



# ROZELLE NORTH LATM FINAL DRAFT REPORT

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# ROZELLE NORTH LATM

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November 2021

Prepared for

**Inner West Council**

# ROZELLE NORTH LATM

## Report Document Control

<b>Project</b>	A Local Area Traffic Management Plan for Rozelle North
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Final Draft Report	22 November 2021	VP / MT	OS

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# 1 EXECUTIVE SUMMARY

## 1.1 LAND USE AND POPULATION GROWTH

### 1.1.1 Land Use and Population Growth

- The study area consists of about 41 hectares of the previous Leichhardt Council area. Within this area, the area is principally zoned General Residential R1.
- Retailing is located principally in the B2 (local centre) zoning on Darling Street (north east and south east corners).
- Food retailing is inside the area with IGA X-press Rozelle and Woolworths Rozelle Metro lying within the area boundary along Darling Street and with Fruitologist Union Place at Nagurra Place.
- There is a considerable amount of open space, with Bridgewater Park and Balmain Cove Park being the public open spaces within the area.
- Elkington Park is on the boundary of the area to the north east, while King George Park is lying to the south west.
- The area is serviced by buses which run along Victoria Road and Darling Street.
- Two public schools service the area, these being Rozelle Public School and Sydney Secondary College Balmain Campus.

### 1.1.2 Mode of Travel to Work

- Census 2011 and 2016 data was reviewed for the study area.
- Of the 2 981 residents in the employable age groups in the area in 2016, 1 947 persons (65%) were in the labour force compared to 72% in 2011.
- In the last 5 years from 2011-2016 the mode to work has changed in car use – down by 2% and public transport use – up by 6%, although travelling by car is still the leading mode to travel to work.
- Half of the study area is within walking distance of Metro Bus stops on Victoria Road. The improvements in public transport since 2011 as well as the growth in road congestion may account for this change in mode.

### 1.1.3 State and Council Strategies and Plans

- The Local Government Road Safety Management Guidance document by Austroads dated January 2020 notes the following in relation to road safety and speed guidance.
- The Safe System approach that underpins the NSW Government's Road Safety Approach called "Towards Zero". This is a holistic approach to the safety of the road system and the interactions among roads and roadsides, travel speeds, vehicle and road users.
- The Greater Sydney Commission identified Transit Oriented Development (TOD) sites in the southern part of the Inner West Council Area, surrounding the railway stations at Sydenham, Marrickville and Dulwich Hill.
- The Our Inner West 2036, the list of its key community challenges, it acknowledges that, compared to many parts of Sydney, Inner West is well serviced by public transport



to get in and out of the area but getting around within the area is still not easy.

- The Draft Inner West Integrated Transport Strategy 2019, the strategy states its aim as providing move towards a transport future focusing on active and sustainable modes of transport, and land-use planning approaches to support these modes of transport.
- Leichhardt LATM 2000 Vol.2 mentions Wellington Street, Wise Street and Terry Street as not complying with an acceptable traffic flow for their functional classification.
- The 2016 Bike Plan prepared by GTA Consultants recommended that one-way roads suitable for two-way bicycle flow: Nelson Street, west of Darling Street.
- Leichhardt Pedestrian Access Mobility Plan 2014, The Pedestrian Access Mobility Plan (PAMP), adopted in 2004, was reviewed and updated in 2014 by Urban Arc to ensure that the planning, design and construction of all future pedestrian facilities link with existing facilities, are designed to incorporate planned future development sites and enhance the safety of existing pedestrian facilities.
- WestConnex Stage 3 (M4-M5 Link), Near the study area, the M4-M5 link project includes construction of a ventilation facility on Victoria Road, Iron Cove Link Surface works and a connection (tunnel end) to the future Western Harbour Tunnel and Beaches Link (WHTBL).

#### 1.1.4 Traffic and Transport

- In terms of daily traffic volumes, the peak hour bi-directional volumes can be interpreted in most cases as 10% of the daily volume on the road. Where the volume exceeds 500 vehicles per hour the Guide states that residential amenity begins to decline noticeably.
- A review of the overleaf reveals that in the study area there were no roads where the 85th percentile speed was 10% over the posted speed limit. Speeds on Terry Street exceed the posted speed limit at two locations; with up to 7.5% exceed level.
- The cycling facilities in the study area for cyclists are predominantly Mixed Traffic facilities. It is noted that a majority of these routes do not provide the requisite cycling facility design, as such warning signs, directional signs and pavement markings.
- The locations of bus stop and bus routes passing through the study are illustrated in **Map 6**. Bus routes and bus stops are of relevance to the LATM study which deals with pedestrian movements, as the crossing of pedestrians to/from stops must be managed for safety in some locations.
- Bus routes and stops are relevant to the LATM in relation to the road width required for buses and impact on traffic management and traffic calming devices which can be used.

#### 1.1.5 Road Crashes

- There were 56 recorded incidents over the latest 5-year period (January 2014 to December 2018).
- Of the 56 crashes in the study area, most were at intersections with 45 incidents (83%), with the remaining 9 crashes occurring mid-block (17%).
- Victoria Road / Wellington Street intersection – 7 crashes
- Crash type RUM Code 30 (rear end collision) occurred 3 times at this intersection, with all three incidents involving vehicles and occurring on Victoria Road. Crash type RUM Code 35 (lane change left) also had 2 accidents in this intersection, with both incidents

involving vehicles.

- Victoria Road / Terry Street intersection – 8 crashes
- Crash type RUM Code 30 (rear end collision) occurred 4 times in this intersection, with all three incidents involving vehicles. A left off carriageway into object or parked vehicle (RUM Code 71), far side collision with a pedestrian (RUM Code 02), left turn side swipe (RUM Code 37) and other same direction (RUM Code 39) crashes at this intersection.
- Wise Street / Darling Street / Beattie Street – 2 crashes
- There were two collisions at this intersection: a RUM Code 02 (far side with a pedestrian on the Beattie St side) and a RUM Code 10 (cross traffic).
- Glassop Street – 2 crashes
- Glassop Street had 2 occurrences of RUM code 63 (vehicle door) crashes between Elliott and Carievile Streets.

## 1.2 COMMUNITY INPUT

### 1.2.1 Community Survey

- In total 173 persons responded. The largest number of respondents were from Terry Street.
- It indicates that weekends are rated almost as highly as a problem time for traffic volume, indicating that this issue is not confined to the working week.
- Terry Street has the highest level of concern for too much traffic, heavy vehicle use, rat running, exceeding the speed limit and sight obstructions;
- Wellington Street and Darling Street also have a high level of concern for too much traffic;
- Wise Street has rat running and exceeding speed limit concerns;
- Glassop Street has a number of concerns over sight obstructions.

## 1.3 RECOMMENDATIONS

### 1.3.1 Darling Street / Merton Street Intersection

Based on the intersection operation and safety assessment and community feedback, it is proposed that a raised pedestrian crossing is installed on the southern approach of the intersection.

### 1.3.2 Terry Street / Margaret Street / Nagurra Place Intersection

Based on community feedback and as noted in the pedestrian safety and intersection operation assessment based on high volumes and speeds of vehicles along Terry Street is proposed to raise the existing pedestrian crossing on the southern approach of this intersection.

### 1.3.3 Darling Street / Wise Street / Beattie Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment based on existing use of pedestrians crossing on the western approach of the intersection it is proposed to increase the height of the existing pedestrian crossing and extend the raised threshold to be extended to the exit of the existing roundabout. Further to this, in order to improve pedestrian safety on the western and eastern approaches to the intersection it is proposed to repair the existing bollard and chain fence and place additional landscaping to ensure pedestrians are directed towards the pedestrian crossing on the western approach and away from the intersection on the eastern approach.

#### **1.3.4 Terry Street / Elliott Street / Glassop Street Intersection**

Based on community feedback and as noted in the intersection safety and operation assessment based on poor visibility from all approaches to the intersection, with non-compliance observed of the existing Stop sign treatment on the Elliott Street and Terry Street approaches an alternative roundabout treatment is proposed.

#### **1.3.5 Glassop Street / White Street / Young Street Intersection**

Based on community feedback and as noted in the intersection safety and operation assessment based on existing limited sight distance from White Street turning into Glassop Street two options are proposed to improve safety at this location.

#### **1.3.6 Terry Street between Thornton Street and Margaret Street**

Based on community feedback and as noted in the intersection safety and operation assessment based on existing speed at the location near Balmain Secondary College, with speeds observed and recorded greater than the 40km/h speed limit. It is proposed to install speed cushions outside 62 Terry Street and install road signs at this additional speed cushion and bring the existing signage leading up to the speed hump to the south to meet Australian Standard 1742.13-2009.

#### **1.3.7 Wellington Street / Terry Street Intersection**

Based on community feedback and as noted in the intersection safety and operation assessment based on existing pedestrian desire lines it is proposed to upgrade the existing refuge island on the western approach of the intersection on Terry Street and to install Zebra Crossings on the western and southern approaches.

#### **1.3.8 Nelson Street / Wellington Street Intersection**

Based on community feedback and as noted in the intersection safety and operation assessment based on observations of drivers travelling north on Wellington Street, which is currently one-way southbound it is proposed to reduce the width of Wellington Street by installing 30-degree angle parking along the western side of Wellington Street and also install a kerb blister and build out to make the right turn manoeuvre more difficult for vehicles.

#### **1.3.9 Wellington Street / Merton Street Intersection**

Based on community feedback and as noted in the intersection safety and operation assessment there is a missing active transport link it is proposed to install kerb extensions on the northern approach of this intersection.

#### **1.3.10 Tilba Avenue – shared zone**

Tilba Avenue was part of Leichhardt Council's Narrow Streets Program, where it is to be converted into a shared zone due to its narrow width and an absence of a footpath.

#### **1.3.11 Darling Street/Nelson Street**

A suggestion was made from our Access and Inclusion Planning for an additional on-street disabled parking space in Darling Street near Nelson Street, for improved access to the Hanford Centre. The existing 15m disabled space in Nelson Street is located on a grade and historically there has been an incident where one older resident had a fall while using the accessible parking space.

#### **1.3.12 Terry Street between Wise Street and Norman Street**

The warrants are not met for a zebra crossing in this section of Terry Street. Therefore, an alternative solution to slow down vehicles is proposed. This includes line marking on Terry Street to attempt to slow down vehicles travelling north on Terry Street at the intersection and nearby bend with Wise Street.

#### **1.3.13 Crystal Street**

Feedback from residents has demonstrated concerns for the current operation of Crystal Street. In order to

reduce conflicts along Crystal Street as a two-way operation, it is recommended that a one-way anticlockwise traffic arrangement be further investigated and parking modified accordingly.

#### **1.3.14 Estimated Cost of all proposals**

It is estimated that the total cost of all proposals will be approximately \$585,000 with a 10 percent contingency this amount would be approximately \$643,500.

## **1.4 ENGAGEMENT OUTCOMES**

A survey of the community was undertaken in September and October 2020 to gauge community support for the proposed improvement recommendations. A total of 109 responses were received. These responses resulted in:

- Completely supportive – 36
- Very supportive – 34
- Moderately supportive – 25
- Slightly supportive – 11
- Not at all supportive – 3

This is an overwhelming support for the proposals and only minor changes were required to be made for the proposals to meet the requirements of the residents, where appropriate.

## 2 INTRODUCTION

The purpose of this project is to develop a Local Area Traffic Management (LATM) scheme for the Rozelle North area (Area L7). This area is bounded by Victoria Road, Darling Street, Young Street, Glassop Street, White Street and Iron Cove as shown in **Figure 2-1**.



**Figure 2-1: Rozelle North Study Area**

The general objectives of this project as stated in the Brief are to:

- Investigate and review the performance of the existing Local Area Traffic Management (LATM) schemes and recommend proposed LATM works.
- Integration of traffic planning based on Local Area Traffic Management and parking management integration.
- To assess vehicle speed across the study area and propose additional control measure where applicable;
- Integration of traffic planning based on Local Area Traffic Management and parking management integration.
- To investigate traffic intrusion into the predominantly residential study area and propose solution as required;
- To improve pedestrians and cyclist accessibility through the study area (taking into account measures proposed in the Inner West Council Bicycle Plan) and strategies for LATM management including price control techniques, quality control techniques and countermeasure techniques.

In developing recommendations LATM Strategy, the Brief states that consideration must be given to incorporate the following principals of Local Area Traffic Management:

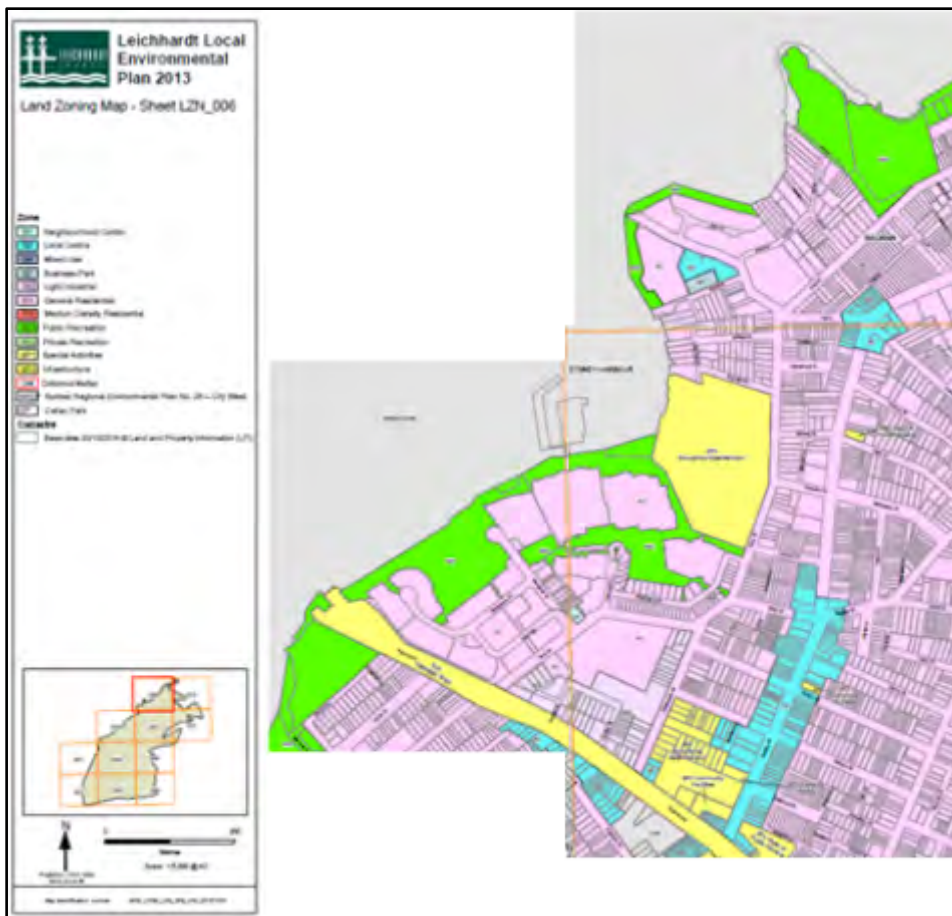
- Reduction in vehicle speeds.
- Minimise traffic levels and intruding traffic in a local street.
- Minimise crash risk.
- Improve local amenity by:
  - Reducing car use,
  - Increasing use of public transport,
  - Increasing walking and cycling.
- Improving the streets-cape.

### 3 CONTEXT

#### 3.1 LAND USE AND POPULATION GROWTH

##### 3.1.1 Leichhardt LEP 2013

The study area consists of about 41 hectares of the previous Leichhardt Council area. Within this area, the area is principally zoned General Residential R1, as in **Figure 3-2** below. Retailing is located principally in the B2 (local centre) zoning on Darling Street (north east and south east corners).



**Figure 3-2: Leichhardt LEP 2013**

Source: NSW Legislation

##### 3.1.2 Surrounding Land Use Attractors

There is a considerable amount of open space, with Bridgewater Park and Balmain Cove Park being the public open spaces within the area. Elkington Park is on the boundary of the area to the north east, while King George Park is lying to the south west.

Food retailing is inside the area with IGA X-press Rozelle and Woolworths Rozelle Metro lying within the area boundary along Darling Street and with Fruitologist Union Place at Nagurra Place. Balmain Wharf is about 1.5 km to the east and Rozelle Bay Light Rail station is about 1km to the south.

The area is serviced by buses which run along Victoria Road and Darling Street.



Primary education is provided by Rozelle Public School (approximately 630 students), which is located in the southern part of the study area. Sydney Secondary College Balmain Campus, located in the middle of the study area, provides education to about 800 students of years 7 to 10.

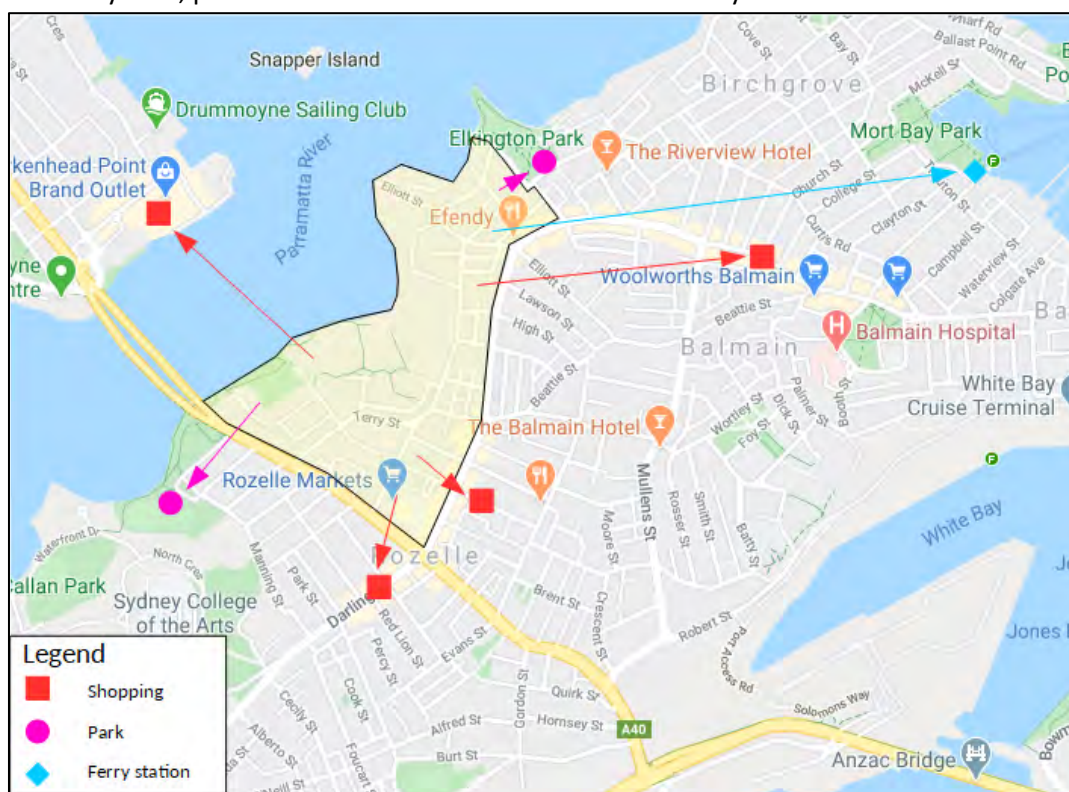


Figure 3-3: Land Use Attractors Outside the Study Area.

### 3.1.3 Public School Catchments

Two public schools service the area, these being Rozelle Public School and Sydney Secondary College Balmain Campus. The catchments of each are illustrated below in **Figure 3-4**. To attend these schools, children from outside the study area would have to cross Victoria Road and Darling Street if they live within walking distance. Other children use school buses or get delivered by car.

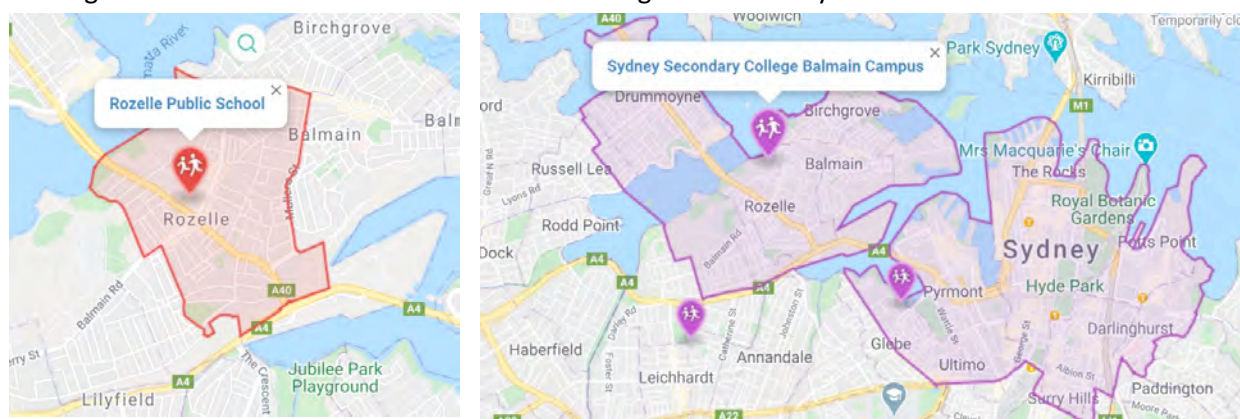


Figure 3-4: Local Primary and Secondary School Catchments.

Source: Australian Public-School Website



### 3.2 LEICHHARDT DCP 2013

The **Leichhardt DCP 2013** states the Objectives within General Provisions are:

Council will, regardless of location, promote urban design that produces walkable, cycle-able neighbourhoods that will support a socially, environmentally and economically resilient community.

Development is to make a positive contribution to implementing the following urban design objectives:

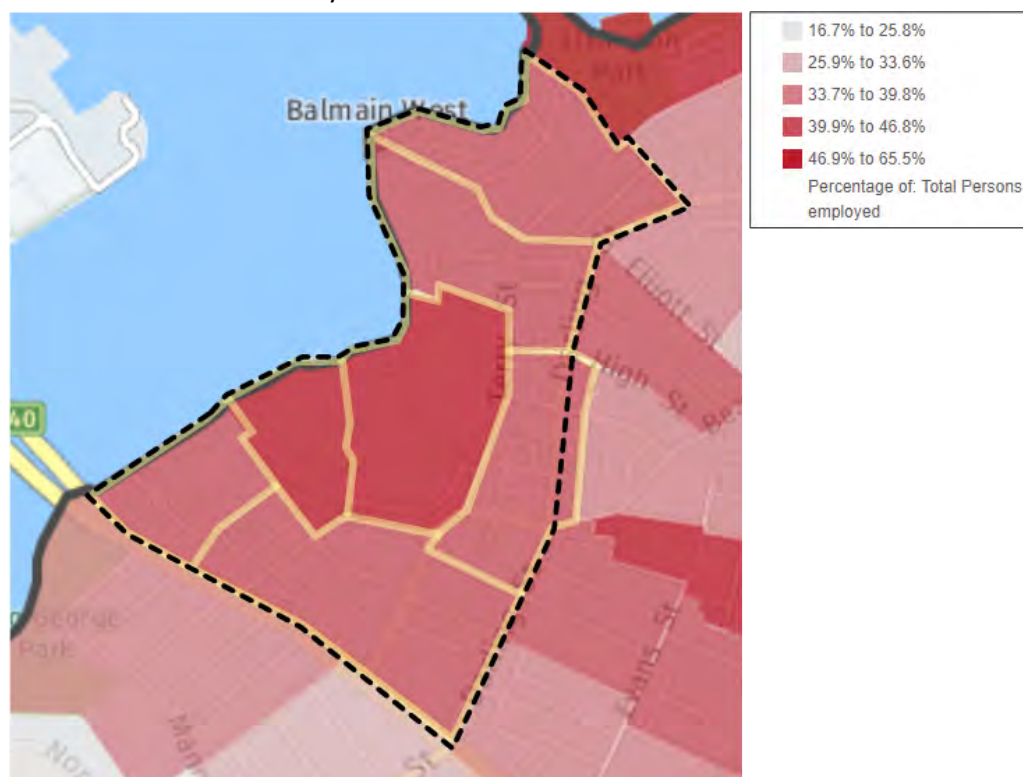
- O2 – Accessible: places and spaces can be accessed by the community via safe, convenient and efficient movement systems.
- O5 – Connected: places and spaces encourage people to interact with the physical environment and each other through a network of safe, convenient travel routes and alternatives which are accessible for all users. Places and spaces accommodate a variety of uses and activities which attract people and enhance social activity. (C1.0)

The **Leichhardt DCP 2013** Desired Future Character of the area includes:

- C1 – Preserve the established setback and street crossing patterns for each street. (C2.2.5.4 Iron Cove Distinctive Neighbourhood)
- C5 – Improve pedestrian and cycle accessibility, safety and facilities to take full advantage of low cost/public transport services in the area.
- C10 – Discourage additional vehicle access to sites from Darling Street and Victoria Road. (C2.2.5.5 Rozelle Commercial Distinctive Neighbourhood)
- C1 – Preserve and improve the pedestrian safety, amenity and focus of Darling Street and adjacent streets. (C2.2.5.5(a) Darling Street Sub Area)

### 3.3 MODE OF TRAVEL TO WORK OF RESIDENTS

Census 2011 and 2016 data was reviewed for the study area. **Figure 3-5** below outlines in yellow seven SA1 areas which cover the study area outlined in a black broken line.



**Figure 3-5: Statistical Areas within Rozelle North.**

Source: IWC Social Atlas

Of the 2 981 residents in the employable age groups in the area in 2016, 1 947 persons (65%) were in the labour force compared to 72% in 2011. In the last 5 years from 2011-2016 the mode to work has changed in car use – down by 2% and public transport use – up by 6%, although travelling by car is still the leading mode to travel to work.

**Table 2. 1: Workforce Method of Travel to Work.**

	2016			2011			% change
	Labour force participation			Labour force participation			
Main method of travel	Number	%	Total responses	Number	%	Total responses	2011 to 2016
Public transport	614	33%	1865	476	27%	1741	+6%
Car	811	43%	1865	789	45%	1741	-2%
Walk	77	4%	1865	79	5%	1741	-1%
Cycle	42	2%	1865	46	3%	1741	-1%
Worked at home	76	4%	1870	85	5%	1725	-1%
Households without car	200	12%	1675	196	14%	1445	-2%

Source: 2016 ABS Census

Half of the study area is within walking distance of Metro Bus stops on Victoria Road. The improvements in public transport since 2011 as well as the growth in road congestion may account for this change in mode. **Figure 3-6** illustrates the catchments for the bus stops (400m). The northern part of the area is serviced by bus routes in Darling Street, with connections to the city and to the Inner West areas.



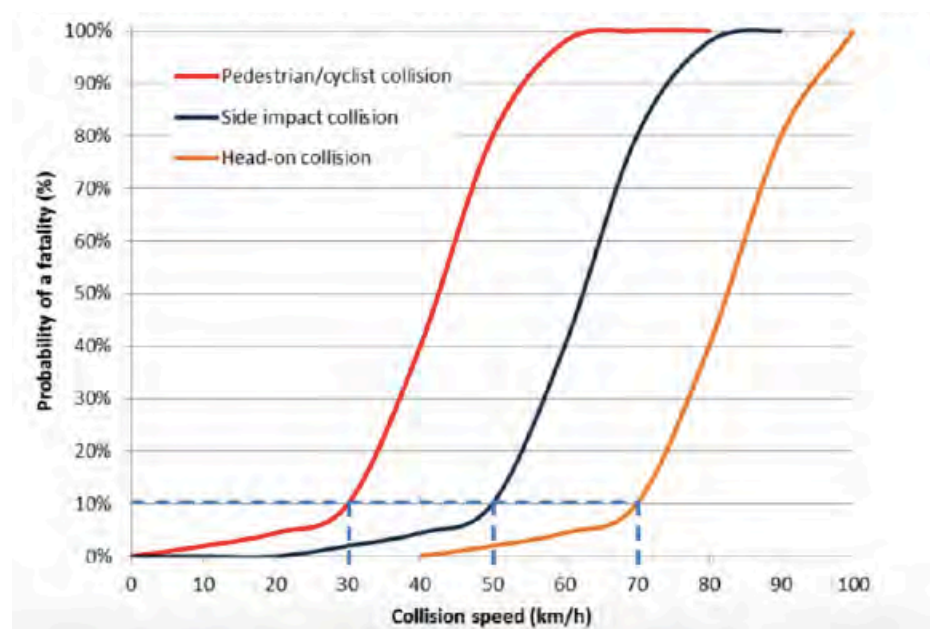
**Figure 3-6: Walking Catchments to Bus Stops.**

## 4 STATE AND COUNCIL STRATEGIES AND PLANS

### 4.1 ROAD SAFETY SPEED RESEARCH

The *Local Government Road Safety Management Guidance* document by Austroads dated January 2020 notes the following in relation to road safety and speed guidance. Local Government roads tend to have vulnerable pedestrians and cyclists present, which may make these types of roads more difficult to manage because of the variability in road types and complex interactions between a wider range of users. This is the case in the study area, with three different local road types being present, these include local access ways and streets (such as Wagamama Place and Waragal Avenue) and collector roads (such as parts of Terry Street and all of Darling Street). As such this guide provides the relevant road safety approaches and practices that are most likely to be applicable in the local government context.

The Safe System approach that underpins the NSW Government's Road Safety Approach called "Towards Zero". This is a holistic approach to the safety of the road system and the interactions among roads and roadsides, travel speeds, vehicle and road users. The role of speed in this system based on the relationship between impact speed and probability of a fatality for different scenarios demonstrates that at during a collision at 30 km/h involving a pedestrian or cyclist there is a 10 per cent probability of a fatality (Wramborg curbs developed in 2005, refer to **Figure 4-7** below. This leads to the safe impact speed for road sections used by cars and vulnerable road users, as would be the case for the local accessways and streets in the study area, would have a Target Safe System speed of 30km/h. This document also notes that there are the highest occurrences of under-reporting amongst the most vulnerable road users, including pedestrians and cyclists and therefore any crash data analysis may need to be supported by traffic engineering base principals when determining any implemented changes, not simply relying on crash data as a source alone.



**Figure 4-7: Relationship between impact speed and probability of a fatality for different scenarios**

Source: Austroads, January 2020

The Safe Systems approach as outlined in the above document is further considered in Integrating Safe System with Movement and Place for Vulnerable Road Users, Austroads, January 2020. Appendix B. provides Safe System Aligned Measures for Pedestrians and Cyclists. Some of the key items that assist in implementing a 30km/h zone should include:

- Raised signalised intersections with 30km/h ramps (or lower) – which could be used for entry treatments to the study area
- Signalised intersections with 30km/h platforms (or lower) which could be used should any intersections be proposed to be signalised in the study area.
- 30km/h speed limits or lower, where in local streets, both speed and traffic volumes not only affect safety, but also the amenity of the street and surrounding areas, which would be effective based on feedback in the study area.
- Wombat crossings (30km/h or lower platforms) – which provides an example in Darling Street, Rozelle on the corner of Wisbeach Road, just outside the study area.
- Kerb blisters or road narrowing, where reducing the roadway width to be crossed by pedestrians reduces the time spent by the pedestrian exposed to crash risk, especially where traffic approaches in one direction only and the speed limit is 30km/h.

#### **4.2 GREATER SYDNEY COMMISSION EASTERN DISTRICT PLAN 2018**

The Greater Sydney Commission identified Transit Oriented Development (TOD) sites in the southern part of the Inner West Council Area, surrounding the railway stations at Sydenham, Marrickville and Dulwich Hill. In the study area, in line with the Leichhardt DCP, there is no proposed urban renewal or increased housing growth as illustrated in **Figure 4-8** overleaf.





**Figure 4-8: Eastern City District Future Housing Supply.**

Source: Greater Sydney Commission

### 4.3 COUNCIL STRATEGIES

#### 4.3.1 Our Inner West 2036

This is a community strategic plan for the inner West community endorsed in June 2018. Among the list of its key community challenges, it acknowledges that, compared to many parts of Sydney, Inner West is well serviced by public transport to get in and out of the area but getting around within the area is still not easy: the routes that link neighbourhoods and destinations throughout Inner West are limited. even though fewer people drive to work (38%) compared to Greater Sydney (56.6%), traffic congestion is an issue for people living and working adjacent to main roads such as Victoria Road.

#### 4.3.2 Draft Inner West Integrated Transport Strategy 2019 ('Going Places Integrated Transport Strategy' and Technical Report May 2019)

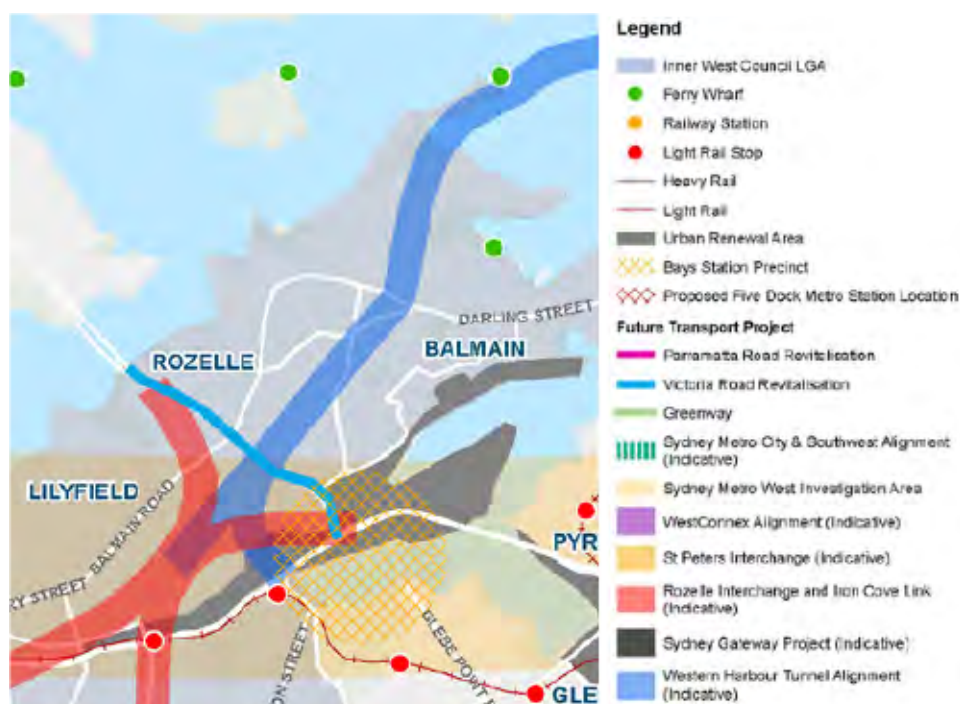
This Strategy states its aim as providing move towards a transport future focusing on active and sustainable modes of transport, and land-use planning approaches to support these modes of transport. It is integrated in that it considers land use and transport as an interconnected system that influences movement and behaviour.

In order to achieve that aim, it is proposed to support a shift from single vehicle travel to public transport and active transport such as pedestrians and cyclists; improve safety for all users, including working towards 40 km/h vehicle speeds throughout Inner West.



**Figure 4-9: Current Transport Network.**

Source: Going Places Integrated Transport Strategy



**Figure 4-10: Key Planning Transport Projects.**

Source: Going Places Integrated Transport Strategy

### 4.3.3 Leichhardt Local Area Traffic Management Studies 2000

Leichhardt LATM 2000 Vol.2 mentions Wellington Street, Wise Street and Terry Street as not complying with an acceptable traffic flow for their functional classification. This LATM Study, being 20 years old, has limited value in terms of analysis of traffic flows and safety issues. Many treatments, proposed by LATM 2000, have been implemented, notably a roundabout at Darling Street/Wise Street/Beattie Street and kerb extensions, pedestrian crossing upgrade in Darling Street north of Thornton Street and 40 km/h speed limits.

## 4.4 COUNCIL PLANS

### 4.4.1 Leichhardt Bike Plan 2016

The 2016 Bike Plan prepared by GTA Consultants recommended the following:

One-way roads suitable for two-way bicycle flow: Nelson Street, west of Darling Street. Route to Rozelle from Terry Street – needs contraflow on Wellington Street from Terry Street roundabout.

Regional bike routes on:

1. Iron Cove Bridge to Pyrmont via Victoria Road and Anzac Bridge (Section A: Victoria Road). Proposed improvement: Path condition on both sides need repair. All vehicle conflict points to have alternative pavement treatment/markings.

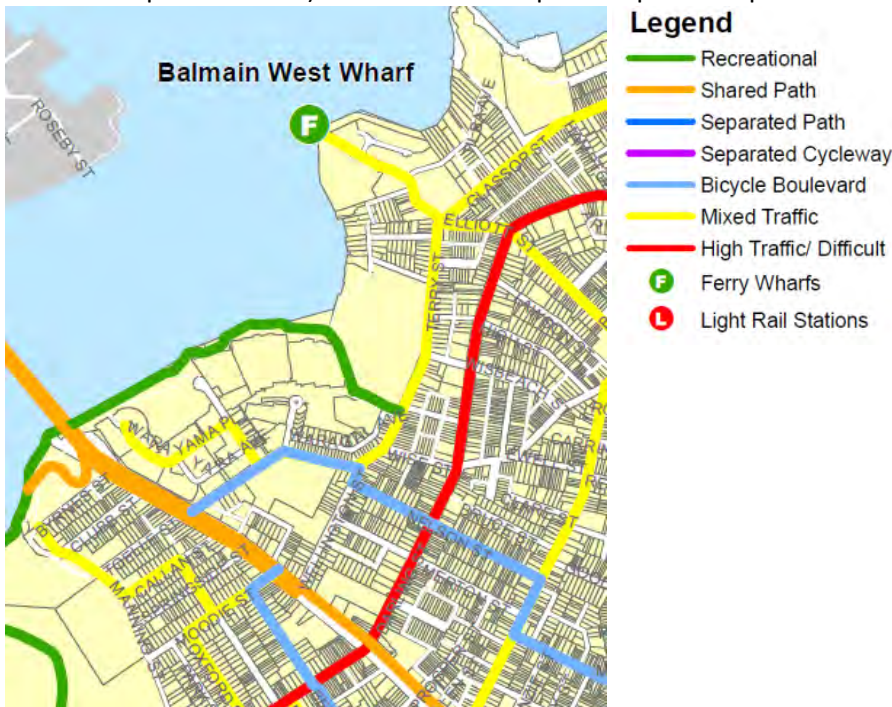
Local bike routes on:

2. Bridgewater Park to Miklouho-Maclay Park via Warayama Place, Margaret Street, Terry Street, Glassop Street, Birchgrove Road, Grove Street. Proposed improvements: Provide bicycle stencils on Warayama Place and Margaret Street. Provide wayfinding signage at Bridgewater Park/Warayama Place and Warayama Place/Margaret Street.



Regional/local:

3. Victoria Road alternative via Terry Street, Wellington Street, Nelson Street or Merton Street, Evans Street, Hanover Street, Mansfield Street, Crescent Street and Robert Street. Proposed improvements: Upgrade as major alternative to Victoria Road (eastern parallel route). Construct new separated path in Piper Street Reserve.



**Figure 4-11: Proposed Bicycle Network.**

Source: Leichhardt Bike Plan 2016 (GTA)

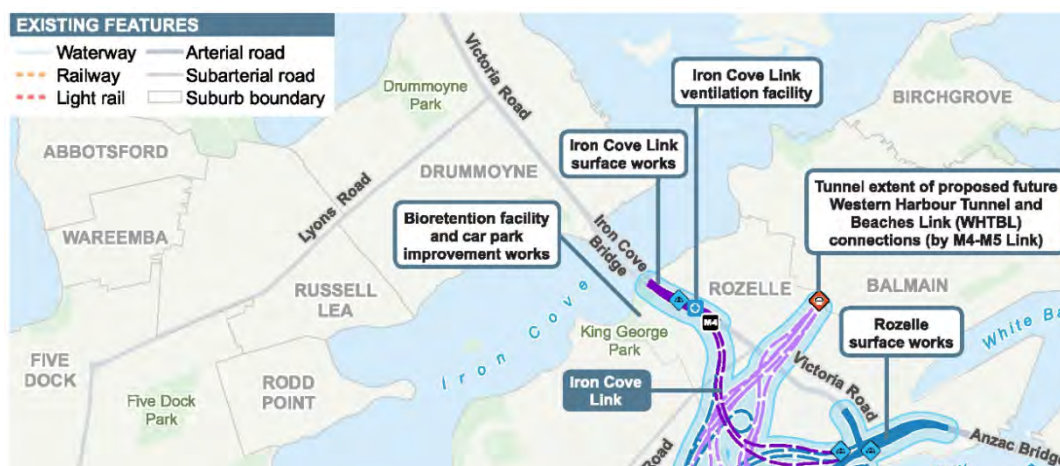
#### 4.4.2 Leichhardt Pedestrian Access Mobility Plan 2014

The Pedestrian Access Mobility Plan (PAMP), adopted in 2004, was reviewed and updated in 2014 by Urban Arc ...to ensure that the planning, design and construction of all future pedestrian facilities link with existing facilities, are designed to incorporate planned future development sites and enhance the safety of existing pedestrian facilities. The 2014 PAMP update outlined a number of issues in the LGA and proposed a number of treatments, some in the study area. The summary of treatments can be found in Appendix A. along with their current implementation status, based on the site inspection conducted by TEF Consulting. The majority of the treatments is related to bicycles interfering with pedestrians, especially along Victoria Road.

#### 4.4.3 WestConnex Stage 3 (M4-M5 Link)

Near the study area, the M4-M5 link project includes construction of a ventilation facility on Victoria Road, Iron Cove Link Surface works and a connection (tunnel end) to the future Western Harbour Tunnel and Beaches Link (WHTBL). The intersection of Victoria Road and Terry Street will be reconfigured of primary Council's concern related to the M-4-M5 link is the potential future increase of traffic flows within Inner West LGA (including Rozelle) and that it does not provide the transport solutions that will best serve the movement of vehicles and people in Sydney's Inner West. There are also concerns about this project focusing on road transport and not paying sufficient attention to public transportation.

Council also has concerns about the full range of construction impacts – including, traffic, parking, noise and dust – around all Stage 3 construction sites. Construction works started in April 2020 and are planned to continue until 2024. The construction impacts may have a



**Figure 4-12: WestConnex Stage 3 (M4-M5 Link) works near the study area.**

Source: <https://www.westconnex.com.au>

## 5 TRAFFIC AND TRANSPORT MOVEMENT AND CONTROL

### 5.1 ROAD HIERARCHY, TRAFFIC VOLUMES AND SPEEDS

Two types of road classification are used in NSW. Each type of classification caters for a different purpose as discussed below.

#### 5.1.1 Funding Classification

This is an administrative classification based on funding where the State and Local Authority allocate responsibilities between them. Thus:

- State roads are fully funded by the RMS (previously RTA);
- Regional roads involve shared funding between the RMS and the Local Council; and
- Local roads are fully funded by Local Councils.

Around the study area, there is one State Road which carries large volumes of traffic including heavy vehicles. The State Road within the study area is:

- Victoria Road.

The Regional Road within the study area is:

- Darling Street.

All other roads in the study area are local roads within the care and control of Inner West Council.

#### 5.1.2 Functional Classification

This classification includes Arterial, Sub-arterial, Collector and Local roads. Together the roads make up a road network. The functional road classification can be described as:

- Arterial : Predominantly carry through traffic from one region to another, forming principal avenues of communication for urban traffic movements.
- Sub-Arterial : Connect the Arterial roads to areas of development and carries traffic directly from one part of a region to another. They may also relieve traffic on Arterial roads in some circumstances.
- Major Collector (or Distributor) : Connect the Sub-Arterial roads to the Local Road system in developed areas. May also be commercial collectors which connect to a commercial centre such as East Gardens or Eastlakes
- Residential Collector : sub-divisional roads within a particular developed area. These are used solely as local access roads

**Map 1** illustrates the functional road hierarchy in the study area based on RMS classification and traffic volumes as well as roads with 3 tonne load limits. The RMS (previously RTA) functional road classification parameters for the metropolitan area are in **Table 5-1**.

**Table 5-1- Road Classification Parameters.**

Factor	Measure of Effectiveness	Desirable Feature for Each Road Class			
		Arterial	Sub Arterial	Collector	Local
Vehicle speed	Operating speed	60-100 km/h	50-60 km/h	40-50 km/h	40 km/h or less
Traffic use	Daily volume (vehicles per day) Residential area	No limit	20,000 vehicles per day max	5,000 vehicles per day max	2,000 vehicles per day max
	Other area	No limit	20,000 vehicles per day max	10,000 vehicles per day max	4,000 vehicles per day max
Intersection spacing	Cross street interference	Approx 1 km	Approx 0.5 km		
Road geometry	Number of travel lanes	4 or more	2 or more	2 or more	1 or more
	Medians	Yes	As needed	No	No
	Min. carriageway width	13 m	7 m	7 m	4 m
Traffic management	Parking	None	Prefer none	Yes	Yes
	Lane and separation lines	Yes	Yes	Maybe	No
	Property access	Minimised	Minimised	Yes	Yes
	Control of turning vehicles	Median	Maybe control	No	No
	Right turn bays	control	Preferred	No	No
	Road closures	Yes	None	Possible	Yes
	LATM devices	None	Yes	Yes	Yes
Pedestrian crossings	Type of crossing	Grade separated or signals	Signals or refuge	Marked crossing, children's crossing or refuge	Marked crossing, children's crossing or refuge

Source: RMS

### 5.1.3 Environmental Capacity

The **RMS' (2002) Guide to Traffic Generating Developments** gives the guidance on the environmental capacity of residential streets (used for new residential subdivision design) as set out in **Table 5-2**. The Guide also states that speed is an important contributor to environmental capacity:

The Environmental Capacity of a street can be increased through a reduction in speed. For example, on an existing residential street where traffic volumes reach the Environmental Capacity maximum (and a proposed development could cope with the volume over the standard), traffic speed may be reduced by the introduction of traffic calming methods.

In existing residential environments, 40km/h is an acceptable speed objective, usually achieved by LATM schemes e.g., adjusting existing roadways with retrofitted design items such as speed humps and slow points.

**Table 5-2: Environmental Capacity Performance Standards on Residential Streets.**

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goals 300 maximum
Collector	Street	50	300 environmental goals
			500 maximum

**Note:** Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to 85th percentile speed.

In terms of daily traffic volumes, the peak hour bi-directional volumes can be interpreted in most cases as 10% of the daily volume on the road. Where the volume exceeds 500 vehicles per hour the Guide states that residential amenity begins to decline noticeably. These volumes will be applied to the Inner West roads and conclusions on performance based thereon.

#### 5.1.4 Implications For The LATM

The main implication of a road hierarchy is that some Council roads have a higher traffic function than others, usually by virtue of:

- connectivity, particularly to the State and Regional Road system;
- the traffic attracting/generating land uses such as shops, schools, industry;
- road design such as road width, sight distance, design speed;
- access control to the main road system such as signals.

From an environmental point of view, it is desirable to have traffic volume of less than 2,000 vehicles per day on residential streets and 3,000 vehicles per day on residential collectors. However, in existing residential areas, residential collectors usually carry higher traffic volumes due to their geometry and connectivity, therefore using the maximum (5,000 vehicles per day would be more realistic).

The Guidelines state that in order to achieve a better amenity and safety in residential areas, lowering of the speed limit can address the negative impacts of higher vehicle volumes. A residential speed limit of 40 km/h has already been established for most of the study area, excluding Darling Street. Thus, the undesirable impacts of higher volume levels on residential streets can be tempered to some degree by the existing 40 km/h speed limit. Where 85<sup>th</sup> percentile speeds are presently over 45 km/h in current 40km/h zones, speed reduction treatments may need to be implemented to lower the speed within acceptable limits.

Traffic volume and speed counts for a number of streets were made available for this study (refer to Map 2 for locations). **Table 5-3** illustrates the vehicles per day and the 85<sup>th</sup> percentile speeds for those streets that are included in the LATM study area.

In the absence of a formal local road hierarchy, the following volumes are applied:

- Sub-Arterials / Regional : are roads with 10 -20,000 vehicles per day'
- Major Collectors : are roads with 5-10,000 vehicles per day,
- Collector : are residential roads with 3-5,000 vehicles per day,
- Local ; are residential roads with less than 3,000 vehicles per day.

These are applied in **Table 5-3** overleaf. Locations where volume clearly exceeds the guidelines are highlighted in the table.

A review of the overleaf reveals that in the study area there were no roads where the 85<sup>th</sup> percentile speed

was 10% over the posted speed limit. Speeds on Terry Street exceed the posted speed limit at two locations, with up to 7.5% exceed level. Current speed limits are shown on Map 3.

It is noted that there were three roads with traffic volume non-compliance. These roads are Terry Street, Wellington Street and Wise Street.

## 5.2 EXISTING TRAFFIC MANAGEMENT

**Map 4** summarizes the traffic and parking management in Rozelle North.

### 5.2.1 Traffic Signals

The following intersections are signalised:

- Victoria Road / Terry Street
- Victoria Road / Wellington Street
- Victoria Road / Darling Street
- Darling Street / National Street

There are no midblock traffic signals.

### 5.2.2 Traffic Calming and Road Closures Treatments

The following treatments are installed to manage the speed of traffic in the study area:

Roundabouts are at the intersections of:

- Terry Street / Margaret Street / Nagurra Place
- Terry Street / Wellington Street
- Wise Street / Darling Street
- Wulumay Close / development access

Speed humps, cushions and thresholds (rubber ones are marked as per Council's request) are located:

- At intersections:
  - Merton Street / Darling Street
  - Merton Street / Wellington Street
  - Nelson Street / Darling Street
  - Darling Street / National Street
  - Darling Street / Nelson Street
  - Darling Street / Elliot Street
  - Darling Street / Thornton Street
  - Terry Street / Thornton Street
- At midblock locations:
  - Terry Street (between Victoria Road and Nagurra Place)
  - Terry Street (between Wulumay Close and Wellington Street)
  - Terry Street (between Thornton Street and Schultz Street)
  - Terry Street (between Bayville Street and Claremont Street)
  - Nagurra Place
  - Waragal Avenue
  - Wellington Street (between Victoria Road and Merton Street) - rubber speed cushions

- Wellington Street (between Merton Street and Nelson Street) - rubber speed cushions
- Nelson Street (between Wellington Street and Darling Street)
- Wise Street (between York Place and Darling Street) - rubber speed hump
- Darling Street (between Schultz Street and Lawson Street)

Pedestrian refuge islands are situated at the following locations:

- Terry Street / Elliott Street
- Terry Street / Wellington Street
  - on the western approach in Terry Street
  - on the northern approach in Terry Street

Zebra crossings are situated at the following location:

- Wise Street / Darling Street
- Darling Street / Wise Street

### 5.2.3 Bicycle Facilities

The bicycle routes are indicated in Map 5 as per the Inner West Cycling Route Map on the Inner West Council website. The cycling facilities in the study area for cyclists are predominantly Mixed Traffic facilities. It is noted that a majority of these routes do not provide the requisite cycling facility design, as such warning signs, directional signs and pavement markings. The Mixed Traffic routes are located on the following streets:

- Warayama Place
- Margaret Street
- Terry Street
- Glassop Street
- Elliot Street
- Between Laggan Avenue and Glassop Street
- Darling Street

There is also an off-street cycle link through Bridgewater Park, connecting Victoria Road, Warayama Place, Margaret Street, Longview Street and Norman Street.

### 5.2.4 Parking Facilities

A site inspection was carried out by TEF Consulting to determine car parking facilities in the study area aside from standard kerbside parking. It was observed that there are 90° parking opportunities on Laggan Avenue and 45° parking opportunities on Nelson Street and Merton Street.

An off-street car park is located on Hamilton Street. It contains 50 marked parking spaces. This is a public car park, with a 2-hour parking limit per day from 8:00 a.m. to 6:00 p.m.

## 5.3 PUBLIC TRANSPORT

### 5.3.1 Buses

The locations of bus stop and bus routes passing through the study are illustrated in **Map 6**. Bus routes and bus stops are of relevance to the LATM study which deals with pedestrian movements, as the crossing of pedestrians to/from stops must be managed for safety in some locations.

Bus routes and stops are relevant to the LATM in relation to the road width required for buses and impact on traffic management and traffic calming devices which can be used.



**Table 5-3: Traffic Volumes and Speeds in Rozelle North.**

Road	Suburb	Location - between streets	Count date	Functional classification	Total AADT	Acceptable max total AADT	Posted speed limit in km/hr	85 %tile speed (NB/EB) in km/hr	85 %tile speed (SB/WB) in km/hr	Acceptable speed
Glassop Street	Rozelle NSW 2039	Elliot St & Carieville St	12/2/2020	Local collector	3672	Y	40	38.8	39.8	Y
Terry Street	Rozelle NSW 2039	Victoria Rd & Margaret St	12/2/2020	Local collector	8413	N	40	34.3	37.7	Y
Terry Street	Rozelle NSW 2039	Margaret St & Wellington St	12/2/2020	Local collector	7948	N	40	41.4	39.5	N
Terry Street	Rozelle NSW 2039	Norman St & Thornton St	12/2/2020	Local collector	5723	N	40	42.9	42	N
Warayama Place	Rozelle NSW 2039	Margaret St & Yara Ave	12/2/2020	Local	1264	Y	50	35.2	37.7	Y
Wellington Street	Rozelle NSW 2039	Merton St & Nelson St	12/2/2020	Local collector	5958	N	40	N/A	32.6	Y
Wise Street	Rozelle NSW 2039	Darling St & Terry St	12/2/2020	Local	5826	N	40	19.9	24.4	Y

## 6 ROAD CRASHES

### 6.1 VEHICULAR, CYCLIST AND PEDESTRIAN CRASH PROFILE

Crashes for the latest 5-year period (January 2014 to December 2018) from the RMS crash data base have been examined. There were 56 recorded incidents over this period, the findings from this examination are:

- **Age and sex**
  - Age of people involved was not identified for a large proportion of crashes (34%). With the known ages, The largest group was the 35-49 age group (31.5%) and the 20-34 age group (30.6%).
  - 68% of the total numbers of people involved in the accidents were males, 30% were females and 2% were unknown.
- **Breakdown by type and severity**
  - In total there were 88 vehicles (79.3%), 7 pedestrians (6.3%), 3 bicyclists (2.7%) and 13 motorcyclists (11.7%) involved across all accidents.
  - No fatal incidents were recorded, with 51 injuries (47%) and 58 % non-casualties.
- **Time of crashes**
  - High prevalence of crashes during the working week with 44 incidents (80%)
  - 10 crashes occurred during the morning commuter peak (18%), with the morning peak period occurring between 6:00 a.m. and 9:00 a.m.
  - 15 crashes occurred during the afternoon commuter peak (27%), with the afternoon peak period occurring between 3:00 p.m. and 6:00 p.m.

**Table 6-4: Crash Age Groups**

Age Group	0-9	10-19	20-34	35-49	50-59	60+	Unknown	Total
No. of persons involved	0	5		35	17	17	3	111
% of persons involved	0.0%	4.5%	30.6%	31.5%	15.3%	15.3%	2.7%	100.0%

Types of crashes	Vehicles	Pedestrians	Bicycles	Motorcycles/ Scooters	Total
No of TUs involved	88	7	3	13	111
% of Tus	79.3%	6.3%	2.7%	11.7%	100.0%

Note: TU - traffic unit

### 6.2 LOCATION OF CRASHES

The documented locations of crashes from the RMS database are depicted in **Map 7**. Most crashes were on the Victoria Road, which is a major arterial road:

- Suburb and road hierarchy**
  - Most crashes occurred on the State Road (Victoria Road) (77%). The rest were on the regional road (Darling Street) (11%) and on Council roads (12%).

## 6.3 CRASH TYPES

Of the 56 crashes in the study area, most were at intersections with 45 incidents (83%), with the remaining 9 crashes occurring mid-block (17%).

- Intersection Crashes**
- The majority were RUM Code 30 (rear end collisions) which had 16 incidents
  - RUM Code 35 (lane change left) had 3 incidents and RUM Code 71 (left off carriageway into parked vehicle or object) had 3 incidents each
  - RUM Code 10 (cross traffic), RUM Code 2 (far side) and RUM Code 21 (right through) had 4 incidents

- Midblock crashes**
- RUM Code 63 (vehicle door) had 3 incidents

Crashes were prevalent at intersections, compared with mid-block locations. Appendix B. can be used for reference of the definitions and notes on RUM codes.

## 6.4 CRASH ANALYSIS

The location and crash types were further analysed to determine if there were certain reoccurring patterns, and if so, what may be the cause of the particular issue.

Absolute majority of the analysed crashes occurred at the intersection of Victoria Road and Darling Street. This intersection is a TfNSW (RMS) responsibility and therefore treatment of safety problems at this intersection is beyond the scope of this study. It is noted, however, that the majority of crashes are rear-end collisions and are likely to be associated with extensive queuing and frequent start-stop situations.

The following is a breakdown of all observations on Regional and Council roads:

### 6.4.1 Victoria Road / Wellington Street Intersection – 7 Crashes

Crash type RUM Code 30 (rear end collision) occurred 3 times at this intersection, with all three incidents involving vehicles and occurring on Victoria Road. Rear end crashes likely to be associated with extensive queuing and frequent start-stop situations on Victoria Road.

Crash type RUM Code 35 (lane change left) also had 2 accidents in this intersection, with both incidents involving vehicles. This crash type occurs when a vehicle attempts to switch to the kerb lane and collides with a vehicle travelling on the same lane. It is likely these accidents are caused by drivers attempting to change lanes early on an approach to the Darling Street intersection or attempting to turn from the second lane into one of the petrol stations located to the west of Wellington Street. There was also a cross traffic accident (RUM code 10) and a right near accident (RUM code 13), both of which are almost certainly caused by vehicles running on red or late amber light.

### 6.4.2 Victoria Road / Terry Street Intersection – 8 Crashes

Crash type RUM Code 30 (rear end collision) occurred 4 times in this intersection, with all three incidents involving vehicles. Rear end crashes likely to be associated with extensive queuing and frequent start-stop situations on Victoria Road. Further investigation will be required at this intersection. There were also single occurrences of a left off carriageway into object or parked vehicle (RUM Code 71), far side collision with a pedestrian (RUM Code 02), left turn side swipe (RUM Code 37) and other same direction (RUM Code 39) crashes at this intersection. None of the latter show a pattern warranting an in-depth investigation.

#### **6.4.3 Wise Street / Darling Street / Beattie Street – 2 Crashes**

There were two collisions at this intersection: a RUM Code 02 (far side with a pedestrian on the Beattie St side) and a RUM Code 10 (cross traffic). No noticeable patterns at this intersection were identified. However, there is concern about the safety of pedestrians at the existing crossing on the Wise Street approach, as advised by Council officers.

#### **6.4.4 Glassop Street – 2 Crashes**

Glassop Street had 2 occurrences of RUM code 63 (vehicle door) crashes between Elliott and Carievile Streets. It is likely that these crashes were due to reduced street width and poor parking discipline because of a lack of parking lane delineation markings.

The remaining few crashes in the area are single occurrences without any specific patterns.

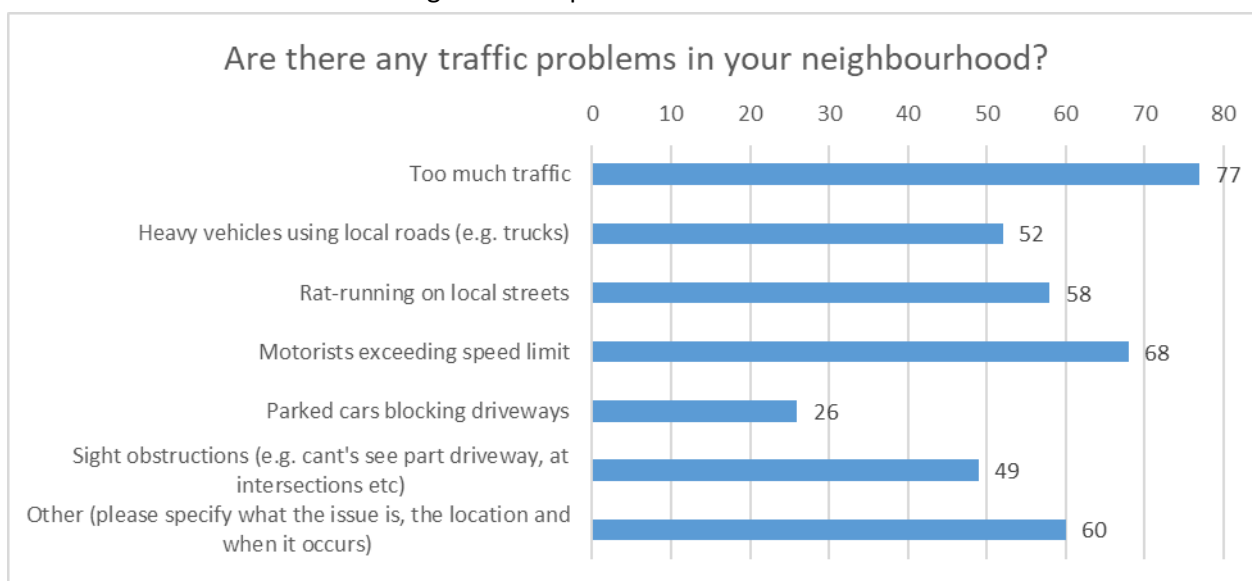
## 7 IDENTIFIED COMMUNITY ISSUES

### 7.1 COMMUNITY SURVEY

A short questionnaire was put on Council's web page at the commencement of the project. In total 173 persons responded. The table below indicates a spread of responses from the study area. The largest numbers of respondents were from Terry Street.

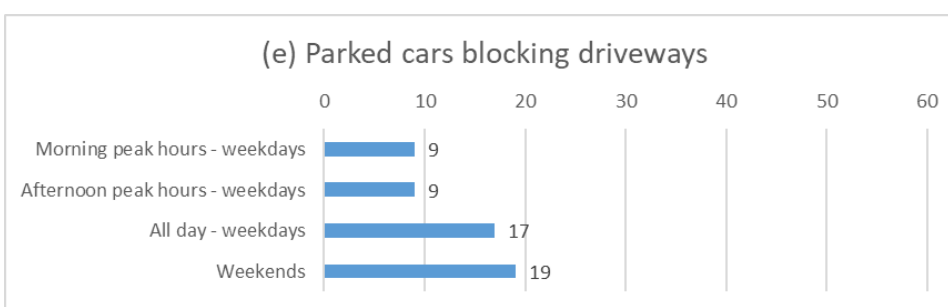
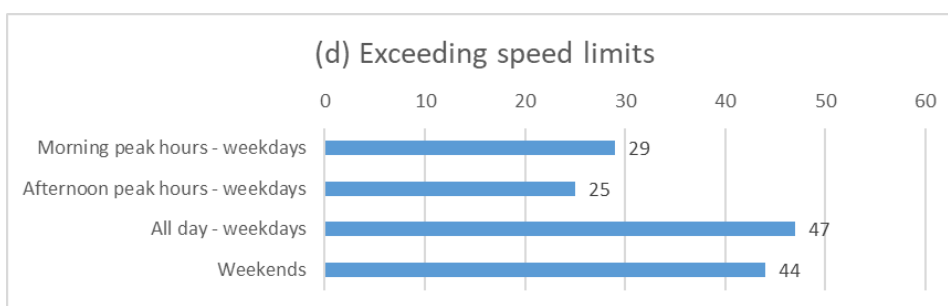
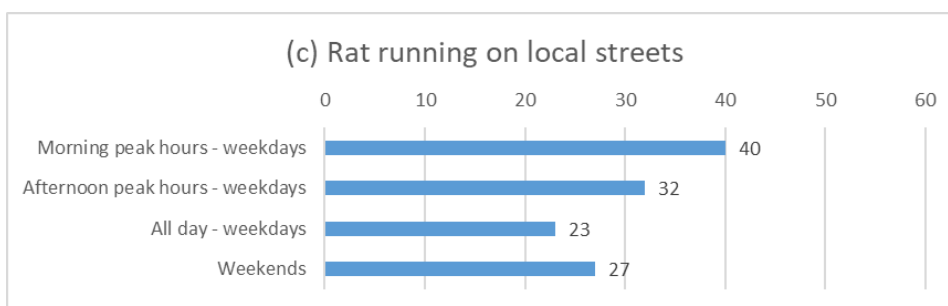
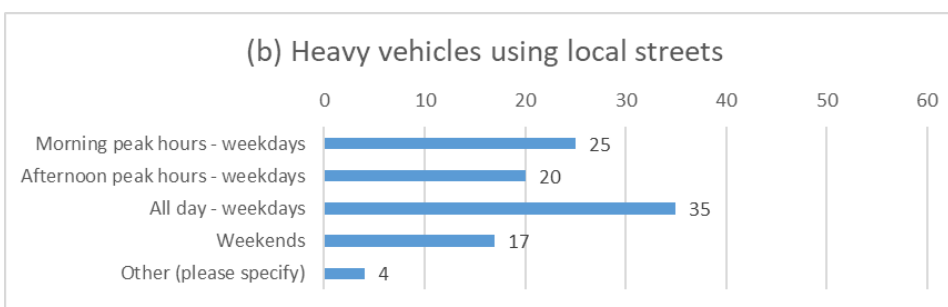
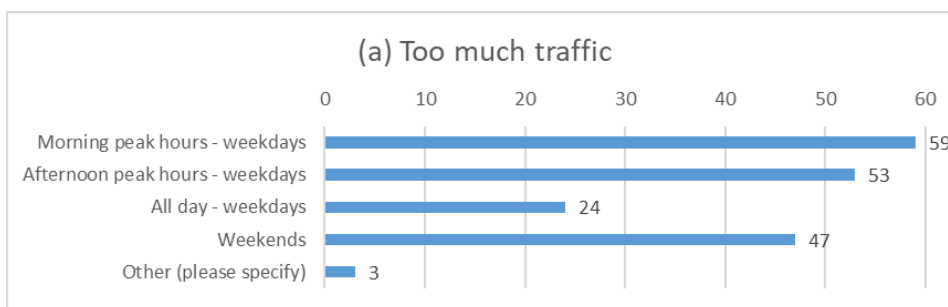
Summary of neighbourhood traffic problems:

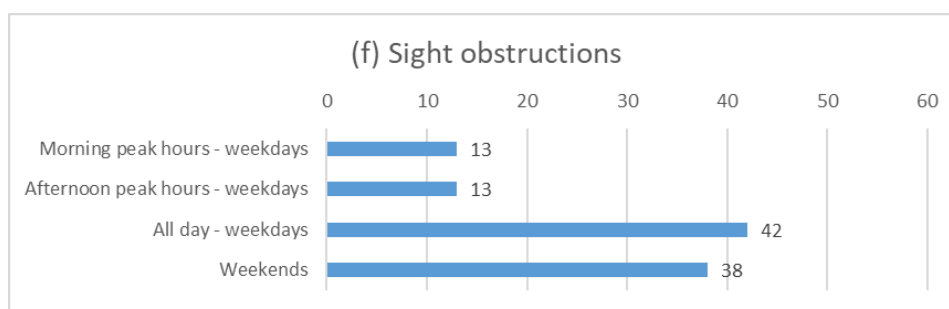
The table below indicates that the highest rated problem in the area is the volume of traffic.



**Figure 7-13: Overall Rating of Traffic Problems.**

The figures below indicate that weekends are rated almost as highly as a problem time for traffic volume, indicating that this issue is not confined to the working week. Heavy vehicles using local streets and rat running on local streets are rated more highly for the working week. Exceeding speed limits and parked cars blocking the driveways are rated higher on weekends than on weekdays.





**Figure 7-14a - 6.2.f: Timings for Respective Issues.**

## 7.2 PROBLEMS IDENTIFIED IN SPECIFIC STREETS

An examination by problem by street is graphically illustrated in Map 8. The following table lists the issues and streets where these issues are most frequently mentioned. The highest level of concern is in:

Terry Street has the highest level of concern for too much traffic, heavy vehicle use, rat running, exceeding the speed limit and sight obstruction;

Wellington Street and Darling Street also have a high level of concern for too much traffic;

Wise Street has rat running and exceeding speed limit concerns;

Glassop Street has a number of concerns over sight obstruction.

**Table 6. 1: Problems rated by street.**

STREET NAME	TOO MUCH TRAFFIC	HEAVY VEHICLES	RAT RUNNING	EXCEEDING SPEED LIMITS	PARKED CARS BLOCKING DRIVEWAYS	SIGHT OBSTRUCTIONS
Terry Street	45	29	34	38	3	18
Wellington Street	27	10	14	15	1	2
Darling Street	13	5	2	5	1	3
Victoria Road	7	6	1	2	0	2
Glassop Street	7	3	7	6	4	10
Wise Street	5	5	10	10	0	2
Elliott Street	4	4	4	3	1	7
Margaret Street	4	1	1	3	2	2
Nelson Street	2	1	1	2	2	0
Nagurra Place	1	0	0	0	0	0
Warayama Place	1	0	0	1	2	4
Roseville Lane	0	1	0	0	1	0
Doolan Lane	0	1	0	0	0	0
Norman Street	0	1	1	1	1	2
Schultz Street	0	2	2	2	2	2
Carieville Street	0	0	1	0	0	0
Waragal Avenue	0	0	2	0	1	0
Yara Avenue	0	0	0	1	0	1
Wulumay Close	0	0	0	2	0	3
Broderick Street	0	0	0	0	1	0
Young Street	0	0	0	0	0	1
White Street	0	0	0	0	1	0

All comments grouped by the street can be found in Appendix C.

## 8 AUDITS OF EXISTING SITUATION

### 8.1 INTRODUCTION

There are 39 intersections in the study area. These are shown in **Table 8-5**. Each intersection has been prioritised based on information presented in **Section 5.2**. Each intersection in the study area was assessed at a high level based on the priority assessment, this is provided in **Table 8-5**.

The assessment criteria are broadly as follows:

- High – requires assessment based on issues raised by the community or identified in **Section 6**.
- Moderate – may require future assessment, however, not in the context of a Local Area Traffic Management Plan.
- Low – existing conditions at this intersection / location do not require any modifications as part of this LATM plan.
- Limited – intersection located on a State Road and therefore under control of Transport for NSW, therefore outside of the scope of this study, however, included in nearby intersections / locations for completeness.

**Table 8-5: List of Intersections in Study Area, Existing Treatment and Priority for Assessment**

Intersection Number	Street 1	Street 2	Street 3	Existing Treatment	Priority for Assessment
1	Victoria Road	Terry Street		Traffic Signals	Limited
2	Victoria Road	Crystal Street (NW)		Priority	Limited
3	Victoria Road	Crystal Street (SE)		Priority	Limited
4	Victoria Road	Wellington Street		Traffic Signals	Limited
5	Victoria Road	Darling Street		Traffic Signals	Limited
6	Darling Street	Merton Street		Priority	High
7	Darling Street	Nelson Street		One way entry to Nelson Street	High
8	Darling Street	Wise Street	Beattie Street	Roundabout	High
9	Darling Street	Norman Street		Priority	Low
10	Darling	Thornton	Wisbeach	Stop Signs	Low



Intersection Number	Street 1	Street 2	Street 3	Existing Treatment	Priority for Assessment
	Street	Street	Street		
11	Darling Street	Schultz Street	High Street	Give Way signs	Low
12	Darling Street	Elliott Street		Give Way Sign west – Stop Sign east	Low
13	Darling Street	Young Street	Arthur Street	Give Way signs	Low
14	Young Street	Maude Lane		Priority	Low
15	Young Street	Rosieville Lane		Priority	Low
16	Young Street	Glassop Street		Priority	Low
17	Glassop Street	White Street	Young Street	Priority	High
18	Glassop Street	Carieville Street		Priority	Low
19	Glassop Street	Elliott Street	Terry Street	Stop Signs on Glassop Street	High
20	Terry Street	Bridge Street		Priority	Low
21	Carieville Street	Phoebe Street	Tilba Avenue	Priority	High
22	Terry Street	Doolan Lane		Priority	Low
23	Terry Street	Claremont Street		Priority	Low
24	Terry Street	Bayville Street		Priority	Low
25	Terry Street	Bridge Street		Priority	Low
26	Terry Street	Norman Street		Priority	Low
27	Terry Street	Wise Street		Stop Sign on Wise Street	High
28	Terry Street	Wellington Street		Roundabout	High
29	Wellington Street	Nelson Street		Priority	High
30	Wellington Street	Merton Street		One way entry to Nelson Street	Low

Intersection Number	Street 1	Street 2	Street 3	Existing Treatment	Priority for Assessment
31	Wellington Street	Hamilton Street		Gated for school staff car park – no public access	Low
32	Terry Street	Waragal Avenue		Priority	Low
33	Terry Street	Wulumay Close		Priority	Low
34	Terry Street	Margaret Street	Nagurra Place	Roundabout	High
35	Waragal Avenue	Accessway		Priority	Low
36	Waragal Avenue	Wulumay Close		Priority	Low
37	Margaret Street	Yara Avenue		Priority	Low
38	Margaret Street	Warayama Place		Priority	Low
39	Warayama Place	Yara Avenue		Priority	Low

## 8.2 TRAFFIC MANAGEMENT DEVICES

The existing traffic management devices in the study area are generally of high quality and condition. Immediate attention is required. The location of these devices is provided in Appendix A.

It has been identified that there are currently 3 rubber speed cushions / humps located in the study area. These were identified in **Section 5.2** and are located at:

- Wellington Street (between Victoria Road and Merton Street) - rubber speed cushions
- Wellington Street (between Merton Street and Nelson Street) - rubber speed cushions
- Wise Street (between York Place and Darling Street) - rubber speed hump.

## 9 ANALYSIS OF CRASH DATA

### 9.1 INTRODUCTION

Analysis provided in **Section 5.2** identified four intersections on Regional and Council Roads with higher crash occurrences and crash patterns. Three of five of these intersections are on State Roads, which while in the study area are not within the direct control of Council. The remaining two of these intersections are on local roads.

While crash data is a good indicator of potential road safety incidents in particular areas, it is good to be aware from Definitions and notes to support road crash data, NSW Centre for Road Safety, September 2019 which states that under the Road Transport (General) Act 1999 and the Road Transport (Safety and Traffic Management) Act 1999 and the regulations made under those Acts, Rule 287 (3) of the Road Rules requires a crash to be reported to police when any person is killed or injured; when drivers involved in the crash do not exchange particulars; or when a vehicle involved in the crash is towed away. Therefore, all minor incidents that do not have an injury, where drivers exchange details, or a vehicle is not towed are not included in the statistics and therefore only a snapshot of the crashes in a particular area. Further to these near misses are not included in the statistics and these can be considered as part of on-site observations and videos taken at each of the locations in this study.

### 9.2 CRASH ANALYSIS – INTERSECTIONS ON STATE ROADS

#### 9.2.1 Victoria Road / Darling Street Intersection

The absolute majority of the analysed crashes presented in **Section 6** occurred at this intersection; however, this is a Transport for NSW (“TfNSW”) managed intersection and therefore beyond the scope of this study. Consideration is given to the immediately preceding intersection of Merton Street and Darling Street which is considered in Section 9.1.

#### 9.2.2 Victoria Road / Wellington Street Intersection

There were seven (7) crashes at this intersection. Five (5) of these crashes were on Victoria Road and therefore not considered as part of this study. The remaining two (2) crashes were both almost certainly caused by vehicles running on a red or amber light towards Victoria Road from Wellington Street. These are considered in Section 9.10 which relates to the intersection of Wellington Street and Merton Street which is the nearest intersection that will be able to improve conditions within the study area.

#### 9.2.3 Victoria Road / Terry Street Intersection

There were eight (8) crashes at this intersection however, this is a Transport for NSW (“TfNSW”) managed intersection and therefore beyond the scope of this study. Consideration is given to the immediately preceding intersection of Terry Street, Margaret Street and Nagurra Place which is considered in Section 9.2.

### 9.3 CRASH ANALYSIS – LOCAL ROADS

#### 9.3.1 Wise Street / Darling Street / Beattie Street Intersection

There were two (2) crashes at this intersection however; no noticeable patterns of crashes were identified.

This intersection is considered in terms of intersection operations and safety in Section 9.3 as it relates to this intersection.

#### **9.3.2 Glassop Street between Elliott and Carieville Streets**

There were two (2) crashes in this location, however, no noticeable patterns of crashes were identified at This section of road is considered in terms of intersection operations and safety in Section 9.4 as it relates to the intersection Terry Street, Elliott Street and Glassop Street and Section 9.5 as it relates to the intersection of Glassop Street, White Street and Young Street.

## **10 INTERSECTION OPERATIONS AND SAFETY ASSESSMENT**

Continuing on from crash data analysis, a further consideration to operational and road safety considerations for pedestrians, cyclists and vehicles considers selected intersections in the study area. The key site issues are presented below as to whether the operational and/or road safety characteristics could be contributing to safety or operational issues at these intersections.

### **10.1 DARLING STREET / MERTON STREET INTERSECTION**

A request has been received from the local community for the installation of a pedestrian crossing on the southern approach of this intersection due to high pedestrian volumes at this location. Further to this a request was received from a local business to remove or relocate the existing loading zone on Merton Street immediately west of Darling Street. This would provide improved access for their customers and reduce non-compliance with parking restrictions on Merton Street at this location.

### **10.2 TERRY STREET / MARGARET STREET / NAGURRA PLACE INTERSECTION**

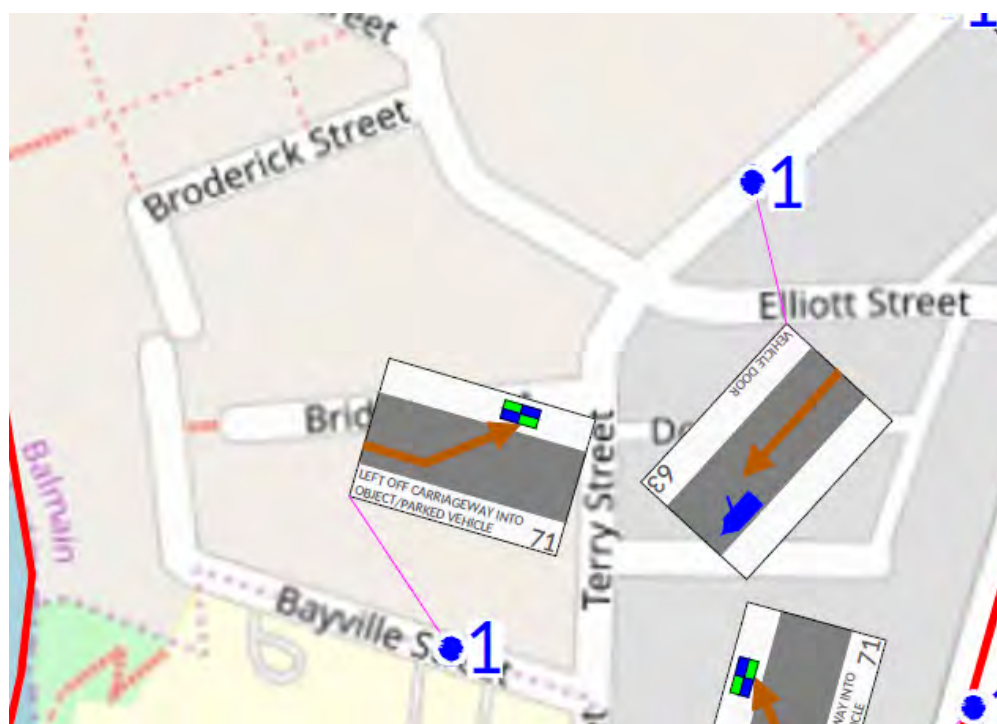
There is an existing at grade pedestrian crossing to the south west of this intersection. Community feedback suggests that drivers are able to see the traffic lights at Victoria Road and may speed up beyond the speed survey location to gain get through the intersection onto Victoria Road. This may require changes at this pedestrian crossing to limit the speed, with due consideration given to the existing speed hump approximately 40 metres south-west of the existing at grade pedestrian crossing.

### **10.3 WISE STREET / DARLING STREET / BEATTIE STREET INTERSECTION**

There is an existing raised pedestrian crossing to the west of this intersection. Observations demonstrate that vehicles that turn left from Darling Street onto Wise Street are focussed on their manoeuvres within the roundabout and do not observe the pedestrian crossing until they have turned the sharp left hand turn and then decelerate to stop too close to or even at the edge of the crossing, thus making pedestrians potentially feel unsafe. Further to this, pedestrians are observed crossing close to the roundabout on the eastern approach to the roundabout due to the deterioration of the condition of the bollards and chains at this location.

### **10.4 TERRY STREET / ELLIOTT STREET / GLASSOP STREET INTERSECTION**

Two vehicle door opening crashes, RUM code 63 was observed at this location. This crash type occurs when a vehicle is parked far from the kerb line and the driver travelling through the intersection cannot avoid a collision with the parked vehicle with its door opened out onto the roadway. These crashes are shown in **Figure 10-15**.



**Figure 10-15: Crash data at Elliott Street / Terry Street / Glassop Street intersection**

Further to this the community has requested improvements to this intersection based on poor visibility from all approaches to the intersection and the current Stop sign treatment on the Glassop Street and Terry Street approaches. Non-compliance of the Stop signs on these approaches was observed during a site visit and from video footage, which would suggest that an alternative treatment is required. There are no pedestrian crossing facilities on the Elliott Street approaches to the intersection. The lack of formal pedestrian crossing facilities coupled with high levels of vehicular turning movements, this presents a pedestrian safety issue.

### **10.5 GLASSOP STREET / WHITE STREET / YOUNG STREET INTERSECTION**

Feedback has been received that there is limited sight distance from White Street turning onto Glassop Street due to the width of the road and the distance to the Young Street Intersection with Glassop Street being offset to this intersection. Vehicles parked on the northern side of Glassop Street immediately to the east of White Street also form part of this issue. The existing layout of the intersection and key sight distance issues are shown in **Figure 10-16**.



Figure 10-16: Existing Glassop Street, White Street and Young Street intersection layout

## 10.6 TERRY STREET BETWEEN THORNTON STREET AND MARGARET STREET

The online community survey showed a trend towards speeding on the high volumes of traffic on Terry Street through the study area. Further to this, based on traffic speed surveys undertaken in February 2020 the 85th percentile speed exceeds the existing 40km/h speed limit in both directions between Thornton Street and Norman Street, outside the High School and in the eastbound direction along Terry Street approaching the intersection with Wellington Street. This speed data is shown in **Figure 10-17**. This suggests additional LATM treatments are required to reduce the speed to below the all-day 40km/h existing speed limit. This is also within a School Zone, which adds support to additional LATM treatments on Terry Street to reduce vehicle speeds.

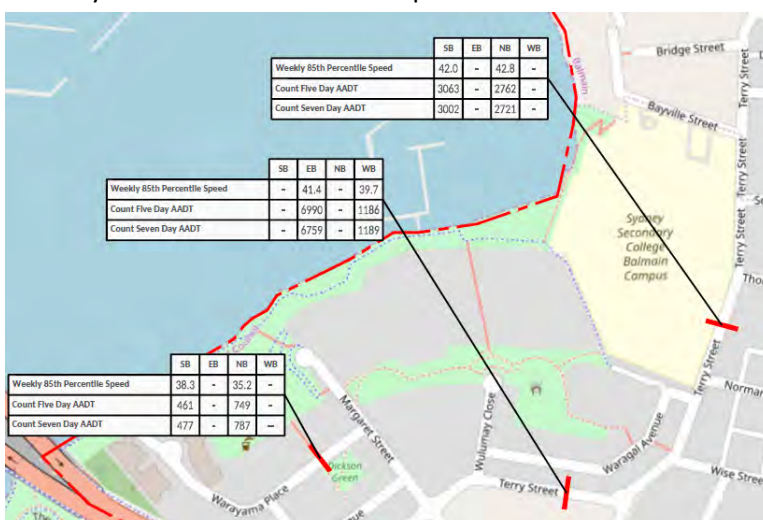
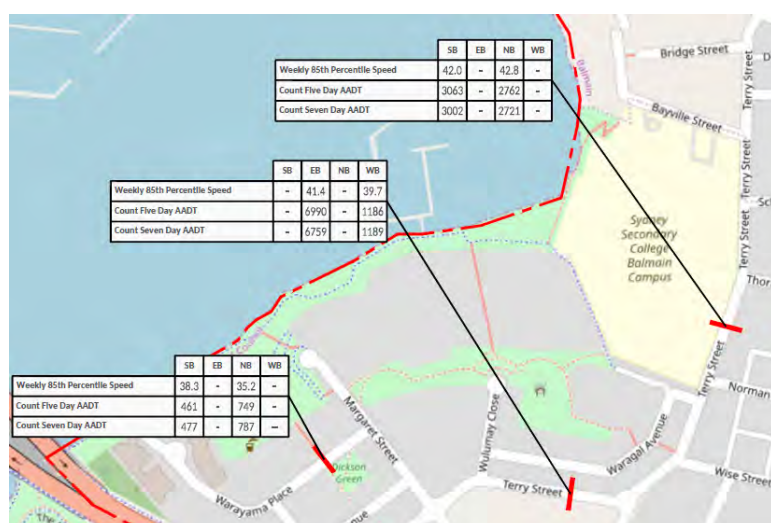


Figure 10-17: Traffic Speed Surveys between Thornton Street and Margaret Street



## 10.7 TERRY STREET BETWEEN THORNTON STREET AND MARGARET STREET

The online community survey showed a trend towards speeding on the high volumes of traffic on Terry Street through the study area. Further to this, based on traffic speed surveys undertaken in February 2020 the 85th percentile speed exceeds the existing 40km/h speed limit in both directions between Thornton Street and Norman Street, outside the High School and in the eastbound direction along Terry Street approaching the intersection with Wellington Street. This speed data is shown in **Figure 10-18**. This suggests additional LATM treatments are required to reduce the speed to below the all-day 40km/h existing speed limit. This is also within a School Zone, which adds support to additional LATM treatments on Terry Street to reduce vehicle speeds.



**Figure 10-18: Traffic Speed Surveys between Thornton Street and Margaret Street**

## 10.8 WELLINGTON STREET / TERRY STREET INTERSECTION

There is a pedestrian generator, a swimming school located at this intersection. This generates significant pedestrian traffic from Nelson Street, Wellington Street and from the northern approach of Terry Street. The intersection currently has non-compliant pedestrian refuge islands, which do not provide physical protection for pedestrians. Further to this, they also do not meet the desire lines and high levels of pedestrian demand at this intersection. Further to this, the pedestrian flow is not organised and potentially creates significant obstacles to a high number of vehicular movements in this area. The current layout of this intersection may increase risk of pedestrian and vehicle incidents at this location due to poor visibility from the northern side of the intersection. This location of the swimming school and pedestrian desire lines are shown in **Figure 10-19**.



**Figure 10-19: Swimming School and pedestrian desire lines intersection of Terry Street and Wellington Street.**

Additional pedestrian crossing measures would be beneficial in addressing the issues observed at this intersection.

## 10.9 NELSON STREET / WELLINGTON STREET INTERSECTION

Vehicles were observed turning right from Nelson Street onto Wellington Street northbound, which is currently marked as one way, southbound, which is currently supported by a kerb buildout on the southern approach of the Terry Street / Wellington Street intersection. An explanation of this manoeuvre is shown in **Figure 10-20**.



**Figure 10-20: Explanation of manoeuvre from Nelson Street onto Wellington Street**

This issue would require additional LATM measures on Wellington Street and Nelson Street.

### 10.10 WELLINGTON STREET / MERTON STREET INTERSECTION

It has been identified that there is a missing pedestrian crossing point between Victoria Road and Terry Street for approximately 250 meters. There is a pedestrian desire line near the intersection of Merton Street and Wellington Street which is near to Rozelle Public School. This missing pedestrian crossing point location is shown in **Figure 10-21**.



**Figure 10-21: Missing pedestrian crossing point at Wellington Street and Merton Street intersection (Source: Google Maps).**



### 10.11 TILBA AVENUE – SHARED ZONE

Tilba Avenue was part of Leichhardt Council’s Narrow Streets Program, where it is to be converted into a shared zone due to its narrow width and an absence of a footpath. The existing conditions on Tilba Avenue are shown in **Figure 10-22**.



**Figure 10-22: Existing conditions on Tilba Avenue (Source: Google Maps)**

### 10.12 PERSONS WITH A DISABILITY PARKING – DARLING STREET / NELSON STREET

A suggestion was made from Council’s Access and Inclusion Planning for an additional on-street Persons with a Disability parking space on Darling Street near Nelson Street. This will provide for improved access to the Hanford Centre. The existing 15m disabled space in Nelson Street is located on a grade and historically there was an incident where a resident had a fall while using the existing parking space. The existing parking space is shown in **Figure 10-23**. It should be noted that this is on the eastern side of Darling Street and thus outside of the study area.



**Figure 10-23: Existing Persons with a Disability space on Darling Street near Merton Street (source: Google Maps)**

### 10.13 TERRY STREET BETWEEN WISE STREET AND NORMAN STREET

Council has identified an issue of informal crossing of Terry Street between Wise Street and Norman Street by students from the nearby high school. The current layouts of this section of road, along with sections to the south of the area are shown below.



Figure 10-24 Existing layout of the Terry Street intersection with Norman Street looking north from Terry Street (source: Google Maps)



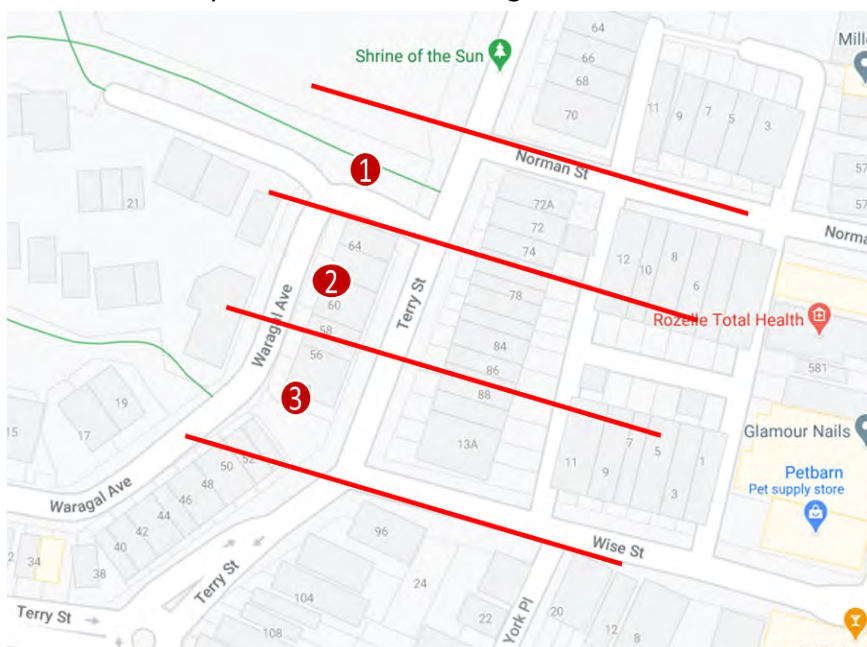
Figure 10-25 Existing layout of the Terry Street intersection with Wise Street looking north-west from Wise Street (source: Google Maps)





**Figure 10-26 Existing layout of Terry Street intersection with Wise Street looking north-east from Terry Street (source: Google Maps)**

This issue was proposed to be resolved with the installation of a zebra crossing on Terry Street to the north of Norman Street. Council undertook pedestrian and vehicle surveys and then an assessment based on Transport for NSW (former Roads and Maritime Services) warrants was undertaken. This assessment is provided based on the three surveyed locations shown in **Figure 10-27**.



**Figure 10-27 Locations of traffic and pedestrian counts – Terry Street between Wise and Norman Streets (Source: Inner West Council)**

The assessment based on Roads and Maritime Supplement to Austroads Guide to Traffic Management Part 10 | Version 3.0 is provided in **Table 10-6**.

	Pedestrian (P) Warrant P>30									Vehicle (V) Warrant P>500			PV Warrant PV>60,000, Special PV>45,000			
Peak time	Section 1		Section 2		Section 3		Section 1-3 combined						Std Warrant		Special	
8am-9am	124	✓	3	×	23	×	150	✓	455	×			56420	×	68250	✓
8:15am-9:15am	133	✓	3	×	29	×	165	✓	517	✓			68761	✓	85305	✓
8:30am-9:30am	112	✓	3	×	28	×	143	✓	513	✓			57456	×	73359	✓
11:30am-12:30pm																
11:45am-12:45pm																
12pm-1pm																
2:30pm-3:30pm	18	×	1	×	37	✓	56	✓	442	×			7956	×	24752	×
2:45pm-3:45pm	19	×	2	×	38	✓	59	✓	452	×			8588	×	26668	×
3pm-4pm	21	×	2	×	41	✓	64	✓	455	×			9555	×	29120	×

**Table 10-6 TfNSW Warrant Assessment – pedestrian crossing on Terry Street between Wise and Norman Streets (Source: Inner West Council)**

**Table 10-6** demonstrates that the proposed pedestrian crossing locations considered would not meet the TfNSW normal or special (school crossing) warrants and therefore an alternative solution should be considered to slow vehicles along Terry Street to improve compliance with the 40km/h school zone along Terry Street beyond Norman Street.

## 10.14 CRYSTAL STREET

A number of residents have raised concerns regarding existing traffic and parking arrangements in Crystal Street. This conflict is associated with the current two- way traffic operation and limited on-street parking availability. The current conditions along Crystal Street with vehicles parked on both sides of the street and limited opportunities for passing are shown in **Figure 10-28**.



**Figure 10-28 Examples of current conditions along Crystal Street facing east (Source: Google Maps).**



## 11 RECOMMENDED ACTIONS

### 11.1 INTRODUCTION

The Local Area Traffic Management should meet broadly with the management principles outlined in the *Going Places: An Integrated Transport Strategy for Inner West (2019)*. The brief states that: “In developing recommendations for the LATM Strategy, consideration must be given to incorporate the following principals of Local Area Traffic Management:

- Reduction in vehicle speeds;
- Minimise traffic levels and intruding traffic in a local street;
- Minimise crash risk;
- Improve local amenity by:
  - Reducing car use
  - Increasing use of public transport
  - Increasing walking and cycling
  - Improving the streetscape”

### 11.2 LATM AND ACTIVE TRANSPORT UPGRADE ACTIONS

A number of actions are required as part of this LATM assessment. Due to the extensive nature of these works, these are provided in detail in Appendix A. A summary of the actions is provided below based on each type of improvement.

#### 11.2.1 Pedestrian Facilities

Improving the existing pedestrian environment along Terry Street and Wellington Street can be implemented through improvements outlined in Section 10.3 mainly at intersections within the study area. Further to this a proposal for a reduced speed limit in part of the study area is also considered to improve pedestrian safety in this predominantly local residential area.

#### 11.2.2 Bicycle Facilities

The bicycle network in the study area should be designed to the following Bicycle Planning Principles for mixed traffic cycling facilities:

- Signage
- W6-7 & W8-23 on side roads approaching intersection
- G8-14 every 150 metres
- Lane lines
- Solid edge lines to delineate traffic lane where width 12m+
- No edge lines where width <12m
- Centre line
- Logos
- PS-2 in Shared Lane before and after every intersection

### 11.3 LATM IMPROVEMENT RECOMMENDATIONS

The proposed recommendations for each intersection, section of road and residential area are provided below:

#### 11.3.1 Darling Street / Merton Street Intersection

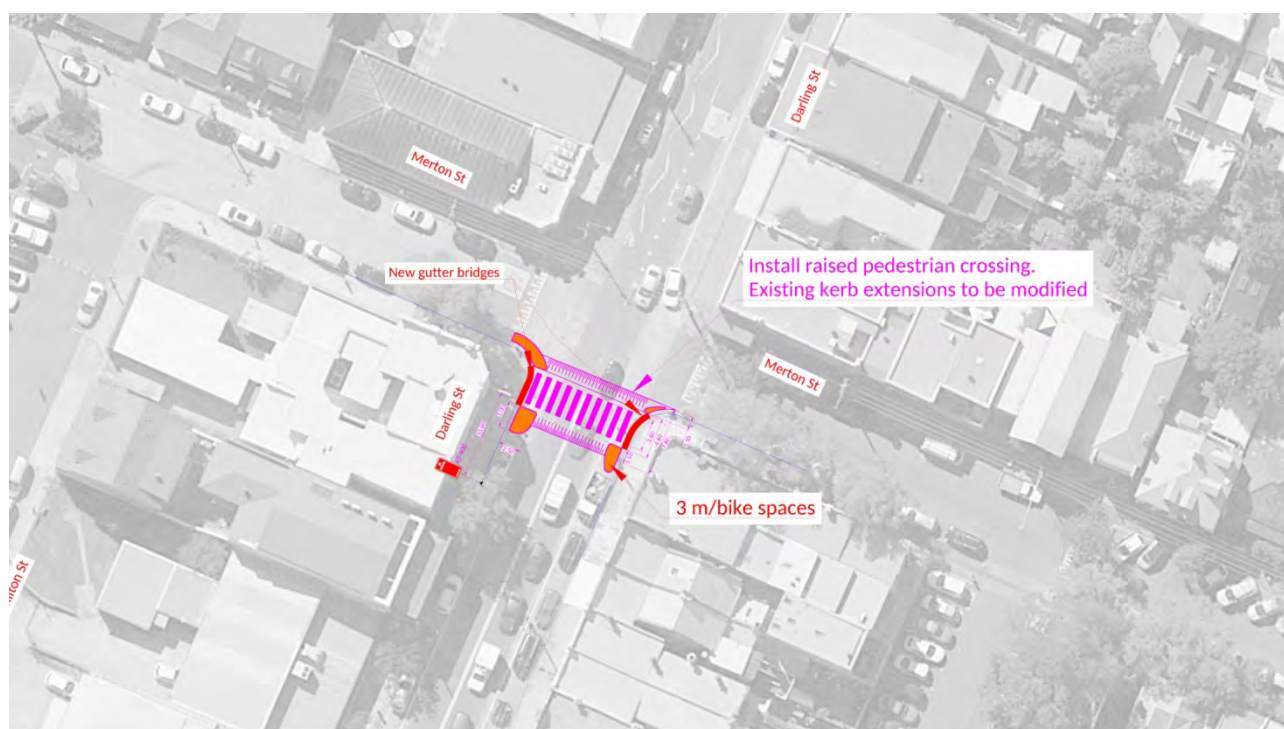
Based on the intersection operation and safety assessment and community feedback, it is proposed that a raised pedestrian crossing is installed on the southern approach of the intersection. Further to this relocation of the loading zone should be considered after further observations of demand for loading/unloading activities. These proposals are presented in **Figure 11-29**.

The key points in support of this proposed recommendation are:

- Improved pedestrian safety on Darling Street with the nearest pedestrian crossings being 80 metres to the south at the Darling and National Street signalized intersection and 80 metres to the north on the northern approach to the Darling Street and Nelson Street intersection.
- Providing a pedestrian crossing for a key pedestrian desire line along Merton Street, with Hamilton Street car park, a supermarket and bank on the western side of Darling Street.
- Slowing down traffic on Darling Street by providing an additional slow point along the street.

The key points that need further consideration for this proposed recommendation are:

- Reduction in loss of parking on Darling Street due to the installation of the raised pedestrian crossing, with the provision of kerb extensions near the proposed raised crossing.
- To square off parking spaces to ensure that there is a minimal loss of parking near the proposed raised crossing.



**Figure 11-29 Darling Street / Merton Street intersection proposal**

- The estimated cost to install a raised pedestrian crossing in Darling Street immediately south of Merton Street is \$75,000.

### 11.3.2 Terry Street / Margaret Street / Nagurra Place Intersection

Based on community feedback and as noted in the pedestrian safety and intersection operation assessment based on high volumes and speeds of vehicles along Terry Street is proposed to raise the existing pedestrian crossing on the southern approach of this intersection. The proposal is shown in **Figure 11-30**.



**Figure 11-30 Terry Street / Margaret Street / Nagurra Place intersection proposal**

The key points in support of this proposed recommendation are:

- Improved pedestrian safety on Terry Street with the nearest pedestrian crossing being 135 metres to the south at the Terry Street and Victoria Road signalized intersection.
- Providing a raised pedestrian crossing will slow down traffic on Terry Street by providing an additional slow point along the street, which would stop drivers speeding towards intersection with Victoria Road when they can see a green light.

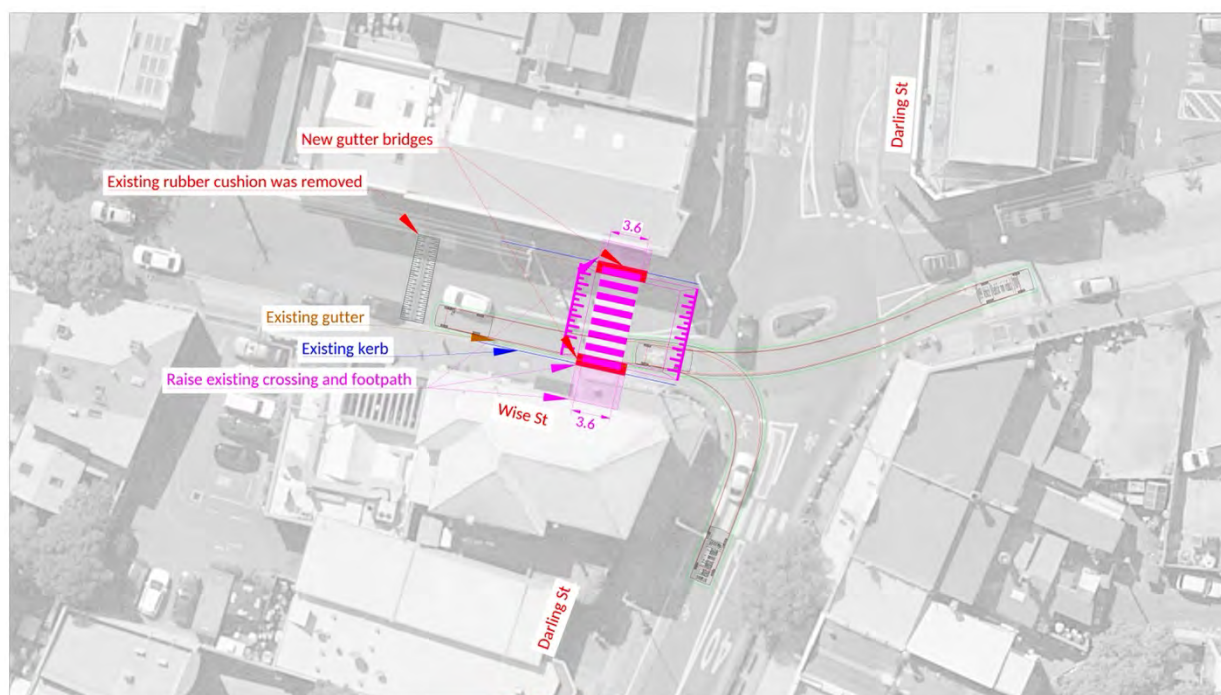
The key points that need further consideration for this proposed recommendation are:

- The existing speed humps approximately 40 metres to the south of this location.
- The estimated cost to install a raised pedestrian crossing is \$75,000.

### 11.3.3 Darling Street / Wise Street / Beattie Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment based on existing use of pedestrians crossing on the western approach of the intersection it is proposed to increase the height of the existing pedestrian crossing and extend the raised threshold to be extended to the exit of

the existing roundabout. Further to this, in order to improve pedestrian safety on the western and eastern approaches to the intersection it is proposed to repair the existing bollard and chain fence and place additional landscaping to ensure pedestrians are directed towards the pedestrian crossing on the western approach and away from the intersection on the eastern approach. The proposal is shown in **Figure 11-31**.



**Figure 11-31 Darling Street / Wise Street / Beattie Street intersection proposal**

The key points in support of this proposed recommendation are:

- Improved pedestrian safety on Wise Street with the raised pedestrian crossing and repairs to bollards and chain fences and potential landscaping near this pedestrian crossing.
- Improved road safety and awareness of the crossing with a raised threshold from the exit of the roundabout at this intersection.
- No relocation of the existing crossing on Wise Street, therefore maintaining the existing pedestrian desire line across Wise Street for pedestrians walking on the western side of Darling Street.
- Provision of an additional two (2) motorcycle spaces on the western side of Darling Street to replace and add to the spaces lost on the eastern side of Darling Street.

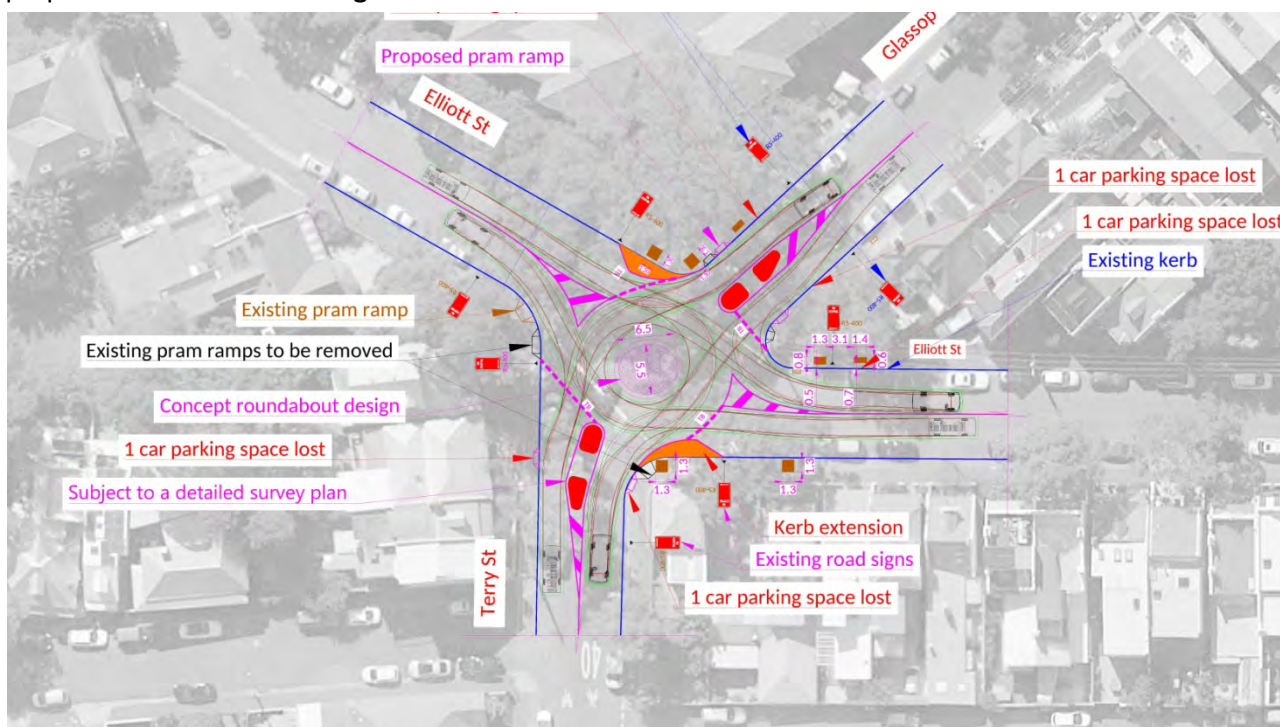
The key points that need further consideration for this proposed recommendation are:

- The eastern approach treatment improvements on Beattie Street are out of the scope of this LATM scheme and would need to be considered in the broader Council LATM budget
- The estimated cost of this proposal is \$75,000.



#### 11.3.4 Terry Street / Elliott Street / Glassop Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment based on poor visibility from all approaches to the intersection, with non-compliance observed of the existing Stop sign treatment on the Elliott Street and Terry Street approaches an alternative roundabout treatment is proposed. This is shown in **Figure 11-32**.



**Figure 11-32 Terry Street / Elliott Street / Glassop Street intersection proposal**

The key points in support of this proposed recommendation are:

- Improved sight distance for all vehicles at all approaches to the intersection.
- Improved active transport outcomes for the on-road cycle route on Terry Street / Glassop Street provided that Table 3.2 is from Austroads, 2015 *Research Report AP-R542-17 Bicycle Safety at Roundabouts* is followed for the width of the approach and departure lanes into the roundabout.
- Meets community expectations based on feedback provided in regard to perceived road safety at this intersection.

The key points that need further consideration for this proposed recommendation are:

- Further crash analysis and community consultation may be required prior to proceeding any further with this proposed roundabout.
- The estimated cost to install a roundabout is \$200,000.

#### 11.3.5 Glassop Street / White Street / Young Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment based on existing limited sight distance from White Street turning into Glassop Street two options are proposed to improve safety at this location. These include:

- Installing kerb build outs on to the east and west of White Street to provide additional visibility by ensuring No Stopping restrictions are observed. This option is presented in **Figure 11-33**.



**Figure 11-33 Glassop Street / White Street / Young Street intersection proposal**

The key points in support of this proposed recommendations are:

- Improved vehicle safety on White Street with both options ensuring vehicles do not park immediately to the east of the intersection.
- Provision of one (1) motorcycle space to limit loss of parking from this proposal.

The key points that need further consideration for this proposed recommendation are:

- The estimated cost of this proposal is \$20,000.

#### 11.3.6 Terry Street between Thornton Street and Margaret Street

Based on community feedback and as noted in the intersection safety and operation assessment based on existing speed at the location near Balmain Secondary College, with speeds observed and recorded greater than the 40km/h speed limit. It is proposed to install speed cushions outside 62 Terry Street and install road signs at this additional speed cushion and bring the existing signage leading up to the speed hump to the south to meet Australian Standard 1742.13-2009. This proposal is shown in **Figure 11-34**.



**Figure 11-34 Terry Street between Thornton Street and Margaret Street proposal**

The key points in support of this proposed recommendation are:

- Improved road safety on Terry Street outside Balmain Secondary College with the speed cushions and new and improved signage the new and existing location.
- Improved road safety within the existing 40km/h school zone outside Balmain Secondary College.

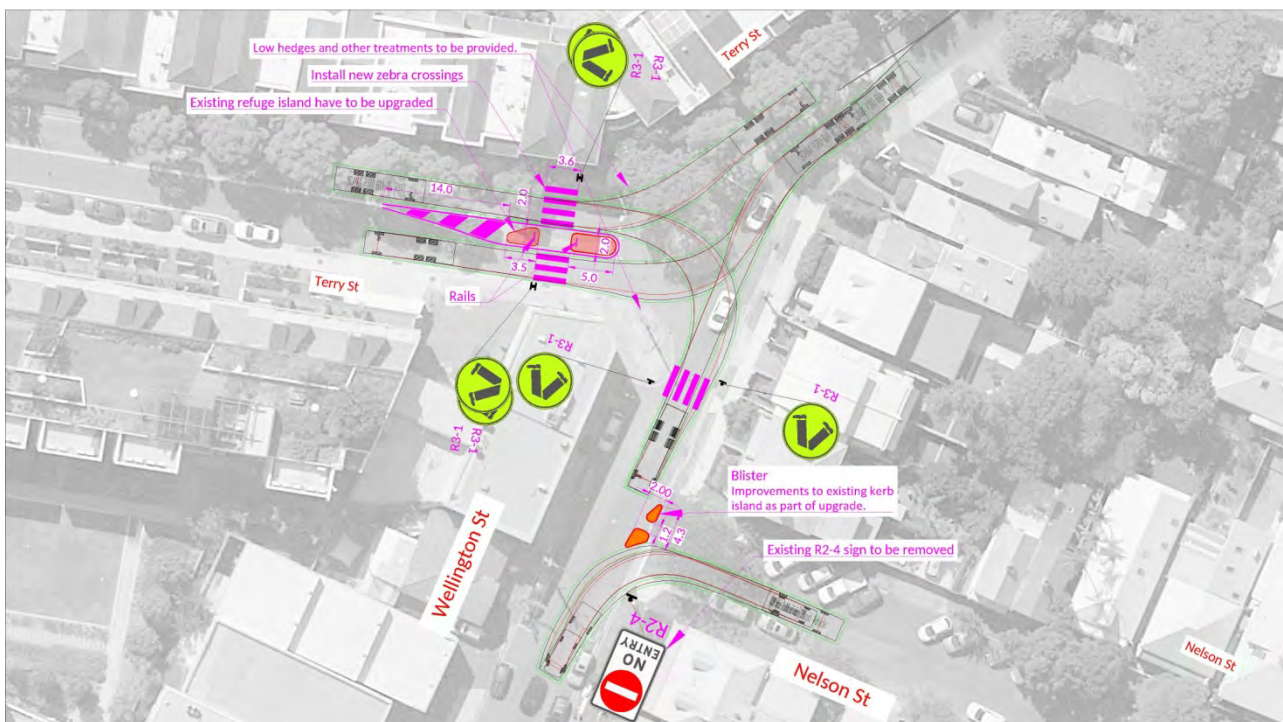
The key points that need further consideration for this proposed recommendation are:

- The 85<sup>th</sup> percentile speeds observed are less than 10 per cent greater than the speed limit of 40 km/h, however, given there is a school zone in this area, support for the proposed treatment should be forthcoming.
- The estimated cost of this proposal is \$20,000.

### 11.3.7 Wellington Street / Terry Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment based on existing pedestrian desire lines it is proposed to upgrade the existing refuge island on the western approach of the intersection on Terry Street and to install Zebra Crossings on the western and southern approaches. The proposal is shown in **Figure 11-35**.





**Figure 11-35 Wellington Street / Terry Street intersection proposal**

The key points in support of this proposed recommendation are:

- Improved pedestrian safety on Terry Street and Wellington Street with the zebra pedestrian crossings at the desire lines for pedestrians from the swim school.
- According to *AS1742.10-2009 Part 10 – Pedestrian Control and Protection* as quoted in the *RMS Supplement to Manual of Uniform Traffic Control Devices (AS 1742) Version 2.1* the following requirements must be met:

**[ i) Normal Warrant:**

A pedestrian (Zebra) Crossing is warranted where:-

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 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)  $P \geq 30$   
AND
- (b)  $V \geq 200$

- The traffic survey carried out on a Saturday in February 2020 confirms that warrants which support the installation of zebra crossings are met on both the western (Terry Street) and southern (Wellington Street) approaches.

HOURLY COUNTS	Nothorn approach			Western approach			Southern approach		
	Vehides, veh/h	Pedestrians, ped/h	PV	Vehides, veh/h	Pedestrians, ped/h	PV	Vehides, veh/h	Pedestrians, ped/h	PV
9:00 - 10:00	409	14		356	29		629	111	
9:15 - 10:15	456	17		439	31		783	127	99441
9:30 - 10:30	497	16		460	33		865	108	
9:45 - 10:45	506	13		509	32	16288	912	105	
10:00 - 11:00	516	21		506	24		915	99	
10:15 - 11:15	526	29		507	21		908	101	91708
10:30 - 11:30	528	28		518	21		905	105	
10:45 - 11:45	535	33		506	18	9108	918	98	
11:00 - 12:00	527	30		536	21		974	74	
11:15 - 12:15	570	18		577	19		1040	70	72800
11:30 - 12:30	575	17		581	15		1035	58	
11:45 - 12:45	593	16		569	14	7966	1020	53	
12:00 - 13:00	601	13		535	10		958	49	
12:15 - 13:15	578	16		511	11		906	41	
12:30 - 13:30	475	15		404	9		737	36	
12:45 - 13:45	317	10		279	6		502	20	

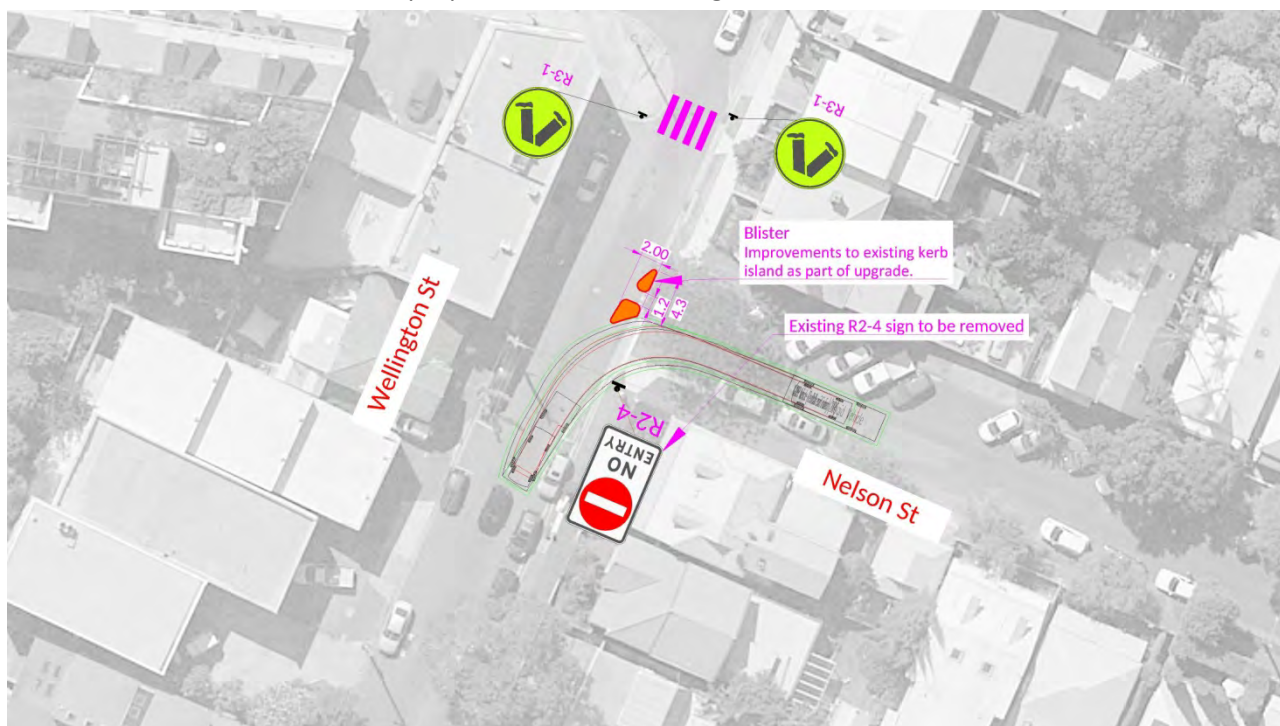
HOURLY COUNTS	Western approach			Southern approach		
	Vehides, veh/h	Pedestrians, ped/h	PV	Vehides, veh/h	Pedestrians, ped/h	PV
9:00 - 10:00	356	43		629	111	
9:15 - 10:15	439	48		783	127	99441
9:30 - 10:30	460	49		865	108	
9:45 - 10:45	509	45	22905	912	105	
10:00 - 11:00	506	45		915	99	
10:15 - 11:15	507	50		908	101	91708
10:30 - 11:30	518	49		905	105	
10:45 - 11:45	506	51	25806	918	98	
11:00 - 12:00	536	51		974	74	
11:15 - 12:15	577	37		1040	70	72800
11:30 - 12:30	581	32		1035	58	
11:45 - 12:45	569	30	17070	1020	53	
12:00 - 13:00	535	23		958	49	
12:15 - 13:15	511	27		906	41	
12:30 - 13:30	404	24		737	36	
12:45 - 13:45	279	16		502	20	

The key points that need further consideration for this proposed recommendation are:

- The community would need to be consulted on the implementation of such a scheme at this intersection.
- The estimated cost of this proposal is \$30,000.

### 11.3.8 Nelson Street / Wellington Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment based on observations of drivers travelling north on Wellington Street, which is currently one-way southbound it is proposed to reduce the width of Wellington Street by installing 30-degree angle parking along the western side of Wellington Street and also install a kerb blister and build out to make the right turn manoeuvre more difficult for vehicles. These proposals are shown in **Figure 11-36**.



**Figure 11-36 Nelson Street / Wellington Street intersection proposal**

The key points in support of this proposed recommendation are:

- Improved compliance of the one-way southbound treatment of Wellington Street
- This proposal will assist in pedestrian safety along with the proposed pedestrian crossing at the intersection of Wellington Street and Terry Street.

The key points that need further consideration for this proposed recommendation are:

- The change in parking arrangements would be greater or equal to the current amount of available parking, however, community consultation will be required to change the arrangements.
- The need to wait until Westconnex works are completed prior to commencing any works on this proposal.
- The estimated cost of this proposal is \$10,000.

### 11.3.9 Wellington Street / Merton Street Intersection

Based on community feedback and as noted in the intersection safety and operation assessment there is a missing active transport link it is proposed to install kerb extensions on the northern approach of this intersection. The proposal is shown in **Figure 11-37**.





**Figure 11-37 Wellington Street / Merton Street intersection proposal**

The key points in support of this proposed recommendation are:

- Providing improved pedestrian safety with kerb extensions to slow down traffic on Wellington Street by providing an additional slow point along the street.

The key points that need further consideration for this proposed recommendation are:

- The need to wait until Westconnex works are completed prior to commencing any works on this proposal.
- The estimated cost of this proposal is \$20,000.

#### **11.3.10 Tilba Avenue – shared zone**

Tilba Avenue was part of Leichhardt Council's Narrow Streets Program, where it is to be converted into a shared zone due to its narrow width and an absence of a footpath. This proposed concept design for the shared zone on Tilba Avenue are shown in **Figure 11-38**.

The key points in support of this proposed recommendation are:

- Improved pedestrian safety on residential streets for vulnerable users

The key points that need further consideration for this proposed recommendation are:

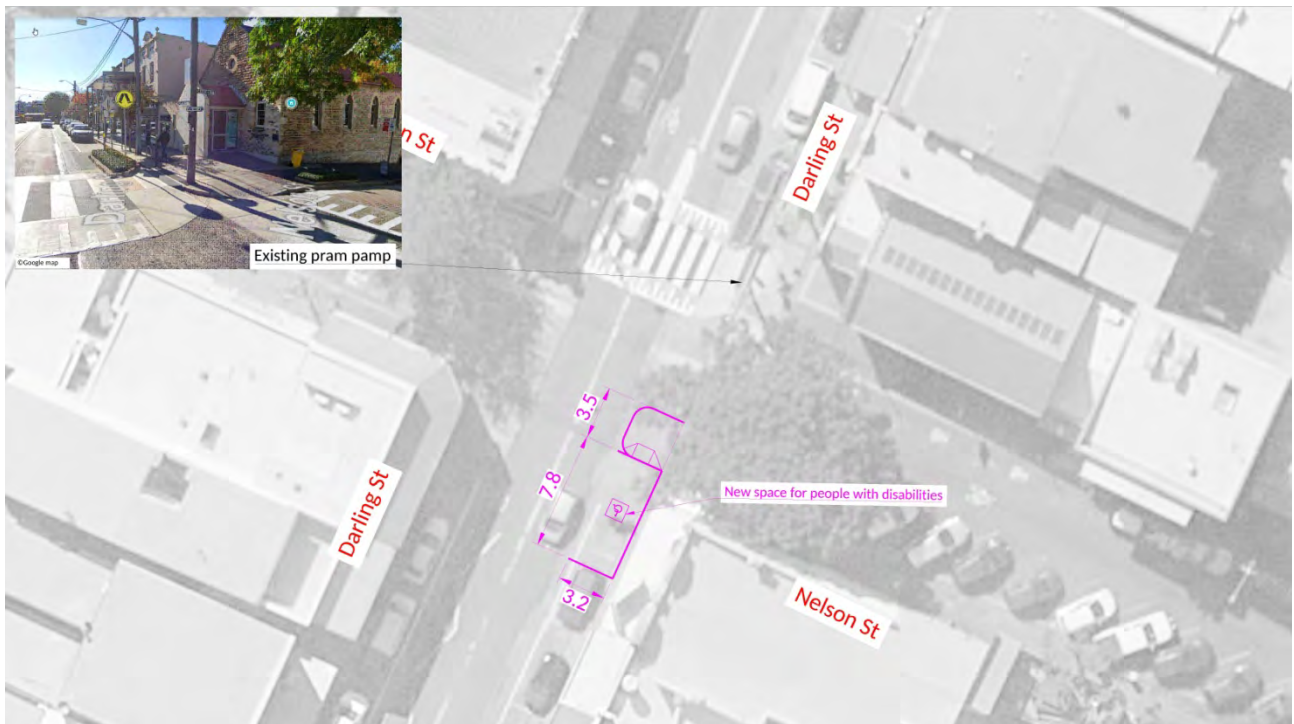
- Community consultation for the proposed shared zone.
- Approval from Transport for NSW, Centre for Road Safety section for a shared zone.
- The estimated cost of this proposal is \$40,000.



**Figure 11-38 Proposed conditions on Tilba Avenue**

#### 11.3.11 Darling Street/Nelson Street

A suggestion was made from our Access and Inclusion Planning for an additional on-street disabled parking space in Darling Street near Nelson Street, for improved access to the Hanford Centre. The existing 15m disabled space in Nelson Street is located on a grade and historically there has been an incident where one older resident had a fall while using the accessible parking space. The proposed location is provided in **Figure 11-39**.



**Figure 11-39 Proposed Persons with Disability parking space on Darling Street near Nelson Street.**

The key points in support of this proposed recommendation are:

- Improved pedestrian safety near the commercial centre for vulnerable users.

The key points that need further consideration for this proposed recommendation are:

- Relocation of the parking space and relevant consultation in relation to this proposal.
- The estimated cost of this proposal is \$15,000.

#### **11.3.12 Terry Street between Wise Street and Norman Street**

As noted above in Section 9.13 the warrants are not met for a zebra crossing in this section of Terry Street. Therefore, an alternative solution to slow down vehicles is proposed. This includes line marking on Terry Street to attempt to slow down vehicles travelling north on Terry Street at the intersection and nearby bend with Wise Street. The proposed line marking is shown in **Figure 11-40**.



**Figure 11-40 Proposed line marking on Terry Street near Wise Street**

The key points in support of this proposed recommendation are:

- Improved pedestrian safety near the high school for school students.
- No loss of parking to implement this initiative.

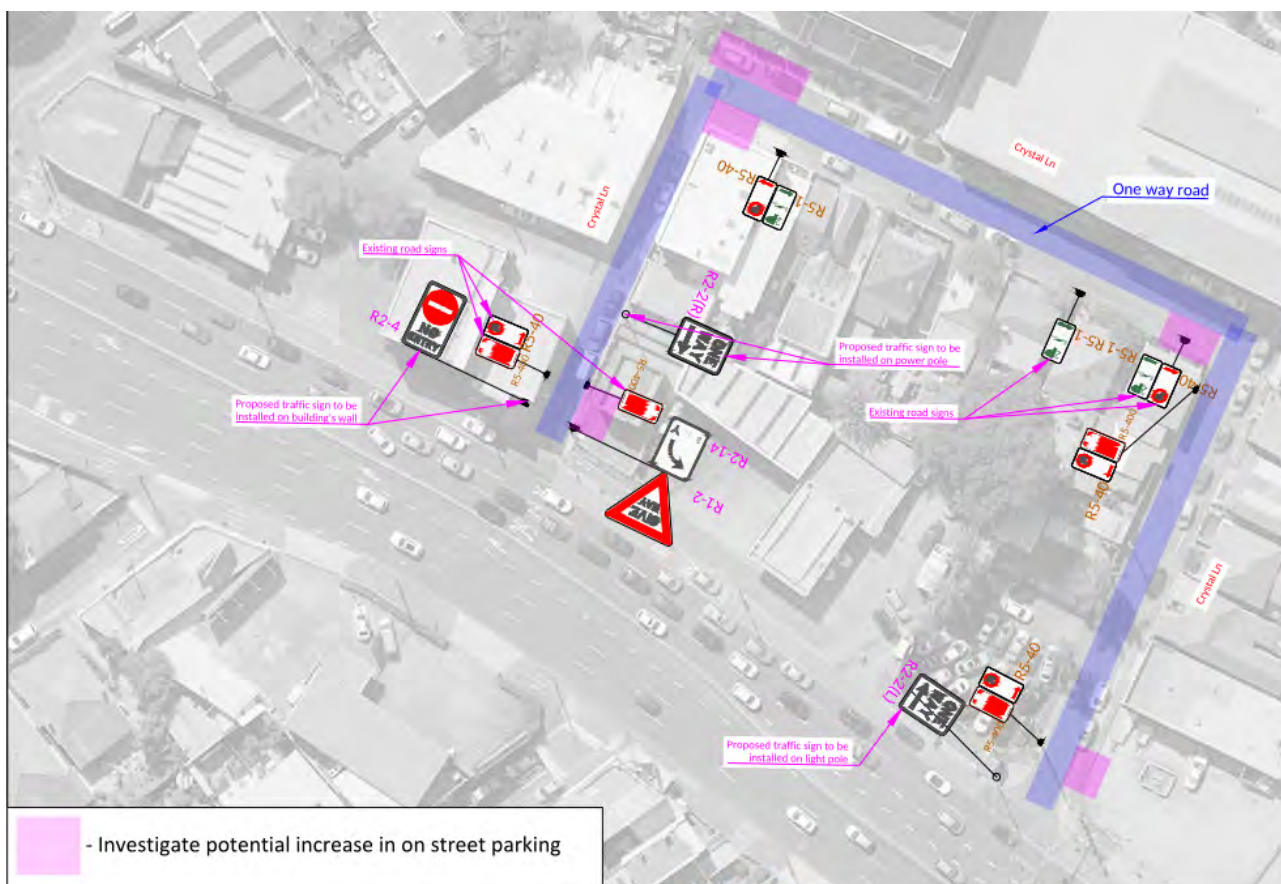
The key points that need further consideration for this proposed recommendation are:

- No solution to informal crossing near the school for students other than to attempt to slow vehicles on Terry Street at the bend near the Wise Street intersection.
- The estimated cost of this proposal is \$5,000.

### 11.3.13 Crystal Street

As noted above in Section 9.14 residents have demonstrated concerns for the current operation of Crystal Street. In order to reduce conflicts along Crystal Street as a two-way operation, it is recommended that a one-way anticlockwise traffic arrangement be further investigated and parking modified accordingly. A proposed one-way operational concept design is shown in **Figure 11-41**.





**Figure 11-41 Proposed anti-clockwise one-way operation on Crystal Street.**

The key points in support of this proposed recommendation are:

- Improved safety for residents and businesses along Crystal Street.

The key points that need further consideration for this proposed recommendation are:

- Potential for loss of parking to implement this initiative.
- The estimated cost of this proposal is \$10,000.

#### 11.4 ESTIMATED COST OF ALL PROPOSALS

It is estimated that the total cost of all proposals will be approximately \$585,000, with a 10 percent contingency this amount would be approximately \$643,500.

## 12 ENGAGEMENT OUTCOMES

### 12.1 INTRODUCTION

A survey of the community was undertaken in September and October 2020 to gauge community support for the proposed improvement recommendations. This includes recommendations above in Section 10.3. A summary of responses is provided below which includes all responses from the community,

### 12.2 SUMMARY OF COMMENTS FROM THE COMMUNITY

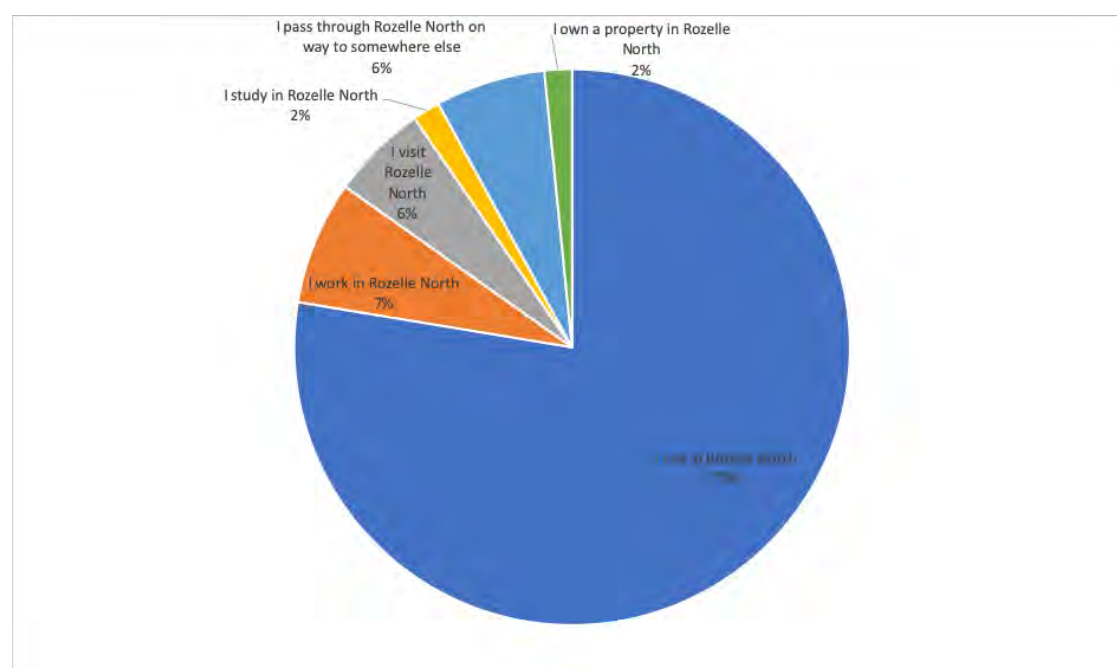
#### Question 1 – What is your relationship to Rozelle North?

A summary of responses to this question is provided in **Table 12-7** and **Figure 12-42**.

**Table 12-7 Responses to Question 1 – Relationship to Rozelle North**

Relationship to Rozelle North	Number
I live in Rozelle North	97
I work in Rozelle North	9
I visit Rozelle North	7
I study in Rozelle North	2
I pass through Rozelle North on way to somewhere else	8
I own a property in Rozelle North	2
<b>Total (multiple responses included)</b>	<b>125</b>

Note: 109 responses were received, multiple responses are counted as such, therefore the total number of responses is greater than 109.



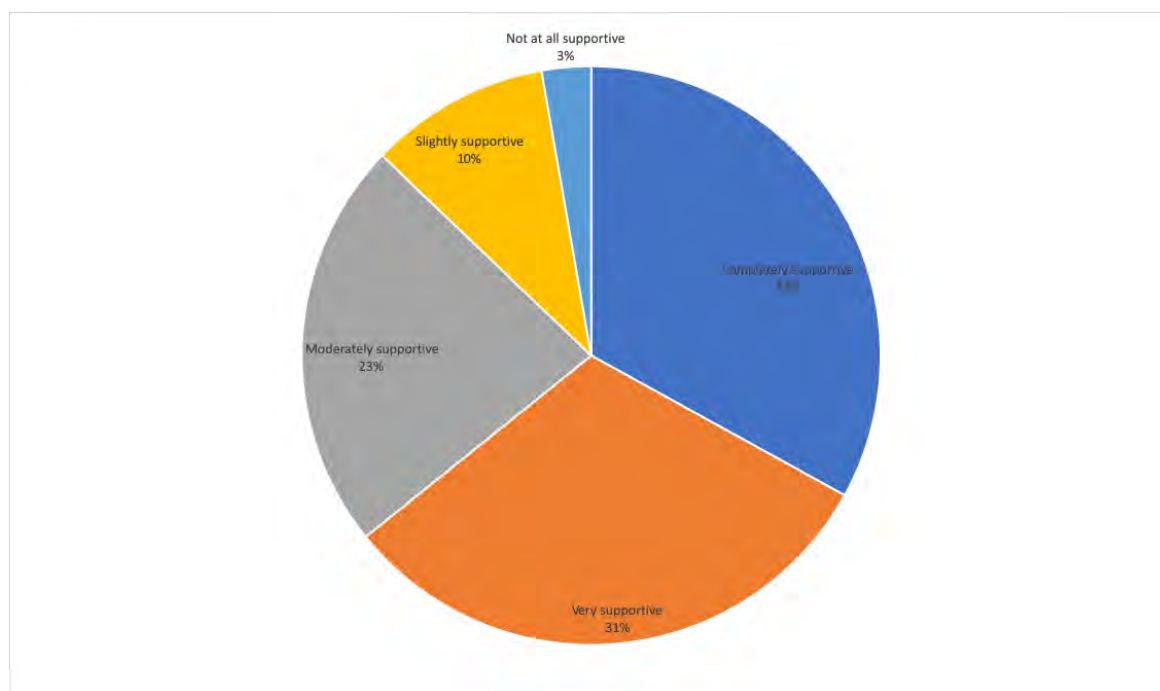
**Figure 12-42 Responses to Question 1 – Relationship to Rozelle North**

**Question 2 – To what extent do you support the proposed treatments to manage traffic and safety in Rozelle North.**

A summary of responses to this question is provided in **Table 12-8** and **Figure 12-43**.

**Table 12-8 - Responses to Question 2 – Support for proposed treatments.**

Support for proposed treatments	Number
Completely supportive	36
Very supportive	34
Moderately supportive	25
Slightly supportive	11
Not at all supportive	3
<b>Total</b>	<b>109</b>



**Figure 12-43 Responses to Question 2 – Support for proposed treatments**

### 12.3 RESPONSES RELATING TO SPECIFIC PROPOSALS

Follow up to Question 2 – To what extent do you support the proposed treatments to manage traffic and safety in Rozelle North - Question 3 - Please let us know why you answered this way (clearly identifying the proposed treatment sites you refer to).

Responses to Question 3 that did not specifically mention any proposed changes are summarised in **Table 12-9**.

**Table 12-9 Responses to Question 3 without specific proposal mentioned relating to Question 2 (Support of proposals).**

Support for proposed treatments (No specific proposals mentioned in feedback)	Number
Completely supportive	12
Very supportive	7
Moderately supportive	6
Slightly supportive	2
Not at all supportive	1
<b>Total</b>	<b>28</b>

In summary of the 28 respondents who did not specifically mention a specific proposal 25 out of 28 or nearly 90 per cent were moderately supportive, very supportive or completely supportive of the overall proposal. There were 3 respondents who were slightly supportive or not at all supportive with the key reasons for this being:

- Consideration for loss of parking;
- Consideration for changes that may not be deemed necessary; and
- A note that cars should still be considered as part of the overall transport task.

The remaining 101 respondents provided comments on specific proposals noted as 1 to 13, additional comments relating to cyclists, additional suggestions for improvements across the study area and beyond and suggestions which are outside of Council's control on State Roads controlled by Transport for NSW. These are discussed in broad terms by each particular option below.

#### 12.3.1 Terry Street / Elliott Street / Glassop Street Intersection

Responses to Question 3 that specifically mention this proposal are summarised in **Table 12-10**.

**Table 12-10 Responses to Question 3 with specific mention of proposal number 1 relating to Question 2 (Support of proposals).**

Support for proposed treatment 1 (No specific proposals mentioned in feedback)	Number
Completely supportive	9
Very supportive	4
Moderately supportive	6
Slightly supportive	NIL
Not at all supportive	NIL
<b>Total</b>	<b>19</b>

In summary of the 19 respondents who mentioned the Terry Street / Elliott Street / Glassop Street Roundabout 100 per cent were moderately supportive, very supportive or completely supportive of the proposal. The key reasons for this support of the proposal being:

- Improved pedestrian safety;
- Long overdue improvement supported;
- A dangerous intersection;
- Reduction of speed in Glassop Street; and
- Improved pedestrian and vehicle access.

### 12.3.2 Glassop Street / Elliott Street / White Street Intersection

Responses to Question 3 that specifically mention this proposal are summarised in **Table 12-11**.

**Table 12-11 Responses to Question 3 with specific mention of proposal number 2 relating to Question 2 (Support of proposals).**

<b>Support for proposed treatment 2 (No specific proposals mentioned in feedback)</b>	<b>Number</b>
Completely supportive	5
Very supportive	2
Moderately supportive	2
Slightly supportive	NIL
Not at all supportive	1
<b>Total</b>	<b>10</b>

In summary of the 10 respondents who mentioned the Glassop Street between Elliott Street and White Street proposal 90 per cent were moderately supportive, very supportive or completely supportive of the proposal. The key reasons for this support of the proposal being:

- Reduced vehicle speeds on Glassop Street;
- Consider reducing vehicles using local streets, with preference for the use of Darling Street.
- Long term residents, with vehicle speeds noted as an issue on Glassop Street.

There was a respondent who was Not at all supportive with the key reasons for this being:

- Noise created by speed humps for residents;
- Residents consider existing measures unnecessary and do not support them.

### 12.3.3 Glassop Street / White Street / Young Street Intersection

Responses to Question 3 that specifically mention this proposal are summarised in **Table 12-12**.

**Table 12-12 Responses to Question 3 with specific mention of proposal number 2 relating to Question 2 (Support of proposals).**

<b>Support for proposed treatment 3 (No specific proposals mentioned in feedback)</b>	<b>Number</b>
Completely supportive	1
Very supportive	2
Moderately supportive	2
Slightly supportive	1
Not at all supportive	1
<b>Total</b>	<b>7</b>

In summary of the 7 respondents who mentioned the Glassop Street / White Street and Young Street proposal more than 70 per cent were moderately supportive, very supportive or completely supportive of the proposal.

The key reasons for this support of the proposal being:

- A preference for alternative option with no loss in parking; and
- Consideration for preference for traffic on Glassop Street.

There were two respondents who were slightly supportive or not at all supportive with the key reasons for this being:

- Loss of parking;
- Consider a stop / give way sign at the intersection; and
- Narrow streets don't support use of kerbside garden.

#### **12.3.4 Carieville Street / Phoebe Street / Tilba avenue**

There were no responses that specifically mentioned this proposal.

#### **12.3.5 Tilba Avenue Shared Zone Proposal**

There were two respondents that specifically mentioned this proposal, they were very supportive and slightly supportive. There were no respondents that were completely supportive, moderately supportive or not at all supportive of the proposal. These responses suggest that:

- Parking should be removed opposite driveways on Tilba Avenue;
- Relocation of the speed cushion at the southern end of Tilba Avenue to be away from driveways to ensure ongoing access.

#### **12.3.6 Terry Street Between Thornton Street and Wise Street - Speed Cushion**

There were three respondents that specifically mentioned this proposal, they were all very supportive of the proposed speed humps on Terry Street. There were no respondents that were completely supportive, moderately supportive, slightly supportive or not at all supportive of the proposal.

#### **12.3.7 Terry Street / Margaret Street / Nagurra Place Raised Pedestrian Crossing**

Responses to Question 3 that specifically mention this proposal are summarised in **Table 12-13**.

**Table 12-13 Responses to Question 3 with specific mention of proposal number 7 relating to Question 2 (Support of proposals).**

<b>Support for proposed treatment 3 (no specific proposals mentioned in feedback)</b>	<b>Number</b>
Completely supportive	4
Very supportive	5
Moderately supportive	2
Slightly supportive	NIL
Not at all supportive	NIL
<b>Total</b>	<b>11</b>

In summary of the 11 respondents who mentioned the Terry Street / Margaret Street / Nagurra Place proposal 100 per cent were moderately supportive, very supportive or completely supportive of the proposal. The key reasons for this support of the proposal being:

- Improved visibility of the existing pedestrian crossing on Terry Street
- Consideration of reducing traffic on Terry Street and potentially moving it to Darling Street.

#### **12.3.8 Wellington Street / Terry Street Intersection**

There were eight (8) respondents that specifically mentioned this proposal, they were completely supportive, very supportive and slightly supportive. There were no respondents that were moderately supportive or not at all supportive of the proposal. These responses suggest that:

- The existing speeds lead to potentially dangerous driving at this intersection
- Improves pedestrian safety at the intersection.

One respondent that was moderately supportive noted that these works should be delayed until after the re-opening of Terry Street due to the Westconnex works, which is likely to take another two (2) years.

#### **12.3.9 Nelson Street / Wellington Street Intersection**

There were seven (7) respondents that specifically mentioned this proposal, they were completely supportive, very supportive and moderately supportive. There were no respondents that were slightly supportive or not at all supportive of the proposal. These responses suggest that:

- Left turn median from Nelson Street onto Wellington Street will improve enforcement of the one-way direction of Wellington Street from Terry Street.
- Wellington Street is a busy traffic street;
- Improved pedestrian safety; and
- Support for calming of traffic on Wellington Street.

Three respondents that were moderately supportive noted

- That they do not support the proposed angle parking on Wellington Street near Terry Street as this



requires drivers to reverse onto the busy traffic street of Wellington Street; and

- The existing businesses in Wellington Street may be further impacted by removal of any parking on Wellington Street due to provision of angle parking, with consideration to be given to providing pedestrian crossings without the loss of any parking.

#### **12.3.10 Wellington Street / Merton Street Intersection**

There were ten (10) respondents that specifically mentioned this proposal, they were completely supportive, very supportive and moderately supportive. There were no respondents that were slightly supportive or not at all supportive of the proposal. These responses suggest that:

- Improved pedestrian safety;
- Strong support for traffic calming measures on Wellington Street.

Two (2) respondents that are moderately supportive noted:

- That with Terry Street access to Victoria Road being closed during Westconnex works, Wellington Street has become busier with traffic and any changes should be made to Wellington Street upon completion of the Westconnex works.
- Consideration to upgrading the existing crossing to be a zebra crossing due to the school's location on Wellington Street.

#### **12.3.11 Darling Street / Merton Street Pedestrian Crossing**

There were five (5) respondents that specifically mentioned this proposal, they were completely supportive and very supportive. These responses suggest that:

- The Darling Street pedestrian crossing near Merton Street is necessary for improved pedestrian safety.

One (1) respondent that was very supportive noted:

- All proposed measures were supported except for this proposed pedestrian crossing on Darling Street near Merton Street.

#### **12.3.12 Darling Street / Nelson Street**

There were three (3) respondents that specifically mentioned this proposal, they were completely supportive and very supportive. There were no respondents that were moderately supportive, slightly supportive or not at all supportive of the proposal.

#### **12.3.13 Darling Street / Wise Street Raised Pedestrian Crossing**

Responses to Question 3 that specifically mention this proposal are summarised in **Table 12-14**.

**Table 12-14 Responses to Question 3 with specific mention of proposal number 13 relating to Question 2 (Support of proposals).**

<b>Support for proposed treatment 3 (No specific proposals mentioned in feedback)</b>	<b>Number</b>
Completely supportive	4
Very supportive	6
Moderately supportive	2
Slightly supportive	2
Not at all supportive	NIL
<b>Total</b>	<b>14</b>

In summary of the 14 respondents who mentioned the Darling Street / Wise Street raised pedestrian crossing proposal more than 85 per cent were moderately supportive, very supportive or completely supportive of the proposal.

The key reasons for this support of the proposal being:

- Improved visibility of the existing pedestrian crossing on Wise Street;
- Consideration to potential loss of parking;
- A review of landscaping on the roundabout which impacts sight distances;
- Raised pedestrian crossings slow traffic and increase safety.

One (1) respondent that was moderately supportive noted:

- That Westconnex traffic is potentially impacting local traffic and that this proposal may further exacerbate this condition.

One (1) respondent that was slightly supportive noted:

- Consideration needs to be given to the loss of parking on Wise Street from the proposal.

## **12.4 COMMENTS TO BE REFERRED TO TRANSPORT FOR NSW**

As noted in Section 9.2.1, there are concerns in the study area that are out of scope of Council. Key suggestions included:

- Change the traffic lights and lane configuration on Wellington Street at Victoria Road to provide a left turn only lane and parking restrictions during peak times to improve traffic flow onto Victoria Road, with queues observed back to Terry Street;
- Pedestrian safety improvements at Wellington Street near Victoria Road, especially with the school on the route;
- Westconnex impacts on the local area for the next two (2) years.

## 12.5 OTHER SUGGESTIONS FOR IMPROVEMENTS IN ROZELLE NORTH

Twenty-five (25) respondents who were completely supportive, very supportive, moderately supportive and slightly supportive provided additional suggestions for improvements in Rozelle North. Key suggestions included:

- A pedestrian refuge on Terry Street, opposite Wise Street;
- Pedestrian crossings at
- Merton Street and Wellington Street;
- Darling Street and Beattie Street;
- Terry Street after Wulumay Close.
- Moving the proposed crossing on Wellington Street near Terry Street further South;
- Implementing measures to slow traffic along Terry Street from Wulumay Close to Wellington Street;
- Installing kerb cushions on both sides of Glassop Street at the intersection with White Street;
- Improvements on Elliott Street from the Glassop Street intersection to improve vehicle and pedestrian safety;
- Improved parking compliance for trailers and vehicles parking across driveways on Glassop Street
- Bicycle improvements to link to the Bay Run;
- Removing non-local traffic from Terry Street and diverting it to Darling Street and Mullens Street;
- Use of no-stopping yellow lines on Carieville Street;
- Installing speed cushions on Terry Street between Margaret Street and Victoria Road;
- Installing four raised pedestrian crossings instead of a roundabout at Terry Street, Elliott Street and Glassop Street.
- An email was received from a resident of Nelson Street, this email included the following key suggestions:
  - Providing a pedestrian crossing on Nelson Street near Darling Street;
  - Installing “Do not queue across intersection” signs at the intersection of Darling Street and Nelson Street;
  - Provision of speed limiting devices on Nelson Street to reduce vehicle speeds.



## Appendix A.

### LEICHHARDT PAMP 2014 ACTION PLAN

Suburb	REF	Location	Intersections or Exact Location	Problem or Issue	Recommendation	Exact Facility	Estimate	Priority	Implemented Y/N
Rozelle	6	Victoria Rd	Darling St	Existing double bus shelters	Conflict cyclists and bus patrons limited pedestrian movements. Separate bus shelters to allow for better pedestrian flow.	Detailed assessment required	\$ 10,000	High	N
Rozelle	9	Victoria Rd	Darling St	Speed problem down hill	Install raised speed cushions on the footpath	speed cushions	\$ 10,000	High	N
Rozelle	8	Victoria Rd	between Crystal St and Wellington St Caltex Service Station	Cars driving into petrol station are not seeing cyclists and fail to give way to cyclists and pedestrians along Victoria Rd	Install signs and provide linemarking alerting motorists that pedestrians and cyclists are using the petrol station driveways	signposting and linemarking	\$ 600	High	Y
Rozelle	13	Darling St	Wise St	Pedestrian crossing approved at this location	Concur with Councils decision to provide facilities	at grade zebra crossing with blisters signposting and linemarking Share the Path as per Appendix 5	\$ 25,000	High	Y
Rozelle	10	Victoria Rd	Terry St to Darling St	Cyclists speeding issue	Install signposting - cyclists give way to pedestrians		\$ 1,200	High	N
Rozelle	17	ANKA site	Terry St	Identify pedestrian pathways for ANKA site	Provide paths	provide path	developer funds	High	Y

## Appendix B.

### 5 Appendix B - Road user movement code table

PEDESTRIANS (on foot or in toy/pram)	VEHICLES FROM ADJACENT DIRECTION (intersections only)	VEHICLES FROM OPPOSING DIRECTION	VEHICLES FROM SAME DIRECTION	MANOEUVRING	OVERTAKING	ON PATH	OFF PATH, ON STRAIGHT	OFF PATH, ON CURVE OR TURNING	MISCELLANEOUS
NEAR SIDE	CROSS TRAFFIC	HEAD ON (on overpass)	ROAD END	U TURN	HEAD ON (including overpass)	PARKED	OFF CARRIAGEWAY TO LEFT	OFF CARRIAGEWAY LEFT ON RIGHT BEND	FELL IN/FROM VEHICLE
00	10	20	30	40	50	60	70	80	90
EMERGENS	RIGHT FAN	RIGHT THROUGH	LEFT RIGHT	IF INTO INTO FIXED OBJECT / INTO VEHICLE	OUT OF CONTROL	DOUBLE PARKED	LEFT OFF CARRIAGEWAY INTO OBJECT / PARKED VEHICLE	OFF CARRIAGEWAY LEFT ON RIGHT BEND AND INTO OBJECT / PARKED VEHICLE	LEAD OR MISSE STRUCK VEHICLE
01	11	21	31	41	51	61	71	81	91
PAK SIDE	LEFT FAN	LEFT THROUGH	RIGHT REAR	LEAVING PARKING	PULLING OUT	ACCIDENT OR BROKEN DOWN	OFF CARRIAGEWAY TO RIGHT	OFF CARRIAGEWAY RIGHT ON RIGHT BEND	STRUCK BRAN / AERODROME
02	12	22	32	42	52	62	72	82	92
PLAYERS, WORKERS, LYING, STANDING ON CARRIAGEWAY	RIGHT REAR	RIGHT LEFT	LANE SIDE SWIPE	ENTERING PARKING	OVERTAKE TURNING	VEHICLE STOP	RIGHT OFF CARRIAGEWAY INTO OBJECT / PARKED VEHICLE	OFF CARRIAGEWAY ON RIGHT BEND INTO OBJECT / PARKED VEHICLE	PARKED VEHICLE RUN AWAY INTO OBJECT / PARKED VEHICLE
03	13	23	33	43	53	63	73	83	93
WALKING WITH TRAFFIC	TWO RIGHT TURNING	RIGHT / RIGHT	LANE CHANGE RIGHT (on overpass)	PARKING VEHICLE: STOP	TURNING IN	PERMANENT OBSTRUCTION ON CARRIAGEWAY	OUT OF CONTROL, ON CARRIAGEWAY	OFF CARRIAGEWAY RIGHT ON LEFT BEND	PARKED VEHICLE RUN AWAY INTO VEHICLE
04	14	24	34	44	54	64	74	84	94
TRADING TRAFFIC	RIGHT / LEFT FAN	LEFT / LEFT	LANE CHANGE LEFT	REVERSEING	PULLING OUT REAR END	TEMPORARY OBSTRUCTION	OFF END OF ROAD / AT INTERSECTION	OFF CARRIAGEWAY RIGHT ON LEFT BEND INTO OBJECT / PARKED VEHICLE	STRUCK WHILE WORKING ON ALIGNED VEHICLE
05	15	25	35	45	55	65	75	85	95
ON FOOTPATH / WIDEWAY	LEFT REAR		RIGHT TURN WIDE SWIPE	REVERSEING INTO FIXED OBJECT / PARKED VEHICLE		STRUCK OBJECT ON CARRIAGEWAY		OFF CARRIAGEWAY LEFT ON LEFT BEND	
06	16		36	46		66		86	
DRIVEWAY	LEFT / RIGHT FAN		LEFT TURN WIDE SWIPE	ENTERING FROM DRIVEWAY		ANIMAL (unloaded)		OFF CARRIAGEWAY LEFT ON LEFT BEND INTO OBJECT / PARKED VEHICLE	
07	17		37	47		67		87	
	TO LEFT TURNING			FROM FOOTPATH				OUT OF CONTROL ON CARRIAGEWAY	
	18			48				88	
OTHER PEDESTRIAN	OTHER ADJACENT	OTHER OPPOSING	OTHER SAME DIRECTION	OTHER ROAD (unloaded)	OTHER OVERTAKING	OTHER ON PATH	OTHER STRAIGHT	OTHER CURVE	OTHER
09	19	29	39	49	59	69	79	89	99

Definitions and notes to support road crash data – June 2014



## Appendix C.



TOO MUCH TRAFFIC		
Street name	No. of comms	Comments
Terry Street	45	Cycling off the Victoria road "cycle path", I cycle up Terry street towards Balmain. The traffic on the up to the roundabout on Nagurra Place is very heavy in the evening, making it very hard to cycle when the road is full of slow-moving cars. There is a similar problem with cars queuing to turn right into wise street. Its simply dangerous on the bike.
		Terry St and Margaret Street
		Terry Street and Wellington Street
		Terry Street.
		Wellington street, Terry street and Nelson Street
		Terry st and Wise st
		Terry St and Wellington St (especially now with the Union Balmain developments completed).
		Terry St cross Margaret
		Terry Street
		Margaret/Terry roundabout near the shops
		Terry street and Wellington street
		Terry Street and Wellington Street. Cnr Wellington and Terry rtreet
		As described above, there are two major spots, both on Terry Str.
		Terry Street is used as a rat-run and drivers become impatient when local residents stop to park in front of their own property -often driving around cars that have commenced parking. There are more young children in the street and the families trying to walk dogs to parks and walk across the road to their car from their property are always fearful of cars not slowing down. There are also many school children arriving and leaving Balmain Secondary College. However further up where the street becomes Glassop street the speedhumps create congestion with so many cars - and impatient drivers behind often beep if someone slows down too much for their liking.
		More private school buses seem to be using Terry street rather than/as well as Darling street - including using Terry street to exit the peninsula rather than turning at the Darling street/Curtis road roundabout and going back up Darling Street like the public buses do. They are noisier and too large for this stretch of Balmain/Rozelle. Trucks are the same and some trucks such as removalist trucks take up parking spaces for days. This combined with so many trailers parked makes it hard for residents to find a parking spot near there house plus obstruct the view of the road/traffic.
		Terry & Margaret Steets
		Terry & Wellington Street at Victoria Road
		Terry st between Victoria rd and Wellington st Rozelle
		Terry st and wise street extending from Wellington street. Especially on weekends
		Terry St and Wellington St- everyone uses these streets to exit the peninsula
		Terry Street between Nagurra Place and Wellington Street
		Terry st close to Nelson street



Terry St
Terry Street is a major access road to Rozelle and Balmain to slow this road down will make the situation worse. No speed bumps.
Terry Street near Wellington Street
Terry st through traffic, school children
Terry Street and Wellington Street
Terry St between Victoria Road and Wellington St.
Terry street. There been a big increase in traffic since we moved in 5 year ago. To be honest I can deal with the cars but trying to cross terry st bar the jump swim school to take my son to preschool is becoming much harder. I think it would be good to consider a crossing.
Terry St near Wellington St
All of them!!!
Particularly roads that lead to Victoria Rd- Darling Street, Wellington Street, Terry St.
When exiting Margaret Street to turn left or right at the round-about there is a very lengthy wait time, especially at 6pm when I am leaving to go to my job - night shift in a hospital.
Terry Street, Wellington Street, Darling St
Terry street and Victoria Road
Terry Street with Wellington st
Victoria Road and Terry Street
Terry Street from Victoria Road through to Glasshop Street
Terry St and Wellington st - access to Victoria road
Terry Street
Terry Street
Terry Street between Elliot St and Wellington St / Victoria St
Can't cross the road on terry St near corner of Wellington st. There needs to be a zebra crossing there
Cnr Terry street and Elliott streets
'Terry and Wise St
- Can not turn right from Darling St into Victoria Road North so it pushes all the traffic turning north into Victoria road into Terry st.
- Terry St has become just as busy as Darling St and it's street built for residential not a major thoroughfare.
Terry Street & Wellington Street roundabout in the morning. Cars block the roundabout
Congestion around the back entrance of Rozelle School with parents trying to park & drop-off children on Wellington Street compounded by residents trying to turn onto Victoria Road at the Bridge Hotel
Roundabout at corner of Terry & Margaret Streets - too much traffic on Terry Street.
Wise Street (both directions) and at the intersection of Wise Street and Terry Street.
Terry Street and Wellington Street - the back entrance to Rozelle public School. Needs a pedestrian crossing and ideally a "lollipop lady"
Terry Street and Wellington Street - both heavily trafficked especially on weekends.



Wellington Street	27	Terry Street and Wellington Street
		Wellington street, Terry street and Nelson Street
		Terry St and Wellington St (especially now with the Union Balmain developments completed).
		on Wellington street (from nelson street to victoria road)
		Wellington St, Rozelle
		Terry street and Wellington street
		Terry Street and Wellington Street. Cnr Wellington and Terry rtreet
		Terry & Wellington Street at Victoria Road
		Terry St and Wellington St- everyone uses these streets to exit the peninsula
		victoria road,/wellington street
		All of them!!!
		Particularly roads that lead to Victoria Rd- Darling Street, Wellington Street, Terry St.
		Terry Street and Wellington Street
		Wellington St Rozelle
		We live on Wellington street. It's total grid lock on the morning and afternoons m-f. And busy all day on weekends
		Terry Street, Wellington Street, Darling St
		Wellington street
		Wellington Street near Victoria road. Cars speeds past to catch the traffic lights at the intersection (just outside Rozelle Public School school).
		Terry Street with Wellington st
		Victoria Road and Wellington St
		Terry St and Wellington st - access to Victoria road
		Wellington st near rozelle public school
		Terry Street & Wellington Street roundabout in the morning. Cars block the roundabout
		Congestion around the back entrance of Rozelle School with parents trying to park & drop-off children on Wellington Street compounded by residents trying to turn onto Victoria Road at the Bridge Hotel
		Hard to cross Wellington St to get the kids to school during peak hours.
		Wellington Street
		Wellington Street
		Terry Street and Wellington Street - the back entrance to Rozelle public School. Needs a pedestrian crossing and ideally a "lollipop lady"
		Terry Street and Wellington Street - both heavily trafficked especially on weekends.



Darling Street	13	Victoria Road and Darling St
		Elliott and Glassop Streets and Elliott and Darling Streets
		Darling Street
		Cars often speed on Darling Street between Elliott and Beattie Street.
		victoria road/darling street
		Darling St Rozelle all along Rozelle shopping centre
		Darling st cross victoria rd and crossing over the iron cove bridge can be a nightmare at times.
		All of them!!!
		Particularly roads that lead to Victoria Rd- Darling Street, Wellington Street, Terry St.
		Terry Street, Wellington Street, Darling St
		Victoria Road and Darling St
		Darling street at Victoria road
		Oxford, Cambridge, Park, Darling, Victoria rd
Victoria Road	7	Victoria Road and Darling St
		victoria road,/wellington street
		victoria road/darling street
		Darling st cross victoria rd and crossing over the iron cove bridge can be a nightmare at times.
		Terry street and Victoria Road
		Victoria Road and Terry Street
		Victoria Road and Wellington St
		Victoria Road and Darling St
		I am mainly concerned about Victoria Road which is particularly burdensome in peak hours.
Glassop Street	7	Victoria rd
		Glassop and Elliot
		Elliott and Glassop Streets and Elliott and Darling Streets
		Glassop St near Elliott St
		Terry Street is used as a rat-run and drivers become impatient when local residents stop to park in front of their own property -often driving around cars that have commenced parking. There are more young children in the street and the families trying to walk dogs to parks and walk across the road to their car from their property are always fearful of cars not slowing down. There are also many school children arriving and leaving Balmain Secondary College. However further up where the street becomes Glassop street the speedhumps create congestion with so many cars - and impatient drivers behind often beep if someone slows down too much for their liking.
		Glassop Street/Elliott Street
		Glassop Street traffic has increased. This is supposed to be a residential street and not a main road artery. There are young children in the street. It is often impossible to cross the road
		Glassop Street all along it, as people use this rather than Darling to get into and out of Balmain. People also use it to park who work or shop in Balmain central shops.





Wise Street	5	Terry st and Wise st
		Terry st and wise street extending from Wellington street. Especially on weekends
		Elliott St and Wise St
		Terry and Wise St
		- Can not turn right from Darling St into Victoria Road North so it pushes all the traffic turning north into Victoria road into Terry st. Wise Street (both directions) and at the intersection of Wise Street and Terry Street.
Elliott Street	4	Elliott and Glassop Streets and Elliott and Darling Streets
		Elliott St and Wise St
		Glassop Street/Elliott Street
		Cnr Terry street and Elliott streets
Margaret Street	4	Terry St and Margaret Street
		Terry St cross Margaret
		Margaret/Terry roundabout near the shops
		Terry & Margaret Steets
Nelson Street	2	Wellington street, Terry street and Nelson Street
		Wellington Street
		Nelson Street
Nagurra Place	1	Nagurra Place is a blockage on weekends, too many cars coming in and then having to turn around.
Warayama Place	1	Warayama Place
		Terry Street



HEAVY VEHICLES		
Street name	No. of comms	Comments
Terry Street	29	Along Terry Street
		Terry Street.
		Heavy vehicles often come through Terry St (between Victoria St and Balmain High School) loudly and early in the morning.
		terry Street & Wellington Street
		Terry Street
		Terry Street
		Terry and Wellington Streets
		Buses and Cement trucks using Terry st as a bypass to reach Balmain and darling st
		Terry Street/Wellington St
		Terry st and wise street extending from Wellington street. Especially on weekends
		Terry Street and Wise Street
		Terry Street between Nagurra Place and Wellington Street
		Terry st near Nelson st
		Terry Street
		Terry St between Victoria Road and Wellington St.
		Victoria Road and Terry Street
		Our street suffers from lots of large lorries, trucks with excavators on the back, buses and trucks, caravans & cars with boat trailers on the back, food delivery trucks, private taxis, Council garbage trucks, are all parking in Terry Street, between Thornton Street & Norman Street, overnight in the "School Bus Zone". The trouble is that during the night - often after midnight - their engines are running, they are unchaining trailers, de-loading excavators & mobile excavators, swapping food trays between home delivery vans, ringing clients on their (loud) car-phones, changing number plates on their taxis, sleeping in their limousines, having take-away meals and throwing the scraps in the gutter. In general, the "Bus Zone in School Hours" has become a free-for-all Mecca for overnight free-lancers who keep my family and all our neighbours up all night between No. 50 to 70 Terry Street, Rozelle. They are all gone by 7.00 am. This is only happening during the night. We would appreciate anything you could do to stop this anti-social behaviour.



	Terry st
	Terry Street
	They are speeding in high pedestrian area
	Terry Street
	Terry St cnr of Schultz
	Terry St in front of High School
	'Terry and Wise St
	- Buses and Trucks all using Terry St as a major thoroughfare
	Terry Street & Margaret Street as truck take the back way into Balmain.
	They travel down Terry Street to Elliot Street, turn right then left onto Darling Street
	Elliott Street & Terry Street
	Terry Street & Wellington...
	Wise Street (both directions) and at the intersection of Wise Street and Terry Street.
	Up top of Terry Street due to West Connex work.
	Terry Street - used as a cut through for vehicles travelling from the north of the harbour to access the entire Balmain peninsula
	Terry Street, Wellington Street, Darling St



Wellington Street	10	Terry and Wellington Streets
		Terry Street/Wellington St
		Wellington Street
		Wellington and Nelson
		Wellington Street near Victoria road
		Victoria Road and Wellington St
		Terry Street & Wellington...
		Streaming down Wellington St all hours- industrial bin trucks all hours of night and am
		Wellington Street
		Terry Street, Wellington Street, Darling St
Darling Street	5	All of Darling street between of Rozelle North
		Darling Street has become more of an issue with all the construction that is happening
		Victoria Road and Darling St
		Lilyfield Rd, Denison st. , Gordon St. Victoria Road, Darling st
		Terry Street, Wellington Street, Darling St
Victoria Road	6	Victoria Road
		victoria road from iron cove bridge to anzac bridge
		Victoria Road
		Victoria rd and other surrounding areas.
		Victoria Road and Terry Street
		Victoria Road and Wellington St
		Victoria Road and Darling St
		Victoria Road, Darling st
Glassop Street	3	Glassop St near Elliott St
		Glassop Street and Birchgrove Road
		Glassop street at least between Elliott and Young streets



Wise Street	5	Terry st and wise street extending from Wellington street. Especially on weekends
		Terry Street and Wise Street
		Elliott St and Wise St
		'Terry and Wise St - Buses and Trucks all using Terry St as a major thoroughfare
		Wise Street (both directions) and at the intersection of Wise Street and Terry Street.
Elliott Street	4	Commercial waste collection vehicles using Elliott Street and Roseville Lane, as well as Elliott Street and Doulan Lane
		Elliott St and Wise St
		End of Elliott Street
		Elliott Street & Terry Street
Margaret Street	1	Terry Street & Margaret Street as truck take the back way into Balmain. They travel down Terry Street to Elliot Street, turn right then left onto Darling Street
Nelson Street	1	Wellington and Nelson
Roseville Lane	1	Commercial waste collection vehicles using Elliott Street and Roseville Lane, as well as Elliott Street and Doulan Lane
Doolan Lane	1	Commercial waste collection vehicles using Elliott Street and Roseville Lane, as well as Elliott Street and Doulan Lane
Norman Street	1	Norman Street Despite having signs not to enter, buses and large trucks use the street and get stuck at the bottom often.
Schultz Street	2	Schultz and Terry Sts
		Schultz St Rozelle





RAT RUNNING		
Street name	No. of comms	Comments
Terry Street	34	Terry street towards Balmain and right into wise street
		Terry Street linking to White Bay to avoid the slowness of Victoria Street
		Terry Street at Glassop Street end
		Terry st and Victoria rd
		Terry, Elliott and Darling Streets and reverse
		Terry Street and Wise Street and Wellington Street
		Terry St, Rozelle
		terry Street & Wellington street
		Terry Street is used as a rat-run and drivers become impatient when local residents stop to park in front of their own property -often driving around cars that have commenced parking. There are more young children in the street and the families trying to walk dogs to parks and walk across the road to their car from their property are always fearful of cars not slowing down. There are also many school children arriving and leaving Balmain Secondary College. However further up where the street becomes Glassop street the speedhumps create congestion with so many cars - and impatient drivers behind often beep if someone slows down too much for their liking.
		More private school buses seem to be using Terry street rather than/as well as Darling street - including using Terry street to exit the peninsula rather than turning at the Darling street/Curtis road roundabout and going back up Darling Street like the public buses do. They are noisier and too large for this stretch of Balmain/Rozelle.
		Schultz and Terry Sts
		Terry st
		Terry Street/Wellington St
		Large number of cars appear to exceed speed limit of 40 kmh along Terry Street between the Margaret St Roundabout and the Wellington st roundabout.
		Terry Street and Wise Street. This is a particularly bad junction as it is on a corner so vision ahead is obscured. This is compounded by the car spaces on the northern side of Terry street closest to the junction.
		Terry St



	Terry St and Wise St intersection is very busy and main access to exit from BALMAIN/Rozelle to Victoria Rd. Badly designed needs upgrading.
	Terry St between Victoria Road and Wellington St.
	The worst is coming up from Victoria Rd along Terry St, then up Wise St and filtering through the streets down through Balmain
	Wellington and Terry
	Wise St (Terry St)
	Terry to Wise st.
	Terry street and Victoria street
	Terry Street
	Terry Street
	Terry street CNR Elliott - very dangerous corner with an increase of traffic and no one stops at the Terry St stop sign
	Terry and Wise
	Terry Street running parallel to Darling Street
	Terry Street and Wise Street down along Beattie Street until Victoria Road - so they miss the traffic lights along Victoria Road
	Terry Street and Glassop Street at Elliott Street
	Terry street and Wellington Street
	Terry /Wellington
	Terry / margaret
	waragal ave and Terry st
	Terry Street & Wellington Street
	Terry Street, Wellington Street, Darling St
	Terry and Wellington Streets



Wellington Street	14	Wellington St
		Terry Street and Wise Street and Wellington Street
		terry Street & Wellington street
		Terry Street/Wellington St
		Wellington and Terry
		Nelson to Wellington st.
		Wellington Street and victoria road
		Terry street and Wellington Street
		Terry /Wellington
		Wellington St
		Wellington Street
		Terry Street & Wellington Street
		Terry Street, Wellington Street, Darling St
		Terry and Wellington Streets
Darling Street	2	Terry, Elliott and Darling Streets and reverse
		Terry Street, Wellington Street, Darling St
Victoria Road	1	Victoria rd
Glassop Street	7	Glassop and Elliot
		Terry Street at Glassop Street end
		Glassop St near Elliott St - usually people trying to find parking, going round and round the block. Residents / timed parking on Glassop St would solve this.
		Terry Street is used as a rat-run and drivers become impatient when local residents stop to park in front of their own property -often driving around cars that have commenced parking. There are more young children in the street and the families trying to walk dogs to parks and walk across the road to their car from their property are always fearful of cars not slowing down. There are also many school children arriving and leaving Balmain Secondary College. However further up where the street becomes Glassop street the speedhumps create congestion with so many cars - and impatient drivers behind often beep if someone slows down too much for their liking.
		Glassop and Elliott
		Terry Street and Glassop Street at Elliott Street
		All of Glassop street



Wise Street	10	Terry street towards Balmain and right into wise street
		Terry Street and Wise Street and Wellington Street
		Terry Street and Wise Street. This is a particularly bad junction as it is on a corner so vision ahead is obscured. This is compounded by the car spaces on the northern side of Terry street closest to the junction.
		Elliott St and Wise St
		Terry St
		Terry St and Wise St intersection is very busy and main access to exit from BALMAIN/Rozelle to Victoria Rd. Badly designed needs upgrading.
		The worst is coming up from Victoria Rd along Terry St, then up Wise St and filtering through the streets down through Balmain
		Wise St (Terry St)
		Terry to Wise st.
		Nelson to Wellington st.
Elliott Street	4	Terry and Wise
		Terry Street and Wise Street down along Beattie Street until Victoria Road - so they miss the traffic lights along Victoria Road
		Terry, Elliott and Darling Streets and reverse
		Glassop and Elliott
		Elliott St and Wise St
Margaret Street	1	Terry St
		Elliott Street, close to the water and bins
Nelson Street	1	Terry / margaret
Norman Street	1	Terry to Wise st.
		Nelson to Wellington st.
Schultz Street	2	Norman Street - and they drive super fast here there are children living in this street
Carieville Street	1	Schultz and Terry Sts
		Schultz St Rozelle
	1	Carieville st



EXCEEDING SPEED LIMIT		
Street name	No. of comms	Comments
Terry Street	38	Along Terry Street from Victoria Street to Wellington Street
		Terry Street and Nelson Street
		Terry st and Carrieville st
		Terry Street and Wise Street and Wellington Street
		Terry St, Rozelle
		Terry St, particularly between Wellington and Wise Streets. It's very dangerous crossing Terry St at Wise St because of this and the fact that, incredibly, there is no pedestrian crossing.
		Terry street between Wellington and Wollumay streets
		Margaret Street, Yara Ave between Balmain Shores and Terry St.
		Terry street
		Terry st, and Wellington st
		Terry St
		Terry st and wise street extending from Wellington street. Especially on weekends
		Terry near Nelson
		Terry Street westbound into Wellington Street.
		Terry st
		Norman between Darling and Terry
		Frequently we get people driving too fast for conditions (but not necessarily above the speed limit) down from Wise/Terry into the roundabout to Wellington St. It is particularly dangerous for children crossing for school in front of Jump Swim School.
		Additionally, there's an element of hooning at night up from Victoria Rd along Terry up to the roundabout.
		Terry street
		Wise st, coming down into the roundabout with terry and Wellington st. Again, trying to cross the road there is limited visibility up wise at and some cars come around with speed.
		Terry St coming from Victoria road and turning left at roundabout near Wellington st. Also going from Terry St to Wellington St
		Wulumay, Terry Street
		Wulumay Close
		Terry street





	Terry st joining Wellington st at roundabout - cars turn left way too fast without regard for possibility of people crossing at Terry st.
	Wellington st at Wise heading to Victoria rd - cars cross over Wise st intersection way too fast without regard for possibility of people crossing at Terry st.
	Motorists not stopping at sign on Wise st to Terry st Junction. Fast speeds coming into Terry St and along making exit from Waragal at both intersections with Terry st difficult. Visibility to get out of waragal Ave onto Terry St near school, turning right difficult at times
	Terry Street - between Victoria Road and Wise Street
	Wise Street and Terry Street.
	Terry Street
	Terry Street and Warayama Place
	Terry Street
	Glassop Street, Terry Street
	Terry street CNR Elliott - very dangerous corner with an increase of traffic and no one stops at the Terry St stop sign - I've come close to accidents often with cars thinking they have right of way on Terry. we need a round about here urgently
	All the time - particularly motorbikes that get a thrill out of using the speed bump as a lunging device to thrash it down east on Terry ST
	Terry Street to Wellington St roundabout
	Terry Street at Elliott Street
	Terry Street and Wellington Street
	Wise Street at the intersection of Wise Street and Terry Street.
	Terry Street - poor observance of high pedestrian flows. Needs to be marked as such
	Wellington Street between intersection of Terry Street and Victoria Road. The speed humps that exist do not do their job and people speed up as they come out of the round about at Terry/Wellington Street heading towards Victoria Road racing to the lights more traffic calming measures are urgently needed.



Wellington Street	15	on Wellington street (from nelson street to victoria road)
		Terry Street and Wise Street and Wellington Street
		Wellington St near Nelson St
		Terry st, and Wellington st
		Terry Street westbound into Wellington Street.
		Frequently we get people driving too fast for conditions (but not necessarily above the speed limit) down from Wise/Terry into the roundabout to Wellington St. It is particularly dangerous for children crossing for school in front of Jump Swim School.
		Wellington and Nelson
		Terry St coming from Victoria road and turning left at roundabout near Wellington st. Also going from Terry St to Wellington St
		Terry st joining Wellington st at roundabout - cars turn left way too fast without regard for possibility of people crossing at Terry st.
		Wellington st at Wise heading to Victoria rd - cars cross over Wise st intersection way too fast without regard for possibility of people crossing at Terry st.
		Terry Street to Wellington St roundabout
		Terry Street and Wellington Street
		Wellington St
		40km school zone on Wellington street! Lots of frustrated drivers cutting thru to Victoria Street
		Wellington Street between intersection of Terry Street and Victoria Road. The speed humps that exist do not do their job and people speed up as they come out of the round about at Terry/Wellington Street heading towards Victoria Road racing to the lights more traffic calming measures are urgently needed.
		Terry and Wellington Streets
Darling Street	5	Victoria Road and Darling St
		Darling street is also bad for speeding. 40KMH seems to be a minimum speed. Local roads off darling street to have a 30KMH limit to match Europes urban roads limits and the Uks 20MPH 'limit.
		Darling and Elliott Streets towards Balmain and reverse
		Darling Street between Elliott Street and Beattie Street
		Along Lilyfield Road and on Darling St.
Victoria Road	2	Victoria Road and Darling St
		victoria road from iron cove bridge to darling street
Glassop Street	6	Glassop and Elliot
		Glassop St near Elliott St - cars fly down Glassop St and there's no cross walks for children to cross safely to go to school (SSC Balmain) or to take the dog to the park (Elkington)
		Glassop Street, Terry Street
		All of Glassop street
		Glassop St, despite speed bumps
		Glassop st



Wise Street	10	Terry Street and Wise Street and Wellington Street
		Terry St, particularly between Wellington and Wise Streets. It's very dangerous crossing Terry St at Wise St because of this and the fact that, incredibly, there is no pedestrian crossing.
		Terry st and wise street extending from Wellington street. Especially on weekends
		Frequently we get people driving too fast for conditions (but not necessarily above the speed limit) down from Wise/Terry into the roundabout to Wellington St. It is particularly dangerous for children crossing for school in front of Jump Swim School.
		Wise st, coming down into the roundabout with terry and Wellington st. Again, trying to cross the road there is limited visibility up wise at and some cars come around with speed.
		Wise St (cnr Darling St)
		Terry st joining Wellington st at roundabout - cars turn left way too fast without regard for possibility of people crossing at Terry st.
		Wellington st at Wise heading to Victoria rd - cars cross over Wise st intersection way too fast without regard for possibility of people crossing at Terry st.
		Motorists not stopping at sign on Wise st to Terry st Junction. Fast speeds coming into Terry St and along making exit from Waragal at both intersections with Terry st difficult. Visibility to get out of waragal Ave onto Terry St near school, turning right difficult at times
		Wise Street and Terry Street.
Elliott Street	3	Wise Street at the intersection of Wise Street and Terry Street.
		Darling and Elliott Streets towards Balmain and reverse
		Elliott Street
Margaret Street	3	Elliott Street. In addition, some cars and motor bikes have modified exhaust pipe extremely noisy.
		Margaret Street, Yara Ave between Balmain Shores and Terry St.
		Rozelle Margaret Street, many people are driving too fast in this street even if the road is a deadlock (Access road for habitation and the river side as there is a Park for animals).
Nelson Street	2	Terry / margaret
		Terry Street and Nelson Street
Warayama Place	1	Wellington and Nelson
Norman Street	1	Terry Street and Warayama Place
Schultz Street	2	Norman between Darling and Terry
		Schultz and Terry Sts
Yara Avenue	1	Schultz St Rozelle
Wulumay Close	2	Margaret Street, Yara Ave between Balmain Shores and Terry St.
		Wulumay, Terry Street
		Wulumay Close



PARKED CARS BLOCKING DRIVEWAYS		
Street name	No. of comms	Comments
Terry Street	3	Terry St
		Schultz Street cnr Terry Street
		Terry Street
Wellington Street	1	Wellington and nelson
Darling Street	1	Schultz Street cnr Darling Street
Glassop Street	4	Glassop and Elliott.
		Glassop Street, Terry Street
		All of Glassop street and also White street
		Glassop st
Elliott Street	1	Elliott Street and Roseville Lane
Margaret Street	2	Warayama Place cross Margaret
		Illegal parking within the precinct accessible via Margaret Street (Balmain Shores) - but especially in the vicinity of Il Grapolo which attracts customers who seem to need to Block other people from enjoying their daily lives!
Nelson Street	2	Wellington and nelson
		Nelson Street
Warayama Place	2	Warayama Place cross Margaret
		Warayama Place
Roseville Lane	1	Elliott Street and Roseville Lane
Norman Street	1	Cars visiting the Rozelle Health Doctors and the Sackville hotel park in Norman Street all the time - it makes it very hard for residents.
Schultz Street	2	Schultz Street cnr Terry Street
		Schultz Street cnr Darling Street
		Schultz St Rozelle
Waragal Avenue	1	Waragal Ave near Sydney Secondary College where it meets Terry St
Broderick Street	1	Broderick Street - People from the town houses on Broderick Street park on Broderick Street rather than using their underground parking spot. Often people try to squeeze their car into remaining parking spots, blocking driveways. As a result we have been required to contact police on numerous occasions as we are unable to get our car in or out of our driveway.
White Street	1	All of Glassop street and also White street



SIGHT OBSTRUCTIONS		
Street name	No. of comms	Comments
Terry Street	18	Terry st and Wise st
		Norman St / Terry St
		Wellington/Terry roundabout. There is a blind corner for pedestrians crossing Wellington street from east to west. It can also be very difficult to cross here in the peaks
		Wise Street and Terry Street junction as mentioned before.
		When attempting to cross Wellington St at the bottom of Nelson St, cars come down Terry Street at speed (on the right) and it can be very hard to see them until the last minute.
		At the roundabout on Terry/Wellington, there are two crossings with obstructed vision:
		Crossing Wellington from Jump Swim School it's hard to see traffic coming down from Wise.
		Coming up from Victoria Rd on Terry, then turning left at the roundabout, those crossing Terry towards Wise have very obstructed vision of fast traffic driving up along Terry from Victoria Rd.
		On the corner of Terry and Wulumay Cl it's very hard to see traffic coming in both directions at once.
		Elliott St and Terry st 4 way intersection. Increased traffic since opening of new apartments and unable to safely see traffic coming down the hill to crossover to Terry St. It needs a roundabout
		Elliott and Terry Streets - as the roads are not at right angles
		The Stop signs at Elliott and Terry have always been on the wrong corners. There are now an additional 100 cars at the new development in Elliott Street and the traffic volume has changed.
		The intersection of Elliott Street with Terry/Glassop Street has stop signs. If you are the stop sign in Glassop Street going towards Victoria Road it is impossible to see the oncoming traffic to the left.
		Since the introduction of more than 100 homes at Sommerville Point the Elliott Street traffic has increased. As the volume has increased on Elliott Street the stop signs should face Elliott Street and not Glassop/Terry Streets.
		Terry Street
		Schultz Street cnr Terry Street
		Terry street and Elliot st
		Intersection of Glossop & Elliot St & Terry St
		Along Terry street
		Corner of Elliott and Terry/Glassop Streets. When driving either direction along Terry/Glassop street it is so, so difficult to see cars coming along Elliott street. Elliott street has the right of way and yet there are so many more cars that drive along Terry/Glassop street. Either Terry/Glassop street should have the right of way or there should be a roundabout installed.
		Terry Street near the intersection of Wise Street and Terry Street.
		Glassop/elliott and terry st intersection needs a round about as visibility is hard when driving but also just when crossing!



Wellington Street	2	Wellington/Terry roundabout. There is a blind corner for pedestrians crossing Wellington street from east to west. It can also be very difficult to cross here in the peaks At the roundabout on Terry/Wellington, there are two crossings with obstructed vision:  Crossing Wellington from Jump Swim School it's hard to see traffic coming down from Wise.
Darling Street	3	From young st into Darling, right turn Darling St cnr of Schultz st Schultz Street cnr Darling Street
Victoria Road	2	Turning into Springside st from Victoria road Victoria road and darling street intersection EVERY DAY
Glassop Street	10	glassop and white. Cars parked in glassop but almost on the corner of glassop making exiting white dangerous Glassop St near Elliott St - this intersections is so hard to see around. My daughter and her friends cross here regularly to go to high school and it's an incredible danger. Especially now the development at the end of Elliot St has increased traffic in the area. Intersection of Elliot and Glassop St. It is very difficult to see cars that are on the left travelling down Elliot St from Darling St when you are positioned on Glassop St facing west towards the high school. This intersection needs upgrading. Intersection of Elliott St and Glassop Sts.....especially travelling SW along Glassop st; at stop sign it is impossible to see what's coming from your left, unless encroaching past the stop sign.....very dangerous.....needs a roundabout; especially with the hundreds of extra residents now living in the Harbourfront development, using this intersection at least twice a day. Also sharp dog leg between Lockhart Ave and Glassop St as you travel up the hill. If anything other than a small car is parked at the dogleg it is impossible to see what is coming down the hill. This area needs some 'No Stopping' signs to alleviate the problem. The intersection of Elliott Street with Terry/Glassop Street has stop signs. If you are the stop sign in Glassop Street going towards Victoria Road it is impossible to see the oncoming traffic to the left. Since the introduction of more than 100 homes at Sommerville Point the Elliott Street traffic has increased. As the volume has increased on Elliott Street the stop signs should face Elliott Street and not Glassop/Terry Streets.  Glassop Street at Elliott Street - vehicle parked on Glassop Street obstructs sight for pedestrians crossing the road. Corner of Elliott and Terry/Glassop Streets. When driving either direction along Terry/Glassop street it is so, so difficult to see cars coming along Elliott street. Elliott street has the right of way and yet there are so many more cars that drive along Terry/Glassop street. Either Terry/Glassop street should have the right of way or there should be a roundabout installed. cars parking on Glassop St either side of the White St corner frequently park so close to the corner/s that pedestrian vision is blocked when crossing to go up Young St. Turning from Elliott St into Glassop St cars parked too close to Elliott on left hand side of Glassop St make this intersection difficult for cars. Perhaps requiring preferably a roundabout at the intersection, or greater "No stopping" space on Glassop St. Glassop/elliott and terry st intersection needs a round about as visibility is hard when driving but also just when crossing! Intersection glassop and Elliot st - a round about would slow traffic down so you can see traffic coming. Intersection of Glassop & Elliot St & Terry St
Wise Street	2	Terry st and Wise st Wise Street and Terry Street junction as mentioned before.





Elliott Street	7	Vision of sight looking right into Darling Street towards Rozelle at Elliott Street intersection.
		Glassop St near Elliott St - this intersections is so hard to see around. My daughter and her friends cross here regularly to go to high school and it's an incredible danger. Especially now the development at the end of Elliot St has increased traffic in the area.
		Elliott and Terry Streets - as the roads are not at right angles
		The Stop signs at Elliott and Terry have always been on the wrong corners. There are now an additional 100 cars at the new development in Elliott Street and the traffic volume has changed. The sight lines from the exit of Glassop Street across to Elliott Street are such that it is impossible to get a safe view of traffic coming from the left (Darling Street). The Stop signs should stop the traffic on Elliott Street.
		The intersection of Elliott Street with Terry/Glassop Street has stop signs. If you are the stop sign in Glassop Street going towards Victoria Road it is impossible to see the oncoming traffic to the left. Since the introduction of more than 100 homes at Sommerville Point the Elliott Street traffic has increased. As the volume has increased on Elliott Street the stop signs should face Elliott Street and not Glassop/Terry Streets.
		Corner of Elliott and Terry/Glassop Streets. When driving either direction along Terry/Glassop street it is so, so difficult to see cars coming along Elliott street. Elliott street has the right of way and yet there are so many more cars that drive along Terry/Glassop street. Either Terry/Glassop street should have the right of way or there should be a roundabout installed.
		Glassop/elliott and terry st intersection needs a round about as visibility is hard when driving but also just when crossing!
Margaret Street	2	There is a sight obstruction at the corner of Margaret and Warayama Place and since Warayama Place doesn't have a traffic sign (should be a Stop Sign), cars drive out without looking and there have been a significant number of near misses.
		Margaret Street corner of Warayama Place due to illegally parked cars on Margaret Street. Warayama Place at various points due to illegally parked cars.
Warayama Place	4	Warayama Place - concealed driveways to apartment carpark ; double parking on street for collections/drop off
		Corner of Yara Avenue & Warayama Place.
		Warayama Place on bend near pool and Carpark entrances
		There is a sight obstruction at the corner of Margaret and Warayama Place and since Warayama Place doesn't have a traffic sign (should be a Stop Sign), cars drive out without looking and there have been a significant number of near misses.
		Margaret Street corner of Warayama Place due to illegally parked cars on Margaret Street. Warayama Place at various points due to illegally parked cars.
Norman Street	2	Norman St / Terry St
		Norman st down to Terry st - cars parked on right at Norman-Terry kerb prevent seeing (fast moving) traffic on Terry st when doing left or right turn
Schultz Street	2	Darling St cnr of Schultz st
		Schultz Street cnr Terry Street
		Schultz Street cnr Darling Street
Yara Avenue	1	Corner of Yara Avenue & Warayama Place.
Wulumay Close	3	Terry Street turning into Wulumay Close (first parking space LHS when turning into Wulumay from Terry Street)
		There is a parking bay on Wulumay Close just off Terry St that obscures visibility both coming off Terry St and driving onto Terry St, making it dangerous to maneuver around. Sometimes it is a No Stopping zone, but I think there are some hours where parking is valid (or at least there are cars that park there).
		On the corner of Terry and Wulumay Cl it's very hard to see traffic coming in both directions at once.
Young Street	1	From young st into Darling, right turn



### Legend:

- - Study area boundary
- - Arterial roads
- - Collector roads
- - Local roads
- - 3t limit

Map 1

Functional classification



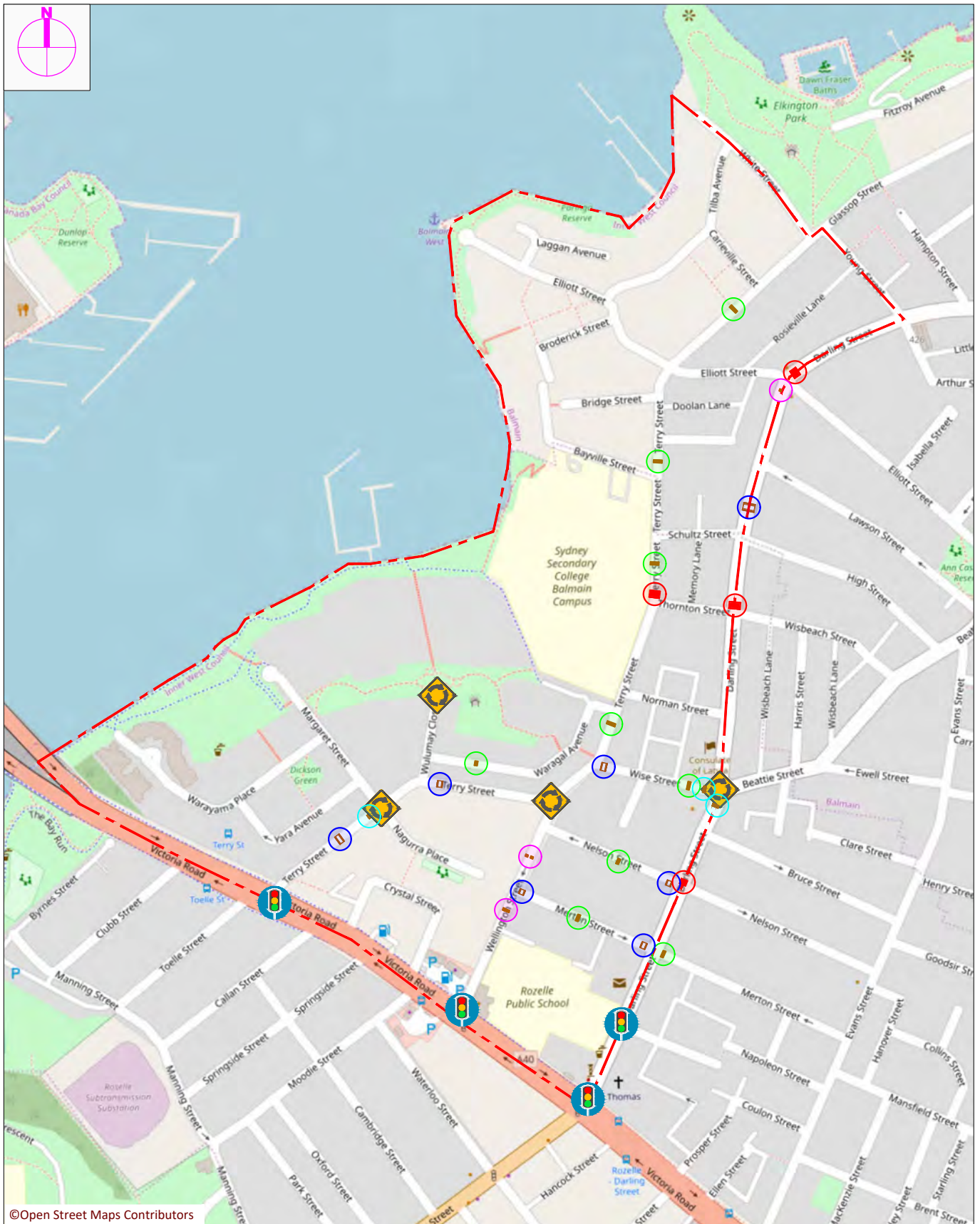




### Legend:

- - Study area boundary
- - 20 km/h
- - 40 km/h
- - 50 km/h
- - 60 km/h

Map 3



#### Legend:

- - Study area boundary
- Roundabout
- Speed hump
- Raised zebra crossing
- Zebra crossing
- Speed cushion
- Threshold

Map 4

Existing traffic management





### Legend:

- - Study area boundary
- - Low traffic street or bike lane
- - Off road shared path



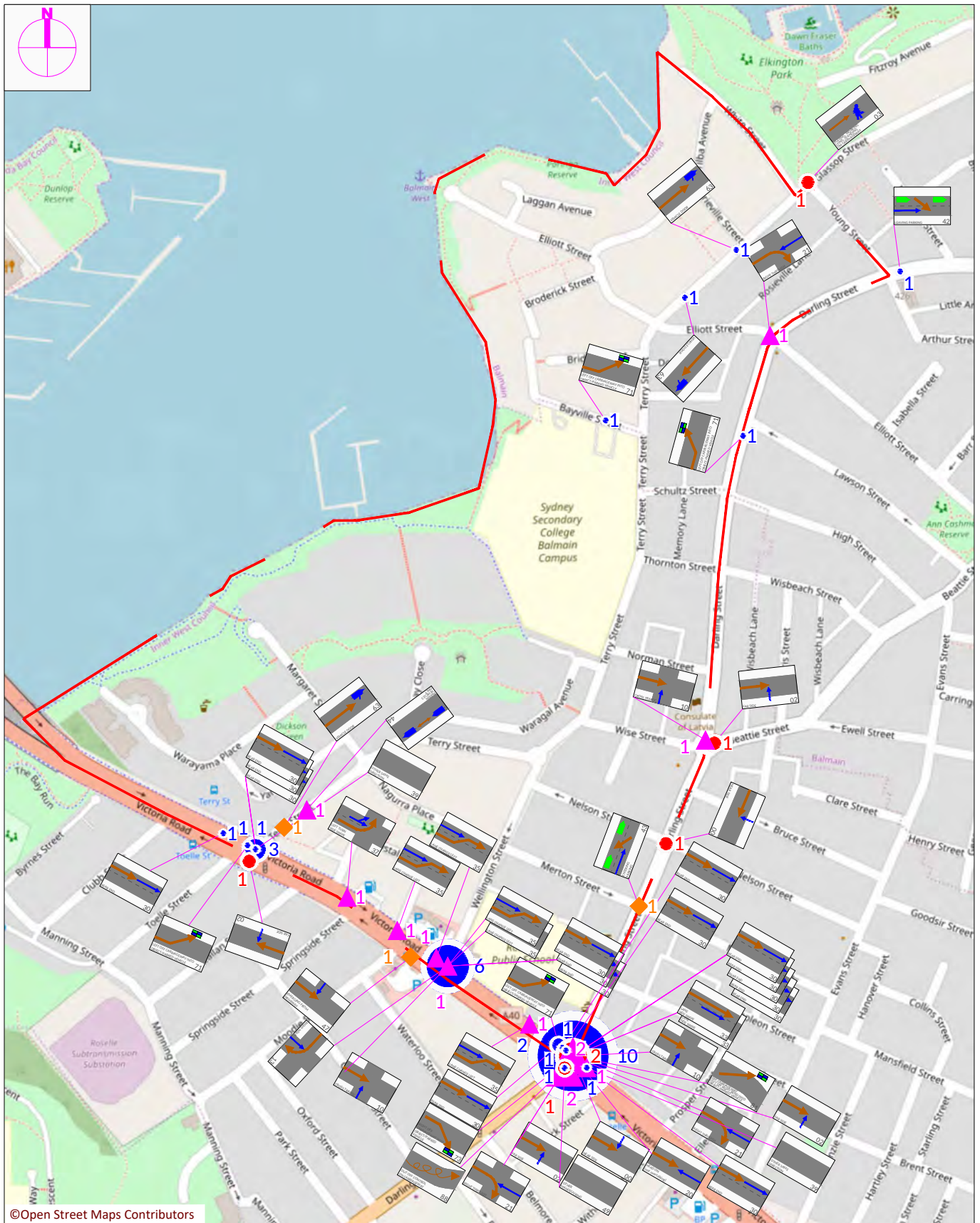


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### Legend:

- - Study area boundary
- - M50
- - 445
- - L37
- - 502, 504, 508, x08
- - 403
- - 440

Map 6



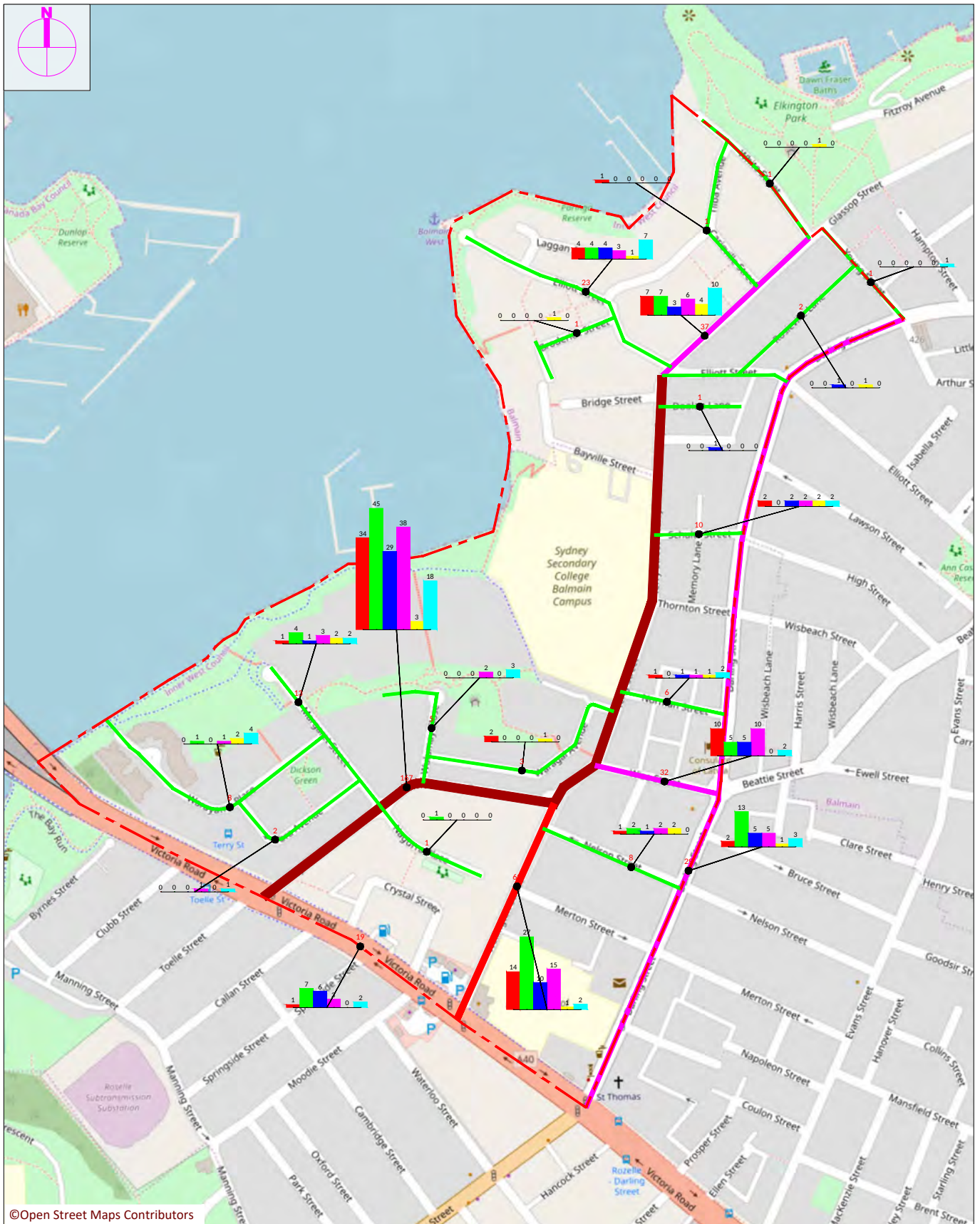
### Legend:

--- - Study area boundary

Crash types:

● - Vehicles    ● - Pedestrian    ▲ - Motorcycle    ◆ - Bicycle





### Legend:

— Study area boundary

— Rat-running

— Too much traffic

— Heavy vehicle using

— Motorists exceeding speed limit

— Parked cars blocking

— Sight obstructions

— 1 - 25

— 25 - 50

— 50 - 75

— >75