

## ITEM 3.3

## DRAFT NORTH ANNANDALE NEIGHBOURHOOD MOVEMENT PLAN - APPROVAL FOR EXHIBITION

<b>Division</b>	Environment and Community Management
<b>Author</b>	STRATEGIC TRANSPORT PLANNER
<b>Meeting date</b>	12 April 2016 Policy Meeting
<b>Strategic Plan Key Service Area</b>	Community well-being Accessibility Place where we live and work A sustainable environment Business in the community Sustainable services and assets

### SUMMARY AND ORGANISATIONAL IMPLICATIONS

<b>Purpose of Report</b>	This report has been prepared to provide Council with an overview of the draft Annandale North Neighbourhood Movement Plan and seek approval to place the Plan on public exhibition.
<b>Background</b>	Council's Integrated Transport Plan (ITP) identified the need to select neighbourhoods for the preparation of neighbourhood movement plans. In accordance with the ITP, Annandale North was chosen for Council's first neighbourhood movement plan. Clouston Associates were commissioned to prepare the Annandale North Neighbourhood Movement Plan in consultation with Council Officers
<b>Current Status</b>	Draft Annandale North Neighbourhood Movement Plan prepared prior to public exhibition.
<b>Relationship to existing policy</b>	Included in Leichhardt Integrated Transport Plan adopted by Council 25 February 2014 (C13/14)
<b>Financial and Resources Implications</b>	This proposal is consistent with the recent s23A Guidelines issued by the OLG in relation to financial expenditure. Funds will not be required for any of the studies or treatments included in the Neighbourhood Movement Plan until the Plan has been finalised (subject to community consultation). Once the Plan has been finalised additional studies, designs and treatments will be subject to Council's normal budgetary processes
<b>Recommendation</b>	That Council place the draft Annandale North Neighbourhood Movement Plan on public exhibition.
<b>Notifications</b>	Public exhibition will be in accordance with Council's Community Consultation Framework.
<b>Attachments</b>	1. Annandale North Neighbourhood Movement Plan Consultant Report

## Purpose of Report

This report has been prepared to provide Council with an overview of the draft Annandale North Neighbourhood Movement Plan, seeking approval to exhibit the study for public comment.

## Recommendation

That Council place the draft Annandale North Neighbourhood Movement Plan on public exhibition.

## Background

In February 2014 Council adopted its Integrated Transport Plan (ITP). Within the ITP; Strategy 7, Action 6.2, Task 7 prescribes the need to identify critical precincts for the preparation of neighbourhood movement plans. The ITP proposes neighbourhood movement plans as a means of applying a coordinated approach to the planning and implementation of the various elements contained in Council's key strategies, including:

- Improved:
  - local environmental amenity;
  - safety and security;
  - sustainability;
- enhanced pedestrian and cycle networks;
- reduced potential for vehicular/pedestrian conflict;
- enhanced green spaces;
- opportunities for place making initiatives;
- improved liveability, active transport and consequently community health.

Ultimately the goal of Leichhardt's neighbourhood movement planning is to create safe, friendly, walkable neighbourhoods, with plans that inform future works programs to ensure a coordinated approach to active living, community development and infrastructure provision. Each of Council's neighbourhood movement plans will be prepared to:

- identify key principles that can be applied to the subject neighbourhood;
- identify future studies/analysis to provide detailed designs for specific locations within the neighbourhood;
- create an action plan which identifies priorities and indicative costs associated with specific treatments proposed in neighbourhood;
- inform Council's future works programs;
- guide landscaping, active transport and traffic management initiatives;
- provide an adopted position to guide Council's discussions with the State Government, and developers, regarding future proposals (eg Bays Precinct and the WestConnex portal) in and around the subject neighbourhood.

Through a preliminary analysis of circumstances associated with various neighbourhoods in Leichhardt LGA, Annandale North was identified as a suitable

area for Council's first neighbourhood movement plan. The demand elements identified in Annandale North included:

- on-going resident concern over pedestrian safety issues in the vicinity of Rozelle Bay Light Rail Stop, most particularly in Prichard Street and Railway Parade;
- the neighbourhood's proximity to:
  - Rozelle Railyards and its future development as part of the Bays Precinct;
  - the potential WestConnex Rozelle Portal;
  - Harold Park redevelopment;
- opportunities presented by existing green space in and around the neighbourhood;
- existing barriers created Johnston Street and the Crescent.

Consequently, Annandale North was chosen as the first of a number of neighbourhood movement plans, potentially becoming the template for future neighbourhoods. While each neighbourhood will have its own unique needs it is proposed that the basic principles of safety, sustainability and walkability should be common to all.

## Report

In late 2014 Leichardt strategic transport team initiated an extensive data collection exercise throughout and adjacent to the Annandale North including:

- pedestrian counts;
- bike counts;
- traffic counts;
- crash analysis;
- street widths;
- desire lines;
- topographic analysis.

Subsequently, Clouston Associates were appointed to assist in creating the neighbourhood movement plan for Annandale North. The guiding principles used in preparing the neighbourhood movement plan are based on the extensive strategic framework which Leichardt Council has established through its various strategies including:

- Leichardt 2025+;
- Community And Cultural Plan;
- Integrated Transport Plan;
- Environmental Sustainability Plan;
- Climate Change Strategy;
- Pedestrian Access And Mobility Plan
- DCP/LEP.

Leichhardt's bike plan was being reviewed concurrently with the neighbourhood movement plan and both studies informed each other's preparation.

Additionally, a liaison group was established with key Council units to assist in developing a multi-disciplinary approach to the project. Particular attention was paid to ensuring that the Neighbourhood Movement Plan is in accordance with Council's recreation planning and infrastructure programming

## **Summary of Annandale North Neighbourhood Movement Plan**

### **Project Objectives**

The aim of the Annandale North Neighbourhood Movement Plan is to provide recommendations to support and promote a safe, friendly, walkable neighbourhood. Additionally, it has been designed 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.

The Study area for the Plan is illustrated in Figure 1.

### **Key Constraints Identified**

The key constraints identified in the Plan include:

- Johnston Street represents a significant barrier to east-west movement, particularly during peak hours;
- any changes to Johnston Street will require extensive negotiations with Roads and Maritime;
- due to current traffic circumstances Johnston Street is not an easy route to promote for wide-spread bicycle use;
- the Whites Creek shared path is not designed for commuters as it is narrow, has a recreational interface and poor connections to the regional commuter bike network;
- Steep topography is an impediment to active transport, in particular for less mobile people and in an east-west direction.





**Figure 1 – Study Area**

## Key Opportunities Identified

The key opportunities identified in the Plan include:

- the existing character and amenity of the neighbourhood provides an attractive setting for active transport;
- the gentler gradients along north-south streets offer opportunities for widely accessible links between residents and key destinations;
- the creek corridors (White Creek and Johnston's Creek) 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 significant, central destinations with potential to encourage active transport use;
- key destinations are well distributed and attract people, encouraging movement and provide passive surveillance;
- active transport 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 Established by the Plan

The Neighbourhood Movement Plan enunciates a strategic framework based on the following principles:

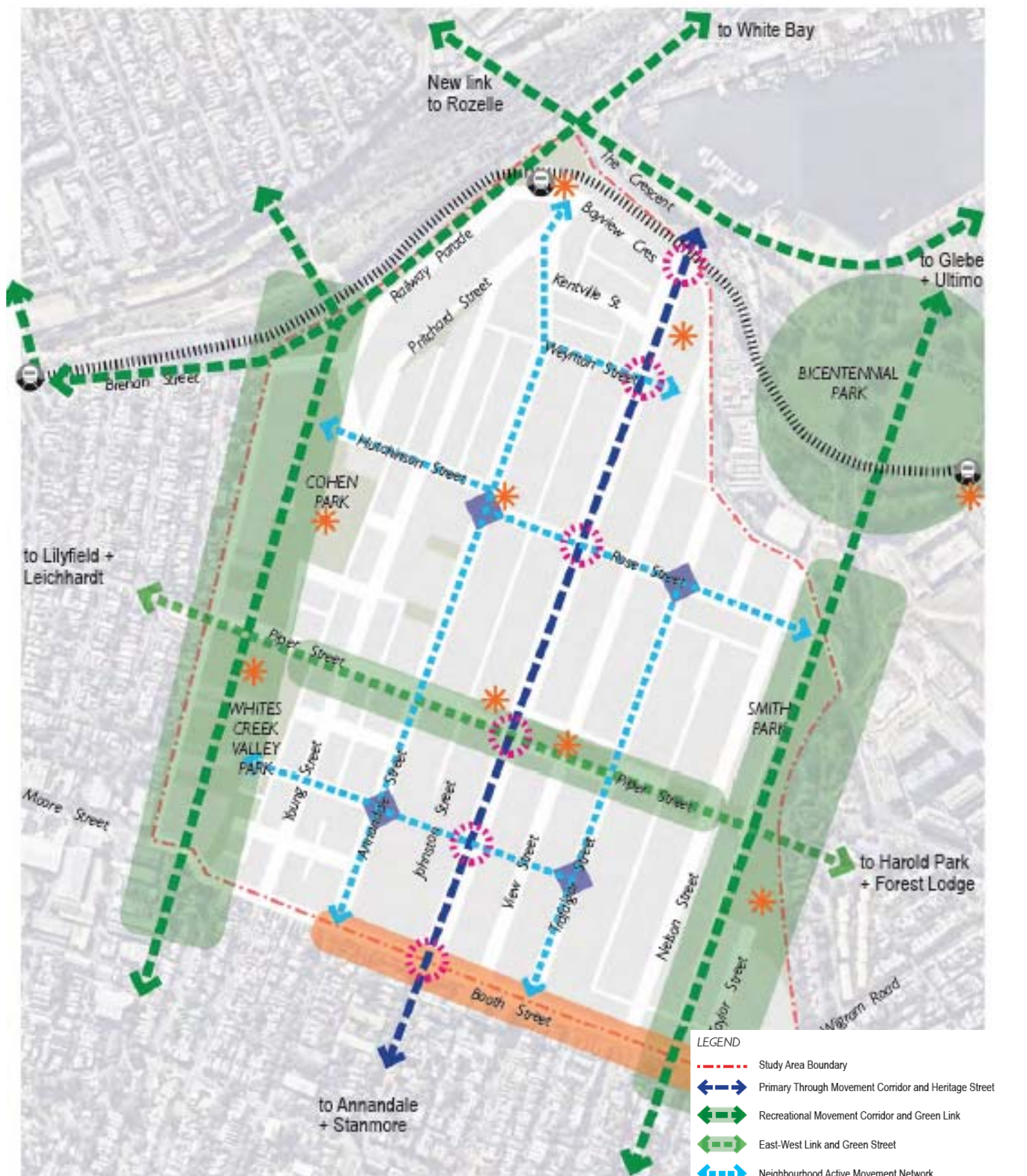
- building on the unique local setting, character and urban structure;
- emphasising the profile of Whites Creek and Johnston's Creek;
- connecting key day-to-day destinations within and adjacent to the neighbourhood;
- providing high levels of amenity and safety to encourage active transport;
- separating the active movement network from major roads;
- maximising accessibility of key routes;
- providing quieter recreation paths within the creek corridors;
- retaining some informality to the landscape.

## Key Features of the Plan

Based on the strategic framework referred to above, a number of concepts and principals have been developed in the Neighbourhood Movement Plan. The central features of the plan are shown in Figure 2 and include:

- establishment of Piper Street as a central east-west green corridor facilitating local environmental improvements and increase opportunities for active transport;
- recognising Johnston Street's existing through function while maintaining the relevance of its heritage significance;
- facilitating safe informal crossing of Johnston Street while maintaining peak hour traffic capacity and movement;
- providing active movement corridors along parallel to Johnston Street;
- providing secondary east-west links including along Rose Street;
- designing residential streets as low speed environments (ideally <30km/h);
- enhancing key intersections as community spaces;
- strengthening the creek corridors as green recreation and movement corridors;
- assisting people to navigate the steep topography of the neighbourhood through small scale investments to maximise accessibility;
- enhancing existing, and creating new, connections to destination adjacent to the neighbourhood;
- undertaking a series of public domain upgrades to create a more legible neighbourhood with a high level of environmental amenity;
- investigating the long-term opportunity for a 'highline' to approach to the existing Viaduct.





**Figure 2 – Strategic Principles/Concepts**

## The Plan's Key Sites

The Plan includes five key sites that illustrate its strategic principles and design directions in greater detail. The five sites are:

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

Figures 3 – 7 provide examples of how the some of the strategic principles and design directions could be applied to these sites. Section 4 of the Neighbourhood Movement Plan provides greater detail including five potential carriageway configurations, intersection treatments and accessibility options.






**Figure 3 – Whites Creek Recommendations**





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

LEGEND

- |   |  |                                   |
|---|--|-----------------------------------|
|  | Centralized road crossing                  | 1. Potential new pedestrian paths |
|  | Primary cyclist path                       | 2. Existing bridges over creek    |
|  | East-west link opportunity through viaduct | 3. Existing paths to be realigned |
|   |  | 4. Existing wetlands              |

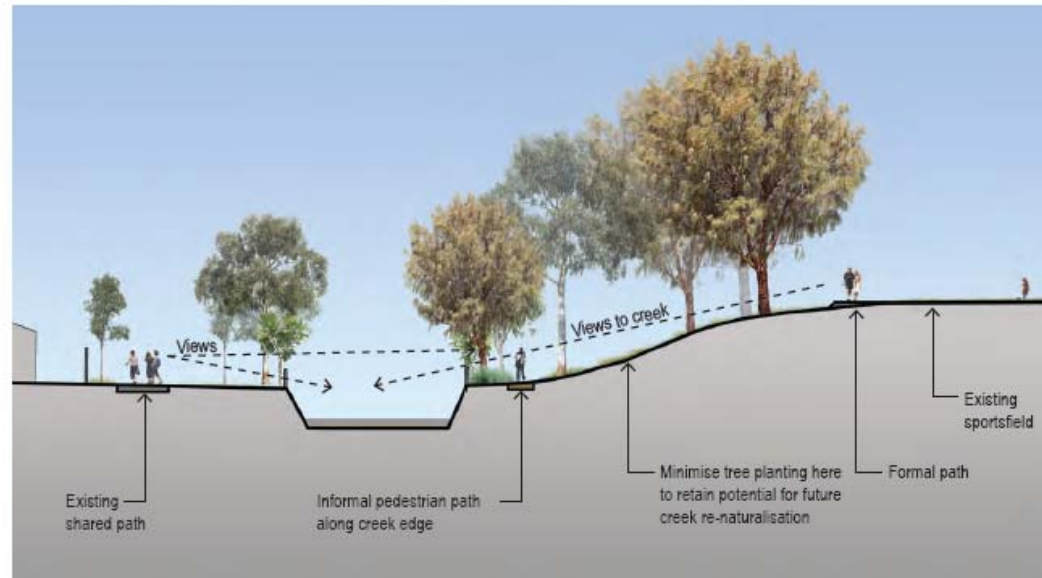


FIGURE 12: INDICATIVE SECTION AA: COHEN PARK - WHITES CREEK VALLEY PARKLANDS (not to scale)

## Figure 4 – Whites Creek Parkland Treatment

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



## Figure 5 Piper Street – Spindler Park Link Recommendations





Figure 6 – Buruwan Park Recommendations





Figure 7 Annandale Street

## **Implementation**

The Annandale North Neighbourhood Movement Plan is a strategic document which, while it includes recommended actions and an “Action Plan: (Section 5) will require detailed design work to permit implementation. It is proposed that the final plan will be used to inform Council’s Infrastructure and Service Delivery works programs and to assist in facilitating a coordinated approach to planning and infrastructure provision for the neighbourhood.

## **Financial Implications**

This proposal is consistent with the recent s23A Guidelines issued by the OLG in relation to financial expenditure as it does not require a commitment of funds at this time.

No funds will be required for any of the studies or treatments included in the Neighbourhood Movement Plan until the Plan has been finalised (subject to community consultation). Once the Plan has been finalised additional studies, designs and treatments will be subject to Council’s normal budgetary processes.

## **Next Steps**

Subject to Council approval, it is proposed that the draft Annandale North Neighbourhood Movement Plan will be exhibited for public comment in accordance with Council’s Community Consultation Framework.

## **Summary/Conclusions**

The draft Annandale North Neighbourhood Movement Plan outlines a series of principles and steps (including associated studies) which will assist in creating a safe, sustainable and walkable neighbourhood. In order to gauge community response to the draft Plan’s strategic principles, design directions and recommendations it is proposed that the draft Plan should be placed on public exhibition.

## **Attachments**

1. Annandale North Neighbourhood Movement Plan Consultant Report

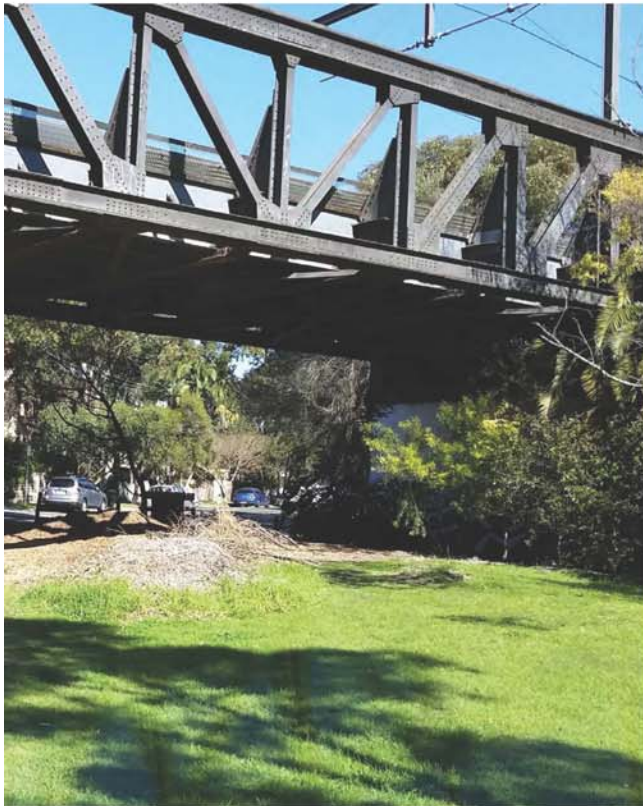




CLOUSTON associates



Leichhardt Municipal Council  
Annandale North  
Neighbourhood Movement Plan - Report  
S15-0064 | 19/01/2016



Cover Image  
Trafalgar Street  
Inside Cover  
Burawan Park



## ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN FINAL DRAFT - FOR EXHIBITION

Client:  
LEICHHARDT MUNICIPAL COUNCIL

Prepared by

**CLOUSTON Associates**  
*Landscape Architects • Urban Designers • Landscape Planners*  
Level 2, 17 Bridge Street • Sydney NSW 2000  
PO Box R1388 • Royal Exchange NSW 1225 • Australia  
Telephone +61 2 8272 4999 • Facsimile +61 2 8272 4998  
Contact: Leonard Lynch  
Email • [sydney@clouston.com.au](mailto:sydney@clouston.com.au)  
Web • [www.clouston.com.au](http://www.clouston.com.au)

Document	Issue	Date	Status	Reviewed	Verified	Validated
S15-0064 R01	A	03/11/2015	DRAFT	JF	JF	CL
S15-0064 R01	B	19/01/2016	DRAFT FOR PUBLIC EXHIBITION	TS	JF	

*Note: this document is preliminary unless validated.*



CLOUSTON associates

## TABLE OF CONTENTS

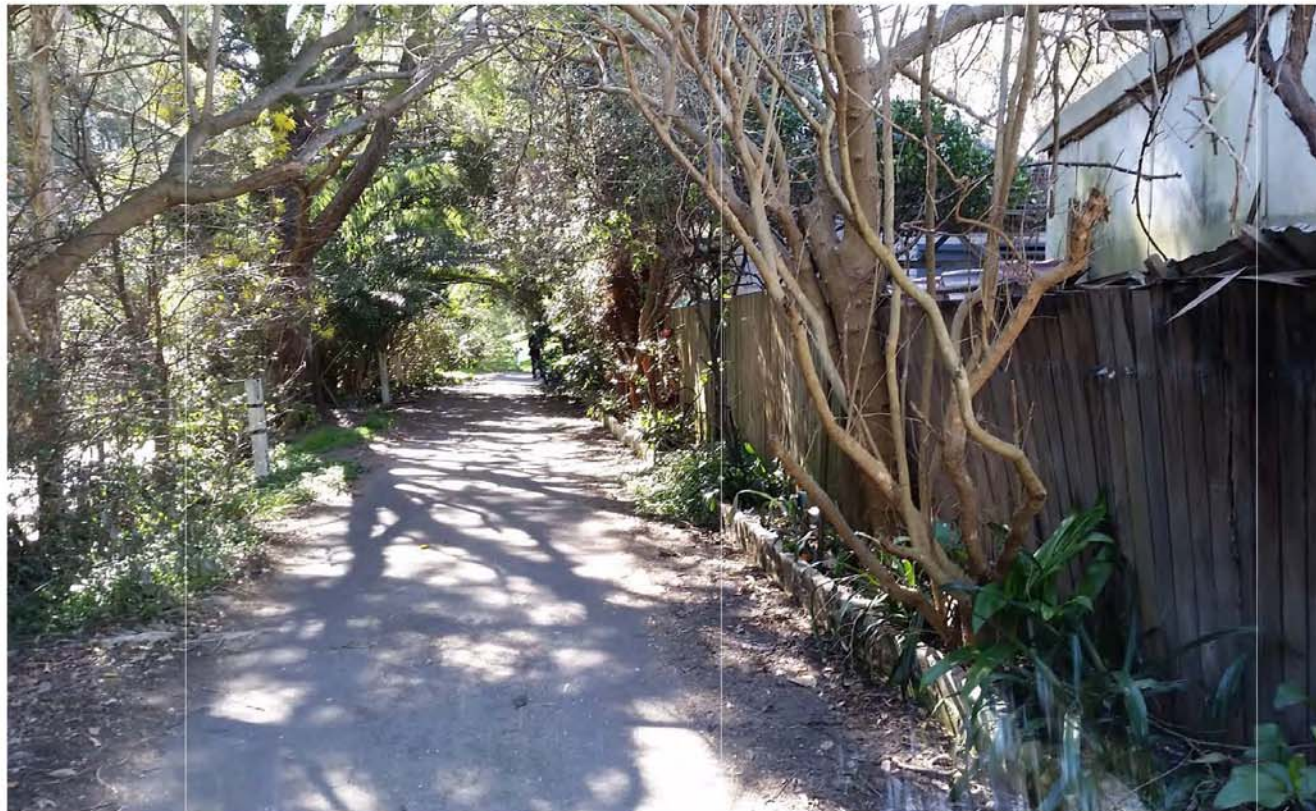
EXECUTIVE SUMMARY	3
1. BACKGROUND, PURPOSE AND OBJECTIVES	4
BACKGROUND	5
PURPOSE OF THIS REPORT	5
PROJECT OBJECTIVES	5
STUDY PROCESS	5
2. SITE ANALYSIS	6
EXISTING MOVEMENT PATTERNS	8
OPEN SPACE AND DESTINATIONS	12
TOPOGRAPHY, VIEWS AND VISTAS AND HERITAGE	13
STREETSCAPE MORPHOLOGY	14
CONSTRAINTS AND 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: INDICATIVE 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: TYPICAL PLAN OF RECONFIGURED ANNANDALE STREET	35



CLOUSTON associates





## 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 fixed-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 its 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.

CLOUSTON associates





## 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 Rail yards 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

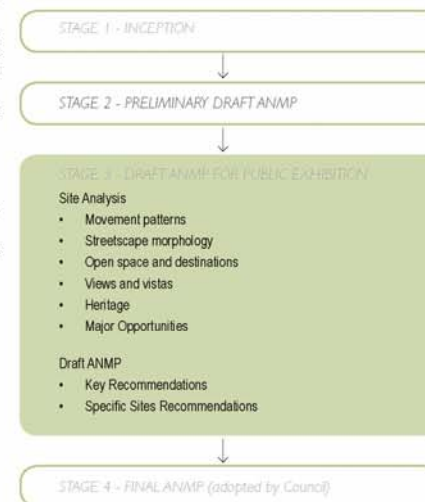
In developing the ANMP the main tasks involved:

- 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.

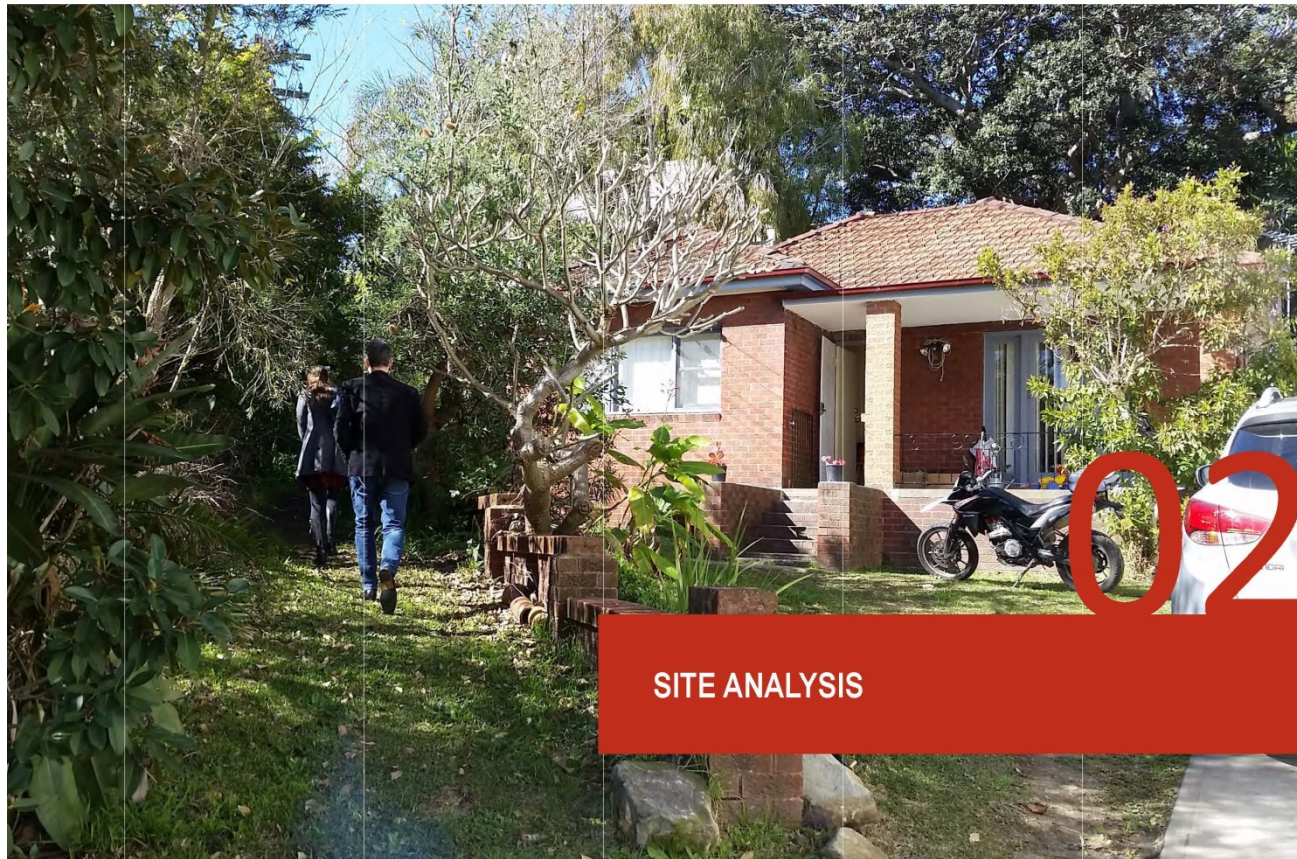
### STUDY PROCESS

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.



CLOUSTON associates





CLOUSTON associates

## 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

ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN



FIGURE 1b: THE STUDY AREA



FIGURE 1b: THE STUDY AREA

CLOUSTON associates

#### 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 Brennan 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

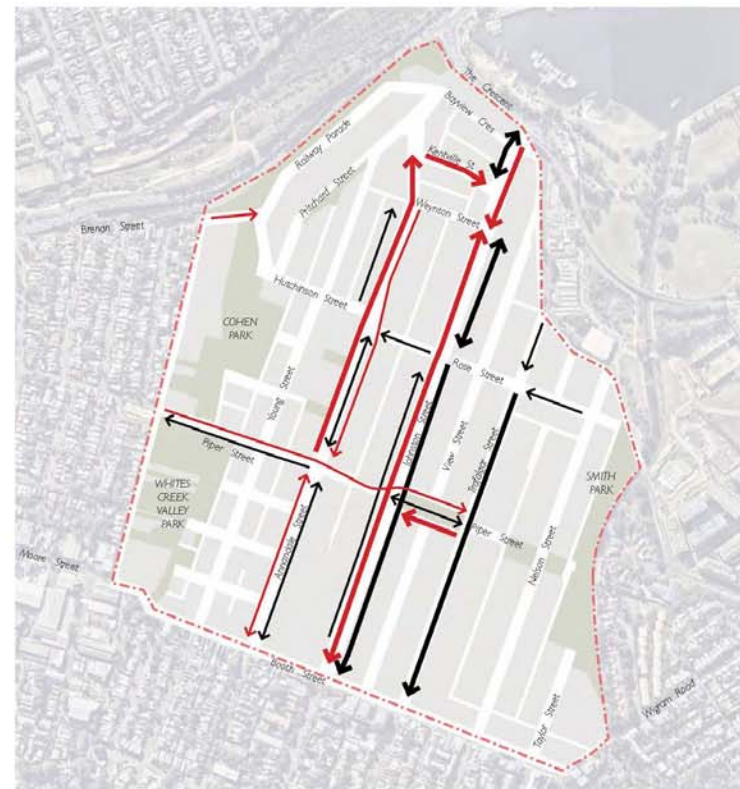


FIGURE 2: PEAK HOUR VEHICULAR MOVEMENTS

0 50 100 200m

ANNANDALE NORTH HILL NEIGHBOURHOOD MOVEMENT PLAN

CLOUSTON associates

#### 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, Brennan 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-8:00pm weekdays

11+ Cyclists

6-10 Cyclists

High cyclist accident density 2009-2013

Medium cyclist accident density 2009-2013



FIGURE 3: PEAK HOUR CYCLIST MOVEMENT



CLOUSTON associates

## 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):

- Brennan 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.

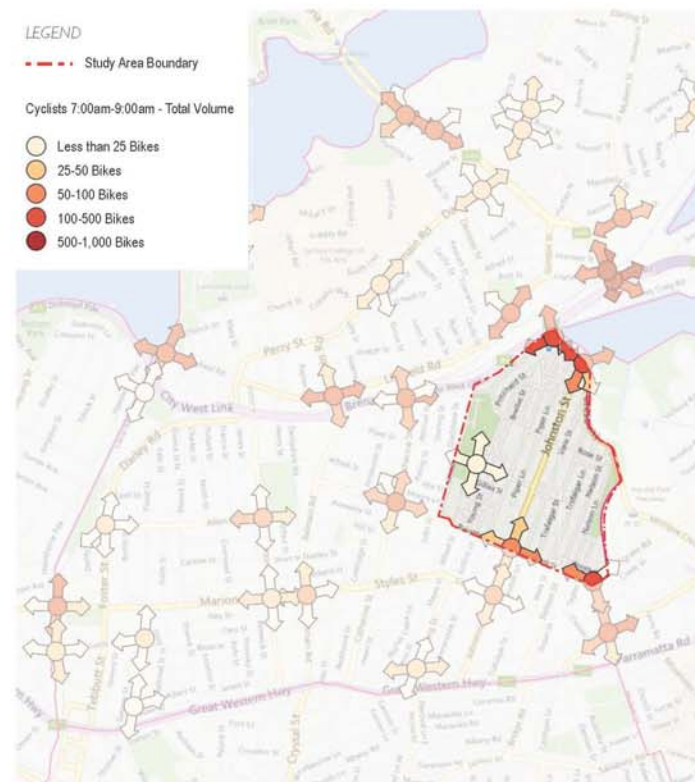


FIGURE 4: CYCLIST MOVEMENT - SUPER TUESDAY 2015

Not to Scale



ARRADALE NORTH NEIGHBOURHOOD MOVEMENT PLAN

## 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
- Distances between traffic lights
- Pedestrian crossing
- Highly used route
- High pedestrian activity precinct

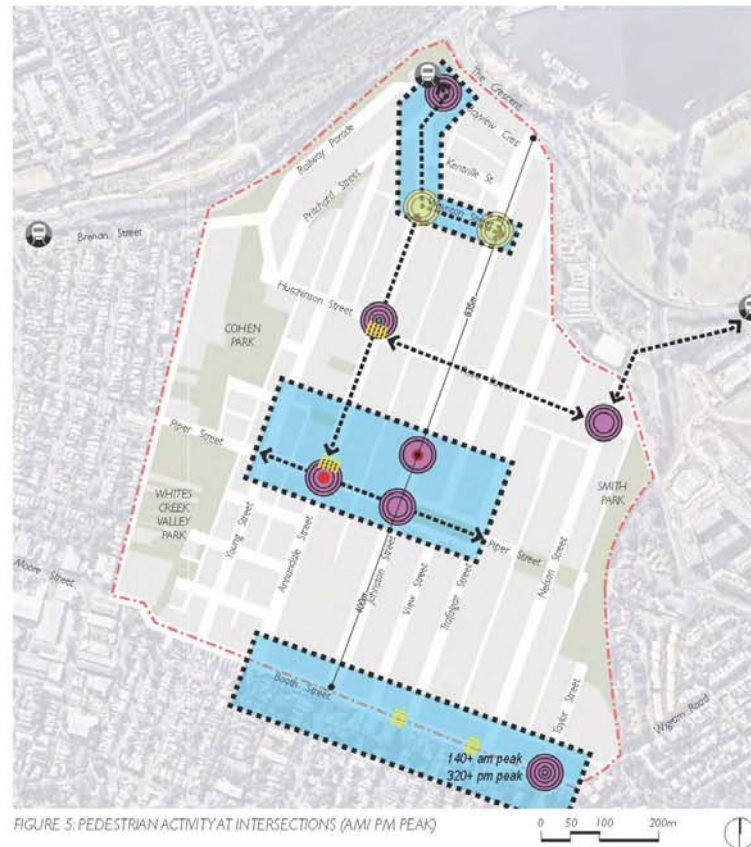
### Intersection Pedestrian Counts (week days)

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.



CLOUSTON associates

## 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
- Place of Worship
- Community Centre
- Child Care centre
- Bus Route
- Light Rail Line
- Bus stop
- Playground
- Light Rail Stop



FIGURE 6: OPEN SPACE AND DESTINATIONS

0 50 100 200m

ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN



## 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

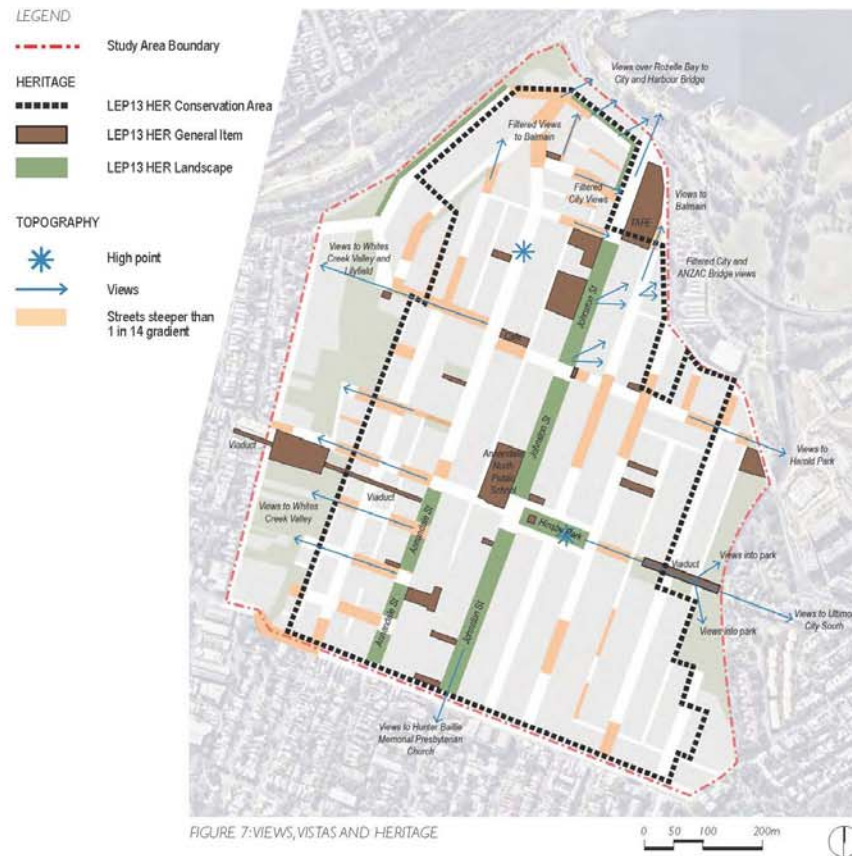
- The built environment of the study area is significant from a heritage perspective, including both built form and landscape.
- Much of the study area is contained within a Heritage Conservation Area.
- There is a large concentration of heritage buildings along Johnston Street.
- The majority of Johnston 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 Pymont 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.



CLOUSTON associates

## 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 (855) 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

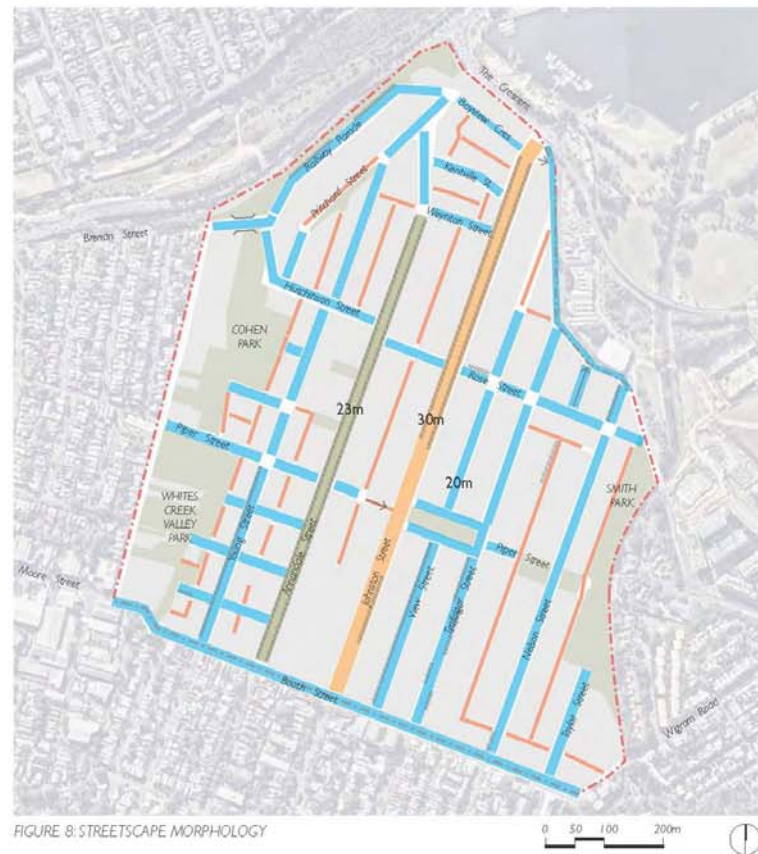


FIGURE 8: STREETSCAPE MORPHOLOGY

## 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.





CLOUSTON associates



### 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.



CLOUSTON associates

### 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.

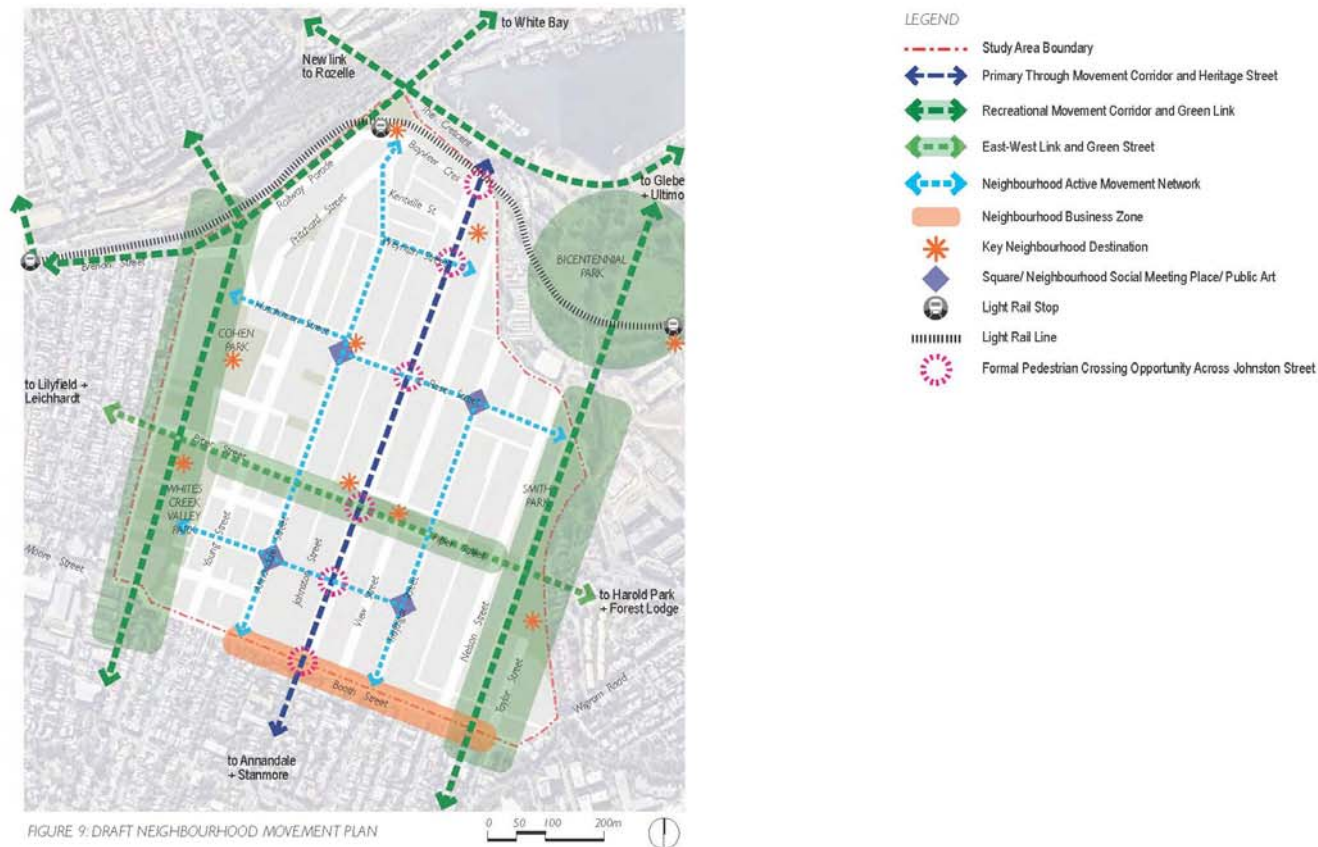
- Build on significant existing heritage character and neighbourhood amenity to provide a safe and comfortable public domain to foster active transport.
- Maintain Johnston Street as a through route and recognise its heritage significance.
- Provide safe, attractive and accessible active movement corridors 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 more detailed concepts illustrating these principles for five key sites within the Annandale North Neighbourhood.

CLOUSTON associates

### 3. MASTERPLAN FRAMEWORK



ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN

FIGURE 9: DRAFT NEIGHBOURHOOD MOVEMENT PLAN

19

CLOUSTON associates



20

PHOTOGRAPHY: B

ANANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN



CLOUSTON associates

#### 4. DESIGN CONCEPTS

This section provides more 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.
- Burwanan Park
- Piper Street (Spindlers Park to Whites Creek Valley Park)
- Johnston Street
- Annandale Street



ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN

19010001 ISSUE B

21

CLOUSTON associates

#### 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 Brennan 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.



FIGURE 10: RECOMMENDATIONS - WHITES CREEK VALLEY PARKLANDS



CLOUSTON associates

#### 4. DESIGN CONCEPTS - WHITES CREEK VALLEY PARKLANDS



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

##### LEGEND

- |  |  |                                   |
|--|--|-----------------------------------|
|  | Centralized road crossing                  | 1. Potential new pedestrian paths |
|  | Primary cyclist path                       | 2. Existing bridges over creek    |
|  | East-west link opportunity through viaduct | 3. Existing paths to be realigned |
|  |  | 4. Existing wetlands              |

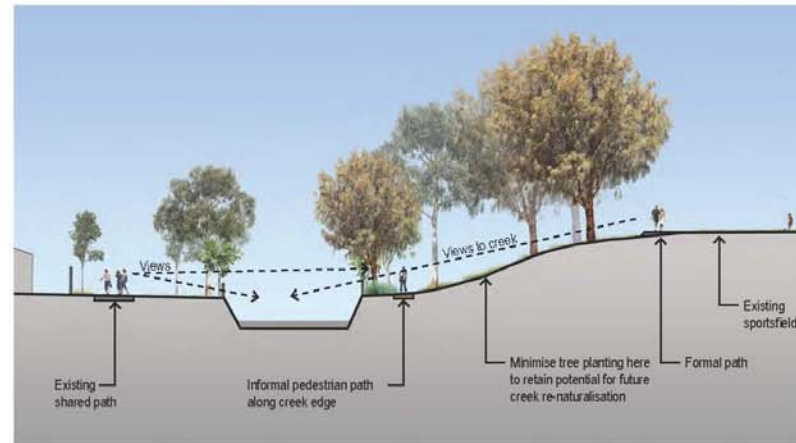


FIGURE 12: INDICATIVE SECTION AA: COHEN PARK - WHITES CREEK VALLEY PARKLANDS (not to scale)

CLOUSTON associates

#### 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.

CLOUSTON associates

#### 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.



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



CLOUSTON associates

#### 4. DESIGN CONCEPTS - BURUWAN PARK

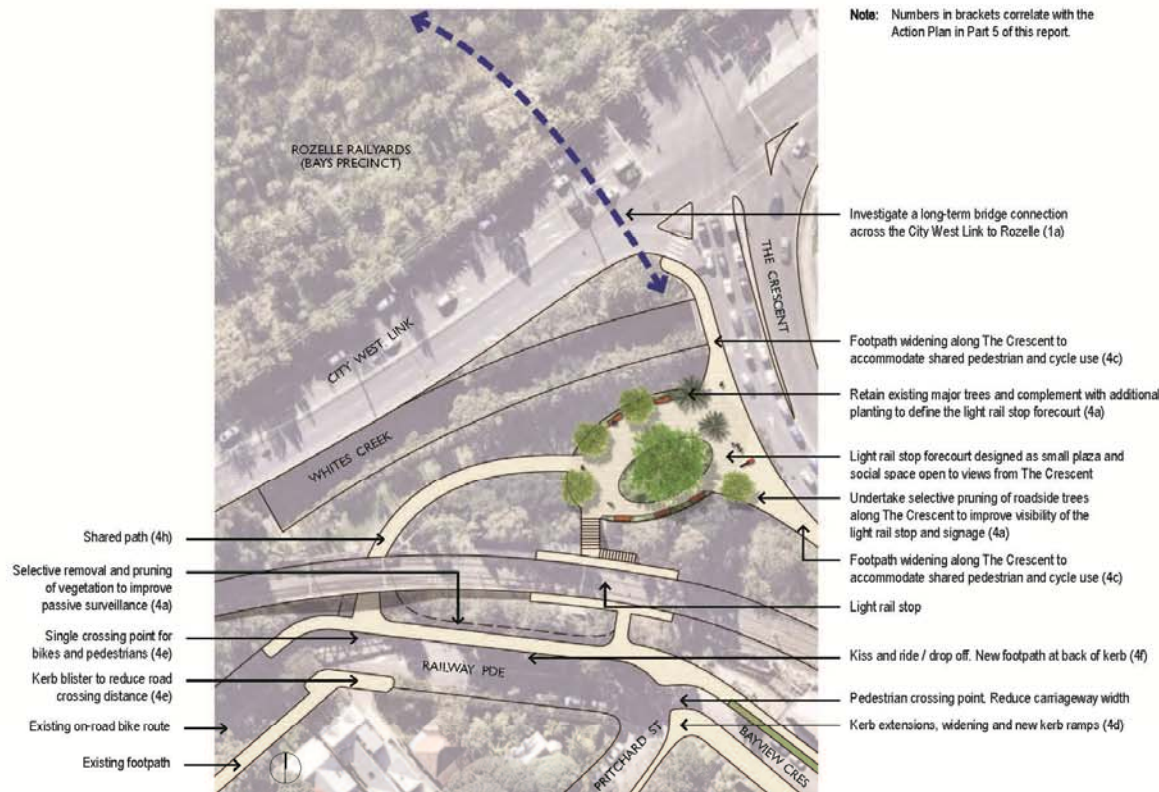


FIGURE 14: DETAIL PLAN A - BURUWAN PARK AND ROZELLE BAY LIGHT RAIL STOP (not to scale)

Clouston associates

#### 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 establish 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.

CLOUSTON associates

#### 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.



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



CLOUSTON associates

#### 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

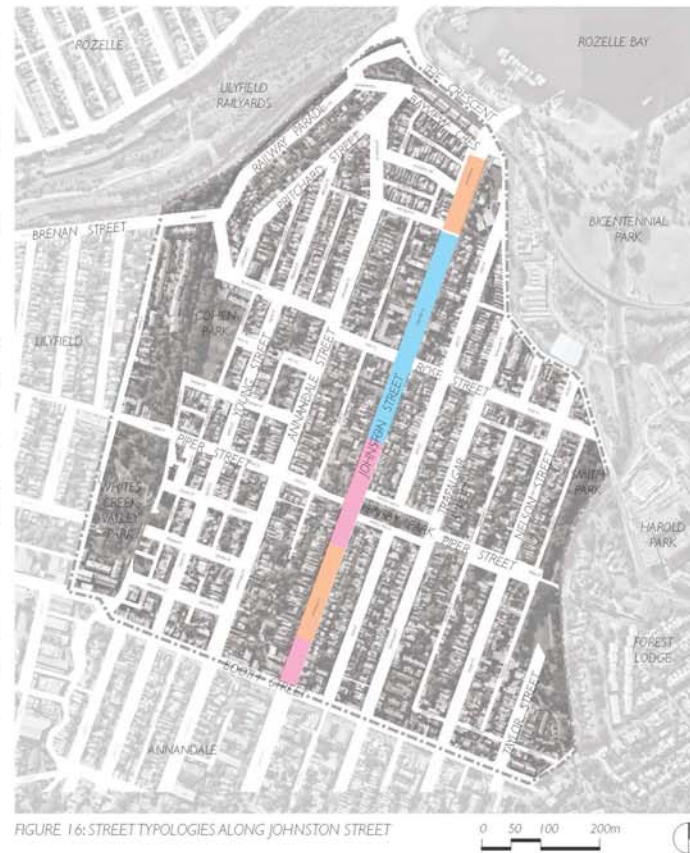
Major opportunities include

- 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)



##### LEGEND

- TYPE 1 - Refer Figure 17
- TYPE 2 - Refer Figure 18
- TYPE 3 - Refer Figure 19

CLOUSTON associates

#### 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.

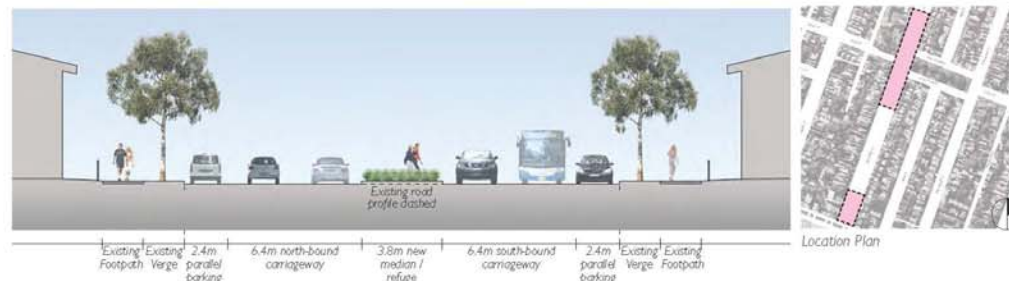


FIGURE 17: TYPICAL SECTION STREETScape TYPE 1 - PARALLEL PARKING BOTH SIDES, 1:200 @A3

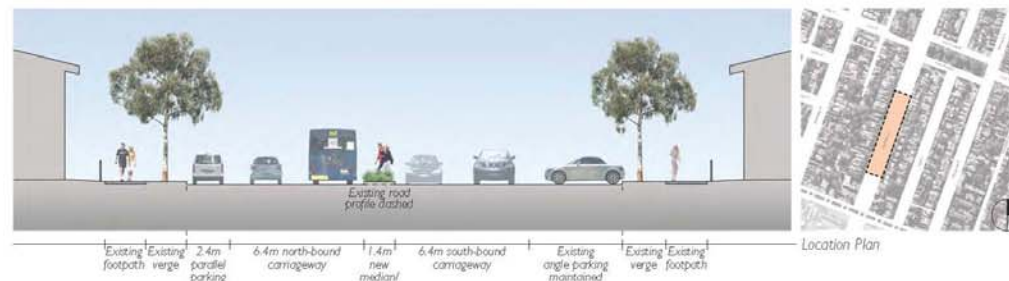


FIGURE 18: TYPICAL SECTION STREETScape TYPE 2 - PARALLEL PARKING AND ANGLE PARKING, 1:200 @A3

CLOUSTON associates

#### 4. DESIGN CONCEPTS - JOHNSTON STREET

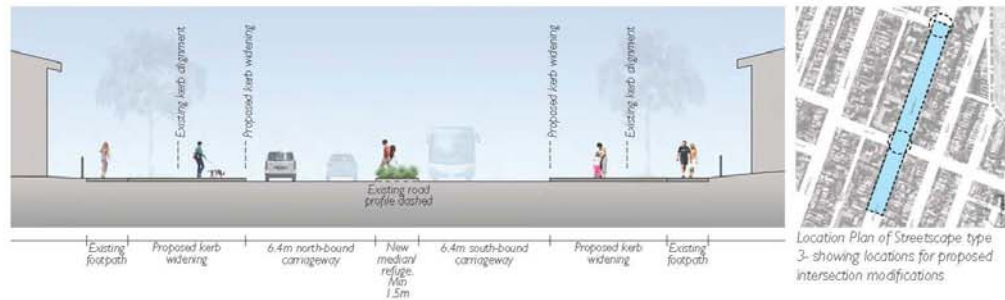


FIGURE 19: TYPICAL SECTION STREETScape TYPE 3 - ANGLE PARKING BOTH SIDES, 1:200 @A3

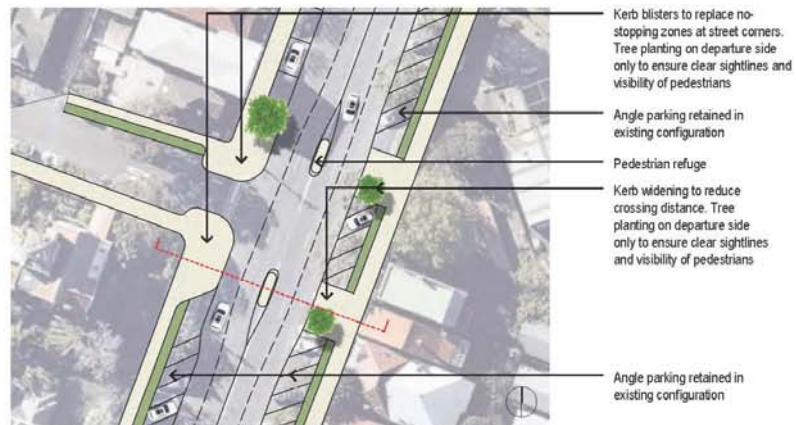
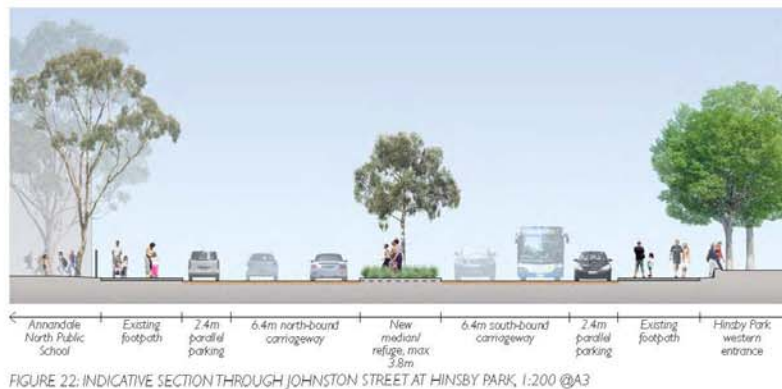


FIGURE 20: TYPICAL PLAN STREETScape TYPE 3 - KERB WIDENING AT INTERSECTIONS (not to scale)



CLOUSTON associates

#### 4. DESIGN CONCEPTS - JOHNSTON STREET



CLOUSTON associates

#### 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 vehicular, cycle and pedestrian usability and safety.



CLOUSTON associates

#### 4. DESIGN CONCEPTS - ANNANDALE STREET

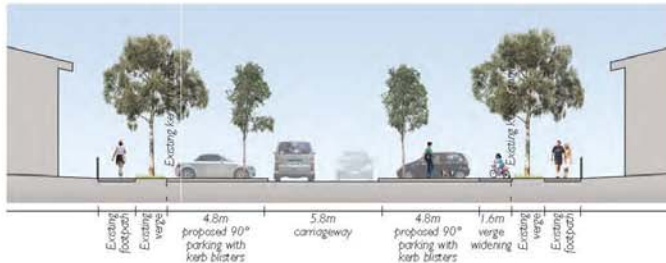


FIGURE 25: TYPICAL SECTION AT MID BLOCK CROSSING, 1:100 @A3

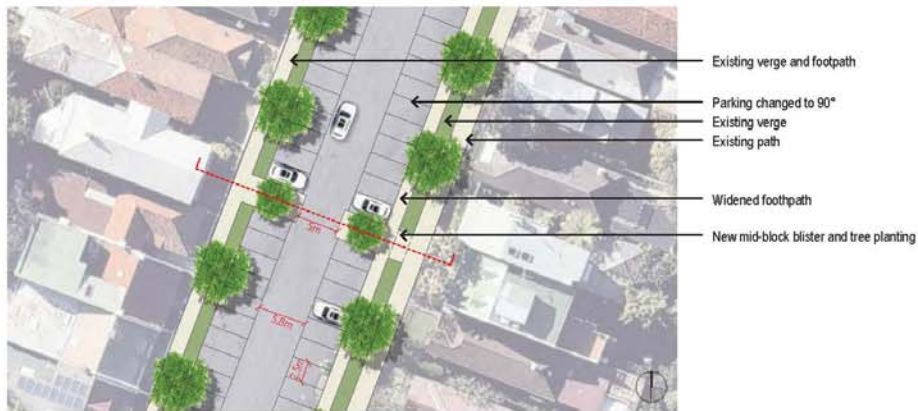
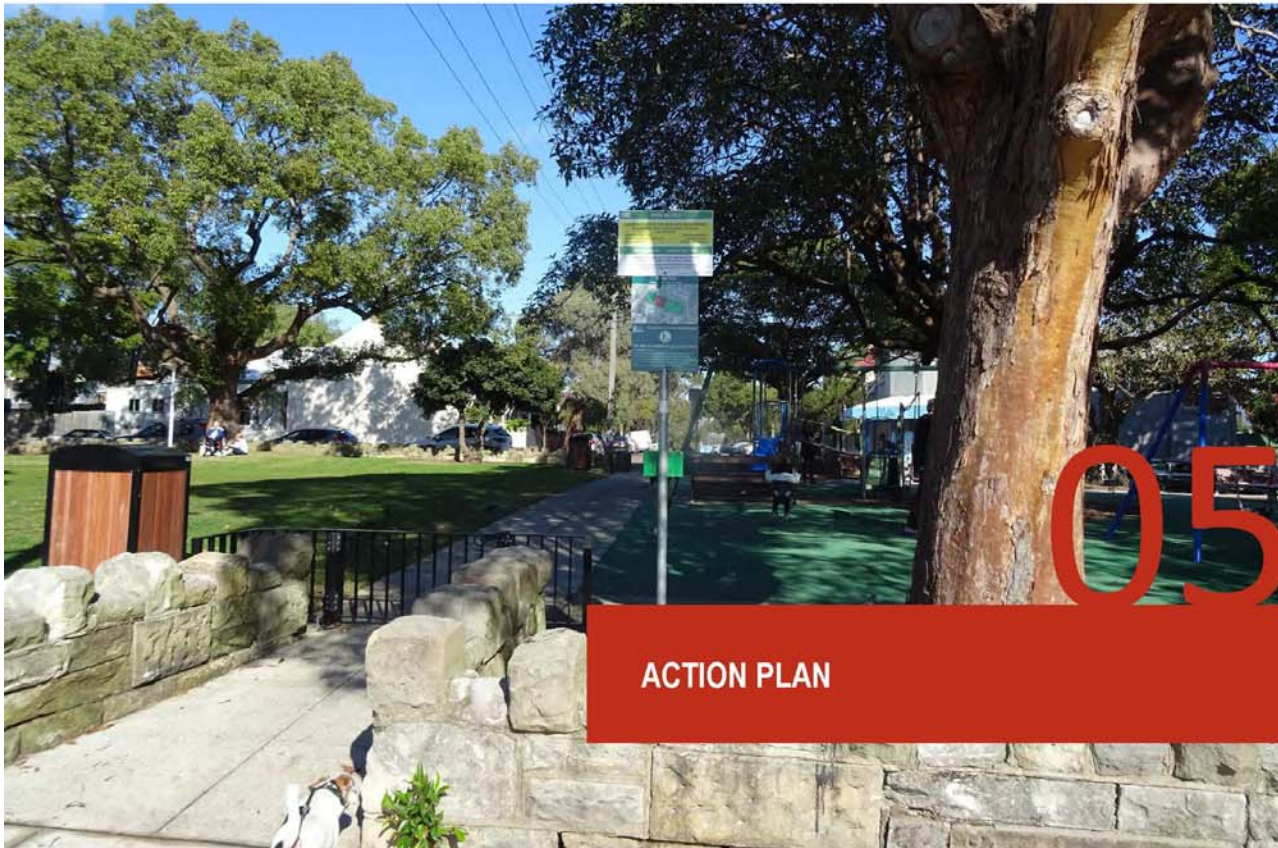


FIGURE 26: TYPICAL PLAN OF RECONFIGURED ANNANDALE STREET (not to scale)



CLOUSTON associates



## 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.



# CLOUSTON associates

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 is 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
<b>2. MOVEMENT FRAMEWORK - GENERAL</b>			
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.
<b>3. WHITES CREEK VALLEY PARKLANDS</b>			
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 Brennan 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.



CLOUSTON associates

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 Ika Street.	L	L-M	Following completion of a plan of management.
<b>4. BURUWAN PARK</b>			
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.

ANNANDALE NORTH NEIGHBOURHOOD MOVEMENT PLAN

DESCRIPTION	PRIORITY (H, M, L)	COST (H, M, L)	NOTES
<b>5. PIPER STREET GREEN LINK (WHITES CREEK TO JOHNSTON CREEK)</b>			
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.

WITCHING ISSUE B

39

CLOUSTON associates



CLOUSTON associates

## PROJECT CREDITS

### CLIENT

Leichhardt Municipal Council  
Clare Harley, Manager Environment & Urban Planning  
Ken Walsh, Strategic Transport Planner  
Ellie Simpson, Student Strategic Transport Planner

### CONSULTANT TEAM

The Annandale North Neighbourhood Movement Masterplan was prepared by

Crosbie Lorimer - Director  
Martin O'Dea - Director  
Judith Fritzsche - Senior Landscape Architect  
Timothy Sickinger - Graduate Landscape Architect

of

### CLOUSTON Associates

Landscape Architects • Urban Designers • Landscape Planners  
Level 2, 17 Bridge Street - Sydney NSW 2000  
PO Box R1388 - Royal Exchange NSW 1225 - Australia  
Telephone +61 2 8272 4999 • Facsimile +61 2 8272 4998  
Contact: Leonard Lynch  
Email - [sydney@clouston.com.au](mailto:sydney@clouston.com.au)  
Web - [www.clouston.com.au](http://www.clouston.com.au)

and

Dick van den Dool - Director

of





