

# Inner West Pedestrian Access and Mobility Plan

## Final Report

Inner West Council

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# EXECUTIVE SUMMARY

The Inner West is one of Sydney's most populated LGAs and has the second highest population density. As such, there is great benefit to shift people away from private vehicles and onto active transport options. Regardless of travel modes, walking typically makes up the start or end of any trip.

Bitzios Consulting was commissioned by Inner West Council to undertake and develop the Inner West PAMP to provide an updated and consolidated PAMP that covers the entire LGA. The PAMP intends to provide Council with a long-term strategy for the development and improvement of pedestrian routes and facilities with a focus on encouraging and increasing localised pedestrian activity.

The PAMP was developed in accordance with Transport for NSW's Guide '*How to Prepare a Pedestrian Access and Mobility Plan*'.

The overarching objectives of the PAMP included:

- *To facilitate improvements in the level of pedestrian access and priority, particularly in areas of pedestrian concentration*
- *To reduce pedestrians access severance and enhance safe and convenient crossing opportunities*
- *To identify and resolve pedestrian crash clusters*
- *To ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups.*

An initial engagement program was conducted to gain an insight on pedestrian and access issues currently faced by Inner West residents and visitors. The engagement process was primarily conducted online using an interactive map on the *Your Say* website and yielded responses from nearly 300 users. Most of who lived within the Inner West.

The demographic of the Inner West is primarily made up of parents and home-owners (aged 35 to 49) and the young workforce (aged 25-34) both of which are higher than the Greater Sydney average.

Journey to work statistics also show most residents work in adjoining LGAs (including City of Sydney) which places further importance on walking as a primary travel mode. Around 5% of residents currently walk to work.

The PAMP focusses on key areas and strategic links throughout the LGA and includes all 26 suburb areas. A review of pedestrian attractors and generators show a strong distribution across the study area, including schools, parks and community facilities.

Historic crash data shows a concentration of pedestrian related crashes within town centres and along main road corridors, totalling 324 crashes over the past five years.

Routes were selected as part of the investigation based on previously developed PAMPs (Ashfield, Leichardt and Marrickville) and various strategic documentation. These routes were then subject to a detailed site investigation and audit looking into pedestrian issues relating to missing pathways, narrow pathways, crossing deficiencies, obstructions, connectivity issues and pedestrian safety issues.

A recommended works program has been developed to assign a priority to each correcting action associated with identified issues. The action plan will inform future works program and assist Council in programming future works to improve the pedestrian network.

Based on these recommended actions, the project was estimated to cost approximately **\$18.1 million**, with an additional **\$3.6 million** as a project contingency.

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# 1. INTRODUCTION

## 1.1 Background

Active modes of transport are the most basic and equitable forms of transport available. Most individual trips, regardless of the type of transport used, begin and / or finish with a walk section, making walking a major element of all travel. Of the top 20 most populated LGAs in Sydney, the Inner West has the second highest population density. Areas such as these often see higher degrees of benefit to shift people away from private vehicles and onto active transport options. This would be especially beneficial in the Inner West, where old, narrow streets have limited options for improvement.

The most recent PAMP was commissioned by former Ashfield Council in 2015/16, whilst the former Leichhardt PAMP was updated in 2014 and former Marrickville PAMP updated in 2009. Since the amalgamation of Ashfield, Leichhardt and Marrickville Councils in 2016, there have been a number of changes to land use, policy and infrastructure which has triggered the need to develop an updated and consistent PAMP for the entire Inner West LGA.

Bitzios Consulting was commissioned by Inner West Council (Council) to develop the updated PAMP, with the intention of providing Council a long-term strategy for the development and improvement of pedestrian routes and facilities with a focus on encouraging and increasing localised pedestrian activity within the Inner West LGA. This can be achieved by improving the safety, convenience, connectivity, and accessibility of pedestrian routes across the network.

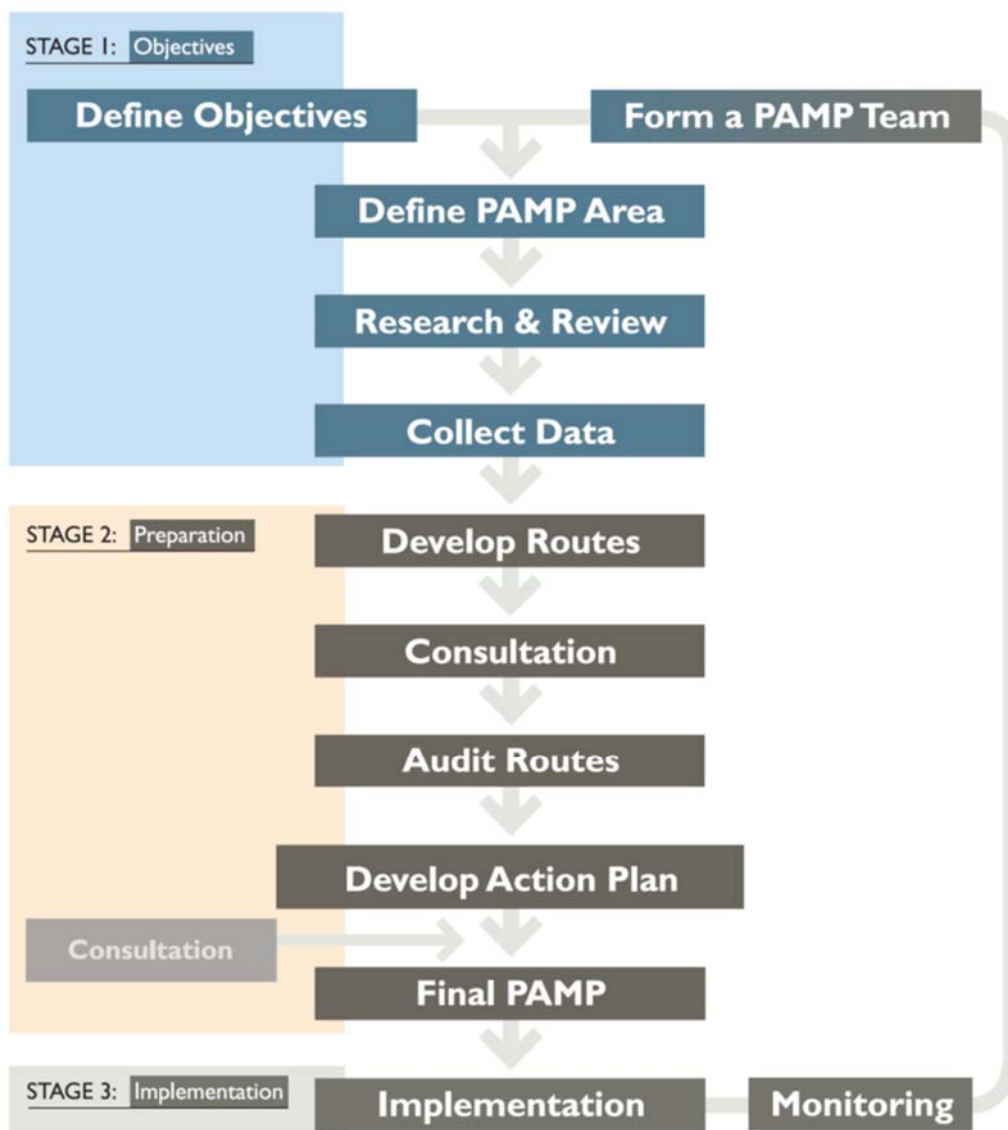
This report presents the findings of the study and contains the following:

- An assessment of the existing situation, activity centres and pedestrian routes
- Identification of deficiencies in the existing pedestrian network
- An audit of identified pedestrian routes
- A list of recommendations to detail and priorities as future projects for Council to implement.

## 1.2 PAMP Methodology

The purpose of this PAMP is to guide the future provision and management of pedestrian access and mobility facilities within the Inner West. To achieve this, the PAMP was developed in accordance with the TfNSW Guide *'How to Prepare a Pedestrian Access and Mobility Plan'*. This guide identifies three stages in the PAMP process, shown in Figure 1.1.

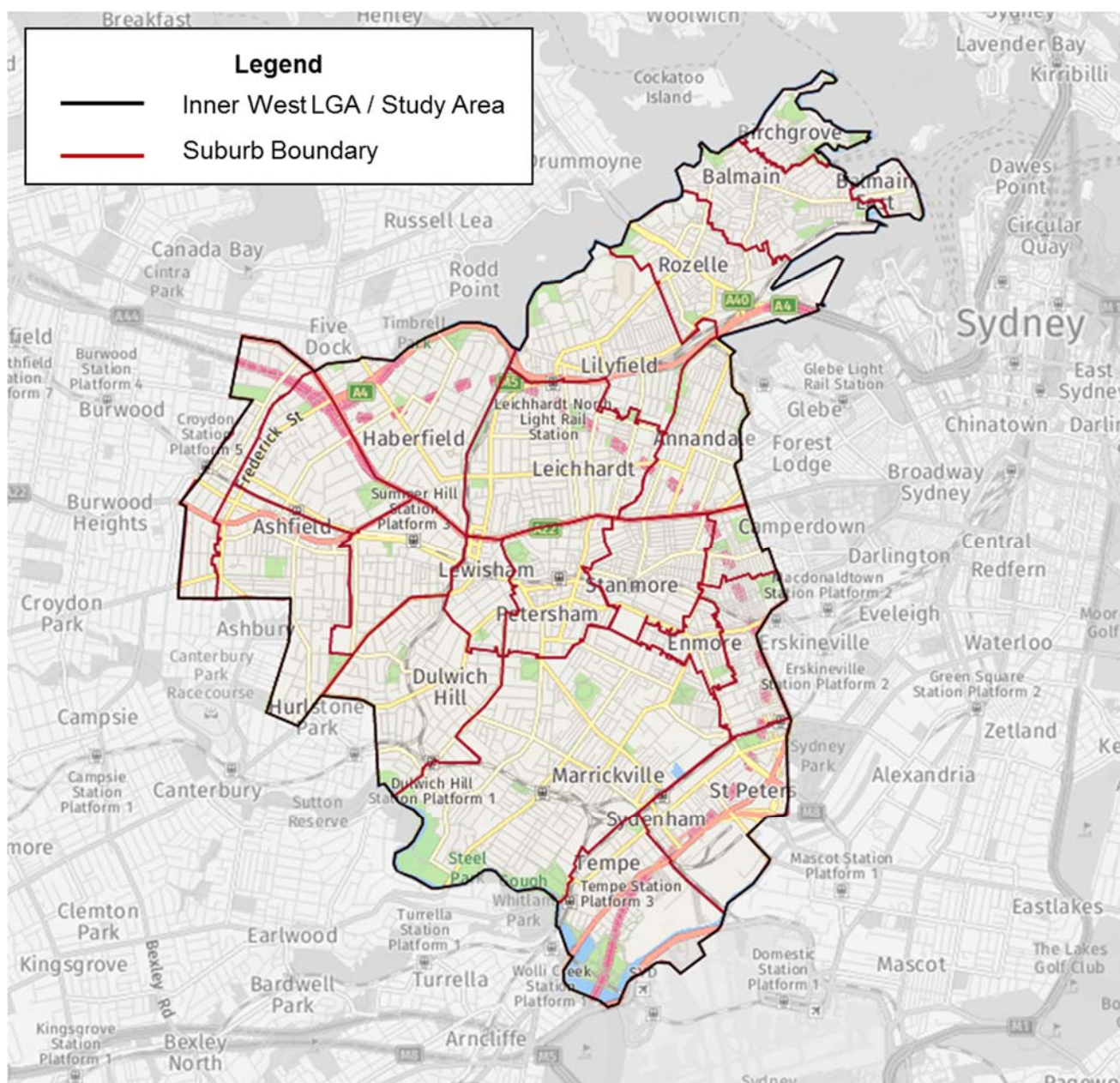
- Stage 1: Defining Objectives
- Stage 2: Preparation and community consultation
- Stage 3: Implementation.



**Figure 1.1: PAMP Development Methodology**

This PAMP study covers the entire Inner West LGA, shown in Figure 1.2, with focus on key areas and emphasis on routes identified in previous Council PAMPs and other Inner West Council strategic documents. In consultation with Council, a defined PAMP area for this study was developed, which is further discussed and presented in Section 8.





Source: Community.id

**Figure 1.2: PAMP Study Area – Inner West LGA**

## 2. PAMP OBJECTIVES

### 2.1 Overview

The aim of this PAMP is to provide a strategy that improves pedestrian safety and promotes walking throughout the Inner West LGA. The PAMP objectives as outlined in the NSW TfNSW Guide 'How to Prepare a Pedestrian Access and Mobility Plan', have been incorporated in this PAMP as follows:

- *To facilitate improvements in the level of pedestrian access and priority, particularly in areas of pedestrian concentration*
- *To reduce pedestrians access severance and enhance safe and convenient crossing opportunities*
- *To identify and resolve pedestrian crash clusters*
- *To ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups.*

These overarching objectives will drive the purpose and implementation of this PAMP.

### 2.2 Connectivity and Missing Links

In addition, the Inner West PAMP specifically aims to:

- Provide a network of safe, inclusive, connected and convenient pedestrian routes which will encourage the shift from car dependency to walking.
- Enhance the pedestrian network to allow all pedestrians to enjoy safe, convenient and coherent independent mobility.

A key focus of the PAMP is to identify and complete key pedestrian connections in the wider pedestrian network. Improving connectivity would also include the provision of usable and safe crossing facilities such as kerb ramps or pedestrian refuges connecting two footpaths across a section of road, or provision of pedestrian priority facilities such as pedestrian crossings, signalised crossings or shared zones.

### 2.3 Pedestrian Safety in Key Areas

The PAMP also aims to increase pedestrian safety, particularly in key centres, town centres and areas of high pedestrian concentration. Where possible, and supported by detailed investigation, the PAMP supports the use of treatments to increase pedestrian safety, such as:

- Upgrading of existing at-grade pedestrian crossings to raised pedestrian (wombat) crossings to slow vehicle speeds and increase visibility of pedestrians, particularly:
  - Within town centres
  - Near schools and education facilities
  - Near public transport hubs (such as train stations)
- Progressively and where funding permits, implement Continuous Footpath Treatments (CFTs) across side streets within town centres
- Implementation of 40km/h High Pedestrian Activity Areas (HPAAs) in town centres and villages
- Introduction Shared Zones along local streets in mixed development areas.

## 2.4 Complementing Other Projects and Procedures

Where possible, the Inner West PAMP also aims to complement and support other related projects and procedures to improve the pedestrian network and experience across the LGA. This includes (but is not limited to):

- Key pedestrian projects identified within the Inner West Integrated Transport Strategy
  - Inner West @ 40 – reducing the speed limit to 40km/h in local areas
  - The Greenway and The Green Grid
  - Planning and Building the Inner West Pedestrian Network
- Council's *Report an Issue / Request a Service* online portal
- Future streetscape, public domain projects or masterplans.

Related key projects within the ITS are further detailed in Section 6.

## 3. COMMUNITY AND STAKEHOLDER ENGAGEMENT

### 3.1 Engagement Process

An initial engagement program was conducted by Council to gather resident feedback on existing pedestrian issues across the Inner West. The engagement period was conducted between 23 November and 22 December 2020. Three community engagement methods were used:

- Online – via an interactive map on Your Say Inner West
- Online – via individual email submissions
- Community group sessions

Local democracy groups and community groups were invited to participate in the community group sessions. The Vietnamese Seniors Group and Arabic Seniors Group accepted the invitation and in-language sessions were conducted with these two groups via interpreters.

A detailed review of the input from the engagement is discussed in the Engagement Outcomes Report, included in **Appendix A**.

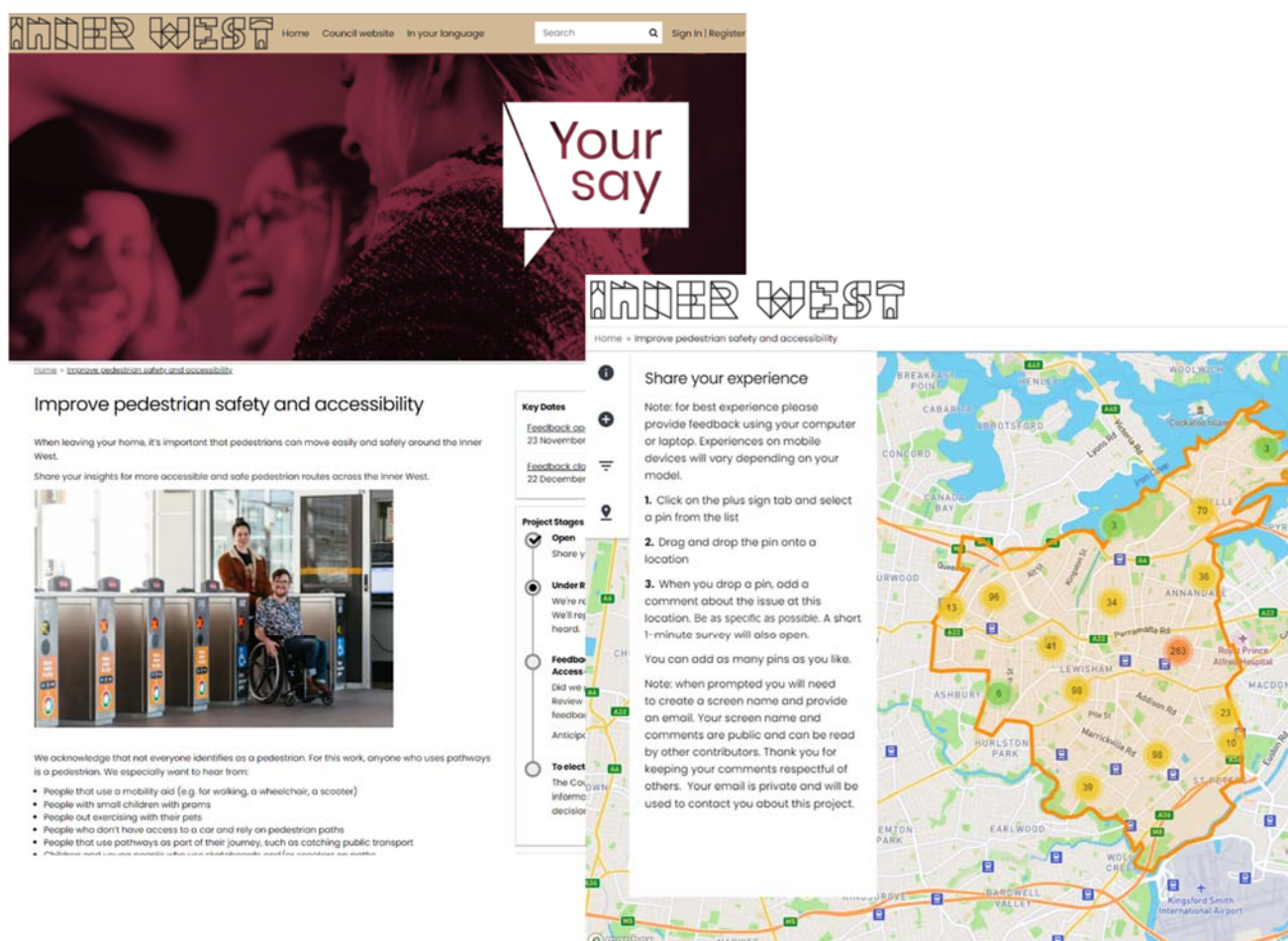
### 3.2 Interactive Mapping

An online interactive map via the *Your Say* website allowed users to place a pin under different categories to provide location-based comments of pedestrian issues, shown Figure 3.1.

A summary of the findings from this engagement method is as follows:

- A total of 836 responses were submitted from 295 participants
- 98% of responses were provided by Inner West residents
- The majority (52%) of participants are within the 35-49 year age group
- The majority of participants reside in Annandale (14%), Leichhardt (11%), Marrickville (11%), and Stanmore (10%)
- Footpaths within the Inner West are used for a variety of purposes, in which there is no dominant purpose
- Using footpaths for travelling to/from shops is the most common (19%), and travelling to/from school is the least common (9%)
- A relatively similar proportion of participants use footpaths to commute to work (13%) and for leisure, health and fitness purposes (13%)
- The most common categories of submissions were related to safety concerns (62%) and accessibility concerns (15%)
- Notably, the top three reported submissions were related to vehicle behaviours, footpath connectivity and obstructions, and crossing deficiencies, comprising of approximately 70% of all submissions
- The greatest number of responses submitted were recorded in the suburbs of Marrickville (14%), Newtown (11%), Ashfield (10%), and Annandale (9%).





**Figure 3.1: Inner West Council – Your Say Website and Interactive Map**

### 3.3 Email Submissions

An email campaign allowed users to submit individual responses if they did not wish to use the online interactive map. A summary of findings from this engagement method is as follows:

- A total of 14 individual responses were received from individuals and groups of residents of the Inner West, including the local State MP for Summer Hill, Jo Haylen, supporting the pedestrian study
- The common themes across all responses were related to footpath facilities and pedestrian safety.

### 3.4 Community Group Sessions

Local democracy groups and community groups were invited to participate in the community group sessions. The Vietnamese Seniors Group and Arabic Seniors Group accepted the invitation and in-language sessions were conducted with these two groups via interpreters.

A summary of findings from this engagement method is as follows:

- A total of 3 community groups were engaged including a Vietnamese mother's group, Vietnamese senior's group, and Arabic senior's group
- A total of 31 issues were provided by 30 participants involved
- The most commonly raised concerns were related to the following:
  - Poor pedestrian facilities on Petersham Road (29%)
  - Cars parking on footpaths (10%)
  - Accessibility difficulties with uneven footpaths due to tree roots (10%).

### **3.5 Use of Community Engagement Findings in PAMP**

Overall, a total of 881 submissions were received from 339 participants involved in the initial engagement process.

The data received provided important insights on the behaviours, challenges and issues for pedestrians in the Inner West and identified locations of key concerns related to pedestrian accessibility, connectivity, and safety. The locations of these related issues were identified and considered in the PAMP study.

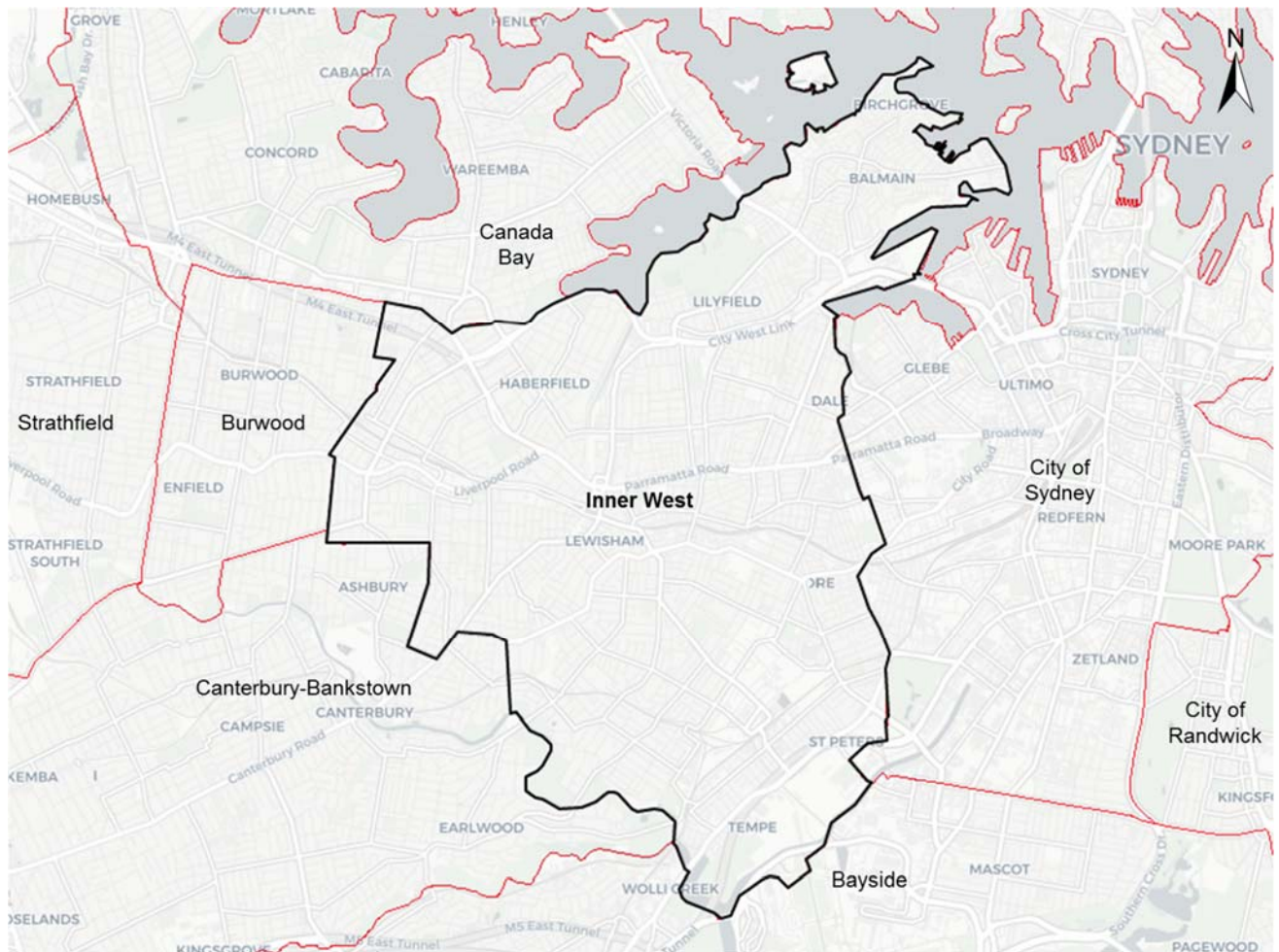
## 4. INNER WEST CHARACTERISTICS

### 4.1 Overview

The Inner West is located in NSW, within the inner Sydney city area. It is located adjacent to the Sydney CBD area and is bounded by City of Sydney LGA to the east, Bayside LGA to the south, Canterbury-Bankstown LGA and Burwood LGA to the west, and Canada Bay LGA and the Parramatta River to the north.

The Inner West has a total area of approximately 35 km<sup>2</sup>, and is predominantly comprised of residential areas, but also has substantial commercial, industrial and marina areas.

A map of the Inner West LGA and surrounds is shown in Figure 4.1.



Source: NationalMap

**Figure 4.1** Inner West LGA and Surrounds

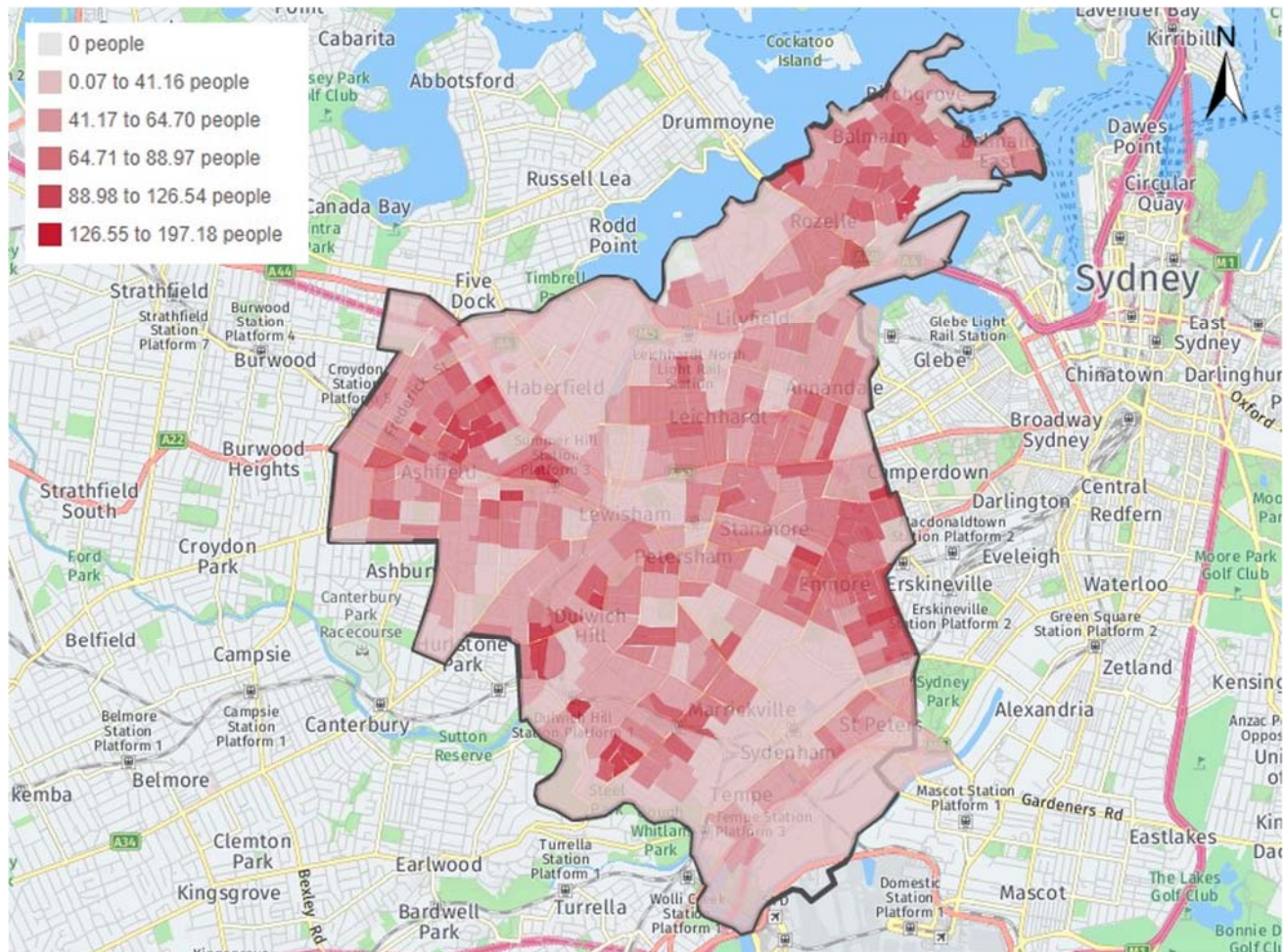


## 4.2 Population

### 4.2.1 Overview

Inner West has an estimated population (2021) of around 204,400 people, according to Australian Bureau of Statistics (ABS) Census Data and is forecast to reach 247,881 people by the year 2041, representing a 21.7% increase over the 20 years from 2021.

The Inner West is one of Sydney's most populated LGAs and has the second highest population density. Figure 4.2 illustrates the population density by area within the Inner West LGA.



Source: Inner West Social Atlas

**Figure 4.2 Population Density of the Inner West LGA**

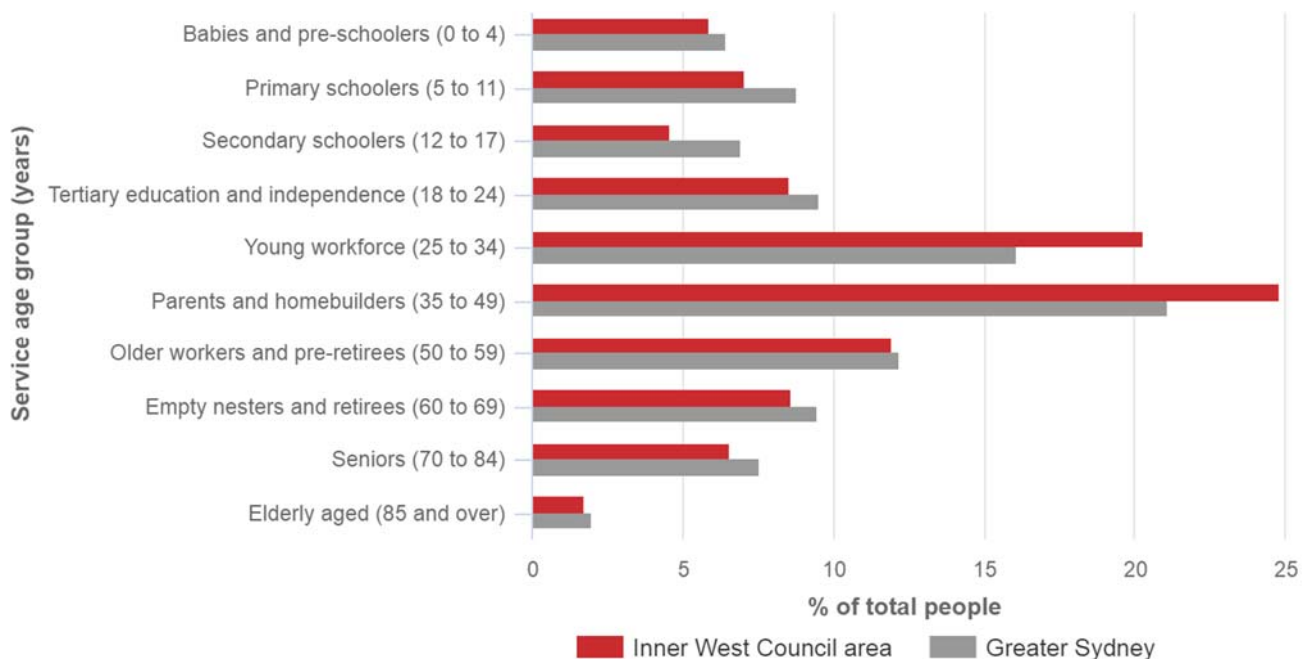
The population is dispersed across the LGA with the highest density areas located in Newtown, Ashfield, Dulwich Hill, and Balmain, with densities between 70 to 100 persons per hectare.

### 4.2.2 Current demographics

Pedestrian planning considers a number of pedestrian facility user groups based on age and assumed mobility levels. To develop this PAMP, key pedestrian demographic groups were derived from TfNSW's Guide *How to Prepare a Pedestrian Access and Mobility Plan*, as follows:

- Infants (ages 0 - 4)
- Pre-school (ages 5 - 8)
- Primary (ages 9 - 11)
- Secondary (ages 12 - 17)
- Young adults (ages 18 - 25)
- Adults (ages 26 - 59)
  - Adults (a) from 26 - 39 years old
  - Adults (b) from 40 - 59 years old
- Elderly (ages 60+)
  - Elderly (a) from 60 - 69 years old
  - Adults (b) from 70+ years of age.

The age profile for the Inner West LGA is presented in Figure 4.3 in comparison with the Greater Sydney according to the 2016 census data.



Source: Australian Bureau of Statistics 2016

**Figure 4.3 Age Profile of Inner West in Comparison with Greater Sydney**

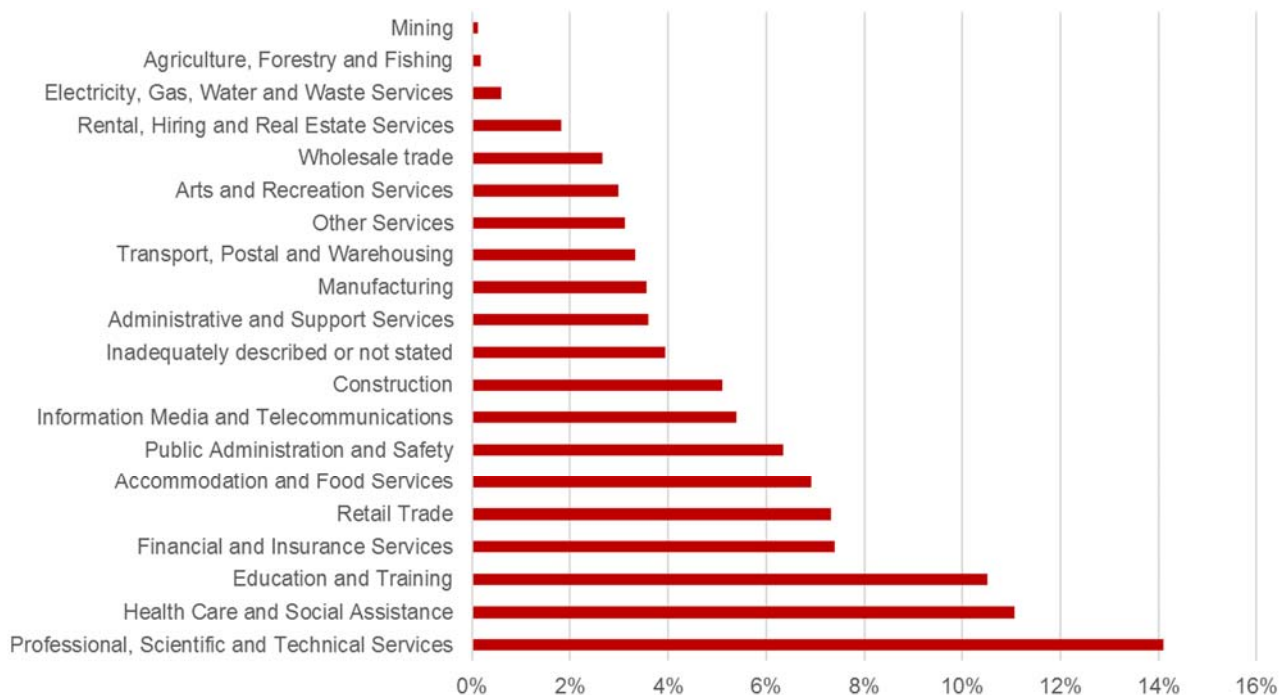
The predominant service age groups within the Inner West LGA are parents (aged 35 to 49) and the young workforce (aged 25 to 34). Comparatively, there is a higher proportion of these age groups compared to Greater Sydney.

In comparison, the proportion of school children (aged 5 to 17) are much lower. The community profile indicates a middle-aged population and an emerging younger and elderly population. This presents the current challenge to provide safer pedestrian facilities and crossings for school children, and slower travelling or immobile pedestrians.

Typically, the parents demographic group requires good footpath and kerb ramp connectivity to properly navigate with a pram or walk young children who may be less experienced and vulnerable.

### 4.3 Employment in the Inner West

Employment numbers in the Inner West LGA have increased approximately 6.9% from 2011 to 2016. This increase in employment may be the result of the emerging young workforce and current middle-aged population. A summary of the employment industry profile within the Inner West LGA is shown in Figure 4.4.



Source: Australian Bureau of Statistics 2016

**Figure 4.4 Employment Industry Profile of Inner West**

The key employment industries within the Inner West are the professional, scientific, and technical services, health care and social assistance, and education and training. The greatest changes to employment sectors from 2011 to 2016 were a reduction to manufacturing and wholesale trade, and an increase to professional, scientific and technical services, and construction.

The employment profile further reiterates the current demographics of the middle-aged and emerging young population.

### 4.4 Journey to Work data

ABS Journey to Work (JTW) data was used to gain an understanding of work locations and typical modal shares for trips to work by the residents of the LGA.

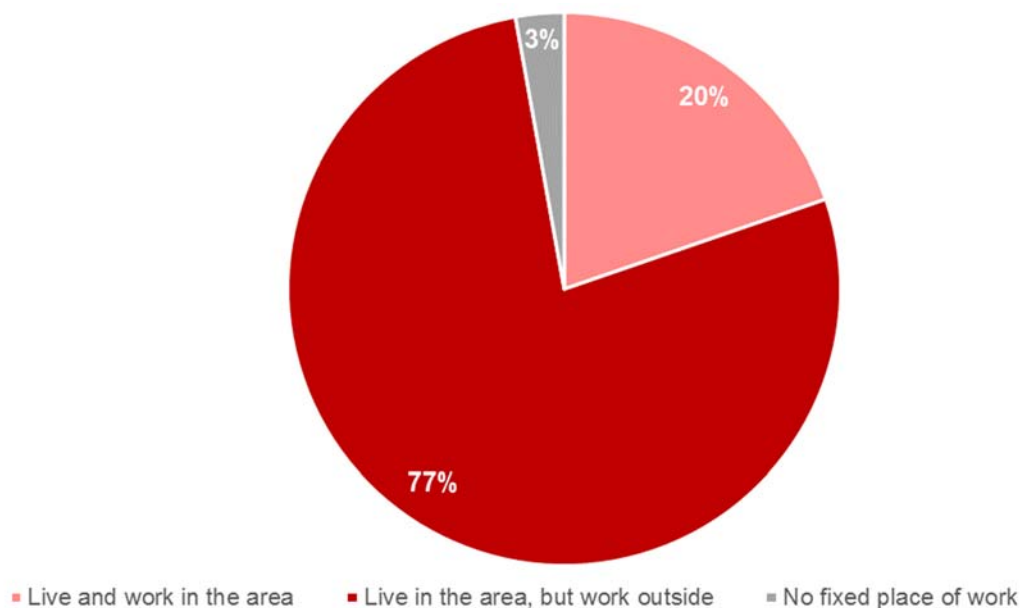
Key JTW statistics include:

- Approximately 43% of employed residents travel to the City of Sydney for work, followed by the Inner West (20%) and North Sydney (4%)
- 'Outbound' commute trips outside the Inner West make up 77% of residents within the area
- Approximately 31% of workers within the Inner West are residents of the area, followed by residents from Canterbury-Bankstown (12%) and City of Sydney (6%) LGA's
- 'Inbound' commute trips to the Inner West make up 69% of workers within the area
- The data shows that there is a higher proportion of 'outbound' journeys to work outside of the Inner West, with a relatively similar proportion of 'inbound' commute trips and a low level of 'local' journeys



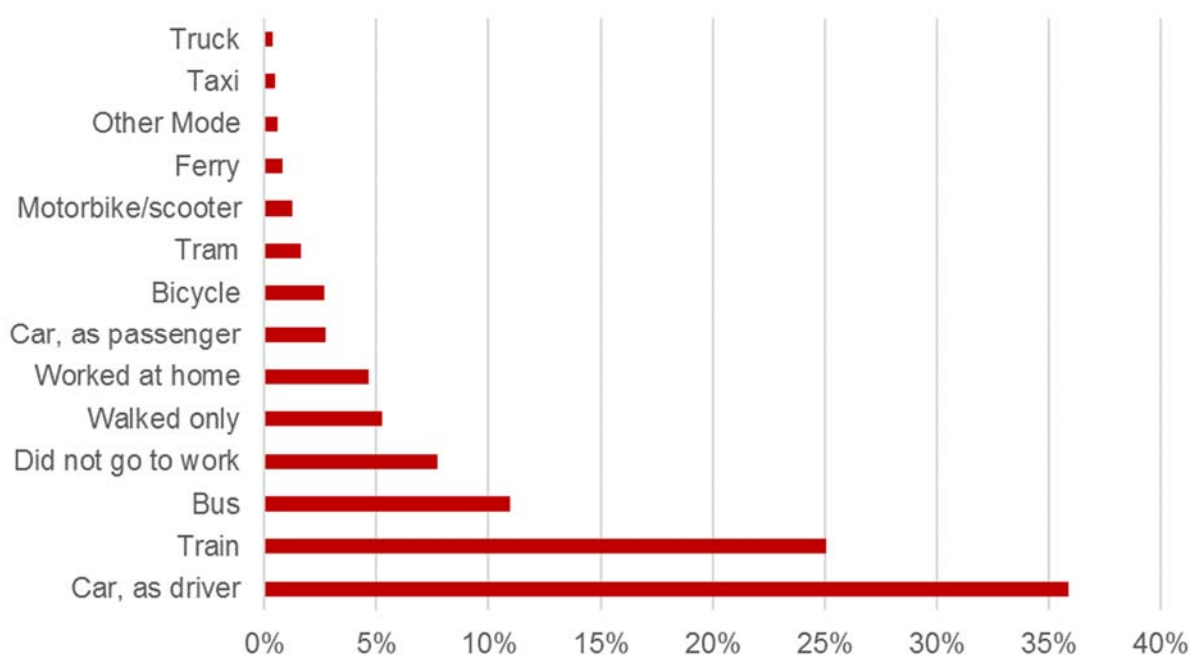
- The predominant mode of transport for Inner West residents is by private car, as a driver or passenger (39% combined)
- 37% of workers travel by public transport including:
  - Train (25%)
  - Bus (11%)
  - Ferry (1%).
- Approximately 5% of people walk to work.

Figure 4.5 shows the place of employment for residents within the Inner West and Figure 4.6 shows the travel modes for Inner West residents commuting to work.



Source: Australian Bureau of Statistics 2016

**Figure 4.5 Resident Employment Location**



Source: Australian Bureau of Statistics 2016

**Figure 4.6 Travel Mode Share of Inner West Residents**

The data shows that the total number of people using public and active transport are similar to the number of people using private cars. Pedestrian activity forms part of every journey, either at the start or end of each travel mode, as people will move from their mode of transport to their destinations (i.e. school, sporting fields, work, etc.). This incidental activity highlights the importance of the active transport network.

## 4.5 Transport Characteristics

### 4.5.1 Travel characteristics

The Inner West LGA is well serviced by public transport with multiple forms available including bus, heavy rail, light rail, and ferry services. These services provide connectivity within the Inner West, to Greater Sydney, and the Greater Western Sydney region. There are three rail corridors providing east-west connectivity in the central region, and the southern extents of the Inner West. The Light Rail extends the connectivity within the Inner West through the north-south direction and towards the city. The northern region of the Inner West is primarily serviced by bus and ferry services.

The Inner West is also well connected through an extensive network of footpaths throughout a significant portion of the area to town centres, public transport, parks, and various attractors.

### 4.5.2 Public Transport

Figure 4.7 shows the various public transport routes, stops and stations servicing the Inner West LGA.

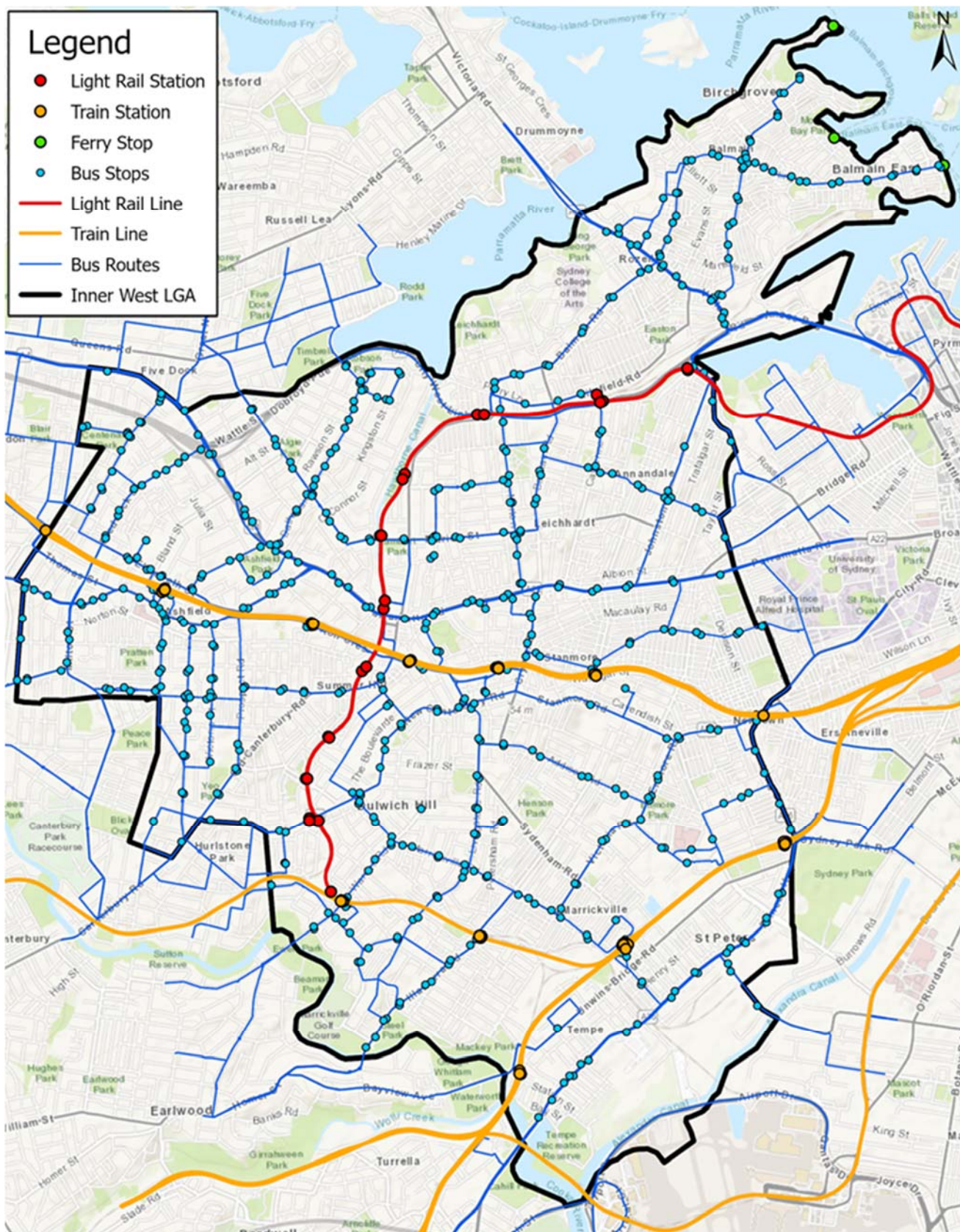
#### Bus

There are over 25 bus routes servicing the Inner West. Table 4.1 is a summary of the key bus routes within the Inner West.

**Table 4.1: Key Bus Services**

Bus Service	Destination 1	Destination 2
M30	Spit Junction	Sydenham
M10	Leichhardt	Randwick
308	Marrickville	City
348	Wolli Creek	Bondi Junction
352, 355	Marrickville	Bondi Junction
412, 413	Campsie	City
418	Bondi Junction	Burwood
422	Kogarah	City
423, L23, 426	Kingsgrove and Dulwich Hill	City
425	Tempe	Dulwich Hill
428, L28	Canterbury	City
444, 445	Balmain East Wharf	Campsie
461	Burwood	City
480, 483	Strathfield	City
438, L38	Abbotsford	City
439, L39	Mortlake	City





Source: Council GIS Data

**Figure 4.7 Public Transport within the Inner West**

## Train

There are four train lines servicing 10 train stations within the Inner West. These are:

- **T3 Bankstown Line** – Dulwich Hill, Marrickville, Sydenham, St Peters. Services to the City or to Liverpool/Lidcombe via Bankstown.
- **T4 Eastern Suburbs & Illawarra Line** – Sydenham, Tempe. Services to Bondi Junction via the City, or to Mortdale/Waterfall/Cronulla.
- **T2 Inner West & South Line** – Newtown, Stanmore, Petersham, Lewisham. All-stations services to the City or to Homebush.
- **T2 Airport Line** (weekday peak only) – Sydenham. Express services to the City (morning peak) and to Campbelltown (afternoon peak).

## Light Rail

The L1 Dulwich Hill Line connects Dulwich Hill and Central via Leichardt and Pyrmont. Light Rail stations serviced by this route are:

- |                 |                     |
|-----------------|---------------------|
| ▪ Dulwich Hill  | ▪ Taverners Hill    |
| ▪ Dulwich Grove | ▪ Marion, Hawthorne |
| ▪ Arlington     | ▪ Leichardt North   |
| ▪ Waratah Mills | ▪ Lilyfield         |
| ▪ Lewisham West | ▪ Rozelle Bay       |

## Ferry

There are three wharfs within the Inner West towards the northern region of Balmain which are serviced by two Sydney Ferries services, including:

- **F3 Parramatta River Service** – Birchgrove Wharf (at Louisa Road), and Balmain Wharf (at Thames Street)
- **F4 Darling Harbour Service** – Balmain East Wharf (at Darling Street).

These services provide connectivity to and from Parramatta River, Pyrmont Bay, and Circular Quay.

## 4.6 Future Growth and Development Areas

### 4.6.1 Parramatta Road Corridor

The Parramatta Road Corridor within the Inner West includes three of the eight recognised precincts under the Parramatta Road Urban Transformation Strategy (PRUTS), including:

- Taverners Hill (near Lewisham)
- Leichhardt
- Camperdown
- Part of Kings Bay (City of Canada Bay)

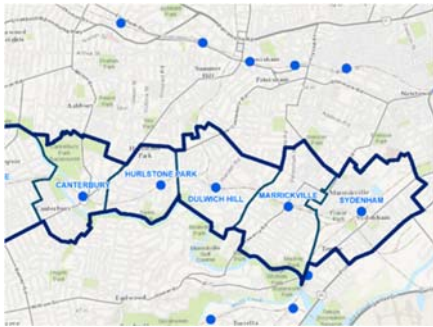
The Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) sets out the NSW Government's 30 year plan for the Corridor and identifies the future land use, development decisions and long-term infrastructure.

Through changes to planning controls and rezoning of existing land uses, housing and population density is expected to increase in these areas, including the development of high-density residential buildings and improved public transport services.



## 4.6.2 Sydney Metro Corridors

### 4.6.2.1 Sydney Metro – Southwest



The Sydenham to Bankstown Urban Renewal Corridor Strategy aims to create more housing, jobs and infrastructure around the eleven train stations on the Sydenham to Bankstown line and make this area a high-frequency metro train service under the Sydney Metro Southwest project.

Under the Plan, the construction of the Sydney Metro Southwest is anticipated to increase the number of dwellings and employment opportunities along the corridor, particularly within the Sydenham, Marrickville and Dulwich Hill areas.

The plan is expected to generate:

- Sydenham Station Precinct: 500 additional dwellings and 711 jobs
- Marrickville Station Precinct: 6,000 additional dwellings and 555 jobs
- Dulwich Hill Station Precinct: 2,000 additional dwellings and 275 jobs.

### 4.6.2.2 Sydney Metro - West

While no stations along Sydney Metro West are proposed to in the Inner West, the locality of the nearest stations is likely to see an increase in pedestrian activity.

The Metro presents itself as more appealing public transport option, reducing dependency on private vehicle travel, and increase pedestrian activity due to passenger walk up to the stations.

The station proposed for Five Dock will see Inner West residents in the Haberfield and Ashfield areas walking to and from the station. The station proposed for White Bay will see an increase in pedestrian activity related to the station and the White Bays Precinct development.



## 4.7 Links to Neighbouring Areas

Being centrally located between other LGAs, the Inner West pedestrian network is well connected to neighbouring areas and beyond. This includes a number of corridors and routes:

### Main Roads

- |                   |                           |                      |
|-------------------|---------------------------|----------------------|
| ▪ Parramatta Road | ▪ Broadway                | ▪ Canterbury Road    |
| ▪ Liverpool Road  | ▪ King Street / City Road | ▪ Georges River Road |
| ▪ Princes Highway | ▪ Ramsay Street           | ▪ Bridge Road        |

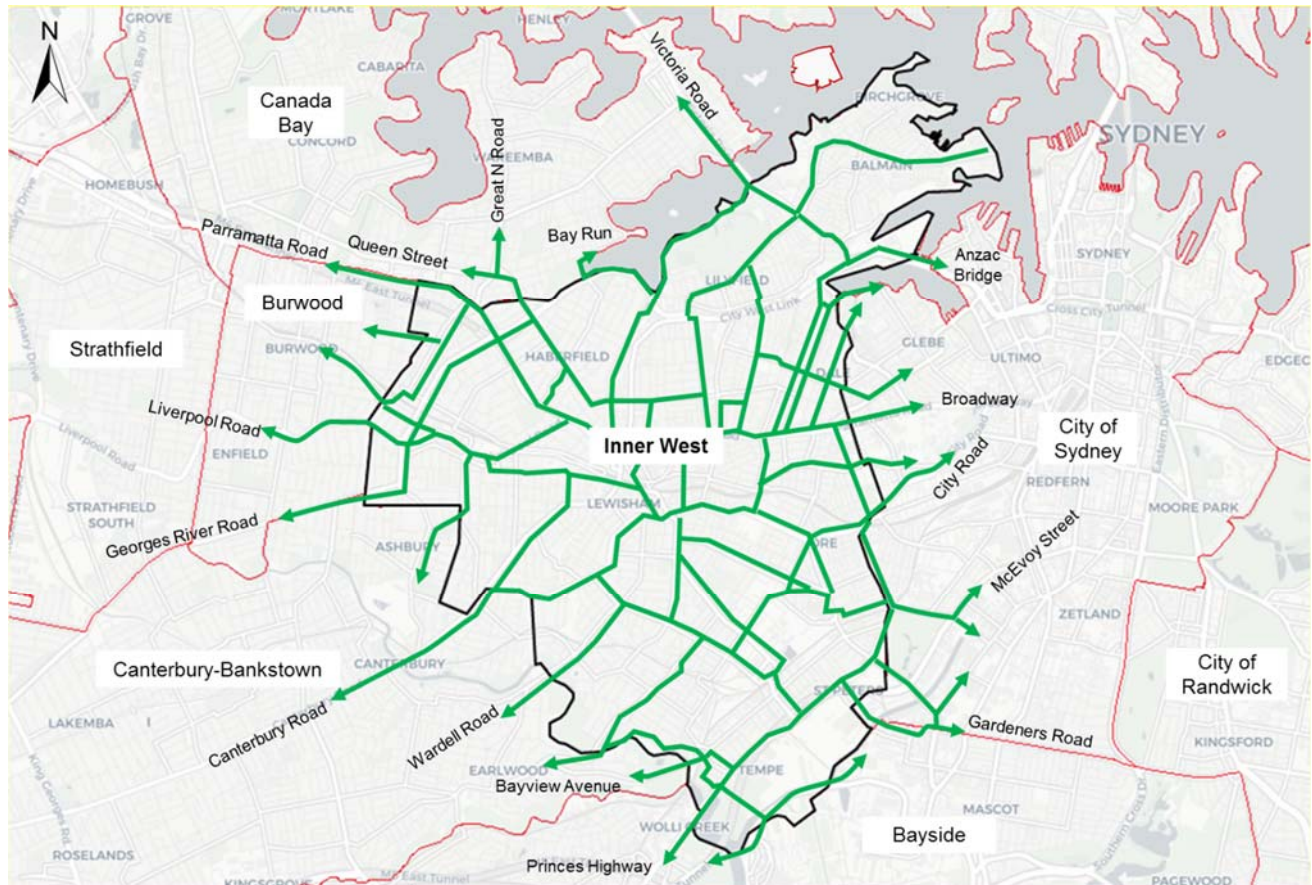
### Bridges

- |                   |                  |                 |
|-------------------|------------------|-----------------|
| ▪ Princes Highway | ▪ Wardell Road   | ▪ Canal Road    |
| ▪ Victoria Road   | ▪ Illawarra Road | ▪ Campbell Road |
| ▪ Anzac Bridge    | ▪ Bayview Avenue |                 |

## Parks and Off-Road Paths

- Bay Run
- Jubilee Park / Bicentennial Park
- Sydney Park
- Cooks River Foreshore

Key routes and connections to neighbouring LGAs are shown in Figure 4.8.



Adapted from National Map

**Figure 4.8: Pedestrian Corridor Connections to Neighbouring Areas**

## 5. PAMP FOCUS AREAS

### 5.1 Overview

The Inner West is comprised of 26 suburb areas, including:

- |                              |                       |
|------------------------------|-----------------------|
| ▪ Annandale                  | ▪ Leichhardt          |
| ▪ Ashbury (Partially)        | ▪ Lewisham            |
| ▪ Ashfield                   | ▪ Lilyfield           |
| ▪ Balmain                    | ▪ Marrickville        |
| ▪ Balmain East               | ▪ Mascot (Partially). |
| ▪ Birchgrove                 | ▪ Newtown             |
| ▪ Camperdown                 | ▪ Petersham           |
| ▪ Croydon (Partially)        | ▪ Rozelle             |
| ▪ Croydon Park (Partially)   | ▪ St Peters           |
| ▪ Dulwich Hill               | ▪ Stanmore            |
| ▪ Enmore                     | ▪ Summer Hill         |
| ▪ Haberfield                 | ▪ Sydenham            |
| ▪ Hurlstone Park (Partially) | ▪ Tempe               |

The Inner West is primarily comprised of low to medium density residential, retail and commercial within suburb core centres, and industrial towards the south-eastern extents. There are also a high number of parks and educational areas within the Inner West.

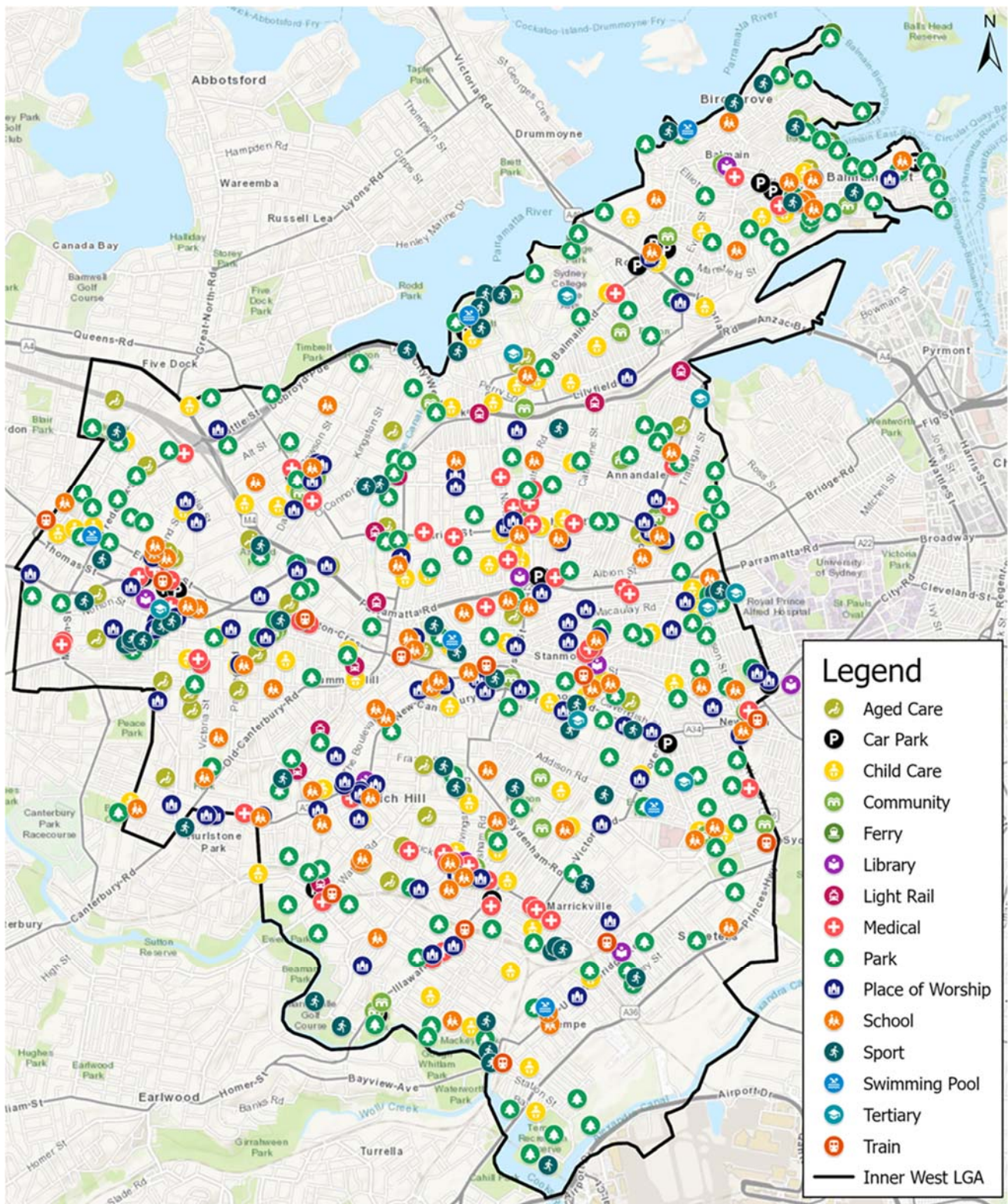
### 5.2 Pedestrian Attractors and Generators

When developing a PAMP, certain land-uses are considered key pedestrian attractors and generators of trips. Typically, these include:

- Shopping centres and main streets
- Educational facilities
- Hospitals and medical centres
- Aged care facilities
- Childcare centres, pre-schools, out of school hours care facilities
- Community halls and facilities, neighbourhood centres, youth centres
- Parks and recreational facilities
- Public transport facilities.

It is also typical for suburbs to have a core town centre which usually includes groups of these attractors and generators which are focus areas due to high pedestrian activity. The key pedestrian attractors and generators within the Inner West is presented in Figure 5.1. Public transport routes and stations and key areas of the Inner West are illustrated in Figure 4.7.





Source: Adapted from Google Maps

**Figure 5.1 Pedestrian Attractors and Generators within Inner West LGA**

## 6. RESEARCH AND REVIEW

### 6.1 Overview

The purpose of this chapter is to align this PAMP with other related plans, as required in TfNSW PAMP Guidelines. These include State Government plans, Regional plans, local planning documents and other relevant plans. A summary of relevant strategies is provided in this section.

### 6.2 State Government Plans

#### 6.2.1 Eastern City District Plan

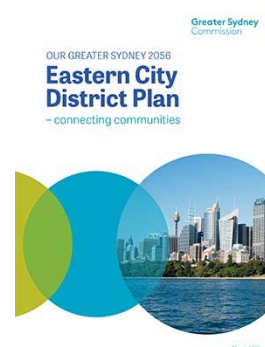
The Eastern City District Plan provides a 20-year plan to manage growth and achieve the 40 year vision, while enhancing Greater Sydney's liveability, productivity and sustainability into the future. This will see the Eastern City District become more innovative and globally competitive, carving out a greater portion of knowledge-intensive jobs from the Asia Pacific Region. The vision will improve the district's lifestyle and environmental assets.

The plan informs local strategic planning statements and local environmental plans, the assessment of planning proposals as well as community strategic plans and policies. It aims to achieve the objectives of the overarching Metropolis of Three Cities region plan, built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services

It provides direction on

- Infrastructure
- Liveability
- Productivity
- Sustainability

Inner West LGA lies within the Eastern City District.



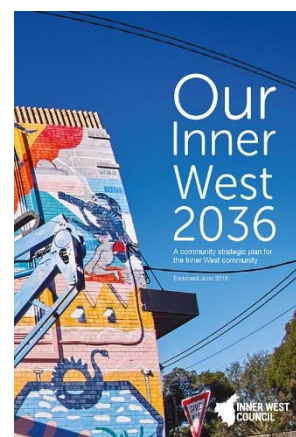
### 6.3 Local Plans and Strategies

#### 6.3.1 Community Strategic Plan

The Community Strategic Plan (CSP) identifies the community's vision for the future, long-term goals, strategies to get there and how to measure progress towards that vision. The Plan:

- Informs the strategic decision-making that will shape our future community and environment
- Protects and enhances the community's values and everything that makes Inner West unique
- Paves the way for the future by anticipating change and the impacts of that change on the community, economy and environment
- Achieves inclusivity, sustainability, accountability and innovation in service delivery

The development of Our Inner West 2036 involved thousands of people who participated through a series of engagement activities in 2016 and 2017.





This reflects the values of the Inner West community, underpins community expectations of how Council will interact with its residents and is the foundation for all decision-making, actions taken and management of resources.

### 6.3.2 Inner West Integrated Transport Plan (ITS)



Going Places: an Integrated Transport Strategy for Inner West, aims to address these transport challenges and provide strategies and actions that move towards a transport future focusing on active and sustainable modes of transport, and land-use planning approaches to support these modes of transport.

The Strategy proposes a vision for transport in the future focused on active and sustainable transport modes. It considers important values for the future network and develops a set of principles. The strategy establishes a hierarchy that prioritises people and sustainable modes of transport over private and polluting vehicles.

The ITS outlines a number of strategic pedestrian routes throughout the LGA, linking key centres and identifying potential active transport corridors. These routes have formed the skeleton of the pedestrian network across the LGA under this PAMP.

### 6.3.3 Inclusion Action Plan

The Inner West Council Inclusion Action Plan (for People with a Disability) outlines Council's commitment to respecting the rights and improving opportunities for people with a disability of all ages, to participate fully in community life.



The key objectives of the IAP 2017-21 are to:

- Assist Council to realise a vision of the Inner West for people experiencing or living with a disability
- Create an accessible and inclusive community that provides the same range of opportunities to all
- Promote and uphold the human rights of people with a disability
- Facilitate the exercise of those rights
- Promote the independence and social and economic inclusion of people with disability
- Assist Council to meet its obligations under the Disability Inclusion Act, 2014 (NSW) and thereby the UNCRPD • Articulate all the above into strategies and actions that will inform Council practice and be delivered through Council's Integrated Planning and Reporting Framework (IPRF)

## 6.4 Local Plans and Projects

### 6.4.1 Greenway – Cooks River to Iron Cove



The GreenWay is a 5.8km environmental and active travel corridor linking the Cooks River at Earlwood with the Parramatta River at Iron Cove. The GreenWay mostly follows the route of the Inner West Light Rail and Hawthorne Canal and features bike paths and foreshore walks, cultural and historical sites, cafes, bush care sites and a range of parks, playgrounds and sporting facilities.

The GreenWay Master Plan was adopted by Inner West Council in August 2018 and guides the delivery of landscaping and infrastructure within the corridor over the next 15 years. It establishes the GreenWay as an integrated ecological and active transport corridor that facilitates a range of recreation opportunities and incorporates local places for culture and art.

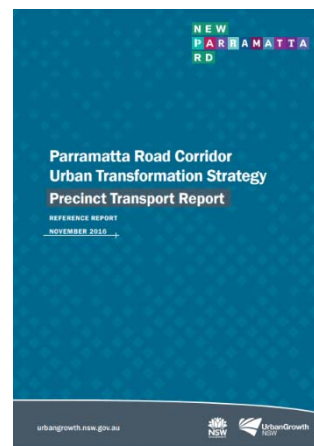
Sections of the greenway have been constructed, predominantly along Hawthorne Canal between Leichardt and Haberfield. The section following the Inner West Light Rail corridor is yet to be developed. The connections to and from the Greenway to the surrounding pedestrian network is included in this PAMP.

### 6.4.2 Parramatta Road Urban Transformation Strategy

The Parramatta Road corridor has been earmarked as an urban renewal corridor that will be the focus for increased housing, economic activity and social infrastructure.

The corridor will be transformed over the next 30 years through implementation of the Parramatta Road Urban Transformation Strategy, developed by urban Growth NSW, specifically providing:

- A long-term vision for the transformation of the Parramatta Road Corridor
- An integrated plan that includes land use and development intensity, public transport and walking and cycling initiatives, green space and links, and key infrastructure focused in eight growth Precincts
- Guiding principles for land use, transport, development and public domain, which will apply to all land within the Corridor
- Precinct Plans and associated building envelopes for each Precinct, providing more detailed principles and targets for growth and development, and actions for implementation.



The Strategy outlines a number of precincts adjacent to Parramatta Road as part of the revitalisation of the corridor with the aim of creating place making opportunities. These precincts include:

- Taverners Hill Precinct – around Taverners Hill Light Rail Station, Leichardt
- Leichardt Precinct – around Norton Street, Leichardt
- Camperdown Precinct – around Pyrmont Bridge Road, Gordon Street, Camperdown
- Part of Kings Bay Precinct

Priority pedestrian routes have also been identified in relation to each precinct and have been considered as part of this PAMP.



### 6.4.3 Iron Cove Creek / Dobroyd Canal Cycle and Pedestrian Path



Iron Cove Creek (also known as Dobroyd Canal) is an open stormwater channel running between Iron Cove and Croydon. Iron Cove Creek is part of the Sydney Green Grid and the Inner West Blue-Green Grid, a long-term network of green spaces connecting parks, transport services and locations where people live and work. North of Parramatta Road the canal travels through surrounding park areas and south of Parramatta Road the canal is surrounded by residential and industrial development with road bridges at Ramsay Street and Parramatta Rd at Five Dock.

The Iron Cove Creek corridor will ultimately become an ecological and active transport link connecting the Bay Run, Parramatta Road and the new Ashfield Aquatic Centre. State Government funding has been sought by Inner West Council under the Metropolitan GreenSpace Program for development of a feasibility and masterplan to provide a landscaping walking and cycling link and connections to the corridor are included in this PAMP.

### 6.4.4 Inner West @ 40

Reducing speed limits have been shown to improve pedestrian safety by reducing the likelihood of serious injury and fatality. A reduction from 50km/h (default urban speed) to 40km/h reduces the likelihood of a fatality by approximately 50%. As such the introduction of a lower speed limit on local streets has been identified as a key project to be undertaken in the Inner West to significantly improve pedestrian and cyclist safety.

Typically, reduced 40km/h speed limits have been applied to high pedestrian activity areas and school zones. Expanding the use of 40km/h speed limits will not only increase the safety of pedestrians and cyclists, but also to improve the local street environment by reducing noise pollution.



Existing 40km/h local areas in the Balmain peninsula has created a safer environment for vulnerable road users and better street environment.

This initiative will complement the improvements to pedestrian facilities and safety under this PAMP (and vice versa) and will be undertaken as a separate project.

## 6.5 Previous PAMPs

The previous Council's which now make up the Inner West have previously developed PAMPs for their respective LGA. This includes:

- Marrickville Council PAMP – 2009
- Leichardt PAMP - 2014
- Ashfield PAMP – 2016.

### 6.5.1 Marrickville PAMP (2009)

The Marrickville PAMP was prepared by Arup Planning in 2009. The study included the entire former Marrickville LGA, including the suburbs of Petersham, Lewisham, Stanmore, Newtown, Enmore, Dulwich Hill, Marrickville, St Peters, Sydenham and Tempe.

The PAMP identified several deficiencies with the pedestrian network and presented a recommended action plan with estimated works totalling \$870,000 over 10 years.

### 6.5.2 Leichhardt PAMP (2014)

The Leichhardt PAMP was prepared by Urban Arc in 2014. The study included the entire former Leichhardt LGA, including the suburbs of Leichhardt, Annandale, Lilyfield, Rozelle, Balmain, Balmain East, and Birchgrove.

The Leichhardt PAMP focussed on key commercial areas in Leichhardt, Rozelle and Balmain, and included an action Plan with estimated works totalling \$946,580.

### 6.5.3 Ashfield PAMP (2016)

The Ashfield PAMP was prepared by Calibre Consulting in 2016. The study included the entire former Ashfield LGA, including the suburbs of Ashfield, Haberfield, Summer Hill, and parts of Croydon, Croydon Park, Ashbury, and Hurlstone Park.

The Ashfield PAMP included the main commercial centres and villages and routes along main corridors and local street surrounding these centres. The developed PAMP action plan identified 199 recommendations with no estimation of total cost.

## 6.6 Planned Infrastructure and Major Developments

### 6.6.1 Sydney Metro

The expansion of the Sydney Metro network will see two new Metro lines running east west from Sydney CBD, including:

- Sydney Metro Southwest – Sydney CBD to Bankstown via Sydenham
- Sydney Metro West – Sydney CBD to Parramatta CBD

The metro will provide a number of new public transport options for Inner West residents, creating a further need to develop a pedestrian network capable of servicing the increased demand as users walk to and from stations.



Relevant stations with the Inner West LGA include:

#### Sydney Metro Southwest

- Sydenham
- Marrickville
- Dulwich Hill

#### Sydney Metro West

- White Bay
- Five Dock (Canada Bay LGA)

### 6.6.2 WestConnex



Current WestConnex construction within the Inner West includes Rozelle interchange, with project sites primarily located near Anzac Bridge and Iron Cove Bridge.

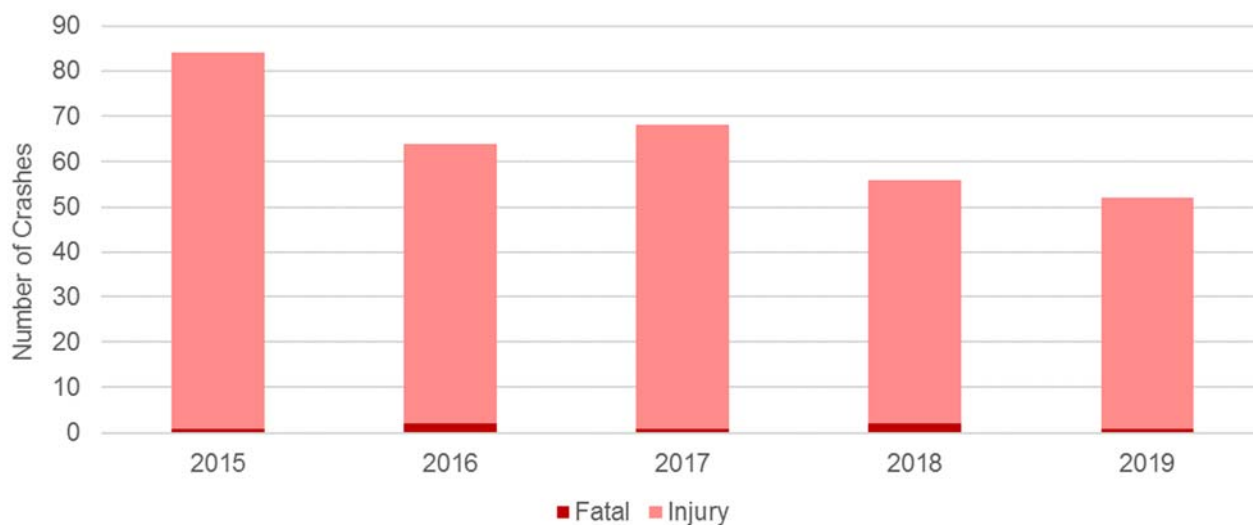
The Rozelle Interchange, which is expected for completion in 2023 connects the M4-M5 Link to the Anzac Bridge, Iron Cove Bridge, and the future Western Harbour Tunnel via the Iron Cove Link. The Rozelle Interchange is being built almost entirely underground, freeing up space for a new 10-hectare regional park on the surface and active transport links through the area.

## 7. PEDESTRIAN CRASH DATA REVIEW

### 7.1 Overview

The NSW Speed Zoning Guidelines recommend a minimum of three years of crash data for a statistical crash analysis. For this assessment, crash data recorded within the Inner West LGA between January 2015 and October 2019 was sourced from Council, representing a five-year period. The crash assessment focused on identifying any trends and crash clusters within the LGA for pedestrian involved crashes.

During the five-year period, there was a total of 2,813 crashes recorded. Pedestrian related crashes comprised of 11.5% of all crashes with a total of 324 crashes. When broken down by year, the number of pedestrian crashes varied between 52 to 84 crashes, as shown in Figure 7.1.

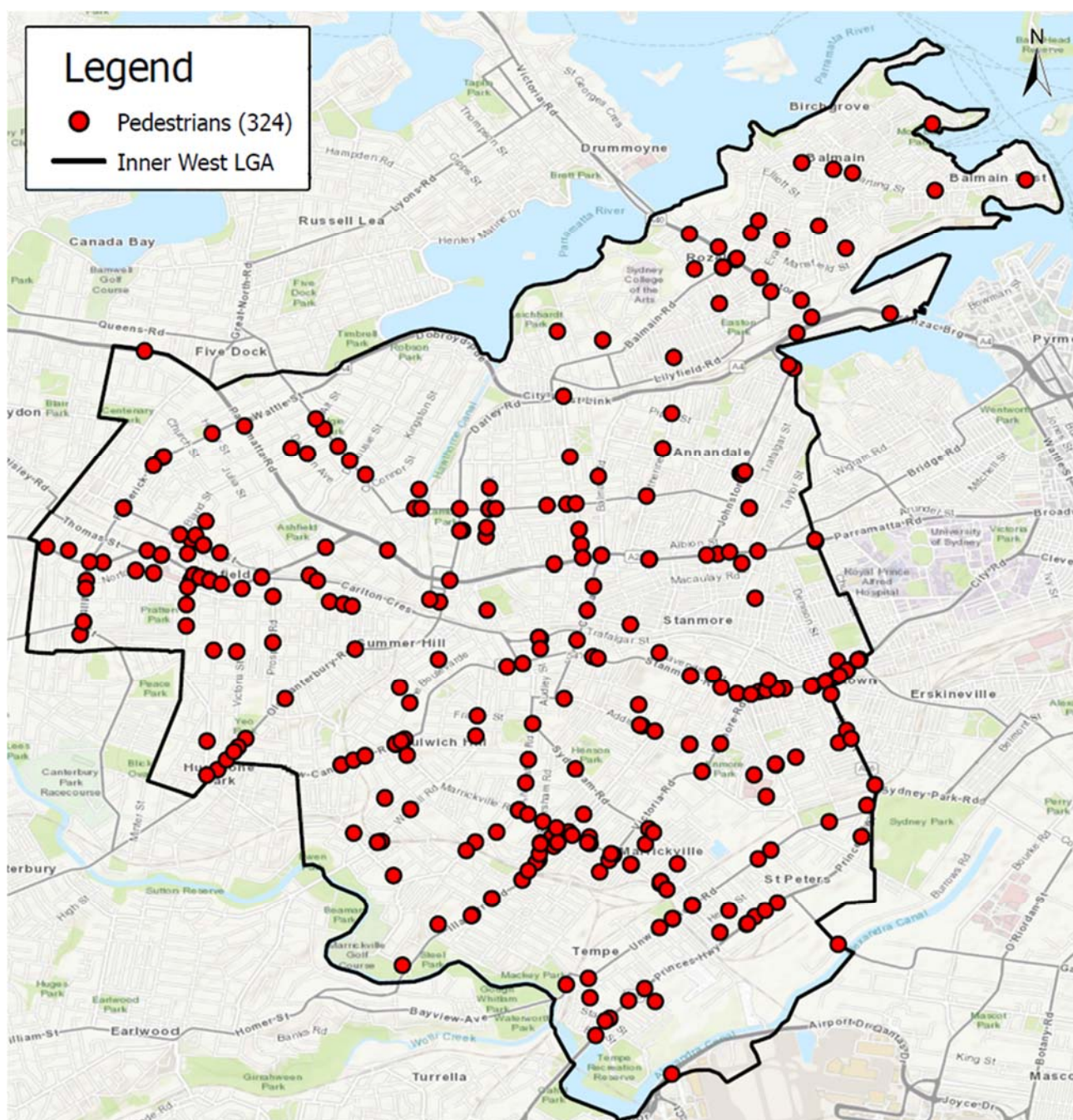


**Figure 7.1 Total Number of Pedestrian Crashes for Inner West LGA**

The overall trend over the 5-year period is a decreasing number of pedestrian crashes. Pedestrian crashes resulting in fatalities varied between one or two crashes per year.

Figure 7.2 shows all recorded pedestrian involved crashes within the Inner West LGA.





**Figure 7.2 Inner West LGA Crash Map - Pedestrian Involved Crashes**

## 7.2 Crash Summary by Suburb

Table 7.1 summarises the total number of crashes and the pedestrians involved per suburb.

**Table 7.1: Pedestrian Crashes by Suburb**

Suburb	Total Crashes	Pedestrian Crashes	Pedestrian Crashes in Suburb (%)	Total Pedestrians (%)
Annandale	108	9	8.3%	2.8%
Ashfield	332	48	14.5%	14.8%
Balmain	49	5	10.2%	1.5%
Balmain East	3	1	33.3%	0.3%
Birchgrove	6	1	16.7%	0.3%
Camperdown	32	1	3.1%	0.3%
Croydon	50	3	6.0%	0.9%
Croydon Park	19	1	5.3%	0.3%
Dulwich Hill	134	23	17.2%	7.1%
Enmore	72	8	11.1%	2.5%
Erskineville	5	0	0.0%	0.0%
Haberfield	154	11	7.1%	3.4%
Hurlstone Park	19	2	10.5%	0.6%
Leichhardt	208	22	10.6%	6.8%
Lewisham	79	3	3.8%	0.9%
Lilyfield	121	5	4.1%	1.5%
Marrickville	401	70	17.5%	21.6%
Mascot	10	1	10.0%	0.3%
Newtown	145	27	18.6%	8.3%
Petersham	189	16	8.5%	4.9%
Rozelle	198	19	9.6%	5.9%
St Peters	120	10	8.3%	3.1%
Stanmore	117	13	11.1%	4.0%
Summer Hill	69	8	11.6%	2.5%
Sydenham	52	6	11.5%	1.9%
Tempe	121	11	9.1%	3.4%
<b>Total</b>	<b>2813</b>	<b>324</b>	<b>11.5%</b>	<b>100%</b>

Ashfield, Dulwich Hill, Marrickville, and Newtown each have the largest composition of pedestrian involved crashes, over 14% of total crashes in the suburb. Ashfield and Marrickville both make up 36.4% of the total number of pedestrian crashes in the LGA.

### 7.3 Crashes by Street

The highest number of pedestrian related crashes were ranked by streets, as summarised in Table 7.2.

**Table 7.2: Highest Number of Pedestrian Involved Crashes by Street**

Rank	Street	Total Pedestrian Crashes	(%)
1	Princes Highway	21	6%
2	Enmore Road	16	5%
3	Parramatta Road	16	5%
4	Liverpool Road	16	5%
5	Marrickville Road	16	5%
6	Victoria Road	13	4%
7	Illawarra Road	12	4%
8	New Canterbury Road	12	4%
9	Darling Street	9	3%
10	Marion Street	9	3%
11	Frederick Street	7	2%
12	Addison Road	6	2%
13	Elizabeth Street	6	2%
14	Stanmore Road	6	2%
15	Unwins Bridge Road	6	2%
16-116	Other	153	47%
<b>Total</b>		<b>324</b>	<b>100%</b>

The top 15 roads comprise of over half of all crashes (53%) involving pedestrians. The highest number of pedestrian related crashes occurred on Princes Highway, Enmore Road, Great Western Highway, Hume Highway and Marrickville Road.

### 7.4 Crash Severity

Table 7.3 summarises the crash severity of all vehicle and pedestrian crashes.

**Table 7.3: Crash Severity**

Crash Type	Fatal	(%)	Injury	(%)	Non-casualty	(%)	Total
Vehicle	6	0.2%	1701	68.3%	782	31.4%	2489
Pedestrian	7	2.2%	317	97.8%	0	0.0%	324
<b>Total</b>	<b>13</b>	<b>0.5%</b>	<b>2018</b>	<b>71.7%</b>	<b>782</b>	<b>27.8%</b>	<b>2813</b>

All pedestrian involved crashes resulted in an injury or a fatality. Details on the severity of pedestrian crashes are as follows:

- 7 (2%) pedestrian crashes resulted in a fatality
- 317 (98%) pedestrian crashes resulted in an injury.

## 7.5 Crash Type

The pedestrian involved crashes were classified into TfNSW Road User Movement (RUM) codes which indicate the type of crash involved, as shown in Table 7.4.

The majority of pedestrian related crashes involve the RUM codes 0 and 2, contributing to 75% of all pedestrian related crashes. These correspond to pedestrians being hit crossing a road. This data could indicate a recurring issue of poor visibility, high vehicle speeds, low pedestrian awareness, poor pedestrian facilities, or identify common pedestrian behaviours.



Table 7.5 summarises the crash severity of all pedestrian related crash types.

**Table 7.4: Pedestrian Involved Crash Types**

Crash Type	RUM Code	Description	Number of Crashes	(%)
Pedestrians (on foot or in toy / pram)	0	Near side	140	43%
	1	Emerging	26	8%
	2	Far side	104	32%
	3	Playing, working, lying, standing on carriageway	22	7%
	5	Facing traffic	1	0%
	6	On footpath / median	8	2%
	7	Driveway	11	3%
	9	Other, pedestrian	2	1%
Vehicles from opposing direction	21	Right through	1	0%
	30	Rear end	3	1%
Manoeuvring	41	U-turn into fixed object / parked vehicle	1	0%
	46	Reversing into fixed object / parked vehicle	1	0%
	49	Other manoeuvring	2	1%
Off path, on straight	73	Right off carriageway into object / parked vehicle	1	0%
Off path, on curve or turning	87	Off carriageway left on left bend into object / parked vehicle	1	0%
<b>Total</b>			<b>324</b>	<b>100%</b>

**Table 7.5: Crash Type Severity**

<b>RUM Code</b>	<b>Fatal</b>	<b>Injury</b>	<b>Non-casualty</b>	<b>Total</b>
0	4	136	0	<b>140</b>
1	0	26	0	26
2	2	102	0	<b>104</b>
3	0	22	0	22
5	0	1	0	1
6	0	8	0	8
7	1	10	0	11
9	0	2	0	2
21	0	1	0	1
30	0	3	0	3
41	0	1	0	1
46	0	1	0	1
49	0	2	0	2
73	0	1	0	1
87	0	1	0	1
<b>Total</b>	<b>7</b>	<b>317</b>	<b>0</b>	<b>324</b>

RUM Codes 0, 2, and 7, resulted in at least one fatality, highlighting the severity of these crash types within the Inner West LGA. Over half (57%) of pedestrian fatalities were a result of a RUM Code 0 crash.

## 7.6 Crash Clusters

A review of the crash locations show that pedestrian crash clusters occurred within the Marrickville and Ashfield areas, notably along Marrickville Road, Illawarra Road, and Hume Highway / Liverpool Road. These locations correspond to major roads within the LGA, and the high number of pedestrian crashes are likely attributed to the high traffic and pedestrian volumes in these environments.

Table 7.6 show the intersections which have recurring number of pedestrian crashes (more than two).

The recurring RUM Code classifications at these intersections are 0 and 2. The data may indicate that these intersections have recurring issues and require further inspection.

## 7.7 Crash Data Analysis Summary

Based on the crash data, the highest number of pedestrian related crashes occur in the suburbs of Ashfield, Dulwich Hill, Marrickville, and Newtown, comprising of over half (51.8%) of the total pedestrian related crashes.

The highest number of pedestrian related crashes occurred on, Princes Highway, Enmore Road, Great Western Highway, Hume Highway, and Marrickville Road, comprising of over a quarter (26%) of the total pedestrian crashes. These are large major roads and do not necessarily indicate poor facility. A review of the crash locations show that crash clusters primarily occur within the Marrickville and Ashfield areas, notably along Marrickville Road, Illawarra Road, and Hume Highway / Liverpool Road.

**Table 7.6: Intersection Crash Clusters – Pedestrian Involved Crashes**

Intersection	RUM Codes	Crashes
Marrickville Road / Buckley Street	0, 2	5
Edgeware Road / Alice Street / Llewellyn Street	0, 2	4
New Canterbury Road / Marrickville Road	0, 2	4
Darling Street / Waterloo Street	0	3
Dulwich Station / Wardell Road / Dudley Street	0, 2	3
Elizabeth Street / Wood Street	0	3
Enmore Road / Station Street	0, 1	3
Enmore Road outside No. 17 (Oporto / Post Office)	2, 7	3
Frederick Street / John Street	0, 2	3
Hume Highway / Liverpool Road / Holden Street	0	3
Hume Highway / Liverpool Road / Murrell Street	0, 2	3
Johnston Street / Booth Street	2, 7	3
King Street / Erskineville Road	0, 2	3
Liverpool Road / Knox Street	2	3
Marion Street / Flood Street	0, 2	3
Marrickville Road / Livingstone Road	0, 2	3
Marrickville Road / Victoria Road	0, 1	3
Parramatta Road / Cannon Street	2	3
Trafalgar Street / Audley Street	2, 9	3
Unwins Bridge Road / Gleeson Avenue	0	3
<b>Total</b>		<b>64</b>

The highest number of crashes at a particular intersection occurs at the following 3 intersections:

- Marrickville Road / Buckley Street
- Edgeware Road / Alice Street / Llewellyn Street
- New Canterbury Road / Marrickville Road.

The data indicates that these intersections are likely to have safety issues and requires inspection.

The primary crash type (75%) involved the RUM Code 0 and 2 of all pedestrian related crashes, which corresponds with pedestrians being hit while crossing the road. RUM Codes 0, 2, and 7 resulted in at least 1 pedestrian fatality, with over half (57%) associated with a RUM Code 0 crash. This may indicate a recurring issue of poor visibility, high vehicle speeds, low pedestrian awareness, poor pedestrian facilities, or identify common pedestrian behaviours, highlighting the significance of providing further traffic measures or improved pedestrian facilities within the Inner West LGA.

## 8. DEVELOPMENT OF PRIORITISED PEDESTRIAN NETWORK

### 8.1 Overview

The primary purpose of the PAMP is to identify the highest priority pedestrian routes, to then define what is needed to upgrade or augment infrastructure along these routes, and to prioritise the proposed new infrastructure.

On this basis, PAMP routes and proposed new infrastructure along these defined routes have been identified in this chapter. This includes 'new links', 'new crossing points' and 'link / crossing upgrades / improvements'.

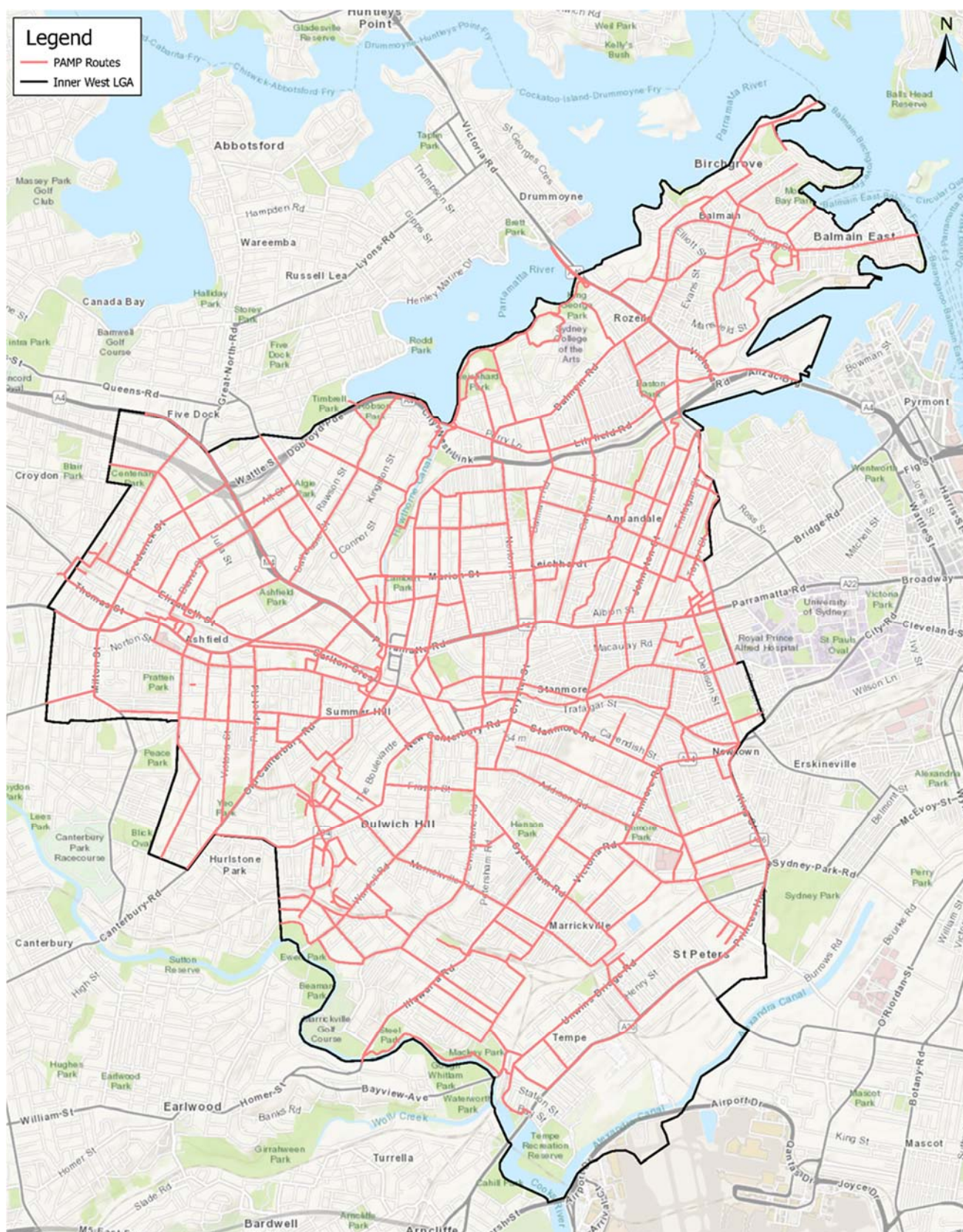
### 8.2 Route Selection

The defined PAMP routes provide a network of primary pedestrian links within the Inner West. Connecting routes to form networks is important to encourage their wider use for trip origins and destinations. That is, these connected networks have cumulative benefits for the community. These PAMP routes have also been nominated because they connect key attractors and generators. The PAMP routes were selected based on the following considerations:

- Routes identified in previous PAMPs and strategic documentation
- Proximity to key centres and pedestrian attractors / generators, such as village centres and railway stations
- Links through suburbs and between key centres and major routes
- Initial community engagement information and feedback (i.e. continuous, safe and connected or highly demanded routes)
- Road hierarchy
- Location of pedestrian crashes.

The network of the PAMP priority routes for Inner West was developed in consultation with Council and is presented in Figure 6.1 and **Appendix B**.





**Figure 8.1 Inner West PAMP Routes**

## 8.3 Route Hierarchy

### 8.3.1 Route Segments

To assist with the process of prioritising any new or missing links and to determine which upgrades need to occur first, each PAMP route was split into smaller sections for scoring purposes. These route segments were created based on:

- Roads: when possible, a segment is entirely contained in a single road.
- Length of segment: to evenly split the length along the PAMP route, or to split the route at logical locations.

These PAMP route segments were created with the objective to develop an equitable basis for scoring to help establish an even distribution of scoring.

### 8.3.2 Scoring Criteria

The PAMP routes were assigned a hierarchy: primary, secondary, or tertiary. A higher order level was given to routes servicing multiple high trip attractors and generators such as town centres and key pedestrian links such as train stations, public transport, schools and parks. A higher order level was also assigned to links that were identified within previous strategic documents and key roads. Emphasis was also given to areas of frequent crash history.

The scoring criteria for prioritising the PAMP routes is summarised in Table 8.1.

**Table 8.1: PAMP Route Criteria and Scoring**

Category	Criteria	Performance Conditions	Score
Land Use	Number of Attractors / generators within 200m	More than 30	12
		More than 20	7
		More than 10	3
		More than 0	1
	Land Use Type	Key Centres and Town Centres (shopping, commercial areas)	15
		Railway Stations (incl light rail stations)	15
		Bus Stops	10
		Education facilities (primary and high schools)	15
Road Hierarchy	Road Classification	Recreation (parks, pools, sports facilities)	10
		State Road	10
		Regional Road	5
Safety	Identified pedestrian crashes	Local Road	0
		More than 5	12
		More than 1	6
Strategic Route	Defined strategic pedestrian routes within the ITS	No crashes	0
		Strategic Route	10
		Non-Strategic Route	0

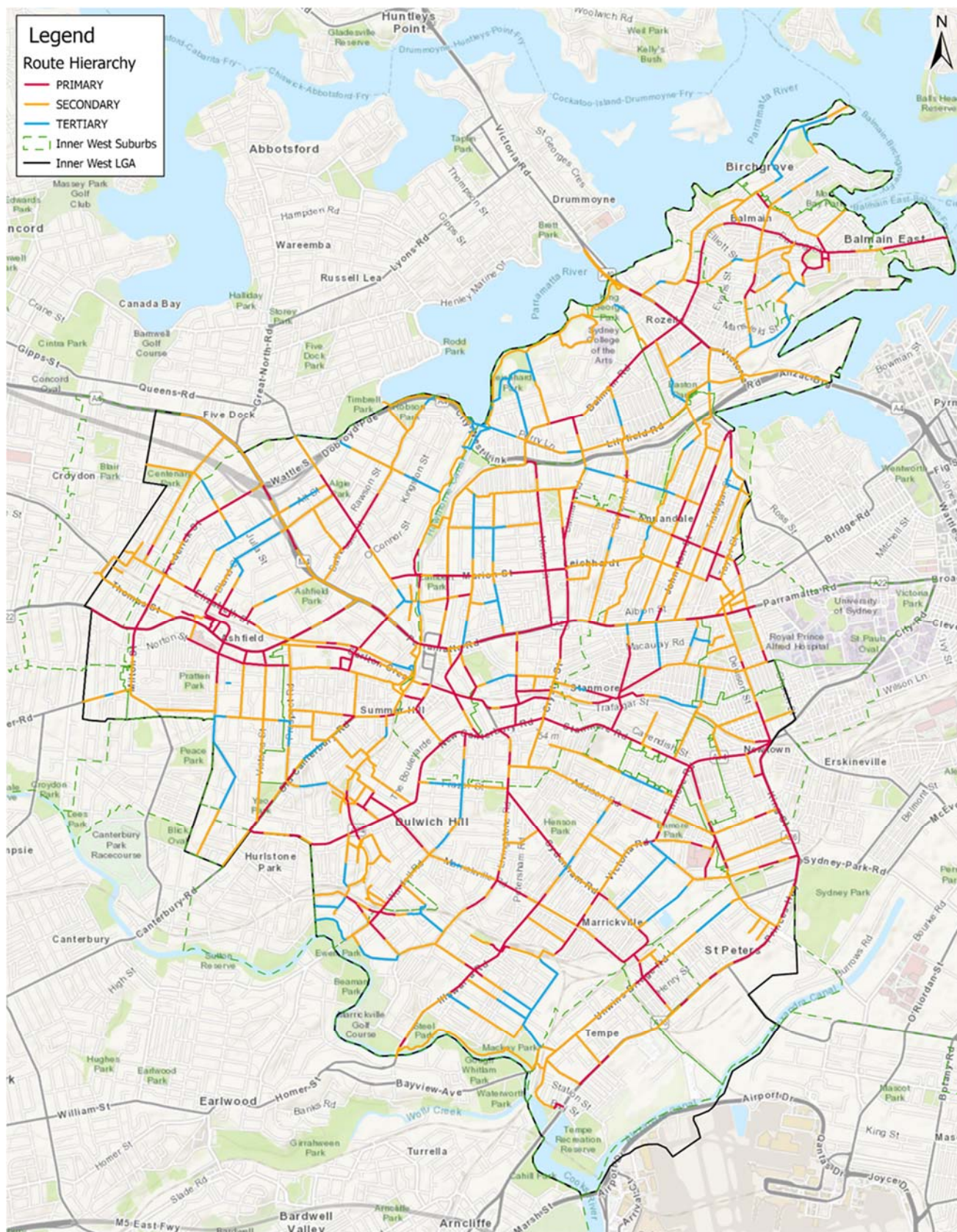
### 8.3.3 Segment Ranking / Priority

Based on the scoring system presented in Table 8.1, the following criteria in Table 8.2 was applied to determine the rank of each route segment. A map of resulting route segment rankings is shown in Figure 8.2 and **Appendix C**.

**Table 8.2: Segment Ranking**

Priority	Scoring Criteria
Primary	42 - 101
Secondary	15 - 41
Tertiary	0 -14





**Figure 8.2: Route Segment Rankings**



## 9. PEDESTRIAN ROUTE AUDITS

### 9.1 Methodology

Existing facility audits were undertaken during the period between 1 December 2020 to 15 March 2021, spanning over three months. These audits were undertaken to:


- Identify gaps, missing links and footpaths in the existing network
- Identify issues, accessibility or crossing deficiencies and maintenance needs
- Investigate locations areas identified by community feedback high pedestrian or crash history
- Identify locations for opportunities for safety improvements or further investigation.




Audits were undertaken on all the identified PAMP routes, in which issues or deficiencies were identified based on Criteria 5C outlined in *Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths (AGRD Part 6A)* which are:

- **Connectivity:** is the route connected to the rest of the network?
- **Comfort:** is the route well maintained, smooth and unobstructed? Is the route attractive and free from excessive traffic noise?
- **Convenience:** are there adequate crossing opportunities? Are key destinations within walking distance of one another?
- **Conviviality:** how pleasant is the walking environment?
- **Conspicuousness:** are the walking route clearly lit and easy to follow?




The audit considered footpaths, kerb ramps, crossing points, and other pedestrian facilities, however, was limited to 'high level' issues that would fundamentally impact the use of the paths or access to the paths. Some examples of issues found during the audits and potential treatments are provided in Table 9.1.


**Table 9.1: Audit Issues Examples**

Description	Picture
<p><b>Missing Footpath:</b></p> <ul style="list-style-type: none"> <li>▪ Pathways which end abruptly</li> <li>▪ Clear pedestrian desire line</li> <li>▪ Missing paved footpath at key locations.</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>▪ Install new footpath</li> </ul> <p>Example: Missing paved footpath along strong pedestrian desire line</p>	

Description	Picture
<p><b>Narrow Footpaths:</b></p> <ul style="list-style-type: none"> <li>Existing footpaths which appear to provide insufficient width for pedestrians of all abilities.</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>Widen footpath</li> <li>Investigate and install Shared Zone</li> <li>Realign kerb and provide footpath</li> </ul> <p>Example: Narrow footpath</p>	
<p><b>Crossing Deficiencies:</b></p> <ul style="list-style-type: none"> <li>Insufficient or unsafe crossing points</li> <li>Missing pedestrian crossing facilities, including kerb ramps or refuge island</li> <li>Poorly orientated / aligned kerb ramps and crossing infrastructure</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>Reconstruct kerb ramps to correct alignment / orientation</li> <li>Reconstruct refuge island</li> <li>Reduce crossing distance by installing kerb extension / refuge island</li> </ul> <p>Example: Poorly aligned kerb ramp – leads pedestrians onto roadway</p>	
<p><b>Obstructions:</b></p> <ul style="list-style-type: none"> <li>Any obstructions preventing or causing difficulty in pedestrian access, connectivity, or crossing, such as: <ul style="list-style-type: none"> <li>Power poles</li> <li>Trees</li> <li>Electricity boxes</li> </ul> </li> <li>Maintenance issues which could hinder or narrow pedestrian pathways such as overhanging vegetation.</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>Relocate or remove obstruction</li> <li>Refer to ongoing Council maintenance team (vegetation issues)</li> </ul> <p>Example: Power pole narrows available footpath</p>	



Description	Picture
<p><b>Access:</b></p> <ul style="list-style-type: none"> <li>▪ Inaccessibility or difficulty in traversing through locations for pedestrians of all abilities, such as footpaths with only stairs and no ramps</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>▪ Install accessible ramp</li> <li>▪ Provide alternative path</li> <li>▪ Reconstruct footpath</li> </ul> <p>Example: Stair access only</p>	
<p><b>Connectivity:</b></p> <p>Areas where the pathway does not provide continued ease of movement from one point to another.</p> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>▪ Re-align kerb and provide footpath</li> <li>▪ Provide alternative route</li> </ul> <p>Example: footpath disconnected due to sudden change in level (wall)</p>	
<p><b>Infrastructure Condition:</b></p> <ul style="list-style-type: none"> <li>▪ Damaged or poor construction of infrastructure such as footpaths/surfaces and accessibility indicators</li> <li>▪ Pedestrian related signage which are extremely faded or obstructed by graffiti or damage.</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>▪ Re-construct footpath pavement or concrete panel</li> <li>▪ Repair utility pit</li> </ul> <p>Example: Uneven footpath surface</p>	

Description	Picture
<p><b>Safety Issues:</b></p> <ul style="list-style-type: none"> <li>Potentially hazardous locations for pedestrians of all abilities due to: <ul style="list-style-type: none"> <li>Steep crossfall</li> <li>Trip hazards</li> <li>Poor visibility</li> <li>Inappropriate vehicle speeds.</li> </ul> </li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>Investigate installing raised pedestrian crossing</li> <li>Install traffic calming</li> <li>Reconstruct footpath pavement</li> <li>Provide warning signage / line marking</li> </ul> <p>Example: Pedestrian crossing requiring further traffic calming.</p>	

## 9.2 Audit Findings

The audit identified around 4,450 issues that were categorised into eight types:

- Access
- Connectivity
- Crossing deficiency
- Infrastructure condition
- Missing paths
- Obstruction
- Narrow path
- Safety issue

Table 9.2 summarises the number of issues identified for each type.

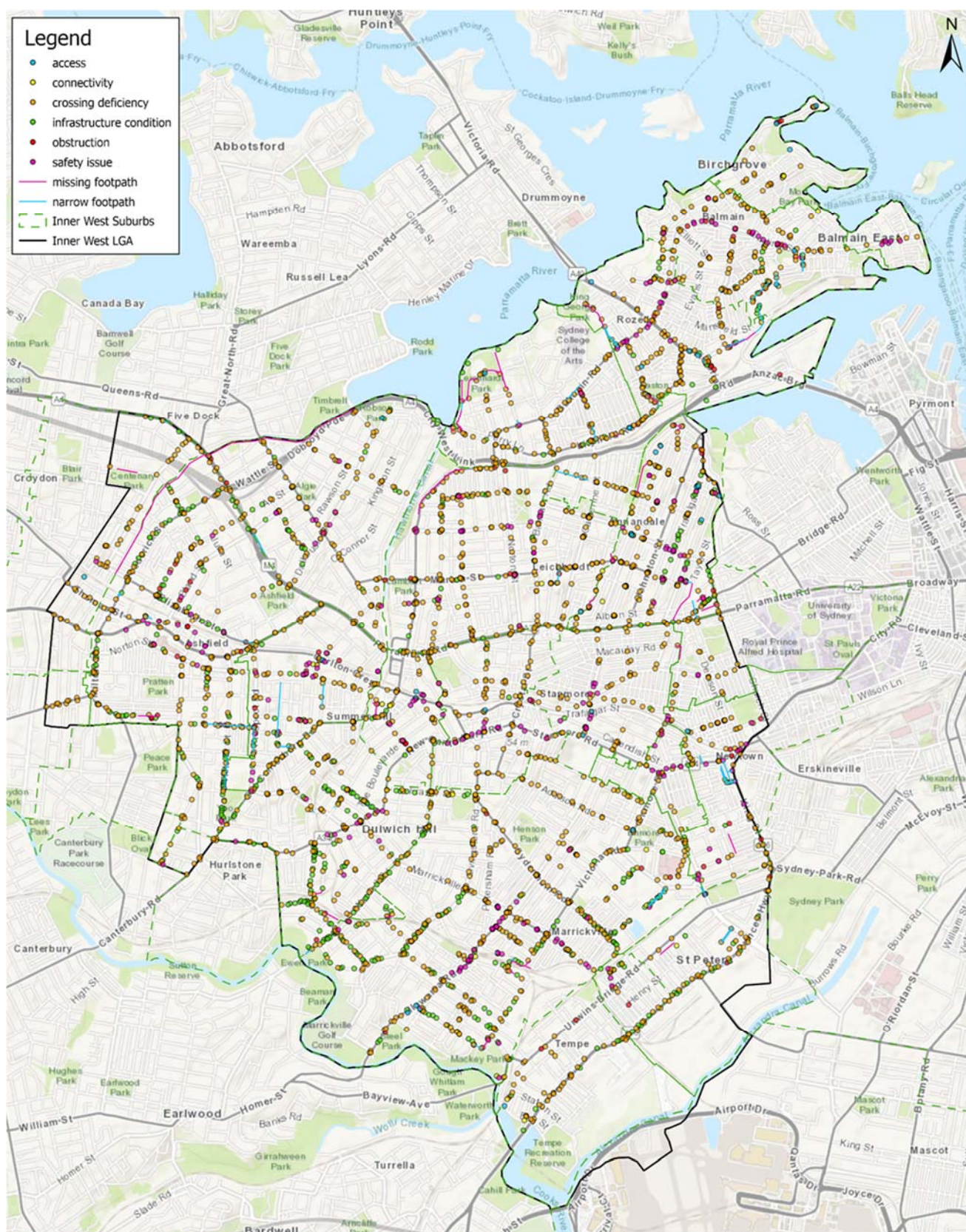
**Table 9.2: Audit Issues by Type**

Issue Type	Number	Percentage
Crossing deficiency	2208	50%
Obstruction	1261	28%
Infrastructure condition	536	12%
Safety issue	259	6%
Narrow footpath	62	1%
Missing footpath	49	1%
Access	41	1%
Connectivity	34	1%

Roughly 50% of the identified issues related to a crossing deficiency, with the majority of these being poorly aligned kerb ramps. Obstructions to footpaths were also high (28%) with the key issues being overgrown vegetation as well as street infrastructure (bins, poles, seats etc.) narrowing footpaths.

The identified deficiencies are shown in Figure 9.1. Detailed maps are provided in **Appendix D**.





**Figure 9.1: Pedestrian Route Deficiencies**

### 9.3 Audit Limitations

During the auditing process, some areas were not able to be audited due to construction activities or strategic routes identified which are not yet developed (such as within the light rail corridor). While these areas were not audited, it is extremely likely that these routes would be developed to modern standards and guidelines which would provide suitable pathways and should be reviewed in future following the end of construction activities.

Table 9.3 outlines the locations which were not audited due to these limitations.

**Table 9.3: Locations Not Audited**

Suburb	Location	Limitation
Annandale	Bignell Lane between Mallet Street and Gordon Street	Undeveloped strategic route
Annandale	White Creek Park	Undeveloped strategic route
Annandale	Links across City West Link to Gordon Street and Lilyfield Road	Undeveloped strategic route
Annandale	Railway Parade between Bayview Crescent and The Crescent	Construction – Rozelle Interchange works
Annandale	The Crescent / Johnston Street Intersection	Construction – Rozelle Interchange works
Ashfield	Alt Street near Charlotte Street	Construction
Ashfield	Parramatta Road near Alt Street	Construction - WestConnex
Camperdown	Parramatta Road near Mallet Street	Construction - WestConnex
Dulwich Hill	Hercules Street / Consett Street Intersection	Construction
Dulwich Hill	Hercules Street between Consett Street and bridge over Light Rail	Construction
Dulwich Hill	Old Canterbury Road near Hampstead Road	Construction
Dulwich Hill	Old Canterbury Road near Constitution Road	Construction
Dulwich Hill	Weston Street near Channel Street	Construction
Haberfield	Parramatta Road near Wattle Street	Construction - WestConnex
Leichardt	Flood Street near Lords Street	Construction
Leichardt	Derbyshire Road near Balmain Road	Construction
Lewisham	McGill Street	Construction
Marrickville	Smidmore Street between Edinburgh Road and Edgeware Road	Construction – Marrickville Metro Shopping Centre
Marrickville	Murray Street between Smidmore Street and Edinburgh Road	Construction – Marrickville Metro Shopping Centre
Marrickville	Edinburgh Road / Murray Street Intersection	Construction – Sydney Metro
Marrickville	Sydney Steel Road	Construction – Sydney Metro
Petersham	Petersham Station	Construction – Station upgrades
Petersham	Trafalgar Street between Audley Street and Shaw Street	Construction – Station upgrades
Rozelle	Gordon Street / Butt Street Intersection	Construction - WestConnex
Rozelle	Byrnes Street / Bay Run Intersection near King George Park	Construction

Suburb	Location	Limitation
Rozelle	Bay Run / Byrnes Street near Victoria Road	Construction - WestConnex
Rozelle	Victoria Road between Moodie Street to Iron Cove Bridge	Construction - WestConnex
Rozelle	Lilyfield Road / Victoria Road	Construction - WestConnex
Rozelle	Lilyfield Road southern side opposite Easton Park	Construction - WestConnex
Stanmore	Gordon Crescent at Douglas Street	Cycleway construction
Summer Hill	Carlton Crescent near Darrell Jackson Gardens	Construction
Summer Hill	Old Canterbury Road near James Street	Construction
Sydenham	Railway Parade between Gleeson Avenue and Sydenham Road	Construction – Sydney Metro



# 10. RECOMMENDED WORKS PROGRAM

## 10.1 Works Prioritisation

A priority level has been assigned to each identified issue and recommended action, taking into consideration its contribution to pedestrian safety, ease of accessibility, the route hierarchy and the amenity of the surrounding environment.

### 10.1.1 Prioritisation criteria

The treatment priority criteria were primarily based on the route segment rank and issue category as summarised below

- **Segment Rank – Primary, Secondary or Tertiary**
  - Ranked route segments indicates the importance of the sections of route based on expected use and surrounding attractors and generators.
  - Primary ranked segments would be mostly representative of key pedestrian areas such as town / village centres, near public transport hubs / stations and strategic corridors (outlined in Section 8.3)
  - Issues within primary ranked route segments are given a higher priority
- **Issue Category**
  - Prioritises treatment based on the type of issue category
  - Issues related to missing paths, crossing deficiencies, access and safety issues are prioritised higher to better improve the pedestrian network or correct current deficiencies presenting safety risks to pedestrians
  - Issues related to infrastructure condition and obstruction are prioritised lower as these are mainly related to existing pedestrian facilities

### 10.1.2 Scoring system

A scoring system was developed to assign a priority to each issue identified, outlined below in Table 10.1.

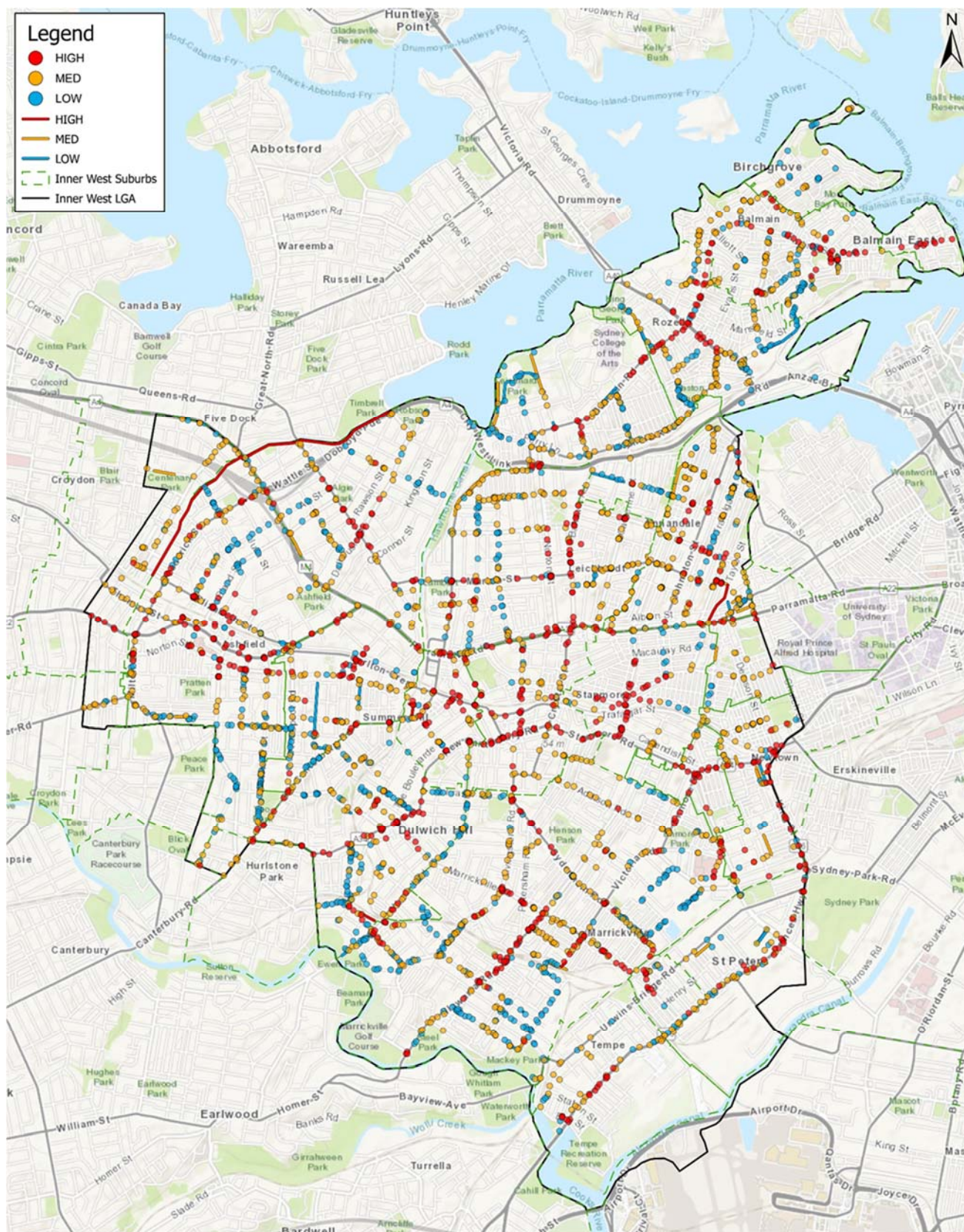
**Table 10.1: Treatment Priority Scoring Criteria**

Criteria	Category	Conditions	Score
1	Route Segment Rank	Primary	10
		Secondary	5
		Tertiary	0
2	Issue Category	Safety Issue	10
		Crossing deficiency	10
		Missing footpath	10
		Access	10
		Narrow Footpath	5
		Infrastructure condition	5
		Obstruction	0
		Connectivity	0
Priority Assignment			
High		15 to 20	
Medium		11 to 15	
Low		0 to 10	



Based on the above criteria and scoring system, the recommended works program has been prioritised with high priority works to be undertaken first, followed by medium and low.

Figure 10.1 presents the assigned priority for each of the issues and associated action within the study area, also provided in **Appendix E**.



**Figure 10.1: Priority Issues and Works**

## 10.2 Implementation Costs

A detailed list of recommended works and costings has been sorted by priority and provided in **Appendix D**.

The estimated cost required to implement these treatments is summarised in Table 10.2.

**Table 10.2: Project Costs**

Item No.	Type	Quantity	Unit Cost	Total Cost
1	adjust flood light orientation	3	\$1,000	\$3,000
2	consult with City of Canada Bay	1	\$-	\$0
3	consult with City of Canterbury-Bankstown	10	\$-	\$0
4	consult with City of Sydney	5	\$-	\$0
5	consult with City of Sydney and TfNSW	1	\$-	\$0
6	consult with Concordia Club (landowner)	1	\$-	\$0
7	consult with Marrickville Metro	1	\$-	\$0
8	consult with TfNSW	17	\$-	\$0
9	further investigation required - bins	1	\$-	\$0
10	further investigation required - crossfall	5	\$-	\$0
11	further investigation required - crossing point	1	\$5,000	\$5,000
12	further investigation required - footpath	3	\$5,000	\$15,000
13	further investigation required - kerb ramp	1	\$5,000	\$5,000
14	further investigation required - path widening	1	\$-	\$0
15	further investigation required - pedestrian crossing	24	\$10,000	\$240,000
16	further investigation required - pedestrian crossing, consult with City of Canterbury-Bankstown	1	\$-	\$0
17	further investigation required - pedestrian link (major infrastructure)	1	\$50,000	\$50,000
18	further investigation required - pedestrian refuge or crossing (signal)	3	\$15,000	\$45,000
19	further investigation required - raised pedestrian crossing	4	\$15,000	\$60,000
20	further investigation required - refuge	2	\$10,000	\$20,000
21	further investigation required - safety assessment	1	\$5,000	\$5,000
22	further investigation required - signals	2	\$20,000	\$40,000
23	further investigation required - stairs	1	\$-	\$0
24	further investigation required - traffic calming	2	\$-	\$0
25	install accessible ramp	19	\$10,000	\$190,000
26	install contrasting threshold	2	\$5,000	\$10,000
27	install keep clear pavement marking	1	\$2,500	\$2,500
28	install kerb blisters/ build outs	5	\$10,000	\$50,000
29	install kerb extension	11	\$10,000	\$110,000
30	install kerb extension - pair	22	\$20,000	\$440,000



Item No.	Type	Quantity	Unit Cost	Total Cost
31	install kerb extension / refuge island	7	\$10,000	\$70,000
32	install kerb extensions	1	\$10,000	\$10,000
33	install landscaping barriers	1	\$750	\$750
34	install new corner refuge island	2	\$10,000	\$20,000
35	install new footpath	4292m	\$200	\$858,400
36	install new kerb ramp	845	\$2,500	\$2,112,500
37	install new kerb ramp - pair	859	\$5,000	\$4,295,000
38	install new kerb ramp - pair, and Tactile Ground Surface Indicators	1	\$6,300	\$6,300
39	install new kerb ramp - pair, new refuge island	6	\$7,000	\$42,000
40	install new kerb ramp and reconstruct refuge island	1	\$5,000	\$5,000
41	install new lighting	12	\$10,000	\$120,000
42	install new pavement surface	3	\$300	\$900
43	install new pedestrian refuge	1	\$15,000	\$15,000
44	install new pit cover	1	\$250	\$250
45	install new refuge island	26	\$15,000	\$390,000
46	install new shared path signage	2	\$350	\$700
47	install new shared zone signage and delineation	1	\$500	\$500
48	install new signpost	1	\$250	\$250
49	install new speed cushions	1	\$3,000	\$3,000
50	install new Tactile Ground Surface Indicators	207	\$650	\$134,550
51	install new Tactile Ground Surface Indicators - pair	127	\$1,300	\$165,100
52	install new utility cover	4	\$2,000	\$8,000
53	install new wheel stops	28	\$1,500	\$42,000
54	install no stopping sign and signpost	3	\$300	\$900
55	install pavement warning message	9	\$150	\$1,350
56	install pedestrian crossing signage	1	\$200	\$200
57	install pedestrian fencing	1	\$750	\$750
58	install raised continuous footpath and tgsi	1	\$30,000	\$30,000
59	install raised continuous footpath treatment	91	\$30,000	\$2,730,000
60	install raised pedestrian crossing	51	\$50,000	\$2,550,000
61	install shared path signage	1	\$300	\$300
62	install splitter/refuge island	2	\$10,000	\$20,000
63	install warning line marking and signage	1	\$1,500	\$1,500
64	investigate High Pedestrian Activity Area implementation	18	\$20,000	\$360,000
65	investigate shared zone implementation	20	\$15,000	\$300,000
66	modify splitter island	1	\$10,000	\$10,000
67	no action	183	\$-	\$0

Item No.	Type	Quantity	Unit Cost	Total Cost
68	notify business owner	3	\$-	\$0
69	notify business/property owner	637	\$-	\$0
70	notify property owner	4	\$-	\$0
71	provide warning signage	1	\$500	\$500
72	re-align crossing and refuge island	1	\$6,000	\$6,000
73	re-align kerb and footpath	2	\$7,500	\$15,000
74	re-construct fence	1	\$150	\$150
75	re-construct footpath pavement	442m	\$200	\$88,400
76	reconstruct kerb blister	1	\$1,500	\$1,500
77	re-construct pedestrian fencing	1	\$5,000	\$5,000
78	re-construct refuge island	40	\$15,000	\$600,000
79	refer to maintenance	394	\$-	\$0
80	relocate bollard	2	\$2,500	\$5,000
81	relocate bus stop pole	1	\$400	\$400
82	relocate crossing - signals	1	\$20,000	\$20,000
83	relocate light post	5	\$10,000	\$50,000
84	relocate no stopping sign	1	\$1,500	\$1,500
85	relocate no stopping signage	1	\$300	\$300
86	relocate or remove bench	2	\$400	\$800
87	relocate or remove bike locker	1	\$400	\$400
88	relocate or remove bike rack	1	\$250	\$250
89	relocate or remove bollard	5	\$2,500	\$12,500
90	relocate or remove bus shelter	5	\$5,000	\$25,000
91	relocate or remove bus shelter and signposts	1	\$5,500	\$5,500
92	relocate signpost	38	\$300	\$11,400
93	repaint bollards	1	\$150	\$150
94	repair barrier	1	\$750	\$750
95	repair bollard	3	\$2,500	\$7,500
96	repair linemarking	1	\$500	\$500
97	repair pavement marking	1	\$200	\$200
98	repair pavement panel	82	\$200	\$16,400
99	repair pit cover	1	\$2,000	\$2,000
100	requires further investigation - long crossing	1	\$5,000	\$5,000
101	review and implement shared zone	2	\$40,000	\$80,000
102	review and relocate double pole signpost	13	\$500	\$6,500
103	review and replace shared path signage	1	\$500	\$500
104	review footpath trading	1	\$-	\$0
105	review when land use changes	1	\$-	\$0



Item No.	Type	Quantity	Unit Cost	Total Cost
106	top up tree pit	1	\$150	\$150
107	Undertake masterplan study	1	\$200,000	\$200,000
108	widen footpath	6427m	\$200	\$1,285,400
109	widen path and relocate fencing	51m	\$400	\$20,400
<b>Estimated Project Sum</b>				<b>\$18,070,750</b>
Contingency		1	20% Of Project Estimated Sum	\$3,614,150
<b>Estimated Project Sum with Contingency</b>				<b>\$21,684,900</b>

Project costings have been sorted by priority and summarised in Table 10.3. It is noted these costs do not include the development and implementation of traffic management plans or the contingency percentage.

**Table 10.3: Cost by Priority**

Priority	Quantity	Cost
High	847	\$7,922,300
Medium	1520	\$6,918,050
Low	2083	\$3,230,400
<b>Total</b>	<b>4450</b>	<b>\$18,070,750</b>

Project costings have been sorted by road type and summarised in Table 10.4.

**Table 10.4: Cost by Road Type**

Road Classification	Quantity	Cost
State	504	\$1,307,200
Regional	632	\$2,177,000
Local	3314	\$14,586,550
<b>Total</b>	<b>4450</b>	<b>\$18,070,750</b>

## 10.3 Other Costs

### 10.3.1 Other Pedestrian Routes

While a detailed audit of the PAMP routes was undertaken, a number of issues may exist along other streets within the PAMP study area which were not designated as a priority PAMP route. As such, the cost of addressing these pedestrian and access issues is not included as part of the above cost estimate.

### 10.3.2 Ongoing Maintenance

Actions deferred to ongoing maintenance across the LGA primarily include actions related to vegetation obstructions (such as overhanging vegetation) and drainage (where drainage is identified as an issue) have not been included as part of the PAMP and is assumed to be under the responsibility of the relevant department and budget within Council.

In addition, costs presented as part of this PAMP include the installation or implementation of treatments and do not include ongoing maintenance costs.

### **10.3.3 Major Infrastructure and Projects**

A number of issues were identified relating to State owned infrastructure or under a major project. This included:

- Accessibility issues at train stations, wharves, and pedestrian bridges over a State road
- Proposed or strategic routes through major infrastructure sites (such as Rozelle interchange)

These items have been assumed to be under the scope of each project or responsibility of transport for NSW and have been excluded from the action associated costs.

## **10.4 Implementation of Treatments and Further Investigations**

The PAMP study has identified the implementation of new shared zones, pedestrian crossings, continuous footpath treatments or High Pedestrian Activity Areas (HPAA) to provide a pedestrian facility at certain locations. The following actions are required under the implementation of each treatment:

### **Shared Zones**

- Undertaking a shared zone warrant assessment following TfNSW guidelines (including traffic surveys)
- Design of shared zone
- Approvals and installation of relevant signage and line marking (and other infrastructure)

### **Pedestrian Crossings**

- Undertaking a pedestrian crossing warrant assessment and investigation following TfNSW guidelines (including traffic and pedestrian surveys) at new crossing locations
- Design of pedestrian crossing and review of local drainage arrangements (where a raised pedestrian crossing is being installed)
- Approvals and installation of relevant signage, line marking and physical infrastructure

### **Continuous Footpath Treatments**

- Undertaking an assessment and investigation following TfNSW guidelines (including traffic volume surveys)
- Design of continuous footpath treatment and review of local drainage arrangements

### **High Pedestrian Activity Areas (HPAA)**

- Undertaking a HPAA assessment following TfNSW guidelines (including traffic surveys)
- Design of HPAA scheme (including signage, line marking and traffic calming)
- Approvals and installation of infrastructure

It should be noted that while a typical expected cost for each of these treatments have been included in the works program, the actual costs associated with these procedures can vary greatly and will be subject to detailed investigation and design.

# 11. IMPLEMENTATION AND FUNDING

## 11.1 Potential funding sources

### 11.1.1 Transport for NSW

TfNSW will generally fund works on state-controlled roads and can be used as a potential source of funding to implement the PAMP action plan.

Actions identified within or across Regional Road and Local Road corridors may be included as part of funding applications to TfNSW. A summary of costs by road type is presented in Table 10.4.

### 11.1.2 Development Contribution Plans

The Environmental Planning and Assessment Act 1979 makes allowance for a consent authority to extract money for the provision of public amenity or public services. Should a development increase pedestrian activity or demand then it would be reasonable for Council to seek contribution toward improvements to pedestrian facilities in the area or adjacent to these developments, to provide a link between the development and local pedestrian network or facilities.

Considering the amount of development occurring within the Inner West LGA, obtaining funding from S.7.11 S.7.12 contributions would be a feasible funding source. As such, Council may consider including some of the works as part of their development contribution plans.

## 11.2 Monitoring and Evaluation

The PAMP is intended to be implemented over the 10-year horizon of this Plan. Funding and budget for recommendations should be identified and set in the budget, and higher priority works be given precedent.

It is typical to have a monitoring program for the PAMP. This would involve:

- Recording of all proposed pedestrian works in a database
- Analysis of crash statistics
- Collection of pedestrian count information
- Periodic updating of the PAMP every five years.



# 12. CONCLUSIONS AND RECOMMENDATIONS

## 12.1 Conclusions

The Inner West PAMP presents the investigation and development of an action plan to improve pedestrian connectivity and safety to encourage more walking across the Inner West LGA.

Issues affecting pedestrians were discussed with Inner West Council in addition to undertaking an initial engagement program to gain an insight of issues and pedestrian concerns faced by Inner West residents and visitors.

Major pedestrian infrastructure deficiencies were identified along key routes through the LGA, and included the lack of quality crossing provisions and connectivity between parts of the pedestrian network. Other issues included obstructions from street furniture, street posts and vegetation. Opportunities to improve pedestrian safety were also identified, such as implementing raised pedestrian crossings and potential reduction in speed limits in High Pedestrian Activity Areas.

Priority PAMP routes were defined, and a comprehensive field audit was undertaken to catalogue issues with footpaths, kerb ramps, crossing points, accessibility issues and pedestrian safety. A number of recommended works are proposed with indicative costs given for each upgrade required. These recommended actions have been prioritised to inform the future works program to be undertaken by Council.

The total cost of the implementation of the identified improvements is approximately **\$18,070,750** with an additional **\$3,614,150** as a 20% project contingency. Most costs arise from the reconstruction of kerb ramps, improvements to pedestrian safety, installation of new footpaths, and widening of existing footpaths.

If fully implemented, the proposed works will support pedestrian safety and amenity across the inner West and encourage residents and employees to undertake walking trips for shopping, work and leisure purposes. It is recommended that these works be implemented as funding becomes available from Council and Transport for NSW. Consideration could also be given to include some items in Council's Development Contribution Plans.