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Leichhardt Municipal Council
Annandale North
Neighbourhood Movement Plan - Report

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Cover Image:
Trafalgar Street.

Inside Cover:
Buruwan Park.

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ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN
FINAL DRAFT - FOR EXHIBITION

Client:
LEICHHARDT MUNICIPAL COUNCIL

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 3

1. BACKGROUND, PURPOSE AND OBJECTIVES 4
- BACKGROUND 5
- PURPOSE OF THIS REPORT 5
- PROJECT OBJECTIVES 5
- STUDY PROCESS 5

2. SITE ANALYSIS 6
- EXISTING MOVEMENT PATTERNS 8
- OPEN SPACE AND DESTINATIONS 12
- TOPOGRAPHY, VIEWS AND VISTAS AND HERITAGE 13
- STREETSCAPE MORPHOLOGY 14
- CONSTRAINTS AND OPPORTUNITIES 15

3. MASTERPLAN FRAMEWORK 16
- COUNCIL'S STRATEGIC FRAMEWORK 17
- STRATEGIC PRINCIPLES 18
- DRAFT NEIGHBOURHOOD MOVEMENT PLAN 18

4. DESIGN CONCEPTS 20
- WHITES CREEK VALLEY PARKLANDS 22
- BURUWAN PARK 25
- PIPER ST/SPINDLERS PARK TO WHITES CREEK VALLEY 28
- JOHNSTON ST 30
- ANNANDALE ST 34

5. ACTION PLAN 36
- OVERVIEW 37
- FURTHER STUDIES 37
- IMPLEMENTATION PRIORITIES 38

6. APPENDIX 40
- PROJECT CREDITS 41

LIST OF ILLUSTRATIONS

FIGURE 1A: METROPOLITAN CONTEXT 7
FIGURE 1B: THE STUDY AREA 7
FIGURE 2: PEAK HOUR VEHICULAR MOVEMENTS 8
FIGURE 3: PEAK HOUR CYCLIST MOVEMENT 9
FIGURE 4: CYCLIST MOVEMENT - SUPER TUESDAY 2015 10
FIGURE 5: PEDESTRIAN ACTIVITY AT INTERSECTIONS 11
FIGURE 6: OPEN SPACE AND DESTINATIONS 12
FIGURE 7: VIEWS, VISTAS AND HERITAGE 13
FIGURE 8: STREETSCAPE MORPHOLOGY 14
FIGURE 9: DRAFT NEIGHBOURHOOD MOVEMENT PLAN 19
FIGURE 10: RECOMMENDATIONS - WHITES CREEK VALLEY PARKLANDS 23
FIGURE 11: DETAIL PLAN A - WHITES CREEK VALLEY PARKLANDS 24
FIGURE 12: INDICITAVE SECTION AA: COHEN PARK 24
FIGURE 13: RECOMMENDATIONS - BURUWAN PARK AND ROZELLE BAY LIGHT RAIL STOP 26
FIGURE 14 DETAIL PLAN A - BURUWAN PARK 27
FIGURE 15: RECOMMENDATIONS - PIPER STREET 29
FIGURE 16: STREET TYPOLOGIES ALONG JOHNSTON STREET 30
FIGURE 17: TYPICAL SECTION STREETSCAPE TYPE 1 31
FIGURE 18: TYPICAL SECTION STREETSCAPE TYPE 2 31
FIGURE 19: TYPICAL SECTION STREETSCAPE TYPE 3 32
FIGURE 20: TYPICAL PLAN STREETSCAPE TYPE 3 32
FIGURE 21: JOHNSTON STREET AND PIPER STREET INTERSECTION 33
FIGURE 22: INDICATIVE SECTION THROUGH JOHNSTON ST AT HINSBY PARK 33
FIGURE 23: TYPICAL SECTION THROUGH PIPER STREET 33
FIGURE 24: ANNANDALE STREET: PROPOSED LOCATION OF KERB BLISTERS, MID-BLOCK CROSSINGS AND PARKING OPPORTUNITIES 34
FIGURE 25: TYPICAL SECTION AT MID-BLOCK CROSSING 35
FIGURE 26: TYPIC AL PLAN OF RECONFIGURED ANNANDALE STREET 35

EXECUTIVE SUMMARY

This report constitutes the Annandale North Neighbourhood Movement Plan (ANMP). It was prepared by CLOUSTON Associates in consultation with Leichhardt Municipal Council (LMC) and GTA Consultants.

In its strategic planning, LMC identified the preparation of Neighbourhood Movement Master Plans (NMPs) as a means to facilitate safe, friendly walkable and cycleable neighbourhoods and to provide linkages between key community points of interest. They will assist in bringing various elements of LMC's Integrated Transport Plan to fruition in individual neighbourhoods.

PROJECT OBJECTIVES

The aim of the ANMP is to provide recommendations to support and promote safe, friendly, walkable and rideable neighbourhoods and to provide linkages between key community points of interest by identifying opportunities for

- movement related infrastructure
- environmental and streetscape improvements
- place making and
- activation of key spaces within the neighbourhood.

This will assist LMC in planning for capital works to encourage safe active transport, while providing the community with enhanced information regarding the movement systems within and adjacent to their neighbourhood.

CONSTRAINTS AND OPPORTUNITIES

Section 2 summarises the site analysis. It audited the existing site conditions within the neighbourhood and identified the following key constraints and opportunities:

Major Constraints

- Johnston Street represents a significant barrier to east-west movement, in particular during peak hours.
- Johnston Street falls under the jurisdiction of the RMS. Any changes to the road corridor will require RMS approval.
- Due to its arterial road function and high traffic volumes Johnston Street is not a suitable route for promoting wide-spread bicycle use.
- The Whites Creek Valley cycleway is not suited for commuters due to its narrow width, the recreation interface and poor connections to the network.
- Steep topography is an impediment to active transport, in particular for less mobile people and in an east-west direction.

Key Opportunities

- The existing character and amenity of the neighbourhood provide an attractive setting for active transport.
- Many neighbourhood streets provide pleasant, quiet and safe routes for movement of both pedestrians and bicycles.
- The gentler gradients along north-south streets offer opportunities for widely accessible links between residents and key destinations.
- The creek corridors offer the potential to connect with regional networks of recreation paths.
- There is scope to improve feed-in links to regional cycle routes.
- Annandale North Public School and Hinsby Park are a major central destination with potential to encourage active transport.
- Key destinations are well distributed and attract people to encourage movement and provide passive surveillance.
- Active movement will be greatly enhanced by making it easier and safer to cross Johnston Street, along its length.
- A well-established network of footpaths can be further enhanced to support active movement.
- The existing streetscape is attractive and can be further enhanced to provide greater consistency and amenity.
- Generously proportioned road corridors have scope to be re-designed without adversely affecting traffic flow or parking provision.

STRATEGIC FRAMEWORK

Section 3 links the ANMP with LMC's strategic planning framework, on the basis of which the following strategic principles were developed:

- Build on the unique local setting, character and urban structure.
- Emphasise the profile of Whites Creek and Johnstons Creek.
- Connect key day-to-day destinations within and beyond the neighbourhood.
- Provide high levels of amenity and safety to encourage active transport.
- Separate the Active Movement Network from the major regional link road.
- Maximise accessibility of key routes.
- Provide quieter off-line and recreation paths in the creek corridors.
- Retain some informality to the landscape.

Based on the strategic principles, a number of specific design directions are developed and summarised in the Neighbourhood Movement Plan.

The central features of the plan are:

- Maintain Johnston Street as a through route and recognise it's heritage significance.
- Provide active movement corridors along parallel north-south streets.
- Design residential streets as low speed environments (ideally <30km/h).
- Establish Piper Street as a central east-west green movement corridor.
- Provide secondary east-west links including along Rose Street.
- Facilitate safe informal crossing of Johnston Street while maintaining peak hour traffic capacity and movement.
- Enhance key intersections as community places.
- Strengthen the creek corridors as green recreation and movement corridors.
- Investigate the long-term opportunity for a 'highline' along the Viaduct.
- Assist people to navigate the steep topography of the neighbourhood through small scale investments to maximise accessibility.
- Enhance existing and create new connections beyond the neighbourhood.
- Undertake a series of public domain upgrades to create a legible neighbourhood of high amenity.

Based on the strategic principles and design directions, Section 4 provides concepts for five key sites that illustrate strategic principles and directions in more detail. The five sites are:

1. Whites Creek Valley Parklands
2. Buruwan Park
3. Piper Street (Spindlers Park to Whites Creek Valley Park)
4. Johnston Street
5. Annandale Street

IMPLEMENTATION

An Action Plan in Section 5 identifies further steps that need to be taken to implement the ANMP. They include

- Further studies including preparation of a Neighbourhood Public Domain Manual and detailed design work for Whites and Johnstons Creeks Linear Parklands, Buruwan Park, Piper Street and Johnston Street
- Planning priorities
- Capital works priorities

Planning and capital works priorities were assigned both a priority and a cost ranking that identify high, medium and low priorities and magnitude of costs.

01

BACKGROUND, PURPOSE AND OBJECTIVES

1. BACKGROUND, PURPOSE AND OBJECTIVES

BACKGROUND

The Annandale North Neighbourhood Movement Plan (ANMP) is the first in a series of Neighbourhood Movement Plans Leichhardt Municipal Council intends to develop across its Local Government Area (LGA).

Council has identified the preparation of Neighbourhood Movement Master Plans in its *Community and Cultural Plan* and *Integrated Transport Plan,* as a means to facilitate safe, friendly walkable and cycleable neighbourhoods and to provide linkages between key community points of interest.

The ANMP focuses on the core of Annandale North, while giving consideration to surrounding areas. The study area is shown in Figure 1.

PURPOSE OF THIS REPORT

The aim of the ANMP is to provide recommendations to support and promote safe, friendly, walkable and rideable neighbourhoods and to provide linkages between key community points of interest, both within and beyond the suburb by identifying opportunities for

- movement related infrastructure
- environmental and streetscape improvements
- place making and
- activation of key spaces within the neighbourhood.

Neighbourhood Movement Master Plans have been proposed to assist in bringing various elements of Council's Integrated Transport Plan to fruition in individual neighbourhoods. To this end they also build on Council's extensive strategic planning work to date, including its strategic plan Leichhardt 2025+, its *Community and Cultural Plan, Environmental and Sustainability Plan* and its *Employment and Economic Development Plan*.

PROJECT OBJECTIVES

The objectives of the project are to

- assist Council in planning for capital works to encourage safe active transport within, to and through the study area
- provide the community with enhanced information regarding the movement systems with and adjacent to their neighbourhood
- encourage increased use of active transport to, through and within the neighbourhood by creating a 10 minute walkable neighbourhood for daily needs
- improve connectivity between Annandale North and adjacent areas including Lilyfield/Rozelle and with regard to potential longer term opportunities through redevelopment of the Rozelle Railyards as part of the Bays Precinct project
- improve the attractiveness and safety of the area to encourage increased active transport, at various times of the day and days of the week.

Project Tasks

In developing the ANMP the main tasks involved:

- A review of existing strategic documents and other relevant background information.
- An analysis of the physical setting of the Annandale North Neighbourhood including a number of site visits.
- Identification of constraints and opportunities.
- Discussions with Council staff.

STUDY PROCESS

The ANMP was prepared in consultation and collaboration with Council staff and GTA Traffic consultants. This report summarises the findings of the study to date, for the community to review, comment and provide input towards refinement and finalisation, prior to adoption by Council.

The following diagram summarises the study process.

STAGE 1 - INCEPTION

↓

STAGE 2 - PRELIMINARY DRAFT ANMP

↓

STAGE 3 - DRAFT ANMP FOR PUBLIC EXHIBITION

Site Analysis

- Movement patterns
- Streetscape morphology
- Open space and destinations
- Views and vistas
- Heritage
- Major Opportunities

Draft ANMP

- Key Recommendations
- Specific Sites Recommendations

↓

STAGE 4 - FINAL ANMP (adopted by Council)

02 SITE ANALYSIS

2. SITE ANALYSIS

The site analysis provides an overview audit of the existing site conditions within the neighbourhood. A number of key factors were analysed with a view to identifying key constraints and opportunities in respect of promoting and encouraging greater active transport use. These were:

- existing movements patterns
- open space and neighbourhood destinations
- topography
- views, vistas and heritage
- existing streetscape typology and morphology.

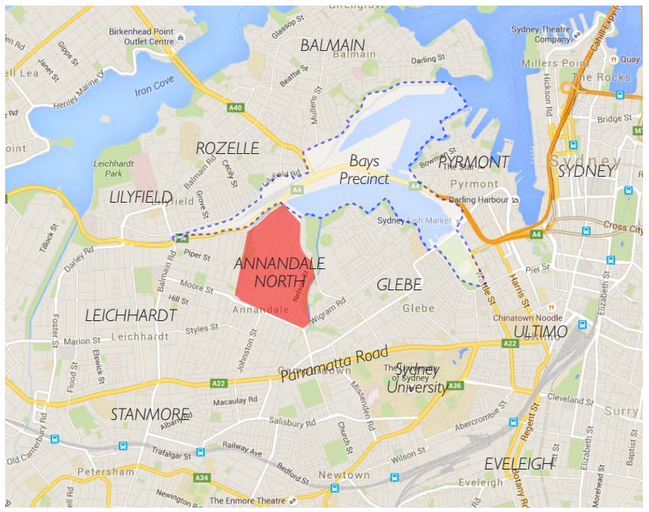


FIGURE 1a: METROPOLITAN CONTEXT

FIGURE 1b: THE STUDY AREA

0 50 100 200m

EXISTING MOVEMENT PATTERNS

The analysis reviewed traffic counts for vehicles, bicycles and pedestrians to identify existing movement patterns including key routes, key movement periods and likely destinations.

Vehicle Movements

Council holds extensive data and traffic counts. These were analysed and the major movement patterns summarised in Figure 2. Key findings are:

- The majority of streets in the study area experience little traffic, even during peak hours (less than 1 car/ minute).
- Johnston Street is the major vehicular thoroughfare.
- Parts of Annandale Street, Piper Street and Brenan Street receive increased traffic during the morning and afternoon peak. However, vehicle movements still remain less than 2 vehicles per minute.

LEGEND

Study Area Boundary

Vehicles 7:45am-8:45am weekdays

1-2 Vehicles per minute

2+ Vehicles per minute

Vehicles 5:00pm-6:00pm weekdays

1-2 Vehicles per minute

2+ Vehicles per minute

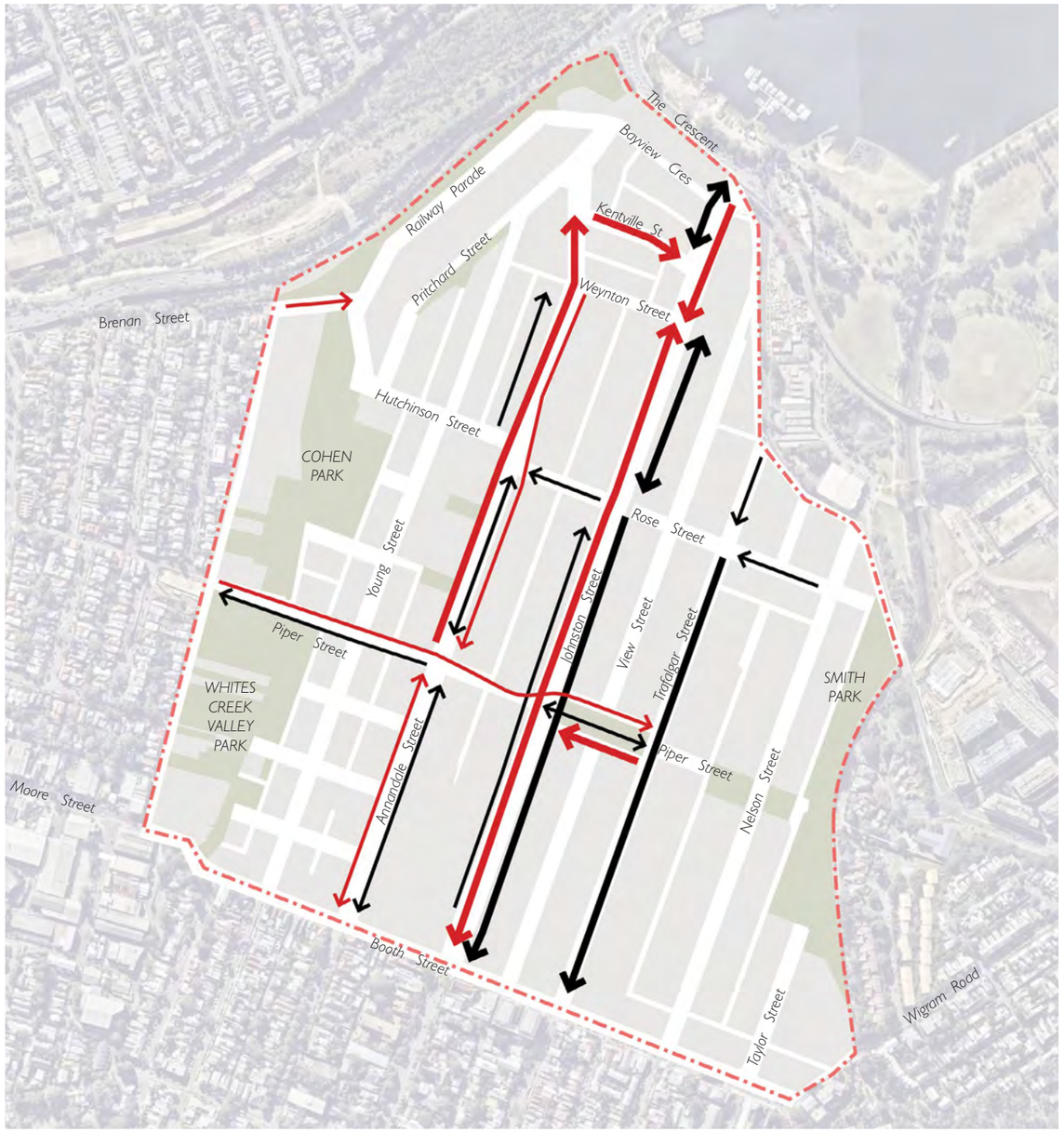


FIGURE 2: PEAK HOUR VEHICULAR MOVEMENTS

0 50 100 200m

Bicycle Movements

The analysis of Council's existing traffic counts revealed the following major findings (refer Figure 3):

- Overall cyclist numbers during the morning and afternoon peak are low.
- No data was available for cycle ways along Whites and Johnston Creeks, and along Booth Street.
- Booth Street is identified as having a medium to high cyclist accident density between 2009 and 2013. This suggests that the route may be popular with cyclists.
- The most important commuter cycle routes are along Johnston Street, Brenan Street/ Railway Parade and Hutchinson Street.
- Nelson and Young Street are also used by commuter cyclists.

LEGEND

Study Area Boundary

Cyclists 7:45am-8:45am weekdays

11+ Cyclists

6-10 Cyclists

Cyclists 5:00pm-6:00pm weekdays

11+ Cyclists

6-10 Cyclists

High cyclist accident density 2009-2013

Medium cyclist accident density 2009-2013

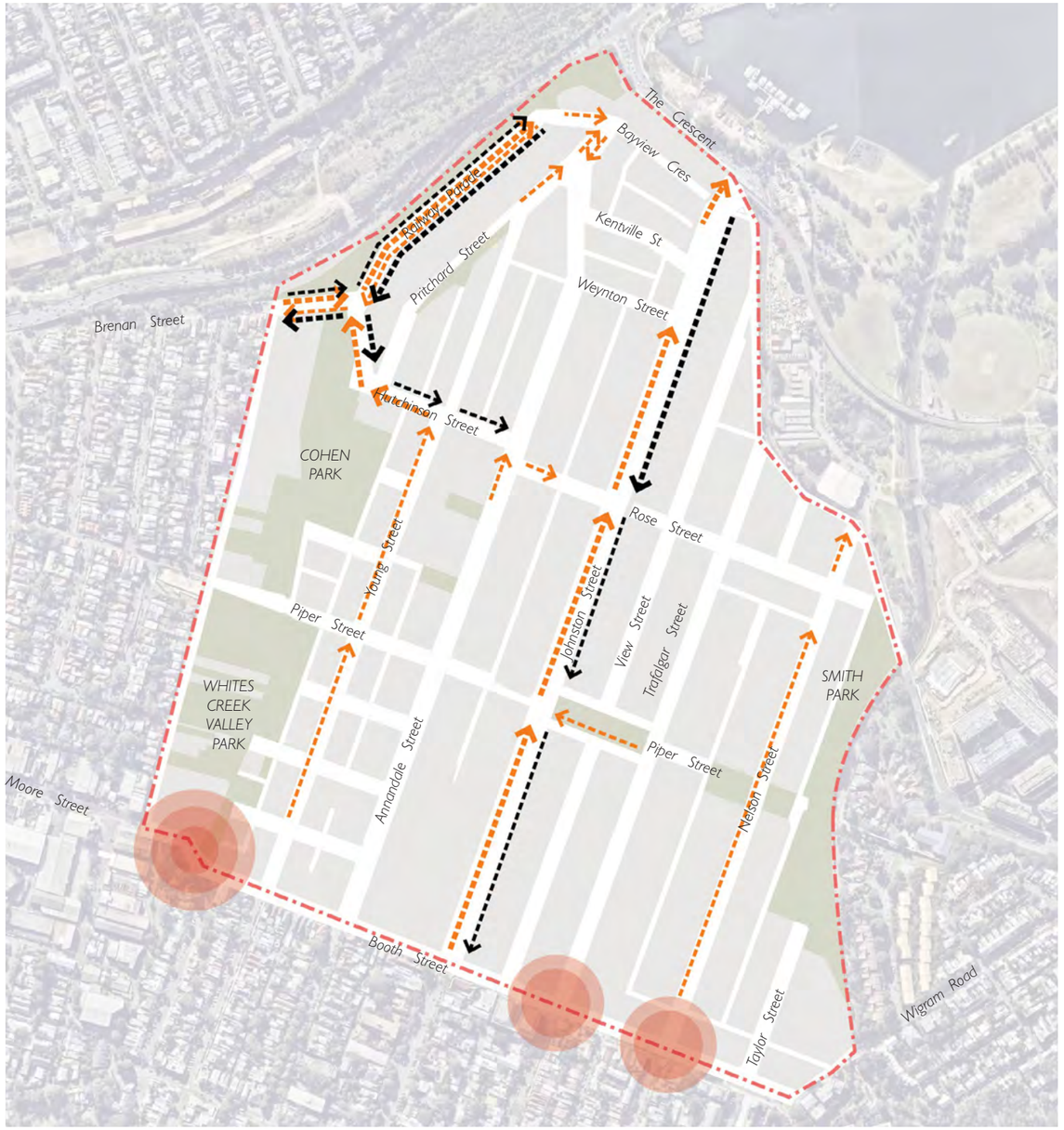


FIGURE 3: PEAK HOUR CYCLIST MOVEMENT

0 50 100 200m

2. SITE ANALYSIS

Bicycle Movements - Super Tuesday

Due to the low overall bicycle numbers in Council's traffic counts, data collected on Super Tuesday was used to supplement this information, and to obtain a fuller picture of existing peak bicycle use, as well as for future potential.

Super Tuesday is an annual event staged by the Bicycle Network. It measures commuter bicycle flows in the morning and afternoon peak, based on a visual bike count. The last count was conducted on 3 March 2015. The count, together with previous counts, provides a measure of bicycle participation trends across Australia.

Review of the Super Tuesday count data revealed the following additional information (refer Figure 4):

- Brenan Street is a popular bike route that connects to the City West Link bike path.
- Bike numbers along Johnston Street were notably higher on Super Tuesday than for other traffic counts.
- Booth Street between Wigram Road and Johnston Street is a busy route for bikes.
- Commuter bike numbers along Whites Creek appear to be low.

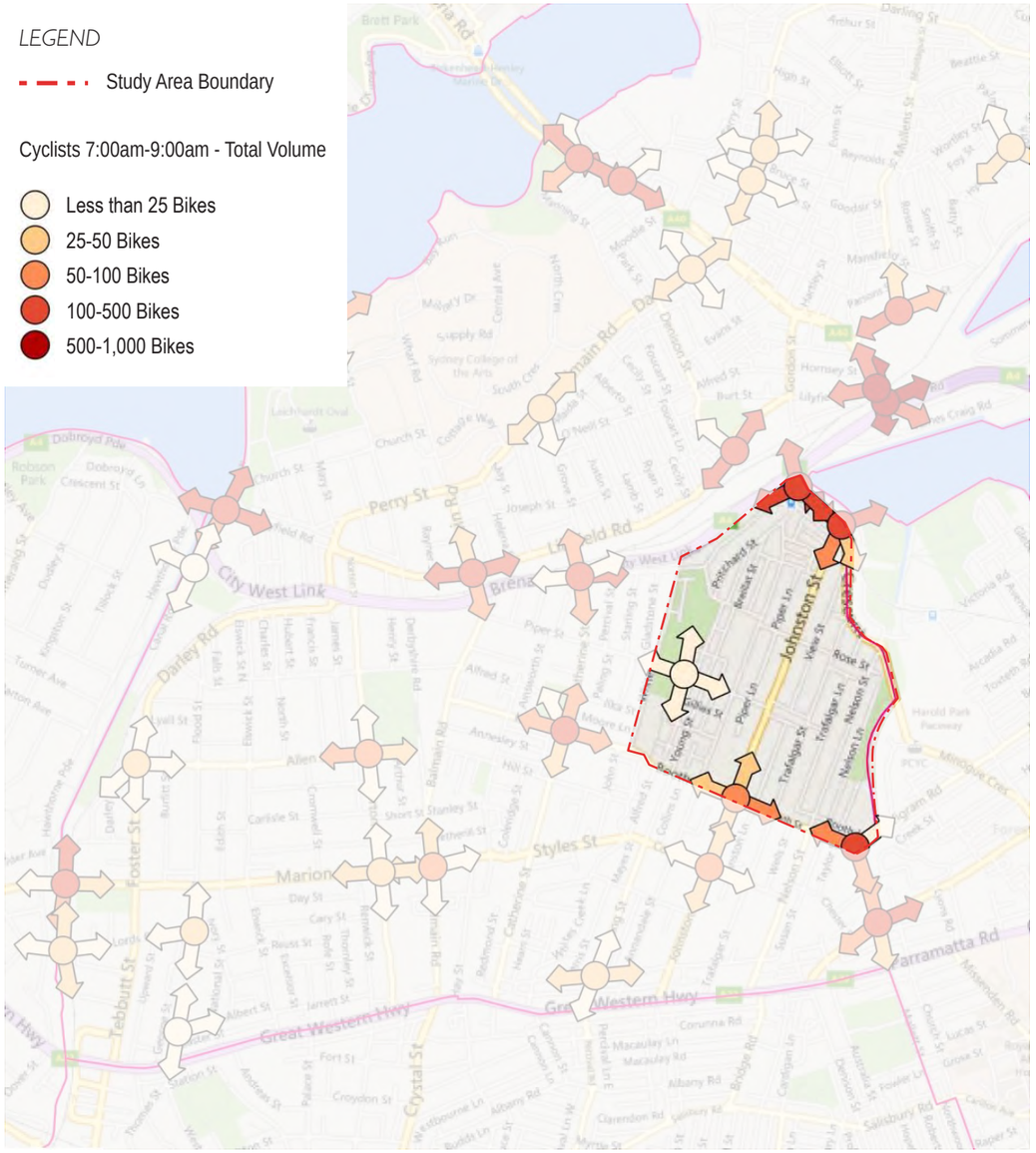


FIGURE 4: CYCLIST MOVEMENT - SUPER TUESDAY 2015

Not to Scale

2. SITE ANALYSIS

Pedestrian Movements

Pedestrian movements were analysed on the basis of pedestrian counts at intersections (refer Figure 5). This has highlighted key areas of pedestrian activity, as well as likely important movement routes. The major findings are:

- The busiest areas for pedestrian movement are along Piper Street, between Annandale and Trafalgar Streets; along Johnston and Annandale Streets; along Rose Street; and between Johnston Street and the Rozelle Bay Light Rail Stop.
- They indicate that the following are key destinations: North Annandale Public School, Rozelle Bay Light Rail Stop, Jubilee Park Light Rail Stop; Hinsby Park and the Revolver Café.
- Johnston Street represents a major barrier to movement. Crossing opportunities for pedestrian and bikes are limited to traffic lights. They are spaced far apart (400m between Booth Street and Annandale North Public School; 625m between ANPS and The Crescent).
- The spacing of crossing opportunities encourages unsafe crossing behaviour.
- Pedestrian activity at intersections shows poor co-relation to the presence of traffic lights.

The concentration of shops and site observations along Booth Street confirm it is a high pedestrian activity area.

LEGEND

- Study Area Boundary
- Traffic light locations
- 400m — Distances between traffic lights
- Pedestrian crossing
- Highly used route
- High pedestrian activity precinct

Intersection Pedestrian Counts (week days)

7:45-8:45am and 5-6pm

- 41-60 / hr.
- 60+ / hr.
- 95+ / hr.
- 170+ / hr. (3-4pm), 20-41 (5-6pm)
- 170+ / hr. (3-4pm), 41-60 (5-6pm)
- 95+ / hr. (7:45am-8:45am) Major weekend node 120+ (11:45am-12:45pm Saturday)

AM Peak Only:

- 41-60 / hr.
- 60+ / hr.

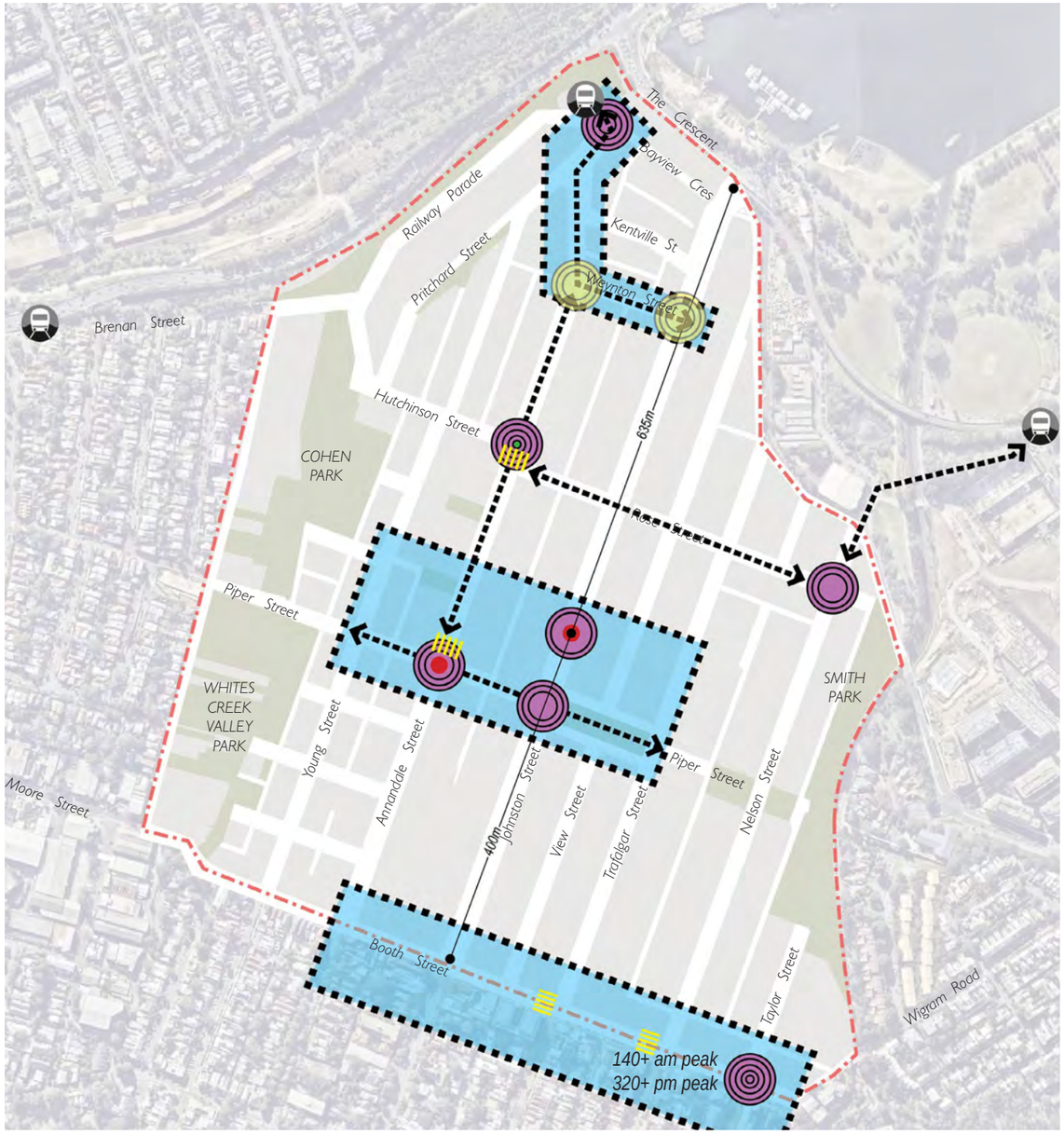


FIGURE 5: PEDESTRIAN ACTIVITY AT INTERSECTIONS (AM/ PM PEAK)

0 50 100 200m

2. SITE ANALYSIS

OPEN SPACE AND DESTINATIONS

Figure 6 identifies those places in the neighbourhood that are likely to constitute major points of community interest generating to and from, as well as in between them. This has the potential to highlight key movement corridors that could be improved to make active transport a safer and attractive for a larger number of people.

There are several types of destinations:

Neighbourhood Destinations

Neighbourhood destinations include

- public destinations such as Annandale North Public School and public transport nodes including the Rozelle Bay Light Rail Stop
- commercial business and services such as local shops, banks or service providers (hairdressers, cafes, florists etc)
- community facilities such as sport and recreation facilities and parklands including the Whites Creek Parklands, Johnstons Creek Parklands and historic Hinsby Park.

Destinations Beyond the Neighbourhood

Destinations beyond the neighbourhood include the Jubilee Park and Lilyfield Light Rail Stops; Bicentennial Parklands; Rozelle and Blackwattle Bay foreshores; Harold Park shops and markets, Annandale Public School and the Catherine Street IGA.

Regional Community Destinations

The Petersham TAFE College Annandale campus is a specialist rigging and scaffolding training facility. It provides a destination for people from outside the study area, including the wider Sydney Region.

KEY

1. Rozelle Bay
2. Bicentennial Park / Federal Park
3. Jubilee Oval
4. Annandale TAFE
5. Soccer Field
6. Tennis Court
7. Basketball Court
8. Skate Park
9. Orchard
10. Revolver Cafe
11. Annandale North Public School
12. Hinsby Park
13. Dog Park
14. IGA Lilyfield
15. Verse Cafe
16. Lilyfield private grocer
17. Industrial supplies
18. War Memorial Park
19. Mangiare Cafe
20. Strip of bars, cafes and retail

LEGEND

- Study Area Boundary
- Park
- Sports facility
- Education
- Commercial and Business
- Waterbody
- R — Place of Worship
- C — Community Centre
- CC — Child Care centre
- Bus Route
- Light Rail Line
- B — Bus stop
- Playground
- Light Rail Stop

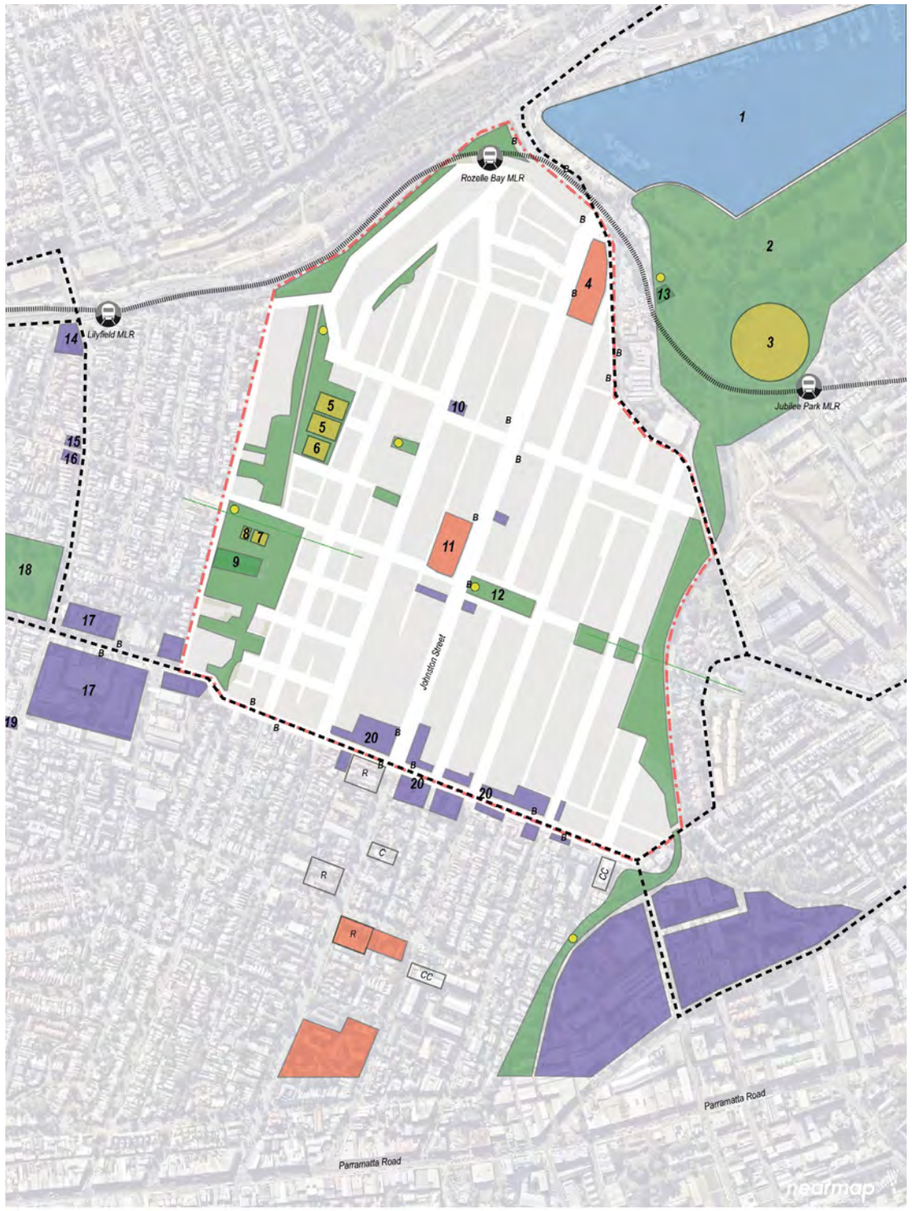


FIGURE 6: OPEN SPACE AND DESTINATIONS

0 50 100 200m

2. SITE ANALYSIS

TOPOGRAPHY, VIEWS, VISTAS AND HERITAGE

Topography, views and heritage items are key elements in defining neighbourhood identity and sense of place. They contribute to way-finding while also providing clues as to which routes offer greatest potential for comfortable and attractive active transport. The following sections and Figure 7 summarise the key findings.

Heritage

- The built environment of the study area is significant from a heritage perspective, including both built form and landscape.
- Much of the study area is contained within a Heritage Conservation Area.
- There is a large concentration of heritage buildings along Johnston Street.
- The majority of Johnston Street is considered a heritage landscape item.
- The southern part of Annandale Street is considered a heritage landscape.
- The viaduct is a unique local landmark crossing the suburb in an east-west direction.

Topography

- Johnston Street follows a natural north-south ridge.
- The highest point along Johnston Street is near Rose Street.
- The topography falls steeply away towards Johnston and Whites Creeks.
- East-west streets are generally steep.
- The steep topography of the area may discourage active transport, in particular for less mobile people.
- Gradients along north-south streets are generally flatter and more easily navigated by a wider range of people.

Views

- Views from the study area are mostly limited to short-distance views along the road corridors. Street trees provide a generally pleasant view along local streets.
- Despite the proximity to Rozelle and Blackwattle Bay, views of the water from the public domain are limited.
- The northern part of the study area enjoys views towards Pyrmont and the city.
- Streets with harbour and city views include Bayview Crescent and northern View Street.
- Hinsby Park is elevated and there are long-distance views towards UTS and the south end of the city.

LEGEND

Study Area Boundary

HERITAGE

LEP13 HER Conservation Area

LEP13 HER General Item

LEP13 HER Landscape

TOPOGRAPHY

High point

Views

Streets steeper than 1 in 14 gradient

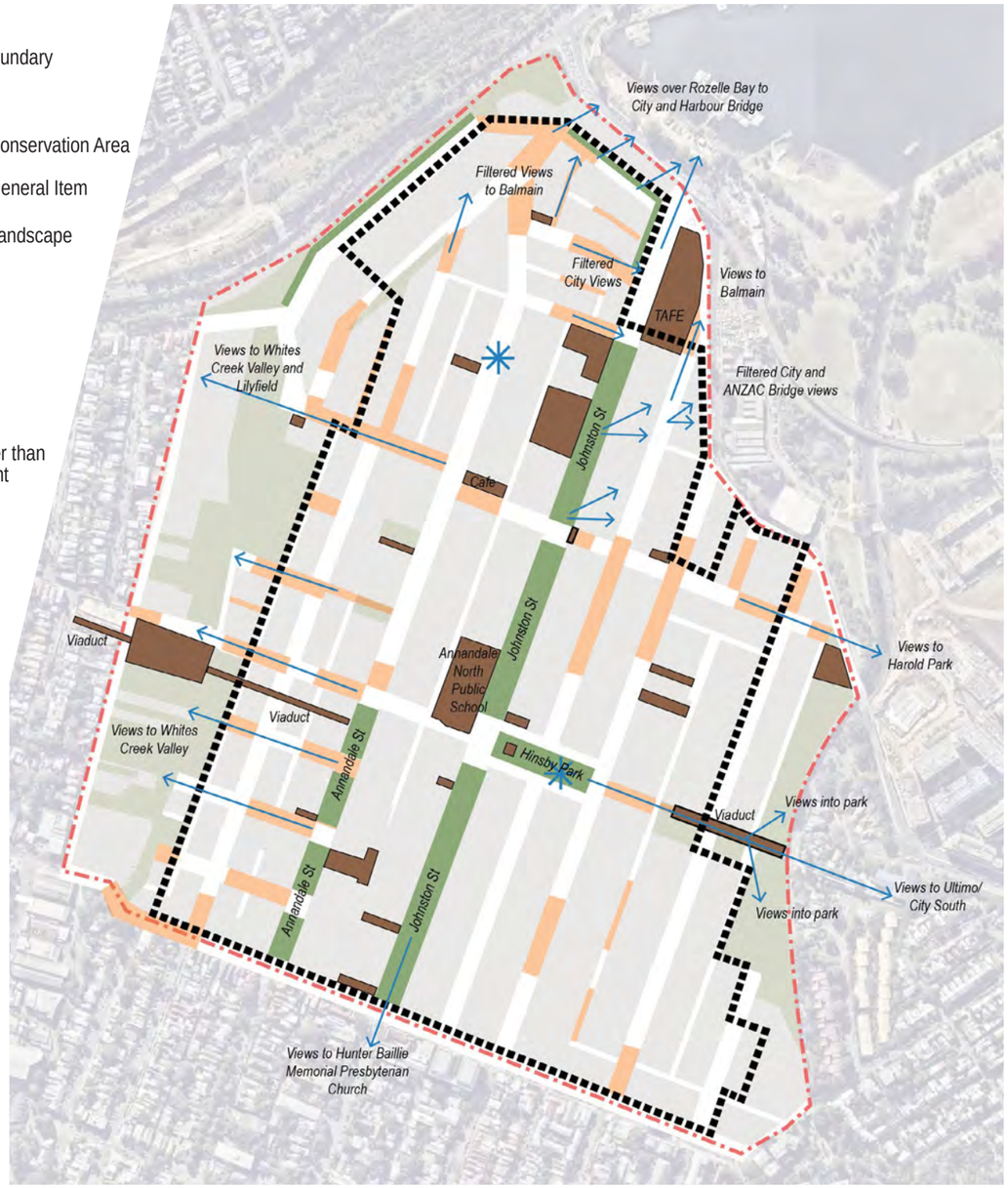


FIGURE 7: VIEWS, VISTAS AND HERITAGE

0 50 100 200m

2. SITE ANALYSIS

STREETSCAPE MORPHOLOGY

The analysis has reviewed the existing configuration of streets in the neighbourhood, in terms of their road corridor width, number of traffic lanes, numbers of parking lanes and parking configuration, and presence of footpaths (refer Figure 8). Key findings are:

- Johnston Street is the major road in the study area, consisting of four travelling lanes, plus parking.
- Johnston Street is a state road (655) managed by Roads and Maritime Services (RMS). It is considered an important linking road within the Sydney metropolitan area.
- Any modifications to the Johnston Street road corridor will require approval by the RMS and will need to consider potential effects on the state road network.
- The majority of roads in the study area consist of two travelling lanes plus parking lanes.
- There is a well-established network of footpaths supporting active movement.
- Street tree cover is inconsistent resulting in varying degrees of pedestrian amenity in particular shade cover.
- Road corridors in the neighbourhood are generously proportioned relative to traffic volumes, offering opportunities for design changes without impeding traffic flow or parking capacity.

LEGEND

- Study Area Boundary
- 4 lanes + parallel parking (unless otherwise hatched)
- 2 lanes + angle parking
- 2 lanes + parallel parking (unless otherwise hatched)
- Laneway
- One-way street traffic direction
- Angle parking
- Bridge + no parking

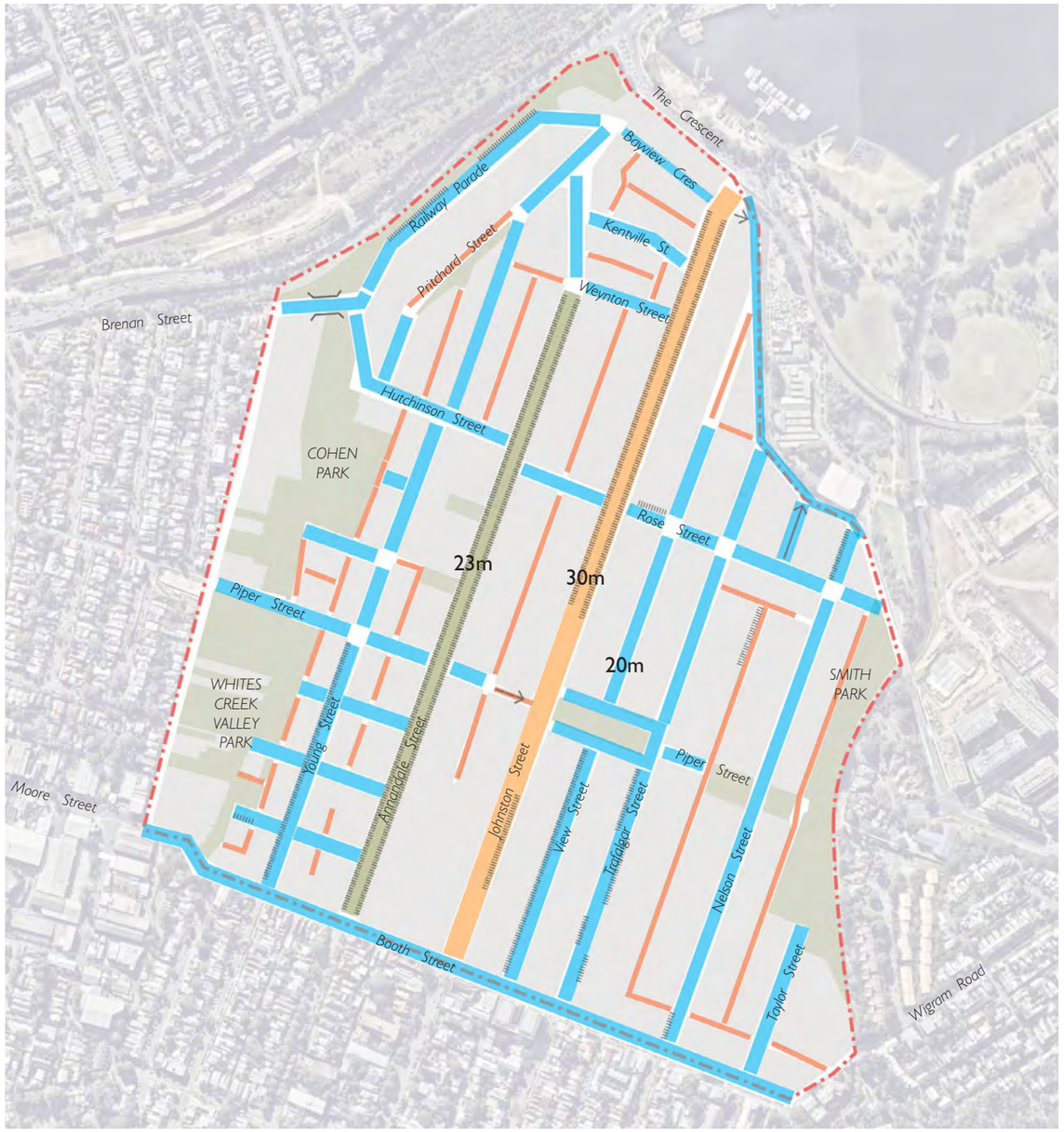


FIGURE 8: STREETSCAPE MORPHOLOGY

0 50 100 200m

2. SITE ANALYSIS

CONSTRAINTS AND OPPORTUNITIES

Based on the site analysis and Council's previous work, the following summarises the major constraints and opportunities in respect of encouraging greater active transport use in the Annandale North neighbourhood.

Key Constraints

- Johnston Street is a major vehicular thoroughfare and represents a significant barrier to east-west movement in the neighbourhood, in particular during peak hours.
- Johnston Street is a state road under the jurisdiction of the RMS. It has an important regional link function that must be maintained. Any changes to the road corridor will require RMS approval.
- Due to its arterial road function and high volumes of traffic during peak hours, Johnston Street is not likely to be suitable route for recreational and less experienced cyclists, including children.
- The Whites Creek Valley cycleway is not an ideal route for commuters due to its narrow width and poor connections to the street network at both ends.
- The steep topography of parts of the neighbourhood can act as an impediment to active transport, in particular for less mobile people and to movement in an east-west direction.

Major Opportunities

- The existing heritage character and high levels of amenity of the neighbourhood provides an attractive setting for active transport.
- Neighbourhood streets away from Johnston Street and Booth Street experience generally low levels of traffic and provide pleasant, quiet and safe routes for movement of both pedestrians and bicycles.
- The gentler slope of the study area in a north-south direction makes movement relatively easy for people of all levels of ability. It offers opportunities for creating accessible links between residential areas and key destinations.
- The creek corridors offer the potential to connect with larger and regional networks of recreation paths such as the Glebe Foreshore Walk.
- There is an opportunity to improve links to better feed into regional cycle routes such as the City West Link.
- Annandale North Public School and Hinsby Park provide a community focus and major destination at the heart of the neighbourhood that offers significant potential to encourage active transport.
- Key destinations are well distributed throughout the suburb and attract sufficient numbers of people to provide passive surveillance.
- Active movement links between key destinations and in particular across Johnston Street can be enhanced by making it easier and safer to cross Johnston Street.
- A well-established network of footpaths can be further enhanced at both the micro and macro level to support active movement. Examples would be the provision of kerb ramps and footpath widening respectively.
- The existing streetscape is attractive and offer scope for further enhancement to provide greater consistency in terms of pedestrian amenity and in particular summer shading.
- Road corridors are generously proportioned, offering opportunities for design changes without limiting traffic flow or parking.

03

MASTERPLAN FRAMEWORK

3. MASTERPLAN FRAMEWORK

COUNCIL'S STRATEGIC FRAMEWORK

The ANMP is one of the outcomes proposed by Leichhardt Municipal Council's (LMC) strategic planning framework. The following is a brief overview of the key documents and how the ANMP supports the respective objectives of Council's adopted policies.

Leichhardt 2025+

Leichhardt 2025+ is the strategic plan for the Leichhardt Local Government Area (LGA). It identifies the main priorities and aspirations for the future and guides the delivery of Council services.

Leichhardt 2025+ identifies the following vision for the LGA:
Community and Council will work together to promote and develop Leichhardt as a sustainable, liveable and connected community.

The ANMP directly supports the following goals identified in *Leichhardt 2025+* :

Leichhardt 2025+	ANMP contribution
A Leichhardt community that is equitable, cohesive, connected, caring, diverse, healthy, safe, culturally active, creative and innovative, and has a strong sense of belonging and place	The ANMP builds on the existing sense of place and maximises opportunities for equality of access, neighbourhood connections, safety and social interaction through an enhanced public domain.
Easy access for people, services, information and facilities that promotes the amenity, health and safety of the community and that reduces private car dependency for all travel.	The ANMP proposes measures that will encourage active travel through improvements in the safety, structure and amenity of the neighbourhood. This in turn will reduce car travel and promote health.
A liveable community – socially, environmentally and economically.	Greater participation in active travel increases opportunities for social interaction, incidental economic activity and reduces reliance on motorised transport.
A sustainable environment created by inspiring, leading and guiding our social, environmental and economic activities.	The ANMP seeks to deliver a public domain that will inspire changes in habit towards a more sustainable future.
Thriving businesses and a vibrant community working together to improve the local economy.	Increased active transport will contribute to a vibrant neighbourhood.
Accountable civic leadership that delivers services and assets to support the community now and in the future.	The ANMP proposes measures that will assist Council in its forward planning to negotiate and deliver the best outcomes for the community in the context of significant development and changes in the region.

Council's 4 and 10 Year Strategic Plans

The following LMC strategic plans are relevant to the ANMP:

The aim of the *Community and Cultural Plan* addresses the social and cultural aspirations and challenges of the Leichhardt Local Government Area. It aligns community infrastructure expenditures and local services and activities with community preferences and values, centred around five strategic objectives.

The *Employment and Economic Development Plan* provides the strategic framework to help realise the community's vision of a sustainable, liveable and connected community. It aims to make place matter and meet people's needs including by supporting, attracting and growing local business and by improving the social and environmental sustainability of the local economy.

LMC's *Integrated Transport Plan - 10 Year Strategic Plan* (ITP) aims to connect people to each other and to connect people to place, by fostering environmental improvements and improve safety for all of the community.

The ITP identifies a series of objectives for accessibility, environmental improvement, equity, access and accessibility, social inclusion, cultural engagement and community wellbeing. It focuses on walking, cycling, public transport parking, general traffic as well as land use and other considerations.

It aims to encourage people to walk and cycle more, public transport that meets people's needs, appropriate management of parking, a safe street network and ensuring that transport is managed across multiple disciplines.

3. MASTERPLAN FRAMEWORK

STRATEGIC PRINCIPLES

Based on LMC's strategic objectives and the constraints and opportunities identified within the Annandale North Neighbourhood, the following strategic principles have been formulated:

- Build on the unique local setting, character and urban structure.
- Emphasise the profile of Whites Creek and Johnstons Creek.
- Connect key day-to-day destinations within and beyond the neighbourhood.
- Create a 10 minute walkable neighbourhood for daily needs.
- Provide high levels of amenity and safety to encourage active transport.
- Separate the Active Movement Network from the major regional link road.
- Maximise accessibility of key routes.
- Provide quieter off-line and recreation paths in the creek corridors.
- Retain some informality to the landscape.

DRAFT NEIGHBOURHOOD MOVEMENT PLAN

From the strategic principles derive a series of site-specific design principles that inform the framework for the Annandale North Neighbourhood Movement Plan. The strategic and design principles are illustrated in Figure 9.

- Build on significant existing heritage character and neighbourhood amenity to provide a safe and comfortable public domain to foster active transport.
- Maintain Johnston Street as a through route and recognise its heritage significance
- Provide safe, attractive and accessible active movement corridors along quiet north-south streets, taking advantage of their generous proportions and relatively easier gradients.
- Design residential streets to discourage them being used as alternative routes or 'rat runs', and to designate them as priority active movement streets characterised by a low speed environment.
- Provide a green link and major east-west movement spine along Piper Street, to connect the Johnston and Whites Creeks corridors through the heart of the neighbourhood.
- Relocate the pedestrian crossing at the school to align with the Piper Street east-west link.
- Enhance Rose Street as a secondary east-west link.
- Investigate opportunities to incentivise an additional secondary east-west link connecting Wisdom Street to Trafalgar Street (subject to heritage considerations and voluntary planning agreements).
- Provide additional crossing opportunities across Johnston Street that are safe and do not adversely affect peak hour traffic movement.
- Upgrade footpaths and develop a palette of suitable furniture and finishes to define primary and secondary movement routes, including fixtures to maximise accessibility and assist people with movement or visual impairments.
- Build on the existing tree cover to develop a suitable palette of street trees to signify primary and secondary movement corridors and to complement the built and landscape heritage.
- Provide additional street tree planting to increase pedestrian amenity and provide consistent shade along primary and secondary active movement routes.
- Enhance key intersections as informal community meeting and social spaces.
- Strengthen the role of the creek corridors as green links framing the suburb, and as recreational movement corridors.
- Investigate long-term opportunities for the Sydney Water Viaduct to become a local 'highline', with the potential to assist east-west movement by eliminating the need to navigate the steep topography of the creek valleys.
- Assist people to navigate the steep topography of the neighbourhood through small scale interventions that maximise the accessibility and walkability of the neighbourhood, within the constraints of the site's topography.
- Improve connections beyond the neighbourhood including through improvements to existing paths and intersections, and through strategic planning input to maximise community outcomes from major development proposals such as the Bays Precinct redevelopment.

The following section provides mode detailed concepts illustrating these principles for five key sites within the Annandale North Neighbourhood.

3. MASTERPLAN FRAMEWORK

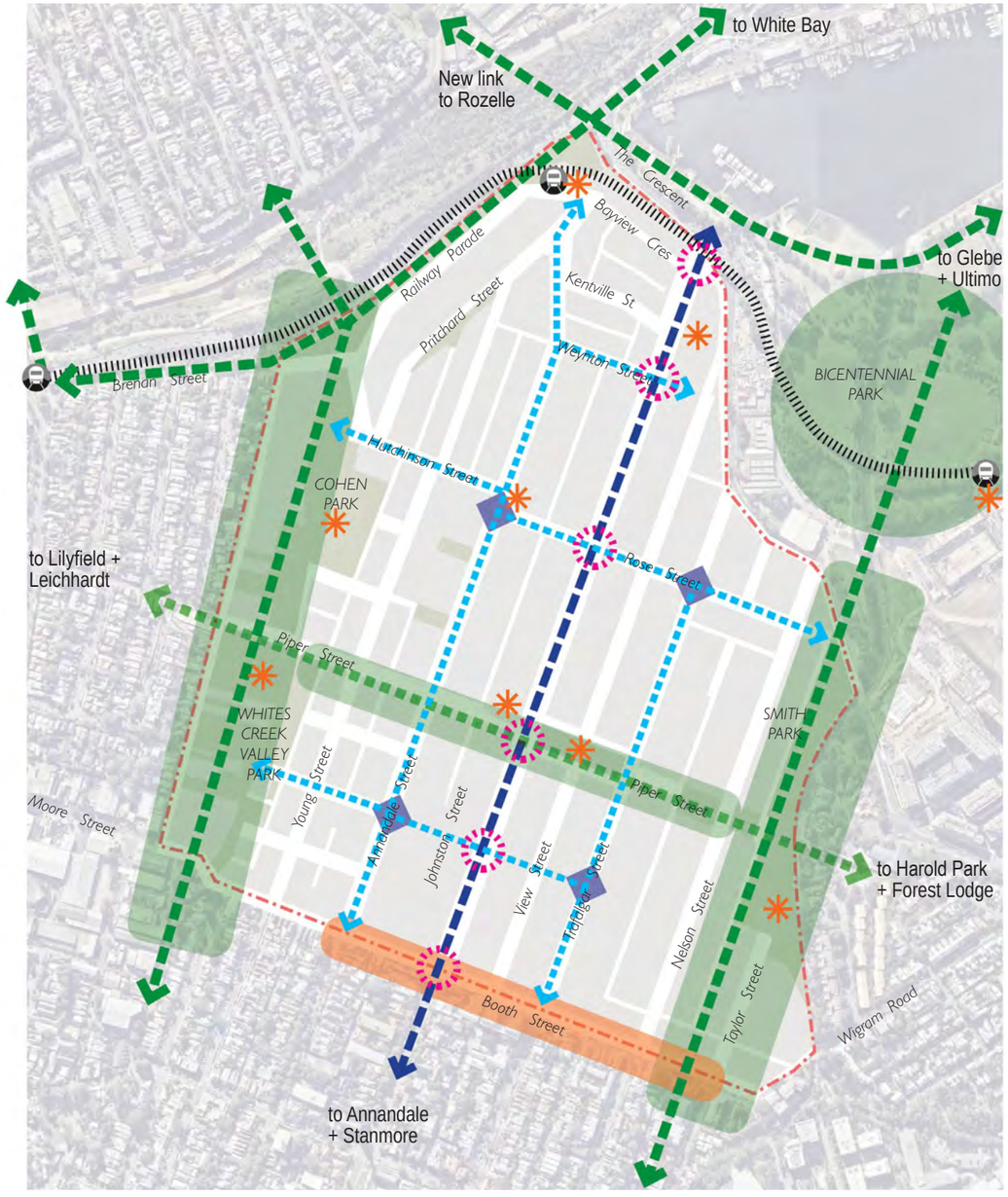


FIGURE 9: DRAFT NEIGHBOURHOOD MOVEMENT PLAN

0 50 100 200m

LEGEND

- Study Area Boundary
- Primary Through Movement Corridor and Heritage Street
- Recreational Movement Corridor and Green Link
- East-West Link and Green Street
- Neighbourhood Active Movement Network
- Neighbourhood Business Zone
- Key Neighbourhood Destination
- Square/ Neighbourhood Social Meeting Place/ Public Art
- Light Rail Stop
- Light Rail Line
- Formal Pedestrian Crossing Opportunity Across Johnston Street

04

DESIGN CONCEPTS

4. DESIGN CONCEPTS

This section provides mode detailed design concepts for the neighbourhood. They illustrate the overarching strategic and design principles for five key sites and their connections to surrounding areas.

The five key sites are:

- Whites Creek Valley Park.
- Buruwan Park
- Piper Street (Spindlers Park to Whites Creek Valley Park)
- Johnston Street
- Annandale Street

4. DESIGN CONCEPTS - WHITES CREEK VALLEY PARKLANDS

Introduction

The Whites Creek Valley Parklands define the western boundary of the North Annandale Neighbourhood. They follow the course of Whites Creek between Booth Street and Railway Parade.

The Parklands are well established and feature a range of recreation facilities and opportunities for the local community, including walk tracks, children's play equipment, a wetland, skate park, orchard, playing fields, tennis courts (currently undergoing redevelopment) and dog off-leash areas.

The Parklands are well connected to surrounding areas and easily accessed from the local street system.

Aim

The aim for the Whites Creek Valley Parklands is to maximise activation by increasing access to the parklands.

Opportunities

Major opportunities for the Parklands lie in the area of improvements to

- existing paths including paved surfaces, widths and clarification of movement hierarchies and systems
- connections and links both along and across the creek
- sight lines to maximise passive surveillance and improve both perceived and actual safety and security.

The following photographs highlight specific opportunities. They are also identified on Figure 10 which provides recommendations for improvement of the Parklands.

1. Improve the bike connection between Brenan Street, Whites Creek Valley and Railway Parade.

- Provide a formal footpath along the top of the bank and enhance views to Whites Creek.

2. Improve sight lines and passive surveillance through selective pruning and/ removal of vegetation. Investigate need for lighting.

3. Align the pedestrian/ cycle path on both sides of Piper Street and provide a single clear road crossing point.

4. Investigate the long-term opportunity for the viaduct to become part of the movement network.

4. DESIGN CONCEPTS - WHITES CREEK VALLEY PARKLANDS

Concept Design

The proposed concept recommendations for the Whites Creek Valley Parklands aim to improve access to and movement around the Parklands, through minor additions to and simplification of existing movement systems.

The proposed modifications to the movement system are shown in Figure 10. Figure 11 focuses on the connection of the Parklands across Piper Street, while Figure 12 shows a typical cross section through the Parklands north of Piper Street .

In addition to the proposals shown, the Parklands would benefit from an updated masterplan to improve legibility throughout. The Parklands are currently a series of individual open space parcels. They hold significant potential to be unified into a coherent whole offering a range of experiences along the route of Whites Creek.

Formalise the cycle link to Buruwan Park and provide an improved pavement surface (3b)

Provide a safe crossing facility for cyclists to connect from the Whites Creek Valley cycle path to Brenan Street and Railway Parade (3b)

Improve visibility of park entrances including the path system (3d)

Neighbourhood active movement network east-west link (refer to Figure 9)

Provide a formal path along the top of the eastern bank of Whites Creek to encourage increased movement (3g)

Undertake selective pruning or tree removal on embankments to improve sight lines and casual surveillance and maintain areas for potential future creek naturalisation (3a)

Provide an additional creek crossing (3e)

Provide additional furniture in association with sports fields and courts to encourage increased casual use and social interaction (3f)

Upgrade pavements and improve passive surveillance through selective pruning to improve sight lines (3a, 3g)

Align pedestrian and cycle paths on both sides of Piper Street (3g)

Piper Street east-west link and green street (refer to Figure 9)

Investigate the opportunity and potential impacts for the viaduct to provide an accessible east-west link across Whites Creek Valley (1c)

Clarify the primary path for cyclists (3g)

Provide a connection through the parklands between Ilka and Wisdom Streets (3h)

Recreational movement corridor and green link (refer to Figure 9)

Neighbourhood active movement network east-west link (1b) (refer to Figure 9)

Improve the connection to and across Moore/ Booth Street (3c)

Note: Numbers in brackets correlate with the Action Plan in Part 5 of this report.

FIGURE 10: RECOMMENDATIONS - WHITES CREEK VALLEY PARKLANDS

4. DESIGN CONCEPTS - WHITES CREEK VALLEY PARKLANDS

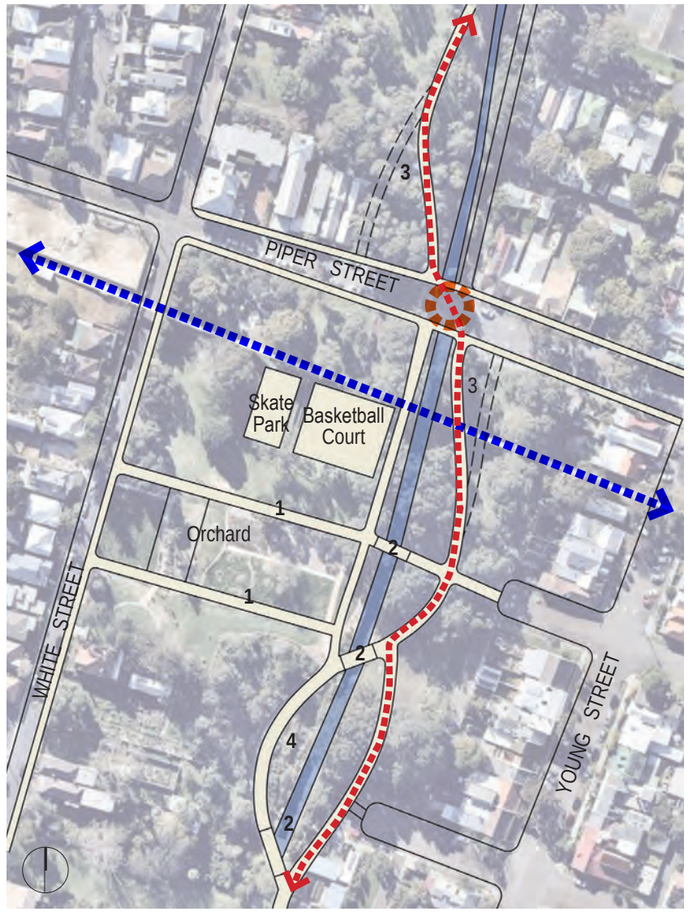


FIGURE 11: DETAIL PLAN A - WHITES CREEK VALLEY PARKLANDS (not to scale)

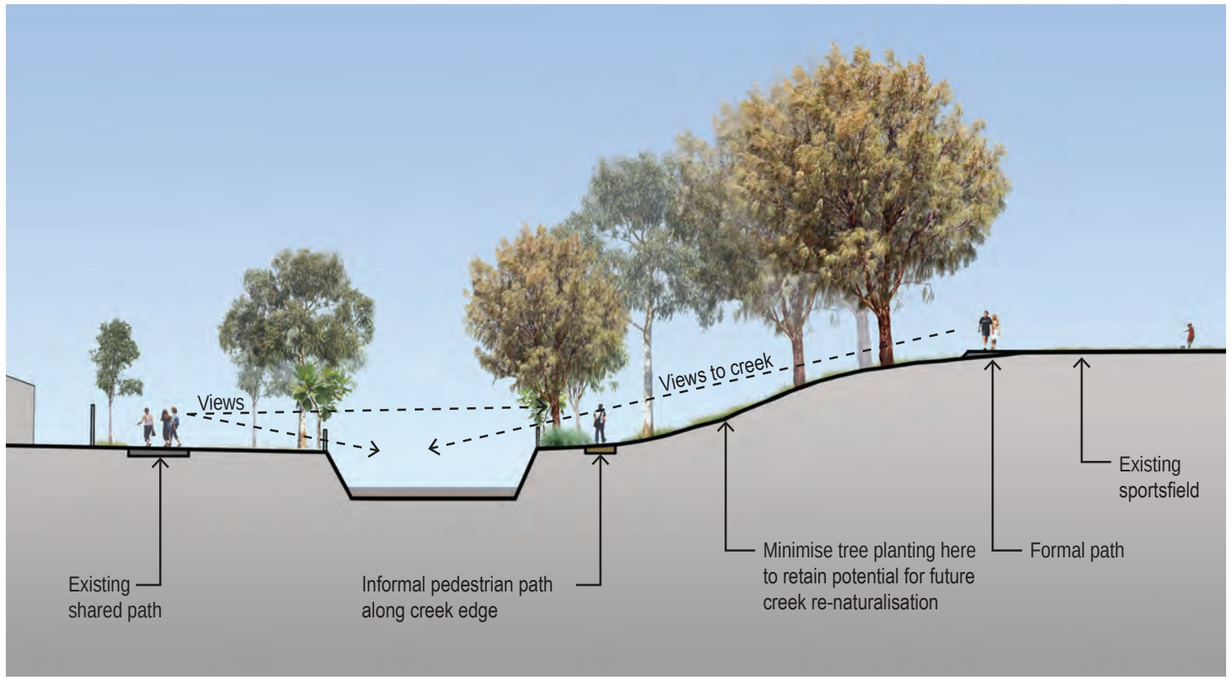


FIGURE 12: INDICATIVE SECTION AA: COHEN PARK - WHITES CREEK VALLEY PARKLANDS (not to scale)

LEGEND

- Centralized road crossing
- Primary cyclist path
- East-west link opportunity through viaduct

1. Potential new pedestrian paths
2. Existing bridges over creek
3. Existing paths to be realigned
4. Existing wetlands

4. DESIGN CONCEPTS - BURUWAN PARK

Introduction

Buruwan Park is a small open space at the northern boundary of the Annandale North Neighbourhood. It is bound by The Crescent, Bayview Crescent and Whites Creek. The viaduct passes over the park and the Rozelle Bay Light Rail Stop is centrally located within the park.

Access to the Light Rail Stop is via Annandale Street, or via a set of stairs from Buruwan Park on the northern side of the light rail line.

Aim

The aim for Buruwan Park is to improve access for and safety of pedestrians, cyclists and vehicles around the Rozelle Bay Light Rail Stop, including connections and approaches to the stop between Railway Parade and The Crescent.

Opportunities

Major opportunities for the Park lie in the area of improvements to

- existing paths including widths and alignment;
- simplified path junctions and road crossings;
- visibility, legibility and passive surveillance.

The following photographs highlight specific opportunities for improvement. They are also identified on Figure 13 which provides the respective recommendations.

1. Improve visibility of the light rail stop through selective tree pruning and/ or removal. Widen footpath to provide a generous shared path.

2. Widen and re-align path to provide easier and safer turning for bicycles.

3. Simplify the junction of the Buruwan Park cycle path and Railway Parade.

4. Provide a safe and well designed crossing opportunity for bikes and pedestrians at the kink in Railway Parade.

5. Widen footpaths and re-align kerb ramps and line-marking to provide a safe pedestrian crossing route at the junction of Railway Parade and Bayview Crescent.

4. DESIGN CONCEPTS - BURUWAN PARK

Concept Design

The proposed concept recommendations for Buruwan Park and surrounds aim to improve access to the light rail stop from the Annandale North, Rozelle and the Rozelle Bay foreshore. They further aim to realise the potential of Buruwan Park to become an attractive public open space with increased scope for social interaction.

Proposed modifications include changes to the path system surrounding the light rail stop, to simplify and improve the safety of road crossings and improve legibility and way-finding.

In addition, improved way-finding and signage should be provided within the potential walking catchment of the light rail stop, capturing locations such as the light rail stop, cycle ways, the Anzac Bridge, Glebe Island Bridge and Harold Park.

Small scale improvements such as the installation of handrails to existing stairs and the provision of kerb ramps at intersections will improve ease of access and movement.

Figure 13 shows the key recommendations in the larger context of Annandale North, Rozelle and Rozelle Bay. Figure 14 focuses on Buruwan Park as the setting for the Light Rail Stop.

Note: Numbers in brackets correlate with the Action Plan in Part 5 of this report.

Investigate a long-term option for the Bays Precinct redevelopment to deliver a bridge link across the City West Link to Rozelle. This would provide an extension of the Foreshore Walk and improve access to the light rail stop (1a)

Undertake selective pruning of roadside trees along The Crescent to improve visibility of the light rail stop (4a)

Investigate the potential for footpath widening along The Crescent to reduce the potential for conflict between pedestrians and cyclists, and to facilitate easier turning movements for cyclists turning into and out of Buruwan Park (4c)

Re-align kerbs and re-position kerb ramps in Bayview Crescent to provide a safe pedestrian route to the light rail stop (4d)

Upgrade the footpath in Annandale Street to provide a clear continuous route to the light rail stop. Consider footpath widening to create a more generous and inviting route (5g) (refer to figure 26)

Investigate the viability of a kiss and drop area or bus stop to enhance the potential of the stop as a local transport interchange (4f)

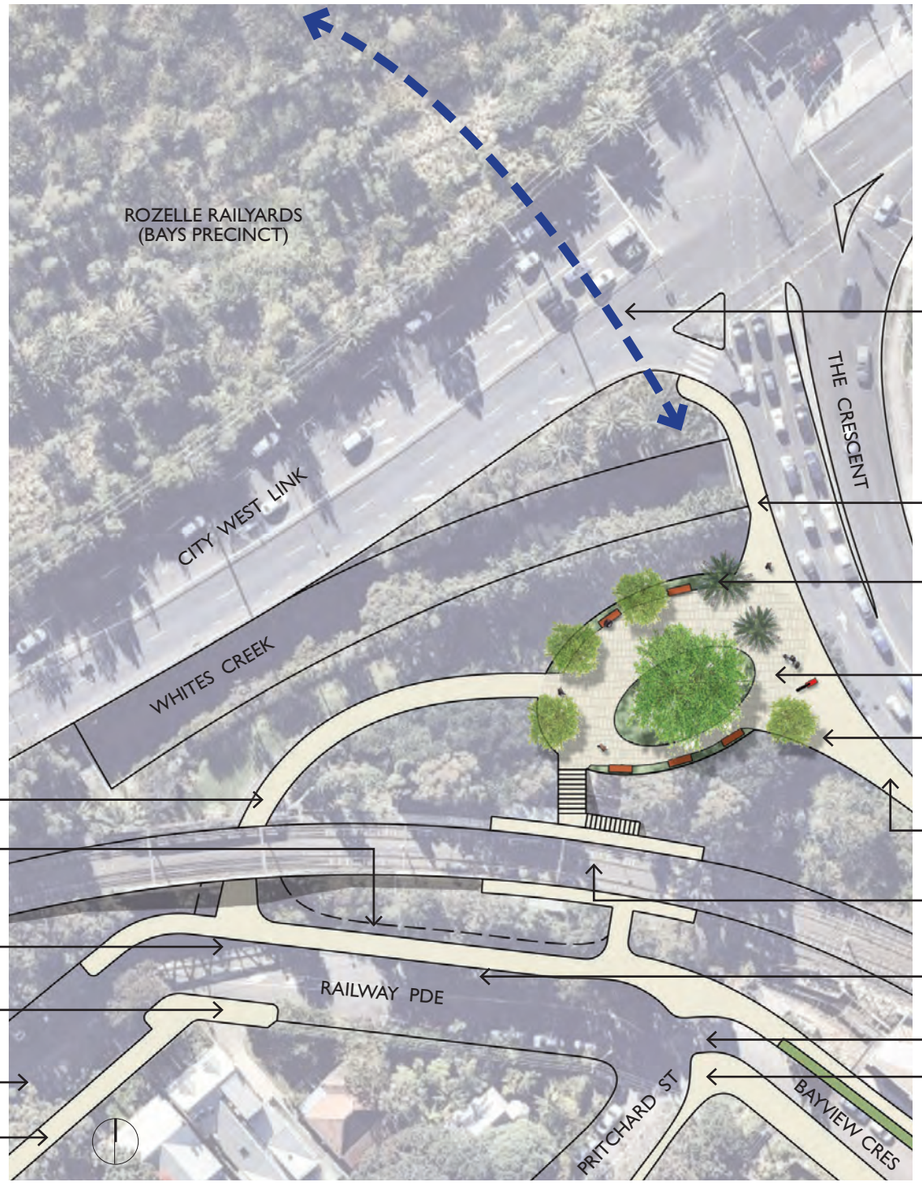
Upgrade pedestrian stairs to Johnston Street to improve accessibility, subject to heritage considerations (4b)

Enhance the pedestrian link to the TAFE (4g)

Undertake selective pruning to improve intersection visibility and safety for bikes and pedestrians. Upgrade the Railway Parade crossing and simplify the junction with the Buruwan Park bike path (4a)

FIGURE 13: RECOMMENDATIONS - BURUWAN PARK AND ROZELLE BAY LIGHT RAIL STOP (not to scale)

4. DESIGN CONCEPTS - BURUWAN PARK



Note: Numbers in brackets correlate with the Action Plan in Part 5 of this report.

Investigate a long-term bridge connection across the City West Link to Rozelle (1a)

Footpath widening along The Crescent to accommodate shared pedestrian and cycle use (4c)

Retain existing major trees and complement with additional planting to define the light rail stop forecourt (4a)

Light rail stop forecourt designed as small plaza and social space open to views from The Crescent

Undertake selective pruning of roadside trees along The Crescent to improve visibility of the light rail stop and signage (4a)

Footpath widening along The Crescent to accommodate shared pedestrian and cycle use (4c)

Light rail stop

Kiss and ride / drop off. New footpath at back of kerb (4f)

Pedestrian crossing point. Reduce carriageway width

Kerb extensions, widening and new kerb ramps (4d)

Shared path (4h)

Selective removal and pruning of vegetation to improve passive surveillance (4a)

Single crossing point for bikes and pedestrians (4e)

Kerb blister to reduce road crossing distance (4e)

Existing on-road bike route

Existing footpath

FIGURE 14: DETAIL PLAN A - BURUWAN PARK AND ROZELLE BAY LIGHT RAIL STOP (not to scale)

4. DESIGN CONCEPTS - PIPER STREET/ SPINDLERS PARK TO WHITES CREEK VALLEY LINK

Introduction

The Annandale North Neighbourhood is characterised by its setting on a ridge, framed by the two valleys along Whites Creek and Johnstons Creek. Both creeks are lined by parklands which provide a green frame to the neighbourhood.

Piper Street is the main street linking the two parklands, running through the heart of the neighbourhood in an east-west direction.

The eastern end of Piper Street is unmade as it is too steep for vehicular traffic. Central to the road corridor, the Sydney water viaduct emerges east of Trafalgar Lane. It is surrounded by bushland remnants and pedestrian stairs provide a link to Spindlers Park.

At the junction of Piper and Johnston Streets is Hinsby Park, a local park of heritage significance. Hinsby Park features an Anzac memorial and children's play equipment. It is a popular afternoon destination, being located diagonally across Annandale North Public School. Located at a high point, it enjoys good views to surrounding areas.

Adjoining the Public School, Piper Street has been reduced to one lane. The northern part of the road reserve is made available to the school as an outdoor play and marshalling area.

Aim

The aim for Piper Street is to enhance it as a green east-west link and active movement corridor, building on the significant opportunity of existing open space and landscape features along its length. They provide existing greenspace as well as community focal points that, together with the school, offer the potential to provide an active, attractive and safe route linking key neighbourhood destinations.

Opportunities

Major opportunities include

- complement existing open space and vegetation with additional planting to create a green street;
- simplify and improve the crossing of Johnston Street;
- assist and enhance accessibility within the constraints of existing topography.

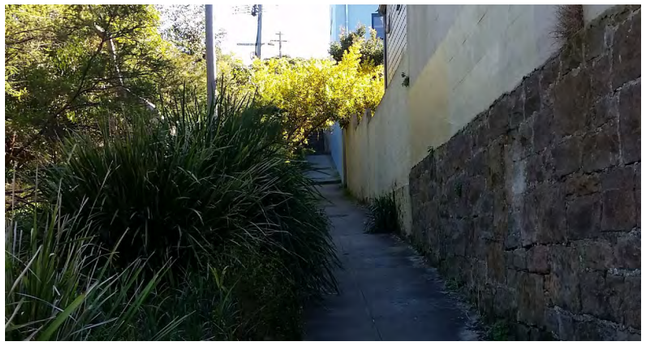
The following highlight specific opportunities for improvement. They are reflected in the recommendations shown on Figure 15.

1. Build on the location of the existing pedestrian crossing to develop the northern footpath as a the primary pedestrian route.
2. Complement existing street trees with additional tree planting to create a green spine that provides continuous shade and assists in drawing cooling breezes between the two creek valleys.

3. Install additional raingardens as means to provide a consistent streetscape treatment, to manage and collect stormwater and to assist in urban cooling through evaporation and green cover.
4. Relocate the Johnston Street pedestrian crossing to the alignment of Piper Street to provide a safe, direct and well designed crossing opportunity for bikes and pedestrians.

5. Improve accessibility through pavement upgrades and minor infrastructure works including handrails, kerb ramps, bike/ pram ramps on stairs and tactile indicators to provide a highly accessible and direct east-west link.

6. Simplify and clarify pedestrian and bicycle routes and reduce clutter in the road corridor to facilitate ease of movement.



7. Undertake selective pruning of vegetation to maximise passive surveillance and provide a safe and secure route.

Concept Design

The concept (refer Figure 15) seeks to established a green street and major east-west link through the heart of the neighbourhood. It will connect major community destinations including parks, residential neighbourhoods, the main street and the school through a direct route that maximises accessibility for all.

Additional tree planting and raingardens will unify the link, provide continuous shade cover to encourage year round comfort and walking, as well as draw cooling breezes between the two creek lines to reduce urban heat island effects.

4. DESIGN CONCEPTS - PIPER STREET/ SPINDLERS PARK TO WHITES CREEK VALLEY LINK

Note: References in parentheses correlate with the Action Plan priorities on pages 38 and 39 of this report.

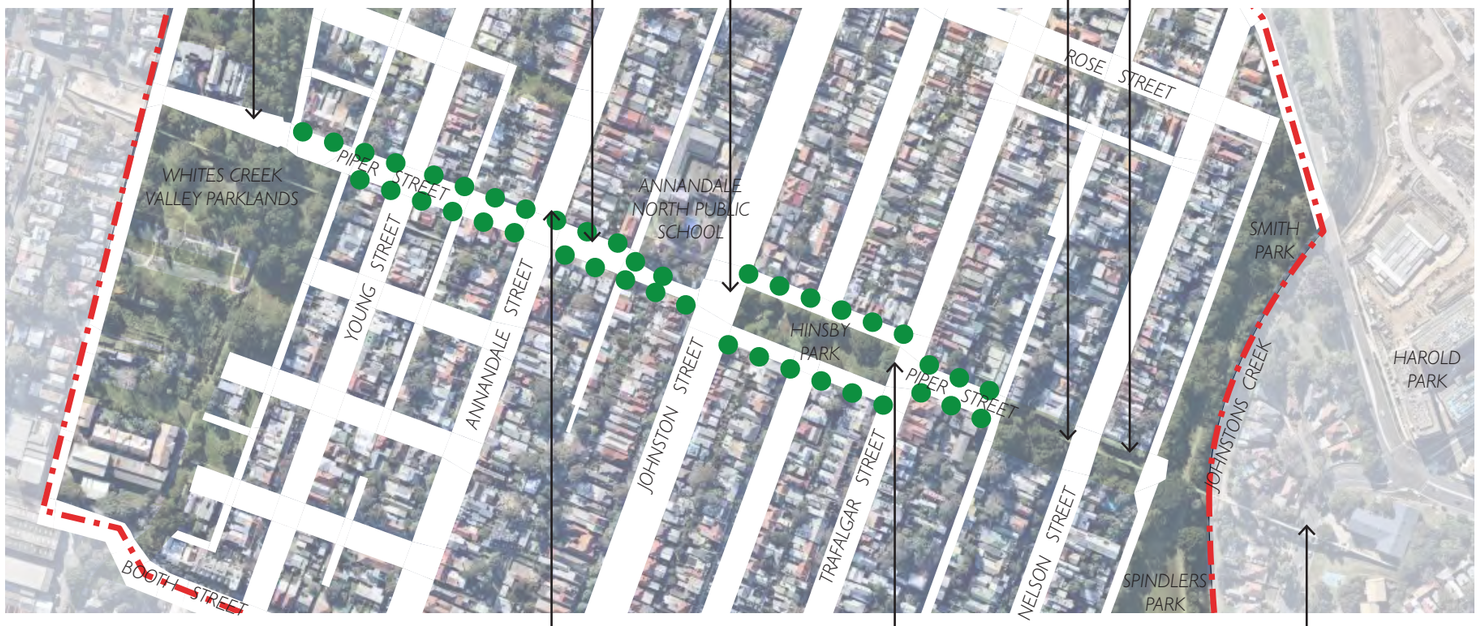
Upgrade footpaths on the northern side to become the primary pedestrian route. Investigate potential for footpath widening. Provide additional street trees for continuous shade cover and urban cooling (5c, 5d).

Undertake selective pruning to improve passive surveillance along paths (5a).

Improve accessibility of footpaths in steep sections through handrails, pram/ bike wheel access ramps and pavement repairs (5b).

Upgrade the Piper Street crossing along the Whites Creek Valley Parklands (refer Figure 11).

Relocate pedestrian lights to Piper Street to provide a direct east-west route. Also refer Figure 23 (5f).



Retrofitting of stairs with access ramps allows physically fit people to push bikes, prams or shopping bags up and down stairs, enabling them to take the most direct route.

Extend existing raingardens to other street corners to provide a consistent design language and manage stormwater as an additional means to provide suburban cooling (5j)

Simplify and clarify bike and vehicular movement around the school and Hinsby Park (5h).

Investigate the opportunity and potential impacts for the viaduct to provide an accessible east-west link across the valley to Forest Lodge (1c).

FIGURE 15: RECOMMENDATIONS - SPINDLERS PARK TO WHITES CREEK VALLEY (not to scale)

4. DESIGN CONCEPTS - JOHNSTON STREET

Introduction

Johnston Street is the main road traversing the neighbourhood in a north-south direction. It is the traditional main street and features significant heritage buildings. It is also a state road under the jurisdiction of the RMS and carries significant traffic volumes during peak hours.

The combination of heavy traffic volumes and a very wide road corridor make it a significant barrier to east-west movement within the neighbourhood. Formal crossing opportunities are currently spaced several hundred metres apart and contribute to unsafe pedestrian crossing behaviour.

Aim

The aim for Johnston Street is to provide additional opportunities for pedestrians and cyclists to cross the road corridor, while maintaining its current traffic capacity and parking provision, in particular in busy areas where parking demand is high such as around shops.

Opportunities

Major opportunities include

- work with the existing road cross section and capacity to provide safe crossing opportunities along the length of the street;
- make crossing safer by reducing the crossing distance across the road corridor;
- maximise road crossing safety by providing a refuge or similar to allow people to cross the road in two separate stages, one for each carriageway.

The concept for crossing opportunities along Johnston Street has analysed the design of the road corridor along its length, to determine the number of existing travelling lanes, as well as the extent and type of parking e.g. parallel or angle parking.

The analysis identified three different arrangements or typologies along Johnston Street (refer Figure 16), with a specific response developed for each (refer Figures 17-19). The typologies are:

1. two travelling lanes in each direction with parallel parking on both sides of the road (refer Figure 17)
2. two travelling lanes in each direction with parallel parking on one side and angle parking on the other side of the road (refer Figure 18)
3. two travelling lanes in each direction with angle parking on both sides of the road (refer Figure 19)

FIGURE 16: STREET TYPOLOGIES ALONG JOHNSTON STREET

4. DESIGN CONCEPTS - JOHNSTON STREET

Concept Design - Streetscape Type 1 and 2

The concept for streetscape type 1 and 2 provides for a new continuous median or refuge island (refer Figures 17 and 18), while retaining existing parking and maintaining lane widths consistent with the function of Johnston Street as a major link road and bus route.

Medians will allow people to cross the road in two separate stages while providing a safe refuge in the centre of the road corridor. They also represent an opportunity for additional planting, to reduce the extent of hard heat-absorbing pavements and to increase visual amenity.

The widths of the median would also support tree planting. Trees should be planted in select locations only, in order to maintain views and vistas along the corridor, in particular views of significant heritage items.

Concept Design - Johnston Street and Piper Street Intersection

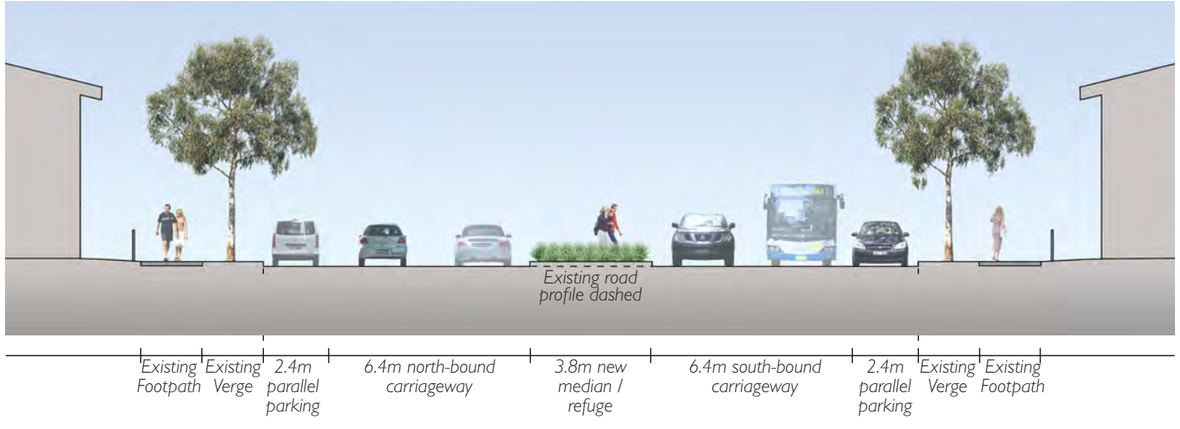
A variation of the streetscape type 1 concept is proposed for the intersection of Piper and Johnston Street. The existing pedestrian traffic light is proposed to be relocated to Piper Street. The crossing will form part of the major east-west green link (refer Figures 21 to 23).

To enable safe movement between the pedestrian crossing and the school, it is proposed that the footpath between Piper Street and the school gates will be widened. This would displace four parking spaces, including one accessible parking spaces. The spaces are proposed to be relocated north of the school gates, in the area of the no-stopping zone that exists around the current pedestrian lights, ensuring no net loss of parking.

Median tree planting is proposed to be provided at this intersection (subject to safe sight stopping distance requirements), to enhance the sense of the Piper Street green link crossing the road corridor. A unique paving material will distinguish the intersection from both vehicular and pedestrian pavements. It will complement the low speed school zone to highlight the importance of the east-west link and raise awareness of increased pedestrian activity in this area.

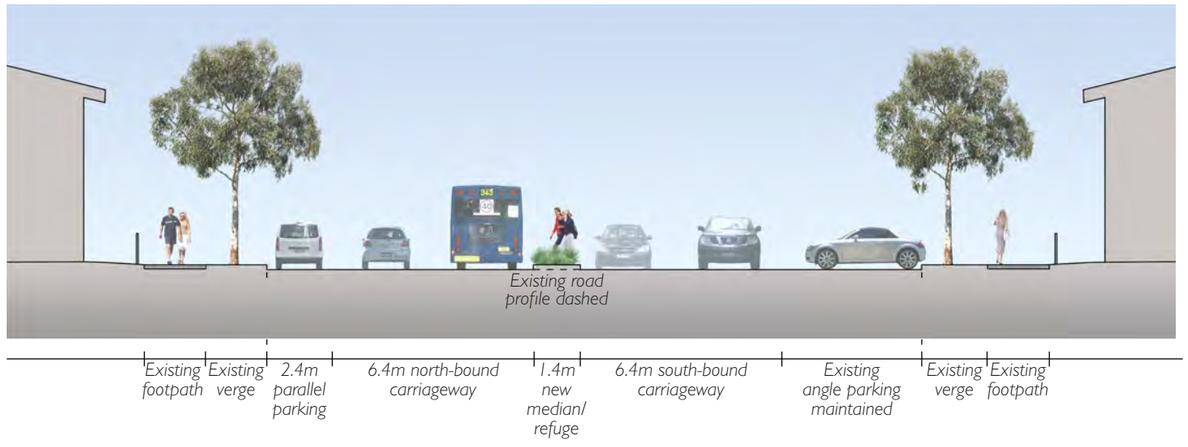
Concept Design - Streetscape Type 3

In areas where streetscape type 3 applies, there is insufficient width available in the road corridor to provide a median refuge while also maintaining existing parking lanes. Instead, it is proposed to provide enhanced crossing opportunities at intersections (refer Figures 19 and 20). They would include kerb blisters and widening, as well as a localised central island, to reduce the crossing distance and provide a safe refuge in the centre of the road.



Location Plan

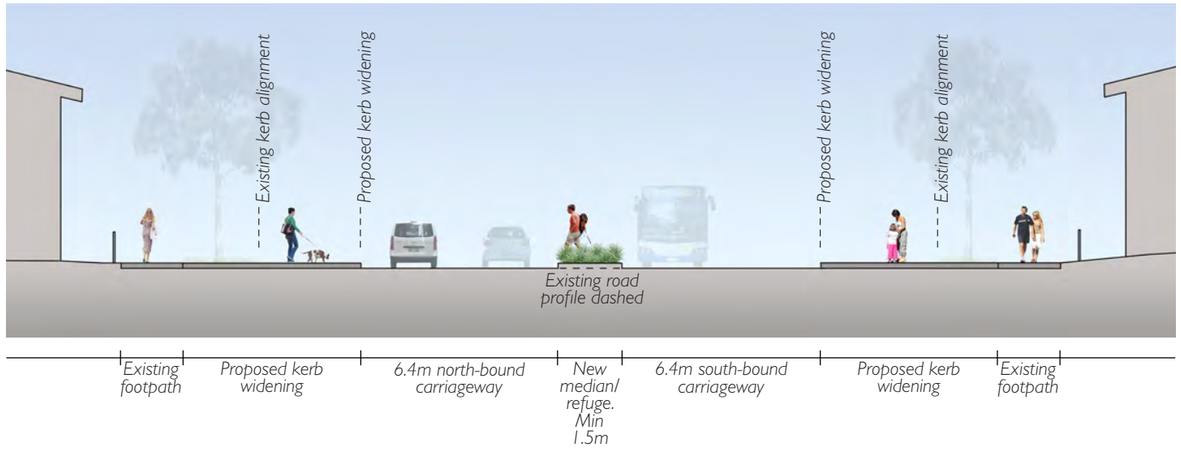
FIGURE 17: TYPICAL SECTION STREETSCAPE TYPE 1 - PARALLEL PARKING BOTH SIDES, 1:200 @A3



Location Plan

FIGURE 18: TYPICAL SECTION STREETSCAPE TYPE 2 - PARALLEL PARKING AND ANGLE PARKING, 1:200 @A3

4. DESIGN CONCEPTS - JOHNSTON STREET



Location Plan of Streetscape type 3- showing locations for proposed intersection modifications

FIGURE 19: TYPICAL SECTION STREETSCAPE TYPE 3 - ANGLE PARKING BOTH SIDES, 1:200 @A3

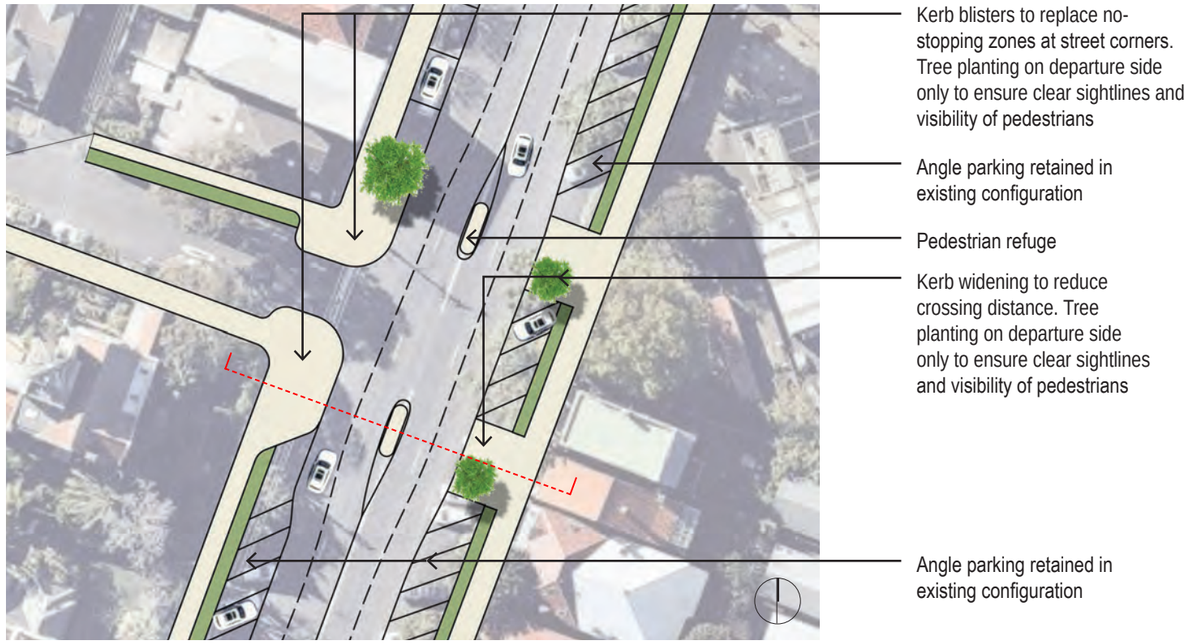


FIGURE 20: TYPICAL PLAN STREETSCAPE TYPE 3 - KERB WIDENING AT INTERSECTIONS (not to scale)

4. DESIGN CONCEPTS - JOHNSTON STREET

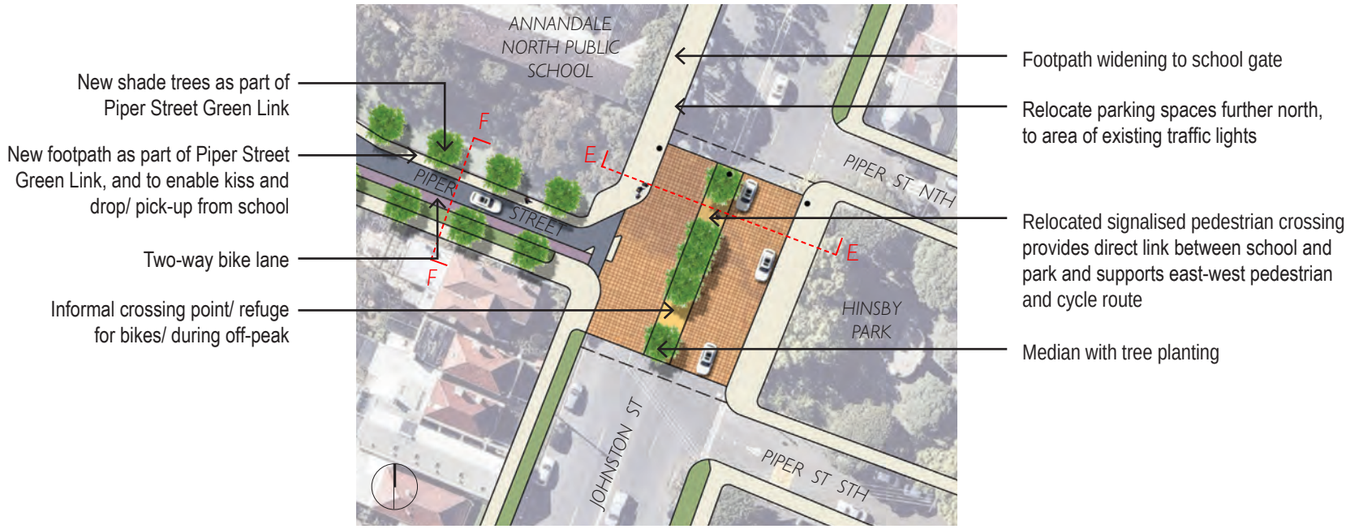


FIGURE 21: JOHNSTON STREET AND PIPER STREET INTERSECTION (not to scale)

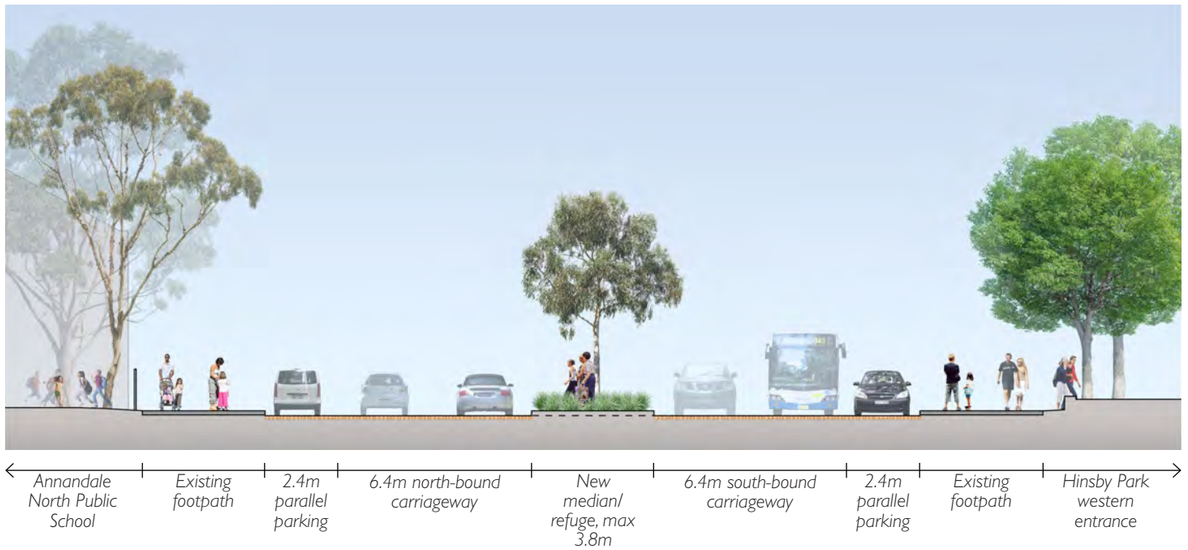


FIGURE 22: INDICATIVE SECTION THROUGH JOHNSTON STREET AT HINSBY PARK, 1:200 @A3

FIGURE 23: TYPICAL SECTION THROUGH PIPER STREET AT ANNANDALE NORTH PUBLIC SCHOOL, 1:200 @A3

4. DESIGN CONCEPTS - ANNANDALE STREET

Introduction
Annandale Street is predominantly a residential street parallel to Johnston Street (refer Figure 24). It is generally a quiet street although evidence suggests it may be used together with Kentville Street to provide an alternative route during peak hour, to avoid traffic congestion along Johnston Street.

Aim
The aim for Annandale Street is to introduce measures that will reduce through traffic and maintain its quiet residential character that makes it a safe neighbourhood street for active transport, including for children.

Opportunities
Annandale Street consists of an approximately 23m wide road corridor, significantly wider than the majority of streets in the neighbourhood, with the exception of Johnston Street.

The generous road corridor width provides an opportunity to reconfigure the streetscape in order to discourage through traffic and 'rat running' through the introduction of measures to reduce the speed of traffic.

Working with the existing cross section of the street offers the opportunity to build on the existing landscape character of the street to provide additional planting and widen footpaths to encourage greater walking and cycling by children (in particular in the area surrounding the school), while maintaining on-street parking.

Concept Design
The concept for Annandale Street reduces the width of traffic lanes to the minimum required based on its predominantly residential nature, as a means to slow vehicular traffic, based on studies that have demonstrated that narrower lanes foster more careful and slower driving. It is proposed that the width of the carriageway would be 5.8m (refer Figures 25 and 26).

Narrowing the carriageway allows verges to be widened. The additional area has the potential to take on a number of functions such as raingardens to manage stormwater or provide for additional tree planting.

Alternatively, the verge could accommodate wider footpaths that would be suited to school 'walking buses'. An alternative configuration as illustrated in Figure 25 would provide a second path to cater to safe bike riding for children while reducing potential for conflicts with pedestrians.

The narrower carriageway provides the further opportunity to reconfigure on-street parking, from angle parking to a more efficient 90° parking layout. This has the potential to generate up to 36% additional parking spaces relative to parking at a 45° angle.

FIGURE 24: ANNANDALE STREET: PROPOSED LOCATION OF KERB BLISTERS / MID-BLOCK CROSSINGS AND PARKING OPPORTUNITIES
(not to scale)

The space savings from a more efficient parking layout in turn would allow for the installation of mid-block crossings (refer Figure 27) whilst maintaining existing parking capacity. Together with kerb blisters at intersections, mid-block crossings will assist people, and in particular children, to safely cross the road as they move around the neighbourhood.

New tree planting in the blisters will reduce the perceived width of the road corridor. Together with a 5m carriageway width between kerb blisters, this will have a further calming effect on vehicular traffic.

A detailed design of Annandale Street would be required to ensure that any reconfiguration of the street maximises vehicluar, cycle and pedestrian usability and safety.

4. DESIGN CONCEPTS - ANNANDALE STREET

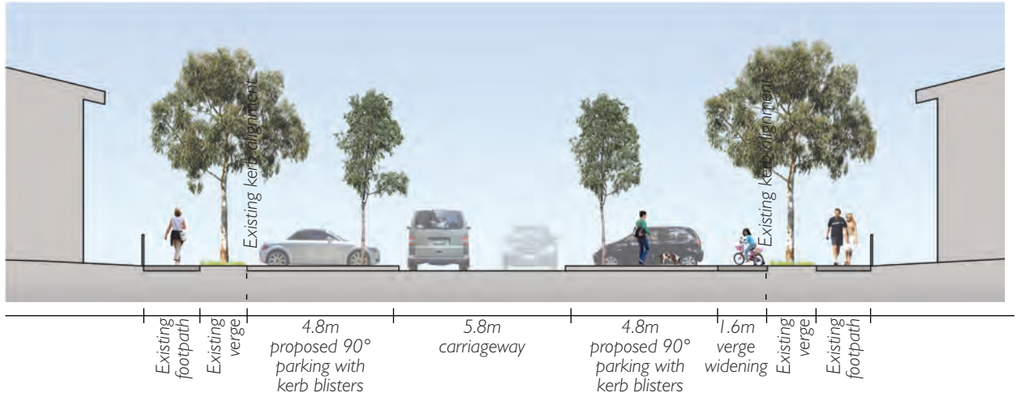


FIGURE 25: TYPICAL SECTION AT MID-BLOCK CROSSING, 1:100 @A3

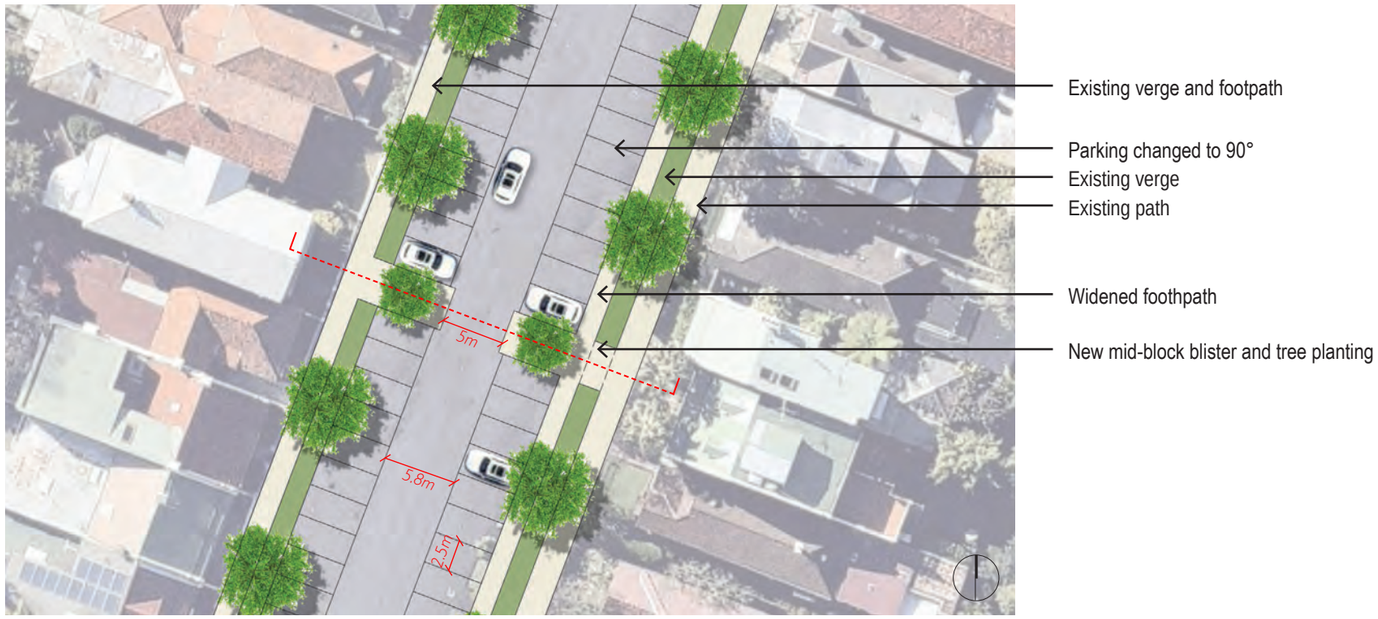


FIGURE 26: TYPICAL PLAN OF RECONFIGURED ANNANDALE STREET (not to scale)

05

ACTION PLAN

5. ACTION PLAN

OVERVIEW

The ANMP proposes a strategic framework towards enhancing opportunities for active transport through a series of measures that enhance the safety and amenity of the neighbourhood while promoting social interaction.

To implement the ANMP, two sets of actions will be required: further planning/ design work and infrastructure/ capital works. The tables on the following pages provide a summary of both.

IMPLEMENTATION PRIORITIES

The ANMP actions have been assigned both a priority and a cost ranking.

Priority Rankings are:

Ranking	Meaning	Implementation time frame
H	High priority or short term	< 3 years
M	Medium term	3-7 years
L	Low priority or long term	7+ years

Cost rankings reflect the likely magnitude of costs. They are:

Ranking	Meaning	Indicative Cost
H	High cost	> $1M
M	Medium cost	$100,000 - 1M
L	Low cost	< $100,000

FURTHER STUDIES

As part of the planning and design work, there are a number of key studies that should be undertaken as a next step to further develop the concepts and to provide a more accurate appraisal of the likely capital costs.

The following studies have been identified as key in supporting and further developing the ANMP. They would provide the additional level of detail required before moving into implementation.

Annandale North Public Domain Manual

Develop a Public Domain Manual to guide future public domain upgrades in the neighbourhood. The Public Domain Manual would include at a minimum:

- the desired suite of materials, finishes and furniture
- a street tree masterplan identifying species for planting in different streets and public spaces
- public art strategy and locations

The Public Domain manual will ensure a consistent, cohesive, attractive and legible outcome is achieved that reflects community and Council expectations and aspirations for the neighbourhood.

Linear Parklands Plans of Management - Whites and Johnstons Creek Valleys

Prepare an up-to-date Plan of Management for both the Whites Creek Valley Parklands and the Johnstons Creek Parklands, to enhance them as green corridors framing the suburb. The aim of these Plans of Management are to guide all future development to ensure the parklands are developed in a way that realises the parklands as a cohesive and legible open space spine with a range of well-considered recreation opportunities.

Buruwan Park Masterplan

Develop a masterplan and concept design for Buruwan Park and the Rozelle Bay Light Rail Stop Precinct, to guide future works, including path widening and re-alignment, transport interchange facilities on Railway Parade and the development of a rail stop forecourt to enhance the arrival sequence and interface with The Crescent.

As part of the masterplan process, initiate discussions with stakeholders to investigate the potential for the Light Rail Stop to become a transport interchange.

Piper Street and Johnston Street Intersection Concept Development

Develop the concept for the Piper Street Green Link crossing over Johnston Street, including relocation of traffic lights, Johnston Street median and tree planting and reconfiguration of the one-way section of Piper Street adjoining Annandale North Public School.

This will be a key measure to improve east-west connections across Johnston Street in the heart of the neighbourhood.

Key stakeholders for consultation will include Annandale North Public School and the wider school community and Roads and Maritime Services and Hinsby Park stakeholders including the RSL or local history/ heritage associations.

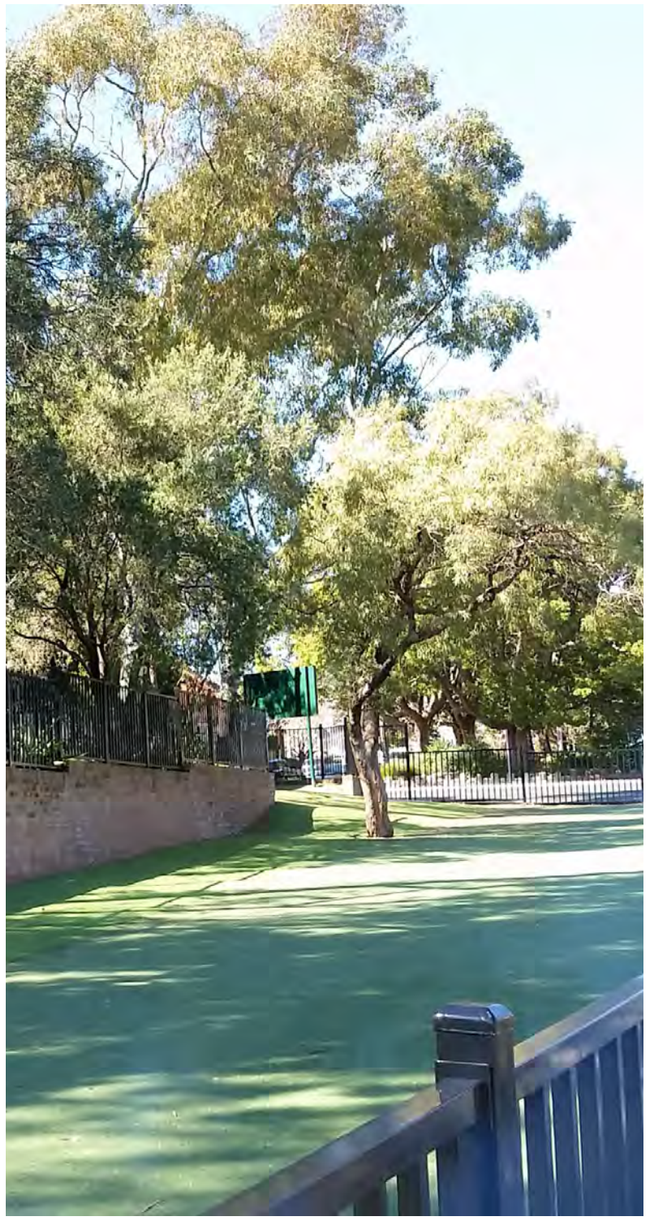
Johnston Street Crossing Opportunities Detailed Concepts

Develop the concepts for enhancing opportunities to safely cross Johnston Street between the current signalised crossings. This includes the installation of medians/ refuge islands, kerb blisters and planting. Increased opportunities to safely cross Johnston Street will be critical in terms of encouraging greater active transport use.

Roads and Maritime Services will be a key stakeholder and discussions should be initiated early to ensure measures can be implemented as soon as possible.

Street Lighting Audit

Undertake a lighting audit along proposed primary and secondary movement corridors to ascertain whether existing road and footpath lighting is consistent with statutory requirements, and to identify areas where upgrades may be required.



The table below ranks these recommended studies by priority.

RECOMMENDED FUTURE STUDY	PRIORITY (H,M,L)	COST (H,M,L)
Buruwan Park Masterplan	M-H	L
Johnston Street Crossing Opportunities Detailed Concepts	M-H	L
Piper Street and Johnston Street Intersection Concept Development	M	L
Linear Parklands Plans of Management	L-M	L
Annandale North Public Domain Manual	L-M	L
Street Lighting Audit	L	L

1. Planning Priorities

In addition to the further studies, the following planning priorities have been identified and listed in order of priority below.

DESCRIPTION	PRIORITY (H, M, L)	COST (H, M, L)	NOTES
a. Additional connections to Rozelle and Lilyfield across the Rozelle Railyards.	H	H	Connections are critical in terms of the larger movement system and encouraging active transport on an LGA/ sub-regional level. Initiate discussions with UrbanGrowth NSW and government stakeholders as a matter of priority to ensure the need for additional connections in considered in future planning/ development proposals.
b. Investigate opportunities for an additional secondary east-west link connecting Wisdom Street to Trafalgar Street.	H	L	This should be identified through the strategic planning process in order to enable Council to negotiate desirable outcomes through Voluntary Planning Agreements or other mechanisms if/ when redevelopment proposals arise.
c. Investigate long-term opportunities for the Sydney Water Viaduct to become a local 'highline'.	L	M-H	Negotiations with key stakeholders including Sydney Water may be initiated sooner, working towards long-term realisation.

Capital Works Priorities

Priorities for implementation have been identified on the basis of costs (considering the need to raise sufficient funds), potential ease of implementation (including time requirements for design and approvals) and degree of importance in terms of realising the overall vision.

They are summarised and listed in order of priority in the following table.

DESCRIPTION	PRIORITY (H, M, L)	COST (H, M, L)	NOTES
2. MOVEMENT FRAMEWORK - GENERAL			
a. Upgrade streets to develop clear primary and secondary circulation routes.	H	M-H	Upgrade streets including pavements, furniture, finishes, lighting and tree planting consistent with the public domain manual and relevant statutory requirements.
b. Upgrade the crossings of linear pedestrian cycleway paths over Moore and Booth Street (along Whites and Johnstons Creek).	H	M	Poor connections are a deterrent to active movement as they are inefficient and unsafe. Develop concepts for upgrades that will enhance connections to surrounding areas, to foster both greater recreational and commuter use.
c. Additional street tree planting along identified movement corridors.	M-H	L	Tree planting is a cost-effective and efficient way to improve thermal comfort and thereby encourage walking. Following completion of the Public Domain Manual, a recurring budget may be set aside to incrementally increase tree cover.
d. Footpath and streetscape upgrades along identified movement corridors.	M	M-H	Initiate more detailed design studies in the short to medium term to develop concepts and confirm costings. Upgrades to be consistent with the Public Domain Manual.
e. Create neighbourhood squares at key intersections.	M	M	Squares will contribute towards legibility and enhance opportunities for social interaction/ community outcomes. Develop squares consistent with the Public Domain Manual.
f. Incidental accessibility upgrades (suburb-wide) including kerb ramps, handrails, tactile indicators.	M	L	Minor upgrades are straightforward to roll out and may be able to be achieved without development approval. Once a Public Domain Manual is adopted, a recurring budget may be set aside to identify the need for and undertake incremental upgrades.
3. WHITES CREEK VALLEY PARKLANDS			
a. Selective pruning to improve sight lines.	H	L	A low-cost measure that would improve passive surveillance and safety/ security of the parklands.
b. Upgrade cycle link to Buruwan Park, including improved crossing of Brenan Street and additional line-marking in Railway Parade.	H	L	This is an important feed-in into the City West Link cycle route, making safety improvements a priority.
c. Whites Creek Valley Linear Path crossing at Booth Street including associated path realignment.	H	L-M	Safety and legibility of the crossing is poor and should be addressed as a priority.
d. Upgrade park entrances to improve visibility and passive surveillance.	M	L	Following completion of an updated parklands masterplan.

DESCRIPTION	PRIORITY (H, M, L)	COST (H, M, L)	NOTES
e. Additional creek crossing at Cohen Park.	M	M	This will greatly improve access and connectivity between the eastern and western portion of the parklands and enhance recreation and active movement opportunities.
f. Additional park furniture.	M	L	Following completion of a plan of management.
g. Whites Creek Valley Parklands path upgrades.	L	M	Path upgrades and new paths have the potential to encourage greater recreational use of the parklands as both a destination and a movement corridor. To be implemented following completion of an updated plan of management.
h. New path connection between Young and White Street, at Ilka Street.	L	L-M	Following completion of a plan of management.
4. BURUWAN PARK			
a. Selective vegetation pruning/ removal along The Crescent.	H	L	Critical to improve visibility of the rail stop forecourt and passive surveillance, as well as sight lines to improve bicycle and pedestrian safety.
b. Accessibility upgrades to Bayview Crescent stair link to Johnston Street.	H	L	Low cost upgrade to include handrails, paving repair and tactile indicators to quickly and efficiently improve accessibility. May be subject to heritage considerations.
c. Footpath widening along The Crescent.	H	M	The current path is neither suitable nor safe for shared use. Upgrade following completion of the Buruwan Park Masterplan.
d. Kerb blisters and footpath re-alignment at the intersection of Railway Parade and Bayview Crescent.	M	L	Possible to implement ahead of the Masterplan.
e. Upgraded pedestrian cycle crossing at Railway Parade, including kerb blisters.	M	L	The location of the crossing point is fixed due to visibility constraints associated with the kink in Railway Parade. The upgrade may be implemented ahead of the Buruwan Park Masterplan.
f. Railway Parade footpath upgrade and drop-off area/ Kiss + Ride.	M	M-H	Following completion of the Buruwan Park Masterplan.
g. Enhanced link to TAFE.	M	L-M	Develop concept as part of a suite of additional crossing opportunities at Johnston Street.
h. Cycle path re-alignment through Buruwan Park including Railway Parade junction.	M-L	L-M	Following completion of the Buruwan Park Masterplan.

DESCRIPTION	PRIORITY (H, M, L)	COST (H, M, L)	NOTES
5. PIPER STREET GREEN LINK (WHITES CREEK TO JOHNSTON CREEK)			
a. Selective pruning around bushland remnants.	H	L	To improve passive surveillance and safety along the unmade section of Piper Street between Trafalgar Street and Nelson Lane.
b. Accessibility upgrades to stairs and ramps. Pavement repairs	H	L-M	Low cost upgrade including handrails, bike/ pram access ramps, paving repair and tactile indicators to quickly and efficiently enhance accessibility.
c. Shared zone at school including new footpath, bike lane configuration and tree planting	H	M-H	Following completion of the detailed concept design.
d. Street tree planting.	H	L	Following completion of the Public Domain Manual.
e. Footpath upgrade (northern side), incl potential widening	H	M	Upgrade the northern footpath as the main movement route for pedestrians. Further investigate the potential for footpath widening based on generous road corridor width and low traffic volumes. To be implemented following completion of the Public Domain Manual.
f. Streetscape Type 1	H	M-H	Highest priority due to interface with Piper Street Green Link and high daily use around the school. Initiate detailed concept design as a matter of priority including discussions with key stakeholder such as the school and RMS.
g. Annandale Street Traffic Calming	M-H	M-H	This project should be considered for acceleration due to potentially significant benefits. The section of between Piper and Rose Streets would be a suitable demonstration project and a first step towards realising the neighbourhood movement framework. To be implemented following the completion of a detailed design for these works.
h. Simplifications and modifications to medians and line marking east of Hinsby Park.	M	L	Modifications should be designed to simplify and facilitate safety and ease of movement for pedestrians and bicycles, both along the Piper Street Green Link and the Trafalgar Street Neighbourhood Movement Corridor.
i. Streetscape Type 2	M	M-H	Initiate stakeholder discussion to enable implementation in the medium to long-term.
j. Additional raingardens and kerb blisters at intersections.	L	M	Following completion of the Public Domain Manual.
k. Streetscape Type 3	L	L-M	Least urgent due to the proximity to the formal crossing opportunity provided by traffic signals at the Booth Street intersection.
Johnston Street: provide additional crossing opportunities, incorporating Actions 5f, 5h, 5i and 5k	H	M-H	This is a key outcome to foster greater participation in active transport, as Johnston Street currently represents a major barrier to movement. High priority should be given to initiating the design and consultation phase, due to potentially longer timing towards realisation. Different priorities have been assigned to the different streetscape types identified along the route.

06

APPENDIX

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