramatta	Rosehill	Parramatta	Traffic calming, Parramatta - Napier Street at Steele Street, Parramatta - Concrete Median Islands with supplementary 'Stop' signs	\$220,000
General	Rosehill	Rosehill	Parramatta	Traffic calming, Rosehill - Prospect Street opposite Arthur Street, Rosehill - Blister island or footpath widening within the 'No Stopping' area on the westbound approach of the pedestrian crossing outside Rosehill Public School	\$15,000
Pedestrian	Rydalmere	Dundas	Parramatta	Pedestrian refuge, Rydalmere - Park Road south of Wattle Street, Rydalmere - Upgrade existing pedestrian refuge island so that it complies with disabled access requirements	\$200,000
General	Rydalmere	Dundas	Parramatta	Roundabout and traffic calming, Rydalmere - Park Road at the driveway for Rydalmere Park and at Elonera Street, Rydalmere - Install a roundabout at the driveway for Rydalmere Park and a concrete median island with a 'No 'U Turn' sign north of Elonera Street	\$250,000
Pedestrian	Telopea	Dundas	Parramatta	New signalised pedestrian crossing, Telopea - Adderton Road, Telopea - Relocate existing pedestrian signals to the intersection of Robert Street and Adderton Road	\$1,000,000
General	Telopea	Dundas	Parramatta	New roundabout, Telopea - Adderton Road/ Manson Road, Telopea - Install a Roundabout	\$350,000
Pedestrian	Toongabbie	Parramatta	Seven Hills	Upgrade pedestrian crossing, Toongabbie - Ballandella Road (at Toongabbie West Public School), Toongabbie - Upgrade existing raised pedestrian crossing to current standards	\$150,000
General	Toongabbie	Parramatta	Seven Hills	Extend existing indented parking area, Toongabbie - Wentworth Avenue, Toongabbie - Reduce the length of landscaped island to create more parking outside Toongabbie Railway Station	\$100,000
General	Wentworthville	Parramatta	Seven Hills	Intersection upgrade (Construction), Wentworthville - Darcy Road / Cumberland Highway, Wentworthville - Upgrade existing Traffic Signals (this includes land acquisition to provide left turn lane for westbound motorists on Darcy Road, Wentworthville (Stage 2 - construction)	\$3,000,000
General	Westmead	Parramatta	Seven Hills	Pedestrian refuge, Westmead - Bridge Road south of Grand Corniche Road, Westmead - Convert splitter island to a pedestrian refuge island (reduced the estimated cost from \$200k to \$170,000)	\$170,000
General	Winston Hills	North Rocks	Seven Hills	New pedestrian refuge, Winston Hills - Buckleys Road, between Langdon Road and Oakes Road (outside No.18), Winston Hills. - Install a pedestrian refuge island	\$175,000
General	Winston Hills	North Rocks	Parramatta	New signalised pedestrian crossing, Winston Hills - Windsor Road near Model Farms Road, Winston Hills - Install a signalized pedestrian crossing	\$650,000
Long Term (10+yrs)					
General	Carlingford	Epping	Parramatta	Median upgrade, Carlingford - Dandarbong Avenue, Carlingford (near No.24) - Install elsholz kerb in the median	\$150,000
General	Carlingford	Epping	Epping	New roundabout, Carlingford - Keeler Street, Carlingford - Install traffic calming (a roundabout at Rickard Street)	\$280,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
General	Carlingford	North Rocks	Baulkham Hills	Roundabout and traffic calming, Carlingford - Parkland Road, Carlingford - Install chicanes and roundabouts as referred in Option 3 of the Parramatta Traffic Engineering Advisory Group (TEAG) report of November 2018 (Ref. TEAG 1811 B4)	\$950,000
General	Carlingford	North Rocks	Parramatta	New roundabout, Carlingford - install new roundabout at the intersection of Moseley Street and Tanderra Street, Carlingford.	\$250,000
General	Carlingford	North Rocks	Parramatta	New roundabout, Carlingford - install new roundabout at the intersection of Moseley Street and Young Street, Carlingford.	\$250,000
General	Carlingford	North Rocks	Parramatta	New roundabout, Carlingford - install new roundabout at the intersection of Young Road and Post Office Street, Carlingford	\$250,000
General	Carlingford	North Rocks	Parramatta	New roundabout, Carlingford - install new roundabout at the intersection of Boundary Road and Post Office Street, Carlingford	\$250,000
Pedestrian	Carlingford	North Rocks/Dundas	Parramatta	Signalised pedestrian crossing, Carlingford - Pennant Hills Road at Cumberland High School, Carlingford - Relocate existing pedestrian signals to the intersection of Pennant Hills Road and Tintern Avenue	\$1,800,000
Pedestrian	Constitution Hill	Parramatta	Seven Hills	New pedestrian refuge, Constitution Hill - Hollis Street at Emma Crescent, Constitution Hill - Install a pedestrian refuge island	\$200,000
General	Constitution Hill	Parramatta	Seven Hills	New median island, Constitution Hill - Bulli Road at Hollis Street, Constitution Hill - Install a concrete median island or rumble bar island in Bulli Road	\$80,000
General	Constitution Hill	Parramatta	Seven Hills	Traffic calming, Constitution Hill - Constitution Road near House No. 54, Constitution Hill - Install a raised threshold near the bend at No.54	\$80,000
Pedestrian	Eastwood	Epping	Epping	New pedestrian refuge, Eastwood - Terry Road, near Aged Care Centre, Eastwood - Install a pedestrian refuge island	\$200,000
General	Epping	Epping	Epping	Remove footpath widening, Epping - Ward Street, Epping West Public School - Remove footpath widening to provide additional on-street parking	\$50,000
Pedestrian	Epping	Epping	Epping	New signalised pedestrian crossing, Epping - Carlingford Road (midway between Ryde Street and Hepburn Avenue), Epping - Install pedestrian signals	\$600,000
Pedestrian	Epping	Epping	Epping	New pedestrian refuge, Epping - Brigg Road at Blaxland Road, Epping - Install a pedestrian refuge island	\$180,000
Pedestrian	Epping	Epping	Epping	New pedestrian refuge, Epping - Ray Road, Epping - Relocate existing raised threshold and install pedestrian refuge island	\$300,000
Pedestrian	Epping	Epping	Epping	New pedestrian refuge, Epping - Maida Road at Blaxland Road, Epping - Install a pedestrian refuge island	\$220,000
Pedestrian	Epping	Epping	Epping	New pedestrian refuge, Epping - Keeler Street east of Rickard Street, Carlingford - Install a pedestrian refuge island near Carlingford Public School	\$220,000
Pedestrian	Epping	Epping	Epping	New pedestrian crossings, Epping - Oxford Street, Epping - Install two (2) raised pedestrian crossings	\$600,000
General	Epping	Epping	Epping	New median islands, Epping - Edenlee Street at Chelmsford Avenue, Epping - Install concrete median islands on the bend at the intersection	\$80,000
General	Epping	Epping	Epping	Intersection upgrade, Epping - Midson Road at Mobbs Lane, Epping - Left Lane Must Turn	\$2,000,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
				Left for northbound traffic, install missing pedestrian phase, upgrade traffic signals to current standards.	
General	Epping	Epping	Epping	New roundabout, Epping - install new roundabout at the intersection of Kent Street and Cliff Road	\$500,000
General	Epping	Epping	Epping	New roundabout, Epping - install new roundabout at the intersection of Forest Grove / Maida Road	\$370,000
General	Epping	Epping	Epping	Intersection upgrades, Epping - Ray Road/ Carlingford Rd intersection upgrades including removal of traffic lights and restriction of vehicular movements to left in / left out from both Ray Road and Rawson Street.	\$3,000,000
General	Epping	Epping	Epping	New traffic signals, Epping - Kent Street / Carlingford Rd intersection – install traffic signals	\$1,000,000
General	Epping	Epping	Epping	New signalised traffic signals, Epping - Install Traffic Signals at Cliff Road / new link road between Rawson St and Carlingford Rd	\$1,000,000
General	Granville	Rosehill	Granville	Road extension, Granville - Parramatta Road at Alfred Street (new extended section), Granville - Stage 2 Extend Alfred Street to connect Cowper Street	\$3,000,000
General	Harris Park	Rosehill	Parramatta	Traffic calming, Harris Park - Good Street at both approaches to the intersection with Allen Street and Eleanor Street, Harris Park - Speed humps or speed cushion or chicane to reduce speeds approaching the roundabout	\$80,000
General	Lidcombe	Rosehill	Auburn	New traffic signals, Lidcombe - Carter Street at Birnie Avenue, Lidcombe - Install traffic signals	\$800,000
General	Lidcombe	Rosehill	Auburn	New road, Lidcombe – extension of John Ian Wing Parade ('green spine') – between Hill Road and Uhrig Road	TBA
General	Melrose Park	Rosehill	Parramatta	New traffic signals, Melrose Park - Intersection of Hope Street and Wharf Road - Install new Traffic Signals	\$750,000
Pedestrian	North Rocks	North Rocks	Parramatta	Upgrade pedestrian refuge, North Rocks - North Rocks Road, North Rocks (at No. 108) - Upgrade the existing refuge island so that the kerb ramp aligns with the gap of the island	\$200,000
Pedestrian	North Rocks	North Rocks	Baulkham Hills	New Pedestrian fence, North Rocks - North Rocks Road at Lawndale Avenue, North Rocks - Install pedestrian fence to direct pedestrians to the traffic signals	\$50,000
General	North Rocks	North Rocks	Baulkham Hills	Intersection of Barclay Road and Tiernan Avenue, North Rock – upgrade existing traffic signals to include a split approach phase in the traffic signals and other enhancements; kerb ramps also need to be upgraded to current standards as part of this work.	\$550,000
General	Northmead	Parramatta	Seven Hills	Road widening, Northmead - Redbank Road at Briens Road, Northmead - Road widening to provide left turn lane in Redbank Road (southbound).	\$1,500,000
General	Old Toongabbie	Parramatta	Seven Hills	Raphael Place at Fitzwilliam Road, Old Toongabbie – install concrete median island	\$80,000
General	Parramatta	Rosehill	Parramatta	New turning lanes and pedestrian crossing, Parramatta - Hassall Street at Arthur Street, Parramatta - Install right and left turn holds at all legs of the intersection, relocate the existing pedestrian crossing located on the east leg of Hassall Street traffic signals to the west close to the intersection and upgrade existing kerb ramps to meet current standards	\$1,500,000
Pedestrian	Pendle Hill	Parramatta	Seven Hills	New pedestrian refuge, Pendle Hill - Ballandella Road near Wentworth Avenue, Pendle Hill - Install a pedestrian refuge island – may need to be located north of driveway to 321 Wentworth	\$200,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
				Avenue to accommodate turning paths	
General	Pendle Hill	Parramatta	Seven Hills	New traffic signals, Pendle Hill - Wentworth Avenue at Binalong Road, Pendle Hill - Install Traffic Signals	\$650,000
Pedestrian	Rosehill	Rosehill	Parramatta	New pedestrian refuge, Rosehill - Arthur Street north of Alice Street, Rosehill - Install a pedestrian refuge island	\$200,000
General	Rosehill	Rosehill	Parramatta	New Roundabout, Rosehill - Eleanor Street at Arthur Street, Rosehill - (Install a roundabout)	\$280,000
General	Rydalmere	Rosehill	Parramatta	Traffic calming, Rydalmere - Clyde Street at South Street, Rydalmere - Relocate kerb ramp and remove splitter island.	\$60,000
Pedestrian	Telopea	Dundas	Parramatta	Upgrade pedestrian refuge, Telopea - Manson Street at Sturt Street, Telopea - Upgrade existing concrete median island to a pedestrian refuge island to meet current standards and install speed cushions	\$200,000
Pedestrian	Telopea	Dundas	Parramatta	New Pedestrian Refuge Island - Install a Pedestrian Refuge Island in Wade Street near Eyles Street, Telopea	\$250,000
Pedestrian	Telopea	Dundas	Parramatta	New Pedestrian Refuge Islands - Install a Pedestrian Refuge Island in Sturt Street, Telopea (outside PLR stop)	\$250,000
General	Telopea	Dundas	Parramatta	New roundabout, Telopea - Shortland St & Evans Rd, Telopea - new roundabout and lane marking within Evans Rd and widening for new lanes and footpath construction within Shortland Ave	\$350,000
General	Telopea	Dundas	Parramatta	New priority treatment, Telopea - Manson St, Sturt St & new Wade Street, Telopea - install median island with priority signage and control line marking for the New Wade Street Manson movement	\$500,000
General	Telopea	Dundas	Parramatta	New priority treatment, Telopea - New Wade St, Shortland St & Marshall Road, Telopea - install median island with priority signage and control line marking for the New Wade Street and Marshall Road movement	\$500,000
Pedestrian	Toongabbie	Parramatta	Seven Hills	Upgrade pedestrian crossing, Toongabbie - Station Road at McCoy Street, Toongabbie - Raise existing pedestrian crossing	\$200,000
Pedestrian	Wentworth Point	Rosehill	Auburn	New pedestrian refuge, Wentworth Point - Bennelong Parkway at Haslams Creek, Wentworth Point - Install a pedestrian refuge island	\$220,000
Pedestrian	Winston Hills	North Rocks	Seven Hills	New pedestrian refuge, Winston Hills - Gibbon Road between Hilary Street and Kindelan Road, Winston Hills - Install a pedestrian refuge Island	\$200,000
General	Winston Hills	North Rocks	Seven Hills	Traffic calming, Winston Hills - Junction Road at Hillcrest Avenue, Winston Hills - Raised threshold near west end of school and chicane	\$100,000
General	Winston Hills	North Rocks	Seven Hills	New median islands, Winston Hills - Junction Road at Model Farms Road, Winston Hills - Install concrete median islands	\$120,000
General	Winston Hills	North Rocks	Seven Hills	Traffic calming, Winston Hills - Lanhams Road/Willmott Road bend, Winston Hills - Install 2 raised thresholds, 1 on each side of the bend	\$160,000
Pedestrian	Winston Hills	North Rocks	Seven Hills	Pedestrian refuge island, Winston Hills - intersection of Caroline Chisholm Drive and Junction Road, Winston Hills - upgrade splitter island to pedestrian refuge island at the north leg of the intersection	\$200,000

Project Type	Suburb	Ward	SED	Description	Estimated Cost
Pedestrian	Winston Hills	North Rocks	Seven Hills	Pedestrian refuge islands, Winston Hills - intersection of Caroline Chisholm Drive and Olympus Street, Winston Hills - upgrade splitter islands to pedestrian refuge islands in the south and west legs of the intersection	\$400,000
General	Winston Hills	North Rocks	Seven Hills	New roundabout, Winston Hills - Gibbon Road at Langdon Road, Winston Hills (boundary with The Hills Shire Council) - Install a roundabout	\$350,000

Parramatta City Centre Traffic Projects List

Location	Treatment Type	Estimated Cost	Comments
Argyle Street at Church Street, Parramatta	Upgrade Kerb Ramps at existing Traffic Control Signals (TCS) to current standards	\$750,000	
Argyle Street at Marsden Street, Parramatta	Upgrade Kerb Ramps at existing Traffic Control Signals (TCS) to current standards	\$750,000	
Barrack Lane, Parramatta	Shared Zone for entire length	\$1,250,000	This location is affected by Parramatta Light Rail and therefore, this project is deferred for construction in 2022/23.
Charles Street at Union Street, Parramatta	Install a pedestrian refuge island	\$250,000	
Church Street at Aird Street, Parramatta	Install continuous footpath	\$400,000	
City Ring Road, Various suburbs	All other proposals that are part of the City Ring Road and not listed in this list.	TBA	Implementation of various projects along the route are currently being investigated.
George Street at Horwood Place, Parramatta	Improve pedestrian safety.	TBA	Treatment is subject to proposal for Horwood Place precinct redevelopment and Sydney Metro.
George Street at Freemason Arms Lane and Phillip Street at Andrew Nash Lane, Parramatta	Install continuous footpath	\$1,000,000	Application has been lodged for NSW Government funding under its Active Transport Program in 2020/21
Macquarie Street at Marsden Street, Parramatta	TCS upgrades - Upgrade Kerb Ramps at existing traffic signals to current standards	N/A	To be undertaken as part of Parramatta Light Rail.
O'Connell Street at Hunter Street, Parramatta	Upgrade Kerb Ramps at the existing Traffic Control Signals (TCS)	\$950,000	
Parkes Street at Wigram Street and at Harris Street, Parramatta	Design and cos estimates for the installation of dedicated eastbound left turn lane at Harris Street; eastbound right turn bay at Wigram Street; and a dual right turn from Harris Street (southbound) into Parkes Street	\$200,000 2019/20 & 2020/21	Design is in progress

Location	Treatment Type	Estimated Cost	Comments
Smith Street, north of Macquarie Lane, Parramatta	Extension of the median island at Macquarie Lane to the north to restrict right turn entry into the car park of 75 George Street, Parramatta	\$50,000	This project is not eligible for State or Federal funding. However, RMS may offer funds as part of easing Sydney's congestion. Otherwise, Council funding is required for this project.
Union Street at Charles Street, Parramatta	Install a Pedestrian Refuge Island	\$250,000	

Black Spot Projects List

BCR	Location	Treatment Type	Initiator / Year Included on List	Estimated Cost	Injury Accidents (over 5-year Period) that can be treated by the treatment	Funding Status	Comments
20.75	Bettington Road, Carlingford and Statham Avenue, North Rocks Ward: North Rocks SED: Parramatta	Install '50km/h' and 'Slow Down' Vehicle Activated Signs	City of Parramatta 2019	\$38,700	7	Not yet funded	Received funding under Australian Governments' Black Spot Program in 2020/21
17.43	intersection of Raymond Street and High Street, Parramatta	Install speed cushions (4) at each approach of the roundabout	City of Parramatta 2020	\$16,000	3	Not yet funded	Applied for funding under Federal and State Governments' Black Spot Programs in 2021/22
15.21	Newington retail precinct	Installation of 40 km/h High Pedestrian Activity Area restrictions with traffic calming	City of Parramatta 2020	\$100,000	4	Not yet funded	Applied for funding under Federal and State Governments' Black Spot Programs in 2021/22
9.68	Wentworth Avenue, Pendle Hill and Toongabbie Ward: Parramatta SED: Seven Hills	Install Speed Limit and Slow Down Vehicle Activated signs (4)	City of Parramatta 2020	\$100,500	10	Not yet funded	Applied for funding under Federal and State Governments' Black Spot Programs in 2021/22
7.04	Carnarvon Street between Vore Street, and Suttor Street, Silver Water	Move stop or give-way lines forward using kerb extensions	City of Parramatta 2020	\$100,000	4	Not yet funded	Applied for funding under Federal and State Governments' Black Spot Programs in 2021/22
2.67	Intersection of Oakes Road and Murray Farm Road, Carlingford	Installation of speed cushions at all approaches to the roundabout at the intersection of Oakes Road and Murray Farm Road, Carlingford	City of Parramatta 2020	\$16,000	2	Not yet funded	Applied for funding under Federal and State Governments' Black Spot Programs in 2021/22
2.06	Bold Street south of Cowper Street, Granville Ward: Rosehill	Install a raised threshold	City of Parramatta 2018	\$180,000	4	Not yet funded	Reviewed the crash history and noted that the appropriate treatments cannot be installed at the intersection due to following reasons: <ul style="list-style-type: none"> In close proximity to two traffic signals (at Parramatta Road and at Railway Parade)

BCR	Location	Treatment Type	Initiator / Year Included on List	Estimated Cost	Injury Accidents (over 5-year Period) that can be treated by the treatment	Funding Status	Comments
	SED: Granville						<ul style="list-style-type: none"> Required to maintain 3 travel lanes (including a bus lane) in the northbound and 2 travel lanes in the southbound directions. Required to maintain right turn access between Bold Street and Cowper Street (west leg) <p>Currently liaising with TfNSW to determine the appropriate treatment options for this location.</p>

Traffic Projects supported by Community Petition (previously The Road Safety and Amenity List)

Location	SED	Proposed Treatment	Year Included on List	Estimated Cost
Ward: Epping;				
Lexington Avenue at Raimonde Road, Eastwood	Epping	Concrete median islands	2014	\$20,000
George Street, Epping	Epping	Chicanes (2)	2020	\$90,000
Ward: Parramatta				
Ballandella Road between Fitzwilliam Road and Barangaroo Road, Toongabbie	Seven Hills	Raised Thresholds or Chicanes (2)	2015	\$150,000
Harris Street, Constitution Hill	Seven Hills	Speed Humps (3)	2015	\$20,000
Ward: North Rocks				
Barnetts Road, Winston Hills	Seven Hills	Chicanes	2011	\$900,000
Ward: Rosehill				
Alice Street between Alfred and Arthur Streets	Parramatta	Speed Humps (2)	2020	\$17,500
Deakin Street, Silverwater (between Stubbs Street and the cul-de-sac)	Auburn	Speed Humps	2018	\$20,000



CITY OF PARRAMATTA COUNCIL

Traffic Engineering Advisory Group Agenda Item

ITEM NO: 2101 B7
SUBJECT: Outstanding Works Instructions
APPLICANT: City of Parramatta Council
REPORT OF: Traffic and Transport Manager
WARD: Various
SED: Various

Purpose

This report provides information on works instructions issued between September and December 2020.

OFFICER'S RECOMMENDATION:

That the information in relation to outstanding Works Instructions over the 3-month period between August and October 2020 be received and noted.

Works Instruction Details

Details of the total number of works instructions issued and the number of outstanding works instructions during the period between August and October 2020 are provided below:

Works Instructions for Delegated Items No. 287 – August 2020

No. of Linemarking Instructions issued:	5
No. of Sign Instructions issued:	10
Instructions issued in:	10/09/2020 to 7/10/2020
No. of Sign Instructions yet to be issued:	1
No. of Instructions yet to be completed:	0

Works Instructions for Delegated Items No. 288 – September 2020

No. of Linemarking Instructions issued:	2
No. of Sign Instructions issued:	10
Instructions issued in:	28/9/2020 to 30/10/2020
No. of Sign Instructions yet to be issued:	0
No. of Instructions yet to be completed:	1 linemarking

Works Instructions for Delegated Items No. 289 – October 2020

No. of Linemarking Instructions issued:	1
No. of Sign Instructions issued:	13
Instructions issued in:	26/10/2020 to 13/12/2020
No. of Sign Instructions yet to be issued:	0
No. of Instructions yet to be completed:	3 signs, 1 linemarking

FINANCIAL IMPLICATIONS

Roads and Maritime Service (RMS) Block Grant funds for 2020/21 have been used for these works.



Richard Searle

Traffic and Transport Manager

13/01/2021