

Kensington & West Kingsford LATM

Local Area Traffic Management Plan

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Kensington & West Kingsford Local Area Traffic Management (LATM) Plan

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1 Introduction

Stantec was commissioned by Randwick City Council in June 2023 to undertake a Local Area Traffic Management (LATM) study for the area of Kensington and West Kingsford, NSW (**Figure 1**). The primary objective of this LATM study is to review and update the 2014 LATM study (Appendix B) and provide measures that reduce through-traffic volumes and vehicle speeds, whilst enhancing local amenity, and also maintaining the appropriate level of access for residents. The 2024 LATM study incorporates and considers significant changes in land use, transport options and overall developments that have occurred since the 2014 draft was written and are anticipated in the future.

1.1 Purpose of an LATM

As described in the Austroads Guide to Traffic Management: Part 8 – Local Street Management (pg. 6), an LATM:

“Local area traffic management is concerned with the planning and management of the usage of road space within a local traffic area, often to modify streets and street networks which were originally designed in ways that are now no longer considered appropriate to the needs of residents and users of the local area. LATM can be seen as a tool of traffic calming at the local level (Brindle 1991; O’Brien & Brindle 1999 p. 259). It involves the use of physical devices, streetscaping treatments and other measures (including regulations and other non-physical measures) to influence vehicle operation, in order to create safer and more pleasant streets in local areas. It is consistent with approaches such as self-explaining streets and context-sensitive urban design.

For the purpose of distinguishing between LATM and other aspects of traffic management, a ‘local (traffic) area’ is an area containing only local access streets and collector roads, and is usually bounded by arterial roads or other roads serving a significant road transportation function, or other physical barriers such as creeks, railways, reserves or impassable terrain.”

1.2 Study Area

The LATM study area consists of parts of Kensington and parts of West Kingsford. The study area is bounded by Alison Road and Moore Park to the north, Anzac Parade and Randwick Racecourse to the east, Gardeners Road to the south and Southern Cross Drive and the Australian Golf Course to the west. The extent of the study is shown in **Figure 1**. Gardeners Road, South Dowling Street, Alison Road and Anzac Parade are state-controlled roads that do not form part of the study area.

1.3 Study Objectives

The primary objective for the LATM will be to change the behaviour of drivers through physical and perceptual influence. This is to be achieved by reducing the volume of traffic and the speeds at which they travel to improve the overall amenity and liveability of the area, whilst improving safety and access. To meet these requirements, this study aims to achieve the following outlined objectives:

- Provide treatments that reduce rat running traffic;
- Reduce overall traffic speeds on the local road network that support formal applications to TfNSW;



- Enhance/ encourage walking and cycling around the study area;
- Enhance streetscape and the overall sense of Place;
- Enable community connections by improving pedestrian and cycling access to activity centres, schools, places of worship and other local destinations; and,
- Improve safety and accessibility for children, elderly and disabled residents and visitors.





Figure 1: Kensington and West Kingsford LATM Study Area



1.4 Guidelines and Policy

The following chapter highlights the relevant guidelines and policies to be considered in the planning and implementation of this LATM Study. These guidelines have been utilised to provide solutions that follow best practices, with local government policy highlighting the strategic direction for the Randwick LGA. The list of documents that are of importance to this study are discussed in Table 1.

Table 1: Relevant Guidelines and Policy

Policy	Description
Austroads Guide to Traffic Management – Part 8 (Local Area Traffic Management)	<p>The Austroads Guide to Traffic Management – Part 8 provides guidance and best practice for undertaking an LATM. The guide provides a framework for the investigation, preparation and delivery of an LATM through its six-stage process:</p> <ul style="list-style-type: none"> • Stage 1: Initiating the LATM program • Stage 2: Data collection and problem identification • Stage 3: Development of plans • Stage 4: Scheme design • Stage 5: Implementation • Stage 6: Monitoring and review
Movement and Place Framework	<p>Movement and Place is a NSW cross-government framework that provides guidance on the delivery of planning, designing and managing transport networks within NSW. The objective of Movement and Place is to achieve roads and streets that:</p> <ul style="list-style-type: none"> • Contribute to the network of public space within a location, where people can live healthy, productive lives, meet each other, interact, and go about their daily activities. • Are enhanced by transport and have the appropriate space allocation to move people and goods safely and efficiently and connect places. Balancing movement and place recognise that trade-offs may be required to achieve a best fit for the objectives. <p>This study will consider the Movement and Place guide to designing local streets to support and enhance the unique character of places whilst aligning with the desired outcomes.</p>
Walking Space Guide	<p>The Walking Space Guide by TfNSW has been developed with principles that look to improve pedestrian comfort and safety. The guide characterises paths based on activity (number of pedestrians) and provides recommendations tailored to that level of activity.</p> <p>The KWK LATM will aim to provide recommendations for pedestrian infrastructure that aligns with the Walking Space Guide. This includes looking to provide the recommended minimum walking space, when possible, to provide a higher level of service to pedestrians.</p>
Cycleway Design Toolbox	<p>The Cycleway Design Toolbox is Transport for NSW guide to support practitioners in the design of cycling and micro-mobility infrastructure across NSW. The toolbox provides practitioners with a range of design tools and best practices for the design and delivery of high-quality cycling infrastructure. The toolbox is centred around five internationally recognised design principals, and one more additional principal.</p> <p>The six design principles are: Safe, Connected, Direct, Attractive, Comfortable, and Adaptable.</p>



Policy	Description
Randwick 2022 – 2032 Community Strategic Plan (CSP)	<p>The Randwick Community Strategic Plan is built off three focus areas, Coastal Environment, Community, and Sustainability. These three themes have been utilised to informing strategies which provide principals and ideal outcomes. In regard to transport, the CSP aims to establish an integrated transport network which promotes sustainability. The 5 principals which underpin this strategy include:</p> <ul style="list-style-type: none"> • Safe - A transport network designed to prioritise safety for everyone, particularly vulnerable road users. • Sustainable - A transport network that enables people to easily choose active and public transport options more often. • Inclusive - A transport network that caters to a variety of people, modes and journey types. • Collaborative - A transport network enhanced by working with partners and the community. <p>Healthy and balanced - A transport network that improves the resilience of Randwick City by enabling people to choose healthier options such as walking and cycling, and by balancing the needs of all modes</p>
Randwick Local Strategic Planning Statement (LSPS)	<p>The Randwick LSPS outlines the long-term visions and planning priorities for the LGA. The LSPS provides a framework for managing growth throughout the area, as it sets out strategic directions and actions which help steer decision-making towards community goals.</p> <p>In relation to the LATM, the LSPS sets out an objective of: Reduction in percentage of commuter trips by private vehicle, which is similarly supported in the CSP, as well as Randwick integrated transport strategy.</p>

2 Existing Conditions

The following section covers existing conditions for transport and land use within the Kensington and West Kingsford study area.

2.1 Existing Land Uses

The suburbs of Kensington and West Kingsford, as part of Randwick City Council, are located five kilometres south of the Sydney CBD. Due to its proximity to the CBD, the study area is highly urbanised, with a concentration of various land uses. Most of the land use within Kensington and West Kingsford is classified as residential zoning, specifically for R2 low density. R3 medium density can be found between Roma Avenue and the intersection of Anzac Parade/Alison Road.

The largest trip generator within the region is the campus of University of New South Wales (UNSW). Although the UNSW Sydney Campus is found east of Anzac Parade, which is outside of the LATM boundary, the proximity of the campus has influenced the land use within the study area, providing mostly retail and hospitality services. As Anzac Parade provides utility to both a light rail service, as well as a main through fare for buses, Anzac Parade receives high levels of foot traffic, which is reflected by the category of land use. UNSW associated buildings found within the study boundary include, UNSW College, UNSW New College Postgraduate Village (H3), and Jacaranda Hall UNSW (residential), which can all be accessed via Anzac Parade. Another key land use within the region is the National Institute of Dramatic Art (NIDA), which provides educational services geared towards performance arts.

Recreational facilities within the boundary are plentiful and can be found across the study area, the largest being Kensington Park. Kensington Park houses Kensington Oval, which is utilised for sporting activities, as well as Kensington Park Community Centre, which offers space for events, yoga, dance and other recreational activities. Other parks within the study area include Raleigh Park, Kokoda Memorial Park, Fitzpatrick Park, and Wills Reserve.

Table 2: Land Uses With and Surrounding the LATM Boundary

Key Land Uses		
<ul style="list-style-type: none">Royal Randwick RacecourseThe Australian Golf ClubKensington ParkRaleigh ParkKokoda Memorial Park	<ul style="list-style-type: none">Kensington Main Street (Anzac Parade)East VillageSupa Centre Moore ParkPrincess of Wales HospitalKensington Park Community Centre	<ul style="list-style-type: none">UNSW SydneyUNSW CollegeNational Institute of Dramatic ArtKensington Public SchoolOur Lady of the Rosary Catholic Primary School



2.2 Future Land Use Change

As part of the Kensington and Kingsford Planning Strategy (K2K), future land uses within the two town centres are scheduled to change. Particularly, the strategy introduces changes to density control and building heights in an attempt to increase development within the core of these centres. Changes include:

- Increase of the current 6-7 story permissible height to 9 stories.
- Opportunity sites, as identified by the council, are applicable for taller buildings of 17-18 stories. A total of three sites have been identified, at the intersections of Anzac Parade with Todman Avenue, Strachan Street and Gardeners Road
- B2 (Local centre land use) extensions for Kingsford town centre at three locations.

2.3 Active Transport

2.3.1 Walking

Pedestrian connectivity is well-established with footpaths provided on both sides of the street for most of Kensington and West Kingsford. Additionally, crossings are found at most intersections, providing some level of separation and safety from traffic (depending on the intersection). Mid-block crossings are less common, however.

Key land uses such as UNSW, light rail terminals, and active frontages on Anzac Parade are key trip generators which draw pedestrian volumes from study area. This results in pedestrian demand primarily flowing to/from Anzac Parade.

2.3.2 Cycling

The existing cycling network within the study area is pictured in Figure 2. The current network primarily provides a mixture of north-south links and east-west links which provide connectivity through most of the study area.

Regarding typology (the form of the network), most of the network is on road cycle lanes (road shoulders) and general roads (no dedicated infrastructure). Infrastructure within the study area includes:

- Separated cycleway on Doncaster Avenue, Day Avenue, and Houston Road, from Alison Road to Barker Street.
- Shared path on the eastern side of Anzac Pde and extending towards UNSW, from Doncaster Avenue to High Street.
- Shared path at Kensington Park.

As part of the Randwick Cycle route construction priority (2015), a series of routes have been identified for implementation. As a result of these routes conditions to road arrangements are expected to change (depending on the infrastructure). Relevant routes to the study area include:

- Kingsford to Centennial Park (route 1) – most of this route has been developed (Doncaster Avenue, Day Avenue, and Houston Road, from Alison Road to Barker Street). It is currently missing the Barker Street to Gardeners Road via Houston Road link.
- Todman Avenue to Doncaster Avenue (Route 3).
- Coogee to Randwick and UNSW (Route 5).



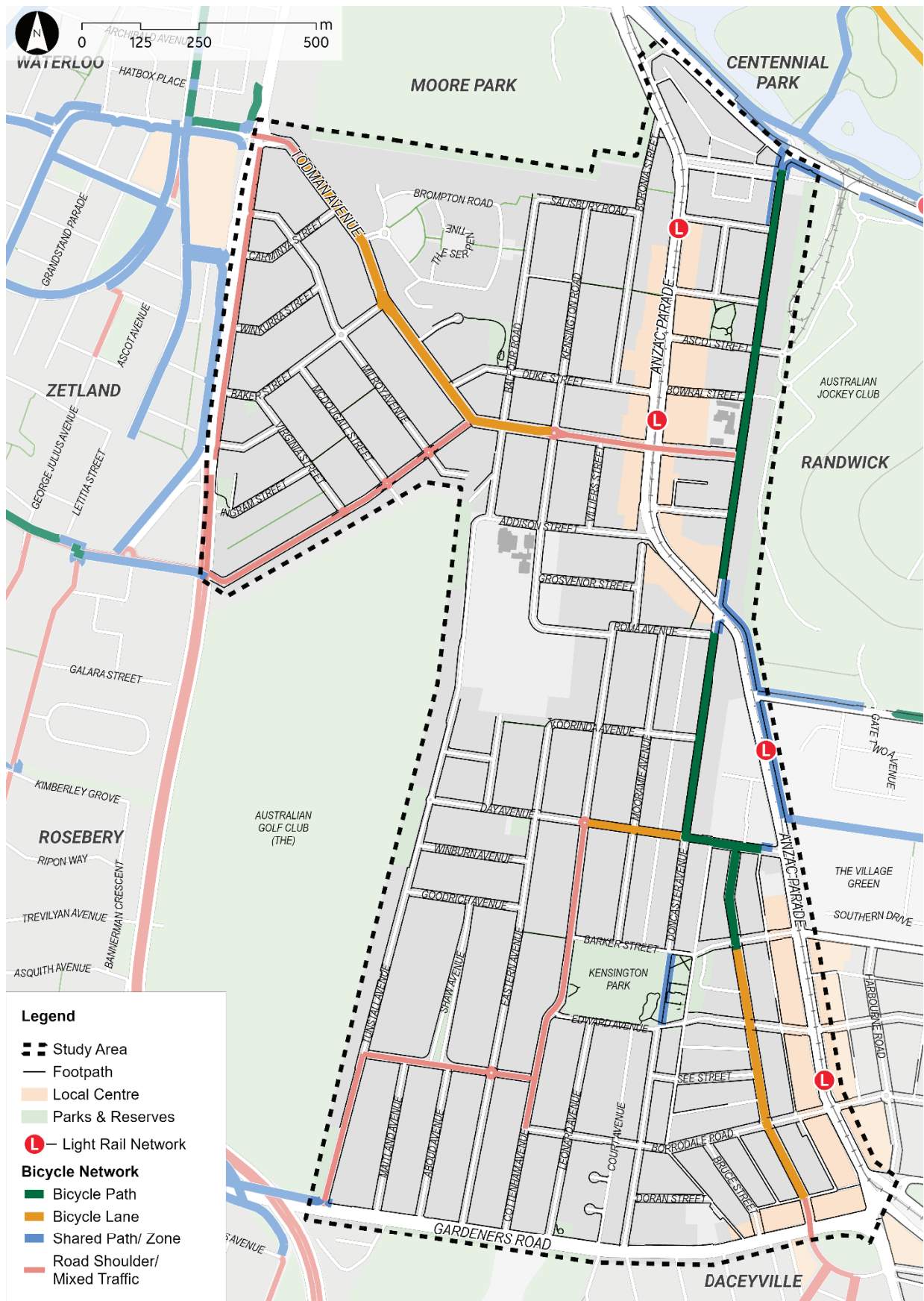


Figure 2: Existing Cycling Network



2.4 Public Transport

2.4.1 Light Rail

The area of Kensington and West Kingsford is serviced by the L3 Kingsford Light Rail line, which runs through to Circular Quay. Stops within the LATM study area include ES Marks, Kensington, UNSW Anzac Parade, and Kingsford. The L3 line terminates to the south of the study area at Juniors Kingsford. Mid-week services have a frequency of 8-12 minutes, with services every eight minutes during the AM and PM peak periods.

2.4.2 Bus Stops and Route Alignment

The local area is serviced by a number of key bus services. The majority of services board and alight on Anzac Parade and Todman Avenue. The 303 and 309 buses are the only services which traverse through the local road network via Eastern Avenue, Day Avenue and Strachan Street. The services which function through the local area are shown below in Figure 3.

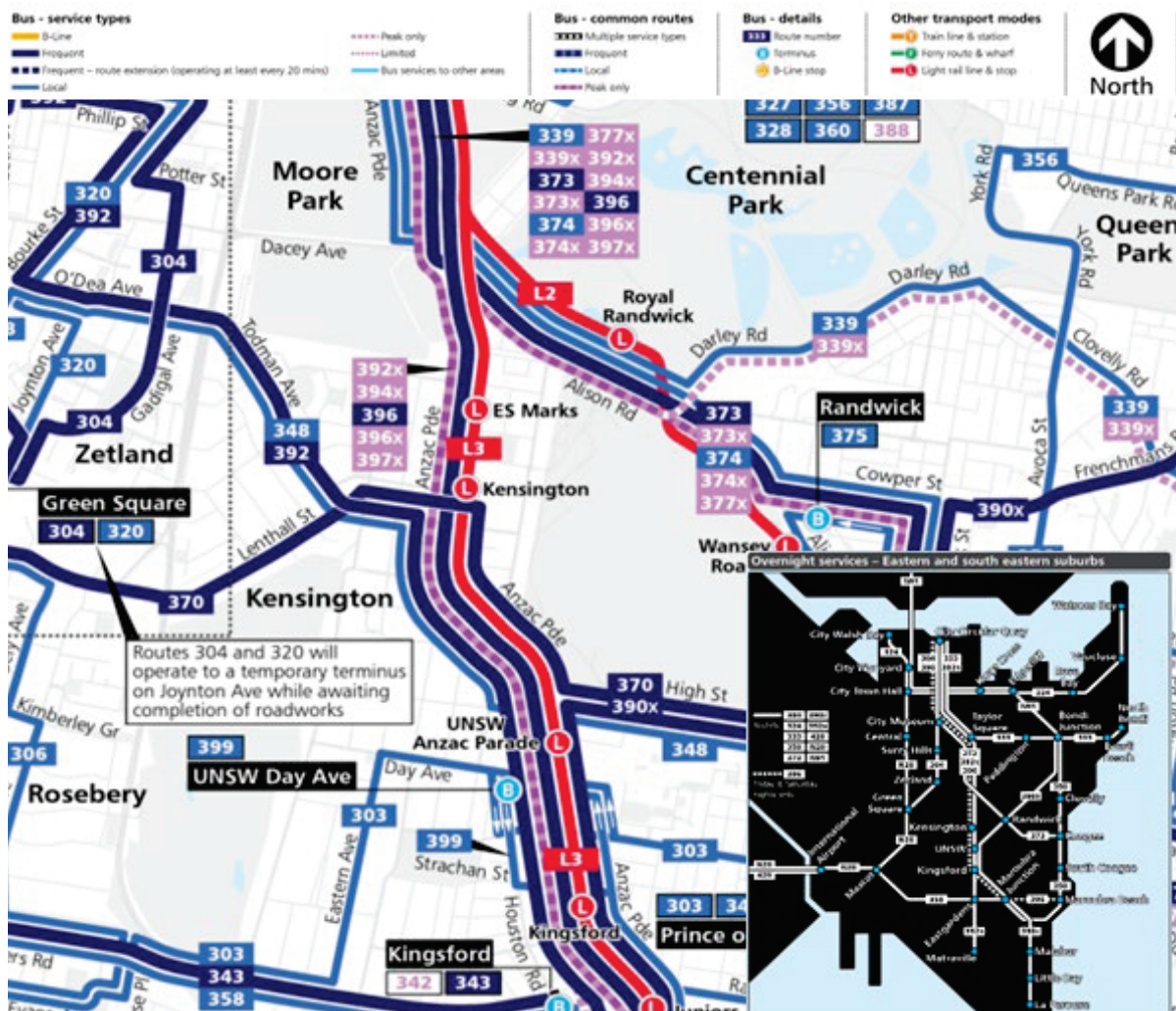


Figure 3: Eastern Suburbs Bus Network (Extract)¹

¹ Source: <https://transportnsw.info/travel-info/ways-to-get-around/bus/bus-operator-maps>

2.5 Road Network

2.5.1 Road Network Changes Since 2014

Since the 2014 Draft LATM study, there have been significant changes to the road network within the Kensington and West Kingsford study area. Major changes to the road network include:

L3 Light Rail

Significant changes to the road network have been made to account for the L3 Kingsford Light Rail Line. The L3 service runs on Anzac Parade through the study area, providing four stopping locations. With the introduction of the service, changes have been made to the Anzac Parade carriageway to accommodate the light rail, with the largest change coming from the removal of on-street parking. The carriageway had previously supported two lanes of traffic in either direction, as well as on-parking. With the introduction of the light rail service, it is understood that some 770 parking spaces were removed when light rail was extended to Kingsford and Randwick, with the light rail tracks in the middle of the carriageway, and two lanes on either side. There have also been adjustments and treatments to the intersections, in order to account for the light rail.

Kingsford to Centennial Park Walking and Cycling Improvements

Kingsford to Centennial Park Walking and Cycling Improvements includes three sections across the LATM study area. Sections are defined by:

- Section 1: Doncaster Avenue between Alison Road to Houston Road
- Section 2: Day Avenue and Houston Road between Anzac Parade and Barker Street
- Section 3: Houston Road and Gardeners Road, between Barker Street and Sturt Street

To date, Section 1 and 2 have been delivered, with section 3 currently on hold. Regarding the changes to traffic conditions, the completion of the first two stages has led to:

- Upgrade to traffic signals at the Todman Avenue/ Doncaster Avenue intersection.
- Raised wombat crossing at Doncaster Avenue near Darling Street
- Raised wombat crossing at Doncaster Avenue near Day Avenue
- Refuge crossing at Day Avenue near Houston Road
- Raised wombat crossing at Barker Street near Houston Road
- Raised wombat crossing at Houston Road near Barker Street
- At grade zebra crossing at Doncaster Avenue near Ascot Street



Figure 4: Kingsford to Centennial Park Walking and Cycling Improvements



2.5.2 Road Hierarchy

Table 3 details the road hierarchy for the study area network and the external major road network which they connect to.

Table 3: Road Hierarchy

Road Name	Description
Motorway	
Southern Cross Drive	Southern Cross Drive is a motorway which provides a connection from Sydney Airport towards Sydney CBD. Southern Cross Drive runs for approximately four kilometres and is a part of the greater M1 Motorway. The road runs along the western boundary of the Australian Park and has a posted speed limit of 80km/h. Motorists looking to connect to the study area, can do so via Link Road, which allows traffic to exit and access Lenthall Street. Southern Cross Drive ends near Lenthall Street at its northern end, where the Eastern Distributor begins, and General Holmes Drive on its southern end. This road is managed by TfNSW.
Eastern Distributor	The Eastern Distributor, part of the greater M1 motorway, starts at the northern end of Southern Cross Drive and connects to the Sydney Harbour Tunnel. The motorway provides north/south movement across the city of Sydney. Most of the motorway is subject to variable speed limits, which change depending on the traffic condition. Regarding the study area, motorists who are looking to connect on to the Eastern Distributor for northbound travel can do so via Link Road, which is accessible via Lenthall Street and Epsom Road, and for those travelling southbound can do so via Todman Avenue. There are no direct exits into the study area, for either south bound or north bound movements. This road is managed by TfNSW.
Arterial Road	
Alison Road	Alison Road, located on the northern tip of the study area, is bounded by Anzac Parade on the west and Beach Street at its eastern end. Alison Road crosses Randwick, allowing motorists to access Coogee Beach and its surroundings. The posted speed limit on Alison Road is 60km/h at its western section, where there are higher volumes of traffic, and drops down to 50km/h after the intersection at Botany Street. Between Anzac Parade and Avoca Street, Alison Road is managed by TfNSW. East of Avoca Street, Alison Road is managed by Randwick City Council.
Anzac Parade	Anzac Parade provides north/south movement through the suburbs of Little Bay, Chifley, Maroubra, Kingsford, Kensington, and Moore Park. It is bounded by Flinders Street in the north and Frenchman's Cove at its southern end, where the road loops back into itself. The number of lanes in the carriage way alter, with 2-3 lanes in either direction on the northern section, and one lane in either direction at its southern section. Between Wallace Street and Carlton Street, Anzac Parade is shared by the Sydney's Light Rail, with L2 and L3 services running. As the Parade runs through the centre of these suburbs, various land uses and attractions exist along its sections, most notably, Moore Park and its recreational provisions. This road is managed by TfNSW.
Gardeners Road	Gardeners Road, located on the southern boundary of the study area, is bounded by the intersection of Bunnerong Road/ Anzac Parade at its eastern end, and the M5 interchange on its west. The posted speed limit is 60km/h, with the road having a 2-3 lane two-way carriageway depending on the section. There is a total of 10 local roads within the study area which can be accessed via Gardeners Road. Most of the traffic which looks to run through the study area off of Gardeners Road tends to access Anzac Road via Doncaster Avenue or Day Avenue. This road is managed by TfNSW.
South Dowling Street	South Dowling Street, bounded by Todman Avenue on the South, and Oxford Street at the north, is located above the Eastern Distributor. Motorists on South Dowling Street can access the study area via Todman Avenue. South Dowling Street has a two-lane two-way carriageway



Road Name	Description
	with a posted speed limit of 60km/h. Significant land uses along its section include Supa Centa and Moore Park. This road is managed by TfNSW.
Distributor Roads	
Barker Street	Barker Street is classified as a distributor road up until the intersection with Anzac Parade (outside of the study area). Barker Street within the study boundary is between Anzac Parade and Cottenham Street. The carriageway is an unmarked road, providing for one-lane two-way traffic and on street parking. The road has a 50km/h posted speed limit, as well as a 40km/h school zone around Randwick Girls High School. The road provides access to significant land uses including Prince of Wales Hospital and UNSW campus. The majority of traffic from Barkers Street, west of Anzac Parade, heads towards Gardeners Road via either Houston Road or Eastern Avenue. This road is managed by Randwick City Council.
Epsom Road	Bounded by Lenthall Street to its east and Botany Road to its west, Epsom Road provides access to Link Road and thus the Eastern Distributor. As it is bounded by Botany Road and provides access/exit off of the Eastern Distributor, Epsom Road receives high levels of traffic which it distributes off to its surroundings. Epsom Road has a posted speed limit of 40km/h for most of its section. This road is managed by Randwick City Council.
Lenthall Street	Lenthall Street is bounded by Epsom Road to the west and Todman Avenue to the east. The carriageway is a one-lane two-way street, with a speed limit of 50km/h. As it connects to Epsom Road, Lenthall is a key route which sees high levels of traffic. The overwhelming majority of traffic which enters the study area via Lenthall Road, near Epsom Road, travels through the area via Lenthall Street and Todman Avenue in order to connect onto Anzac Parade. This road is managed by Randwick City Council.
O'Dea Avenue	O'Dea Avenue is bounded by Bourke Street at its western end and the intersection o of Todman Avenue/ Dowling Street to the east. O'Dea Avenue provides a direct route into the City of Sydney, accessing Zetland and Waterloo. This road is managed by City of Sydney Council.
Todman Avenue	Todman Avenue is a key distributor and is bounded by Dowling Street to the west and Doncaster Avenue to the east. Todman Avenue intersects with Anzac Parade toward the eastern extent. Todman Avenue is a key connection between the recently opened Kingsford to Centennial Park Cycleway and Waterloo Cycleway. The road is largely two lanes in both directions with a 50 km/h posted speed limit and a 40km/h school zone towards Doncaster Avenue for Kensington Public School. This road is managed by Randwick City Council.

Key Local Roads

The roads listed below have been identified as key roads within the study area. Whilst they are classified as 'local roads' they see significant traffic volumes when compared to other local streets in the area. These roads are susceptible to rat-running and increased traffic speeds which impact safety and well-being. They are:

Addison Street, Boronia Street, Cottenham Avenue, Day Avenue, Doncaster Avenue, Duke Street, Houston Road, and Tunstall Avenue.

2.5.3 Road Speeds

Most of the road network within the Kensington and West Kingsford study area has a posted speed limit of 50km/h, as seen within Figure 6. Roads within the study area with a posted limit greater than 50 km/h include Gardeners Road and the northern extent of Anzac Parade which have posted speed limits of 60km/h. Raleigh Park Estate observes a reduced speed limit of 40km/h, with some areas exhibiting 10 km/h posted speed limits. Additionally, a new 40km/h zone has been installed along the northern part of Doncaster Avenue and in associated side streets.



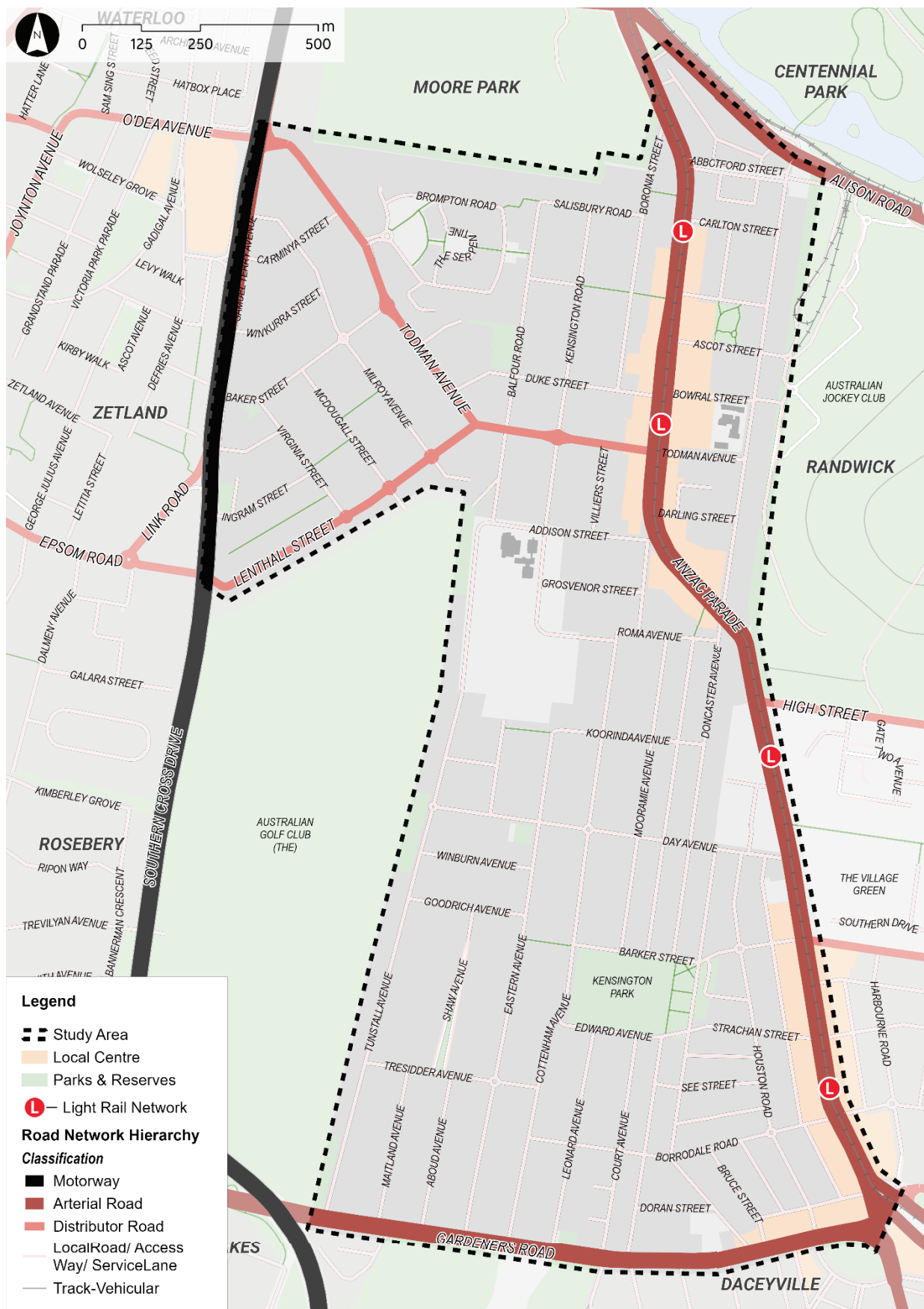


Figure 5: Road Network Hierarchy





Figure 6: Posted Speed Limits Within and Surrounding the Study Area



2.5.4 School Zones

Within the Kensington and West Kingsford study area, there are three school zones. School zones impact road conditions reducing the posted speed limit to 40km/h during operation. School zones within the study operate from Monday to Friday during school terms between the periods of 8-9:30 am in the morning peak and from 2:30-4 pm in the evening peak. Reduced speed limits are applied along roads bounding and within proximity to schools. School zones within the study area, as shown in Figure 8 include:

- **Kensington Public School:** Todman Avenue, Bowral Street, Doncaster Avenue, Ascot Street
- **Our Lady of the Sacred Heart College/ Our Lady of the Rosary Catholic Primary School:** Tunstall Avenue, Kensington Road, Addison Street, Grosvenor Street, and Balfour Road
- **St Spyridon College – Junior Campus:** Gardeners Road, Doran Street, and Bruce Street

2.5.5 Traffic Controls and Signals

Traffic control devices found within the study area include both signalised controls and roundabouts. Traffic signals were not found to be widespread throughout study area, with the majority of signalised intersections congregated on main roads and entry points into the area such as Todman Avenue/ Eastern Distributor and Doncaster/ Allison Road. A total of 20 signalised intersections exists within the study area, of which 6 and 12 interact with Gardeners Road and Anzac Parade respectively. Since the 2014 Draft LATM, two new signalised controls have been installed on Anzac Parade as part of the Light Rail upgrades.

Other traffic controls were found with less of a frequency, with the study area containing a total of 13 roundabouts. Although roundabout locations were a lot more dispersed through the area, congregations of these traffic controls still existed on certain roads such as Lenthall Street and Day Avenue. Changes to roundabout locations since the 2014 Draft LATM include the removal of the roundabout on Barker/Houston Street and Day Avenue/Doncaster Avenue.

Figure 8 provides an overview of the locations of traffic devices within the study area.

2.5.6 Resident Permit Parking Zones

To control parking across the Randwick LGA and improve parking availability for residents, the RCC operates a resident permit parking scheme, which allows residents to park their vehicles for longer than the signposted time limit within specific parking zones.

The study area contains a total of four resident parking areas, which include KF2, KN1, KN2, and KN3. As highlighted in Figure 7, within each permit parking area, the provision of applicable resident permit parking zones vary. Of all the parking areas within the study area, KN2 provides the largest capacity of resident parking zones followed by KN1 and KF2, and KN3 providing the least.



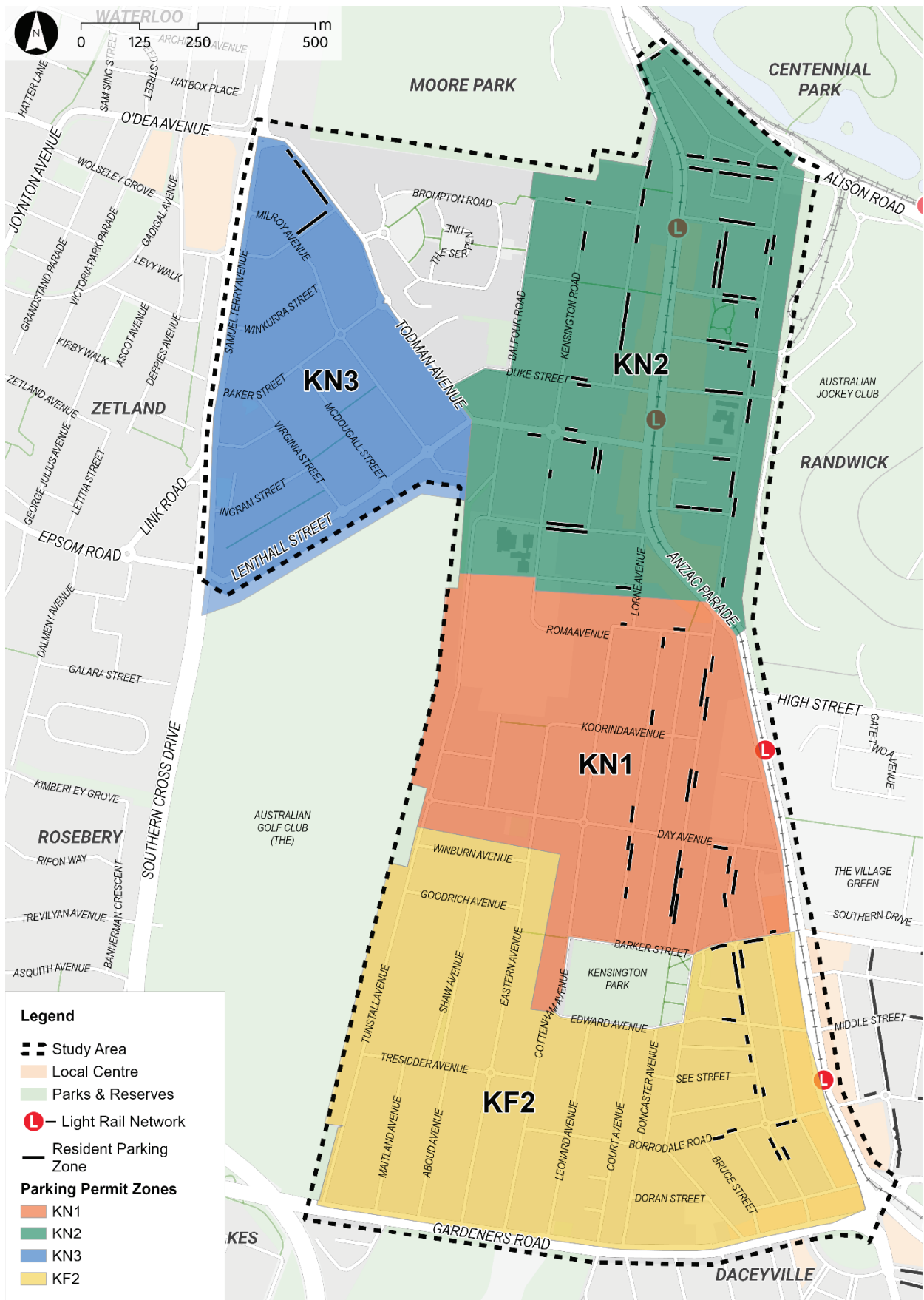


Figure 7: Resident Permit Parking Zones for KWK





2.5.7 Kensington 40km/h Area

RCC has implemented a 40km/h speed area in Kensington for the area shown in Figure 9 to create safer communities by reducing traffic speeds. Land uses in the area are predominantly scheduled as R3 medium density, with the remainder scheduled as E2 commercial centre. As the speed zone is centrally located within the strategic core of Kensington, it is within the vicinity of several trip generators, including, Kensington Town Centre, UNSW Sydney Campus, Light Rail Stations, and Royal Randwick Racecourse. These trip generators attract both vehicular traffic as well as pedestrian, which creates conflicts between the two. This is highlighted by that fact that a total of 13 crashes occurred during the period of January 2019 – December 2023, of which 11 related to injury and three involved pedestrians, and two involved cyclists.

As part of the Road Risk Assessment (iRAP) undertaken by Council, individual roadways were assessed for risk, based on road features which can influence traffic conditions. With the implementation of a 40km/h zone, star rating assessment saw improvements across all categories, particularly walking and cycling. Alison Road (State Road) and Anzac Parade (State Road) have not been included in the speed zone due to their traffic levels and function.

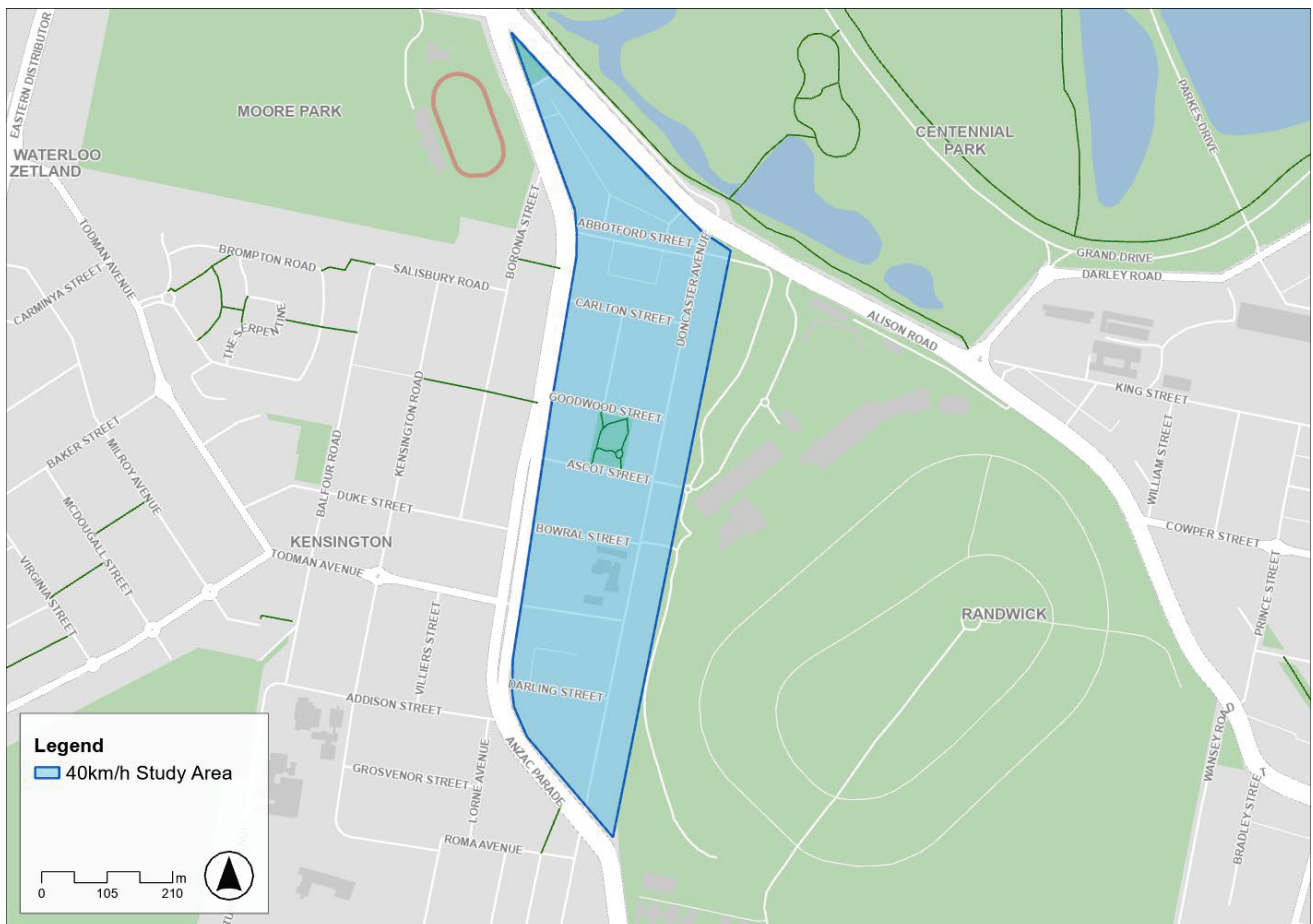


Figure 9: Kensington 40km/h Speed Zone



2.6 Crash Analysis

Between the period of January 2019 to December 2023, there were a total of 169 crashes within the study area. Of the 169 crashes there were 43 serious injuries and no fatalities. The distribution of crashes over the analysis period is shown in Figure 11. There was a sustained drop from 2019 to 2021, attributed to the significant shift in travel patterns which arose during the pandemic.

Of these crashes, 24 involved pedestrians and 38 involved cyclists. The 62 crashes involving active transport resulted in 23 pedestrians and 31 cyclists being injured (serious or moderate). Figure 11 and Figure 12 outline the specific crash locations.

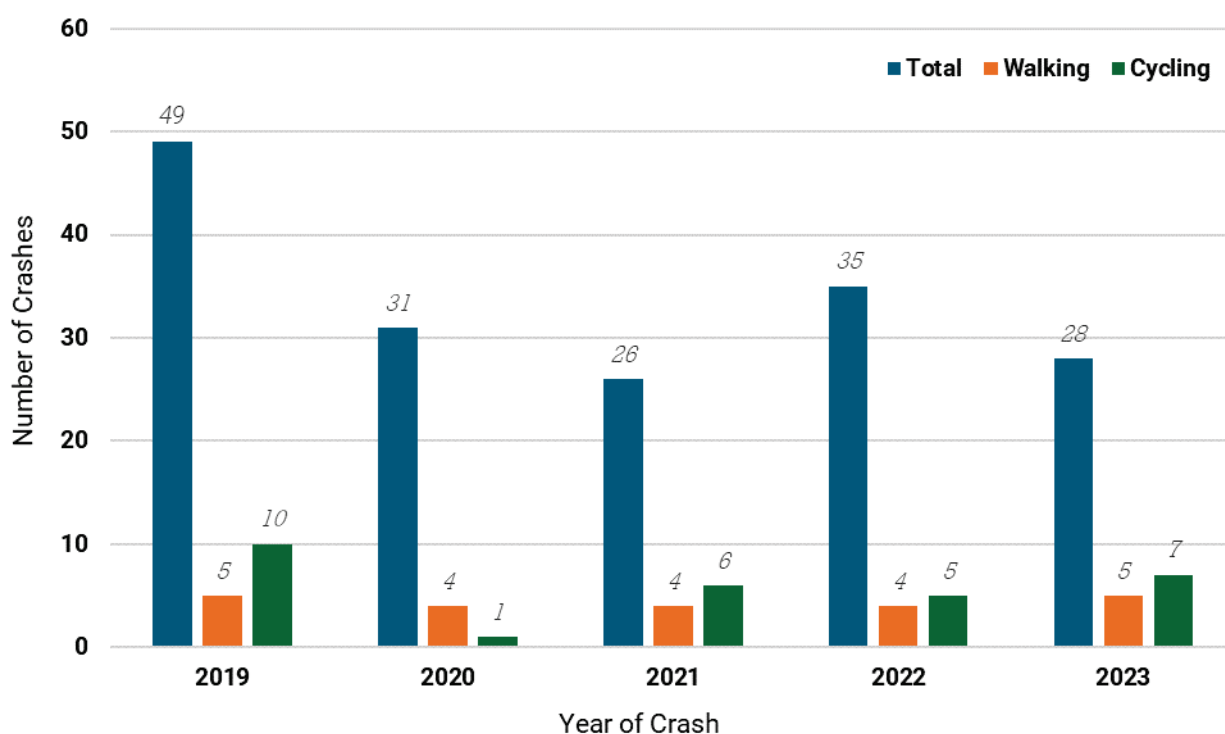


Figure 10: Total Crashes (2019 – 2023)

Crash Hotspots

The following outlines key locations for crashes on local roads within the LATM Kensington and West Kingsford study area:

- Intersection of Todman Avenue/ South Dowling Street
- Intersection of Todman Avenue/ Kensington Road
- Intersection of Todman Avenue/ Anzac Parade
- Intersection of Doncaster Avenue/ Day Avenue
- Intersection of Gardeners Road/ Anzac Parade
- Barker Street between Anzac Parade and Houston Road





Figure 11: Crash Density Heat Map (Crashes 2019 – 2023)





Figure 12: Pedestrian and Bicycle Crash Map (Crashes 2019 – 2023)



3 Review of the 2014 LATM

3.1 Background

In 2013, Randwick City Council engaged consultants ARUP to prepare an LATM study for the Kensington and West Kingsford Area, the extent of which forms the same study area boundary shown in Figure 1. The 2014 LATM study was completed but was not furthered due to a number of factors, including the construction of the L3 Light Rail line. This LATM is completed but not furthered on the back of the 2014 LATM, to ensure the treatment recommendations proposed remain relevant and provide the greatest benefit to the local community. For reference purposes, the 2014 LATM study has been attached in Appendix A of this study. The previous LATM study covered the following:

- Introduction
- Study area characteristics
- Background data (traffic flows, origin-destination data, speed data, crash data, utility locations)
- Sydney CBD and South East Light Rail implications
- Technical data and analysis
- Community consultation
- Draft LATM scheme recommendations

This chapter will provide a review of the background data, community consultation and draft LATM scheme recommendations.

3.2 Proposed Treatments

The 2014 LATM study recommended a series of traffic related treatments. The treatments pertained to different traffic/transport infrastructure to reduce speed across the study area and disincentivise through traffic in local streets. The proposed location and type of treatment is outlined in Figure 13.



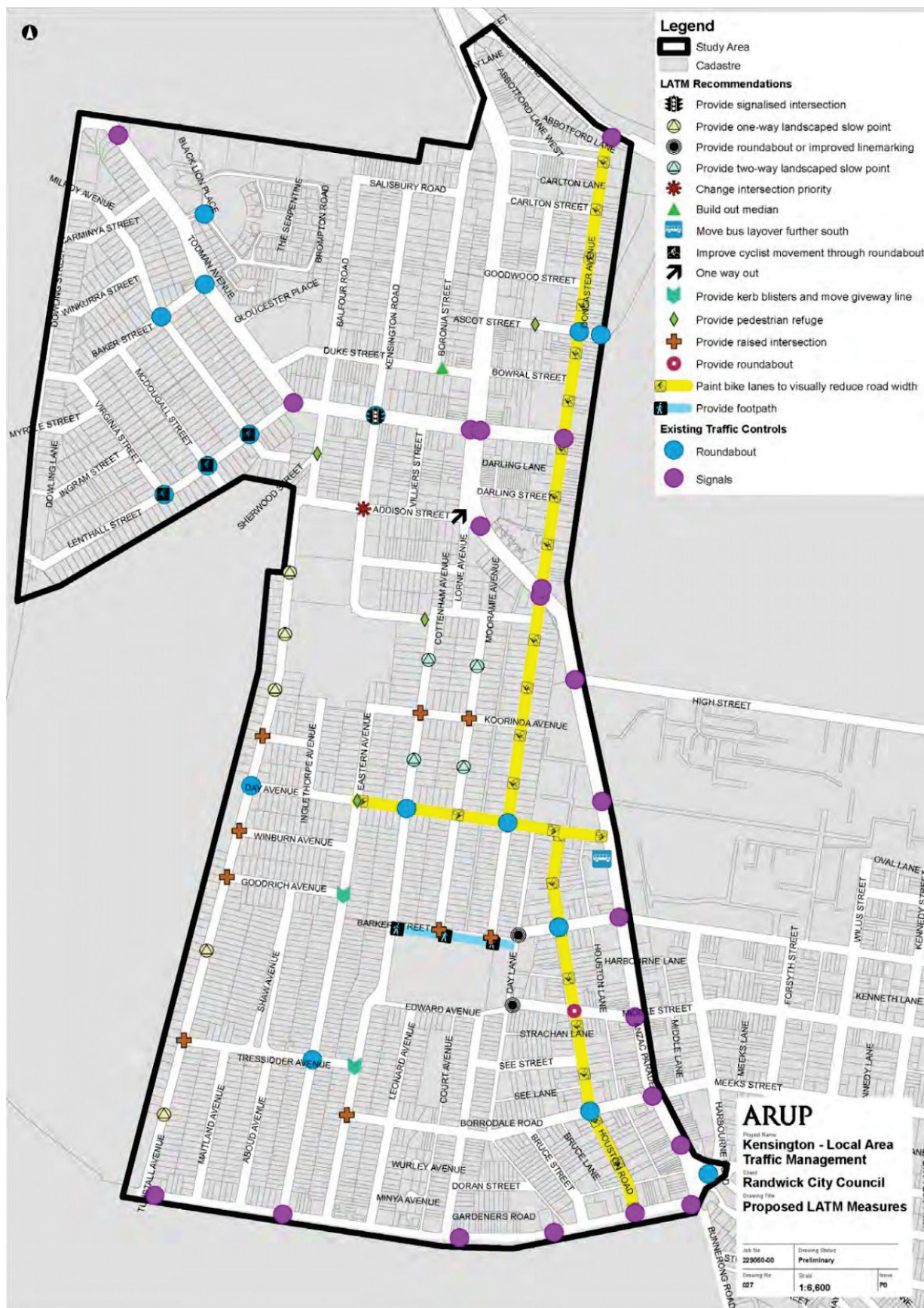


Figure 13: Proposed LATM Recommendation per 2014 Kensington and West Kingsford Draft LATM



3.2.1 Application of Proposed Treatments

Table 4 outlines all the proposed treatments within the 2014 Draft LATM. The table highlights the type, location, and its implementation status.

Table 4: Recommendations of 2014 Draft LATM

Treatment type	Location	Implemented
Build out median	Duke Street, near Boronia Street	Yes
Change intersection priority	Intersection of Kensington Road and Addison Street	No
Improve cyclist movement through roundabout	Intersection of Lenthall Street and McDougall Street	No
Improve cyclist movement through roundabout	Intersection of Lenthall Street and Milroy Avenue	No
Improve cyclist movement through roundabout	Intersection of Lenthall Street and Virginia Street	No
Move bus layover further south	Anzac Parade, near Day Avenue	No
One way out	Addison Street, to Anzac Parade	No
Painted bike lanes	Day Avenue, between Eastern Avenue and Anzac Parade	Yes
Painted bike lanes	Doncaster Avenue, from Alison Road to Day Avenue	Yes
Painted bike lanes	Houston Road, between Day Avenue and Gardeners Road	Yes
Provide footpath	Barker Street, between Day Lane and Cottenham Avenue	No
Provide kerb nibs and move give-way line	Intersection of Eastern Avenue and Goodrich Avenue	No
Provide kerb nibs and move give-way line	Intersection of Tresidder Avenue and Eastern Avenue	No
Provide one-way landscaped slow point	1 Tunstall Avenue	No
Provide one-way landscaped slow point	36A Tunstall Avenue	No
Provide one-way landscaped slow point	85 Tunstall Avenue	No
Provide one-way landscaped slow point	110 Tunstall Avenue	No
Provide one-way landscaped slow point	Tunstall Avenue, between Goodrich Avenue and Tresidder Avenue	No



Treatment type	Location	Implemented
Provide pedestrian refuge	Ascot Street, between Doncaster Avenue and Anzac Parade	No
Provide pedestrian refuge	Day Avenue, near Eastern Avenue	No
Provide pedestrian refuge	Roma Avenue, near Cottenham Avenue	Yes
Provide pedestrian refuge	Sherwood Street, near Balfour Street	No
Provide raised intersection	Intersection of Cottenham Road and Borrodale Road	No
Provide raised intersection	Intersection of Doncaster Avenue and Bake Street	No
Provide raised intersection	Intersection of Koorinda Avenue and Cottenham Avenue	No
Provide raised intersection	Intersection of Koorinda Avenue and Mooramie Avenue	No
Provide raised intersection	Intersection of Mooramie Avenue	No
Provide raised intersection	Intersection of Tunstall Avenue and Goodrich Avenue	No
Provide raised intersection	Intersection of Tunstall Avenue and Tedwin Avenue	No
Provide raised intersection	Intersection of Tunstall Avenue and Tresidder Avenue	No
Provide raised intersection	Intersection of Tunstall Avenue and Winburn Avenue	No
Provide roundabout	Intersection of Houston Road and Strachan Street	No
Provide roundabout or improved marking	Intersection of Day Lane and Strachan Street	No
Provide roundabout or improved marking	Intersection of Day Lane and Barker Street	No
Provide signalised intersection	Intersection of Todman Avenue and Kensington Road	No
Provide two-way landscaped slow point	9 Cottenham Avenue	No
Provide two-way landscaped slow point	23 Cottenham Avenue	No
Provide two-way landscaped slow point	15 Mooramie Avenue	No
Provide two-way landscaped slow point	43 Mooramie Avenue	No



4 Community Engagement

To understand the needs of the community within the study area, a period of community consultation was undertaken. Community engagement was conducted via Social Pinpoint, an online interactive mapping platform through Council's Have Your Say webpage. Community engagement was open from 11th September to 24th October 2023. The survey provided the public with opportunities to raise concerns and identify opportunities regarding transport and traffic within the study area. A total of 667 submissions from 159 unique contributors were received during the community engagement. Further information on the process of engagement can be found at the following [link](#)².

Online engagement received a total of 667 submissions from 159 unique contributors. Kensington residents made up the largest proportion of responses with 61 (38%) contributors, followed by Kingsford with 41 (26%). 34 (21%) respondents resided in other suburbs located across the Randwick LGA with Maroubra (9), Randwick (6) and Matraville (3) accounting for the largest proportion. 23 (14%) respondents either skipped or did not respond to the question as seen in Figure 14.

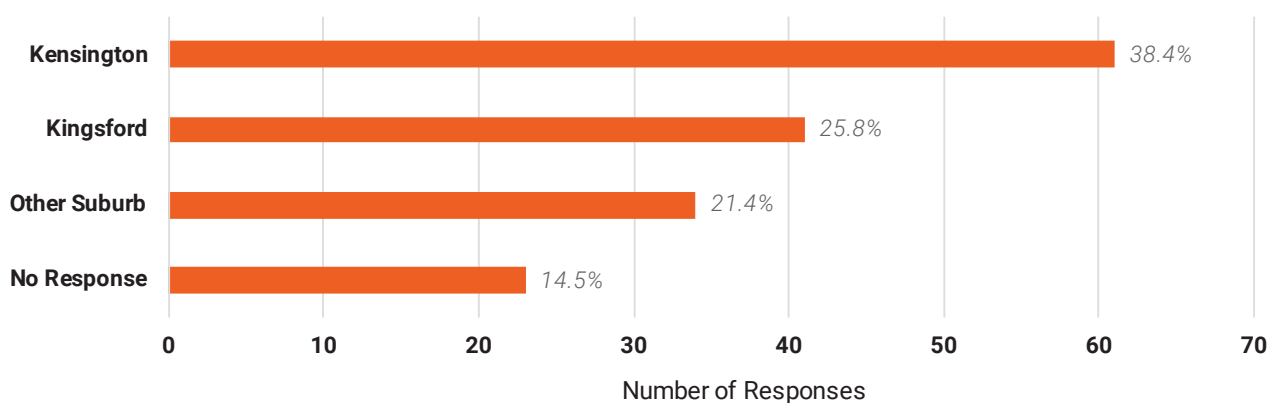


Figure 14: Suburb location of participants

Respondents were given the opportunity to identify areas of Randwick City in which they held an interest, as outlined in Figure 15. The area of *Traffic and Transport* received the highest proportion of those who responded to the question with a 14 per cent share.

Other key areas included *Planning and Development* (12%), *Parks and Open Spaces* (12%), and *New and Future Projects* (10%).

² Link: <https://www.yoursay.randwick.nsw.gov.au/kensingtonlatm/maps/kensingtonlatm>



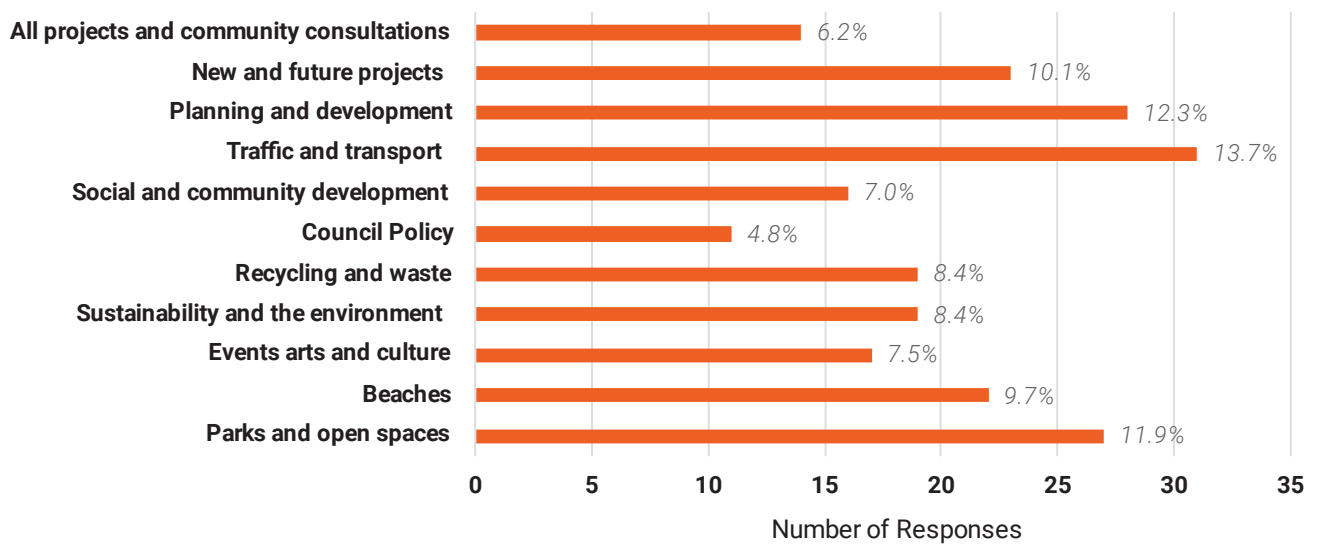


Figure 15: Areas of interest

Overall, the greatest number of submissions received were related to traffic ideas and issues with 45 per cent of responses. This was followed by Cycling and Walking with 20 per cent and 19 per cent respectively. Public transport received the lowest proportion of responses with a two per cent share.

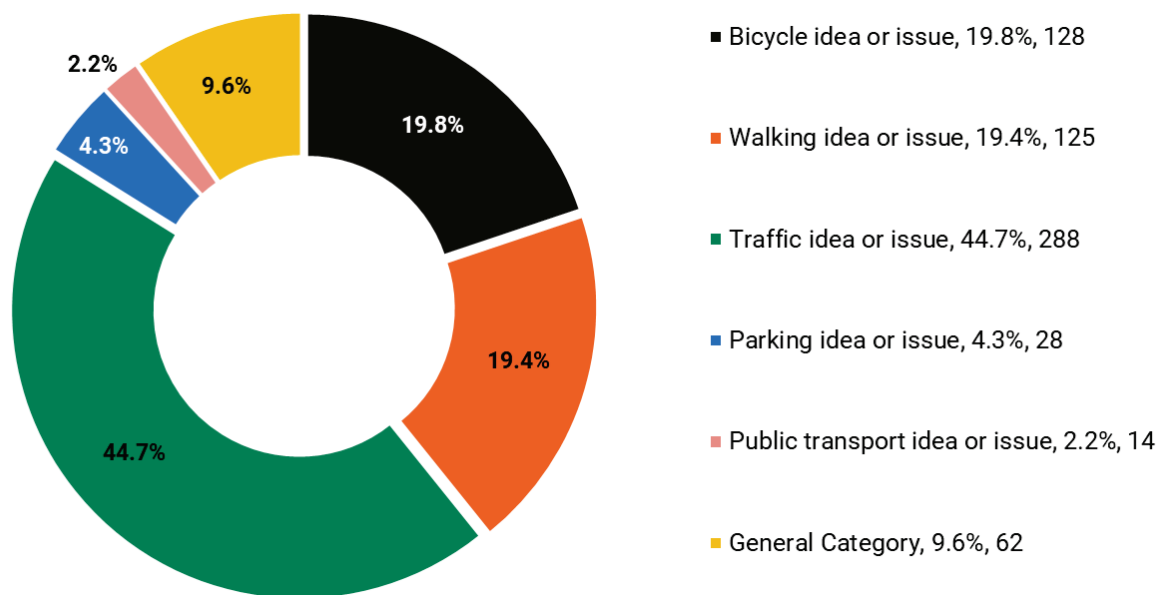


Figure 16: Responses by Category

To assess the application of data further, each submission was reviewed and defined as either an idea or an issue as the original submission did not ask respondents to choose. Submissions that included recommendations for improvement or change were labelled as ideas, while submissions that only highlighted issues were labelled as issues. The summary of issues and ideas per category is shown in Figure 17.

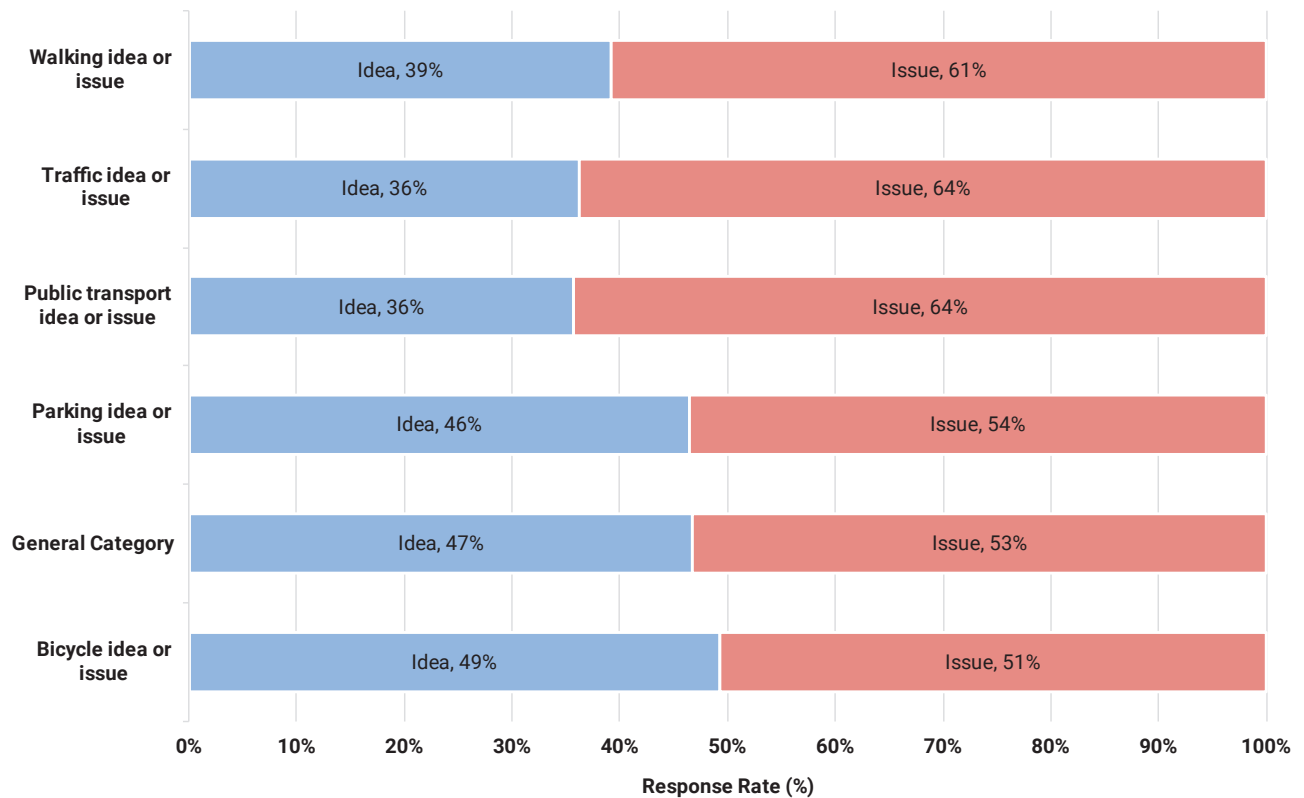


Figure 17: Responses as per Category and Idea or Issue

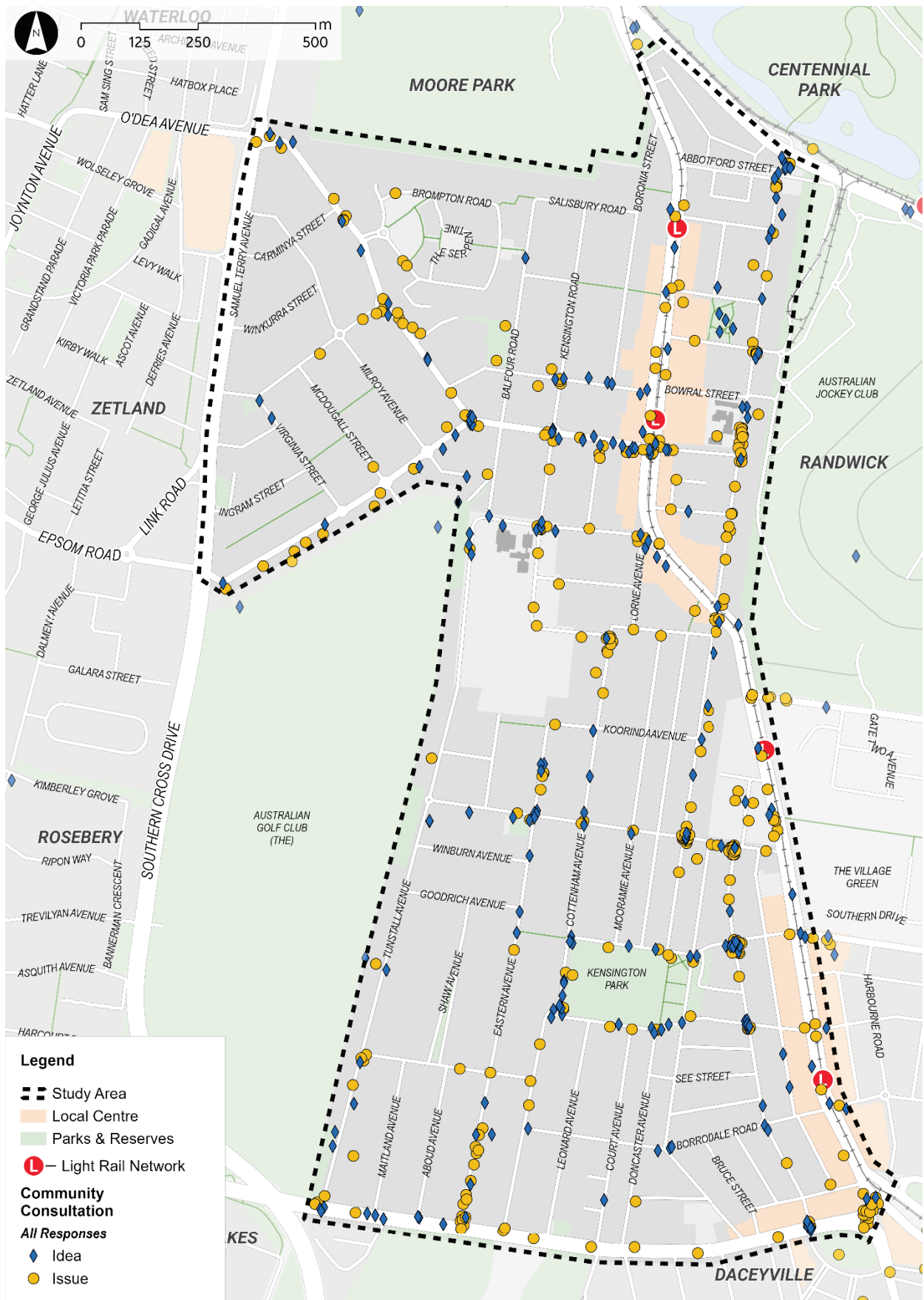


Figure 18: Community Consultation Responses (All)

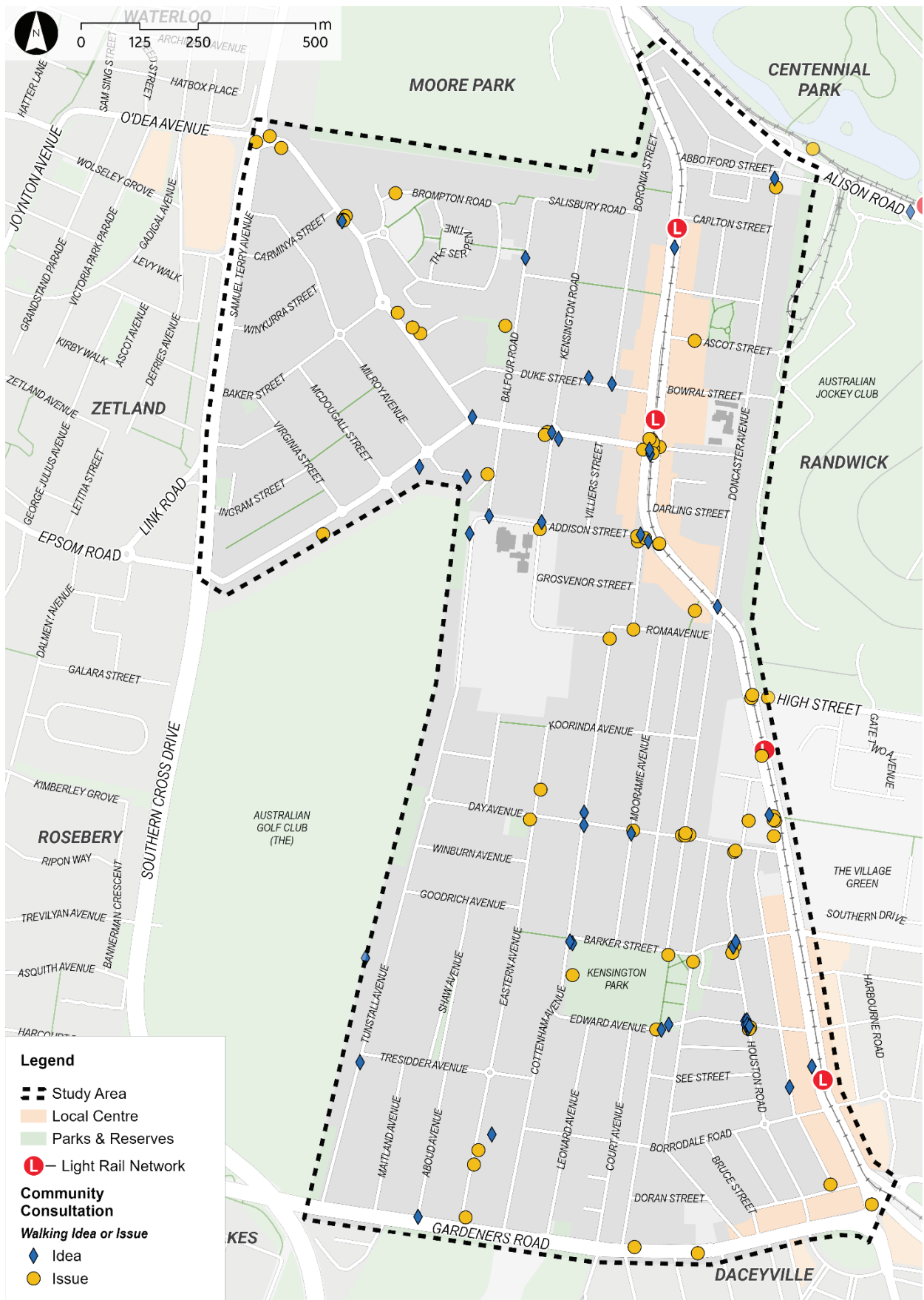


Figure 19: Community Consultation Responses (Walking)

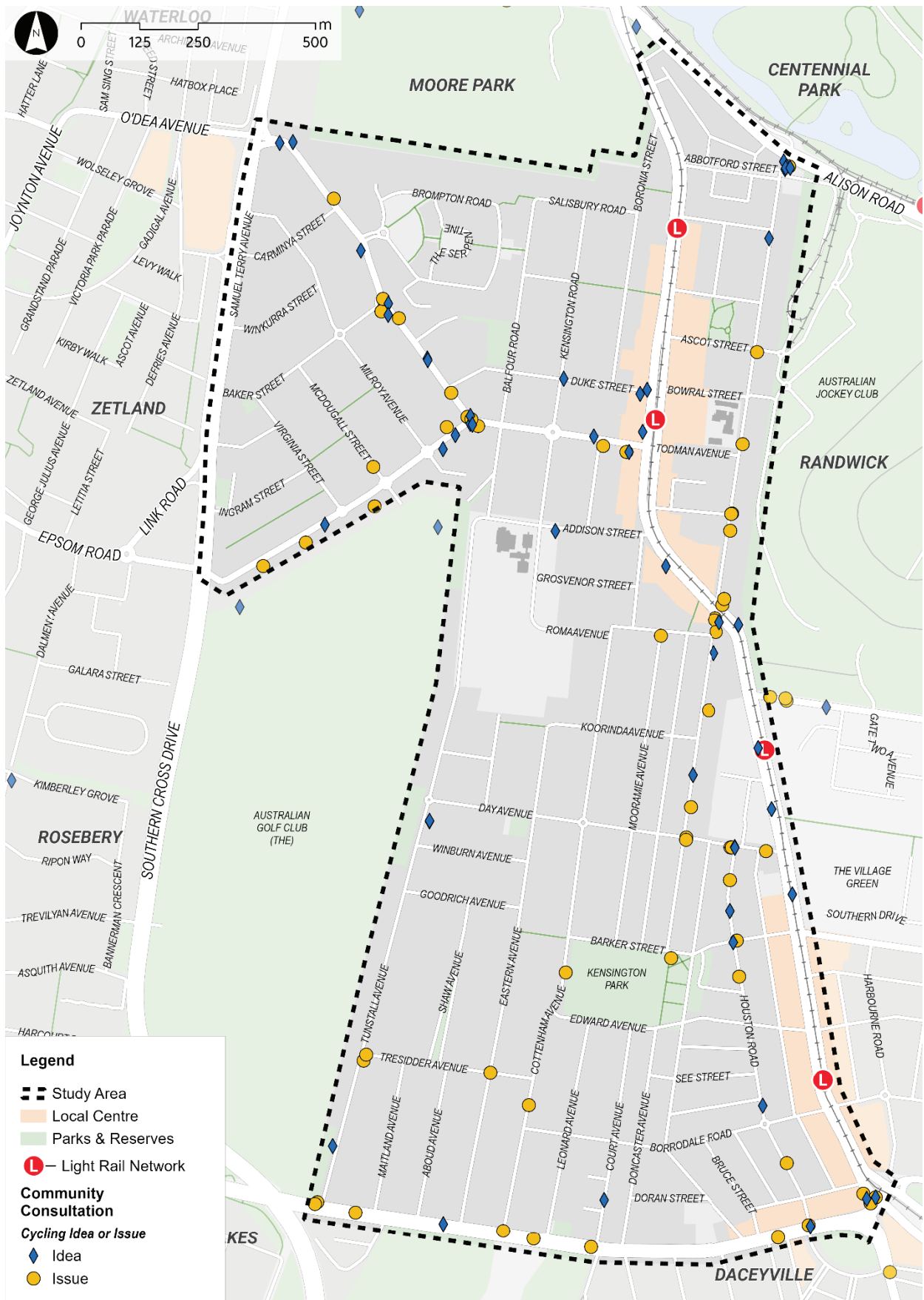


Figure 20: Community Consultation Responses (Cycling)



5 LATM Guiding Principles

The following section covers the principles which have guided the actions recommended in this LATM. The principles have been derived from the Austroads Guide to Traffic Management Part 8: Local Street Management, which provides a framework for establishing an LATM.

5.1 Consider Placement and Nature

The placement and nature of traffic devices was determined by assessing a set of different factors within the network context. Key factors which have been considered and influenced the treatment recommendations include:

Traffic volume: Roads with high traffic volumes require careful consideration to avoid congestion and ensure safety. Devices like road humps and narrowing are more suitable for local streets with lower traffic volumes, where the primary goal is to reduce speeds and enhance safety for residents and pedestrians

Vehicle speeds: Treatments are often placed based on data analysis of 85th percentile speeds, aiming to reduce excessive speeding in specific areas. The objective is to create a consistent speed environment that enhances safety for all road users

Traffic characteristics (rat-running): The LATM also aims to address the issue of vehicles using local roads to avoid signalised intersections or main roads. By implementing appropriate traffic calming measures, the LATM seeks to discourage "rat-running" and ensure that local roads serve their intended purpose of providing access to local destinations rather than acting as shortcuts for through traffic

Road function: The function of the road also influences treatment selection. For instance, residential streets prioritise safety and liability, making them suitable candidates for various traffic calming measures. In contrast, collector, and arterial roads focus on moving traffic efficiently, thus requiring different approaches to manage speeds without compromising traffic flow.

Road users: The LATM considers the diverse needs of all road users, including cyclists, pedestrians, buses, and emergency vehicles. For example, where road humps are necessary on bus routes, flat-top humps or cushions are preferred to allow buses to straddle them comfortably, minimising disruption to public transport services. This approach ensures that traffic calming measures do not negatively impact essential services.

5.2 Consider Speed-Based Design Principles

A big influence in the determination of treatments is the speed of vehicles on the existing road infrastructure. The purpose of speed-based design principles is to create a road environment that naturally encourages desired speed behaviours through the strategic placement of traffic calming devices.

Speed-based design takes into consideration the 85th percentile speed, which is the speed at or below which 85% of the traffic is moving. Treatments are targeted to address areas where this speed exceeds the safe or desired limit. By focusing on the 85th percentile speed, the design ensures that most drivers are influenced by the traffic calming measures, thereby enhancing overall road safety.



The spacing of devices is critical in achieving the desired outcome of reduced and consistent speeds. If treatments are spaced inappropriately, it may lead to disappointing outcomes as described in the Austroads Guide to Traffic Management: Part 8 – Local Street Management (pg. 37)”

- *The localised ‘draw down’ effect that the device has on the speed profile may not sufficiently change the street speed.*
- *The changed speed profiles at each successive device interact with each other; this interaction should determine the spacing of the devices, taking into account the variability in speeds that this might lead to.*

To avoid inefficient treatments, a holistic approach has been undertaken in the recommendation of LATM treatments. As recommended in the Guide to Traffic Management: Part 8, roads have been looked at in their entirety, including features like surrounding land uses, traffic devices, road geometry, and more.

5.3 Developing Plans and Strategies

The preparation of the LATM has incorporated development strategies as outlined in Austroads Guide to Traffic Management: Part 8 – Local Street Management (pg. 41)

- *Does the scheme meet the adopted objectives and strategies?*
- *Is adequate circulation and access maintained for emergency services and larger vehicles that will need to operate in the area?*
- *Will there be any possible negative impacts in adjacent areas?*
- *Will the scheme, by its appearance and physical effects, induce driver behaviour that is consistent with the objectives?*
- *Does the street become more integrated with adjacent land uses and activities?*
- *Will there be a net improvement in environmental quality?*
- *Is a genuine range of plans, representing significantly different approaches, being prepared? If so, this will provide the opportunity for fresh insights to emerge, as well as avoid putting ‘all the eggs in one basket’ and risking the rejection of the whole purpose of the scheme.*
- *How does the scheme rate in terms of its safety, particularly for active road users such as pedestrians and cyclists?*



6 LATM Treatments

The following sections details LATM treatments that have been considered as approaches to traffic management in this study. The Austroads Guide to Traffic Management Part 8: Local Area Traffic Management defines four types of group measures. These include:

- Vertical Deflection Devices
- Horizontal Deflection Devices
- Diversion Devices
- Signs, Linemarking and Other Treatments

Vertical Deflection Devices

As defined by Austroads: *“Vertical deflection devices force vertical changes in the ride alignment or travel path of a vehicle introduced as the result of a physical feature of a roadway. This deflection generally achieves a reduction in vehicle speeds as drivers attempt to avoid discomfort when travelling over the LATM measure.”*

Horizontal Deflection Devices

As defined by Austroads: *“Horizontal deflection devices are designed to change the horizontal course or path of a vehicle as the result of a physical feature of a roadway. This deflection generally discourages short-cutting or through traffic to a varying extent and may achieve a significant reduction in traffic volume, speed and conflicts.”*

Diversion Devices

As defined by Austroads: *“Diversion devices are used to redirect traffic, typically through the use of physical obstructions in the roadway supplemented by regulatory signs. These measures obstruct specific vehicle movements typically at intersections or mid-block locations to discourage short cutting or through traffic, which may reduce conflicts and vehicle speeds.”*

Signs, Linemarking and Other Treatments

As defined by Austroads: *“Signs and linemarking can be used to regulate traffic movements or calm traffic. It may discourage speeding, prevent vehicle conflicts, and prevent through traffic from short-cutting along a street. The primary aims of signs and linemarking are to aid in the safe and orderly movement of traffic. They may contain instructions that the road user is required to obey, or they may be used to impart information. Signs are typically categorised into one of the following categories:*

- *regulatory – to indicate legal requirements*
- *guide – to inform and advise road users of directions, distances and destinations*
- *warning – to warn road users of unusual or unexpected conditions*
- *temporary – to control, warn and guide road users safely through, around or past roadworks or other temporary features.”*



6.1 Vertical Deflection Devices

Road Hump



Figure 22: Road Hump

A road hump is a speed reduction device in the form of a raised curved profile extending across the roadway. There are two types of road hump which are the Sinusoidal profile hump and the Watts profile hump. Sinusoidal profile humps are more forgiving to cyclists whilst Watts profile humps is deemed on have a greater effect on drivers.

Road Cushion

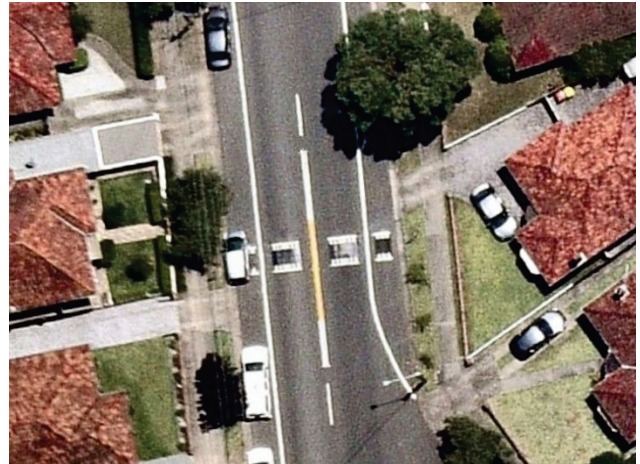


Figure 23: Road Cushion

A road cushion is a type of road hump that covers only part of the roadway. It is designed to be more accommodating to cyclists, buses, and commercial vehicles compared to a standard full-width road hump. Road cushions can also be used temporarily during special events or in roadwork zones.

Raised Pedestrian Crossing (Wombat)

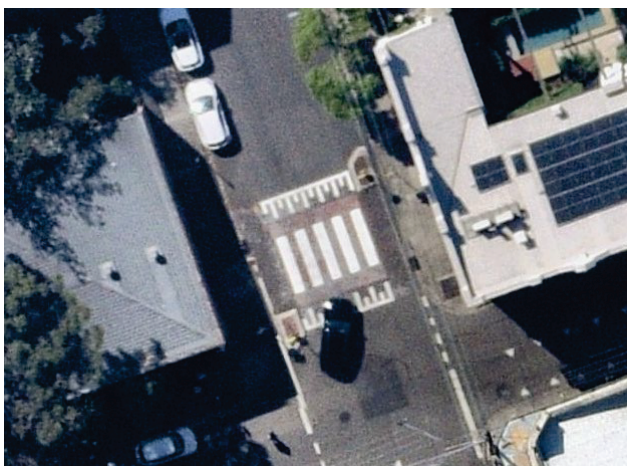


Figure 24: Raised Pedestrian Crossing (Wombat)

Wombat crossings are raised crossings which give pedestrians the right of way. As a traffic management tool, raised crossings are used to reduce speeds, as the raised profile forces vehicles to slow down.

Raised Intersection

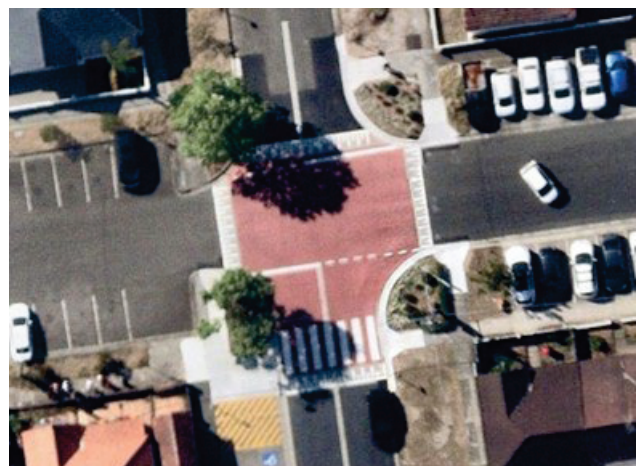


Figure 25: Raised Intersection

A raised intersection increases the height of the road. The purpose of this treatment is to slow vehicles approaching intersections, as well as vehicles turning into the carriageway.

6.2 Horizontal Deflection Devices

Lane Narrowing/ Kerb Extension



Figure 26: Lane Narrowing/ Kerb Extension

Kerb nibs, or kerb extensions, are primarily used to reduce road widths, in order to slow traffic and improve pedestrian sight lines. By reducing the width of a carriageway in a particular spot, generally where there is poor sight distance for pedestrians, drivers become more attentive and innately slow down.

Median

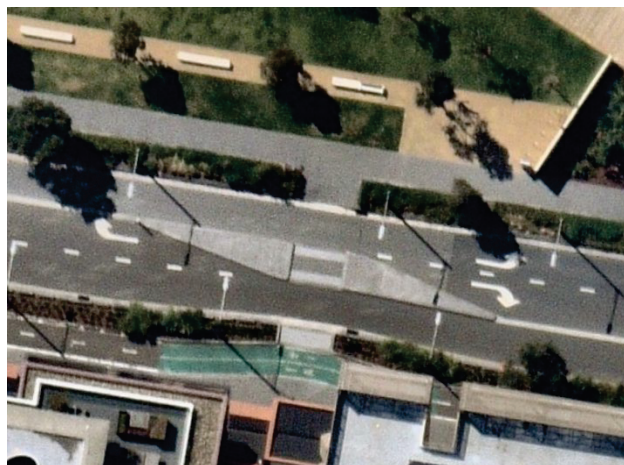


Figure 27: Median

Medians, also commonly known as a pedestrian island or mid-block, is a traffic calming measure that allows pedestrians to cross one direction of vehicle traffic at a time, providing a safe space in the middle of the road. Refuges are particularly effective in aiding the mobility of pedestrians on multi-lane roads.

Roundabout



Figure 28: Roundabout

Roundabouts are traffic management devices which help control intersections with three legs or more. Roundabouts, unlike traffic signals, control traffic through road rules, as drivers give way to vehicles on their right. Roundabouts help regulate traffic speeds, as they force vehicles to slow down upon approach.

Slow Point (One-way/ Two-way)

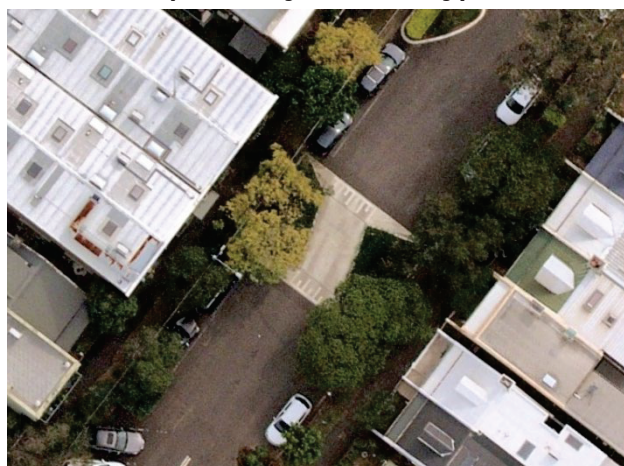


Figure 29: Slow Point - Single Lane / Dual Lane (As Two-Way Traffic Is Permitted)

Slow points are used to reduce vehicle speeds by allowing only one vehicle to pass at a time. They often use physical barriers such as kerbs or bollards, to create a pinch point. This forces drivers to be more alert, reducing speeds as vehicles may need to come to a complete stop.



6.3 Diversion Devices

Full Road Closure

A full road closure involves shutting down a street to all two-way traffic. This measure helps eliminate through traffic on the street or simplifies an intersection layout, thereby reducing potential conflict points and the risk of crashes.



Figure 30: Full Road Closure

Half Road Closure

Half road closures restrict entry or exit to local areas by using kerb arrangements and regulatory controls to allow traffic in only one direction. These closures are used when traffic control is needed without fully restricting traffic movements. They involve closing one lane and can be implemented at intersections or midblock. Their effectiveness depends on drivers obeying regulatory signs that prohibit access through the closure.

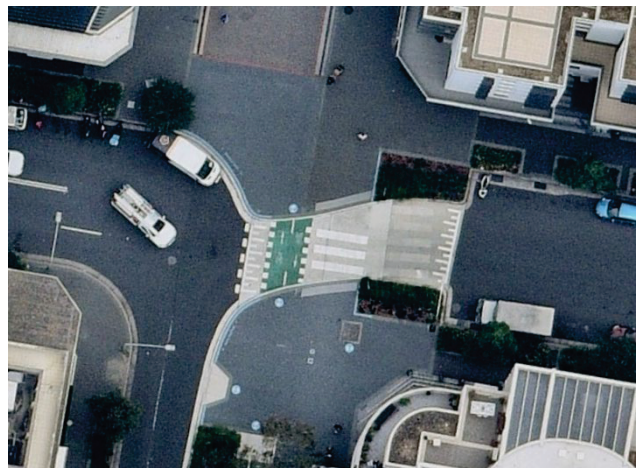


Figure 31: Half Road Closure

Left-in/ Left-out

A left-in/left-out island is used at an intersection to block right turns and through movements to and from the intersection. This device functions as a partial road closure, similar to a half road closure. Its effectiveness is enhanced when a median island is incorporated into the design to prevent non-compliant traffic movements.

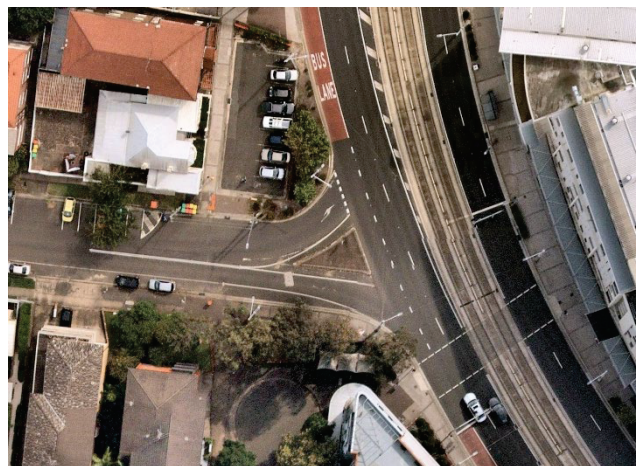


Figure 32: Left-in/ Left-out



6.4 Signs, Linemarking and Other Treatments

Other treatments include cycling facilities and footpaths, as discussed below.

Bicycle Facilities



Figure 33: Bicycle Path Crossing

Treatments at intersections that help facilitate improved cycling movement by providing safer cycling opportunities through intersections, such as the dedicated cycling crossing shown

Separated Bicycle Path



Figure 34: Separated Bicycle Path

Separated bicycle paths provide cyclists a safe path which minimises interactions between cyclists and vehicles.

Footpaths



Figure 35: Footpath

Footpaths help facilitate pedestrian movement as they provide a safe and accessible path for pedestrian to travel upon. A well-connected pedestrian network also helps reduce car users through a modal shift, as more trips can be made via walking.

Shared Paths



Figure 36: Shared Path

Shared paths provide safe paths which minimises interactions between cyclists and vehicles. Unlike the separated bike paths, shared paths are used by pedestrians and cyclists. While this decreases the movement speed of a bicycle lane, it provides additional separation from road traffic.

Speed Limit Signs and Indication Signs

Speed limit signs provide indication to drivers of the maximum legal speed limit on a particular stretch of road.



Figure 37: Examples of Posted Speed Signs

Prohibited Traffic Movement Signs

Prohibited traffic movement signs inform drivers about banned turns on roads or at intersections. These signs help prevent traffic from taking shortcuts through streets, restrict access for certain types of road users, and reduce the likelihood of crashes.



Figure 38: Examples of Prohibited Movement Signs

One-way Street

One-way street signs indicate to the driver that traffic movements are only permitted in one direction. These restrictions help reduce traffic volumes, minimise pedestrian crossing distances, direct traffic away from a particular street and can enhance the pedestrian environment.



Figure 39: Examples of One Way Signage

Give Way

Give way signs assign and indicate a priority along a road or at an intersection. They are generally provided at intersections which are not controlled by traffic signals or where sight distance is poor.



Figure 40: Examples of Give Way Signage

Stop Signs

Stop signs assign and indicate a priority along a road or at an intersection. All road users are required to stop completely before making the next move.



Figure 41: Examples of Stop Signage

Local Traffic Area

Local traffic areas are enforced to protect pedestrian and cycling movements. As a traffic management tool, local traffic areas have speed limits of 40 km/h and force vehicles to be more aware of their surrounding due to the movement of pedestrians



Figure 42: Examples of Local Traffic Signage

School Zones

School zones are located in the vicinity of a school and are operational during a specific time, which is indicated on the sign. School zones require vehicles to reduce speeds during operational hours to minimise the risk of conflict between vehicles and pedestrians.

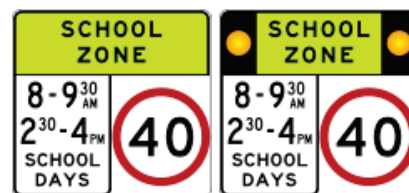


Figure 43: Examples of School Zone Signage

7 Proposed Treatments

7.1 Methodology

The proposed treatments for the refreshed Kensington and West Kingsford LATM have been built off the Draft 2014 LATM considering 2024 conditions. Figure 44 highlights the methodology and factors considered to update the LATM to be relevant to the current and future Kensington and West Kingsford. These factors include:

- **Traffic Survey:** Traffic surveys were undertaken at key locations to capture the existing volume and speed of traffic on the road network. Additionally, traffic volumes have been used as a means to provide a growth factor for existing origin – demand survey data to understand how traffic moves through the system.
- **Community Survey:** Community surveys have been undertaken via an interactive web-map tool, allowing the community to highlight their concerns and solutions around traffic in Kensington and West Kingsford.
- **Zoning Changes:** Updates to land zoning around the town centres of Kensington and West Kingsford are scheduled to increase the number of dwellings.
- **Transport Network:** Since the Draft LATM, Kensington and West Kingsford have undergone significant changes to the transport network with the introduction of the light rail at Anzac Parade. This has influenced the movement of traffic through the study area.
- **Framework/Guidelines:** Since the LATM there have been updates to best practices (particularly Austroads Guide to Traffic Management – Local Street Management) and the introduction of TfNSW Movement and Place Framework.

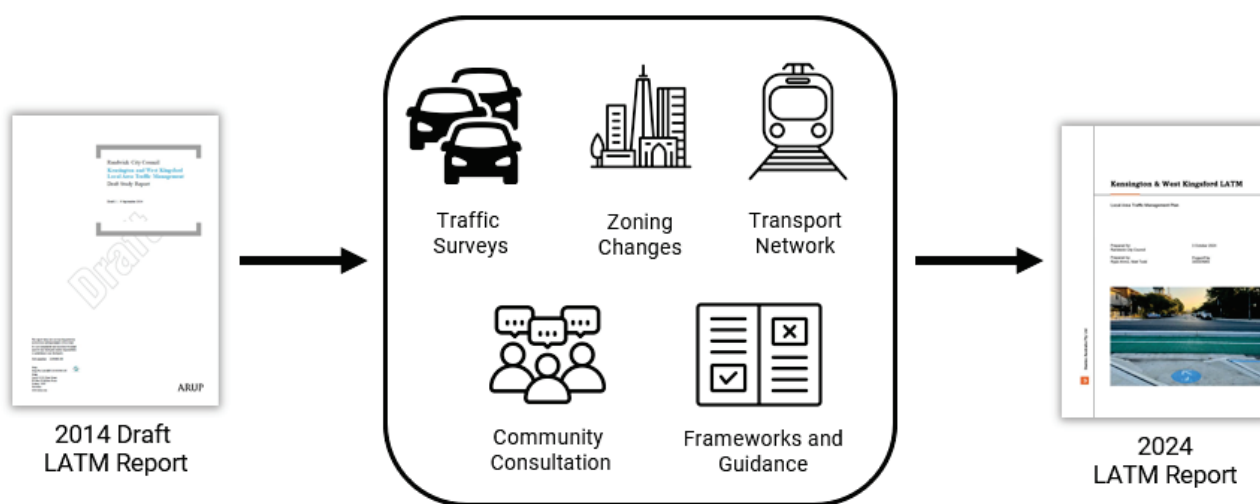


Figure 44: Proposed Treatment Factors

7.2 Treatments

The following section covers the type, location, and justifications behind the recommended treatments. Recommendations have been grouped by treatment type, with an overview of all the recommended treatments detailed within Table 17 and are pictured in Figure 45.



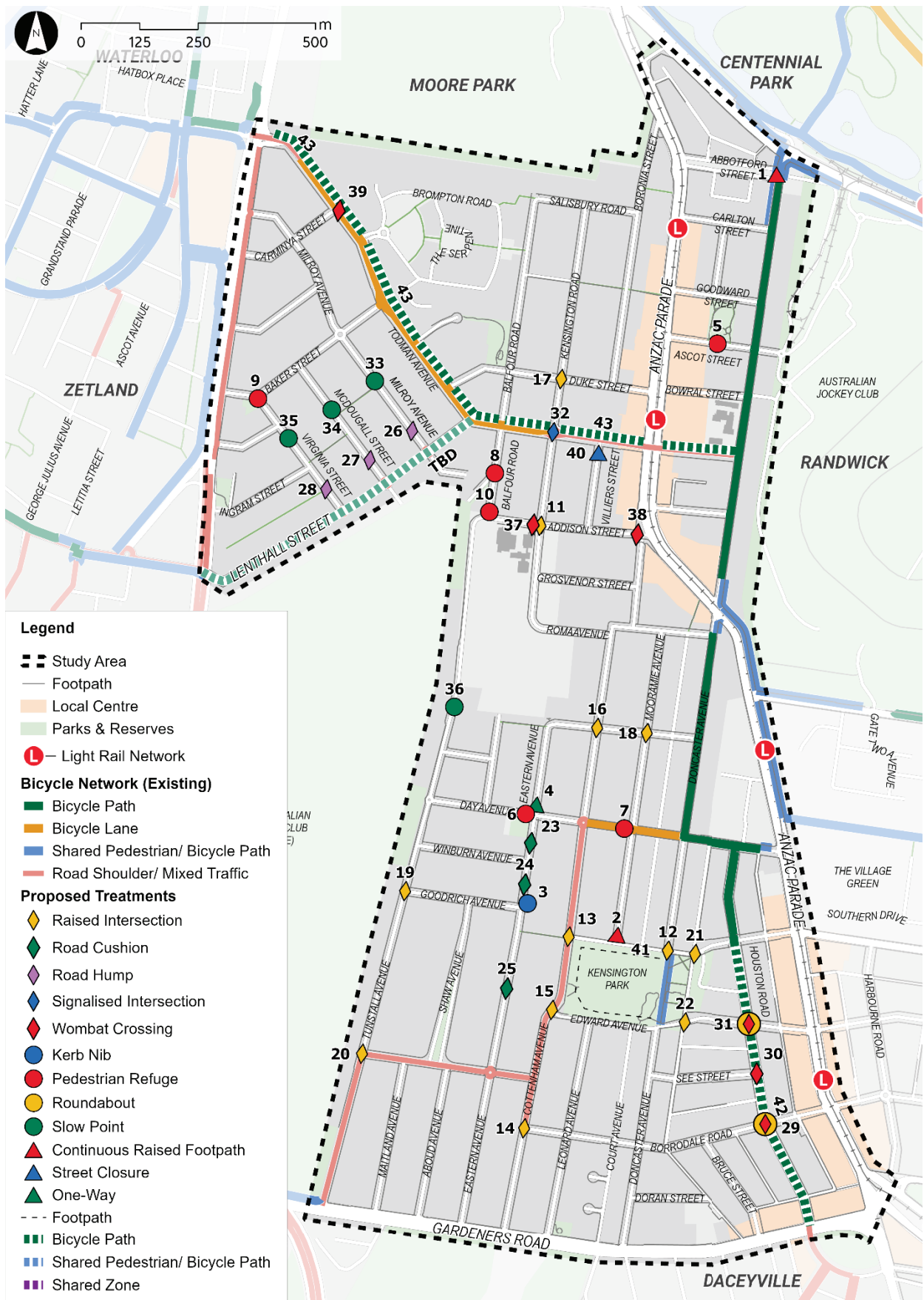


Figure 45: Proposed Treatments



7.2.1 Kerb Nib

Table 5: Proposed Kerb Nib

Street Name	Justification
Goodrich Avenue near Eastern Avenue	<p>The 2014 Draft LATM proposed kerb nibs/ build-out with a forward advanced give way line to address safety/visibility concerns. Evidence of this safety risk was seen with four tow-away crashes between 2006-2011 at Goodrich Avenue/ Eastern Avenue.</p> <p>The refreshed LATM supports this proposed treatment. While there have not been any crashes at the intersection during the investigation period, the intersection is still seen to be a crash risk and would benefit from the implementation of the proposed changes. Furthermore, community consultation highlighted the tendency of vehicles to 'cut the corner', turning into Eastern Avenue at high speeds.</p>

7.2.2 One Way Out

The LATM has considered changes to road rules to support local streets by diverting traffic to roads which can handle higher traffic volumes, which includes changing streets to one way out.

Table 6: Proposed Changes to Traffic Conditions

Street Name	Justification
Eastern Avenue north of Day Avenue (one way out)	Eastern Avenue north of Day Avenue is proposed to be a one way out (southbound). The one way out would remove northbound traffic and prevent rat runs via Eastern Avenue. This change will force vehicles to travel along Day Avenue or Cottenham Avenue instead however, as these are wider roads it is safer for traffic.

7.2.3 Pedestrian Refuge Island

Table 7 outlines the provision of pedestrian refuge islands as part of the refreshed LATM. Pedestrian refuge islands physically separate pedestrians from traffic and have an influence on traffic speeds / volumes, creating a safer pedestrian and road environment.

Table 7: Proposed Pedestrian Refuge Islands

Street Name	Justification
Day Avenue/ Mooramie Avenue	Community consultation highlighted the difficulty to cross Day Avenue due to high traffic volumes. Three pedestrian refuge crossings have been recommended at the Mooramie Avenue/ Day Avenue intersection. These refuges will provide pedestrians a separated crossing for each leg of the intersection (east, west and north legs only). This treatment is likely to result in the loss of two on-street parking spaces.
Day Avenue/ Eastern Avenue	The 2014 Draft LATM proposed pedestrian refuges at the Day Avenue/ Eastern Avenue intersection to address concerns with perceived safety. The refreshed LATM supports this proposal. Community consultation highlighted the difficulty to cross Day Avenue due to high traffic volumes. This treatment is likely to result in the loss of two on-street parking spaces.
Balfour Road near Addison Street	<p>The existing infrastructure (kerb ramps) does not provide adequate infrastructure to cross Balfour Road at Addison Street. The current sight lines between vehicles and pedestrians travelling along Tunstall Avenue is poor, proposing a crash risk to pedestrians. In addition, the location is near multiple educational facilities and was pinpointed by community consultation as a crossing point perceived to be unsafe. This treatment is likely to result in the loss of two on-street parking spaces.</p> <p>The LATM proposes a pedestrian refuge with a kerb build out. This treatment will provide a safer crossing opportunity for students travelling to the multiple educational facilities in the area. Due to topographic constraints, the provision of both a pedestrian refuge and kerb build out may not be</p>



Street Name	Justification
	possible. In this case the priority should be to install the pedestrian refuge island. This treatment is likely to result in the loss of two on-street parking spaces.
Sherwood Street near Balfour Road	The 2014 Draft LATM proposed a pedestrian refuge at Sherwood Street near Balfour Road to improve pedestrian safety and connectivity. The pedestrian refuge will also help slow down speeds of vehicles turning in/out of Sherwood Street. The refreshed LATM supports the provision of a pedestrian refuge at Sherwood Street near Balfour Road. Due to service vehicles accessing the Sherwood Street depot of the Australian Golf Club, careful design is required. This treatment is likely to result in the loss of two on-street parking spaces.
Virginia Street near Baker Street	A new pedestrian refuge is proposed at Virginia Street near Baker Street to support east-west pedestrian movements. Current infrastructure includes kerb ramps and a painted median to delineate traffic lanes. The installation of pedestrian refuge island would provide a separated crossing which would support access to Les Bridges Playground. The pedestrian refuge would also help slow down speeds of vehicles turning in/out of Virginia Street. This treatment is likely to result in the loss of two on-street parking spaces.
14 Ascot Street near Kokoda Memorial Park	The 2014 Draft LATM proposed a pedestrian refuge on Ascot Street to improve pedestrian safety and connectivity. The refreshed LATM supports the provision of a pedestrian refuge, as it supports Kokoda Memorial Park, a key recreational land use in the area. This will have a noticeable parking impact. This treatment is likely to result in the loss of two on-street parking spaces.

7.2.4 Raised Intersections

Raised intersections have been proposed at locations which have been identified as safety risks due to either higher traffic speeds, sightlines and crash data. Raised intersections may also incorporate continuous footpath treatments in the design where applicable.

Table 8: Proposed Raised Intersections

Street Name	Justification
Tunstall Avenue/ Tresidder Avenue	The 2014 Draft LATM proposed raised intersections at both Tunstall Avenue/ Tresidder Avenue and Tunstall Avenue/ Goodrich Avenue. These treatments are supported by the refreshed LATM due to the high traffic volumes and average speeds of over 40km/h. Tunstall Avenue is a key rat run for vehicles looking to avoid the Gardeners Road/ Eastern Avenue signalised intersection. Rat running traffic is primarily northbound, with over 1,000 vehicles travelling north during the AM peak (weekday AM average). The two proposed raised intersections treatment would reduce vehicle speeds and discourage traffic volumes. Additionally, raised intersections will be supported by a slow point further north on Tunstall Avenue. The raised intersection of Tunstall Avenue and Tresidder Avenue is likely to result in the loss of one on-street parking space. The raised intersection at Tunstall Avenue and Goodrich Avenue is not expected to lose any on-street parking spaces.
Tunstall Avenue/ Goodrich Avenue	
Cottenham Avenue/ Borrodale Road	A raised intersection is proposed at Cottenham Avenue/ Borrodale Road to discourage high traffic volumes on Cottenham Avenue. Currently, the stretch of road is used to avoid signals on Gardeners Road and Anzac Parade. The provision of the treatment will help reduce speeds of vehicles approaching Kensington Park, which are currently at 85th percentile speeds of 50 km/h. This treatment supports the consecutive treatments found on Cottenham Avenue. This treatment is likely to result in the loss of two on-street parking spaces.
Cottenham Avenue/ Edward Avenue	A raised intersection is proposed at Cottenham Avenue/ Edward Avenue, Barker Street/ Cottenham Avenue, Barker Street/ Doncaster Avenue to discourage high traffic volumes around the park. Cottenham



Street Name	Justification
Barker Street/ Cottenham Avenue	Avenue is likely used to avoid signals on Gardeners Road and Anzac Parade. The consecutive treatments will help reduce the appeal of Cottenham Avenue to non-local traffic. Additionally, the raised profile of the intersections will reduce vehicle speeds, in turn making the surrounding environment safer for pedestrians and supporting the place function of the park. Similarly, the treatments on Barker Street will help create a safer environment for pedestrians around the park and recreational centre. It is noted that this area is subject to flood events and that these need to be taken into account with any proposed design.
Barker Street/ Doncaster Avenue	<p>The Cottenham Avenue and Edward Avenue intersection is likely to result in the loss of three on-street parking spaces.</p> <p>The Cottenham Avenue and Barker Street intersection is likely to result in the loss of two on-street parking spaces.</p> <p>The Doncaster Avenue and Barker Street intersection is likely to result in the loss of three on-street parking spaces.</p>
Koorinda Avenue/ Cottenham Avenue	<p>The implementation of raised intersections at Koorinda Avenue/ Cottenham Avenue and Koorinda Avenue/ Mooramie Avenue were recommended in the 2014 Draft LATM. The treatments were proposed as a counter measure to the treatments on Tunstall Avenue, and to prevent new rat runs developing.</p> <p>The refreshed LATM supports these recommended raised intersections. In addition to the discouragement of through-traffic moving in both north-south and east-west directions, the raised intersections will also provide safety improvements. Crash history at these two intersections include:</p>
Koorinda Avenue/ Mooramie Avenue	<p>Koorinda Avenue/ Cottenham Avenue - two crashes between 2019 to 2022.</p> <p>The raised intersection at Koorinda Avenue and Cottenham Avenue is likely to result in the loss of one on-street parking space.</p> <p>The raised intersection at Koorinda Avenue and Mooramie Avenue is not expected to lose any on-street parking spaces.</p>
Addison Street/ Kensington Road	<p>A raised intersection is proposed to improve safety concerns at the intersection. The existing intersection gives priority to traffic on Kensington Road, with a posted stop sign at Addison Street. During the investigation period there were four crashes at this intersection, three of which have resulted in injury. In addition, site lines are impacted by nearby infrastructure which adds further to the crash risk.</p> <p>Community comments raised similar concerns regarding safety, noting that the intersection was adjacent to a primary and secondary school which sees a lot of pedestrian and vehicle traffic concentrated in the peak periods.</p> <p>A raised intersection would act as a speed deterrent, requiring all vehicles to slow down to clear the vertical deflection, and in the process making the intersection safer to navigate for drivers.</p> <p>This treatment is not expected to lose any on-street parking spaces.</p>
Duke Street/ Kensington Road	<p>The LATM proposes a raised intersection at Duke Street/ Kensington Road to reduce vehicle speeds and improve safety at the intersection.</p> <p>The existing intersection gives priority to traffic on Duke Street with Kensington Road traffic required to stop. Community consultation highlighted concerns around vehicles failing to stop at Kensington Road, resulting in perceptions of an unsafe environment. This is corroborated with crash data, with a serious injury occurring in 2022 as a result of result of a vehicle not slowing down.</p> <p>This treatment is not expected to lose any on-street parking spaces.</p>
Day Lane/ Barker Street	Barker Street/ Day Lane is an unconventional intersection due to the road geometry and property boundaries. In its existing form, the intersection has poor sight lines, particularly for southbound vehicles turning from Day Lane. The raised intersection has been proposed as a preventative measure against crash risks.



Street Name	Justification
Day Lane/ Strachan Street	<p>The 2014 Draft LATM proposed improvements to Day Lane/ Strachan Street intersection to standardise and provide consistency at intersections. The Day Lane/ Strachan Street intersection is similar to that of Barker Street/ Day Lane in the sense that the road geometry is unconventional.</p> <p>The refreshed LATM supports the provision of a raised intersection to help reduce crash risk and reduce traffic speeds.</p>

7.2.5 Road Cushions

As part of the LATM, three road cushions (all on Eastern Avenue) have been proposed. Table 9 provides the reasoning for the recommended speed treatments. While road cushions are not 'ideal' treatments due to the increase in noise pollution, constraints along Eastern Avenue limit the potential for effective treatments. Hence, road cushions are seen as a step in the right direction which can be implemented and tested at a cost-effective rate.

Table 9: Proposed Road Cushions

Street Name	Justification
Eastern Avenue	<p>Eastern Avenue is a critical 'rat-run' link as it helps commuters to avoid signalised intersections on Gardeners Road and Anzac Parade. It is also the only intersection, west of Houston Road, providing a southbound to westbound manoeuvre at Gardeners Road. Traffic speeds and volumes were further highlighted during the community consultation.</p> <p>Eastern Avenue (between Gardeners Road and Day Avenue) is a narrow road, measuring approximately nine metres kerb to kerb along most of its section with parking on both sides. While the narrow road should be conducive to lower speeds and traffic volumes, it is not due to the large amount of traffic utilising the road as an alternative.</p> <p>As Eastern Avenue caters to buses (bus route 303) the installation of lateral deflection devices is not feasible. The selection of vertical deflection devices is also limited due to the clearance requirements of buses.</p> <p>Given the opportunity and constraints, three sequenced road cushions are proposed. While road cushions are publicly stigmatised due to noise concerns, they remain a strong traffic calming measure which can be implemented easily and cost effectively.</p> <p>Prior to installation, a detailed community consultation process should be undertaken indicating the pros and cons of such facilities.</p> <p>Each road cushion treatment is likely to result in the loss of two on-street parking spaces.</p>

7.2.7 Road Humps

Three road humps are proposed as part of the LATM. These three treatments are in the northern precinct of Kensington and have been proposed in conjunction with slow points on these three roads to discourage through traffic avoiding Lenthall Street/ Todman Avenue.

Table 10: Proposed Road Humps

Street Name	Justification
Milroy Avenue, McDougall Street, and Virginia Street near Lenthall Street	<p>Community consultation raised the concern of rat running via Virginia Street, with the purpose to avoid the signalised intersection at Lenthall Street/Todman Avenue. A traffic survey revealed 85th percentile speeds of 52.4 and 52.4 km/h on McDougall Street and Virginia Street respectively. Traffic volumes were also seen to be too high for the context of the roads (local roads with no key connective purposes or land uses).</p> <p>To help support the angled slow points (discussed in Section 7.2.10), Road humps have been proposed to discourage traffic volumes and reduce speeds. The road humps will prevent vehicles increasing their speeds once they have left the roundabout as well as help reduce crash risk at the roundabout. While data outlines Virginia Street as the main route choice for rat running (followed by Milroy Avenue), similar treatments have been prescribed across all three streets to prevent traffic being diverted to one of the other local streets.</p> <p>Each treatment is likely to result in the loss of two on-street parking spaces.</p> <p>Prior to installation, a detailed community consultation process should be undertaken indicating the pros and cons of such facilities.</p>

7.2.8 Roundabouts

Roundabouts have been considered at local intersections which receive high volumes of traffic or pose crash risks. They help reduce the speed of approaching vehicles and enhance overall intersection safety. It should be noted that if the design of a roundabout proves problematic, an alternate intersection treatment such as channelisation may have to be considered.

Table 11: Proposed Roundabouts

Street Name	Justification
Houston Road (Multiple)	<p>The implementation of a roundabout at Houston Road/ Strachan Street was initially recommended in the 2014 Draft LATM due to high traffic volumes (approx. 780-860 vehicles per hour two-way in AM peak hour) with an ADT volume of 8,871.</p> <p>The refreshed LATM supports the implementation of a roundabout at Houston Road/ Strachan Street. Traffic volumes on Houston Road and at the Houston Road/ Strachan Street intersection have persisted:</p> <p>9,019 AADT volumes recorded in 2018 on Houston Road between Strachan Street and Borrodale Road.</p> <p>2,503 ADT volumes recorded in 2023 on Strachan Street between Anzac Parade and Houston Road.</p> <p>The design forms part of Section 3 of the Kingsford to Centennial Park cycleway improvements.</p> <p>Additionally, a roundabouts is recommended at the intersection with Borrodale Road. This results in a total of three new roundabouts on Houston Road to support the extension of the cycleway.</p> <p>In order to improve safety and convenience of pedestrians, all roundabouts are to incorporate a number of raised pedestrian crossings / wombat crossings as referenced in Section 7.2.10</p>



7.2.9 Signalised Intersection

Given the local nature of the study area, while signalised intersections have been considered, most local road intersections do not meet the required TfNSW warrants. In addition, intersections which require or would benefit from signalisation already have signals. Based off this, signal provision is only recommended at the intersection of Todman Avenue/ Kensington Road.

Table 12: Proposed Traffic Signals

Street Name	Justification
Todman Avenue/ Kensington Road	<p>The implementation of a signalised intersection at Todman Avenue/ Kensington Road was initially recommended in the 2014 Draft LATM. A warrant study was completed as part of the draft LATM which met the warrant demand for a signalised intersection. The signalised intersection will help alleviate safety concerns of the existing roundabout particularly for pedestrians, many of whom are students at nearby schools.</p> <p>The LATM supports the proposed signalised intersection. During the investigation period there have been a total of seven vehicle crashes directly at the existing roundabout on Todman Avenue/ Kensington Road. Two of these crashes involved pedestrians. Furthermore, the concern for pedestrian safety was highlighted during the community engagement period. This is particularly a concern given the proximity to a nearby high school and primary school.</p>

7.2.10 Slow Point

The primary factor considered for the recommendation of slow points is the function of the road. Slow points have been proposed in local streets which do not serve major connective purposes.

Table 13: Proposed Slow Points

Street Name	Justification
Milroy Avenue (mid-block)	Community consultation raised the concern of rat running via Virginia Street, with the purpose to avoid the signalised intersection at Lenthall Street/Todman Avenue. A traffic survey revealed 85 th percentile speeds of 52.4 and 52.4 kilometres per hour on McDougall Street and Virginia Street respectively.
McDougall Street (mid-block)	Traffic volumes were also seen to be high for the context of the roads (local roads with no key connective purposes or key land uses).
Virginia Street (mid-block)	<p>The LATM proposes angled slow points at midblock locations between Lenthall Street and Baker Street to deter rat runs and speeding in the local area. Slow points are poised to be one-way, restricting the number of vehicles which can pass at once. This would help reduce speeds, as well as discourage rat runs as vehicles are required to come to a stop, if there is opposing traffic.</p> <p>Each treatment is likely to result in the loss of two on-street parking spaces.</p>
No. 5 Tunstall Avenue	<p>A single lane slow point at No. 5 Tunstall Avenue is part of series of measures on Tunstall Avenue to reduce 85th percentile speeds and deter through traffic. Currently, Tunstall Avenue is a common 'rat run' used to avoid intersections on Gardeners Road and Anzac Parade.</p> <p>The slow point is to be installed past the gradients and curves to allow for clear sight lines. Priority to be given to vehicles travelling southbound to avoid tail back over the hill. This is to be provided by a give way control incorporated into the design.</p> <p>This treatment is likely to result in the loss of two on-street parking spaces.</p>



7.2.11 Continuous Footpath Treatments

Continuous footpaths enhance pedestrian priority by reducing vehicle speeds and improving pedestrian visibility. These footpaths are installed in areas where continuous pedestrian movement is beneficial, improving accessibility for people with mobility issues, pushchairs, and cyclists. This LATM proposes implementing raised footpath treatments at two locations, as detailed in Table 14.

Table 14: Proposed Continuous Footpaths

Street Name	Justification
Doncaster Avenue at intersection with Abbotsford Street	A raised continuous footpath has been proposed to support the recently constructed Kingsford to Centennial Park cycleway. The footpath will provide priority to pedestrians and cyclists crossing both legs of Abbotsford Street along Doncaster Avenue.
Barker Street at intersection with Mooramie Avenue	A raised continuous footpath has been proposed to improve pedestrian prioritisation around Kensington Oval. This will improve east-west connections from Kingsford and support seamless connectivity from the proposed raised intersection with raised pedestrian crossings at Day Lane.

7.2.12 Raised Pedestrian Crossing

Raised pedestrian crossings (wombat crossing) are effective traffic measures which provide benefits across both traffic volume and speed reduction, as well as improved pedestrian and cyclist safety. A total of seven wombat crossings are recommended (outlined in Table 15), four of which are proposed on Strachan Street as per the Kingsford to Centennial Park Walking and Cycling improvements.

Table 15: Proposed Wombat Crossings

Street Name	Justification
Todman Avenue near Carminya Street	<p>The existing zebra crossing at Todman Avenue near Carminya Street has been identified as an insufficient crossing through community concerns. While the zebra crossing awards priority to pedestrians, vehicles do not slow down for pedestrians due to limited speed calming measures. In addition, the crossing was highlighted as a pedestrian concern during the community consultation, noting the obstructed sightlines due to existing utility infrastructure (electrical box).</p> <p>To improve the pedestrian experience, a wombat crossing is recommended. A wombat crossing will ensure vehicles slow down at approach, enabling pedestrians to take advantage of their priority. As this crossing is along a bus route, the design of the raised profile must allow for buses to clear safely. Generally, vertical deflection devices on bus routes are avoided, however as this measure addresses pedestrian safety, it is recommended. It is recommended that modelling be undertaken to understand what impact this may have on the signalised intersection of Dowling Street and Todman avenue, as well as the entrance to the Supa Centre car park.</p>
Addison Street west of Anzac Parade	<p>The existing mid-block crossing at Addison Street near Anzac Parade has been identified as insufficient. Existing infrastructure includes two kerb drops. Community consultation highlighted that crossing the road was unclear due to a nearby driveway. Furthermore, the crossing is located near key land uses which leads to regular interactions between vehicles and pedestrians. This is due to increase as a result of the two major developments either side of Addison Street.</p> <p>Additionally, as a consequence of the two nearby developments, consideration is being given to converting the nearby small carpark into a civic space, further necessitating pedestrian safety / access improvement. To provide a safer and clearer crossing, the LATM proposes a wombat crossing.</p> <p>The provision of a wombat crossing may require the relocation of existing infrastructure, with the location subject to future design investigations.</p>

Street Name	Justification
Addison Street near Kensington Road	A wombat crossing is proposed at Addison Street near Kensington Road to allow safe crossings for pedestrians (predominantly students). The wombat crossing is to be incorporated with the proposed raised intersection. In conjunction the treatments will improve crossings, reduce vehicle speeds and discourage rat running between Anzac Parade and Todman Avenue.
Houston Road (Multiple)	As previously discussed, several raised pedestrian crossings have been proposed along Houston Road to support the extension of the Kingsford to Centennial Park cycleway. These crossings are planned at the intersections of Houston Road with Borrodale Road, See Street, and Strachan Street.

7.2.13 Other

Table 16: Other Considerations

Street Name	Justification
Barker Street, between Day Lane and Cottenham Avenue (footpath)	Provide pedestrian footpaths around Kensington Park to enhance pedestrian connectivity. The connectivity would serve both recreational purposes and support connections through to West Kingsford. The implementation of the footpath was highly requested in the community survey. Trees have previously been raised as an issue to provide a footpath in this location and are subject to future design investigations.
Todman Avenue to Doncaster Avenue and Lenthall Street from Todman Avenue (bicycle path)	Council are currently investigating the design of a separated cycleway along Todman Avenue.. The cycleway would provide a safe connection to the wider City of Sydney cycleway network and address the missing gap between Zetland and the newly constructed Kingsford to Centennial Park cycleway. Due to the route being a priority route, the speeds and volumes of traffic, the cycleway design toolbox requires this to be a fully separated bicycle path. Council is also exploring opportunities to improve facilities for bicycle riders along Lenthall Street.
Houston Road, between Barker Street and Gardeners Road	The existing Kingsford to Centennial Park cycleway currently extends only to the south of Barker Street. Council has confirmed that they are working with TfNSW to continue the separated cycleway further south along this section.
Precinct wide speed reductions	In addition to the 40 km/h speed reductions previously discussed in chapter 2.5.7 additional changes are proposed across the southern proportion of the study area. This is discussed in further detail in chapter 7.2.12.



7.2.14 Kensington and West Kingsford 40km/h Zone

To further support the local nature of Kensington and West Kingsford, new 40 km/h area zones are proposed. The boundary of the proposed areas are pictured in Figure 46. The area covers local roads, excluding Anzac Parade and Gardeners Road. Land uses within these zones are primarily housing, with recreational and educational land uses scattered around. The 40 km/h zones are broken down into three stages, they are:

- Stage 1 – Has been implemented to provide additional safety measures to the Kingsford to Centennial Park Cycleway
- Stage 2 – Identified for implementation following the introduction of Stage 1. Now that Stage 1 has been implemented in the Council are to proceed with investigating measures to proceed with Stage .
- Stage 3 – Stage 3 is to be considered following the implementation of Stage 2. This will finalise coverage in the study area reducing all locals roads to a maximum posted speed of 40 km/h. Council may seek to implement coverage along Todman Avenue and Lenthall Street following further investigation.

The NSW Speed Zoning Standard: TD 00030:2023 (November 2023) outlines the following considerations for the implementation of a 40km/h zone:

- Have a high place function that includes pedestrian attractors and generators where pedestrians frequently cross the road.
- Consider whether signalised pedestrian crossing options are appropriate.
- Include recommended treatments such as gateway traffic calming, and vertical and horizontal deflection through the treatment area. In some cases, traffic lanes may be reduced.
- Have protected bicycle lanes (physical separation between vehicles and cyclist).

Following the proposed treatments in **Section 7.2**, the implementation of a 40 km/h zone is applicable and warranted. The existing and future traffic calming proposed covers most of the area to help reduce speeds and decrease rat running. However, it is noted that the implementation of a 40km/h zone will require review from TfNSW. Additionally, 'repeater' signage will be required at all entry and exit points to each 40 km/h zone

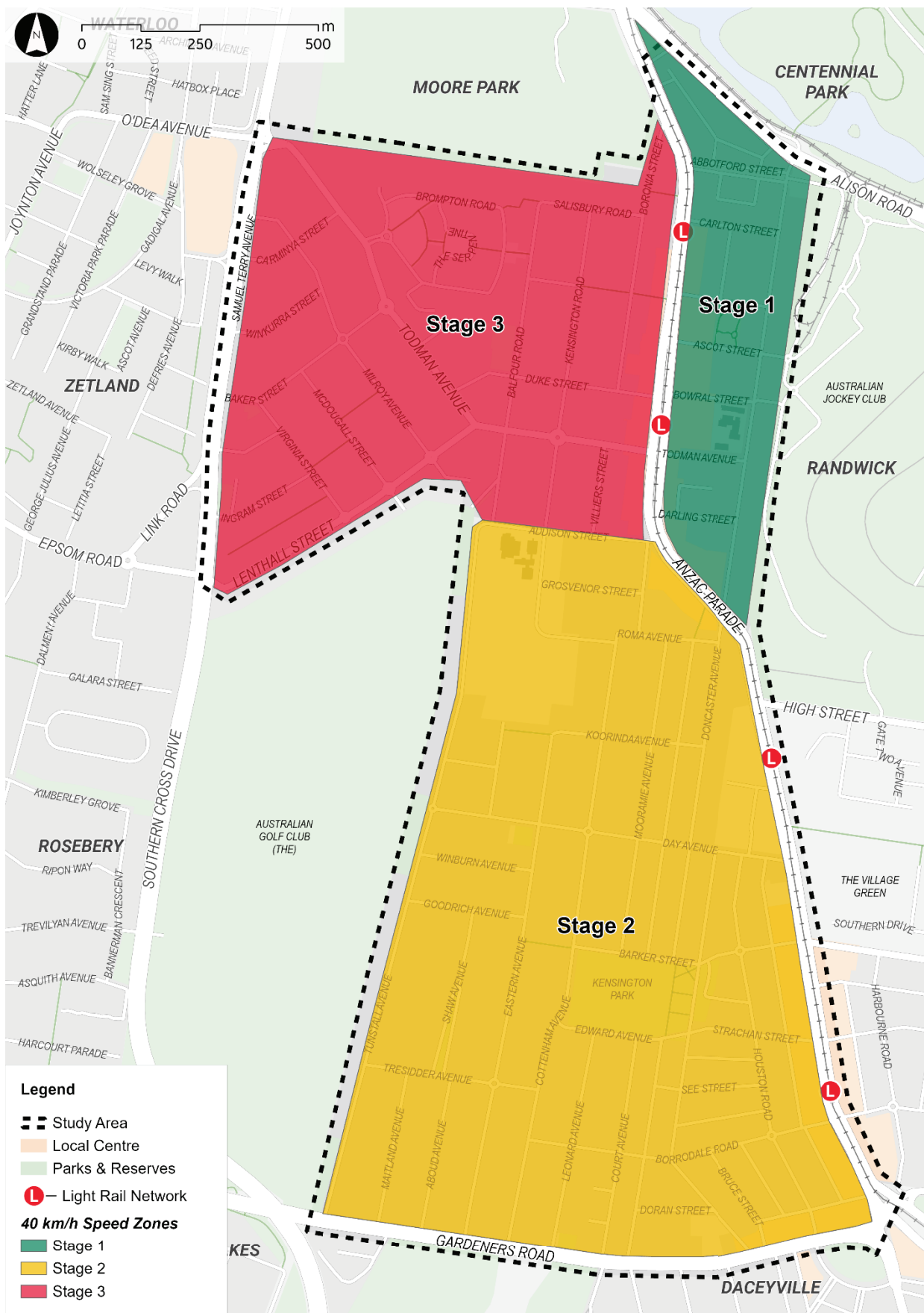


Figure 46: Proposed 40km/h Area



7.3 Treatment summary

Table 17 outlines a summary of all treatments proposed as part of this study.

Table 17: Treatment Summary

ID	Street name/Location	Treatment type	Proposed by	Justification summary	Challenges
1	Abbotford Street near Doncaster Avenue	Continuous raised footpath	Refreshed LATM	Gateway treatment to the 40 km/h zone that supports a continuous connection from the new cycleway.	-
2	Mooramie Avenue near Barker Street	Continuous raised footpath	Refreshed LATM	Supports Place function around Kensington Park and reduces the speed of vehicles connecting to Barker Street.	-
3	Goodrich Avenue near Eastern Avenue	Kerb nib	2014 Draft LATM – supported by Refreshed LATM	Provides a safer crossing opportunity for pedestrians by reducing the carriageway widths. Provides additional speed reduction and was identified as part of the PAMP as a crossing opportunity.	-
4	Eastern Avenue north of Day Avenue	One way out (southbound)	Refreshed LATM	Removes some traffic off of Eastern Avenue, requiring vehicles to travel along Day Avenue or Cottenham Avenue which are wider roads.	-
5	Ascot Street near Kokoda Park	Pedestrian refuge	2014 Draft LATM – supported by Refreshed LATM	Support place function at Kokoda Park.	This treatment is likely to result in the loss of two on-street parking spaces.
6	Day Avenue/ Eastern Avenue	Pedestrian refuge	2014 Draft LATM – supported by Refreshed LATM	Support pedestrian movement at Day Avenue.	This treatment is likely to result in the loss of two on-street parking spaces.
7	Day Avenue/ Mooramie Avenue	Pedestrian refuge	Refreshed LATM	Support pedestrian movement at Day Avenue.	This treatment is likely to result in the loss of two on-street parking spaces.
8	Sherwood Street near Balfour Road	Pedestrian refuge	2014 Draft LATM – supported by Refreshed LATM	Support pedestrian movement and reduce vehicle speeds turning in/out of Sherwood Street.	Design considerations need to consider truck turning movements
9	Virginia Street near Baker Street	Pedestrian refuge	Refreshed LATM	Support pedestrian movement and reduce vehicle speeds turning in/out of Virginia Street.	This treatment is likely to result in the loss of two on-street parking spaces.



ID	Street name/Location	Treatment type	Proposed by	Justification summary	Challenges
10	Balfour Road near Addison Street	Pedestrian refuge and kerb nib	Refreshed LATM	Provide safer crossing opportunity near a school. Slow down vehicles turning into Balfour Road.	Topographic challenges exist at the site. This treatment is likely to result in the loss of two on-street parking spaces.
11	Addison Street/ Kensington Road	Raised intersection	Refreshed LATM	Reduce vehicle speeds near a school site. Deter traffic from Addison Street and Kensington Road. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety. This treatment is not expected to lose any on-street parking spaces.	-
12	Barker Street/ Doncaster Avenue	Raised intersection	2014 Draft LATM – supported by Refreshed LATM	A raised intersection with continuous footpath treatments/crossing across Doncaster Road and Barker Street to provide safe access into the park and will provide better access to walking link to Eastern Avenue (between No's 80-82 Cottenham Avenue. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	Potential overland flow path issues. This treatment is likely to result in the loss of three on-street parking spaces.
13	Cottenham Avenue/ Barker Street	Raised intersection	Refreshed LATM	Poor sightlines at the turn with parked cars makes it an unsafe environment. Raised intersection will reduce vehicle speeds, making it safer for pedestrians to cross the road. Will also deter rat running traffic in the area.	Raised intersection to be designed to allow for access to property. This treatment is likely to result in the loss of two on-street parking spaces.
14	Cottenham Avenue/ Borrodale Road	Raised intersection	2014 Draft LATM – supported by Refreshed LATM	The raised intersection will reduce vehicle speeds and discourage rat running.	This treatment is likely to result in the loss of two on-street parking spaces.
15	Cottenham Avenue/ Edward Avenue	Raised intersection	Refreshed LATM	Poor sightlines at the turn with parked cars makes it an unsafe environment. Raised intersection will reduce vehicle speeds, making it safer for pedestrians to cross the road. Will also deter rat running traffic in the area. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	This treatment is likely to result in the loss of three on-street parking spaces.



ID	Street name/Location	Treatment type	Proposed by	Justification summary	Challenges
16	Cottenham Avenue/ Koorinda Avenue	Raised intersection	2014 Draft LATM – supported by Refreshed LATM	Would act as a speed deterrent and discourage rat running. Slower vehicles speeds would further increase pedestrian safety. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety. This treatment is not expected to lose any on-street parking spaces.	-
17	Duke Street/ Kensington Road	Raised intersection	Refreshed LATM	Slows through traffic on Duke Street, discouraging rat running and improving the safety of the intersection of vehicles and pedestrians. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	Potential drainage challenges
18	Koorinda Avenue/ Mooramie Avenue	Raised intersection	2014 Draft LATM – supported by Refreshed LATM	Would act as a speed deterrent and discourage rat running. Slower vehicles speeds would further increase pedestrian safety. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety. This treatment is not expected to lose any on-street parking spaces.	-
19	Tunstall Avenue/ Goodrich Avenue	Raised intersection	2014 Draft LATM – supported by Refreshed LATM	85th percentile speeds exceed the posted speed limit, with Tunstall Avenue being a key rat run for vehicles looking to avoid the Gardeners Road/ Eastern Avenue signalised intersection. This treatment would reduce vehicle speeds and discourage traffic volumes. This treatment is not expected to lose any on-street parking spaces.	-
20	Tunstall Avenue/ Tresidder Avenue	Raised intersection	2014 Draft LATM – supported by Refreshed LATM	85th percentile speeds exceed the posted speed limit, with Tunstall Avenue being a key rat run for vehicles looking to avoid the Gardeners Road/ Eastern Avenue signalised intersection. This treatment would reduce vehicle speeds and discourage traffic volumes.	This treatment is likely to result in the loss of one on-street parking space.
21	Day Lane/ Barker Street	Raised intersection	Refreshed LATM	Improve safety and sight lines at the intersection. This treatment is not expected to lose any on-street parking spaces.	Unconventional intersection causes design constraints
22	Day Lane/ Strachan Street	Raised intersection	Refreshed LATM	Improve safety and sight lines at the intersection. This treatment is not expected to lose any on-street parking spaces.	-



ID	Street name/Location	Treatment type	Proposed by	Justification summary	Challenges
23	No. 27 Eastern Avenue	Road cushion	Refreshed LATM	Reduces speeding and discourages rat running. Allows for a temporary measure to see how it affects performance of the road and if complaints arise from residents. Road hump to be provided as an alternative feature.	Noise concerns and community backlash. This treatment is likely to result in the loss of two on-street parking spaces.
24	No. 38 Eastern Avenue	Road cushion	Refreshed LATM	Reduces speeding and discourages rat running. Allows for a temporary measure to see how it affects performance of the road and if complaints arise from residents. Road hump to be provided as an alternative feature.	Noise concerns and community backlash. This treatment is likely to result in the loss of two on-street parking spaces.
25	No. 82 Eastern Avenue	Road cushion	Refreshed LATM	Reduces speeding and discourages rat running. Allows for a temporary measure to see how it affects performance of the road and if complaints arise from residents. Road hump to be provided as an alternative feature.	Noise concerns and community backlash. This treatment is likely to result in the loss of two on-street parking spaces.
26	Milroy Avenue near Lenthall Street	Road hump	Refreshed LATM	Provides a traffic calming measure for vehicles coming off of Lenthall Street to reduce the desire to rat run	This treatment is likely to result in the loss of two on-street parking spaces.
27	McDougall Street near Lenthall Street	Road hump	Refreshed LATM	Provides a traffic calming measure for vehicles coming off of Lenthall Street to reduce the desire to rat run	This treatment is likely to result in the loss of two on-street parking spaces.
28	Virginia Street near Lenthall Street	Road hump	Refreshed LATM	Provides a traffic calming measure for vehicles coming off of Lenthall Street to reduce the desire to rat run	This treatment is likely to result in the loss of two on-street parking spaces.
29	Houston Road/ Borrodale Road	Roundabout with wombat crossing	Refreshed LATM	Improve pedestrian and cyclist connectivity and safety. Proposed as part of the Centennial cycleway. Provides safer access for vehicles moving east-west whilst reducing vehicle speeds along Houston Road. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	If the design of a roundabout proves problematic, an alternate intersection treatment such as channelisation may have to be considered.
30	Houston Road/ See Street	Wombat crossing	Refreshed LATM	Improve pedestrian connectivity and safety. Proposed as part of the Centennial cycleway. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	



ID	Street name/Location	Treatment type	Proposed by	Justification summary	Challenges
31	Houston Road/ Strachan Street	Roundabout with wombat crossing	Refreshed LATM	Improve pedestrian and cyclist connectivity and safety. Proposed as part of the Centennial cycleway. Provides safer access for vehicles moving east-west whilst reducing vehicle speeds along Houston Road. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	If the design of a roundabout proves problematic, an alternate intersection treatment such as channelisation may have to be considered.
32	Todman Avenue/ Kensington Road	Signalised intersection	2014 Draft LATM – supported by Refreshed LATM	Improve road safety for pedestrians and vehicles at the intersection. High traffic volumes and crash history warrant a signalised intersection. This area has observed a significant number of crashes and is identified as a black spot.	This treatment is likely to result in the loss of two on-street parking spaces.
33	Milroy Avenue	Slow point	Refreshed LATM	Discourage rat runs of vehicles looking to avoid Lenthall Street/ Todman Avenue intersection and reduce 85th percentile speeds.	This treatment is likely to result in the loss of two on-street parking spaces.
34	McDougall Street	Slow point	Refreshed LATM	Discourage rat runs of vehicles looking to avoid Lenthall Street/ Todman Avenue intersection and reduce 85th percentile speeds.	This treatment is likely to result in the loss of two on-street parking spaces.
35	Virginia Street	Slow point	Refreshed LATM	Discourage rat runs of vehicles looking to avoid Lenthall Street/ Todman Avenue intersection and reduce 85th percentile speeds.	This treatment is likely to result in the loss of two on-street parking spaces.
36	No. 5 Tunstall Avenue	Slow point	Refreshed LATM	Reduce speeds on Tunstall Avenue and improve safety.	This treatment is likely to result in the loss of two on-street parking spaces.
37	Addison Street near Kensington Road	Wombat crossing	Refreshed LATM	Provide a safe crossing Infront of a school site and reduce speeds. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	-
38	Addison Street west of Anzac Parade	Wombat crossing	Refreshed LATM	Provide a traffic calming measure for vehicles coming off the Anzac Parade ramp. Also provide pedestrians a safe crossing point which does not currently exist on Addison Street. A key community comment that would slow vehicles and discourages rat running between Anzac Parade and Todman Avenue.	Requires moving utilities and public infrastructure.



ID	Street name/Location	Treatment type	Proposed by	Justification summary	Challenges
39	Todman Avenue near Carminya Street	Wombat crossing	Refreshed LATM	Existing zebra crossing does not provide adequate priority to pedestrians. Vertical deflection device to slow down vehicles as they approach the crossing. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	Kerb extensions may impact bus manoeuvres, and cycle path.
40	Villers Street near Todman Avenue	Street Closure	Refreshed LATM	Close the end of Villers Street at the intersection with Todman Avenue to create a friendly local street and discourage rat running from Anzac Parade onto Todman Avenue. In 2019 a crash at the Villers Street/ Todman Avenue intersection involved a pedestrian and resulted in a moderate injury. Crashes have occurred in this area during the investigation period, and the proposed treatment will help improve overall safety.	Limited space availability may cause issues for refuse trucks needing to turn around. Issues with turning movements in the concept design phase suggest that this requires a more detailed investigation.
41	Barker Street, between Day Lane and Cottenham Avenue	Footpath	Refreshed LATM	Provide pedestrian footpaths around park to ensure pedestrian connectivity. It was highly requested in the community survey and is supports connections through to West Kingsford.	Existing trees are likely to impact on the design of the footpath.
42	Houston Road, between Barker Street and Gardeners Road	Separated cycleway	2014 Draft LATM – supported by Refreshed LATM	Separated cycleway currently terminates south from Barker Street. Continuation of a separated cycleway is recommended	-
43	Todman Avenue to Doncaster Avenue	Separated cycleway	Refreshed LATM	Provides a safe connection to the wider City of Sydney cycleway network and addresses the missing gap between Zetland and the newly constructed Kingsford to Centennial Park cycleway.	-



In addition to the measures proposed in Chapter 7.2 there are a number of additional measures which have not been included in this LATM study but are recommended for further investigation. These include:

Wombat Crossing

- A wombat crossing is proposed for further investigation on Doncaster Avenue, south of Abbotford Street. This crossing would facilitate smooth movement from the shared path along Doncaster Avenue. The demand for this path is expected to increase due to cyclists transitioning from the cycleway to the shared path.

Street Closures

- Investigate the opportunity to introduce a street closure on Balfour Road at the intersection with Todman Avenue. This is to be investigated as part of the design process for the proposed bicycle path which is currently in the concept design phase.
- Conduct a traffic modelling study to examine the impact of closing Virginia Street, McDougall Street, and Milroy Avenue at their intersections with Lenthall Street. These closures could potentially eliminate rat running through these local streets between Lenthall Street and Todman Avenue. While traffic counts provide some insight into the issues, traffic modelling is necessary to fully understand the effects these closures would have on the Todman Avenue intersection and the surrounding road network.

8 Implementation of Actions

A number of actions have been recommended for this study, supporting the core focus on improving overall road safety and discouraging rat running through the local streets of Kensington and West Kingsford. These actions are critical to addressing the pressing need to enhance the safety and liveability of these neighbourhoods. By reducing through-traffic, we can lower the risk of accidents, decrease noise pollution, and create a more place-oriented and pedestrian-friendly environment. These measures are essential to ensure that local streets serve the residents' needs rather than becoming movement corridors for non-local traffic.

This updated study was raised in part due to strong community concerns regarding possible impacts of the WestConnex project. It is considered that the southern part of the study area would be more affected by any WestConnex outcomes. Therefore, it is proposed that these actions be implemented in a staged approach to prioritise these improvements. Randwick City Council should focus on implementing the actions south of Addison Street and Anzac Parade first, followed by those in the north. This approach supports the expansion of the Kingsford to Centennial Park cycleway, a critical piece of cycling infrastructure in the area. Additionally, this aligns with the Stage 2 implementation of a new 40 km/h zone, further enhancing road safety and encouraging sustainable transport options.

