



# 40KM/H & 10KM/H SHARED ZONE MASTERPLAN & ACTION PLAN



**NORTH SYDNEY COUNCIL**



## Executive Summary

A draft 40km/h and 10km/h Shared Zone Masterplan and Action Plan has been developed by Council's Traffic & Transport Operations business unit to review the existing road networks in the North Sydney Council Local Government Area and to identify opportunities to create a safer road environment for all road users by reducing traffic speeds.

Potential sites for implementing 40km/h speed limits and 10km/h shared zones have been identified in accordance with relevant RMS guidelines and taking into consideration surrounding land uses. In addition, several sites have already been identified through previous studies including the North Sydney Local Area Traffic Management (LATM) Action Plans (2019) and other transport and planning studies. These sites have been consolidated into a single Master Pan map.

A total of 223 sites have been proposed for treatments of 40km/h speed limit and 10km/h shared zones.

## Contents

1. Introduction .....	4
2. Strategic Context .....	4
2.1 National Road Safety Strategy 2011-2020 .....	4
2.2 NSW Road Safety Strategy 2012-21 .....	5
2.3 NSW Road Safety Plan 2021 .....	5
2.4 Local Government Road Safety Program (LGRSP) .....	5
2.5 North Sydney's Transport Strategy (2017) .....	6
2.6 North Sydney Local Area Traffic Management Action Plans (LATM) .....	6
2.7 North Sydney Traffic & Parking Strategy (2015).....	7
2.8 North Sydney Crash Analysis Report (2019).....	7
2.9 NSW Speed Zoning Guidelines .....	8
2.9.1 40km/h speed limits .....	9
40km/h Speed Limit in School Zones .....	9
40km/h Speed Limit in High pedestrian Activities Areas .....	9
40km/h Speed Limit in Local Traffic Areas .....	9
2.9.2 10km/h Shared Zone .....	10
3. Existing Speed Limits in North Sydney LGA.....	13
4. Identifying potential sites .....	14
4.1 40km/h speed limits.....	14
4.2 10km/h shared zones .....	15
5. Proposed Speed Limits in North Sydney LGA.....	18
Zone 1 - Milsons Point.....	19
Zone 2 - Kirribilli/North Sydney .....	20
Zone 3a - Neutral Bay Wharf.....	22
Zone 3b - Neutral Bay.....	23
Zone 4 - Neutral Bay Town Centre South.....	24
Zone 5 - Neutral Bay Town Centre North .....	25
Zone 6 - Cremorne Town Centre North.....	26
Zone 7 - Cammeray .....	28
Zone 8 - Crows Nest/ St Leonards .....	29
Zone 9 - North Sydney North .....	31
Zone 10 – Wollstonecraft .....	32
Zone 11 – Waverton.....	33
Zone 12 - McMahons Point .....	35
Other Areas .....	36
6. Funding Opportunities .....	37
7. Action Plans .....	37
8. Recommendations from the result of public exhibition: .....	38
Appendix A – LATM Action Plans .....	39
Appendix B - Ranking Matrix .....	41
Appendix C- Cost Summary .....	42
Appendix D- North Sydney 40km/h and 10km/h Shared Zone Masterplan Implementation Program.....	43

## 1. Introduction

Vehicle speed is the biggest single factor contributing to vehicle crashes, pedestrian injuries and fatalities in North Sydney according to *North Sydney Crash Analysis Report 2019*<sup>1</sup>.

This plan has been developed to review the current road networks in the North Sydney Local Government Area and identify opportunities to create a safer road environment for all road users by reducing traffic speeds.

The key objectives of this plan are to:

- Identify opportunities to implement 40km/h speed limit zones and 10km/h Shared Zones within the North Sydney Local Government Area.
- Ensure that the Master Plan and accompanying Action Plan also meets the NSW State Governments Strategic objectives around Road Safety as per the recently released NSW Road Safety Plan 2021 which aims to reset the state's priorities and outline the strategic direction and actions to address key road safety issues in NSW.
- Provide a foundation and framework to assist Council in allocating resources and applying for road safety funding grants such as 'RMS 40km/h High Pedestrian Activity Area (HPAA)', 'Walking Communities' programs and any other Local Government Road Safety Programs (LGRSP) that become available.
- Demonstrate that Local councils are well placed to plan, implement and deliver road safety projects relevant to their communities.
- Deliver on the Communities requests and Councils adopted LATM action plans to reduce speed across the North Sydney Local Government Area as identified in the LATM study and Action Plans adopted by Council in November 2017.
- Achieve the community priorities identified in North Sydney's Transport Strategy (2017) to provide "Safe travel" by reducing traffic speeds.
- Improve safety and amenity for walking and cycling throughout the North Sydney Local Government Area.

## 2. Strategic Context

### 2.1 National Road Safety Strategy 2011-2020<sup>2</sup>

The National Road Safety Strategy 2011–2020 aims to improve Australia's road safety with a vision of "no person should be killed or seriously injured on Australia's roads". It set the targets of an annual reduction of 30% in the number of crash fatalities and serious crash injuries by 2020. The National Road Safety Strategy is based on the Safe System approach which consists of four principles, 'Safe Roads', 'Safe Speeds', 'Safe Vehicles' and 'Safe People' aiming to

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<sup>1</sup> North Sydney Crash Analysis Report 2019, [https://www.northsydney.nsw.gov.au/Community\\_Services/Safety/Road\\_Safety/North\\_Sydney\\_Crash\\_Analysis\\_Report](https://www.northsydney.nsw.gov.au/Community_Services/Safety/Road_Safety/North_Sydney_Crash_Analysis_Report)

<sup>2</sup> National road Safety Strategy, <https://www.roadsafety.gov.au/nrss/interventions.aspx>

provide a forgiving road transport system that caters for all road user groups and tolerates human mistakes and physical frailty

The following are some key interventions regarding Safe Speeds by geographical locations:

#### **All of Australia**

- Best practice speed enforcement.
- Public information about the community benefits of lower travel speeds.
- Introduction of risk-based national speed limit guidelines.

#### **Metropolitan areas**

- Reduce speed limits at intersections.
- More speed limits of 40 km/h or lower in pedestrian and cycling areas.

#### **Regional and remote areas**

- Review of speed limits on higher crash risk routes.

### 2.2 NSW Road Safety Strategy 2012-21<sup>3</sup>

In NSW speed contributes to about 42 percent of road deaths, resulting in 520 fatalities over the three-year period from 2008 to 2010. Similar to the National Road Safety Strategy, the NSW Road Safety Strategy 2012-21 has a vision of “Working Towards Vision Zero” and commits to the Safe System approach. One of the key focuses for achieving road safety targets is to improve the safety of pedestrians and bicycle riders through the implementation of lower speed limit schemes such as 40km/h high pedestrian activity areas and 10km/h shared zones.

### 2.3 NSW Road Safety Plan 2021<sup>4</sup>

Further to the release of NSW Road Safety Strategy 2012-21, NSW government has recently introduced a Road Safety Plan 2021 which aims to reset the state’s priorities and outline the strategic direction and actions to address key road safety issues in NSW. The Plan recognises the critical role local councils play in reducing road trauma and includes a commitment to delivering and refining the Local Government Road Safety Program (LGRSP) which assists NSW councils to reduce the likelihood of deaths and injuries from road trauma in their local communities.

The Plan recognises that Local councils are well placed to plan, implement and deliver road safety projects relevant to their communities. It acknowledges that Councils interact regularly with local residents, schools, government agencies, businesses and other stakeholders and that Council officers have a detailed knowledge of their local road networks, traffic management issues and road crash history.

### 2.4 Local Government Road Safety Program (LGRSP)<sup>5</sup>

Local Councils have an obligation under the LGRSP and the “Safe System Approach” to:

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<sup>3</sup> NSW Road Safety Strategy, [https://roadsafety.transport.nsw.gov.au/downloads/road\\_safety\\_strategy.pdf](https://roadsafety.transport.nsw.gov.au/downloads/road_safety_strategy.pdf)

<sup>4</sup> NSW Road Safety Plan 2021, <https://towardszero.nsw.gov.au/sites/default/files/2018-02/road-safety-plan.pdf>

<sup>5</sup> LGRSP, <https://www.rms.nsw.gov.au/business-industry/partners-suppliers/lgr/documents/local-gov-road-safety-program.pdf>

- Plan, develop and implement evidence based local road safety projects; as agreed with RMS and using the LGRSP database.
- Ensure project objectives are clear and can be evaluated to determine road safety outputs and outcomes.
- Support state-wide strategies and programs, as appropriate, to deliver road safety project activities to local communities.
- Submit road safety projects and Action Plan through the LGRSP database for RMS approval.
- Demonstrate financial and in-kind contributions to projects.
- Report against project milestones.

The LGRSP guidelines (May 2019) identified specific key objectives that Councils need to address around reducing “Speed”. These include the following:

- Review areas which may benefit from the installation of a lower speed limit and advocate to council for safer treatments (e.g. High Pedestrian Activity Areas in shopping strips, transport interchanges)
- Provide regional RMS with information (speed counts, existing traffic facilities information, proposed treatments) to assist with speed limit reviews
- Promote school zone speed limits by working with school communities and local police
- Public education promoting safe speed messages
- Work with RMS and NSW Police to identify areas where speed enforcement is needed
- Conduct local speed check program around schools and other areas of high pedestrian activity
- Promote the ‘Road Safety and Your Work, A Guide for Employers’ to local employers and within council.

## 2.5 North Sydney’s Transport Strategy (2017)<sup>6</sup>

The North Sydney’s Transport Strategy adopted by Council in 2017 sets the framework to deliver all transport planning and management strategies and projects in the North Sydney LGA. One of the key community priorities is to improve community safety by creating slow speed road environments where more vulnerable road users are protected from higher impact road users and the number of crashes and severity of injuries is minimised.

## 2.6 North Sydney Local Area Traffic Management Action Plans (LATM)

On 4 December 2017 Council resolved to adopt the Local Area Traffic Management (LATM) Action Plans following extensive community consultation and public exhibition to manage traffic and parking across the North Sydney LGA. The Action Plans will be used to coordinate a program of works and projects over the next 10 years.

Several locations have been identified in the LATM Action Plans for implementation of Shared Zones and 40km/h speed zones which will be incorporated in this plan.

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<sup>6</sup> North Sydney’s Transport Strategy (2017),  
[https://www.northsydney.nsw.gov.au/Traffic\\_Transport/Transport\\_Strategy/North\\_Sydney\\_Transport\\_Strategy](https://www.northsydney.nsw.gov.au/Traffic_Transport/Transport_Strategy/North_Sydney_Transport_Strategy)

## 2.7 North Sydney Traffic & Parking Strategy (2015)<sup>7</sup>

The North Sydney Community Strategic Plan states that for a reliable, accessible and sustainable transport system, Council will:

- Promote equity of access to public and community transport.
- Incorporate true environmental and social costs in our transport planning.
- Pursue improvement and expansion of sustainable transport options.
- Encourage the use of alternative modes of transport to the private car.

Some of the stated aims regarding transport include:

- The impact of the private car on our community and environment is dramatically reduced.
- The frequency, quality and diversity of public transport throughout North Sydney is increased.
- Pedestrians and cyclists enjoy easy and safe access throughout North Sydney.
- Transport management is coordinated at a regional level.

North Sydney Integrated Traffic and Parking Strategy outlines the key principles in Council's approach to traffic and parking management on Council roads in line with the objectives and goals of the Community Strategic Plan.

The goals of the Strategy are to:

- Improve traffic and parking management across the LGA.
- Ensure that traffic and parking is balanced to meet the needs of road users, particularly residents and businesses both now and into the future.
- Encourage sustainable transport modes as alternatives to private motor vehicle use.

## 2.8 North Sydney Crash Analysis Report (2019)<sup>8</sup>

North Sydney Crash Analysis Report 2019 examined the crash history for the 5 year-period between 2013-2017. The report reveals a total of 203 crashes in 2017 which is lower than 2016. However, the number of injury crashes has increased slightly from 2016 and was slightly higher than the 5-year average. See Table 1 below.

	2013	2014	2015	2016	2017	5-year Avg.
<b>Fatal Crashes</b>	2	2	3	0	1	1.6
<b>Injury Crashes</b>	166	136	153	154	157	152
<b>Non-casualty Crashes</b>	155	130	64	62	45	91
<b>Total Crashes</b>	323	268	220	216	203	246

Table 1. Number of casualties by killed/injured classification in North Sydney LGA, 2013 to 2017

<sup>7</sup> North Sydney Traffic & Parking Strategy (2015), [https://www.northsydney.nsw.gov.au/Transport\\_Parking/Transport\\_Strategy/North\\_Sydney\\_Traffic\\_Parking\\_Strategy](https://www.northsydney.nsw.gov.au/Transport_Parking/Transport_Strategy/North_Sydney_Traffic_Parking_Strategy)

<sup>8</sup> North Sydney Crash Analysis Report 2019, [https://www.northsydney.nsw.gov.au/Community\\_Services/Safety/Road\\_Safety/North\\_Sydney\\_Crash\\_Analysis\\_Report](https://www.northsydney.nsw.gov.au/Community_Services/Safety/Road_Safety/North_Sydney_Crash_Analysis_Report)

## Percentage of Crashes by Contributing Factors

The crash analysis report identifies that speed is the greatest contributing factor for all crashes locally, regionally and across the state as shown in Figure 1 below.

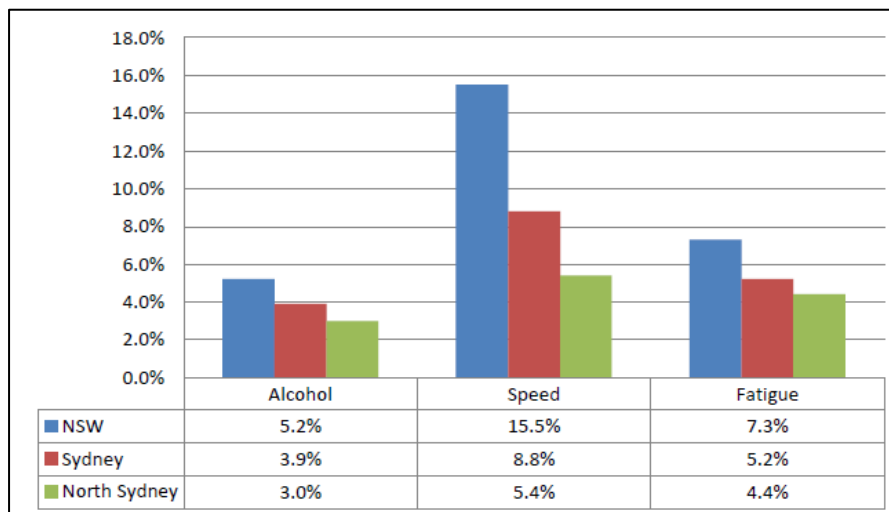


Figure 1. Percentage of crashes by contributing factors in NSW, Sydney region and North Sydney LGA during 2017

## Percentage of Crashes by Road User Class

The crash analysis report also indicates that pedestrians are the third highest road user group for casualties for North Sydney at 12.4%, which is higher than Sydney's casualties at 8% and NSW casualties at 6.1%.

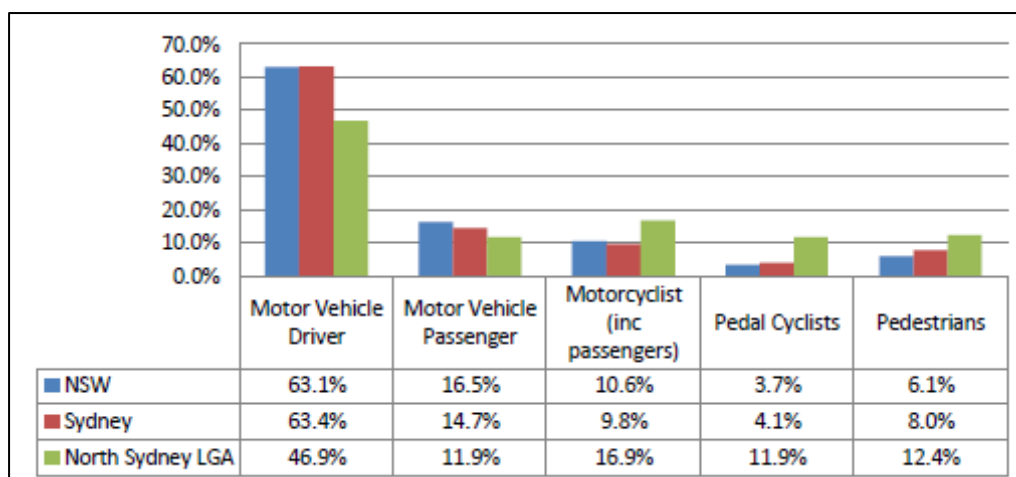


Figure 2. Percentage of casualties by road user class in 2017 for NSW, Sydney region and North Sydney LGA

It is expected that with the introduction and implementing of 40km/h and 10km/h Shared Zones through this plan, speed related crashes and pedestrian casualties will be reduced.

## 2.9 NSW Speed Zoning Guidelines

Roads and Maritime Services (RMS) is the only agency authorised to administer speed zones on all roads in NSW as per The Road Transport Act 1999. The NSW Speed Zoning Guidelines published by the RMS provide the information needed to understand the principles of speed zoning and procedures for reviewing and implementing speed zones.



In the context of this plan, the provision of 40km/h and 10km/h speed limit zones will be investigated.

### 2.9.1 40km/h speed limits

40km/h speed limits are provided in areas where vulnerable road users are present such as:

- School zones
- High pedestrian activity areas (HPAA)
- Local traffic areas



Figure 3. Typical signage of 40km/h speed limit<sup>9</sup>

#### *40km/h Speed Limit in School Zones*

40km/h School Zones have been established around all schools in the North Sydney LGA and are managed and operated under the jurisdiction of RMS. Therefore, this plan will not include any changes to the existing 40km/h school zones.

#### *40km/h Speed Limit in High pedestrian Activities Areas*

In addition to the NSW Speed Zoning guidelines, the RMS has published “a guide to identifying and implementing 40km/h speed limits in high volume pedestrian areas”. The guidelines suggest that, the 40km/h High Pedestrian Activity Speed Limits are installed in areas where there are relatively large volume of pedestrians and/or vulnerable road users such as:

- Central Business District (CBD) areas
- Suburban shopping strips.
- Areas where land-use or facilities generate significant pedestrian traffic (e.g. Beach-side/park-side reserves).
- Business areas generating significant pedestrian traffic such as medical centres, hospitals, and Government service agencies.

In order to create a self-enforcing 40km/h speed environment, these areas should be established with a suitable Local Area Traffic Management Scheme (LATMs) including physical devices and treatments.

#### *40km/h Speed Limit in Local Traffic Areas*

40km/h speed limits may also be established in areas that are primarily self-contained, residential precincts with networks of local streets used mainly for local access. Typically, these areas have physical devices or road environments that “naturally” restrict vehicle speeds.

<sup>9</sup> Centre for Road Safety, Transport for NSW:

<https://roadsafety.transport.nsw.gov.au/speeding/speedlimits/safespeedlimits.html>

## Benefits of 40km/h speed limits

Travelling at lower speeds improves driver's ability to stop at a safer distance to avoid crashes, otherwise reduce the severity of a crash. According to the media release by Transport for NSW on 28 June 2017, there was a 33 per cent reduction in crashes causing serious injuries and deaths between 2005 and 2015 where 40km/h zones has been introduced. These zones include busy shopping precincts and neighbourhoods. The benefits are not only for pedestrians, but for traffic efficiency and all road users.

### **Safer stopping distances** - Case study from Centre for Road Safety, Transport for NSW<sup>10</sup>

*One car is travelling at 40 km/h and another at 50 km/h. Both drivers see a child about 27 metres ahead, recognise the danger and brake. The car travelling at 40 km/h will stop safely after 26 metres, avoiding the child. The car travelling at 50 km/h will take an extra 9 metres to stop and will still be travelling at 41 km/h when it hits the child.*

*A diagram depicting the situation is shown on figure 4.*



Figure 4. Stopping distances comparison of cars travelling at 40km/h and 50km/h

*Centre for Road Safety also states that a small difference in vehicle speed can make a big difference to crash severities. If a car hits a pedestrian at 50 km/h, the driver is twice as likely to kill the pedestrian than if the car had been travelling at 40 km/h.*

Therefore, the 40 km/h urban limit is part of a nationwide strategy to improve safety in high pedestrian traffic areas.

### 2.9.2 10km/h Shared Zone

A shared zone is a road or network of roads in an area where pedestrians and motor vehicles share the road space. Drivers must not exceed 10km/h and must always give way to pedestrians.

Shared Zones are generally provided in areas where adequate footpaths cannot be retained within the road reserve and where there are very low numbers of slow-moving vehicles.

A shared zone requires a self-enforcing road environment typically provided with regulatory and non-regulatory treatments such as signs and markings, contrasting road pavements and traffic calming devices.

<sup>10</sup> Centre for Road Safety, Transport for NSW:  
<https://roadsafety.transport.nsw.gov.au/speeding/speedlimits/safespeedlimits.html>

There are two types of shared zone prescribed in the RMS technical direction<sup>11</sup>:

- A **Category 1 (Cat 1)** shared zone is provided on a road related area, has clearly different coloured and textured surface treatments from the surrounding roads, and typically does not have kerbs.
- A **Category 2 (Cat 2)** shared zone is provided on a road which includes footpath parking and has substandard footpath widths, retains kerbs and has traffic calming devices and treatments to regulate traffic speeds to 10km/h.

### Benefits of 10km/h Shared Zone

- Increases safety for pedestrians and cyclists
- Creates a lower speed environment
- Improves amenity without affecting access
- Alerts drivers to a different street environment
- Encourages a modal shift towards walking and cycling
- Creates a more socially inclusive street environment

Examples of Category 1 and 2 shared zones are shown on figures 5, 6 and 7.

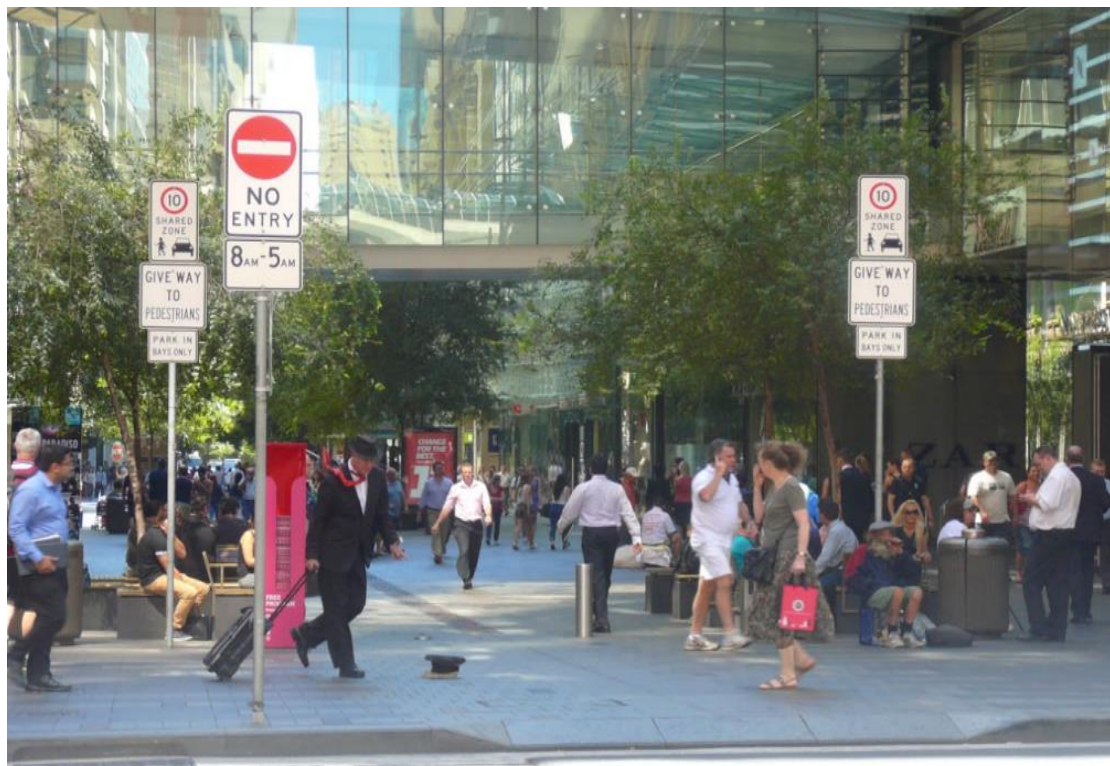


Figure 5. Typical layout of a Category 1 Shared Zone with kerb and gutter removed as shown in RMS Technical Direction TTD 2016/001.

<sup>11</sup> RMS Technical Direction TTD 2016/001 - Design and Implementation of Shared zones Including Provision for Parking, [https://www.rms.nsw.gov.au/trafficinformation/downloads/ttd\\_2016-001.pdf](https://www.rms.nsw.gov.au/trafficinformation/downloads/ttd_2016-001.pdf)





Figure 6. Typical layout of a Category 1 Shared Zone with retaining kerb and gutter as shown in RMS Technical Direction TTD 2016/001.



Figure 7. Typical layout of a Category 2 Shared Zone with footpath parking and traffic calming devices as shown in RMS Technical Direction TTD 2016/001.



### 3. Existing Speed Limits in North Sydney LGA

Over the years North Sydney Council has implemented several 40km/h speed limits and 10km/h Shared Zones in collaboration with the RMS. The existing speed limits are illustrated in Figure 8.

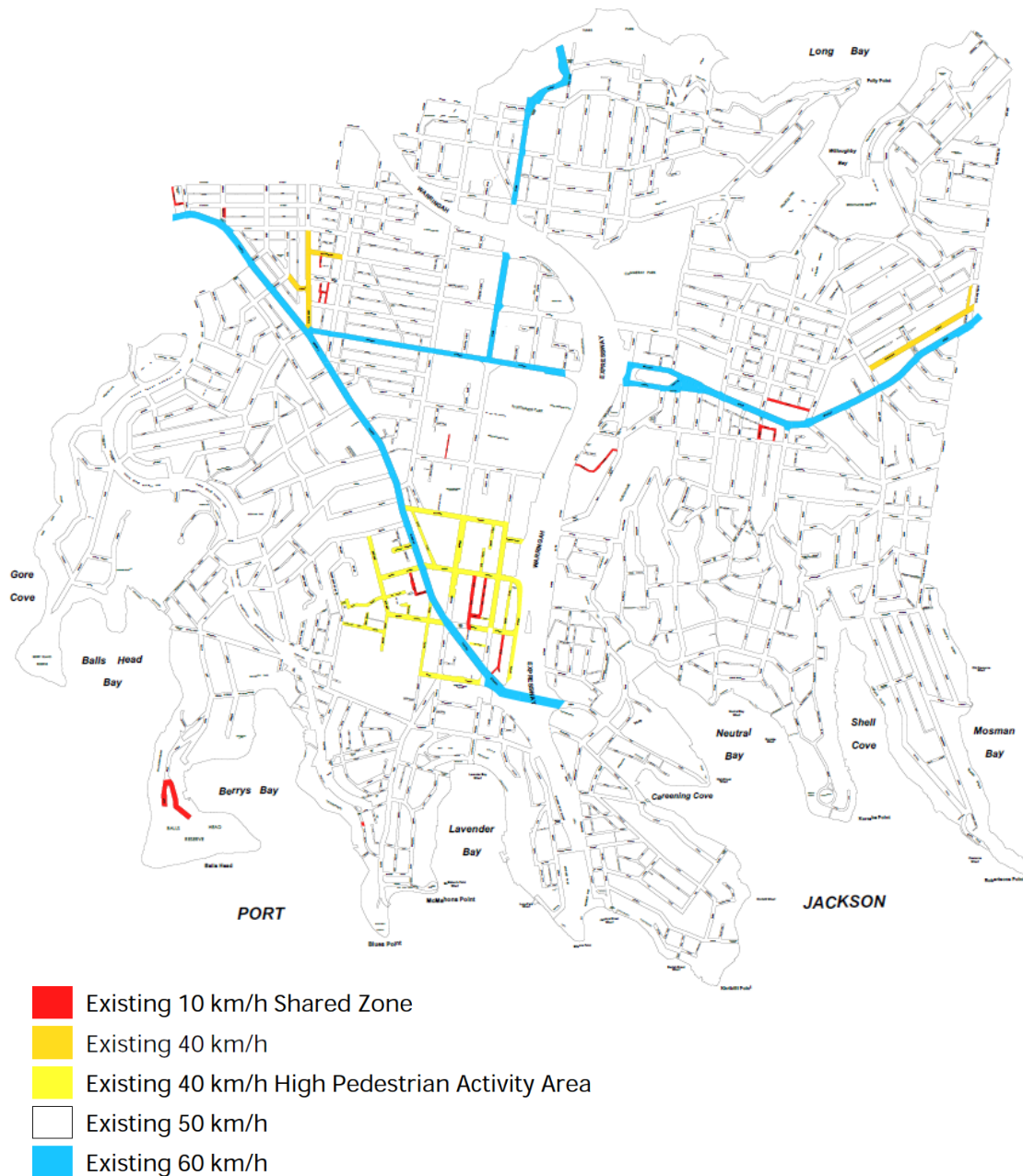


Figure 8. Map of existing speed limits in North Sydney LGA

*Note: '40km/h School Zones' operated between 8am-9:30am and 2:30pm- 4pm School Days are not shown on the above map.*

## 4. Identifying potential sites

RMS provides guidelines for the implementation of 40km/h speed limits and 10km/h Shared Zones.

### 4.1 40km/h speed limits

The RMS guideline for 40 km/h speed limits in high volume pedestrian areas specifies the criteria for 40km/h speed limits areas as shown in Figure 9 below, and an example is shown in Figure 10.

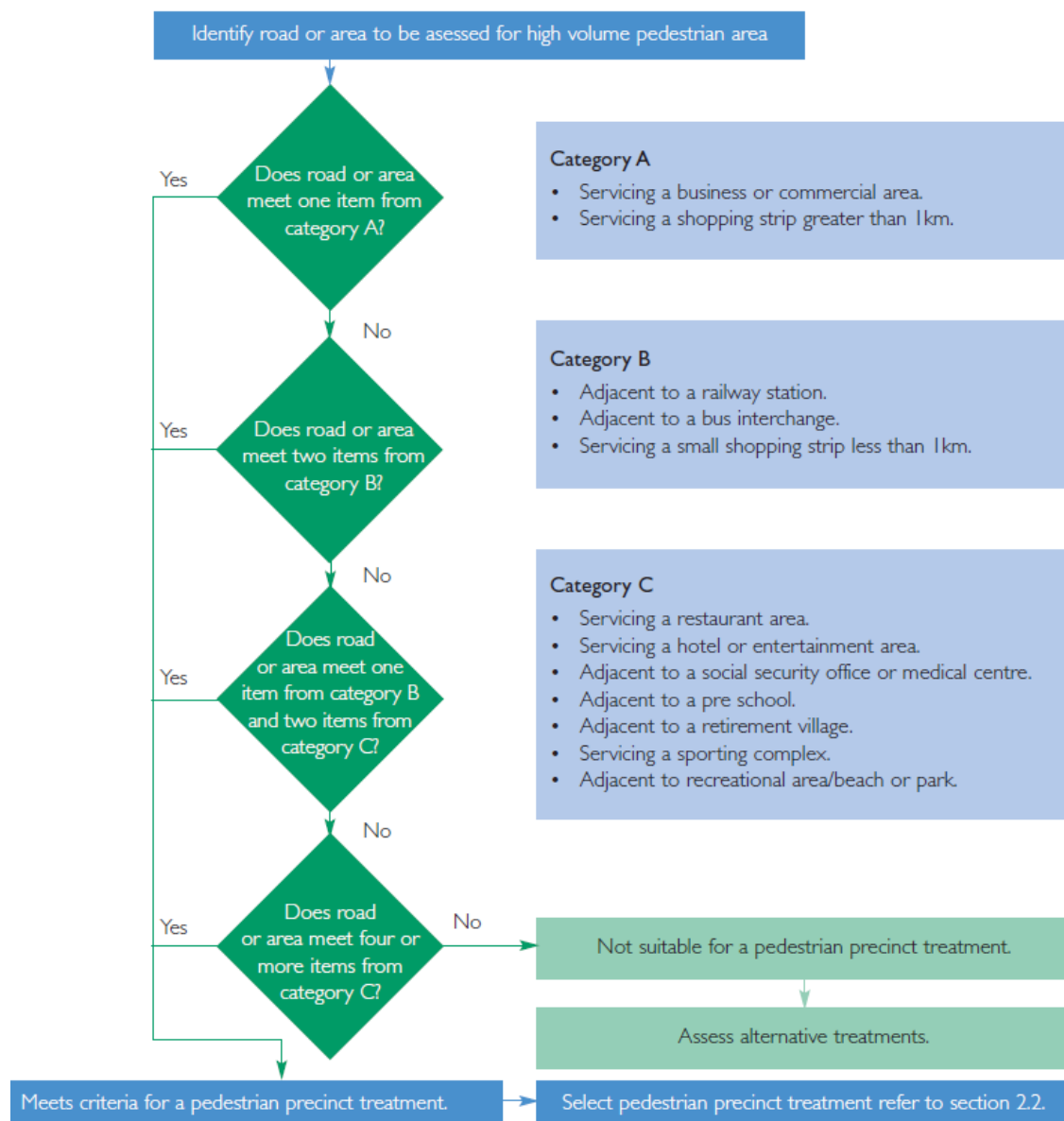


Figure 9. 40km/h HPAA criteria flowchart

## Example site



Figure 10. Existing 40km/h HPA in Miller Street, North Sydney

### 4.2 10km/h shared zones

RMS policy and guidelines for shared zone outline the criteria for establishing shared zones as summarised in Table 2. Examples of existing 10km/h Shared Zones in the North Sydney LGA are shown in Figures 11 and 12.

Features	Shared Zone
Current traffic flows	≤ 100 vehicles per hour and ≤ 1000 vehicles per day
Current speed limit	≤ 50 km/h
Length of proposed Shared Zone	≤ 400 metres
Current speed limit of adjoining roads	≤ 50 km/h
Current carriageway width	minimum trafficable width of 2.8 metres
Route access	must not be located along bus routes or heavy vehicle routes except delivery or garbage trucks
Streets with narrow or no footpaths	where pedestrians are forced to use the road
Kerbs	kerbs must be removed unless excepted by the RMS (See Section 4)

Table 2. RMS site criteria for shared zones



## Example sites



Figure 11. Existing 10kmh Shared Zone in Young Lane, Neutral Bay

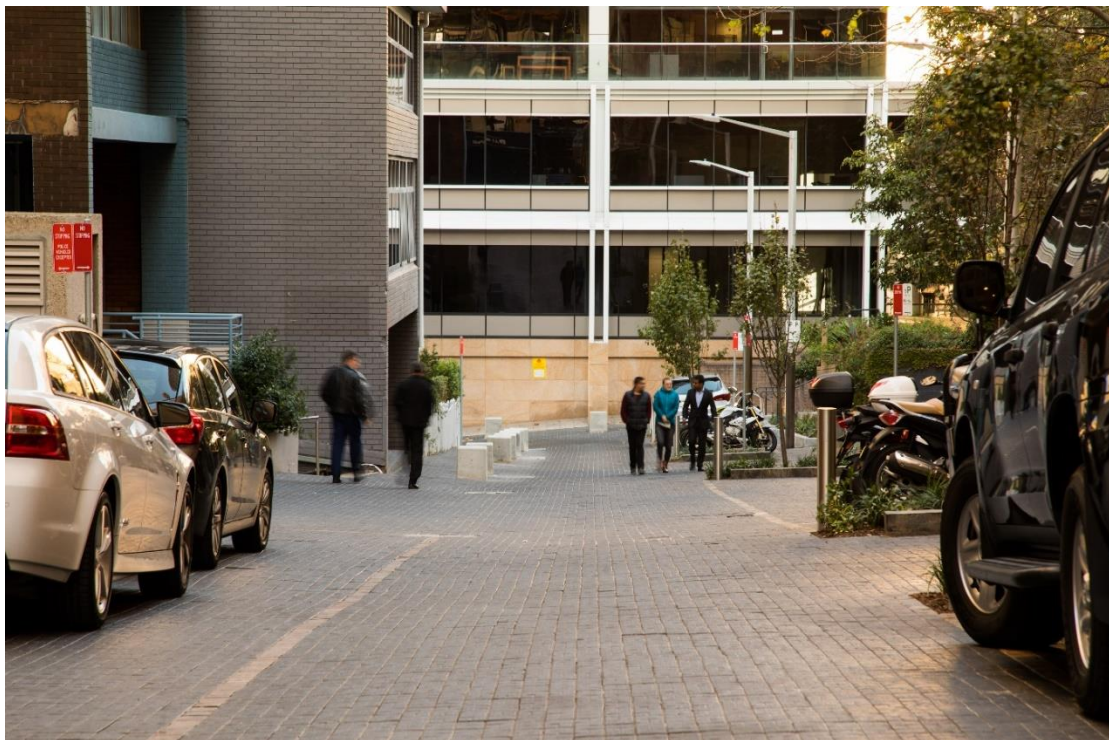


Figure 12. Existing 10kmh Shared Zone in Charles Street and Napier Street, North Sydney





Figure 13. Existing 10km/h Shared Zone in Mitchell Street Plaza, St Leonards

## 5. Proposed Speed Limits in North Sydney LGA

Potential sites for implementing 40km/h speed limits and 10km/h shared zones have been identified in accordance with relevant RMS guidelines, and taking into consideration surrounding land uses. In addition, several sites have already been identified through previous studies including the North Sydney Local Area Traffic Management (LATM) Action Plans (2019); North Sydney Public Domain Strategy (2019); St Leonards and Crows Nest Planning Study (2011 & 2015); Managing Traffic Speed in North Sydney (2015). These sites have been consolidated into a single map presented in Figure 13.

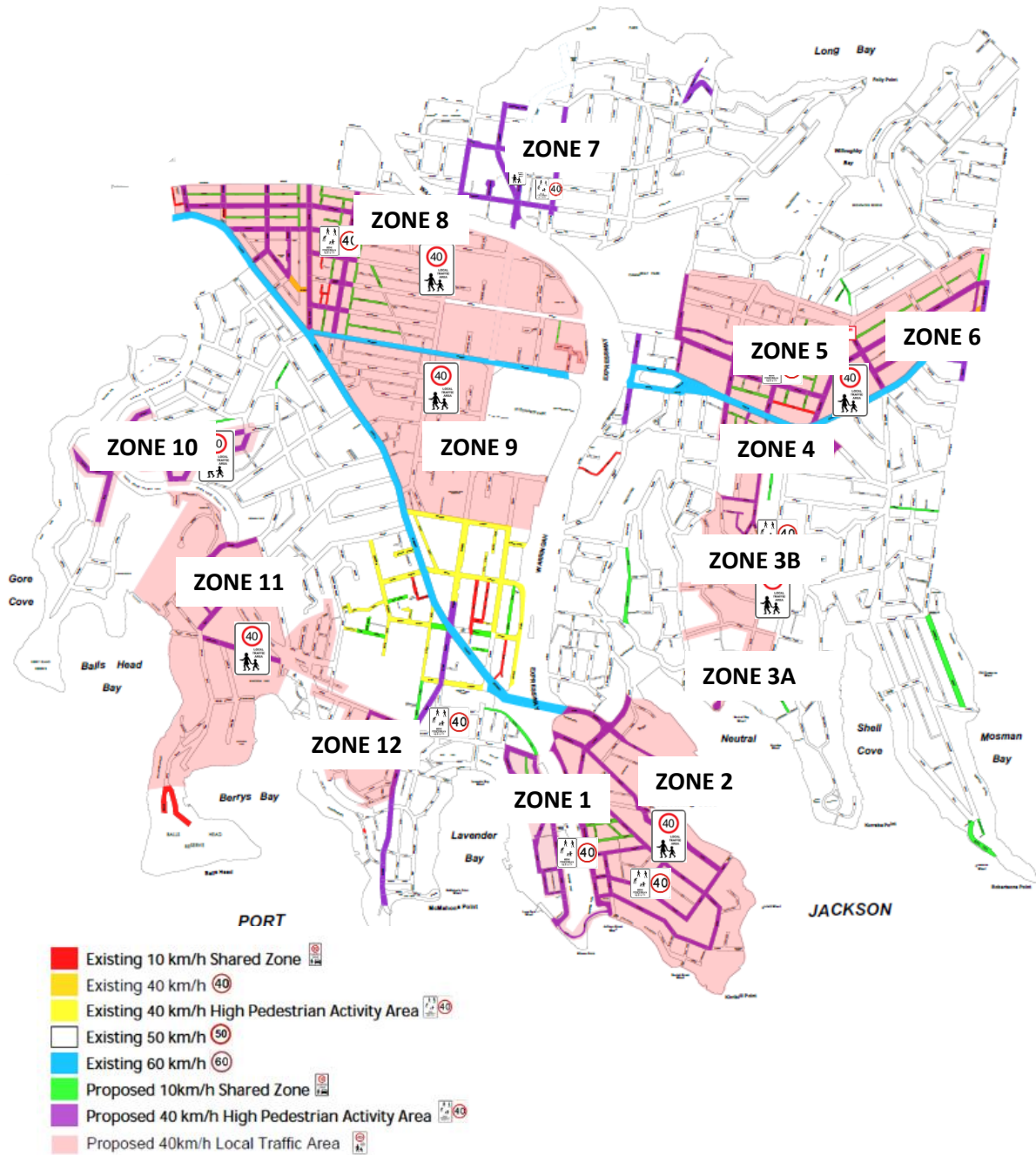


Figure 14. Proposed Speed Limits Map

The proposed speed limits map has been divided into 12 zones based on geographical locations. Cost estimates for the implementation of the proposed speed limits have been calculated based on the anticipated treatments required to comply with RMS guidelines.

Implementation of the speed limits within each zone have been prioritised according to the North Sydney Integrated Traffic and Parking Strategy methodology and criteria which considers safety, traffic volume, speeds, pedestrian and cycling volumes, surrounding land uses, alignment with the Community Strategic Plan, and overall cost of the scheme.

### Zone 1 - Milsons Point

Streets	Treatment	Priority	Estimated Cost
Alfred Street South	40km/h HPAA	Short	\$2,000
Dind Street	40km/h HPAA	Short	\$2,000
Glen Street	40km/h HPAA	Short	\$2,000
Harbourview Crescent	40km/h HPAA	Short	\$2,000
Northcliff Street	40km/h HPAA	Short	\$2,000
Olympic Drive	40km/h HPAA	Short	\$4,000
Paul Street	40km/h HPAA	Short	\$2,000
Cliff Street	Shared Zone	Long	\$500,000
<b>Total:</b>			<b>\$516,000</b>

Table 3. Zone 1 - Proposed 40km/h and 10km/h sites

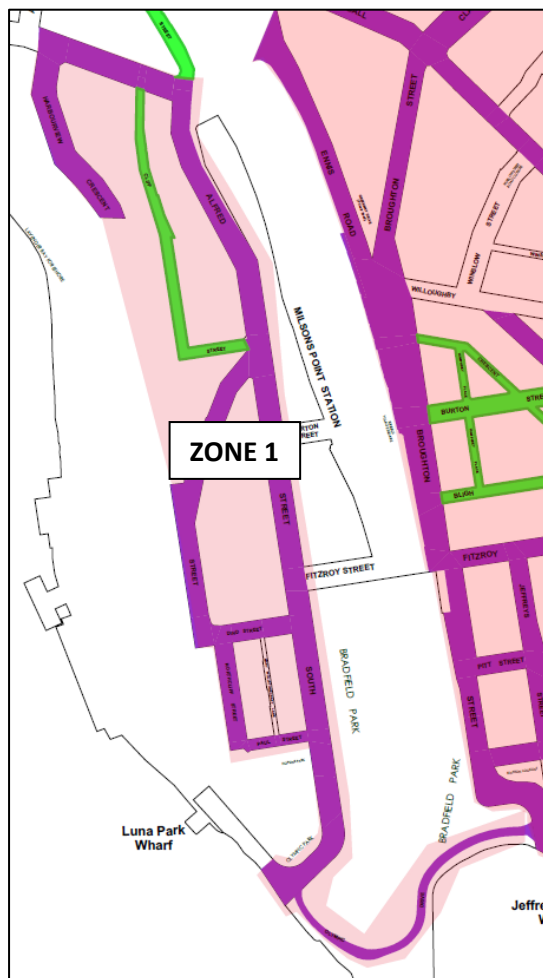




Figure 15. Zone 1 Locality Map

Zone 2 - Kirribilli/North Sydney

Streets	Treatment	Priority	Estimated Cost
Adderstone Avenue	40km/h Local Traffic Zone	Short	\$ 2,000
Bradly Avenue	40km/h Local Traffic Zone	Short	\$ 2,000
Broughton Street	40km/h HPAA	Short	\$ 5,000
Clark Road (between McDougall Street and Adderstone Avenue)	40km/h HPAA	Short	\$ 50,000
Ennis Road	40km/h HPAA	Short	\$ 2,000
High Street (between Alfred Street North and Wharf)	40km/h HPAA	Short	\$ 4,000
Hipwood Street	40km/h Local Traffic Zone	Short	\$ 4,000
Holbrook Avenue	40km/h Local Traffic Zone	Short	\$ 2,000
Jeffreys Street	40km/h HPAA	Short	\$ 4,000
Kirribilli Avenue	40km/h HPAA	Short	\$ 4,000
McBurney Lane	40km/h Local Traffic Zone	Short	\$ 2,000
Plunkett Street	40km/h Local Traffic Zone	Short	\$ 2,000
Robertson Lane	40km/h Local Traffic Zone	Short	\$ 2,000
Stannards Place	40km/h Local Traffic Zone	Short	\$ 2,000
Waruda Avenue	40km/h Local Traffic Zone	Short	\$ 1,000
Waruda Street	40km/h Local Traffic Zone	Short	\$ 2,000
Willoughby Street	40km/h Local Traffic Zone	Short	\$ 2,500
Winslow Lane	40km/h Local Traffic Zone	Short	\$ 1,000
Winslow Street	40km/h Local Traffic Zone	Short	\$ 1,000
Carabella Street	40km/h HPAA	Medium	\$ 8,000
Crescent Place	Shared Zone	Medium	\$ 600,000
Elamang Avenue	40km/h HPAA	Medium	\$ 70,000
Fitzroy Street	40km/h HPAA	Medium	\$ 60,000
Humphery Place	Shared Zone	Medium	\$ 390,000
McDougall Street	40km/h HPAA	Medium	\$ 60,000
Parkes Street	40km/h HPAA	Medium	\$ 60,000
Pitt Street	40km/h HPAA	Medium	\$ 40,000
Upper Pitt Street	40km/h HPAA	Medium	\$ 60,000
Bligh Street	Shared Zone	Long	\$ 1,000,000
Burton Street between Broughton St and Carabella Street	Shared Zone	Long	\$ 1,000,000
<b>Total:</b>			<b>\$ 3,442,500</b>



Table 4. Zone 2 - Proposed 40km/h and 10km/h speed limit sites.

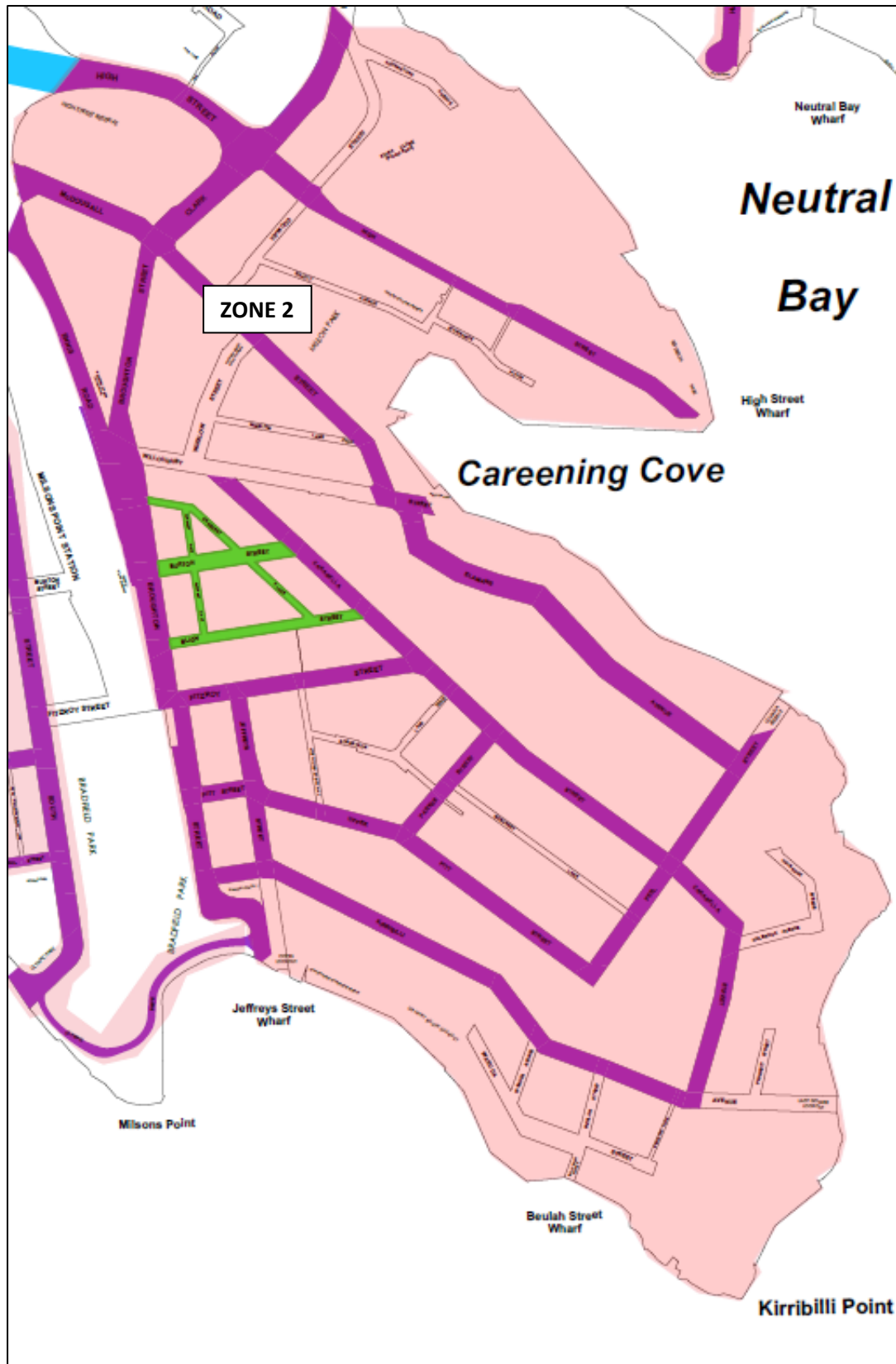


Figure 16. Zone 2 Locality Map

## Zone 3a - Neutral Bay Wharf

Streets	Treatment	Priority	Estimated Cost
Manns Avenue	40 km/h HPAA	Short	\$ 2,000
Hayes Street	40 km/h HPAA	Medium	\$ 50,000
Lower Wycombe Road	40 km/h HPAA	Medium	\$ 50,000
Wallagringa Avenue	Shared Zone	Medium	\$ 400,000
Wycombe Lane	Shared Zone	Medium	\$ 400,000
Shellcove Road	Shared Zone	Long	\$ 250,000

**Total:** \$ 1,152,000

Table 5. Zone 3a - Proposed 40km/h and 10km/h speed limit sites.

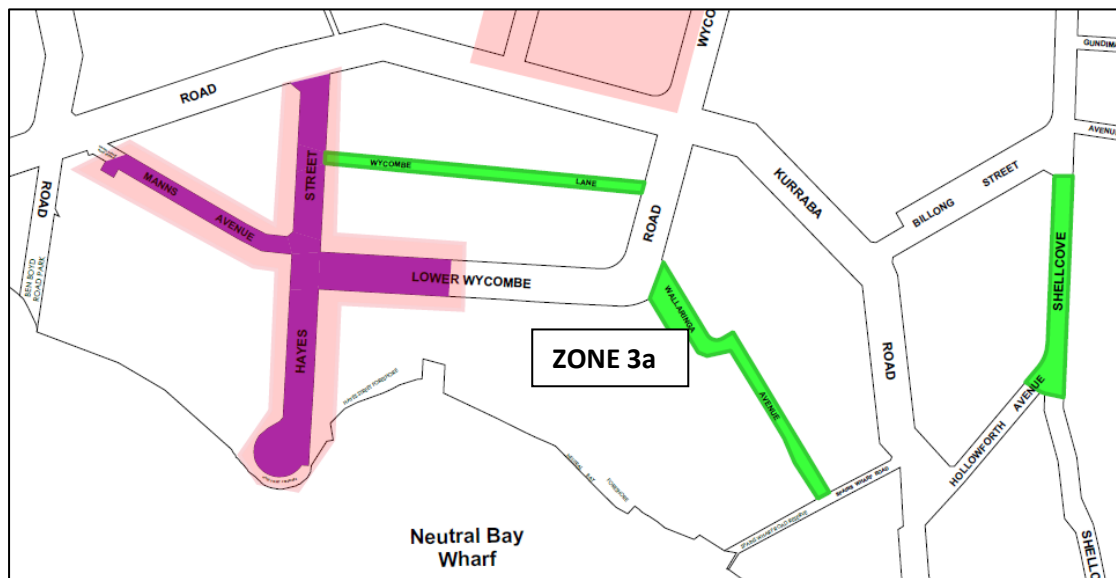


Figure 17. Zone 3a Locality Map

## Zone 3b - Neutral Bay

Streets	Treatment	Priority	Estimated Cost
Anderson Street	40 km/h HPAA	Short	\$ 2,000
Aubin Street	40 km/h Local Traffic Zone	Short	\$ 2,000
Barry Lane	Shared Zone	Short	\$ 600,000
Barry Street	40 km/h HPAA	Short	\$ 4,000
Bydown Street (between Yeo and Lindsay St)	40 km/h Local Traffic Zone	Short	\$ 2,000
Harriette Street	40 km/h Local Traffic Zone	Short	\$ 2,000
Phillips Street (Ben Boyd and Raymond)	40 km/h Local Traffic Zone	Short	\$ 2,000
Raymond Road	40 km/h Local Traffic Zone	Short	\$ 2,000
Reserve Street	40 km/h Local Traffic Zone	Short	\$ 2,000
Thrupp Street	40 km/h Local Traffic Zone	Short	\$ 2,000
Undercliff Street	40 km/h Local Traffic Zone	Short	\$ 2,000
Westleigh Lane	40 km/h HPAA	Short	\$ 1,000
Westleigh St	40 km/h HPAA	Short	\$ 2,000
Lindsay Street (between Raymond Rd and Barry St)	40 km/h HPAA	Medium	\$ 40,000
<b>Total:</b>			<b>\$ 665,000</b>

Table 6. Zone 3b – Proposed 40km/h and 10km/h speed limit sites

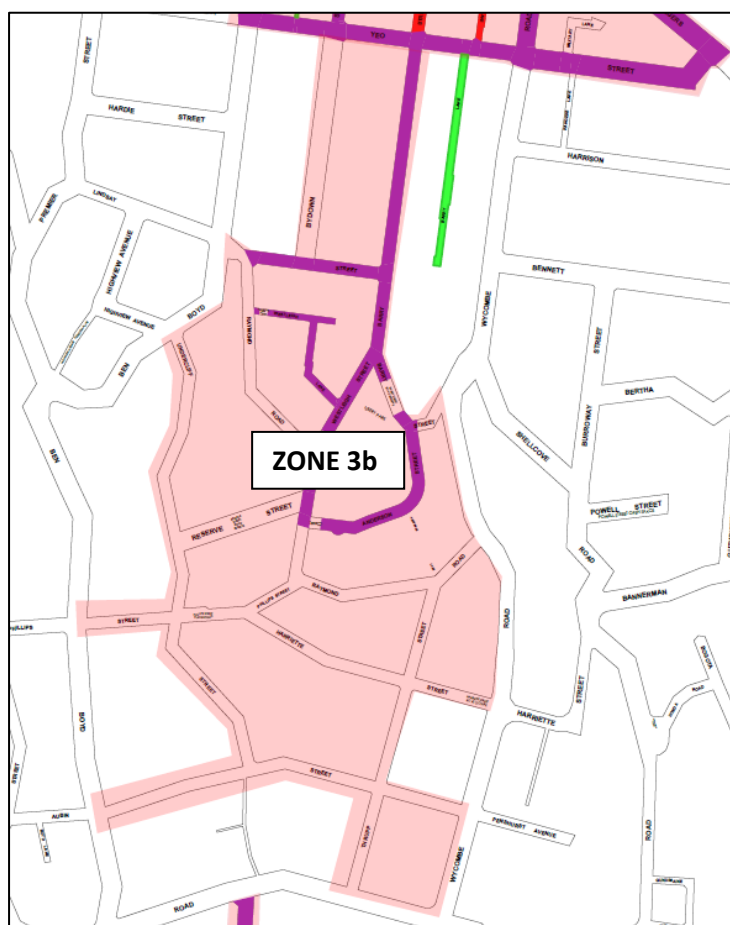


Figure 18. Zone 3b – Locality Map

## Zone 4 - Neutral Bay Town Centre South

Streets	Treatment	Priority	Estimated Cost
Ben Boy Road (btw Yeo St and Military Rd)	40 km/h HPAA	Short	\$ 2,000
Bydown St (btw Yeo St and Military Rd)	40 km/h HPAA	Short	\$ 2,000
Military Lane	40 km/h	Short	\$ 1,000
Rangers Road (btw Yeo St and Military Rd)	40 km/h HPAA	Short	\$ 2,000
Wycombe Road (btw Yeo St and Military Rd)	40 km/h HPAA	Short	\$ 2,000
Yeo Street	40 km/h HPAA	Short	\$ 2,000
Cheal Lane	Shared Zone	Medium	\$ 500,000
Olive Lane	Shared Zone	Medium	\$ 200,000
Yeo Lane	Shared Zone	Medium	\$ 60,000
<b>Total:</b>			<b>\$ 771,000</b>

Table 7. Zone 4 – Proposed 40km/h and 10km/h speed limit sites

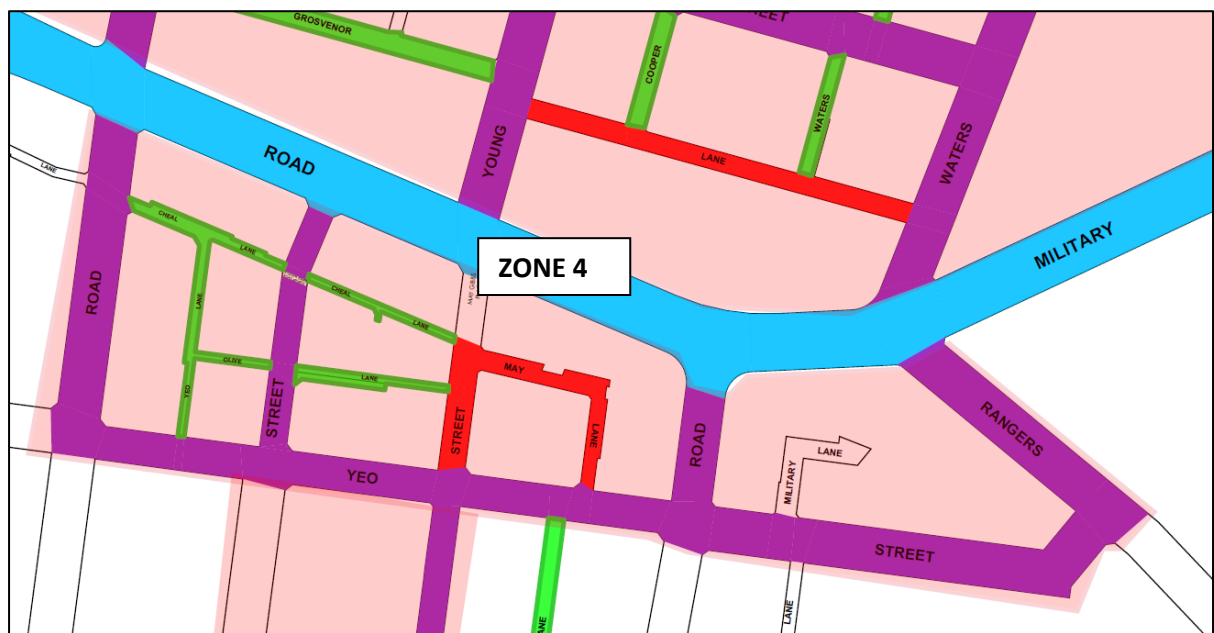


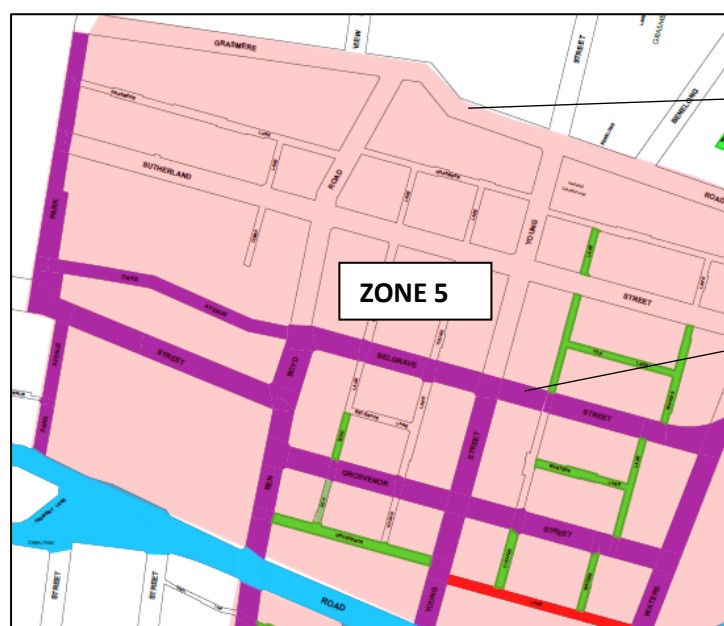
Figure 19. Zone 4 – Locality Map



## Zone 5 - Neutral Bay Town Centre North

Streets	Treatment	Priority	Estimated Cost
Grosvenor Lane (btw Ben Boyd Road and Young St)	Shared Zone	Under construction	
Ben Boyd Lane (btw Sutherland St and Belgrave St)	40 km/h Local Traffic Zone	Short	\$ 1,000
Ben Boyd Road (Military Rd and Belgrave St)	40 km/h HPAA	Short	\$ 20,000
Cooper Lane (btw Grosvenor St and Belgrave St)	40 km/h Local Traffic Zone	Short	\$ 1,000
Grosvenor Street	40 km/h HPAA	Short	\$ 3,000
Waters Road (btw Military Rd and Gerard St)	40 km/h HPAA	Short	\$ 2,000
Young Lane (btw Grosvenor Lane and Belgrave St)	40 km/h Local Traffic Zone	Short	\$ 2,000
Young Street (btw Military Rd and Belgrave St)	40 km/h HPAA	Short	\$ 2,000
Belgrave Street (btw Ben Boyd Rd and Waters Rd)	40 km/h HPAA	Medium	\$ 80,000
Ben Boyd Lane (btw Grosvenor Lane and Belgrave Street)	Shared Zone	Long	\$ 1,000,000
Cooper Lane (btw Belgrave St and Sutherland St)	Shared Zone	Long	\$ 3,000,000
Cooper Lane (btw Grosvenor St and Grosvenor La)	Shared Zone	Long	\$ 1,000,000
Martens Lane	Shared Zone	Long	\$ 200,000
Old Lane	Shared Zone	Long	\$ 200,000
Waters Lane	Shared Zone	Long	\$ 1,000,000
<b>Total:</b>			<b>\$ 6,511,000</b>

Table 8. Zone 5 – Proposed 40km/h and 10km/h speed limit sites



The proposed 40km/h zone be extended to Grasmere Road.

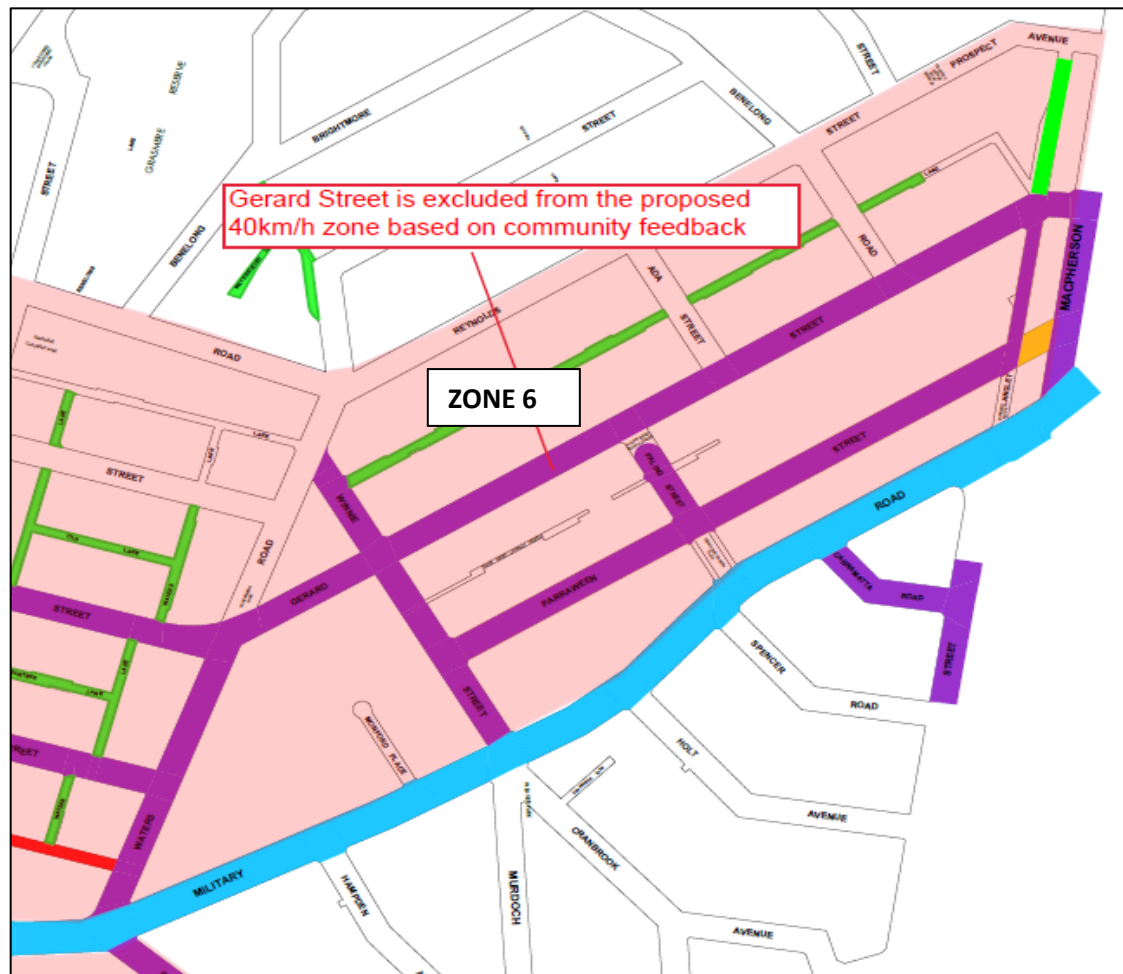
Belgrave Street is excluded from the proposed 40km/h zone based on community feedback.

Figure 20. Zone 5 – Locality Map

Zone 6 - Cremorne Town Centre North

Streets	Treatment	Priority	Estimated Cost
Cabramatta Road	40km/h HPAA	Short	\$ 5,000
Pailing Street	40km/h HPAA	Short	\$ 4,000
Parraween St	40km/h HPAA	Short	\$ 20,000
Spofforth St (btw Cambamatta Rd and Spencer Rd)	40km/h HPAA	Short	\$ 50,000
Gerard Street (btw Winnie St and Macpherson St)	40km/h HPAA	Medium	\$ 80,000
Macpherson St (btw Gerard St and Military Rd)	40km/h HPAA	Medium	\$ 200,000
Winnie Street	40km/h HPAA	Medium	\$ 60,000
Brightmore Lane	Shared Zone	Long	\$ 200,000
Gerard Lane	Shared Zone	Long	\$ 500,000
Langley Avenue north of Gerard Street	Shared Zone	Long	\$ 300,000
Watersleigh Lane	Shared Zone	Long	\$ 129,000
<b>Total:</b>			<b>\$ 1,548,000</b>

Table 9. Zone 6 – Proposed 40km/h and 10km/h speed limit sites



*Figure 21. Zone 6 – Locality Map*

## Zone 7 - Cammeray

Streets	Treatment	Priority	Estimated Cost
Abbott Lane	40km/h HPAA	Short	\$ 5,000
Amherst Street between West Street and Bellevue Street	40km/h HPAA	Short	\$ 80,000
Fredben Avenue	40km/h HPAA	Short	\$ 2,000
Miller Street between Falcon Street and Palmer Street	40km/h HPAA	Short	\$ 60,000
Abbott Street	40km/h HPAA	Medium	\$ 50,000
Bellevue Street	40km/h HPAA	Medium	\$ 80,000
Cambridge Street	40km/h HPAA	Medium	\$ 5,000
Carter Street between Bellevue Street and Colin Street	40km/h HPAA	Medium	\$ 80,000
Palmer Street between West Street and Bellevue Street	40km/h HPAA	Medium	\$ 80,000
<b>Total:</b>			<b>\$ 442,000</b>

Table 10. Zone 7 – Proposed 40km/h and 10km/h speed limit sites

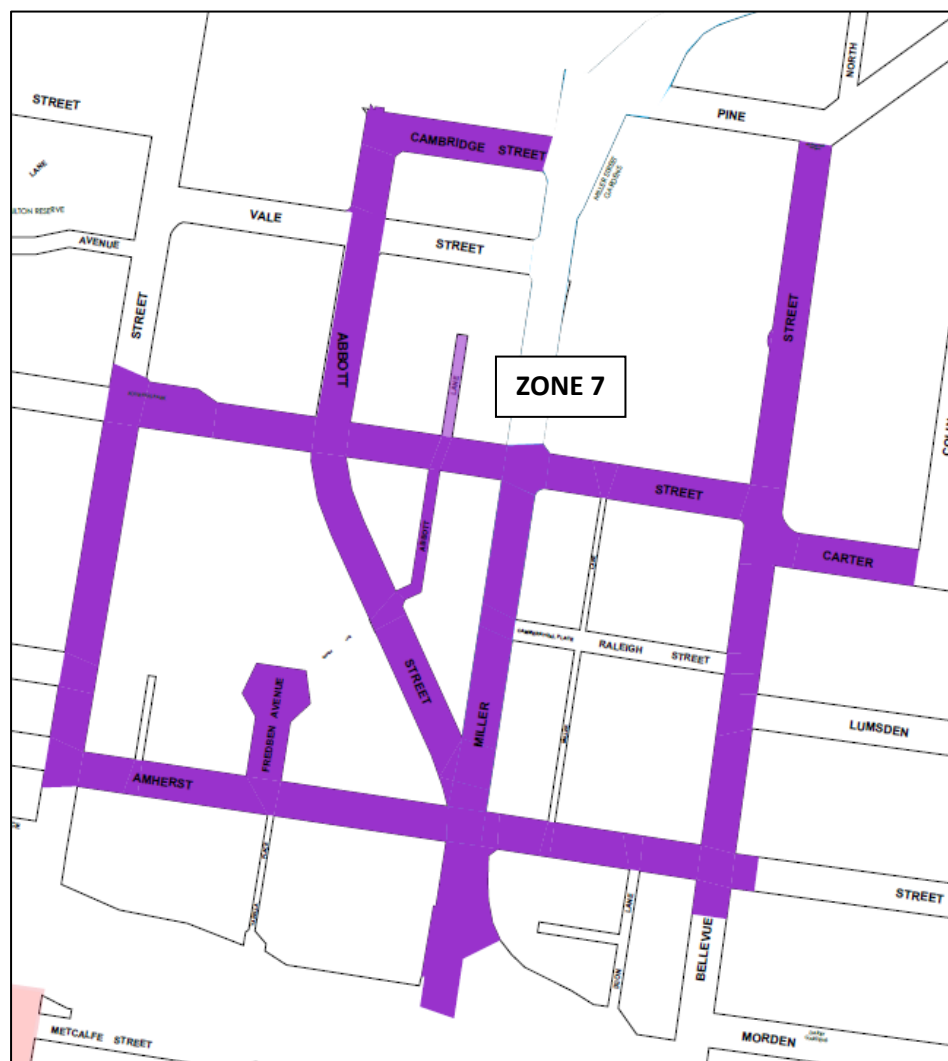


Figure 22. Zone 7 – Locality Map

## Zone 8 - Crows Nest/ St Leonards

Streets	Treatment	Priority	Estimated Cost
Albany Street between Pacific Hwy and Alexander St	40km/h HPAA	Short	\$ 5,000
Alexander Lane between Falcon Street and Pacific Hwy	40kmh Local Traffic Zone	Short	\$ 2,000
Alexander Street between Chandos Street and Falcon Street	40km/h HPAA	Short	\$ 20,000
Alexander Street between Falcon St and Pacific Hwy	40kmh Local Traffic Zone	Short	\$ 20,000
Bernard Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Burlington Lane between Sophia Street and West Street	40kmh Local Traffic Zone	Short	\$ 2,000
Burlington Street between Willoughby Road and Alexander Lane	40kmh HPAA/Local Traffic Zone	Short	\$ 20,000
Christie Street between Chandos St and Pacific Hwy	40km/h HPAA	Short	\$ 5,000
Clarke Street	40km/h HPAA	Short	\$ 2,000
David Lane	40kmh Local Traffic Zone	Short	\$ 2,000
David Street	40kmh Local Traffic Zone	Short	\$ 5,000
Devonshire Street	40kmh Local Traffic Zone	Short	\$ 4,000
Ernest Lane between Alexander Lane and West Street	40kmh Local Traffic Zone	Short	\$ 2,000
Ernest Street between Willoughby Road and West Street	40kmh HPAA/Local Traffic Zone	Short	\$ 5,000
Falcon Lane between Sophia Street and West Street	40kmh Local Traffic Zone	Short	\$ 2,000
Hayberry Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Hume Street	40km/h HPAA	Short	\$ 2,000
Matthew Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Matthew Street	40kmh Local Traffic Zone	Short	\$ 4,000
Mitchell Street between Atchison Street and Chandos Street	40km/h HPAA	Short	\$ 5,000
Oxley Street between Pacific Hwy and Chandos St	40km/h HPAA	Short	\$ 5,000
Thomas Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Willoughby Road between Pacific Hwy and Chandos St	40km/h HPAA	Short	\$ 20,000
Atchison Street between Christie Street and Willoughby Road	40km/h HPAA	Medium	\$ 80,000
Emmett Street	40kmh Local Traffic Zone	Medium	\$ 50,000
Hayberry Street	40kmh Local Traffic Zone	Medium	\$ 50,000
Holtermann Street between Willoughby Road and Alexander Lane	40kmh HPAA/Local Traffic Zone	Medium	\$ 50,000
Huntington Street	40kmh Local Traffic Zone	Medium	\$ 50,000



West Street between Carlow Street and Warringah Freeway	40kmh Local Traffic Zone	Medium	\$ 50,000
Albany Lane	Shared Zone	Long	\$ 3,390,000
Alexander Lane	Shared Zone	Long	\$ 5,760,000
Atchison Lane	Shared Zone	Long	\$ 1,000,000
Burlington Lane between Alexander Lane and Sophia Street	Shared Zone	Long	\$ 500,000
Chandos Lane	Shared Zone	Long	\$ 760,000
Chapel Lane	Shared Zone	Long	\$ 120,000
Falcon Lane between Alexander Lane and Sophia Street	Shared Zone	Long	\$ 500,000
Hume Lane between Albany Street and Chandos Street	Shared Zone	Long	\$ 1,000,000
Ingram Lane	Shared Zone	Long	\$ 500,000
Ives Lane	Shared Zone	Long	\$ 140,000
Sophia Street between Holtermann Street and Ernest Street	Shared Zone	Long	\$ 1,000,000
Willoughby Lane	Shared Zone	Long	\$ 4,955,000
Zig Zag Lane	Shared Zone	Long	\$ 1,017,000
<b>Total</b>			<b>\$ 21,112,000</b>

Table 11. Zone 8 – Proposed 40km/h and 10km/h speed limit sites

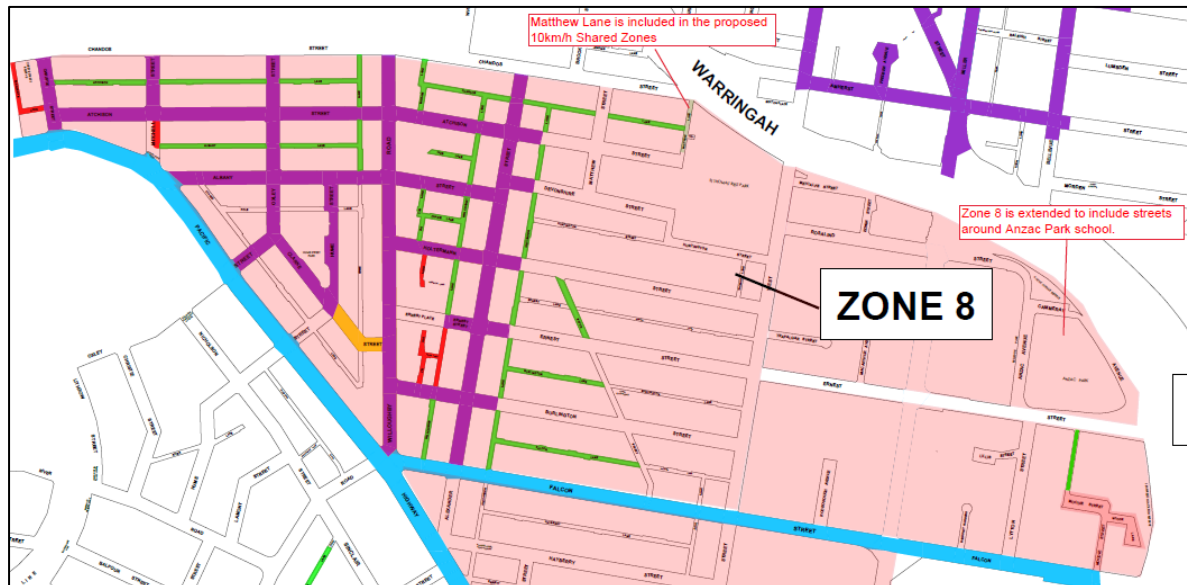


Figure 23. Zone 8 – Locality Map

## Zone 9 - North Sydney North

Streets	Treatment	Priority	Estimated Cost
Cassins Avenue	40kmh Local Traffic Zone	Short	\$ 1,000
Cassins Lane	40kmh Local Traffic Zone	Short	\$ 1,000
Church Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Church Street	40kmh Local Traffic Zone	Short	\$ 2,000
Cunningham Street	40kmh Local Traffic Zone	Short	\$ 2,000
East Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Eden Lane	40kmh Local Traffic Zone	Short	\$ 2,000
Eden Street	40kmh Local Traffic Zone	Short	\$ 2,000
Elliott Street	40kmh Local Traffic Zone	Short	\$ 2,000
Miller Street between McLaren Street and Falcon Street	40kmh Local Traffic Zone	Short	\$ 5,000
Moodie Lane	40kmh Local Traffic Zone	Short	\$ 1,000
Ridge Street	40kmh Local Traffic Zone	Short	\$ 2,000
Tucker Street	40kmh Local Traffic Zone	short	\$ 1,000
Walker Street between Ridge Street and McLaren Street	40kmh Local Traffic Zone	Short	\$ 2,000
West Street between Carlow Street and Pacific Hwy	40kmh Local Traffic Zone	Short	\$ 200,000
Carlow Street	40kmh Local Traffic Zone	Medium	\$ 100,000
Moodie Street	40kmh Local Traffic Zone	Medium	\$ 10,000
Myrtle Street	40kmh Local Traffic Zone	Medium	\$ 50,000
Moodie Street between Ernest Street and No.3 Moodie Street	Shared Zone	Long	\$ 200,000
<b>Total</b>			<b>\$ 587,000</b>

Table 12. Zone 9 – Proposed 40km/h and 10km/h speed limit sites



Figure 24. Zone 9 – Locality Map

Zone 10 – Wollstonecraft

Streets	Treatment	Priority	Estimated Cost
Belmont Avenue	40kmh Local Traffic Zone	Short	\$ 60,000
Milner Crescent between Russell Street and Shirley Road	40kmh Local Traffic Zone	Short	\$ 5,000
Telopea Street	40kmh Local Traffic Zone	Short	\$ 5,000
Shirley Road between Milray Lane and Newlands Street	40kmh Local Traffic Zone	Medium	\$ 12,000
Shirley lane	Shared Zone	Long	\$ 1,260,000
<b>Total</b>			<b>\$ 1,342,000</b>

Table 13. Zone 10 – Proposed 40km/h and 10km/h speed limit sites

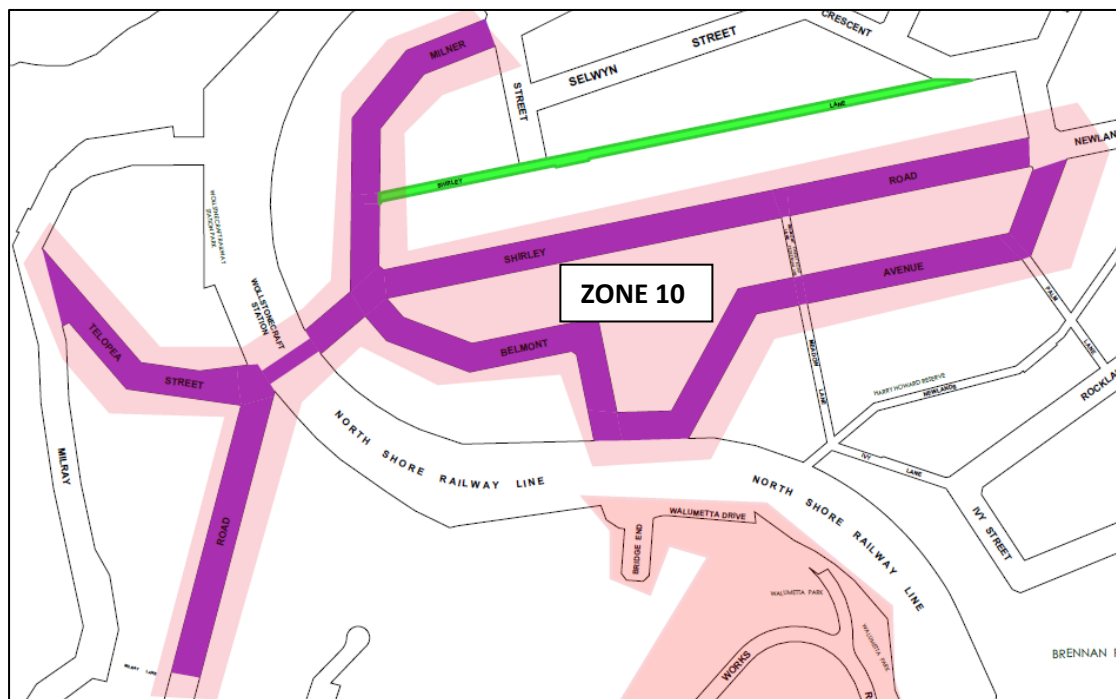


Figure 25. Zone 10 – Locality Map

## Zone 11 – Waverton

Streets	Treatment	Priority	Estimated Cost
Ancrum Street	40kmh Local Traffic Zone	Short	\$ 2,000
Balls Head Drive	40kmh Local Traffic Zone	Short	\$ 2,000
Balls Head Road	40kmh Local Traffic Zone	Short	\$ 5,000
Bank Lane	40kmh Local Traffic Zone	Short	\$ 1,000
Bay Road between Ross Street and Carr Street	40km/h HPAA	Short	\$ 5,000
Carr Street between railway line and Bank Street	40kmh Local Traffic Zone	Short	\$ 5,000
Clifton Street	40kmh Local Traffic Zone	Short	\$ 2,000
Crows Nest Road between Bay Road and Carr Street	40km/h HPAA	Short	\$ 2,000
Euroka Lane	40kmh Local Traffic Zone	Short	\$ 1,000
Euroka Street	40kmh Local Traffic Zone	Short	\$ 2,000
Gas Works Road	40kmh Local Traffic Zone	Short	\$ 2,000
Horace Street	40kmh Local Traffic Zone	Short	\$ 2,000
Larkin Street	40kmh Local Traffic Zone	Short	\$ 2,000
McKye Street	40km/h HPAA	Short	\$ 2,000
Ross Street	40kmh Local Traffic Zone	Short	\$ 2,000
Tunks Street	40km/h HPAA	Short	\$ 5,000
Walumetta Drive	40kmh Local Traffic Zone	Short	\$ 2,000
Waterhen Drive	40kmh Local Traffic Zone	Short	\$ 2,000
Whatmore Lane	40km/h HPAA	Short	\$ 2,000
Wood Street	40kmh Local Traffic Zone	Short	\$ 2,000
Woolcott Avenue	40kmh Local Traffic Zone	Short	\$ 2,000
Woolcott Street	40kmh Local Traffic Zone	Short	\$ 2,000
King Street between Whatmore Street and Carr Street	40km/h HPAA	Medium	\$ 50,000
Woolcott Street	40km/h HPAA	Medium	\$ 50,000
<b>Total</b>			\$ 154,000

Table 14. Zone 11 – Proposed 40km/h and 10km/h speed limit sites



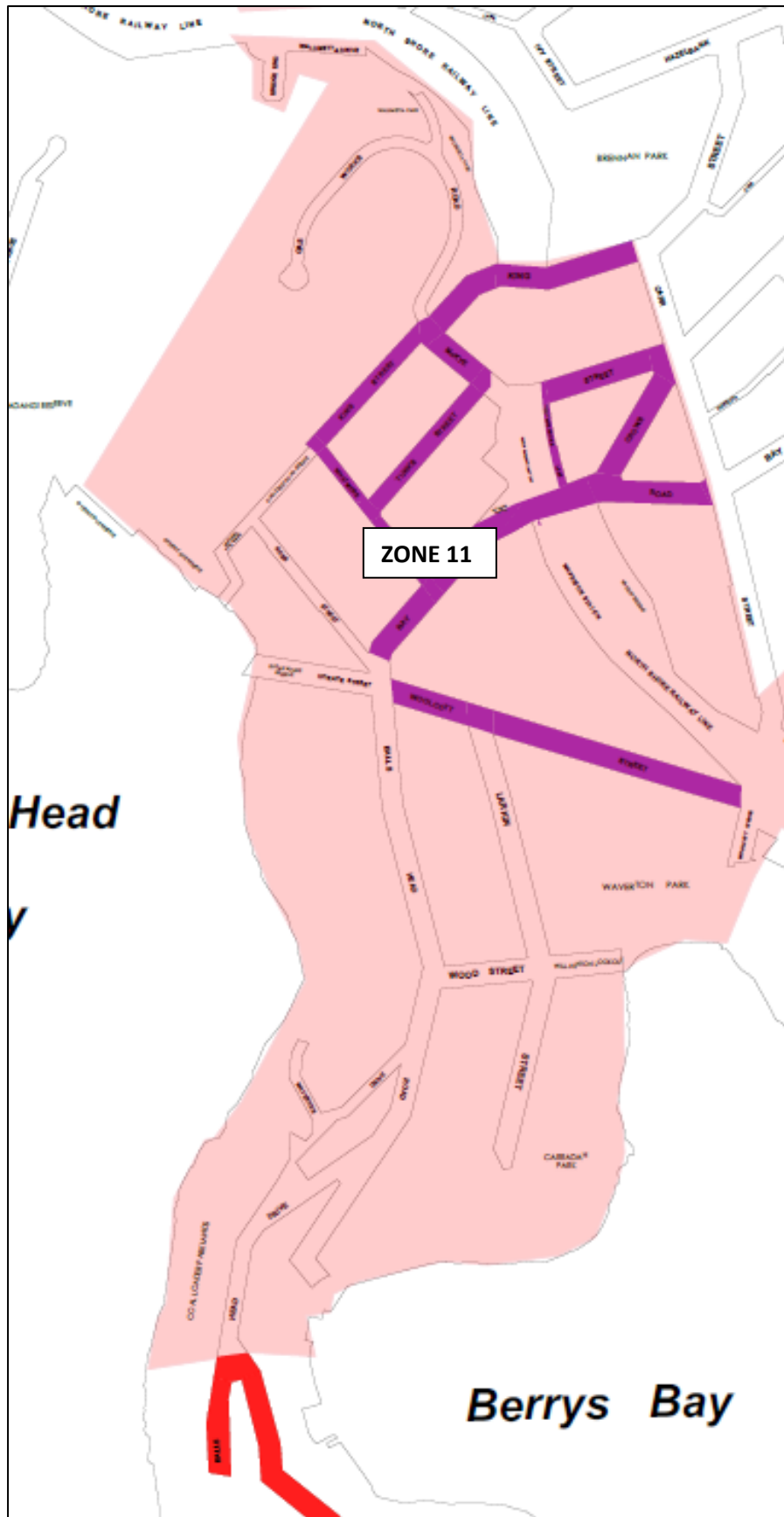


Figure 26. Zone 11 – Locality Map

## Zone 12 - McMahons Point

Streets	Treatment	Priority	Estimated Cost
Blues Point Road	40km/h HPAA	Short	\$ 80,000
Mil Mil Street	40kmh Local Traffic Zone	Short	\$ 2,000
Princes Place	40kmh Local Traffic Zone	Short	\$ 1,000
Princes Street	40kmh Local Traffic Zone	Short	\$ 2,000
Queens Avenue	40kmh Local Traffic Zone	Short	\$ 2,000
Union Street	40km/h HPAA/40kmh Local Traffic Zone	Short	\$ 40,000
Webb Street	40kmh Local Traffic Zone	Short	\$ 1,000
Chuter Street	40km/h HPAA	Medium	\$ 15,000
Thomas Street	40kmh Local Traffic Zone	Medium	\$ 20,000
Victoria Street	40km/h HPAA/40kmh Local Traffic Zone	Medium	\$ 30,000
Holt Street	Shared Zone	Long	\$ 1,130,000
Mitchell Street	40kmh Local Traffic Zone	Long	\$ 30,000
Victoria Place	Shared Zone	Long	\$ 452,000
William Street	Shared Zone	Long	\$ 500,000
<b>Total</b>			<b>\$ 2,305,000</b>

Table 15. Zone 12 – Proposed 40km/h and 10km/h speed limit sites

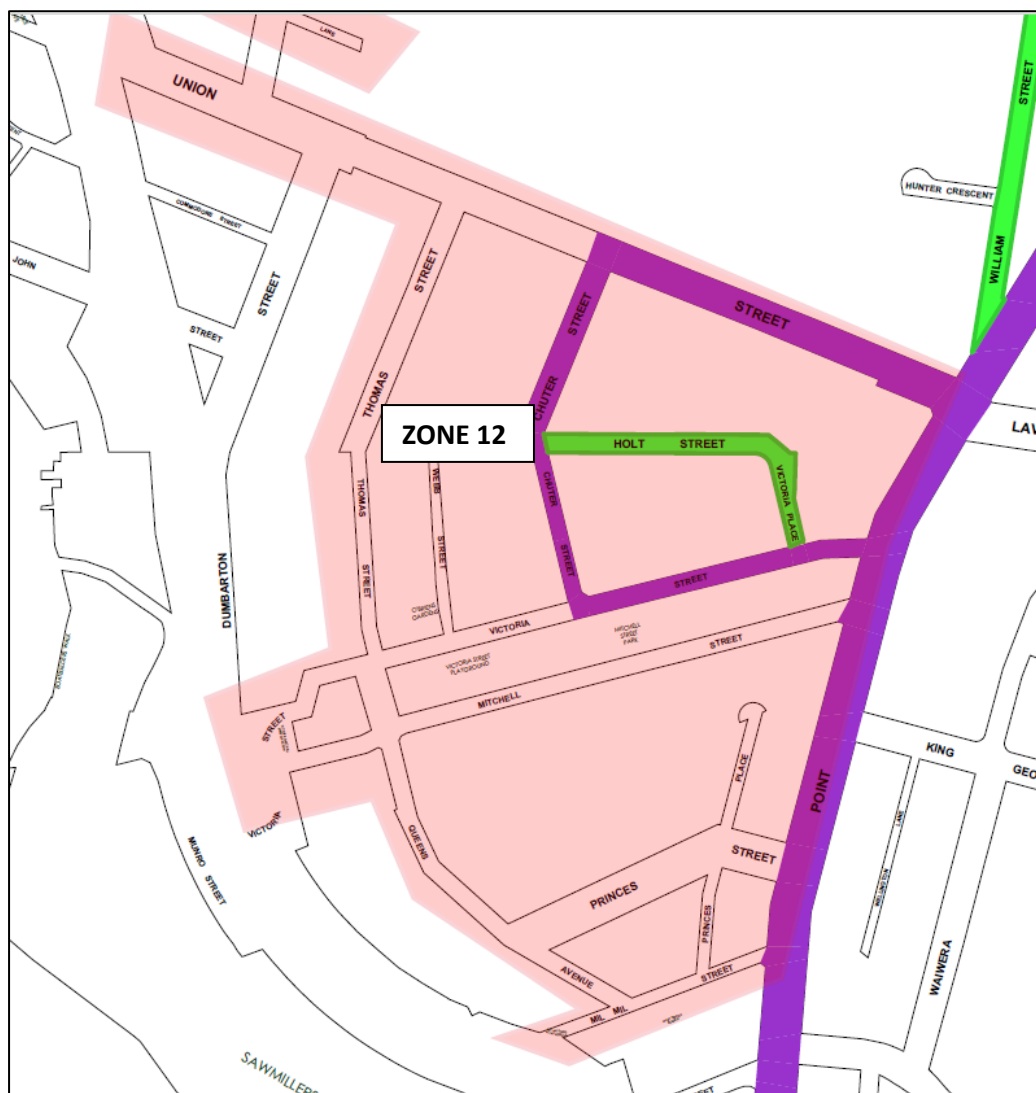


Figure 27. Zone 12 – Locality Map

Other Areas

Streets	Treatment	Priority	Estimated Cost
Brothers Avenue	40km/h HPAA	Short	\$ 5,000
Miller Street between Blue Street and Berry Street	40km/h HPAA	Short	\$ 5,000
Vernon Street	40km/h HPAA	Short	\$ 3,000
Merlin Street	40km/h HPAA	Medium	\$ 80,000
Florence Lane	Shared Zone	Long	\$ 422,000
Hill Street	Shared Zone	Long	\$ 180,000
Holdsworth Street	Shared Zone	Long	\$ 900,000
Kareela Road	Shared Zone	Long	\$ 3,120,000
Little Walker Street between Mount Street and Berry Street	Shared Zone	Long	\$ 2,260,000
Lord Street	Shared Zone	Long	\$ 500,000
Middlemiss Street	Shared Zone	Long	\$ 1,000,000
Milson Road between Wharf Road and Cremorne Wharf	Shared Zone	Long	\$ 600,000
Morton Lane	Shared Zone	Long	\$ 500,000
Mount Street between Walker Street and William Street	Shared Zone	Long	\$ 500,000
Oak Street	Shared Zone	Long	\$ 1,401,200
Short Street	Shared Zone	Long	\$ 500,000
Wulworra Avenue	Shared Zone	Long	\$ 254,000
<b>Total:</b>			<b>\$ 12,230,200</b>

Table 16. Other areas of proposed 40km/h and 10km/h speed limit

A total of 223 sites have been proposed for treatments of 40km/h speed limit and 10km/h shared zones. The total estimated cost is \$ 52,177,700.

## 6. Funding Opportunities

From time to time Council receives grant funding from various road safety programs. Council has been invited by RMS to submit proposals for the introduction of 40 km/h speed limits as part of the RMS 40km/h High Pedestrian Activity Area (HPAA) Program. This plan will assist Council in allocating resources to make submissions to RMS for consideration of funding for implementation of the 40km/h speed zones.

Sites proposed in this plan will also be funded through Council's Local Area Traffic Management (LATM) budget in accordance with the Implementation Program in Appendix D.

## 7. Action Plans

The following Action Plans has been developed with the objective of providing 40km/h speed zones and 10km/h shared zones in the North Sydney road network to improve road safety and walking and cycling amenities.

Action	Description	Timeframe
1. 40km/h & 10km/h Shared Zone Map	Provide map of the existing and proposed 40km/h and 10km/h shared zones. The draft masterplan and action plan will be put on public exhibition for community feedback.	August 2019
2. Council endorsement of the Plan	Following public exhibition, a report will be presented to Council for endorsement of the plan based on community feedback.	60 days
3. Funding application	Apply funding through state government grants for implementation of 40km/h and 10km/h shared zones. Also, Council adopted LATM implementation budget for the next 3 years.	Ongoing
4. Future requests	Future requests received in relation to 40km/h and 10km/h shared zones will be investigated in accordance with this plan and will be added to the map if warranted.	Ongoing

Table 17. 40km/h and 10km/h shared zone action plans



## 8. Recommendations from the result of public exhibition

The draft 40km/h & 10km/h Shared Zone Masterplan & Action Plan was placed on public exhibition from 6 September 2019 to 5 November 2019. Advertisements were placed in local newspapers and on Council's website to advise of the public exhibition of the plan.

Based on the submissions from the public exhibition, a number of recommendations were adopted and are summarised below.

<b>No.</b>	<b>Recommendations</b>	<b>Plan Page No.</b>
1	Belgrave Street is excluded from the proposed 40km/h zone in Zone 5	25
2	Gerard Street is excluded from the proposed 40km/h zone in Zone 6	26
3	Proposed 40km/h zone in Zone 5 and Zone 6 are extended to include Grasmere Road and Reynolds Street	25, 26
4	Zone 8 is extended to include streets surrounding Anzac Park school	29
5	Matthew Lane is included in the proposed 10km/h Shared Zone in Zone 8	29

## Appendix A – LATM Action Plans

Streets identified in LATM Action Plans for treatment of Shared Zone/40HPPA/40km as received through community consultation in 2016.

<b>Location</b>	<b>Treatment</b>
McDougall Street between Clark Road and Willoughby Street	40km/h Speed Zone
Broughton Street between McDougall Street Willoughby Street	40km/h Speed Zone
Broughton Street between McDougall Street and Olympic Drive	40km/h Speed Zone
Burton Street between Broughton Street and Carabella Street	10km/h Shared Zones
Bligh Street between Broughton Street and Carabella Street	10km/h Shared Zones
Fitzroy Street between Broughton Street and Carabella Street	40km/h Speed Zone
Carabella Street between Willoughby Street and Peel Street	40km/h Speed Zone
Upper Pitt Street between Jeffreys Street and Peel Street	40km/h Speed Zone
LATM Zone 7 - entire area	40km/h Speed Zone
Florence Lane	10km/h Shared Zones
Holdsworth Street, entire length	10km/h Shared Zones
Kareela Lane	10km/h Shared Zones
Warringa Avenue, entire length	10km/h Shared Zones
Winter Avenue, near Bent Street	10km/h Shared Zones
Wycombe Lane	10km/h Shared Zones
Shellcove Road between Hollowforth Avenue and Billong Street	10km/h Shared Zones
Yeo Lane between Yeo Street and Cheal Street	10km/h Shared Zones
Milson Road south of Cremorne Road near pedestrian ramp to Cremorne Reserve	10km/h Shared Zones
Ben Boyd Lane between Belgrave Street and Grosvenor Street	10km/h Shared Zones
Brightmore Lane	10km/h Shared Zones
Cooper Lane	10km/h Shared Zones
Gerard Lane	10km/h Shared Zones
Grosvenor Lane between Ben Boyd Road and Young Street	10km/h Shared Zones
Grosvenor Lane between Young Street and Waters Road	10km/h Shared Zones
Grosvenor Street	40km/h Speed Zone
Langley Avenue north of Gerard Street	10km/h Shared Zones
Martens Lane	10km/h Shared Zones
Merlin Street	40km/h Speed Zone
Parraween Street	40km/h Speed Zone
Waters Lane	10km/h Shared Zones
Winnie Street between Military Road and Gerard Street	40km/h Speed Zone
Young Street at Grosvenor Lane	10km/h Shared Zones
Cremorne & Neutral Bay shopping area bounded by Military Road, Ben Boyd Road, Belgrave Street, Gerard Street and MacPherson Street	40km/h Speed Zone

Miller Street, Cammeray at between Amherst Street and Palmer Street	40km/h Speed Zone
Brothers Avenue	10km/h Shared Zones
Brothers Avenue & Vernon Street	40km/h Speed Zone
Brothers Avenue & Vernon Street	40km/h Speed Zone
Cliff St	10km/h Shared Zones
William St from Blue St to Blues Point Rd	10km/h Shared Zones
Berry St	10km/h Shared Zones
Middlemiss St	10km/h Shared Zones
Chuter St, entire length	10km/h Shared Zones
Lord Street entire length	10km/h Shared Zones
Blues Point Rd, Union St to Henry Lawson Ave	40km/h Speed Zone
Mount Street between Denison Street and Walker Street	10km/h Shared Zones
Ingram Lane and Hume Lane between Chandos Street and Atchison Street	10km/h Shared Zones
Falcon Lane	Shared Zone
Moodie Street	40km/h Speed Zone
Burlington Lane	10km/h Shared Zones
West Street	40km/h Speed Zone
Sophia Street between Ernest Street and Holtermann Street	10km/h Shared Zones
Atchison Lane	10km/h Shared Zones
St Leonards and Crows Nest area bounded by Alexander Street, Pacific Highway, Sergeants Lane and Chandos Street	40km/h Speed Zone
Hayberry Precinct - area bounded by Alexander Street, Falcon Street, Miller Street, Ridge Street, West Street and Pacific Highway	40km/h Speed Zone
Sergeants Lane	10km/h Shared Zones
Hospital Lane & Willoughby Lane	10km/h Shared Zones
Crows Nest residential area bounded by Alexander Street, Falcon Street, West Street and Chandos Street	40km/h Speed Zone
Morton Lane	10km/h Shared Zones
Short St	10km/h Shared Zones
Oak Street, entire length	10km/h Shared Zones
Balls Head Drive	10km/h Shared Zones

## Appendix B - Ranking Matrix

The revised Integrated Traffic and Parking Strategy (ITPS): Project Assessment Framework below delivers a justified and consistent transport planning and management decision matrix that addresses North Sydney's transport vision and priorities and that can be used to prioritise both strategic<sup>\*1</sup> and local<sup>\*2</sup> transport works programs.

<sup>\*1</sup> projects identified through Mode Specific Action Plans

<sup>\*2</sup> projects identified through TAPAS consultation and ongoing resident enquiries

Community Transport Priority	Will the project:	Make Worse							Improve	NSTS Priority Rating <sup>*</sup>	TOTAL
		-3	-2	-1	0	1	2	3			
<b>Safe Travel</b>	...improve community safety by creating slow speed road environments where more vulnerable road users are protected from higher impact road users and the number of crashes and severity of injuries is minimised?								<b>0.81</b>	Score X NSTS Priority Rating	
<b>Transport Security</b>	...improve personal security through improved streetscape design, increased street activity and passive surveillance?								<b>0.81</b>	Score X NSTS Priority Rating	
<b>Social Wellbeing</b>	...provide social spaces where human interaction is given the highest priority and the negative impacts of traffic are minimised, promoting incidental social interaction, increasing civic pride, reducing anti-social behaviour and community policing requirements?								<b>0.65</b>	Score X NSTS Priority Rating	
<b>Active Health</b>	...provide infrastructure that encourages healthy and active lifestyle/travel choices?								<b>0.65</b>	Score X NSTS Priority Rating	
<b>Fair Access to Parking</b>	...reduce demand for parking and / or provide more equitable access to existing parking supply?								<b>0.59</b>	Score X NSTS Priority Rating	
<b>Environmental Sustainability</b>	...encourage the use of low greenhouse gas emitting transport options?								<b>0.56</b>	Score X NSTS Priority Rating	
<b>Local Environments</b>	...encourage the use of travel modes that have minimal impact on air quality, water quality and noise?								<b>0.56</b>	Score X NSTS Priority Rating	
<b>Transport Affordability</b>	...encourage the use of travel options with lower social, health and economic costs and higher social, health and economic benefits?								<b>0.51</b>	Score X NSTS Priority Rating	
<b>Congestion</b>	...apply travel demand management principles to minimise traffic demand and associated traffic congestion?								<b>0.44</b>	Score X NSTS Priority Rating	
<b>Business Activity</b>	...increase business opportunities by improving the look/amenity of North Sydney throughout the day and in to the evening while, at the same time, reducing the whole of life cost of transport networks, including the ongoing costs associated with cleaning and maintaining assets?								<b>0.38</b>	Score X NSTS Priority Rating	
<b>TOTAL = SUM / 16.35</b>											
<b>Preliminary Project Score = SUM/16.35 x estimated cost x residents effected</b>											



## Appendix C- Cost Summary

Proposed Speed Limits Zones	Priority			Subtotal
	Short term 5 years	Medium term 8 years	Long term > 8 years	
Zone 1 - Milsons Point	\$ 16,000	\$ -	\$ 500,000	\$ 516,000
Zone 2 - Kirribilli/North Sydney	\$ 94,500	\$ 748,000	\$ 2,000,000	\$ 2,842,500
Zone 3a - Neutral Bay Wharf	\$ 2,000	\$ 900,000	\$ 250,000	\$ 1,152,000
Zone 3b - Neutral Bay	\$ 625,000	\$ 40,000	\$ -	\$ 665,000
Zone 4 - Neutral Bay Town Centre South	\$ 11,000	\$ 760,000	\$ -	\$ 771,000
Zone 5 - Neutral Bay Town Centre North	\$ 31,000	\$ 80,000	\$ 6,400,000	\$ 6,511,000
Zone 6 - Cremorne Town Centre	\$ 79,000	\$ 340,000	\$ 1,129,000	\$ 1,548,000
Zone 7 - Cammeray	\$ 147,000	\$ 295,000	\$ -	\$ 442,000
Zone 8 - Crows Nest	\$ 140,000	\$ 330,000	\$ 20,642,000	\$ 21,112,000
Zone 9 - North Sydney North	\$ 227,000	\$ 160,000	\$ 200,000	\$ 587,000
Zone 10 - Wollstonecraft	\$ 70,000	\$ 12,000	\$ 1,260,000	\$ 1,342,000
Zone 11 - Waverton	\$ 54,000	\$ 100,000	\$ -	\$ 154,000
Zone 12 - McMahons Point	\$ 128,000	\$ 65,000	\$ 2,112,000	\$ 2,305,000
Other	\$ 13,000	\$ 80,000	\$ 12,137,200	\$ 12,230,200
<b>Grant Total</b>	<b>\$ 1,637,500</b>	<b>\$ 3,910,000</b>	<b>\$ 46,630,200</b>	<b>\$ 52,177,700</b>

## Appendix D- North Sydney 40km/h and 10km/h Shared Zone Masterplan Implementation Program

Short Term Priority - 5 Years				
<b>Zone 1</b>	Alfred Street South	<b>Zone 3a</b>	Manns Avenue	
	Glen Street		<b>Zone 3b</b>	Bydown Street (between Yeo and Lindsay St)
	Harbourview Crescent			Barry Street
	Northcliff Street			Westleigh St
	Olympic Drive			Westleigh Lane
	Paul Street			Anderson Street
	Dind Street			Raymond Road
<b>Zone 2</b>	Stannards Place	Undercliff Street		
	Broughton Street	Reserve Street		
	Kirribilli Avenue	Phillips Street (Ben Boyd and Raymond)		
	Adderstone Avenue	Harriette Street		
	Bradly Avenue	Aubin Street		
	Clark Road (between McDougall Street and Adderstone Avenue)	Thrupp Street		
	Ennis Road	Barry Lane		
	High Street (between Alfred Street North and Wharf)	<b>Zone 4</b>	Ben Boy Road (btw yeo St and Military Rd)	
	Hipwood Street		Yeo Street	
	Holbrook Avenue		Bydown St (btw Yeo St and Military Rd)	
	Jeffreys Street		Wycombe Road (btw Yeo St and Military Rd)	
	McBurney Lane		Rangers Road (btw Yeo St and Military Rd)	
	Plunkett Street		Military Lane	
	Robertson Lane		<b>Zone 5</b>	Ben Boyd Road (Military Rd and Belgrave St)
	Waruda Avenue	Young Street (btw Military Rd and Belgrave St)		
	Waruda Street	Grosvenor Street		
	Willoughby Street	Ben Boyd Lane (btw Sutherland St and Belgrave St)		
	Winslow Lane	Young Lane (btw Grosvenor Lane and Belgrave St)		
	Winslow Street	Waters Road (btw Military Rd and Gerard St)		
		Cooper Lane (btw Grosvenor St and Belgrave St)		

Short Term Priority - 5 Years					
<b>Zone 6</b>	Parraween St	<b>Zone 9</b>	West Street between Carlow Street and Pacific Hwy		
	Pailing Street		Eden Street		
	Cabramatta Road		East Lane		
	Spofforth St (btw Cabramatta Rd and Spencer Rd)		Eden Lane		
<b>Zone 7</b>	Miller Street between Falcon Street and Palmer Street		Church Lane	Church Street	
	Amherst Street between West Street and Bellevue Street		Ridge Street	Cunningham Street	
	Fredben Avenue		Elliott Street	Miller Street between McLaren Street and Falcon Street	
	Abbott Lane		Walker Street between Ridge Street and McLaren Street	Cassins Lane	
<b>Zone 8</b>	Burlington Street between Willoughby Road and Alexander Lane		Cassins Avenue	Tucker Street	
	Matthew Street		Moodie Lane	<b>Zone 10</b>	
	Christie Street between Chando St and Pacific Hwy		Belmont Avenue		Telopea Street
	Mitchell Street between Atchison Street and Chandos Street		Milner Crescent between Russell Street and Shirely Road		<b>Zone 11</b>
	Albany Street between Pacific Hwy and Alexander St		Walumetta Drive	Gas Works Road	
	Oxley Street between Pacific Hwy and Chandos St	Tunks Street	McKye Street		
	Clarke Street	Whatmore Lane	Bay Road between Ross Street and Carr Street		
	Hume Street	Crows Nest Road between Bay Road and Carr Street	Ross Street		
	Willoughby Road between Pacific Hwy and Chandos St	Ernest Street between Willoughby Road and West Street	Balls Head Road		
	Alexander Street between Chandos Street and Falcon Street	Falcon Lane between Sophia Street and West Street	Horace Street		
	Ernest Street between Willoughby Road and West Street	Burlington Lane between Sophia Street and West Street	Larkin Street		
	Falcon Lane between Sophia Street and West Street	Ernest Lane between Alexander Lane d and West Street	Wood Street		
	Burlington Lane between Sophia Street and West Street	Devonshire Street	Waterhen Drive		
	Ernest Lane between Alexander Lane d and West Street	Thomas Lane			
	Devonshire Street	Matthew Lane			
	Thomas Lane	Alexander Street between Falcon St and Pacific Hwy			
	Matthew Lane	Alexander Lane between Falcon Street and Pacific Hwy			
	Alexander Street between Falcon St and Pacific Hwy	Hayberry Lane			
	Alexander Lane between Falcon Street and Pacific Hwy	Bernard Lane			
	Hayberry Lane	David Lane			
Bernard Lane	David Street				
David Lane					
David Street					

<b>Short Term Priority - 5 Years</b>	
<b>Zone 11 - continued</b>	Balls Head Drive
	Carr Street between railway line and Bank Street
	Woolcott Avenue
	Woolcott Street
	Clifton Street
	Euroka Street
	Euroka Lane
	Ancrum Street
Bank Lane	
<b>Zone 12</b>	Mil Mil Street
	Union Street
	Webb Street
	Queens Avenue
	Princes Street
	Princes Place
	Blues Point Road
<b>Other</b>	Miller Street between Blue Street and Berry Street
	Brothers Avenue
	Vernon Street



Medium Term Priority - 8 Years				
<b>Zone 2</b>	Upper Pitt Street	<b>Zone 8</b>	Atchison Street between Christie Street and Willoughby Road	
	Carabella Street		Holtermann Street between Willoughby Road and Alexander Lane	
	Fitzroy Street		Huntington Street	
	Crescent Place		Hayberry Street	
	Elamang Avenue		Emmett Street	
	Humphery Place		West Street between Carlow Street and Warringah Freeway	
	McDougall Street		<b>Zone 9</b>	Myrtle Street
	Parkes Street			Carlow Street
	Pitt Street			Moddie Street
<b>Zone 3a</b>	Hayes Street	<b>Zone 10</b>	Shirely Road between Milray Lane and Newlands Street	
	Lower Wycombe Road		<b>Zone 11</b>	King Street between Whatmore Street and Carr Street
	Wycombe Lane	Woolcott Street		
	Wallagringa Avenue	<b>Zone 12</b>	Chuter Street	
	Victoria Street			
<b>Zone 3b</b>	Lindsay Street (between Raymond Road and Barry Street)		Thomas Street	
<b>Zone 4</b>	Cheal Lane	<b>Other</b>	Merlin Street	
	Yeo Lane			
	Olive Lane			
<b>Zone 5</b>	Belgrave Street (btw Ben Boyd Rd and Waters Rd)			
<b>Zone 6</b>	Gerard Street (btw Winnie St and Macpherson St)			
	Winnie Street			
	Macpherson St (btw Gerard St and Military Rd)			
<b>Zone 7</b>	Palmer Street between West Street and Bellevue Street			
	Abbott Street			
	Carter Street between Bellevue Street and Colin Street			
	Belleveu Street			
	Cambridge Street			

Long Term Priority - >8 Years			
<b>Zone 1</b>	Cliff Street	<b>Other</b>	Milson Road between Wharf Road and Cremorne Wharf
<b>Zone 2</b>	Bligh Street		Wulworra Avenue
	Burton Street between Broughton St and Carabella Street		Kareela Road
<b>Zone 3a</b>	Shellcove Road		Morton Lane
<b>Zone 5</b>	Ben Boyd Lane between Grosvenor Lane and Belgrave Street		Lord Street
	Cooper Lane between Gorsvenor St and Grosvenor Lane		Short Street
	Waters Lane		Hill Street
	Martens Lane		Mount Street between Walker Street and William Street
	Old Lane		Middlemiss Street
	Cooper Lane between Belgrave St and Sutherland St		Little Walker Street between Mount Street and Berry Street
<b>Zone 6</b>	Gerard Lane		Oak Street
	Brightmore Lane		Holdsworth Street
	Langley Avenue north of Gerard Street		Florence Lane
	Watersleigh Lane		
<b>Zone 8</b>	Atchison Lane		
	Albany Lane		
	Hume Lane between Albany Street and Chandos Street		
	Ingram Lane		
	Chandos Lane		
	Willoughby Lane		
	Ives Lane		
	Chapel Lane		
	Zig Zag Lane		
	Alexander Lane		
	Burlington Lane between Alexander Lane and Sophia Street		
	Falcon Lane between Alexander Lane and Sophia Street		
	Sophia Street between Hotermann Street and Ernest Street		
<b>Zone 9</b>	Moodie Street between Ernest Street and No.3 Moodie Street		
<b>Zone 10</b>	Shirley lane		
<b>Zone 12</b>	Mitchell Street		
	Holt Street		
	Victoria Place		
	William Street		