

# DULWICH HILL STATION Detailed Master Plan



## Executive Summary

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Plummer and Smith were engaged by Inner West Council in 2017 to undertake a detailed master plan for the public domain around the Dulwich Hill Station. The aim of the master plan is to document a ten year strategy to transform the streets and public spaces around the station into a pedestrian oriented village.

The scope of the project is for public domain element including streets, lanes, plazas and other public spaces along the following street environments:

- Wardell Road from Ewart Street to the north side of the Keith Street / Wilga Avenue intersection;
- Dudley Street;
- Ewart Street between Ewart lane and Murray Lane; and
- Bedford Crescent.

The design process has included detailed site analysis, strategic policy review, community engagement, collaborative workshops with Council disciplines and benchmarking with best practice.

Some of the detailed master plan strategies include:

- Provide raised threshold treatments to the entries along Wardell Road at Wilga Avenue and Ewart Street. Threshold treatments are designed to slow traffic and define the village centre.
- Provide a pedestrian priority, pedestrian connection across Bedford Crescent;
- Install new pavement treatments to delineate a shared pedestrian zone in Ewart Lane;
- Install a designated bicycle lane to Dudley Street;
- Reconfigure the existing intersection at Dudley Street and Wardell Road with raised pedestrian pavements, shorter pedestrian crossing distances and traffic signals;
- Provide new tree plantings to increase shade with Water Sensitive Urban Design (WSUD) rain gardens to each tree base in order to improve storm water quality and provide passive irrigation to each tree;
- Install new pedestrian pavements to the town centre streets;
- Support proposals by the Sydney Metro and South-West project to integrate the upgraded metro station with connections to Ewart Lane, Wardell Road and Bedford Crescent.
- Optional extra of undergrounding of electrical infrastructure to accommodate larger tree species (This is an optional extra as it is beneficial to the streetscape, but alternative tree species can be selected in detail design that will grow beneath the existing electrical infrastructure); and
- Widening of Wardell Road pedestrian zone with decking structure to improve the pedestrian connection over the railway bridge.

The master plan has been reviewed by Sydney Buses and Roads and Maritime Service (RMS) who have provided approval for the proposed strategies and support the aim to provide a pedestrian orientated village.

The detailed master plan has been fully costed with a staged implementation plan proposed for each of the strategies.

The master plan will be used to guide future detailed design and construction works over the next ten years and will assist within funding and grant application processes.

## Contents

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Section	Page
1 Project Context	4
2 Site Analysis	13
3 Community Engagement	31
4 Design Strategies	33
5 Detailed Master Plan	44
6 Costing and Implementation	66

## Document Control

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Date	Revision Number	Revision Details	Issued	Approved
06.10.17	1	DRAFT	P&S	IWC
07.02.18	2	DRAFT	P&S	IWC

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1

PROJECT CONTEXT

DRAFT

PLUMMER & SMITH



# 1 Project Context

## Overview

The Dulwich Hill Station Detail Master Plan provides Inner West Council and the Dulwich Hill community with a ten year plan to transform the streets and public spaces around the station into a pedestrian oriented village.

The plans build on previous work completed by the former Marrickville Council including community engagement during the Tomorrow's Dulwich Hill project and the Draft Marrickville Public Domain Study. The proposed strategies in these documents have informed the master plan, along with the aim to improve the public domain around the Dulwich Hill Station.

The master plan has carefully considered the changing private domain within the precinct. Recent developments with increased residential density, changed transport options and State Government planning initiatives are impacting the public domain within the precinct. The proposals within the master plan have been established to allow for existing uses while planning and supporting any future changes to the neighbourhood.

## Strategic Alignment

Council's streets and town centres service multiple community needs as demonstrated by the extensive list of relevant outcomes in Our Place, Our Vision 2023: the (former) Marrickville Community Strategic Plan (CSP). The ongoing management of the streets and centres is consistent with the CSP, promoting the shared vision of the community and Council. It also provides Council with a focus; enabling Council to allocate the required resources to translate the vision into action. The following pages outline how this report and its projects will integrate with and support, the community's strategic outcomes.

This document / project progresses from a range of high level planning and policy documents impacting this area and the vision for the community.

These documents included;

- The Draft Marrickville Public Domain Study (2015);
- Marrickville Public Domain Design Guide (2016);
- Marrickville Street Tree Masterplan (2014);
- Marrickville Public Domain Concept Designs- Dulwich Hill Station Precinct (2012);
- Recreation Needs Research- Strategic Directions for Marrickville (2012);
- Marrickville Recreation Policy and Strategy (2013); and
- Tomorrow's Dulwich Hill- Draft document;
- Marrickville Strategy for a Water Sensitive Community 2012 – 2021;
- Marrickville Biodiversity Strategy 2011-2021; and
- The Climate Change Plan 2015 – 2025

## Policy and Planning Document Public Domain Recommendations

There are a range of existing public domain recommendations for this site area stemming from previous studies and proposals. These have been reviewed as part of the site analysis and design workshopping process. Additional and more site specific information is included in the Detailed Master Plan section of this document.

Previous planning work recommendations to be considered include:

### Arrival

- Provide nodal features at key arrival locations to Dulwich Hill Station;
- Use trees to terminate / frame vistas;
- Use avenue tree plantings to denote the town centre area

### Access

- Relocate pedestrian crossings to improve safety;
- Relocate kiss and ride to improve safety;
- Investigate the use of raise thresholds for traffic calming;
- Provide uncluttered footpath environments

### Connections / Links

- Provide integrated links to nearby open space;
- Connect pedestrians and cyclists with the GreenWay corridor links;
- Liaise with RMS for potential re-use of land between Wardell Road and the State Rail car park south of the station;
- Reinforce connections with clear signage;
- Build on / connect existing 'living streets' in Wilga Avenue;
- Provide consistent treatments and connections from MacArthur Parade to Wardell Road along Bedford Crescent

### Destinations

- Widening footpaths along Dudley Street and Bedford Street to accommodate kerbside uses and improved pedestrian movements;
- Provide pedestrian amenity items including seating;
- Design the entry to the light rail as a small park / square

### Environment and Character

- Ensure public spaces are designed with Crime Prevention Through Environmental Design (CPTED) principles;
- Water Sensitive Urban Design to all planting areas, including trees;
- Ensure regional views to the south are retained

### Materials

- Provide simple low maintenance materials and furniture;
- Option to use cobbles and brick threshold treatments at road crossings and entry points

### Trees

- Plant large spreading canopy trees where possible;
- Avenue tree plantings to be included on at least one side of Wardell Road;
- Investigate the use of deciduous tree species to maximise solar access (winter) and shade (summer).

# 1 Project Context

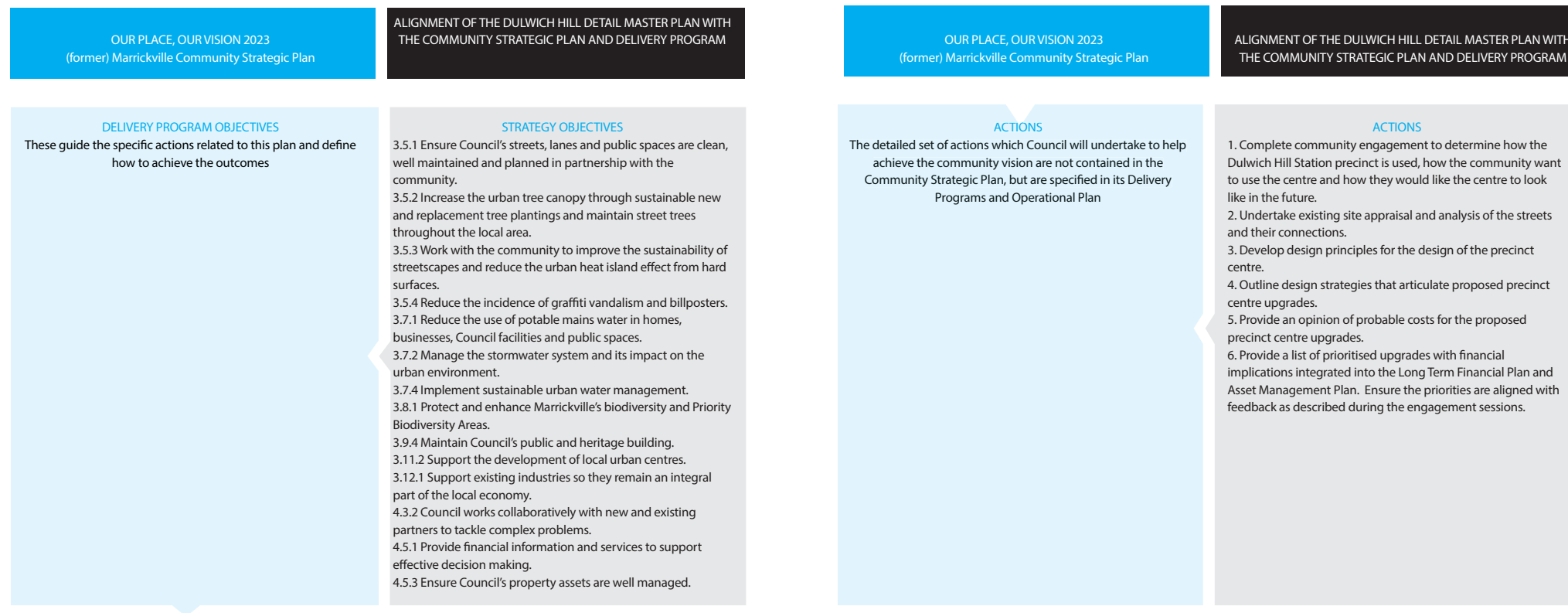
## Community Strategic Plan

OUR PLACE, OUR VISION 2023 (former) Marrickville Community Strategic Plan	ALIGNMENT OF THE DULWICH HILL DETAIL MASTER PLAN WITH THE COMMUNITY STRATEGIC PLAN AND DELIVERY PROGRAM	OUR PLACE, OUR VISION 2023 (former) Marrickville Community Strategic Plan	ALIGNMENT OF THE DULWICH HILL DETAIL MASTER PLAN WITH THE COMMUNITY STRATEGIC PLAN AND DELIVERY PROGRAM
<p><b>KEY RESULT AREAS</b></p> <p>These are the big picture results which the community would like Council and its many partners to focus on achieving</p>	<p><b>KEY RESULT AREAS</b></p> <p>KRA 1 - A diverse community that is socially just, educated, safe and healthy.</p> <p>KRA 2 - A creative and cultural Marrickville.</p> <p>KRA 3 - A vibrant economy and well planned, sustainable urban environment and infrastructure.</p> <p>KRA 4 - An innovative, effective, consultative and representative Council.</p>	<p><b>DELIVERY PROGRAM OBJECTIVES</b></p> <p>These guide the specific actions related to this plan and define how to achieve the outcomes</p>	<p><b>STRATEGY OBJECTIVES</b></p> <p>1.1.3 Support the mental health and well-being of citizens.</p> <p>1.1.4 Work to minimise the impacts of aircraft and other significant noise in homes, businesses and public spaces.</p> <p>1.2.2 Deliver and improve a wide range of essential community services that produce better outcomes for people of all ages and abilities.</p> <p>1.2.3 Collaborate with other agencies to plan and deliver a range of programs that meet community needs and promote community well-being.</p> <p>1.2.4 Community and Council facilities are well managed.</p> <p>1.3.4 There are safe places for people to meet and interact.</p> <p>1.4.1 Plan and advocate for improved accessibility including accessible transport options and well maintained and accessible pathways.</p> <p>1.4.2 Collaborate to address crime and improve safety.</p> <p>1.4.3 Reduce accidental injury and opportunistic crime in public places by auditing and upgrading town centres.</p> <p>2.1.2 Develop a community culture where everybody feels comfortable expressing their chosen cultural life, including their cultural practices, art and languages.</p> <p>2.1.4 Integrate public art and street art into public spaces.</p> <p>2.3.1 Record and promote the area's diverse cultural history for current and future generations.</p> <p>2.3.2 Engender a sense of community pride in and respect for the area's diverse history.</p> <p>2.4.1 Protect Aboriginal Culture and History in Marrickville.</p> <p>2.4.3 Increase interpretative signage and aboriginal art in public places.</p> <p>3.1.3 Enhance Council's and the community's ability to adapt to a changing climate.</p> <p>3.3.1 Plan and provide accessible and well connected footpaths, cycle ways and associated facilities.</p> <p>3.3.2 Promote accessibility of railway stations and bus stops.</p> <p>3.3.3 Support and promote cycling, walking and use of public transport and other alternative transport modes to reduce car use.</p> <p>3.4.1 Ensure local and regional roads are safe and well constructed and maintained.</p> <p>3.4.2 Reduce the impact of traffic and improve pedestrian and cyclist safety, particularly around schools and urban centres.</p> <p>3.4.4 Ensure car parking is well managed.</p> <p>3.4.5 Develop options to reduce regional truck and car movements through the local area.</p>
<p><b>OUTCOME STATEMENT</b></p> <p>These are detailed outcomes under each KRA. They are more specific than the KRAs, but still focus on the end result rather than how to get there</p>	<p><b>OUTCOMES</b></p> <p>1.1 The community is active and healthy;</p> <p>1.2 The community has improved access to a range of local services for all ages and abilities;</p> <p>1.3 The community has increased opportunities for participation and enjoyment;</p> <p>1.4 The community feels safe, connected and has access to infrastructure;</p> <p>2.1 Marrickville is a creative community participating in arts and cultural activities at all stages of life;</p> <p>2.3 The community understands and has a strong sense of history;</p> <p>2.4 Increased awareness and appreciation of Aboriginal art, culture and history in Marrickville;</p> <p>3.1 The community is responding to climate change and is actively reducing greenhouse gas emissions.</p> <p>3.3 The community walks, rides and uses public transport.</p> <p>3.4 Marrickville's roads are safer and less congested.</p> <p>3.5 Marrickville's streets, lanes and public spaces are sustainable, welcoming, accessible and clean.</p> <p>3.7 Marrickville is a water sensitive community that: supplies water from within its catchment; provides green infrastructure to support ecosystem services and collaborates to makes plans, designs and decisions that are water sensitive.</p> <p>3.8 Marrickville has thriving natural habitats.</p> <p>3.9 Marrickville's built environment demonstrates good urban design and the conservation of heritage, as well as social and environmental sustainability.</p> <p>3.11 Marrickville's economy supports local employment and provides business opportunities.</p> <p>3.12 Marrickville's industrial areas remain an important and viable part of the local economy.</p> <p>4.3 Council is innovative in its delivery of services and projects.</p> <p>4.5 Council is financially viable and provides value for money in the delivery of its services.</p>		



# 1 Project Context

## Community Strategic Plan



## 1 Project Context

### VISION

To provide a pedestrian orientated village centre

### OBJECTIVES

- Provide improved pedestrian and cycle links from the station, light rail and retail areas to nearby residential streets;
- Retain and enhance community identity through public art treatments;
- Retain the existing site character through improvements to the public domain that are sympathetic to the existing federation style and village scale;
- Improve the sense of separation from traffic noise and movements for pedestrians using the streets;
- Provide pedestrian amenity items to encourage people to spend time in the street, have social interactions and use the street for recreation purposes;
- Review Council provided parking options for Dudley Street;
- Promote opportunities for outdoor dining or other potential street uses;
- Introduce water sensitive urban design initiatives as standard for planting design within the streetscape;
- Increase shade and the urban forest canopy cover;
- Develop streetscape designs that have multipurpose and flexible outcomes; and
- Facilitate improved pedestrian use of the precinct, particularly during the evening.
- Install changes to the traffic network to improve the streetscape to ensure safe traffic and pedestrian movements



# 1 Project Context

## Project Methodology

The project methodology comprises five phases, some of which overlap and run concurrently. The methodology was established in response to the project brief and to the existing strategic planning and analysis information already undertaken by others.

The five phases include:

### Phase 1: Review and Initiation

- project initiation including site familiarisation, existing Council policy review, existing strategic planning review, confirm project program and methodology, and develop project objectives and aims.

### Phase 2: Site Analysis

- site analysis was undertaken to assist in establishing a range of opportunities and constraints. Elements forming site analysis included; existing use patterns, public transport, access and connectivity, topography, stormwater and drainage, existing trees and vegetation, pedestrian and cycling movement, traffic, public domain quality, existing services and infrastructure, geology, microclimate and biodiversity.

### Phase 3: Detailed Master Plan

- develop an illustrative detailed master plan with supporting structure diagrams and analysis. Included in this phase is design workshoping with Council, the testing of ideas, the rechecking of site constraints and opportunities, the drafting of design proposals for the public domain.

### Phase 4: Project Costing

- develop an opinion of probable costs to assist with forward planning and project realisation.

### Phase 5: Exhibition and Updates

- Council review and public exhibition of Detailed Master Plan proposals. Undertake any appropriate design report changes resulting from feedback.

### Community Engagement

- This is a 'floating' component through all phases of the project. Significant existing community consultation relevant to this project has already been undertaken by Inner West Council. Additional targeted consultation was undertaken as part of the process. By not tying community consultation to a particular phase of the project it enabled a certain level of flexibility to be applied to this component enabling consultation to be tailored as the project progressed.

## How to Use this Document

This Detailed Master Plan report is designed as a document facilitating future staged works (documentation and construction) for the Dulwich Hill Station precinct streets comprising the site area.

For ease of reference the document is divided into different sections that loosely align with the project methodology phases.

### 1\_ Project Context

This section provides an introduction and background to the project including existing Council policy source material, project methodology and objectives.

### 2\_ Site Analysis

The physical characteristics of the site area and contextual connections are described and analysed in plans, words and images. While focusing on physical site analysis this section also reviews site and cultural history as well as existing use and cultural qualities.

### 3\_ Community Engagement

This section provides a brief overview of the points raised during Inner West Council's community consultation period.

### 4\_ Design Strategies

This section includes words and diagrammatic analysis of the design strategies used in the proposals. Also outlined in this section are precedent works relevant to the designs and site. The design strategies, or principles provide a spatial representation of the objectives.

### 5\_ Detailed Master Plan

This section of the report sets out the overall design proposals for the public domain within the site area including plans, sections, and perspectives to illustrate desired outcomes.

### 6\_ Costing and Implementation

This section outlines the probable costs associated with the design upgrades and suggests potential staging or implementation strategies.

## 1 Project Context

### Location

The Dulwich Hill Station precinct is located in the inner western Sydney suburb of Dulwich Hill. The site area is approximately 8km from the Sydney CBD. The precinct is located close to the southern boundary of the Inner West LGA- adjacent to the Cooks River valley. The elevated areas in the centre of the precinct / site area enjoy relatively expansive views south-west across the Cooks River Valley.

The geographical and active centre of the site area is the Dulwich Hill train station and associated Light Rail station.





## 1 Project Context

### Site Area

The site area (as shown) includes;

- Wardell Road from Ewart Street to the north side of the Keith Street / Wilga Avenue intersection
- Dudley Street
- Ewart Street between Ewart Lane and Murray Lane
- Bedford Crescent



## 1 Project Context

### History

The traditional custodians of the Cooks River Valley are from the Cadigal Wanggal of the Eora Nation. The landscape around Dulwich Hill was a series of heavily timbered low hills vegetated with Turpentine/Ironbark Grassland. A constant water supply fed by many creeks running into the Cooks River made it a fertile area. Campsites were dotted along the Cooks River that were regularly used for fishing for many months of the year.

The good timber was highly prized by European settlers and the fertile ground made it viable for crop farming. These aspects attracted settlement to the area first known as West Marrickville.

The existence of the train station at Dulwich Hill dates back to 1895 as a stop on the Bankstown line. The platform, buildings and overbridge structure are of local heritage significance today.

Along Wardell Road, shop fronts tell a story of commercial growth during the Federation period of Australia. The housing beyond the station area is also predominantly of the Federation period. As with many villages throughout Sydney, sandstone kerbs are present along some areas of the streets of Dulwich Hill.



Turpentine/Ironbark Forest Grassland remnant site - Maquarie University predicts that less than 5% of Turpentine/Ironbark forests remain in the Sydney area. Considered endangered under the Commonwealth EPBC Act it is vital these environments are maintained. Inner West Council continues to preserve a section of this precious natural, biodiverse environment running along the rail corridor. Seed stock is regularly collected to propagate plant stock for use in the LGA.



Dulwich Hill Station Ticket Office - timber weatherboard structure



Sandstone Kerbs - these are being preserved throughout Sydney where possible



Heritage facades - federation era development



Service station building on the corner of Ewart Street and Wardell Road - owner by the Howard family





2

SITE ANALYSIS

DRAFT



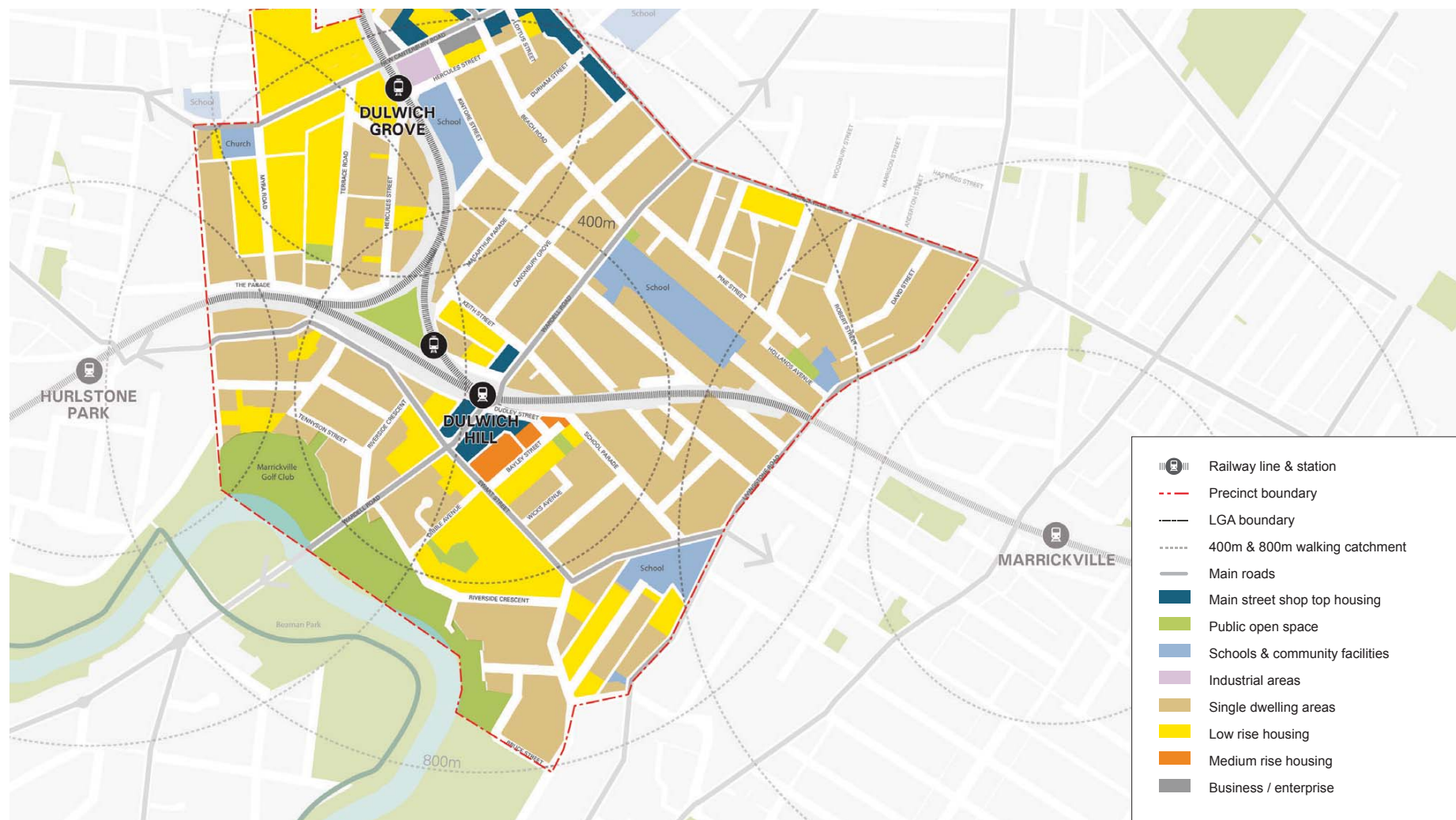
## 2 Site Analysis

### Strategic Planning Context

#### CURRENT LAND USES PERMITTED

Source: Sydenham to Bankstown- Draft Urban Renewal Corridor Strategy

The NSW State Government Departments of Planning and Environment and Transport for NSW are working concurrently to deliver the Sydney Metro and the Sydenham to Bankstown Renewal Corridor Strategy. The strategy will increase population densities and zoning to facilitate a transformed urban environment along the corridor. The plans on the following pages outline the proposed changes. These changes include intensified densities and building heights both north and south of the railway station.

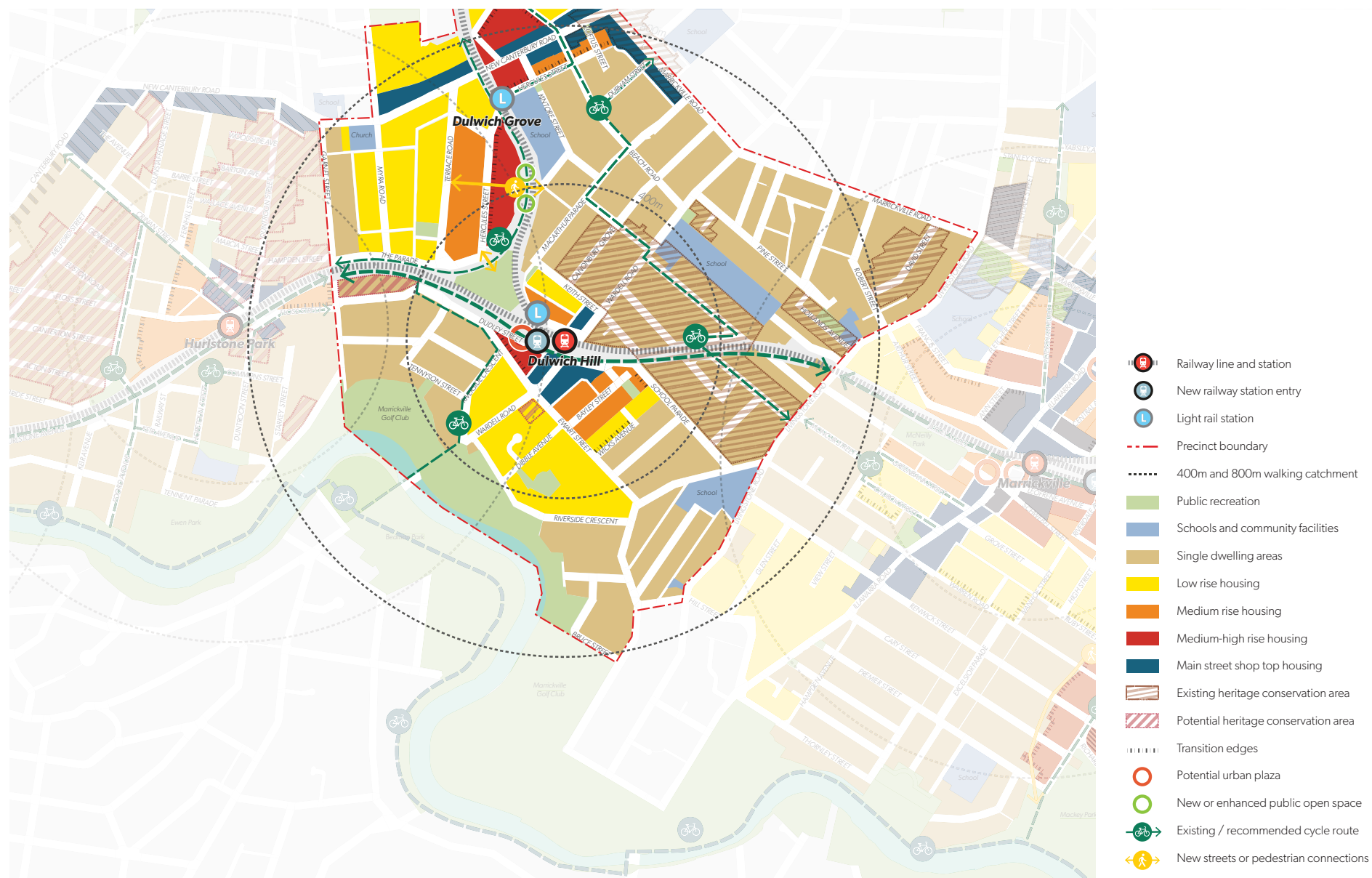


## 2 Site Analysis

### Strategic Planning Context

#### PROPOSED LAND USES

Source: Sydenham to Bankstown- Draft Urban Renewal Corridor Strategy





## 2 Site Analysis

### Site Area- Existing Public Domain

The site area's existing public domain is fragmented and generally in poor condition. There are small isolated pockets of footpath or roadway upgrades but generally the area can be characterised as having aged and degraded infrastructure.

Many footpath areas are a patchwork of old finishes and rectification works. At various key junctures through the site the footpath areas become cluttered with signage, power poles, and safety fencing. The presence of signage and infrastructure in these locations (notably the southern end of the Wardell Road railway overpass) correspond with the most pedestrian activity. This combination results in a number of 'bottle-necks' that have negative impacts on pedestrian amenity and safety.

The northern side of Dudley Street currently has narrow footpath widths- this is further exacerbated by the location of the existing bus shelter- the footpath is down to single file width in this location.

An aging mix of road surfaces also impact negatively on visual cohesion within the site area.

Overhead power is also a dominant feature of the public domain of the site. Not only does it have a significant visual impact, it also impacts on the quality and extent of existing street tree plantings.

Topography becomes a significant feature of the public domain on Wardell Road south of the station where it falls towards Ewart Street. Part of the western side of this section of road has a double height, stepped kerb that results in uncomfortable and potentially dangerous transitions between the roadway (parking) and the footpath.

There are limited seating opportunities in the site area- three seats (excluding bus stops) were counted.

The site is devoid of any water sensitive urban design (WSUD) measures. Existing street planting areas are kerbed and isolated beds that are not connected to footpath areas or to stormwater gutters. This means that the planters offer limited value to footpath areas and provide no WSUD benefits such as filtering stormwater run-off.

There are four main public domain character types in the Master Plan area:

- A 'human scale' village centre on Wardell Road north of the station
- Detached dwelling residential areas
- Rail corridor
- Building dominated retail centre on Wardell Road south of the station

The following images capture the existing conditions within the precinct.



Adhock safety measures due to incompatibility between footpath width and required use



Isolated island planters with no WSUD value. Wardell Road pedestrian crossing is a safety hazard



Cooks River valley views from Wardell Road- south of the train station



Signage and services negatively impact legibility



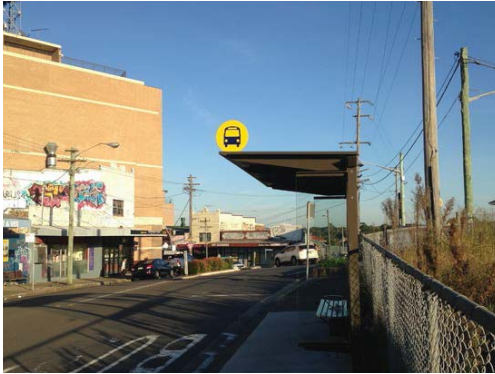
Wardell Road- inconsistent road surfaces



Existing detached residences and street trees- Wardell Road north of the train line



## 2 Site Analysis



Footpath widths incompatible with intended use- Dudley Street bus stop



Narrow footpath connections and CPTED concerns



Outdated public domain layouts (un-used bus stop bay) and obsolete bus stop signage



Adhock safety measures due to incompatibility between footpath width and required use (existing station entry)



Isolated island planters with no WSUD value



Cars preferred over pedestrians- pedestrian refuge island at the intersection of Ewart Street and Wardell Road



Wardell Road pedestrian crossing- a safety concern



Ewart Lane- limited amenity



Ewart Lane and existing connections to Railway Parking and Rail land



## 2 Site Analysis



Limited footpath amenity and long exposed road crossing- Dudley Street and Wardell Road intersection



Limited pedestrian amenity- southern side of Dudley Street



Narrow footpath connections and CPTED concerns- pedestrian link between Bedford Cr and Keith St



Clashes between infrastructure and business use- Wardell Road and Bedford Crescent intersection



Steep grades and double height kerb- Wardell Road south of the train station



Poor access connections between parking and footpath- adjacent to Light Rail entry on Bedford Crescent



Bike way connection with Dudley Street

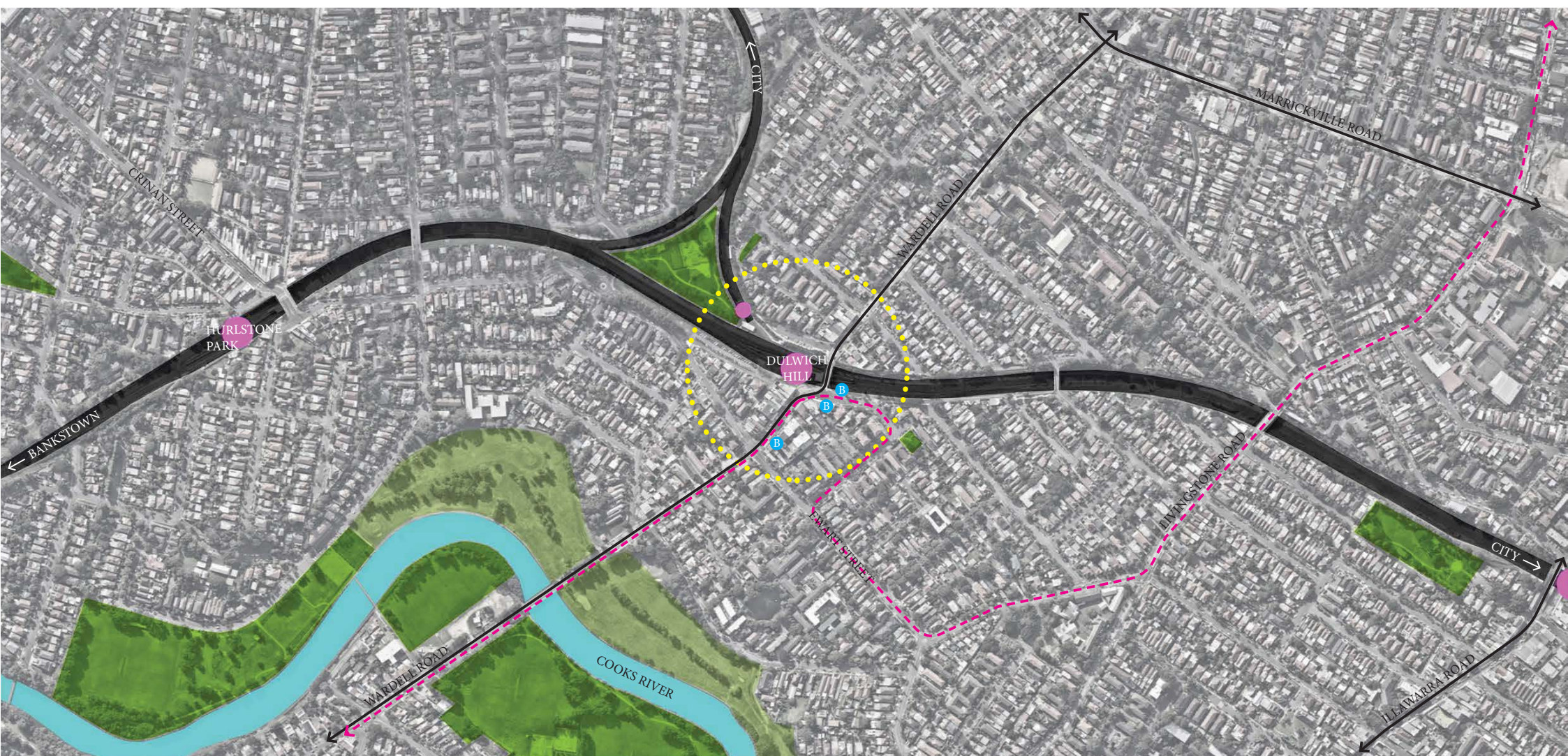


Pedestrian space sacrificed when street amenity added- Wardell Road north of station



## 2 Site Analysis

The following pages outline elements that impact the site and are being considered as part of the design process.



### LEGEND



Open space- parkland



Cooks River



Marrickville Golf Course



Train Line / Light Rail



Train Station / Light Rail Station



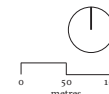
Major Roads



Site Area



Public Bus routes through the site area (route 412) and bus stops in the site area



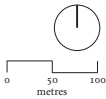


2 Site Analysis



LEGEND

 Flood liable land



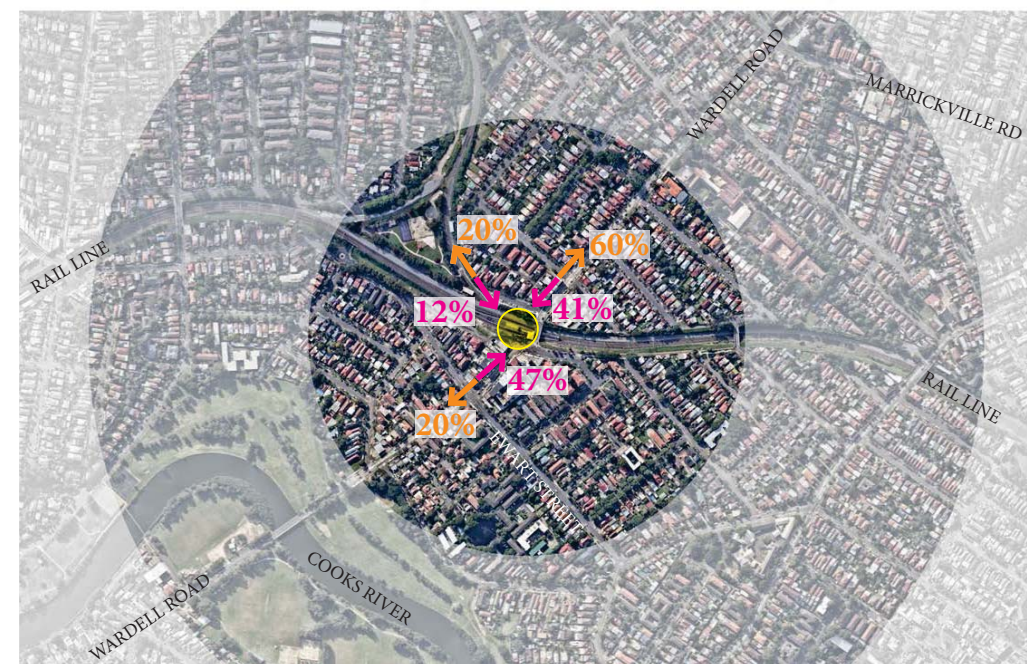
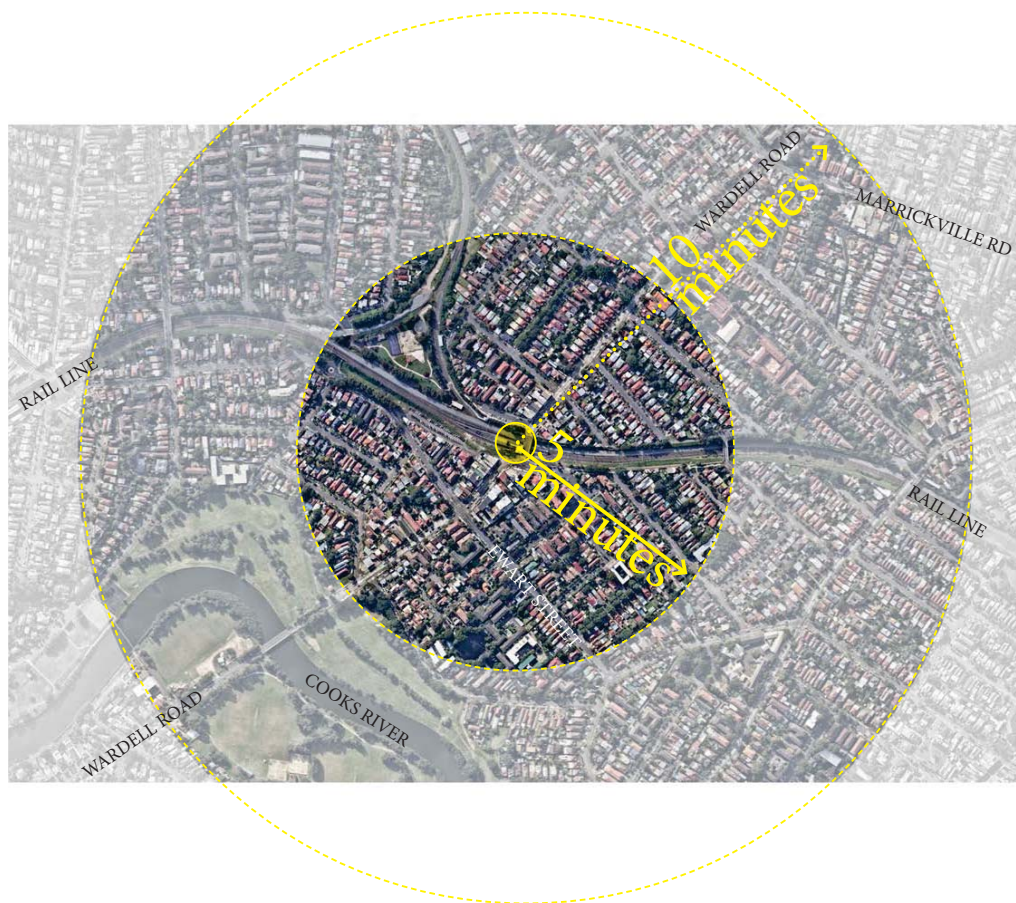


## 2 Site Analysis

WALKING TIMES TO DULWICH HILL STATION- the geographical and gathering centre of the precinct.

COMMUTER BOARDING AND ALIGHTING DIRECTIONS-  
DULWICH HILL STATION

Boarding  
Alighting





## 2 Site Analysis

PROPOSED STATION  
CHANGES & THE  
IMPLICATIONS FOR  
ADJACENT SPACES

### LEGEND

- T Train Station location
- L Light Rail Station location
- Boarding
- Alighting
- Critical public domain areas associated with new station and access arrangement
- Access routes to and from the station

### LEGEND

- B Sydney bus
- B School bus
- B 'Night bus'

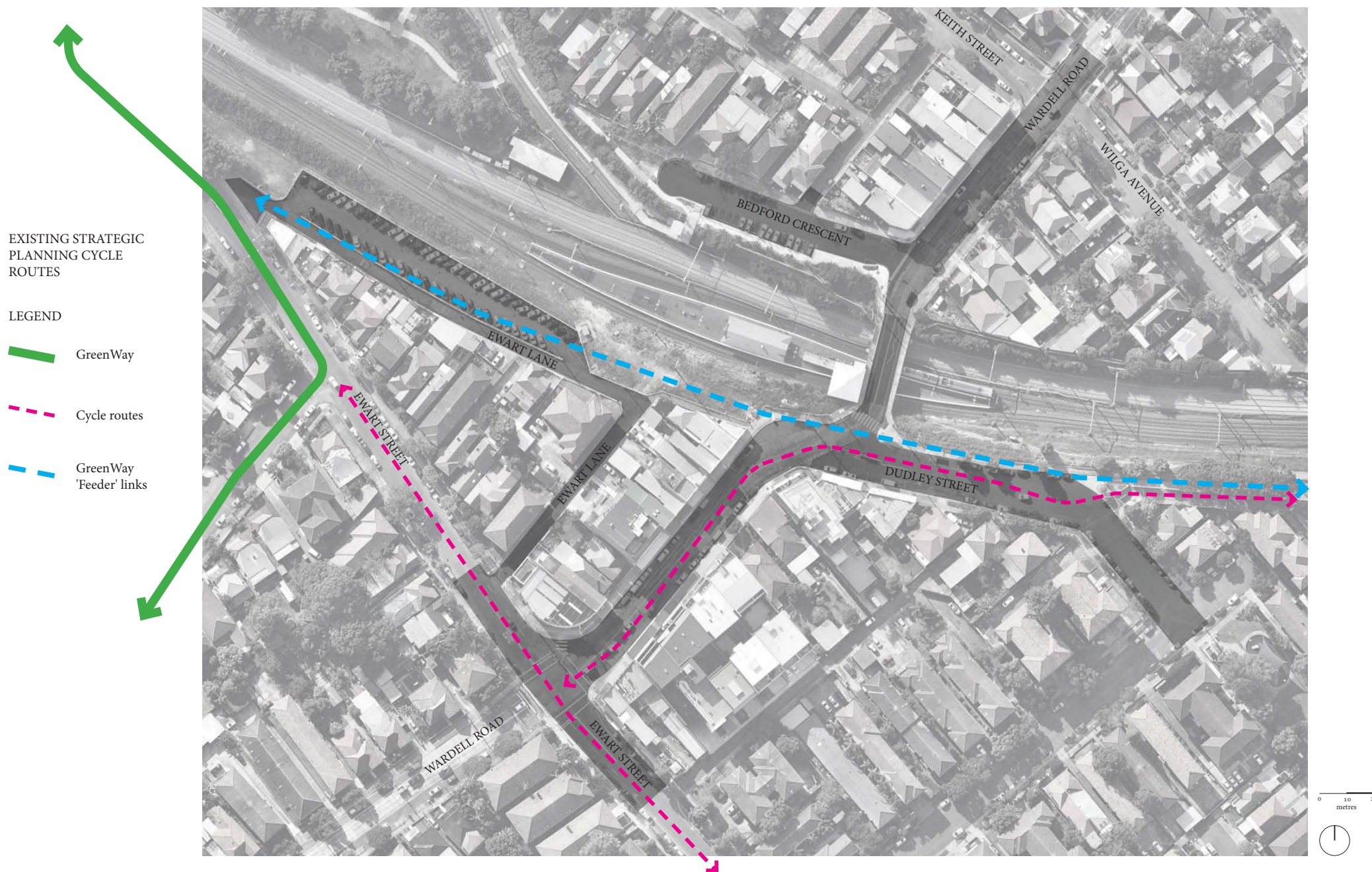


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metres





## 2 Site Analysis








## 2 Site Analysis

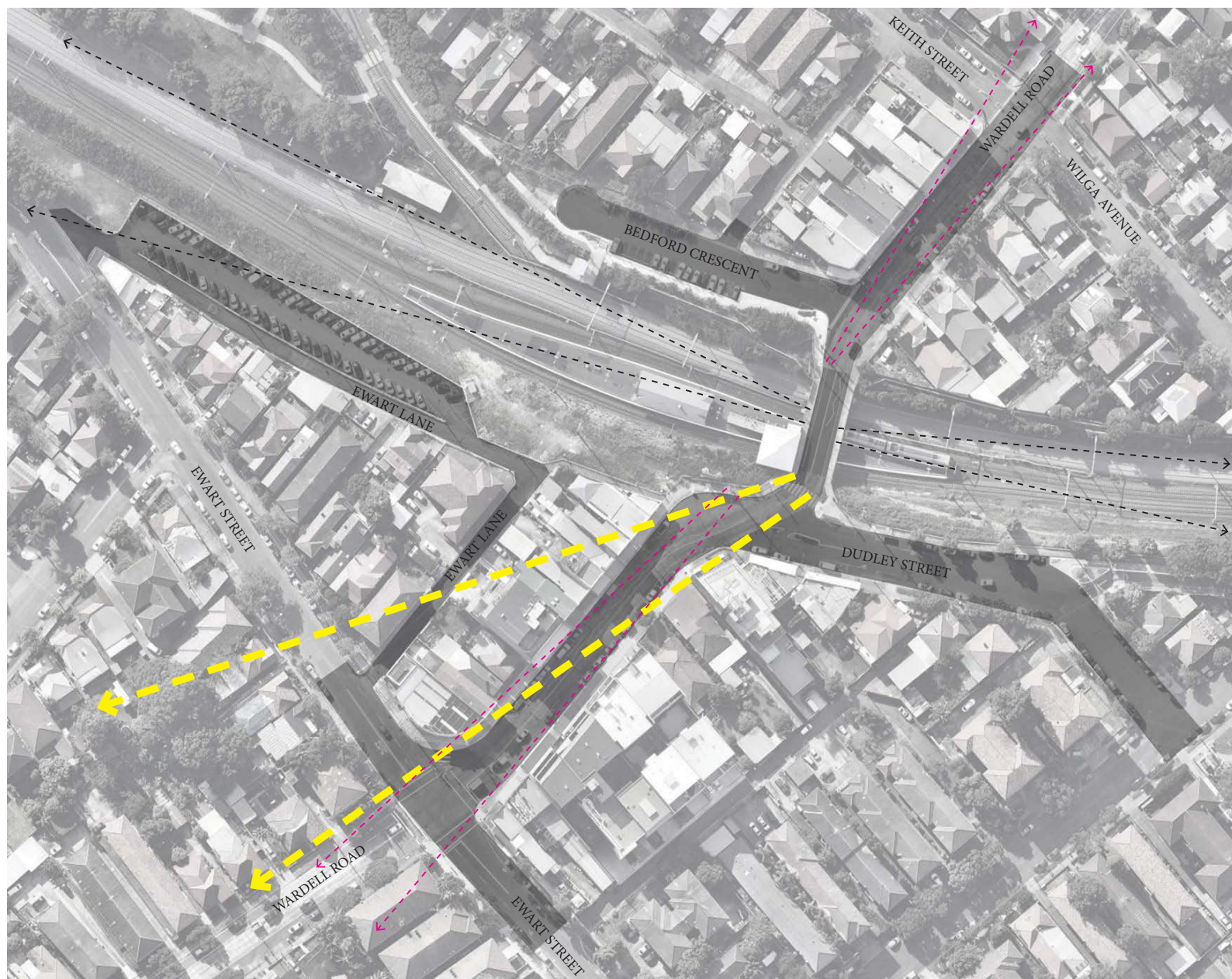
### VIEWS

There are a range of views and vistas available within the site area. The 'kinking' nature of Wardell Road as it crosses the Rail Corridor results in long vistas up and down the streetscape- in each case framed by architecture.

Long views are possible along the Rail Corridor and across the Cooks River valley. If public domain areas and footpath widths allowed this would result in a sense of spaciousness that could improve public domain amenity considerably.

### LEGEND

-  Elevated vista / view- Cooks River valley
-  Urban infrastructure / rail corridor vista
-  Urban vista- streetscape, building framing, Cooks River valley



0 10 20  
metres





## 2 Site Analysis

### EXISTING HIGHLIGHT MOMENTS

Whilst not being immediately impressive or 'glossy' there are several key moments within the existing public domain that enhance the experience.

### LEGEND

-  Existing Heritage Train Station building- a landmark at the centre of the site- particularly as the focal point of a vista up Wardell Road when approaching from the south
-  Remnant Turpentine / Ironbark Grassland community
-  Existing significant trees that impact street character
-  Existing village atmosphere- traditional commercial and residential architecture. Human scale and access to sky, sun, significant trees
-  Seat with prospect / refuge qualities- prospect down Wardell Road to Cooks River valley, refuge via the bus shelter and topography







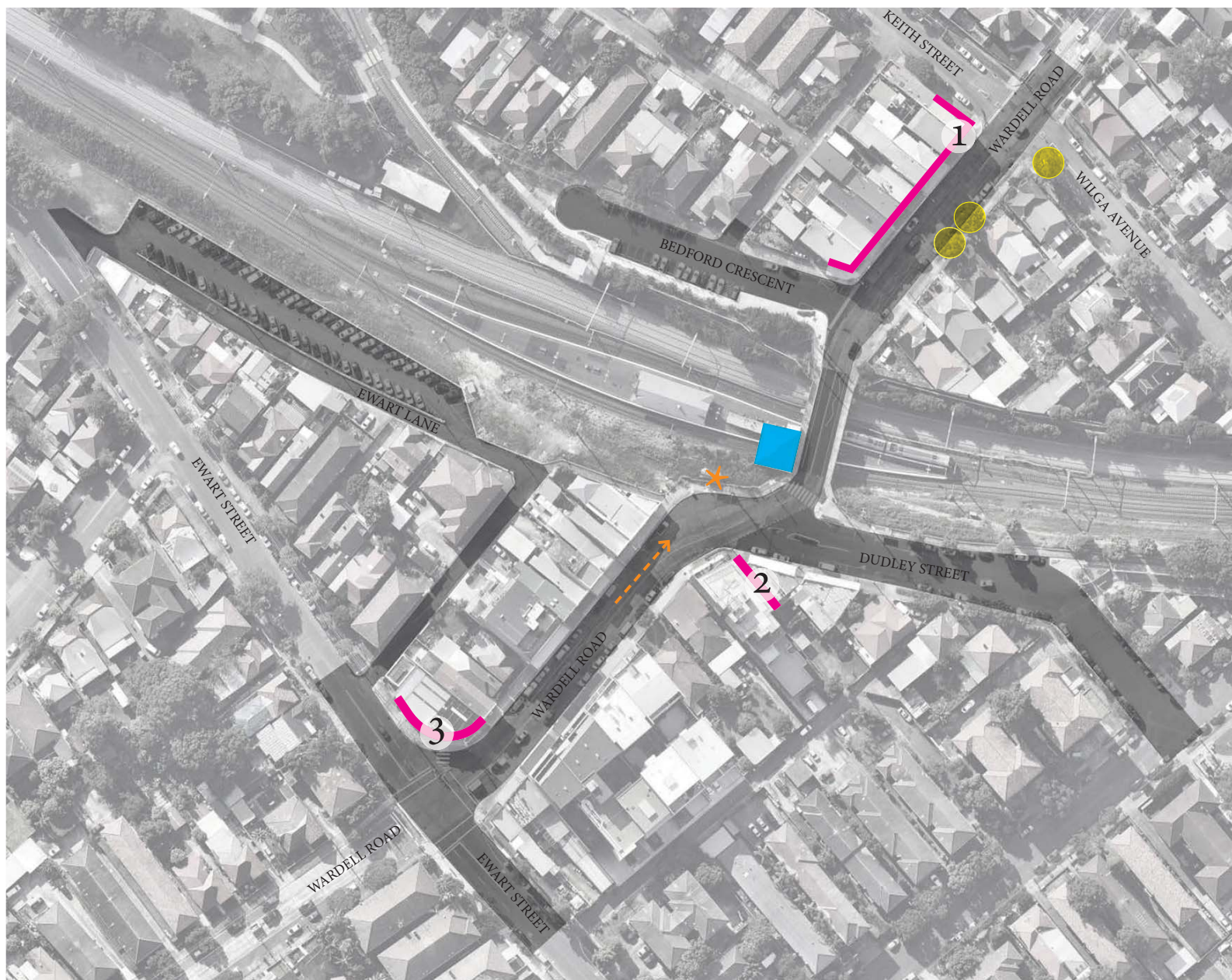


## 2 Site Analysis

### KEY ARRIVAL MOMENTS / FEATURES

#### LEGEND

-  Architectural arrival moments:  
 1\_ Wardell Road commercial buildings north of the station  
 2\_ The exposed brick wall of the residential unit block  
 3\_ Curving facade of the auto repairs shop
-  Existing Heritage Train Station building
-  Existing Melaleuca trees and Peppermint Gum contribute to sense of arrival when travelling south
-  An undesirable arrival moment is the impact of the advertising billboard on Rail land when travelling north- this highly visible location could be utilised in other ways to positively contribute to village character





## 2 Site Analysis


### WSUD- KEY POTENTIAL LOCATIONS

While all planting areas within the streetscape should have WSUD value as a basic requirement, several locations have particular potential for rain gardens and the filtering and slowing of run-off

### LEGEND

 Primary rain garden WSUD locations

 Secondary rain garden WSUD locations

 Opportunity for improved drainage- 'expressing the flow'



0 10 20  
metres





## 2 Site Analysis

### PARKING AND BUS STOP LOCATIONS

#### LEGEND

||||| Parking

||||| Bus stop

..... Bus stop for designated times-  
school bus and night bus

— Streetscape planters







## 2 Site Analysis

### EXISTING STREET TREES & OVERHEAD POWER

Overhead powerlines within the site area have a significant impact on the scale of street trees. This means that there are limited locations where larger trees can provide their visual and environmental benefits to the public domain

#### LEGEND

 Existing street tree- numbers relate to below species list

 Overhead power in road reserve

 Overhead power in rail corridor

#### EXISTING TREES

- 1\_ *Callistemon viminalis*
- 2\_ *Tristaniopsis laurina*
- 3\_ *Melaleuca quinquenervia*
- 4\_ *Magnolia little gem*
- 5\_ *Lophostemon confertus*
- 6\_ *Podocarpus elatus*
- 7\_ *Eucalyptus nicholli*
- 8\_ *Cupaniopsis anacardioides*
- 9\_ *Elaeocarpus reticulatis*
- 10\_ *Cinnamomum camphora*
- 11\_ *Koelreuteria bipinnata*
- 12\_ *Tristaniopsis luscious*





## 2 Site Analysis

STREETSCAPE INFRASTRUCTURE-  
Bins, Seats, Bike Racks, Public  
Telephones

### LEGEND

- S** Existing seats- excluding bus stops
- B** Existing bins
- R** Existing bike racks
- T** Existing public telephone





A photograph of a brick wall with a white gutter. A yellow circular graphic overlay is positioned on the right side of the image, containing the text '3 COMMUNITY ENGAGEMENT'.

# 3 COMMUNITY ENGAGEMENT



### 3 Community Engagement

During June and July 2017, Inner West Council undertook community engagement on the current use and future vision for the Dulwich Hill Station Precinct. The engagement included interactive sessions and an online survey at Inner West Council 'Your Say Inner West' website. During the four week engagement period, the online website received 729 visits with 181 surveys completed. The engagement sessions also received input from respondents who completed interactive activities and had lengthy discussions with Council staff.

The scope of the engagement included feedback on the streets, footpaths, lanes, plazas, bicycle connections and any other left over public space. The scope also included the pedestrian and bicycle connections to nearby parks and residential areas including the light rail and GreenWay corridors.

The streets included in the Dulwich Hill Station Precinct include:

- > Wardell Road (from near Keith Street to Ewart Street);
- > Dudley Street (from Wardell Road to School Parade);
- > Ewart Street (from Ewart Lane to Murray Lane);
- > Bedford Crescent; and
- > Ewart Lane.

The feedback highlighted the majority of those that visit the Dulwich Hill Station Precinct live near or in the study area and catch public transport to and from the area. A smaller portion only travel through the site, but of those that stop, many buy food or supplies from the precinct.

Respondents noted they feel safe during the day due to the large number of other pedestrians providing casual surveillance. At night however, a lack of lighting meant that many respondents felt unsafe. Respondents also noted the pedestrian crossing across Wardell is dangerous, with the high volumes of traffic and poor sight lines. From the feedback provided it was clear there are a list of items that the community requested through the engagement period.

These items included:

- > Better pedestrian lighting;
- > Greener streets, more trees and plants;
- > More street art;
- > Better footpaths and kerb ramps;
- > Safer pedestrian crossings;
- > Bicycle parking;
- > Slower traffic; and
- > Better / more street furniture.

For more detailed information on the Community Engagement processes and outcomes please refer to:

- *Community Engagement Summary Report- Dulwich Hill Station*

The community engagement outcomes helped form the Master Planning proposals contained in this Detailed Master Plan document.

In addition to the completed consultation works these plans will be placed on public exhibition to ensure Council has interpreted the feedback correctly and met community expectations. Feedback from the community will inform amendments to the draft plan, before the final draft is presented to Council for adoption. The final master plans will guide streetscape and public domain improvements over the coming 10 years.





4  
DESIGN STRATEGIES



## 4 Design Strategies

### Improved Pedestrian Amenity

A range of strategies have been used to improve pedestrian amenity, including;

- T • the decluttering of footpath areas including measures such as relocating the telephone box at the corner of Wardell Road and Bedford Crescent;
- • providing 'in-road' street trees wherever possible provides street amenity and shade without loss of footpath space
- ▨ • footpath areas increased in key locations including Dudley Street and Wardell Road / Ewart Street intersection
- ★ • improved pedestrian crossing points- including the raising of intersection thresholds
- ★ • introducing a signalised crossing at the intersection of Wardell Road and Dudley Street
- providing natural shade for improved street amenity
- providing seating opportunities
- ▨ • increasing the width of the footpaths on the Wardell Road rail crossing bridge. Increased widths will require a minor relocation of the Station building. This minor relocation will be required (if the building is retained) as part of Sydney Metro works.
- ▨ • introducing a shared zone for the eastern end of Ewart Lane



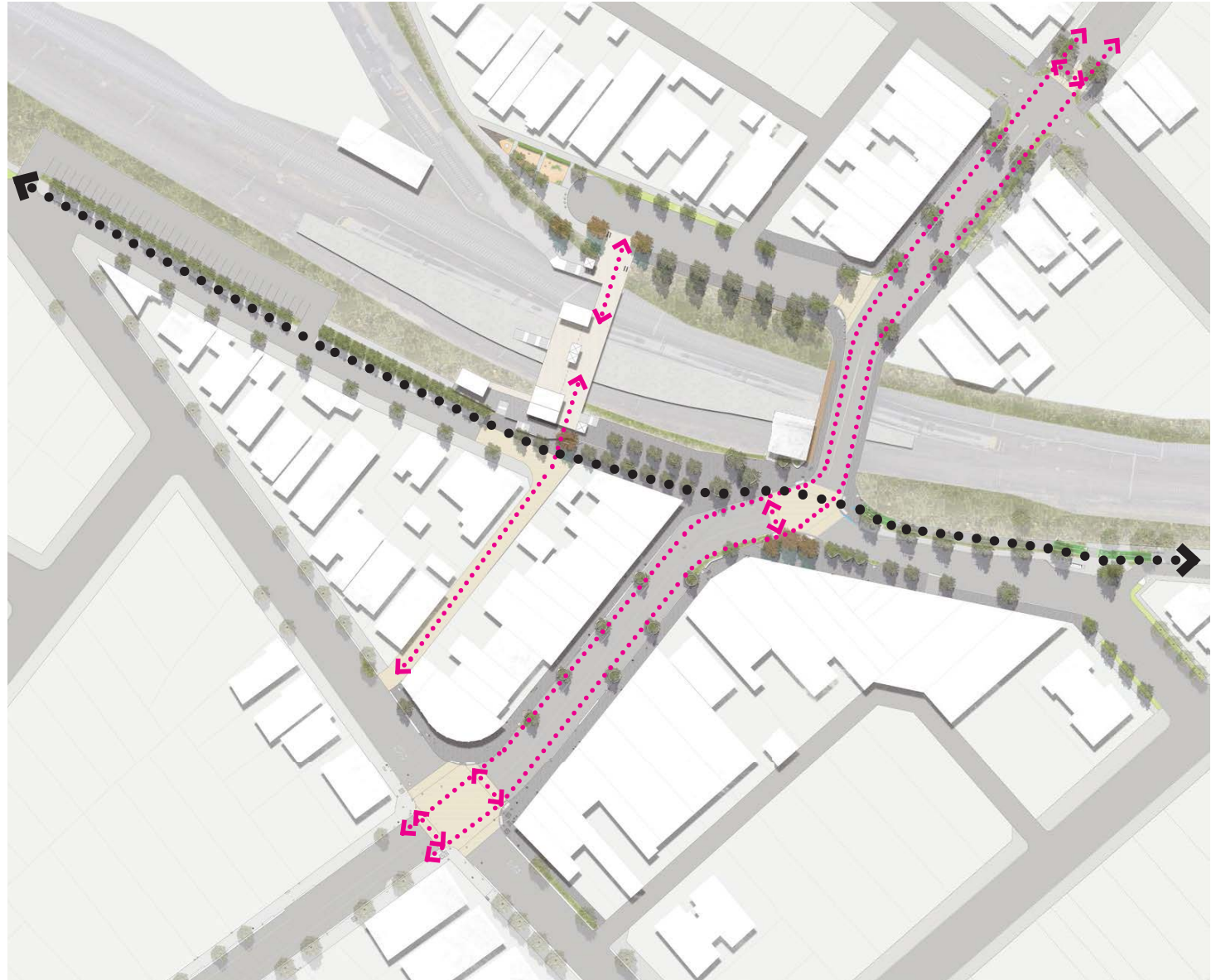


## 4 Design Strategies

### *Improved Circulation and Bike Links*

A range of strategies have been used to improve connectivity and cycling routes, including;

- formalised bike path improvements to Dudley Street
- new signalised crossing at intersection of Dudley Street and Wardell Road
- new paths along Ewart Lane linking to regional bike routes
- increased and rationalised bike racks





## 4 Design Strategies

### *Social Streets*

A range of strategies have been used to encourage a village of social streets, including;

- dedicated seating and street gathering areas;
- key gathering zones;
- small seating opportunities;
- improvements to visual amenity of streets and provision of shade, encouraging people to spend more time in the public domain;
- public art used to connect people to place





## 4 Design Strategies

### *Safety and Accessibility*

A range of strategies have been used to improve pedestrian safety and accessibility

- ★ raised pedestrian crossing points
- ★ signalised crossing introduced to Dudley Street and Wardell Road intersection
- ★ removal of the pedestrian refuge at Wardell Road and Ewart Street intersection and the extension of footpath space
- ▨ rationalisation of Dudley Street bike path, footpath and bus stop conflicts





## 4 Design Strategies

### Improved Legibility

Improving legibility within the public domain is a critical element of the proposed design. This will involve both additions of new signage and removals of existing signage.

#### Removals:

The removal and/or consolidation and updating of existing signage will reduce existing clutter and mixed messages within the public domain. For example there are a number of obsolete bus signs in the precinct that provide confusing and, at times, incorrect information.

#### Additions:

Wayfinding signage can be introduced to the site area to improve legibility. Elements that would benefit from wayfinding information at selected spots include;

- Public open space- Jack Shanahan Park, and Tom Kenny Reserve
- Bikeway ('Greenway' and 'feeder' links)
- Train Station and key Bus Stops

Interpretive signage can be introduced to communicate site stories and/or information, including;

- the Turpentine / Ironbark Grassland and the links to new street plantings
- Rain gardens and other WSUD measures





## 4 Design Strategies

### *Biodiversity and WSUD*

Increase vegetation, WSUD elements, trees species and shade

- ◆ introduction of rain gardens in a number of street planting areas;
- increased planting areas;
- ◆ ensuring the existing Turpentine / Ironbark Grassland is communicated and celebrated





## 4 Design Strategies

### Connection to Place

A critical part of a healthy and vibrant community is connection to place- a sense of being part of a place and a community. All of the above strategies can assist in establishing community connection and interaction- such as social streets, improved physical and visual amenity, celebration of ecology etc. Another contributing factor to connection to place is awareness.

The Dulwich Hill Station precinct is an area undergoing significant change as a result of its location on the Sydney to Bankstown Rail line. The existing character of the precinct will inevitably change. However, policy zonings and heritage protections will assist in the retention of some existing architectural character elements, particularly north of the train line. These areas should be celebrated as the heart of the village character- the proposals seek to enhance the existing character in these areas.

The topography of the site results in there being a significant 'prospect' opportunity in the middle of the precinct with views across the Cooks River valley and along the rail corridor. At the centre of this location are two important elements- the existing station building and the Wardell Road bridge. The Master Plan proposes extensions to the pedestrian footpaths of the bridge crossing enabling easy pedestrian flow and viewing opportunities- connection to place.

The existing station building plays an important role within the community with regards to connection to place and connection to history. It occupies a landmark site within the precinct. The Master Plan proposes that when the new station works are undertaken the existing building is retained and reused as a community facility. The building could become a lookout shelter, 'trainspotters shed', or some other structure of community value.

The station building could also be modified to connect to the proposed plaza immediately to the south of the building.

Inner West Council wishes to retain\* the building for an alternative use. The loss of this building will impact the sense of place and the existing journey along Wardell Road, but its removal does not otherwise impact any other element of the Master Plan.

**NOTE: The retention, removal, or relocation of the station building will be subject to the Sydney Metro project.**

\*Note that even if retained the building will require minor relocation to accommodate Sydney Metro track works and the proposed widening of the bridge footpath.



The station building in the evening- providing a lantern like, home like feature in the middle of the village



The station building seen across the Turpentine / Ironbark Grassland



The existing station building- a generous opening to the street



The existing station building-architectural details and relocatable structure



Existing architecture and trees provide character and on-going connection



Heritage architectural facades provide character and on-going connection



## 4 Design Strategies

### Precedents

Below are images of precedent works relevant to the design.



Wayfinding signage (Frome Street Bikeway- Aspect Studios)



Bikeway with planted island divider and shade trees



Wayfinding signage (Frome Street Bikeway- Aspect Studios)



Material palette- hard wearing surfaces softened by planting and subtle lighting (Aspect Studios)



Simple hard wearing finishes with subtle variation



## 4 Design Strategies

### Precedents

Below are images of precedent works relevant to the design.



Rain garden improving drainage and street amenity



Interpretive signage providing information about WSUD processes and ecology



Example of stormwater treatments that 'express' the flow- potential for Ewart Lane



Example of integrated interpretive art elements communicating WSUD areas (Hassell)



Example of WSUD treatments- providing streetscape amenity while using existing topography as an asset (SLR Consulting)



Example of a street which encourages slower vehicle speeds and has vegetation and trees to improve the pedestrian experience



Example of public plaza shade trees combined with seating opportunities



## 4 Design Strategies

### Precedents

Below are images of precedent works relevant to the design.



Example of outdoor dining under natural shade



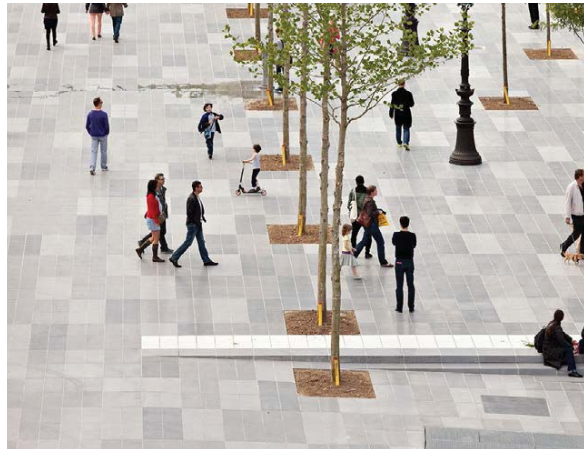
An existing 'Perfect Match' artwork in the site area- additional works could improve civic amenity



Example of attention to detailing for hardstand finishes



Example of brick feature paving and planting



Example of open flexible plaza areas with simple finishes and natural shade



Example of considered detailing and feature pavement treatments (JILA)





# 5

DETAILED  
MASTER PLAN

DRAFT



## 5 Detailed Master Plan



### KEY

-  New footpath pavement-bluestone paving
-  Existing trees
-  New street trees
-  New feature trees
-  Raised threshold feature pavers
-  New bike path
-  Existing vegetation along rail corridor
-  Timber deck extension widening existing footpath
-  Turf to verge
-  Decomposed granite to pocket park
-  New planting and concrete seating wall
-  New planting and feature paving
-  New low flow rain garden planters
-  Proposed New Station Concourse by others

NOTE: refer to pages 46-54 for additional notation and detail



## 5 Detailed Master Plan



### NOTES

1. Entry Threshold (raised) defining the entry to the village zone - prioritising pedestrians
2. New in-road planting and trees - rain gardens
3. Existing Melaleuca incorporated in new works as important character elements
4. Bedford Crescent entry threshold treatment (raised)
5. Bedford Crescent new car parking treatments as per Metro requirements
6. Pocket Park
7. Raised signalised intersection for improved safety and pedestrian movement
8. Existing Station building proposed to be retained (with minor relocation for footpath and track works) as a community facility. *Note: The retention, removal, or relocation of the station building will be subject to the Sydney Metro project*
9. New Bikeway and footpath treatments (including planting and street trees)
10. New bus stop location, new rain garden associated
11. New in road trees and footpath treatments
12. Extended footpath areas allows space for pedestrians, footpath dining, street gathering spaces and trees and planting
13. New street planting areas
14. New public plaza works associated with station upgrades - improved cycling and pedestrian linkages, shaded seating areas
15. New in-road tree plantings and low flow rain gardens
16. New Station works by Sydney Metro
17. Improved pedestrian and cycling amenity with improved paths and shade trees
18. New car park areas (including shade and screen trees) as part of station upgrade
19. Ewart Lane resurfaced and denoted as Shared Zone
20. Raised Threshold
21. Kerb extensions to improve pedestrian amenity
22. New rain garden and drainage
23. Timber deck extension to bridge footpath- improved pedestrian amenity and safety. Bridge widening will require the minor relocation of the station building- original location to be shown in pavement treatments



## 5 Detailed Master Plan



### PROPOSED TREES NOT SHOWN FOR CLARITY

#### NOTES

1. Entry Threshold (raised) defining the entry to the village zone - prioritising pedestrians
2. New in-road planting and trees - rain gardens
3. Existing Melaleucas incorporated in new works as important character elements
4. Bedford Crescent entry threshold treatment (raised)
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## 5 Detailed Master Plan



- Bin
- Timber Seat with back rest
- ▲ Granite Stools
- P1** Bluestone
- P2** Brick Feature Paver
- P3** Threshold Paver
- RG** Rain Garden
- Tactile indicators (stainless steel)

NOTE: for all furniture refer to the Furniture Palette (pp. 57), for all pavement elements refer to the Materials Palette (pp. 60)



## 5 Detailed Master Plan

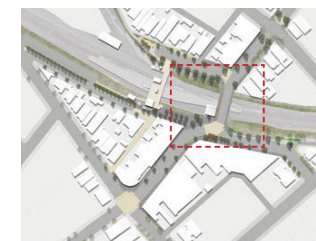


- Bin
- Timber Seat with back rest
- ▲ Granite Stools
- P1 Bluestone
- P2 Brick Feature Paver
- P3 Threshold Paver
- P4 Natural grey concrete footpath
- P5 Decomposed granite
- BR Bike racks
- RG Rain Garden
- Tactile indicators (stainless steel)
- \* Drinking fountain

NOTE: for all furniture refer to the Furniture Palette (pp. 57), for all pavement elements refer to the Materials Palette (pp. 60)



## 5 Detailed Master Plan



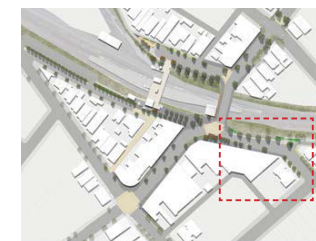
- Bin
- Timber Seat with back rest
- ▲ Concrete seating walls
- ▲ Granite Stools
- P1 Bluestone
- P2 Brick Feature Paver
- P3 Threshold Paver
- P4 Natural grey concrete footpath
- Br Bike racks
- RG Rain Garden
- Tactile indicators (stainless steel)
- \* Drinking fountain

NOTE: for all furniture refer to the Furniture Palette (pp. 57), for all pavement elements refer to the Materials Palette (pp. 60)

\*\*NOTE: The retention, removal, or relocation of the station building will be subject to the Sydney Metro project. Even if retained the building will require minor relocation to accommodate Sydney Metro track works and the proposed widening of the bridge footpath.



## 5 Detailed Master Plan

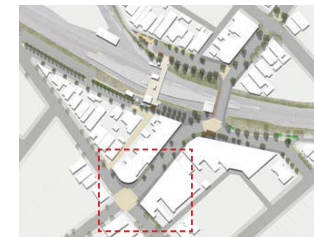


- Bin
- Timber Seat with back rest
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- ▲ Granite Stools
- P1** Bluestone
- P2** Brick Feature Paver
- P3** Threshold Paver
- P4** Natural grey concrete footpath
- Br** Bike racks
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- Tactile indicators (stainless steel)

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## 5 Detailed Master Plan

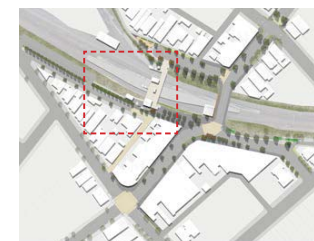


- Bin
- Timber Seat with back rest
- ▲ Concrete seating walls
- P1** Bluestone
- P2** Brick Feature Paver
- P3** Threshold Paver
- RG** Rain Garden
- Tactile indicators (stainless steel)

NOTE: for all furniture refer to the Furniture Palette (pp. 57), for all pavement elements refer to the Materials Palette (pp. 60)



## 5 Detailed Master Plan



- Bin
- Timber Seat with back rest
- ▲ Concrete seating walls
- ▲ Granite Stools
- P1** Bluestone
- P2** Brick Feature Paver
- P3** Threshold Paver
- P4** Natural grey concrete footpath
- BR** Bike racks
- ✱ Drinking fountain

NOTE: for all furniture refer to the Furniture Palette (pp. 57), for all pavement elements refer to the Materials Palette (pp. 60)



## 5 Detailed Master Plan



**P4** Natural grey concrete footpath



## 5 Detailed Master Plan

### *Indicative Perspective*



Indicative perspective: showing village entry threshold, planting, street trees, and the removal of overhead powerlines



Existing- looking south along Wardell Street from the Keith Street intersection



## 5 Detailed Master Plan

### *Indicative Perspective*



Indicative perspective: showing increased footpath areas, seating and planting, street trees, and the removal of overhead powerlines.  
Note- street trees of a scale to ensure Cooks River valley views are retained



Existing- looking south down Wardell Street from the train station



## 5 Detailed Master Plan

### Public Domain Palettes / Furniture



Grafted Bole Granite | UAP Supply



Classic Plaza Seat | Street Furniture Australia



Bicycle Hitch Rail Fixed | Arrow Alpha, Street Furniture Australia



Bollard Fixed | LEDA SSP150FB- if required- none currently shown



Grafted Bole Brass | UAP Supply



Classic Plaza Bench | Street Furniture Australia



Frame Bin Enclosure (240L) | Street Furniture Australia



Prospect Drinking Fountain with Bottle Tap | Botton and Gardiner



## 5 Detailed Master Plan

### *Public Domain Palettes / Furniture*



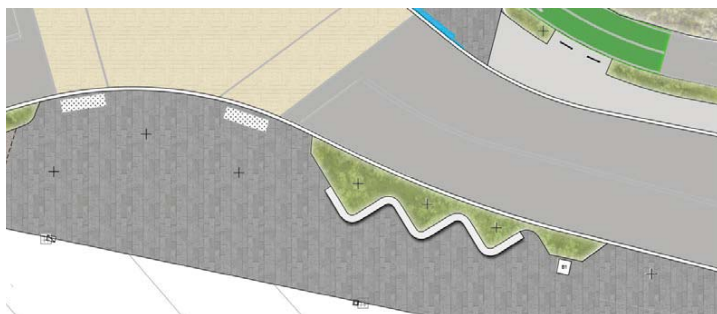
Custom concrete seating wall- accommodates individuals and groups. The articulated form also allows for protected spaces for planting and street trees- see below for plan and see pages 61- 62 for potential feature tile treatments to selected seating elements



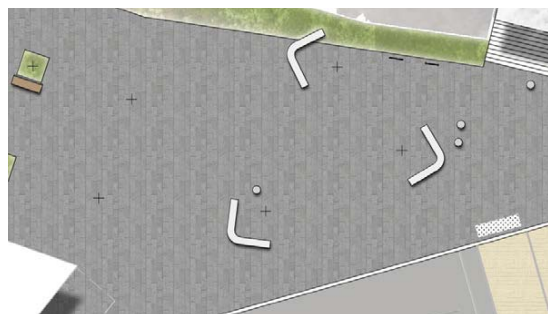
Custom concrete seating wall- 'inward corner'. The articulated form also allows for 'inward' or 'outward' seating arrangements- see below for plan and see pages 61- 62 for potential feature tile treatments to selected seating elements



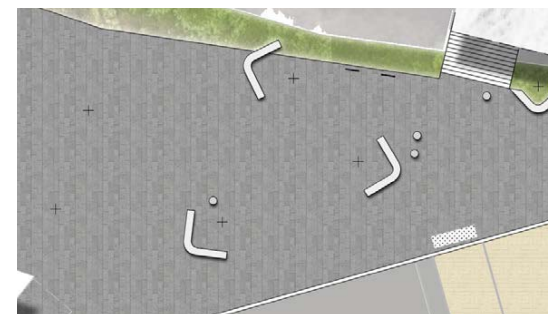
Custom concrete seating wall- 'outward corner'. The articulated form also allows for 'inward' or 'outward' seating arrangements- see below for plan and see pages 61- 62 for potential feature tile treatments to selected seating elements



Plan location- southern side of Dudley Street (shown above) and southern side of existing train station.



Plan location- the eastern end of the proposed new station public plaza



Plan location- the eastern end of the proposed new station public plaza

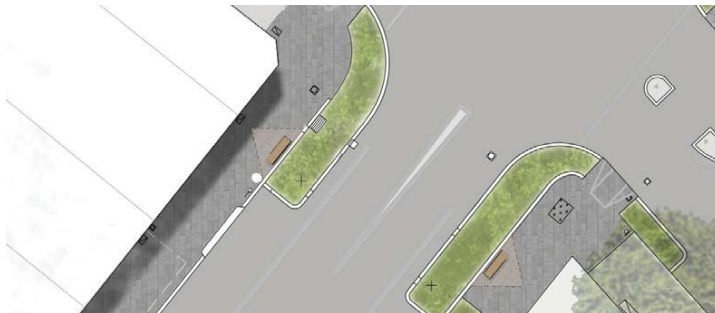


## 5 Detailed Master Plan

### *Public Domain Palettes / Furniture*



Timber backrest seats combined with planting, shade, and feature pavement treatments (see plans for feature pavement locations)



Plan location- two on the southern side of the Wardell Road and Keith Street / Wilga Avenue intersection (shown above) - three others proposed along Wardell Road- see plan



## 5 Detailed Master Plan

### Public Domain Palettes / Hardscape



Natural Stone, Bluestone | Melocco  
Layout as per Marrickville Council Public Domain  
Technical Manual 2016  
A3 Large Irregular



Basalt small unit paver  
Feature Paving

OR



Clay Bricks | Claypave  
Feature Paving



Bipave Concrete unit paver, shotblast finish |  
AbriMasonry  
Shared Zone and intersection thresholds



Sandstone Kerb and Gutter | Inner West Council



## 5 Detailed Master Plan

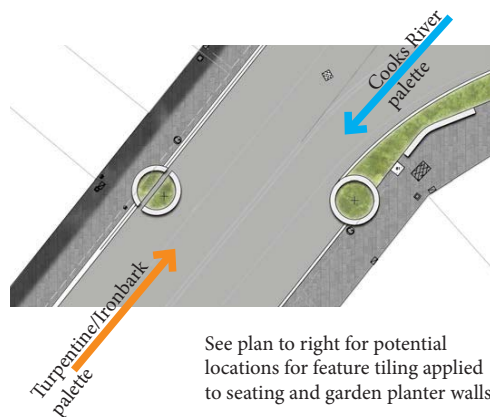
### Public Domain Palettes / Village Placemaking

Colour and interest can be added to the public domain through the telling of site specific stories. Colour tiles will be added to the public domain palette at select locations- on selected seating and/or planting bed elements.

It is proposed that there be two colour palettes used. The colour palettes will be established in reference to two site characteristics;

- the Turpentine/Ironbark Forest remnant grassland that exists within the Rail Corridor at the centre of the site; and
- the Cooks River that flows close to the southern edge of the site

It is proposed that these tiles will be positioned in relation to direction of travel- i.e when moving through the site from north to south the Cooks River palette will be visible. When moving through the site from south to north the Turpentine / Ironbark palette will be visible.



See plan to right for potential locations for feature tiling applied to seating and garden planter walls:

★ Cooks River palette

★ Turpentine / Ironbark palette



Grassland species



Example tile artwork



Existing grassland in the rail corridor



Example tile artwork (Belinda Smith)



## 5 Detailed Master Plan

### *Public Domain Palettes / Village Placemaking*

#### *Cooks River palette*



Cooks River



Cooks River (taken from the Wardell Road bridge crossing)



Example tile artwork (Belinda Smith)



## 5 Detailed Master Plan

### *Public Domain Palettes / Public Art*

Public Art in the Dulwich Hill Station precinct should reflect the locality and should contribute to its identity as a precinct separate to the main Dulwich Hill shops. As the area is also a transport hub, artworks should be memorable and assist with wayfinding and identity.

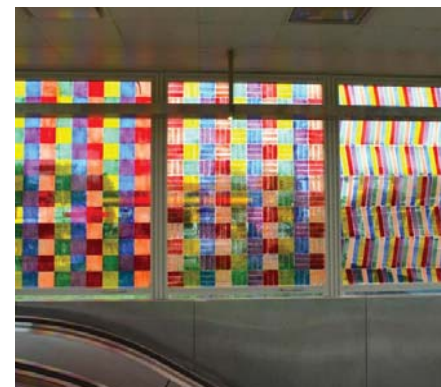
#### **Themes:** **Biodiversity**

The opportunity exists to commission artworks that highlight the importance of the Turpentine / Ironbark Grassland to the biodiversity of the precinct. While the urban density will increase in the precinct it is valuable to acknowledge the natural environment both in informative and interpretive artworks.

Interpretive artworks and signage can also be utilised to communicate natural and designed processes at play in the public domain such as rain gardens, water sensitive urban design, and biodiversity planting.

#### **Creative Community**

Another opportunity is to engage the public domain users with changing and flexible art 'canvases'. Projects such as the Newtown Artseat and Perfect Match could be seen as a precedent for potential public art in this precinct. Adorning critical public domain junctures with public art that provides an opportunity for local artists to create and exhibit artwork. These types of projects inject a vibrant and changing feature to public space and are valuable in keeping art content fresh and establishing on-going elements of public domain interest.





## 5 Detailed Master Plan

### Public Domain Palettes / Public Art



#### P Primary Artworks



#### S Secondary Artworks



#### I Interpretive





## 5 Detailed Master Plan

### Public Domain Palettes / Plants - Grassland species

Where-ever possible new plantings should comprise locally native species- with species from the Turpentine/Ironbark Grassland used where appropriate.



*Aristida vagans*



*Cymbopogon refractus*



*Danthona*



*Dichelachne crinata*



*Eragrostis brownii*



*Sporobolus elongatus*



*Themeda triandra*



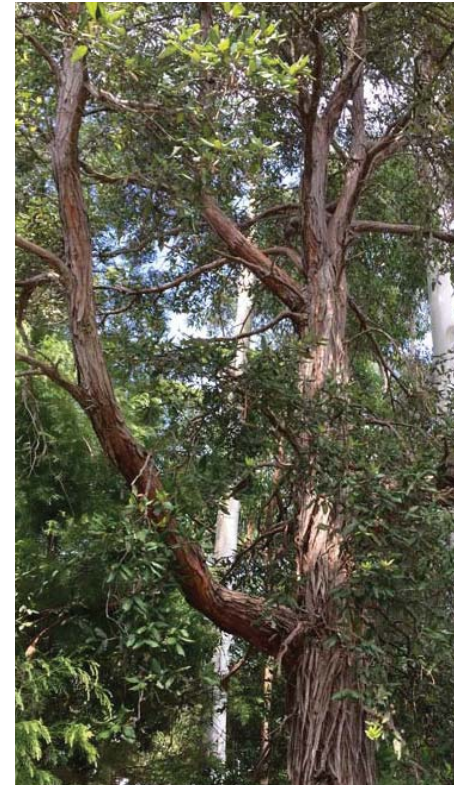
*Callistemon pinifolius*



*Kunzea ambigua*



*Glycine tabacina*



*Syncarpia glomulifera*





# 6

## COSTING AND IMPLEMENTATION

DRAFT

POLYMER & SMITH



## 6 Costing and Implementation

### *Implementation Plan*

The implementation plan is a guide to the preferred implementation and staging for the Dulwich Hill Station Detail Master Plan. The implementation plan has been used to influence Council's Long Term Financial Plan.

#### **How to use the implementation plan**

The project costings has been completed by a Quantity Surveyor to provide accurate costings reflective of the current construction market. The project costs have been separated into stages by Council's Public Domain Planning team to reflect deliverable projects that are aligned with community expectations and works to be delivered by others including the NSW Stage Government associated with Sydenham to Bankstown Sydney Metro Project. Both the original Quantity Surveyor's report and the proposed staging is included in this section of this report.

#### **Exclusions**

- Private domain improvements;
- Major earthworks and grading;
- Parking study and changes to marking regulations (e.g. parking meters, line markings and signage);
- Overtime for costs above and beyond basic wages;
- Electrical services upgrades;
- Works associated with the Sydenham to Bankstown Sydney Metro Project; and
- Elements not described in the master plan.

Additional clarifications on the assumptions to prepare the costings are outlined in the Quantity Surveyor's report.

#### **Project Costs and Implementation**

The Dulwich Hill Station Detailed Master Plan is estimated to cost a total of \$7,472,000 (exc. GST). This includes an optional extra to underground overhead electrical services. The undergrounding of the services does not need to proceed should this cost be higher than anticipated and the rest of the design works are not contingent on this action occurring.

The master plan is proposed to be delivered in seven stages. Stage 6 (six) is to be delivered and made by others as part of the Sydenham to Bankstown Sydney Metro Project. Each stage is to be delivered as

funding is available in Council's Forward Financial Plan or from grant funding submissions.

The full cost breakdown, staged costs and staging plan is on the following pages with the Quantity Surveyors report. A staging plan and the staged cost breakdown follows.



## 6 Costing and Implementation

### Implementation Plan / Staged Delivery



#### STAGING KEY

1. Dudley Street bicycle link
2. Dudley Street
3. Threshold treatment
4. Singnalised intersection
5. Wardel street works - WSUD and Paving
6. Sydney Metro project works
7. Streetscape works to Ewart Lane

#### STAGE COSTS\*

(all figures exclude GST)

1. \$ 570,095
2. \$ 459,315
3. \$ 1,071,455
4. \$ 894,090
5. \$ 1,775,850
6. \$ 857,280
7. \$ 619,915

#### Option Extra-

Undergrounding Electrical Services: \$ 1,224,000

**TOTAL:** \$ 7,472,000

\*Note: Cost Estimate and detailed breakdowns of items for the overall project are included on the following pages





**Mitchell Brandtman**

5D Quantity Surveyors & Construction Expert Opinion

# 5D COST PLANNING

We don't just provide costs, we provide certainty in real time

**Dulwich Hill Station Streetscape Works**

**Masterplan Estimate 1.2**

Mrs Caitlin Shields

Associate & 5D Quantity Surveyor

07 3327 5000

[cs@iields@mitbrand.com](mailto:cs@iields@mitbrand.com)

06 February 2018

Issue: 1.2

**Plummer & Smith**

**PO Box 204, Murwillumbah**





## 1. Introduction

Mitchell Brandtman has been commissioned by Plummer & Smith to undertake a masterplan estimate for the purpose of establishing a project budget for the works as described below. We have updated our estimate as per instruction by the Client for a reduced scope of works to the Undergrounding of Overhead Power Lines; which now excludes works to the rail corridor.

We understand the project scope involves improving pedestrian amenity around Dulwich Hill Station, with works comprising resurfacing and rebuilding roads, widening footpaths, providing more shade and texture in form of street planting and park works, new signalised traffic lights for the Wardell Road/Dudley Street intersection and tidying up of existing services.

We note that the existing old heritage station building is to be left untouched, and the actual station works will be by others.

## 2. Masterplan Estimate

Our Masterplan Estimate for the building works is as follows;

Description	Cost
Construction Works	\$ 5,118,000.00
Undergrounding of Overhead Power Lines (Option)	\$ 1,224,000.00
Design Contingency [10%]	\$ 635,000.00
<b>Subtotal</b>	<b>\$ 6,977,000.00</b>
Cost Escalation to September 2018**	\$ 140,000.00
<b>Subtotal</b>	<b>\$ 7,117,000.00</b>
Professional Fees	EXCL
Construction Contingency [5%]	\$ 355,000.00
<b>Total (Excluding GST)</b>	<b>\$ 7,472,000.00</b>

Refer to annexure A for estimate summary and details.

\*all figures noted here and throughout the report are exclusive of GST.

\*\*Cost Escalation provision is an allowance for cost increases and is dependent on the programmed commencement of work. Current market analysis suggests that on average there is expected to be approximately 2% escalation in the order of construction costs over the next 12 months. Prudent budgeting practices would support an allowance of 1-2% per annum thereafter

# Dulwich Hill Station Streetscape Works





### 3. Allowances

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Refer the estimate details in Annexure A for full list of allowances.

### 4. Structure & Services

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Assumptions have been made regarding structure as no structural information is available. Further detailed estimates should be carried out as structural information becomes available.

Our estimates for services are preliminary only and should be confirmed by the relevant services engineers.

### 5. Method

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Our estimate has been prepared to provide an indication in our opinion of the order of construction costs associated with the proposed development. We have calculated approximate quantities for the various project components from the drawings described. Appropriate unit rates have been applied to the relevant quantities based upon our cost record for comparable developments.

### 6. Clarifications

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The estimate is based on unrestricted access to the site and buildings being unoccupied.

The estimate is also based on a reasonable construction period and standard working hours, with no allowances made for acceleration costs, overtime and the like.

This estimate is based on a tendered lump sum type building contract / procurement system with select, competitive tenders.

In preparing our estimate we have made the following assumptions;

- All existing levels are adequate. No allowance has been made for earthworks to form levels or grades.
- The site is free of any contaminants; hazardous materials, acid sulphate soils etc.
- Suitable capacity services are available at the site boundary and diversions or upgrades are not required. A provision has been made to relocate the overhead powerlines to underground trenches.
- No allowance has been made for parking meters.

# Dulwich Hill Station Streetscape Works





## 6. Clarifications [cont'd]

- The works will need to be completed in stages to minimise impact on traffic. Staging of the works has been allowed to Wardell Road North, Wardell Road South, Bedford Crescent, Ewart Lane/Street and Dudley Street.
- An allowance has been made to repair/clean all pavements in the area of works that is not getting re-surfaced or re-laid.
- A Provisional Allowance of \$150,000.00 has been included in the extension of the timber bridge for works within/around rail zone below.
- Areas of Bluestone Pavement have been re-paved only. No allowance has been made for a new concrete footpath under.
- Electrical supply is sufficient to support new traffic signals and lighting. No allowance has been made to upgrade electrical mains or new sub stations.
- We note that the Provisional Allowance for undergrounding of overhead power lines may vary significantly - a quote should be requested for this at the earliest convenience.
- Provisional Allowances have been made for:
  - \$150,000.00 - Public Art
  - \$15,000.00 – Removal, Storage & Re-instatement of Heritage Kerbs
  - \$40,000.00 – Interpretive Signage
  - \$200,000.00 – Lighting

"This report is provided solely for the client named on the cover of this report and cannot be relied upon by any other party.~ Mitchell Brandtman shall not be liable for any loss or damage of any kind, howsoever caused, whether direct or consequential, including but not limited to negligence, suffered or incurred by any such party."

## 7. Documents

Our estimate is based on the following documents:

- Dulwich Hill Station Detailed Master Plan received 15.09.2017
- Email brief from Dan Plummer received 15.09.2017
- Client correspondence 04.10.2017 & 12.12.2017

# Dulwich Hill Station Streetscape Works





## 8. Exclusions

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Our estimate excludes the following items:

- Station Works
- Works to Heritage Station Building
- Works within Rail Corridor
- Parking Meters
- Professional fees
- DA works, Authority Fees, Charges & Contributions
- Workplace Health and Safety and PLSL Fees
- Removal of Contaminates
- Site Allowance
- Goods and Services Tax

We welcome the opportunity to discuss any part of this estimate with you. Please contact myself on 07 3327 5000 should you have any queries or require further information.

Yours Sincerely

MITCHELL BRANDTMAN

**Caitlin Shields**

**Associate & 5D Quantity Surveyor**

# Dulwich Hill Station Streetscape Works



Commercial in Confidence



**MitchellBrandtman**  
SD Quantity Surveyors & Construction Expert Opinion

## Annexure A

### Estimate Details

# Dulwich Hill Station Streetscape Works

021352/01351713  
Masterplan Estimate  
Issue 1.2  
06 February 2018



**ELEMENTAL COST ANALYSIS**

**PROJECT:** Dulwich Hill Station Upgrades

**Issue No:** 1.2

**Issue Date:** 06 Feb 2018

**Project No:** 021352

**Status:** B1

**Cost Index:** 561

**FECA:** 0 m2

CODE	ELEMENT	COST \$	RATE \$/m2
****	Demolition	364,001	
****	Roadworks	3,270,714	
****	Parking	189,865	
****	Soft Landscaping	224,286	
****	Pocket Park	42,966	
****	Furniture & Structures	346,500	
****	Underground Overhead Powerlines	1,224,000	
	Lighting	220,000	
	Traffic Control/Staging	294,030	
	Public Art Provision	165,000	
	Existing Station Building	0	
	New Station Works	0	
Total		6,341,363	0.00



## ELEMENTAL DETAILS

Demolition		QTY	RATE	\$
<b>Demolition</b>				
1	Demolish paving.	3,133 m2	35.00	109,655
2	Strip road surface.	4,717 m2	35.00	165,095
3	Demolish footpath.	1,176 m2	35.00	41,160
4	Provisional Allowance to remove, store and re-instate existing heritage kerb sections.	Item		15,000
Preliminaries provision - 10%.				33,091
<b>Element Total</b>				<b>364,001</b>
**** Roadworks		QTY	RATE	\$
<b>Roadworks</b>				
1	Resurface road.	2,080 m2	135.03	280,862
2	New concrete road - Wardell North.	1,390 m2	150.00	208,490
3	New concrete road - Wardell South.	1,744 m2	150.00	261,587
4	Provision for connections.	Item		52,500
5	Raised pedestrian sections with feature pavers.	756 m2	262.50	198,450
6	Line marking to bike path.	70 m2	52.50	3,675
7	Extension of existing footpaths and new footpaths including paved finish.	3,841 m2	309.75	1,189,750
8	Allow to join with existing.	212 m	105.00	22,260
9	New kerbs.	891 m	160.00	142,559
10	Pram ramps.	4 No	1,260.00	5,040
11	Suspended timber bridge extension.	46 m2	1,575.00	72,450
12	Extra for working within / around rail zone below.	Item		150,000

## ELEMENTAL DETAILS

**** Roadworks (Cont'd)	QTY	RATE	\$
13 Repair/make good existing pavement and footpaths in areas of new works.	1,705 m2	100.01	170,503
14 Traffic signals to 3-way intersection including fully activated detectors, electrical services between signals, control box, pedestrian push buttons and indication signs.	1 No	204,750.00	204,750
15 Provision for electrical services to traffic signals.	Item		10,500
Preliminaries provision - 10%.			297,338

### Element Total

**3,270,714**

**** Parking	QTY	RATE	\$
<b>Parking</b>			
1 Asphalt carpark.	933 m2	135.00	125,954
2 Linemarking and miscellaneous hardware including bollards and wheelstops.	933 m2	50.01	46,651
3 Parking meters.	Note		EXCL
Preliminaries provision - 10%.			17,260

### Element Total

**189,865**

**** Soft Landscaping	QTY	RATE	\$
<b>Soft Landscaping</b>			
1 Planting areas including passive irrigation.	196 m2	150.01	29,474
2 Rain garden planters including drainage and passive irrigation.	6 No	5,880.00	35,280
3 Turf to verge.	127 m2	78.75	9,993
4 New street trees including structural tree pit and grate.	30 No	1,575.00	47,250
5 Garden planters (per tree).	65 No	1,260.00	81,900



## ELEMENTAL DETAILS

**** Soft Landscaping (Cont'd)	QTY	RATE	\$
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Preliminaries provision - 10%. 20,390

**Element Total 224,286**

**** Pocket Park	QTY	RATE	\$
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<b>Pocket Park</b>			
1	Resurfacing included in Roadworks.	Note	INCL
2	Decomposed granite finish.	99 m2	105.00 10,395
3	Feature paving.	35 m2	315.00 11,025
4	Planting areas complete.	14 m2	1,260.00 17,640
Preliminaries provision - 10%.			3,906

**Element Total 42,966**

Furniture & Structures	QTY	RATE	\$
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<b>Furniture &amp; Structures</b>			
1	Precast concrete seats.	40 m	2,000.00 80,000
2	Allow for miscellaneous furniture including bins, shade sails, tactile indicators and timber seating benches. No allowance has been made to re-use existing furniture.	Item	180,000
3	New open bus stop.	Item	15,000
4	Provisional Sum Allowance for interpretive signage.	Item	40,000
Preliminaries provision - 10%.			31,500

**Element Total 346,500**

**** Underground Overhead Powerlines	QTY	RATE	\$
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**Underground Overhead Powerlines**

## ELEMENTAL DETAILS

**** Underground Overhead Powerlines (Cont'd)		QTY	RATE	\$
<u>Roads</u>				
1	Bedford Road.	Item		153,000
2	Ewart Road.	Item		369,000
3	Wardell Road - North.	Item		196,000
4	Wardell Road - South.	Item		208,000
5	Dudley Street.	Item		188,000
6	Keith Street, Wilga Avenue, Wardell Rod South East of Ewart Street, Ewart Street South West of Wardell Road.	Note		EXCL
<u>Rail Corridor</u>				
7	Bedford.	Item		EXCL
8	Ewart.	Item		EXCL
9	Dudley.	Item		EXCL
10	Provision for Rail Corridor access / safety & restricted works penalty.	Item		EXCL
Preliminaries provision - 10%.				110,000
<b>Element Total</b>				<b>1,224,000</b>
<b>Lighting</b>				
<u>Lighting</u>				
1	Provisional Allowance for Lighting.	Item		200,000
Preliminaries provision - 15%.				20,000
<b>Element Total</b>				<b>220,000</b>





## ELEMENTAL DETAILS

Traffic Control/Staging		QTY	RATE	\$
Traffic Control/Staging				
1	Traffic control.	Item		250,800
2	Hoarding.	Item		16,500
Preliminaries provision - 10%.				26,730
Element Total				294,030
Public Art Provision		QTY	RATE	\$
Public Art Provision				
1	Provisional Sum for Public Art	Item		150,000
Preliminaries provision - 10%.				15,000
Element Total				165,000
Existing Station Building		QTY	RATE	\$
Dulwich Hill Station Building				
1	Existing station building retained as community facility - no works allowed.	Note		EXCL
Element Total				0
New Station Works		QTY	RATE	\$
New Station Works				
1	New station works by Sydney Metro.	Note		EXCL
2	Suspended platform and stair access to new station.	Note		EXCL
Element Total				0

## CONTACT

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