(Source: pinterest.com)

CUMBERLAND CITY COUNCIL

Wentworthville Centre

Public Domain Plan

April 2020

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Table of Contents

1 Introduction

1.1 Purpose

The Wentworthville Centre Public Domain Plan (The Plan) has been prepared by Cumberland Council to guide the delivery of consistently high-quality public realm to promote the revitalisation of Wentworthville Centre identified in Figure 1.

The Plan sets out a Centre wide palette of streetscape treatments, including material palettes for surface treatments, street furniture, landscaping and finishes. This document also provides guidelines and relevant information to assist developers and Council in undertaking public domain works within the Centre.

1.2 What is the Public Domain

Within the context of this document, the public domain represents all urban and natural elements, structures, and spaces that exist within the publicly-owned areas of the Wentworthville Centre and the relationship between them. The public domain also includes privately-owned arcades, plazas, building forecourts, internal walkways, and other semi-public spaces as they also influence the overall character of the public domain.

Figure 1 - Wentworthville Centre Boundary

1.3 Objectives

The objectives of this Plan are consistent with the Wentworthville Centre Planning and Place Making Strategy. This Plan aims to establish a framework of design principles to guide the improvement of the public domain within the Centre. The main objectives are to:

a. Promote design solutions that enhance the amenity and character of the Centre for residents, visitors, businesses, and other users.
b. Embrace diversity and distinctiveness and foster a sense of community and ownership for locals and visitors alike through high-quality public domain design.
c. Encourage the development of spaces that are attractive, well-used, universally accessible, robust, and safe for all users.
d. Provide new connections for better access and improved pedestrian and vehicular network in the Centre.
e. Facilitate high quality design solutions that encourage social interaction, a range of sensory experiences, and functionality.
f. Promote the seamless integration of the public and private domains.
g. Encourage sustainable environmental practices.
h. Promote outdoor dining and street activation by improving pedestrian amenity and access to outdoor dining areas.
i. Protect heritage elements within the Centre.

1 Introduction

1.4 How to Use this Manual

This Plan is to be used to inform the design of the proposed public domain works in order to:

1. Influence the understanding of the site context, including infrastructure needs and desired future character;
2. Guide design and development decisions to ensure seamless integration of the public and private domain; and
3. Inform the choice of materials, street furniture, tree planting and landscaping, and other streetscape elements to be used within the Wentworthville Centre.

1.5 Policy Context

The arrangement of public domain spaces in Wentworthville Centre are significantly shaped and determined by a number of specialist studies and policy documents, which include:

1. Cumberland 2030: Our Local Strategic Planning Statement, which identifies Wentworthville as a Principal Local centre
2. Holroyd Local Environmental Plan and future Cumberland Local Environmental Plan
3. Holroyd Development Control Plan and future Cumberland Development Control Plan, with reference to site specific controls for:
    - Wentworthville Centre
    - Wentworthville Mall Site
    - 108 Station Street, Wentworthville

The Plan builds upon these strategies in providing principles for the planning and design of public domain areas, and should be read in conjunction with these documents.

The Plan is also cognisant of numerous other relevant studies undertaken, which include the following:

4. Wentworthville Planning and Place Making Strategy
5. Wentworthville Public Art Visioning Report

The proposed urban development structure of Wentworthville Centre and defining key components of the public domain which are referred to in this document are discussed in Section 4 of this Plan.

2 Background

2.1 Wentworthville Centre Structure Plan - Public Domain

The Wentworthville Planning and Place Making Strategy was based on extensive community consultation, urban design study / modelling and numerous specialist studies. The Strategy, includes a Built Form Structure Plan, Open Space and Public Domain Structure Plan and connectivity Structure Plan.

The key elements of the Wentworthville Centre Structure Plan – Public Domain include:

- New linear plaza along the southern side of Dunmore Street. This space is intended to be a tree-lined public promenade / pedestrian mall that supports outdoor dining, shaded seating areas with public art, feature lighting and Water Sensitive Urban Design (WSUD) opportunities (Refer Figure 3).
- Improved pedestrian link at the existing arcade / mall site.
- New plaza at the library and civic hub at the end of Dunmore Street and revitalised parkland along Finlaysons Creek to enhance the civic precinct and provide much needed open space within the Centre.
- Improved and enhanced street tree planting along streets to improve streetscape character and enhance amenity with the Centre.

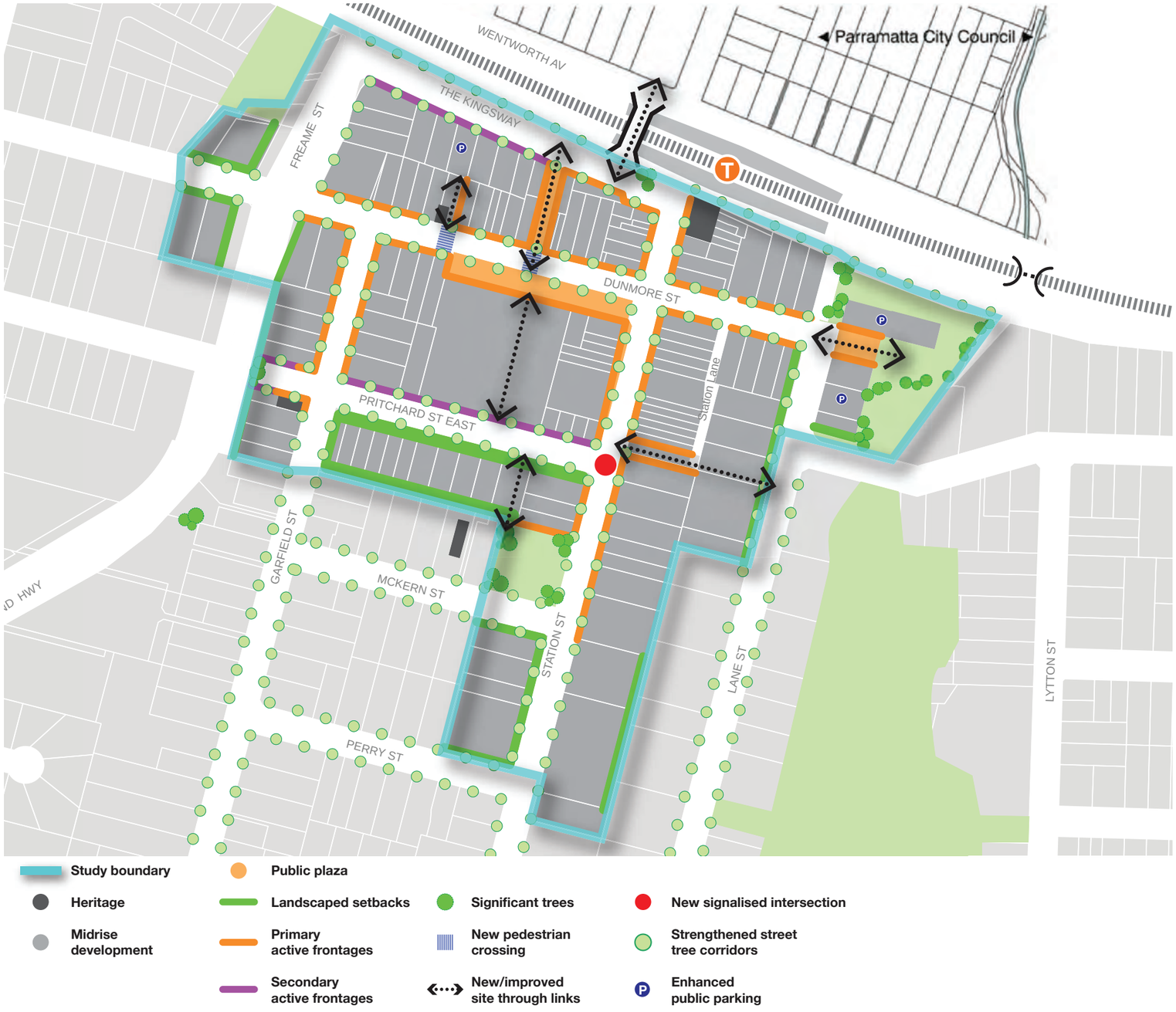

Figure 3 - Wentworthville Centre Structure Plan - Public Domain

2 Background

2.2 Wentworthville Centre Structure Plan - Connectivity

The key elements of the Wentworthville Centre Structure Plan – Connectivity include:

- A new main street bypass directly connecting Pritchard Street to Veron Street by acquiring land north of 52 Station Street (Wentworthville Hotel) to establish Dunmore Street as High Pedestrian Activity Area (HPAA) by removing through traffic from Dunmore Street(Refer Figure 4).
- Improved through-site links between The Kingsway and Dunmore Street to provide more direct and safe pedestrian access to the rail station and public car park.
- New pedestrian link between Dunmore Street and Pritchard Street East to improve pedestrian permeability within this large urban block to promote activation along Pritchard Street East.
- New pedestrian link between Pritchard Street East and Friend Park to improve activation of the Park and better integrate it into the core of the Centre.
- New pedestrian crossing at mid-block on Dunmore Street and Pritchard Street East to improve north-south pedestrian connectivity with the core and though long blocks.
- Cycle routes connecting into the Centre and improving access to the rail station.
- New service lane from The Kingsway to the rear of properties along Dunmore Street to facilitate redevelopment of the on-grade car park and retain service access to future shops.
- Extension of Station Lane to the south to provide service access for future development and maximise active street frontage along Station Street.

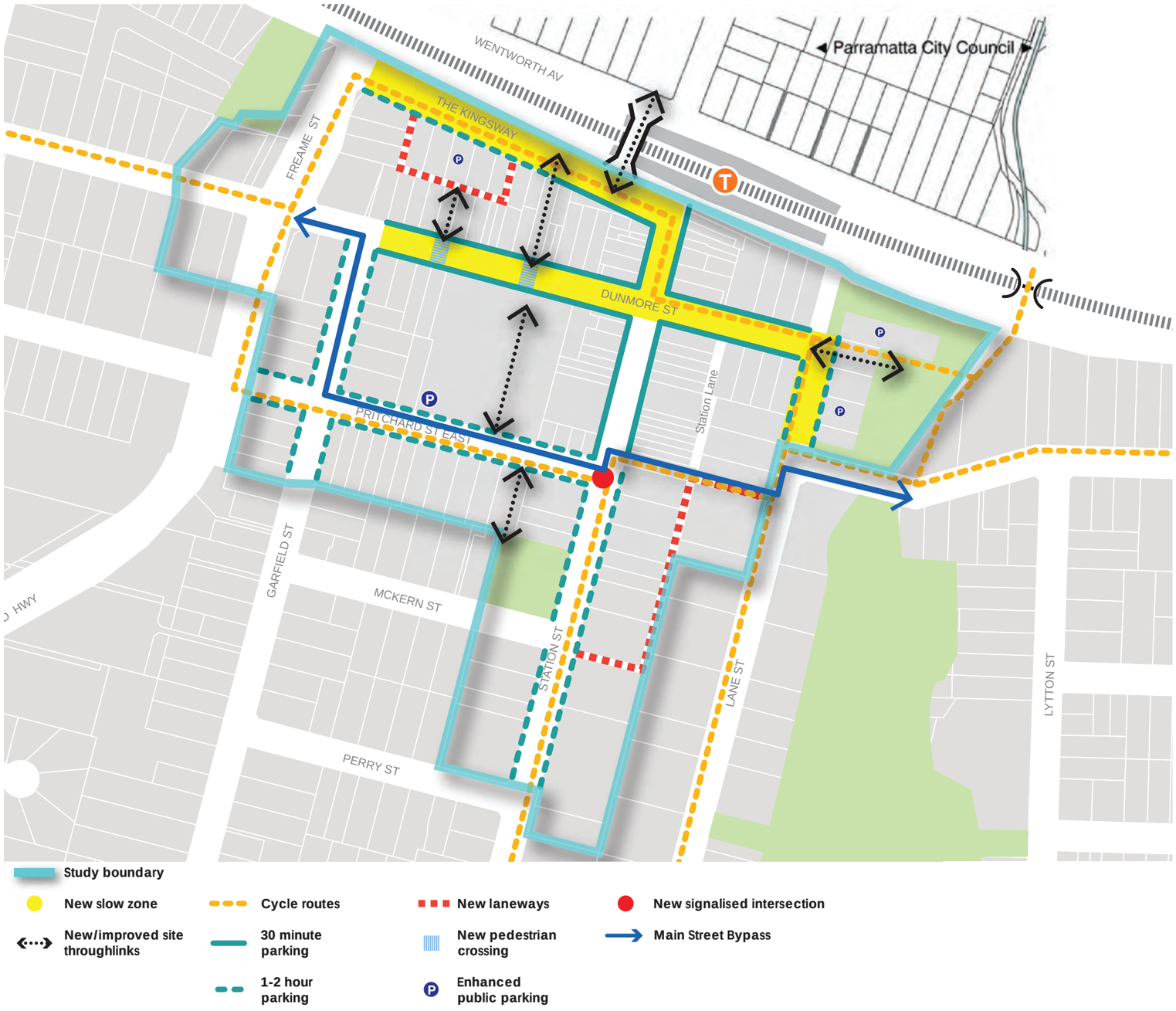

Figure 4 - Wentworthville Centre Structure Plan - Connectivity

3 Vision

This Public Domain Plan builds on and further refines the vision established for the Wentworthville Centre in the Wentworthville Centre Planning and Place Making Strategy as follows: *"A progressive, colourful, vibrant and engaging local centre that is comfortable and well connected to the surrounding area and facilities. Wentworthville Centre will be a great place to live and shop; to stay".*

Wentworthville Centre is envisioned to be characterised by a high-quality, well designed, safe and liveable environment. The public domain vision for the Centre is to insert a new landscape layer that provides a meaningful and distinctive landscape that strengthens the character of the Centre. Landscaping and planting along the streets, and laneways will provide the much needed "green canopy" that will soften the built environment and enhance the amenity of the public domain (Refer Figures 5, 6 and 7).

The principles guiding the design of the public domain will result in establishing Dunmore Street as a high pedestrian activity area (HPAA) with outdoor dining within new Dunmore Street Plaza. The introduction of new pedestrian connections and street tree planting will provide a distinct landscape character defining the Centre. Tree lined Station Street will provide a strong entry statement from the Train Station. Dunmore Street as a HPAA and Dunmore Street Plaza will compensate to some extent the lack of public space within the Centre.

This Public Domain Plan outlines a series of principles, strategies and guidelines needed to achieve this vision. The design principles are outlined in the following Section of this report.

Figure 5- Potential Public Cumberland Library Lawn

Figure 6 - Main Street Rouse Hill Shopping Centre - Potential Streetscape Character - Station Street

Figure 7 - Potential Character - Wentworthville Plaza Outdoor Dining Area with Active Frontage, Planter Boxes and Shade Structure (*Source: pinterest.com*)

4 Design Principles

Promoting pedestrian access is central to the design of the public domain and increases opportunities for social interaction and community life. Streets and public spaces should be comfortable, safe, and engaging places that encourage people to stay. Pedestrian routes to and within Wentworthville Centre should be designed to be accessible to everyone, promote walking, and reduce conflict between pedestrians, bicycles, and cars.

Public art, trees, directional signage, and street furniture should be incorporated into streets and public spaces as they not only contribute to the visual and spatial quality of the public domain but also improve the human experience by providing amenities such as shade, seating, and wayfinding. Sustainability outcomes can also be promoted in streets, parks, and urban spaces by including street trees where possible and implementing measures to harvest and reuse water.

The key principles that guide the design and development of public spaces within the Wentworthville Centre are discussed below and the concept captured in Figures 8-16.

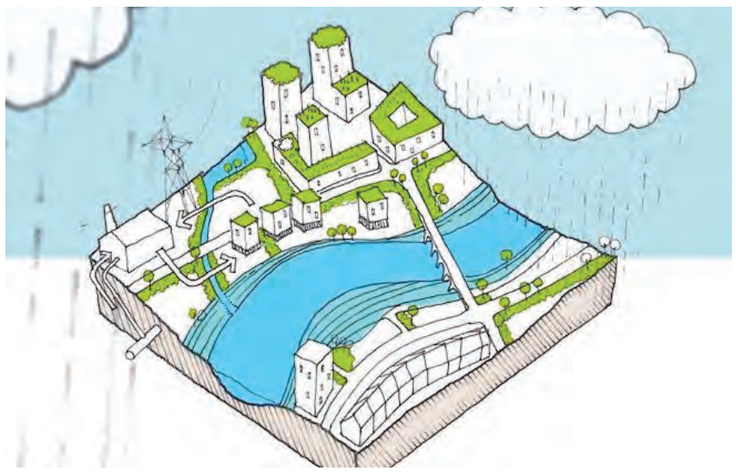

Figure 8: Water Sensitive Urban Design Principles (*Source: WSUDInstitite.com*)

Liveability

- Create spaces that provide a desirable setting and backdrop for social interaction and a variety of activity.
- Promote healthy living by enhancing pedestrian / cycle connectivity and amenity to encourage walking / cycling.
- Provide unified streetscapes that are high-quality, durable, and timeless in design.

Active Transport

- Prioritise pedestrian amenity by providing opportunities to expand the public domain.
- Minimise pedestrian, cycle, and vehicle conflict.
- Provide amenities such as seats, shelters, and bike racks to support pedestrian and cycle use.

Water Sensitive Urban Design

- Integrate water sensitive urban design measures in the landscape to enhance flood protection, minimise impacts on water quality in receiving waters' and irrigation of street trees and landscape.

Equitable Access and Use

- Enable equitable and safe access for people of all ages and abilities in accordance with the Building Code of Australia (BCA) and the Disability (Access to Premises – Buildings) Standards (Premises Standards) - AS 1428.
- Ensure continuous accessible paths of travel and circulation spaces and appropriate facilities for people with disabilities.
- Eliminate level changes and obstructions and promote consistent paving patterns as much as possible.

Safety by Design

- Ensure that all publicly accessible pathways have sufficient width, lighting, and finishes to enhance public safety.
- Where possible, pathways should be adjacent to active spaces to improve amenity and safety.

Figure 9: Liveability (*Source: Nature Homes, Melbourne*)

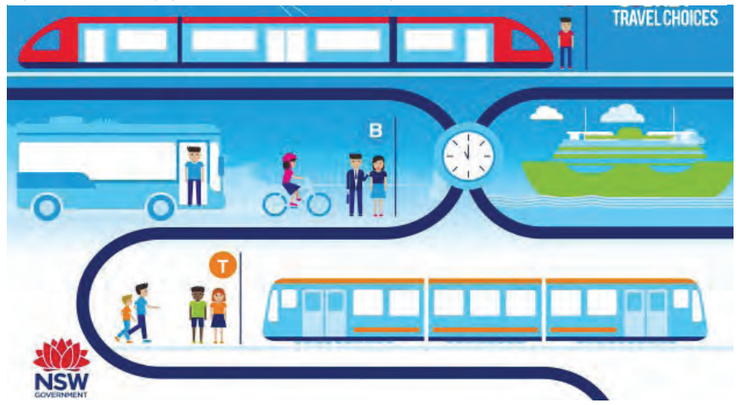

Figure 10: Active Transport (*Source: Transport NSW)*

Figure 11 Equitable access (*Source: Pinterest.com*)

4 Design Principles

- Where possible, footpaths should be located to avoid conflict with vehicular traffic .

Trees

- Integrate tree and landscape treatments to provide shade, interest, and amenity as well as unify streetscape.
- Increase tree canopy and understorey planting to reduce the extent of hard surfaces and reduce heat island load, increase biodiversity, and influence microclimate.

Public Art

- Incorporate public art that assists legibility and defines a sense of place and identity of Wentworthville.
- Develop public art projects that express Wentworthville's cultural richness and diversity.
- Provide visual interest to everyday activities.

Future Fit

- Ensure streetscape is planned and designed with current and likely future needs in mind.
- Ensure the material palette is available over the lifetime of the plan.

Figure 13: Public Art: Eco Street Art - The Morton Arboretum, Illinois USA (*Source: livingdesign.com.br*)

Figure 15: Designing for the Future (*Source: vectorstock.com*)

Figure 12: Safety by Design Principles (*Source: CPTED Forum Sydney*)

Figure 14: Integrating Trees into Landscape (*Source: Nature Homes, Melbourne*)

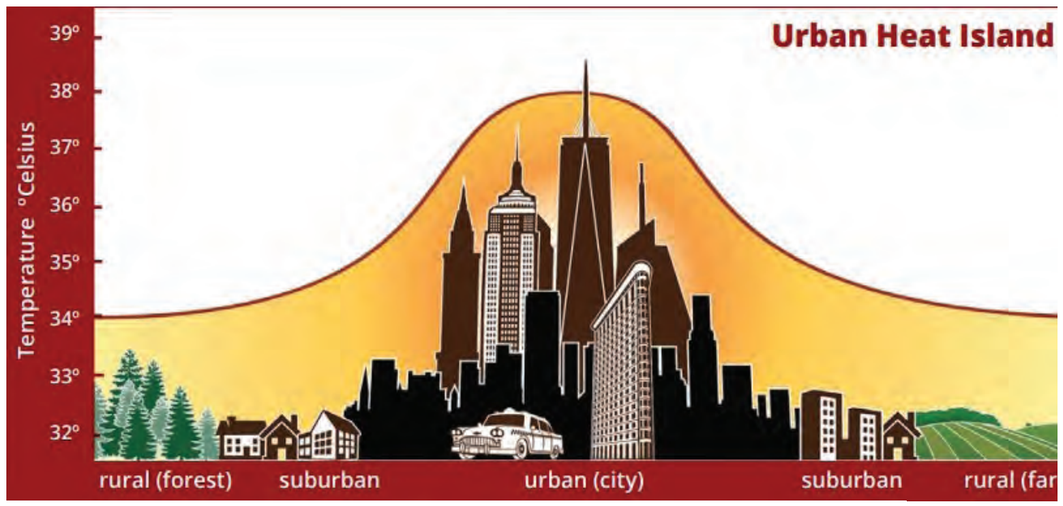

Figure 16: Urban Heat Island Effect (*Source: Urban Heat Island department of Commerce*)

5 Circulation and Access Network

5.1 Street Typology

The Public Domain Plan promotes a more balanced idea of street design that recognises the need to accommodate public life and amenity as well as cater for traditional transport corridor function. In order to guide both future development and road design projects, the Public Domain Plan has established a set of street typologies that classify Wentworthville Centre's streets based on the adjacent land uses and desired character of the street.

The planning controls reinforces Dunmore and Station Streets as the principal streets within the Wentworthville Centre. In particular, the permissible height and FSR will see Dunmore and Station Streets develop as main streets with residential development above active street frontages. The network of existing streets will be augmented by proposed new laneways and a bypass to create a circulation network that aims to substantially improve traffic congestion and create a more permeable and amenable public domain for pedestrians and cyclists. The circulation network is created by a combination of existing streets, new laneways, arcades and a plaza (Refer Figure 17). The proposed hierarchy and character of existing streets and proposed laneways and pedestrian links is discussed in the following section.

The hierarchy of streetscape typology is different to the standard NSW Roads and Maritime Services (RMS) road classification. The recommended streetscape typologies are illustrated in Figure 17 and discussed in detail in the following Section.

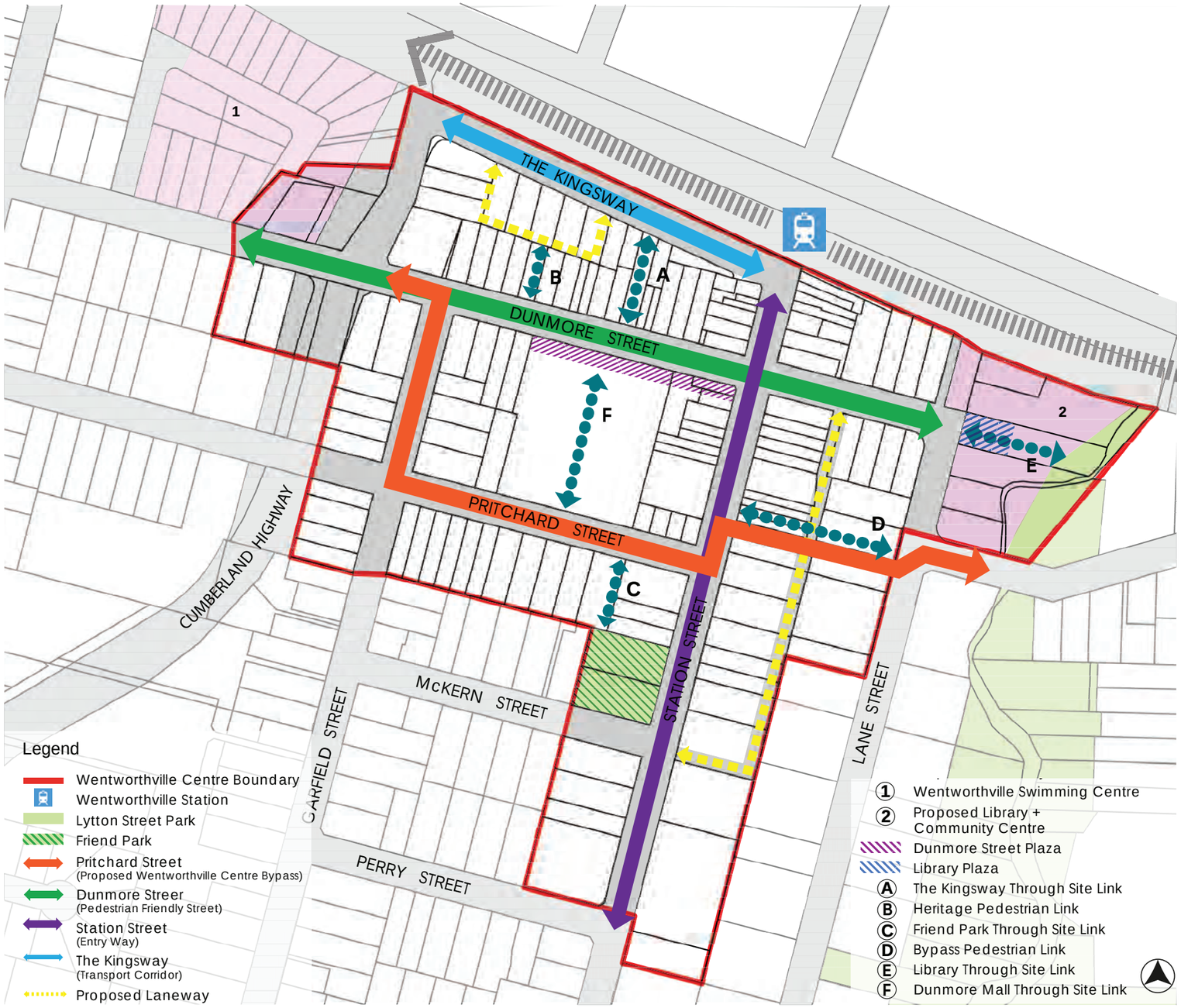

Figure 17 - Proposed Public Domain Plan

5 Circulation and Access Network

5.2 Dunmore Street

Dunmore Street – High Pedestrian Activity Area

It is proposed to change the function of Dunmore Street from a major traffic throughway to a traffic calmed street to handle both high pedestrian volumes and high levels of activity throughout the day and night (Refer Figures 18 and 19). Retail and urban street life activity will be focused on Dunmore Street, with an enlarged pedestrian plaza and distinctive design treatments. This will enhance pedestrian amenity and connectivity and provide much needed additional outdoor space for adjacent businesses.

Guidelines

a. Introduce a slow zone for vehicles with speeds of maximum 40km/hr between Garfield Street and Station Street by reducing the number of traffic lanes and establishing street tree planting between the traffic lanes.

b. Progressively remove long term on-street parking and build wider footpaths to improve street life that accommodates pedestrians, and outdoor dining, new street furniture, unique public art, and street trees.

c. Introduce and align two new pedestrian crossings with through site links to both The Kingsway and Pritchard Street to improve permeability and pedestrian flow.

d. Provide short term parking drop off zone.

e. Create a clear east-west visual and pedestrian connection along Dunmore Street between Wentworthville Swimming Centre with Wentworthville Community Centre using quality urban design elements.

f. Establish new street tree planting to improve the urban amenity.

g. Where trees are planted in the median on Dunmore Street, final design to be approved by RMS.

h. Provide two bus stops (one each way) supported by high quality urban infrastructure.

i. Enable temporary access for emergency, community and maintenance vehicles to Dunmore Plaza when required.

j. Incorporate Water Sensitive Urban Design Features within the streetscape.

The materials palette is discussed in detail in Sections 7 to 11 of this report.

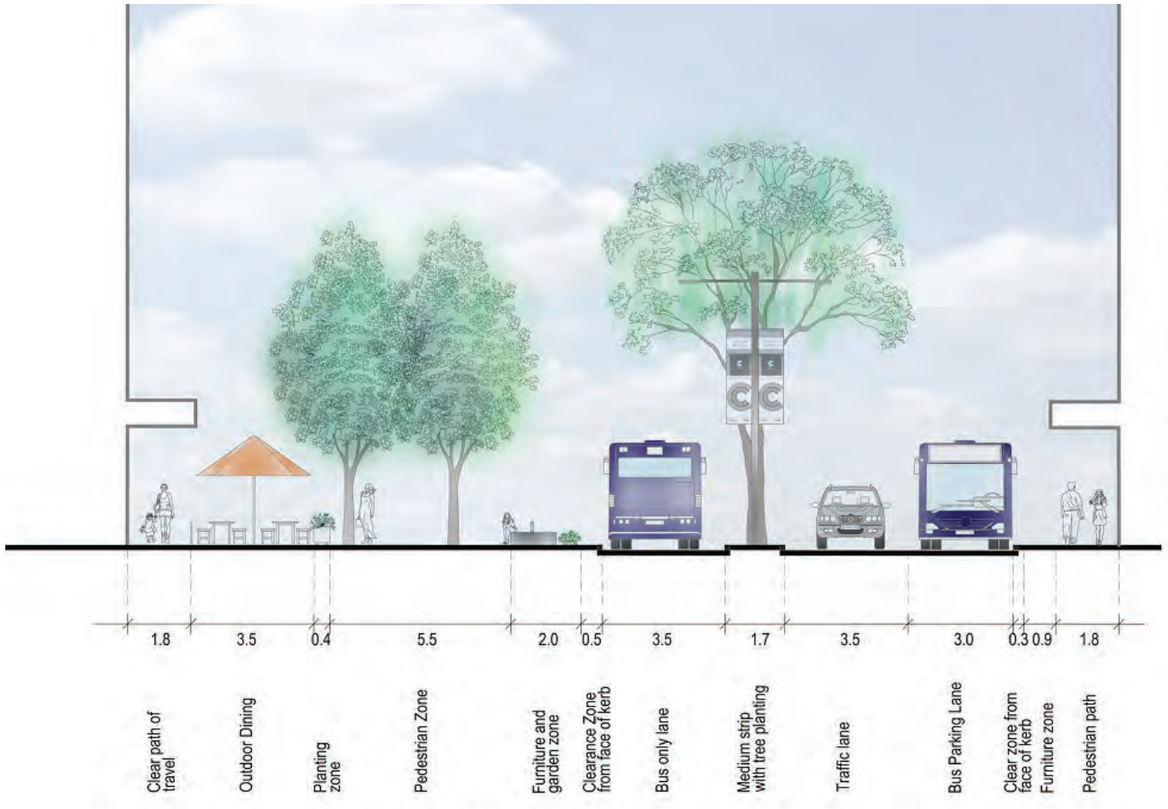

Figure 18 - Dunmore Street Section Through Plaza - Looking West

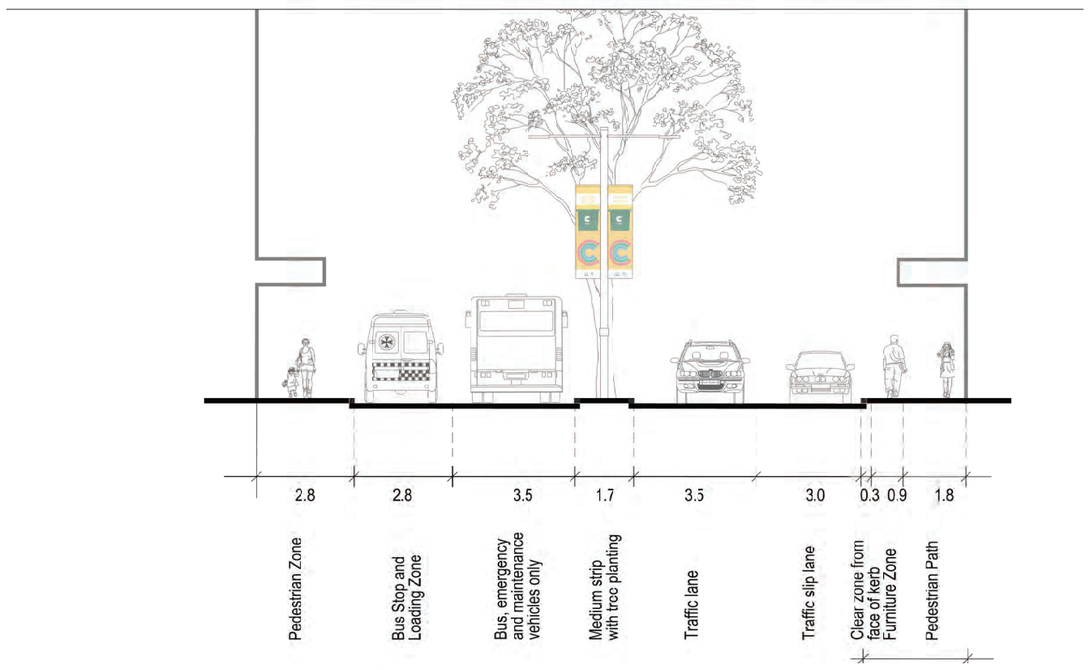

Figure 19 - Dunmore Street Section near Garfield Street - Looking West

5 Circulation and Access Network

5.3 Pritchard Street

Pritchard Street – Wentworthville Centre Bypass

A new bypass link connecting the Cumberland Highway to Veron Street via Pritchard Street will allow the east-west travelling traffic not associated with the Centre to bypass Dunmore Street and part of Station Street. This will improve pedestrian access, safety as well as public transport efficiency within Dunmore Street whilst catering to the future traffic demands associated with future development within the Centre (Refer Figure 20).

Guidelines:

a. Establish two lanes of traffic each way along Pritchard Street.

b. Provide ease of access and egress to off street parking within the Wentworthville Mall Development site and other development associated with Pritchard Street.

c. Establish new street tree planting within the setback zones on the northern side of the street to improve the urban amenity. In addition, tree planted is encouraged within the private setback to the south of Pritchard Street.

d. Maintain pedestrian access along Pritchard Street with a pedestrian crossing located at the Station Street intersection.

e. Enable on-street parking on the southern side of Pritchard Street during off-peak period.

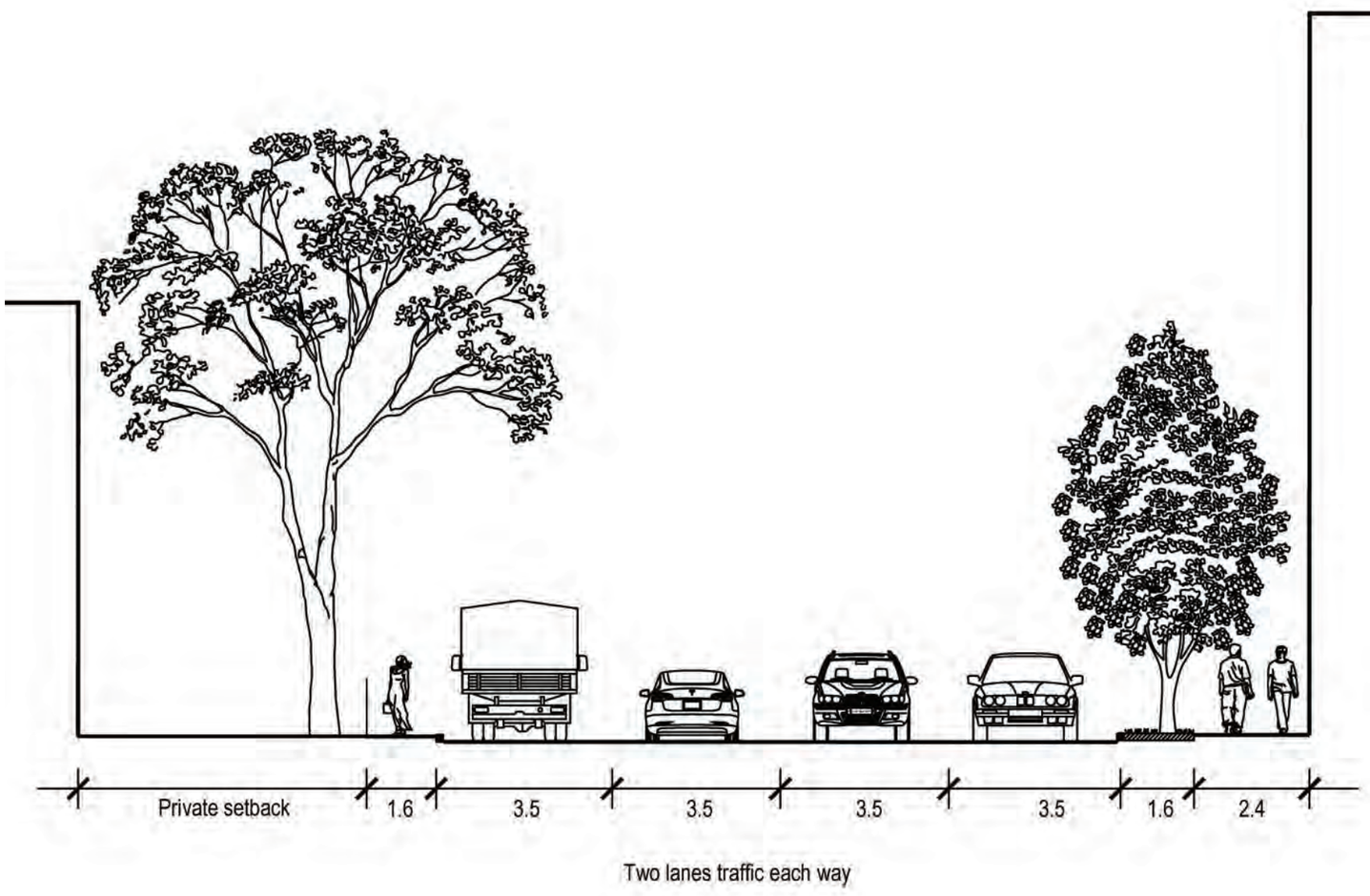

Figure 20 - Pritchard Street Section at Mall Site - Looking West

5 Circulation and Access Network

5.4 Station Street

Station Street – Entry Avenue

With planting on both sides, Station Street will provide an imposing entry to the Centre from the Train Station(Refer Figure 22).

Friend Park, the only green public open space within the Centre, has an interface with Station Street. The Train Station and Friend Park -the key anchors for the Centre - will handle continuous activity throughout the day. Station Street will provide a space where people do their daily errands, meet with friends and shop. Consideration to managing short-term parking and loading facilities efficiently and effectively that serves both the needs of local businesses while enabling improvements to the public realm is essential for the success of Station Street.

Guidelines

a. Distinguish the entry into the Centre from the Train Station by establishing high quality urban design amenities.

b. Establish new street tree planting to improve urban amenity.

c. Tree planting on Station Road shall be placed in the road corridor and allow for car parking between each tree. Final design to be approved by Council's Engineers.

d. Incorporate WSUD features within the streetscape.

e. Establish loading zones and short–term parking to meet the demands of local businesses and visitors to the Centre.

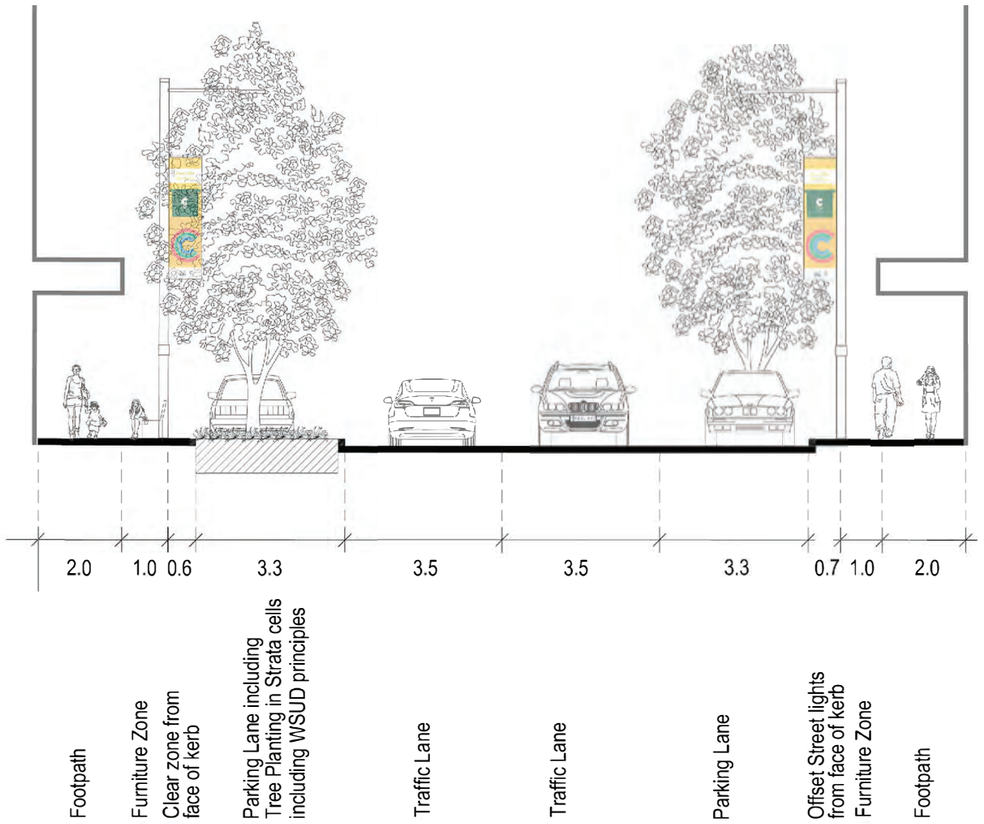

Figure 22: Station Street Looking North

5.5 The Kingsway

The Kingsway – Transport Corridor

The Kingsway will service two key functions:

- The eastern end will serve as a major pedestrian access point to the Centre from the Train Station; and,
- The western end will provide vehicular access to the commuter car parking.

Guidelines

a. Introduce high quality urban design elements that signify entry to the Centre.

b. Prioritise pedestrian movements by introducing a raised pedestrian crossing at the Train Station entrance.

c. In association with the Train Station, introduce high quality urban design elements to support taxi facilities and "Kiss and Ride" spaces.

d. Introduce new street tree planting to improve the urban amenity.

e. Retain a public toilet facility in The Kingsway.

5.6 Station Lane

Station Lane – Service Corridor

The new laneway on the eastern side of Station Street will enable both residential and service vehicular access to properties fronting Station Road and Lane Street. The laneway shall be designed for low vehicle speeds to calm traffic and emphasize shared space with pedestrians.

Guidelines

a. Introduce different paving material at entrances to or along laneways.

6 Public Domain Areas

The design guidelines and specifications in the following sections of this report apply to all work carried out in the public domain within the Wentworthville Centre.

Dunmore Street will have a distinct character and materiality appropriate to its intended use. While the remaining Centre (excluding Dunmore Street) will have a more standardised materials palette. Based on the material palettes, the following sections of this report are broadly divided into two sections which include materials palette for areas within the Centre identified as following (Refer Figure 23):

1. Dunmore Street Plaza
2. Wentworthville Centre Public Domain

Note: *Unless otherwise included under the Dunmore Street Plaza section; the Wentworthville Centre Public Domain materials palette is applicable to the whole Centre.*

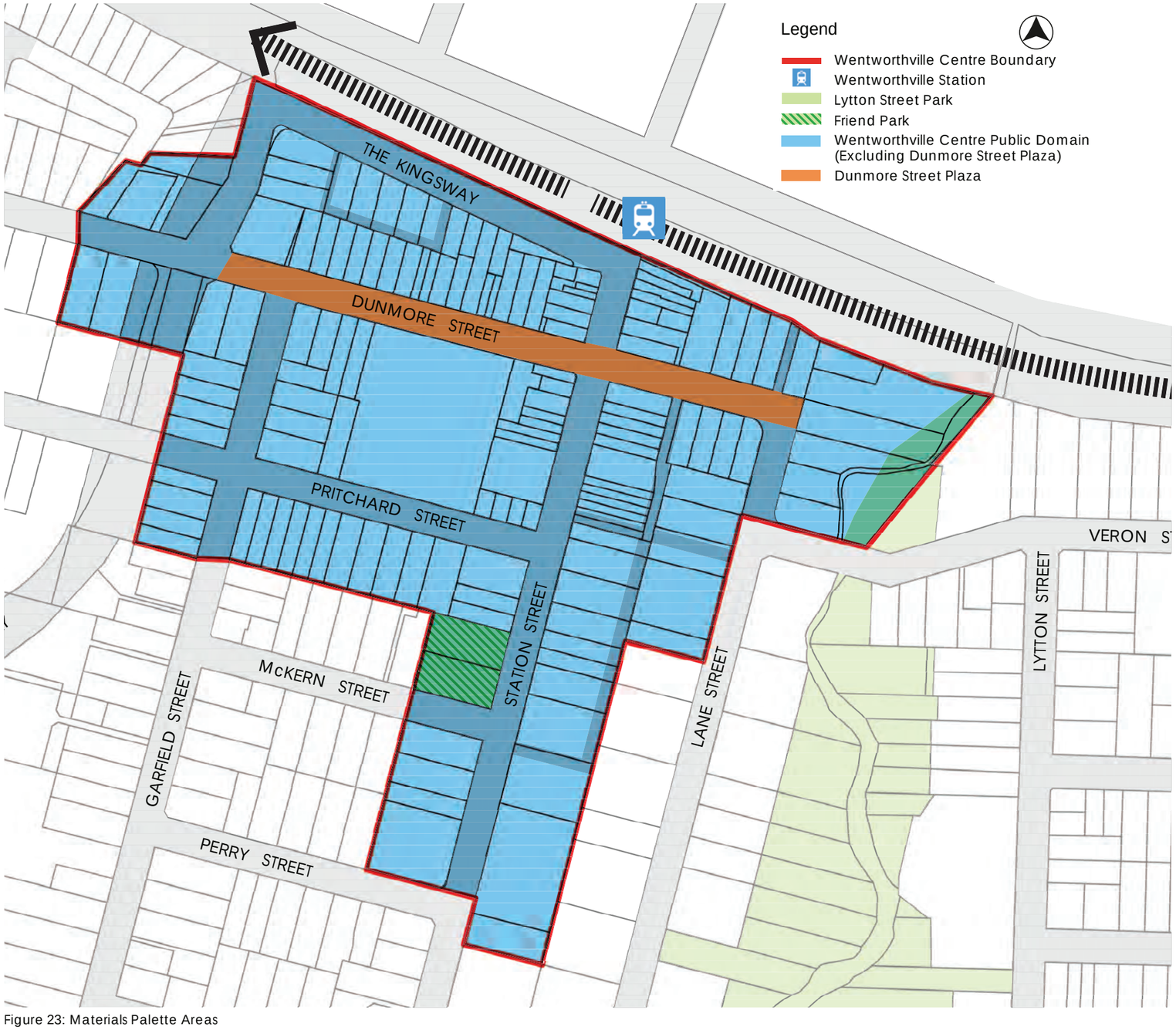

Figure 23: Materials Palette Areas

7 Dunmore Street Plaza

7.1 Dunmore Street Plaza - Precedent Images

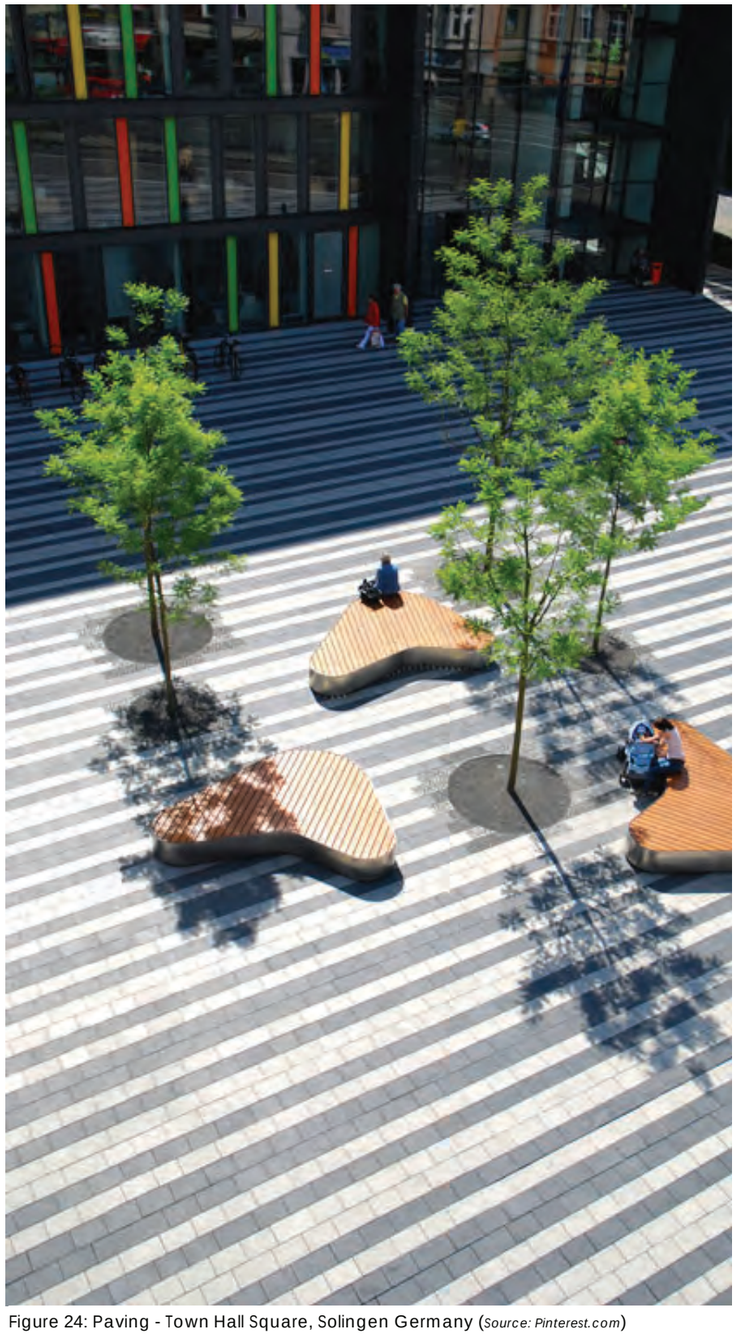

Figure 24: Paving - Town Hall Square, Solingen Germany (*Source: Pinterest.com*)

Figure 25: Art Seat Installation - London (*Source: Pinterest.com*)

Figure 26: Dual Rubbish Bins (*Source: Street Furniture Australia*)

Figure 27: The Avenue des Champs-Élysées - Outdoor Dining (*Source: Pinterest.com*)

Figure 28: Integrating WSUD in the Local Public Space

7 Dunmore Street Plaza

7.2 Dunmore Street Plaza - Distinctive Elements

A. Granite Paving

Larger paving stone size with a strong visual patterning (Refer Figure 24).

B. Custom Design Seating

Site specific seating, which could be “sculptural seating” to create distinctive character for Dunmore Street (Refer Figure 25).

C. Out-door Dining Shade Structure

Be of single style, vibrant colour, free standing and compatible with the surrounding streetscape. (Refer Figure 27).

D. Raised Seating / Grassed Area

Designed to respond to the topography of the exiting street.

E. Traffic Calming

Introducing traffic calming measure, such as a widened median strip and removal of-on-street parking at this location. This will improve pedestrian safety and minimise noise and air pollution from traffic at this location. The design of these measures will align with the elements of the Public Domain Plan (Refer Figure 28 and 29).

F. Landscaping for Wayfinding

Planting trees with vibrant colours to mark the intersection of Dunmore Street and Station Street.

G. Garbage Bins

To be incorporated into the public art theme by implementing unique design to reflect the cultural diversity of the area (Refer Figure 26).

H. Public Art Pedestrian Lights / Catanery Lights

To be provided where appropriate following consultation with Council.

Notes

Final layout and design of all Dunmore Street Plaza street furniture subject to final approval by Council.

Figure 29 - Dunmore Street Plaza - Distinctive Elements

7 Dunmore Street Plaza

7.3 Paving

The design of Dunmore Street Plaza is proposed to be bold and vibrant signifying Dunmore Street Plaza to be the "community hub" that will result in enhanced social interaction and community development. Granite paving is only proposed for Dunmore Street Plaza area (Refer Figure 30).

Materials

a. Granite: Austral Black - 600mm x 400mm x 60mm
b. Granite: Hazy White - 600mm x 400mm x 60mm
c. Granite: Silver Black - 600mm x 400/300mm x 60mm
d. Huon Bluestone Deer Park - 600 x 400/300mm x 60mm

Specification

e. Plaza area to allow for vehicular traffic to 8.5T load bearing weight. Paving minimum 60mm thick on reinforced concrete base

Finishes

f. Granite paving:-Exfoiliated finish
g. Bluestone:- Sandblasted/exfoliated finish

Guidelines

h. New granite paving shall match in with existing bluestone paving on western side of Plaza area.
i. Where possible materials shall be sourced from Australian manufacturers with a guarenteed supply of specified paving for the duration of this Public Domain Plan.

Proprietary Product

j. **Granite:** Adelaide Black exfoliated
k. **Granite:** Harcourt exfoliated
l. **Basalt Black Bluestone** or approved equivalent sandblasted/ exfoliated

Suppliers

m. Samstone
n. Melocco Stone or approved equivalent

7.4 Custom Designed Seats

Custom designed seats for Dunmore Street Plaza area are intended to be sophisticated and elegant reflecting Council's focus on design, heritage and culture. The custom designed seats will contribute to the distinctive identity and Council's aim to create a family of elements reflecting Wentworthville's unique culture and urban context.

Specification

a. Site specific designed seat/benches for Dunmore Street Plaza

Recommended locations

b. Dunmore Street Plaza

Guidelines

c. Materials selected should be robust and create a distinctive character to the Plaza space.
d. Considering comfort of users, timber slatted seating surfaces are the preferred material.
e. Use of distinctive and bold colours is encouraged.
f. Installation of seats should allow minimum 600mm offset from back of kerb.
g. Compliance with the Disability Discrimination Act (1992).
h. Final layout and design will be subject to approval by Council
i. The final design should make reference to the "Wentworthville Story Schemes and Dreams Public Art Visioning Report" - a Community led place making and cultural activation project prepared for Cumberland Council.

Figure 30A: Hazy White

Figure 30B: Adelaide Black

Figure 30: Paving - Town Hall Square, Solingen Germany (*Source: Pinterest.com*)

Dunmore Street Plaza	
Pavers	Dark granite flagstones with light granite inlay to unify the Dunmore Street Plaza area (Refer Figure 30). Main Body Pavement: Adelaide Black or Austral Black Inlay: Hazy White and/or Silverblack or equivalent approved by Council.
Vehicle Crossing	Standard natural grey colour (no added oxide) to Council specifications.
Kerb Ramp	Same paving material as immediate surrounds.

7 Dunmore Street Plaza

7.5 Tree Grate

Materials

a. Galvanised steel

Specification

b. Paver support tree grate

Finishes

c. Hot dipped Galvanised Finish

d. To integrate with surrounding paving material

Recommended Locations

e. Tree grate to be used where trees are located within pedestrian thoroughfare areas that require a paver surround.

Guidelines

f. Tree grates should comply with Council specified load bearings for pavement areas.

Proprietary Product

g. Citygreen Tree Grate 1200 mm W x 1200mm L with 600mm opening or approved equal.

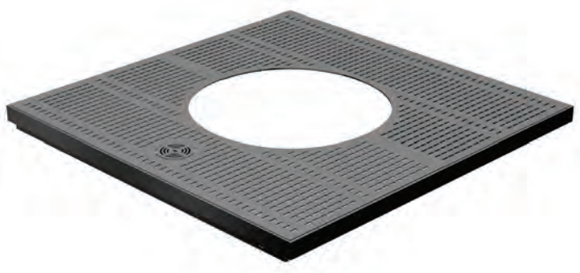

Figure 31: Galvanised Steel Tree Grate (*Source: CityGreen*)

7.6 Tree Guard

Specification

a. Guard to protect tree

b. Baked enamel finish – colour to be confirmed

Recommended Locations

c. To be installed around trees located in pedestrian pavement areas with tree grille base.

Proprietary Product

d. Citygreen Premium Tree Guard 1850mm H x 600mm dia base x 800mm dia top or approved equal.

Figure 32: Baked Enamel Finish Tree Guard (*Source: Citygreen*)

7.7 Bus Shelter

Rather than adopting a standard design, given the location in proximity to the Dunmore Street Plaza, the bus shelter should be designed to reflect the unique character of Dunmore Street (Refer Figure 33).

Recommended Locations

e. To relocate the existing bus stop on the southern side of Dunmore Street Plaza to the west of the Mall Site through site link.

Guidelines

f. Bus shelters should include night time illumination.

g. Bus shelters may include advertising Billboards subject to Council approval.

h. At a minimum, bus shelter shall include a seat with arm rests, regulatory bus signage (R5-20) (AS1742.11:1999) and appropriate tactile paving.

i. Detailed design of the bus shelter shall be undertaken by a practising qualified civil engineer.

Figure 33: Unique Character for Bus Stop near Dunmore Street Plaza (*Source: JC Decaux*)

7 Dunmore Street Plaza

7.8 Outdoor Dining Shade Structure

To improve the ambience of outdoor eating areas and comfort for diners, temporary outdoor dining shade structures are encouraged within Dunmore Street Plaza.

Materials

a. Must be of a commercial quality, and constructed of fire retardant material.

Specification

Shade structures used in the outdoor dining area shall:

b. Be high quality and uniform in appearance and read as part of the public domain.

c. Not include any commercial logo or advertisement.

d. Be temporary, light-weight, and modular umbrella shaped units approved by Cumberland Council.

e. Be able to be removed or closed at the end of business hours or in windy conditions.

f. Be able to support outdoor heaters and be connected by inserts between shades to reduce run-off.

g. Must not be attached to or above the awning.

h. Must be fixed at a minimum height of 2.1m so as to not interfere with passing footpath or vehicular traffic or pedestrian view lines.

Finishes

i. Each individual umbrella to be of a single colour and style to provide consistency and identity and must be compatible with the surrounding streetscape (Refer Figure 33A).

j. Clear, transparent, and colourless plastic blinds are permitted, but they may only be used where it can be demonstrated that the amenity of the surrounding streetscape and pedestrian safety will not be compromised, and will not have an impact on flooding/overland flow within an identified area. Plastic blinds are permitted on a maximum of 3 sides of the outdoor dining area.

k. Opaque or coloured blinds are not permitted.

Recommended locations

l. Locate shade structures where a clear need exists and generally to accommodate outdoor footpath dining. Shade structures shall not obstruct safe and reasonable movement of pedestrians and vehicular traffic, and other street activities. Locations are subject to Council approval.

Guidelines

m. No shelter for weather protection should be erected or installed in or about an outdoor dining area without Council's prior written approval.

n. Shade structures should comply with Cumberland Council's Outdoor Dining Guidelines and Policy.

o. Heating devices must comply with AS 4565-2004 Radiant Gas Heaters. Access to the gas mains and use of electrical extension cords are not permitted.

p. Outdoor dining furniture shall be removed from paved area each night.

Figure 33A: Temporary Shade Structure (*Source: shadeaustralia.com*)

7.9 Planter Boxes

All plants and planter boxes placed on Council's footpaths are to be included in the licensed area and should not take up more than 15% of the licensed area. Where they are used to delineate the licensed area, they will be included as part of the licensed space. The planter boxes must be well maintained by the proprietor.

Council reserves the right to order the removal of planter boxes that are not properly maintained, including the consistent provision of approved high quality flowers or vegetation. They must be removed from the public area when the cafe is not operating. Permanent planter boxes will only be considered in privately owned open space or on footpath blisters.

Proposals for the use of plants and/or planter boxes are to be submitted to Council for approval.

8 Street Trees

8.1 Street Planting Concept

Planting street trees and landscaping is a simple and effective way to enhance the character and amenity of the Centre. Trees can increase shade, reduce urban heat load, minimise glare, contribute to biodiversity, support habitat and naturally filter the air of pollutants. Trees can also improve the visual quality and legibility of streets. They can create a sense of cohesion and enclosure and screen distracting building mass and scale.

Tree lined streets can also be an effective traffic calming device to encourage driving at lower speeds resulting in pedestrian friendly streets providing opportunity for informal socialising.

It is proposed that existing established trees particularly on the Centre's periphery roads shall be retained and protected. New tree species have been selected to complement the existing street tree palette in order to integrate future development into the existing neighbourhood fabric. Nominated tree species are selected for their hardiness and will grow within highly urbanised environments(Refer Figure 33B,34 and Table T1).

The selection of species aims to:

- Create an aspirational and high-quality urban landscape by selecting species that will grow in existing conditions and respond well to future development.
- Complement the existing landscape character within Wentworthville.
- Reinforce the entrance to the Centre.
- Provide thermal comfort through deciduous shade-bearing trees in summer months that will allow solar access in winter months.
- Provide linear, repetitive plantings that create a regular character and unifying scale within the Urban Centre.
- Promote water sensitive urban design through selection of tree species that require relatively few inputs, such as irrigation.
- Facilitate passive surveillance and not pose a hazard due to failing branches or excess debris.

In light of multiple benefits, which include biophysical, economic and social, associated with green cover with urban landscapes, one of the planning priorities (Planning Priority C16) identified by the Greater Sydney Commission (GSC) in the Central City District Plan is: *"Increasing urban tree canopy and delivering Green grid connections."* The proposed tree planting will respond to the state objectives as well as the local context. The species selected will respond to the scale and visual prominence of streets, lot layout, street lighting, services and drainage layout and requirement to provide visual amenity, shade and temperature control.

Guidelines

a. To maximize winter sun and summer shade, the east -west streets should primarily be deciduous with either distinctive colouring or flowers to add vibrancy to the Centre.

b. Evergreen trees for roads running north to south, to provide continuous leaf colour and visual amenity to the area is encouraged. The proposed species should have distinctive flowers and/or bark patterning.

c. New street trees should be single stem and minimum 400 L pot size when installed throughout the Centre. All trees should meet the quality and standards as recommended in *Specifying Trees – A guide to assessment of tree quality by Ross Clark*.

d. Linear, repetitive plantings to create a regular character and unifying scale shall be incorporated within the Centre. Tree spacing should be subject to site requirements for parking and compliance with RMS visual clearance and safety guidelines.

e. Within all hard paved areas and the road corridor strata cell units to support tree growth and root structure are encouraged. Trees shall be planted in minimum 20m^3 soil. Final design to be approved by Council's Engineers.

f. Trees shall be installed in the road corridor where the building awing provides no opportunity for the planted tree to reach its maximum growing capacity and height.

g. Where appropriate, tree pits shall be designed to capture stormwater runoff and filter water using WSUD principles.

h. Where appropriate, suitable groundcover should be planted under street tree canopy.

i. Tree grates and tree guards should only be used in pedestrian paved areas.

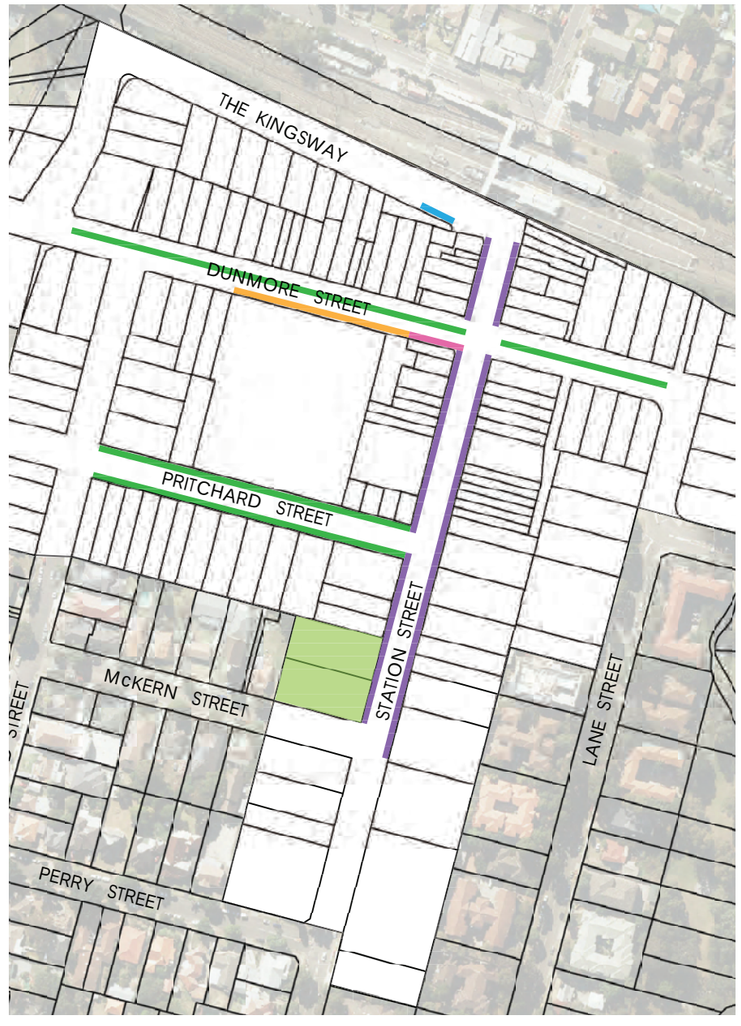

Figure 33B: Wentworthville Centre Planting Plan

8 Street Trees

8.2 Recommended Species

Table T1			
Botanical Name	**Common Name**	**Height x Spread**	**Min. Pot Size**
Street Trees			
Acer rubrum 'October Glory'	Maple	12m x 9m	400L
Calodendron capense	Cape Chestnut	10m x x 8m	400L
Corymbia maculata	Spotted Gum	20m x 10m	400L
Hymenosporum flavum	Native Frangipani	15m x 6m	400L
Pyrus ussuriensis	Manchurian Pear	9m x 7m	400L
Hedge Planting			
Buxus microphylla var. japonica	Box hedge	1m x 0.75m	200mm
Suggested Understorey Planting			
Pelargoniums	Geranium		75mm
Kniphofia species	Dwarf Red Hot Poker		75mm
Lomandra tanika	Lomandra	0.60m x 0.65m	tube
Thymus vulgaris	Thyme		
Grass			
Microleana stipoides	Weeping grass	0.1-0.3 x 0.1-0.3 m	tube

Irrigation

Planting beds and raised grass planform along Dunmore Street shall be irrigated. Irrigation shall be designed by a qualified irrigation designer, shall be automated and comply with relevant Australian Standards.

Geranium - Pelargonium 'Pinnacle Red

Geranium - Sanguineum New Hampshire

Lomandra tanika

Buxus microphylla Hedge

Thyme

Pyrus ussuriensis

Kniphofia (Red Hot Poker Dwarf)

Hymenosporum flavum

Calodendron capense

Acer rubrum 'October Glory'

Corymbia maculata

Figure 34: Landscape Materials Palette

8 Street Trees

8.3 Sight Lines and Clearances

Tree planting must not impact on the safety and function of the road corridor. Refer to Table T2 for minimum clearance distances.

Table T2	
Streetscape Element	**Indicative Minimum Clearance**
Road Intersection (distance from the projected line of intersection on approach side)	10m from intersection kerb line
Traffic Signals (approach)	10m
Traffic Signals (egress)	7m
Bus Stops (approach)	10m
Bus Stops (egress)	7m
Pedestrian Crossings (approach)	10m
Pedestrian Crossings (egress)	7m
Driveways	2m from Driveways
Stormwater inlet/outlet	2m from stormwater inlet/outlet
Street Light Pole	3m from centre of light pole
Underground Service Pit	2m from edge of service pit

Figure xx:

8.4 Water Sensitive Urban Design

Best practise Water Sensitive Urban Design (WSUD) measures will be incorporated along Dunmore Street, Station Street and The Kingsway in the tree pit and garden design. Trees will be planted within the stratacell units to maximise opportunities for healthier tree root growth and canopy cover in a small area.

Strata Cells

Strata Cells are an engineered void space modular unit system that enables large volumes of soil to be placed under hard paved surfaces for the establishment of healthy tree root system and vibrant canopy trees. In comparison to conventional methods of planting, the strata cell system enables trees to grow more effectively in hard urban environments, establishing more sustainable and liveable precincts by delivering cooler cleaner air; shading; and when combined with WSUD principles improved quality of stormwater runoff entering local waterways (Refer Figures 35 and 36).

Strata Cells shall have a load bearing capacity to support maintenance and garbage trucks and reduce pavement upheaval by addressing invasive tree root damage.

Strata Cell systems can be designed using best practice WSUD principles to capture overland stormwater and effectively filter and retain water at the source of each tree reducing the overload of stormwater on the network – Strata cells combined with WSUD will deliver multiple benefits to both green and blue infrastructure and for the wider community.

Guidelines:

a. Strata cell system shall be incorporated where tree planting occurs within hard paved areas and the road corridor on Dunmore Street, Station Street and The Kingsway.

b. Strata cell systems shall be designed for minimum 20m^3 soil volume per pit for the establishment of medium sized trees within the Centre.

c. WSUD principles shall be incorporated to capture overland stormwater and direct into rain gardens and tree planting beds thereby reducing the quantity of stormwater runoff and cooling and greening our local environment.

Figure 35: Median Tree Planting - Dunmore Street near Garfield Street - Looking West (*Source: Citygreen*)

Figure 36: Median Tree Planting - Dunmore Street Wentworthville Plaza - Looking West (*Source: Citygreen*)

9 Paving

Objective: To provide a quality pedestrian surface treatment throughout the Centre.

Guidelines:

a. Visual and tactile qualities of the paving should communicate the functional characteristics of the street.

b. Sustainable; locally sourced and readily available paving materials should be used.

c. Pavers that are flexible, easy to remove and relay should be used.

d. Paving material should be robust and durable, cater to high pedestrian traffic loads and easy to maintain.

(Refer Figures 37-41)

Paving material Transition

e. A variation and/or colour contrast in paving format for Dunmore Street Plaza and outdoor dining areas is encouraged.

f. New paving should be integrated with existing bluestone paving so that paving reads as a continuous legible palette in the Centre.

g. A street with higher activity should take precedence for paving treatment, and must wrap the corner into the minor street.

h. Paving on private property adjacent to public footpath must not extend across into the public footpath zone. The junction of materials must be physically and visually coordinated.

i. Where building setbacks provide a section of widened footpath, the materials and paving used must be integrated with the existing footpath paving, and the Wentworthville Centre Paving Palette must be used.

Specifications

a. Pavements should be all-accessible, using sustainable materials, slip-resistant and high quality as recommended by the Australian Stone Advisory Association (ASSA).

b. All works to be in accordance with AS4455-2:2010 Pavers and Flags, and AS4586:2013 Pedestrian surface materials.

c. All stone shall be natural, uniform quality, free of defects (such as vents, cracks, fissures, seams, porous inclusions, foreign material, loose surface material striations, stains and discolouration) liable to affect its strength, appearance, durability or proper function under the intended conditions of use.

d. Supplier shall provide written certification that the granite stone meet the international ASTM C615/C615M-11 Standard Specification for Granite Dimension Stone for the following quality criteria:

Table T3	
Maximum deviation	Deviation from required dimensions for paver face dimensions for items of thickness up to 90mm shall be 1mm
Squareness	The squareness difference between diagonals shall be no greater than 1.5mm
Thickness	+/- 2mm
Flatness	Honed surfaces: 0.5mm per metre; and Sawn or sandblasted faces: 1.5mm per metre
Edge Straightness	0.5mm per metre
Maximum deviation of paver face from plane	Finishes: 1.5mm in 1200mm; and Natural riven faces: 10mm in 1200mm

e. Stormwater drainage infrastructure should be integrated within the footpath where surface runoff will be excessive (in footpath areas greater than approximately 120m^2).

f. A V-shaped footpath profile should be used where a satisfactory single cross fall to the top of the kerb cannot be achieved.

g. All service pits should include infill paving to ensure consistent visual look and feel.

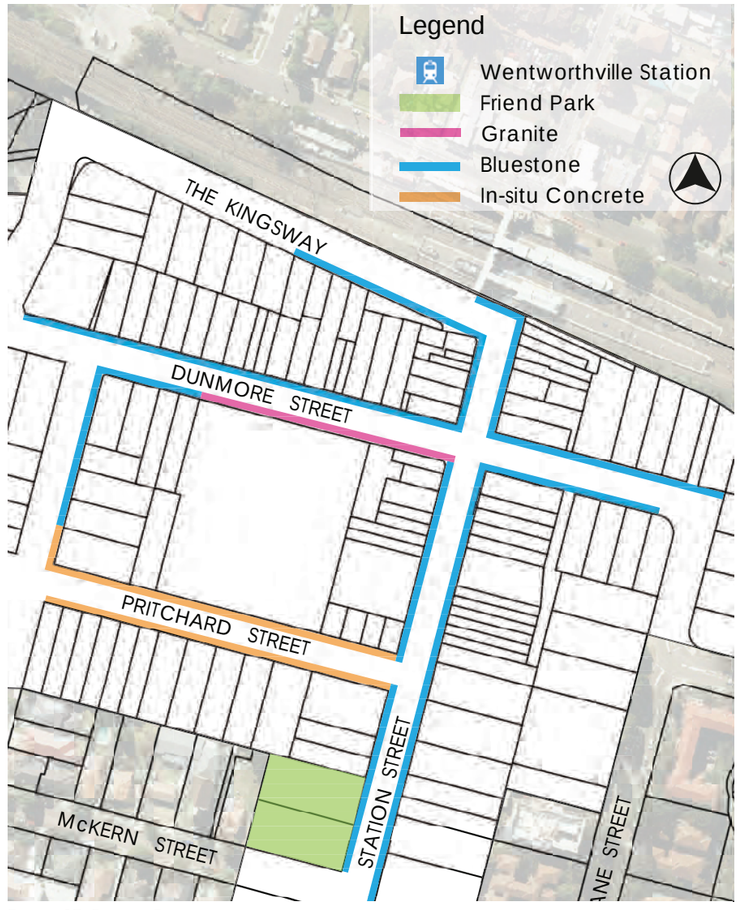

Figure 37: Paving Plan

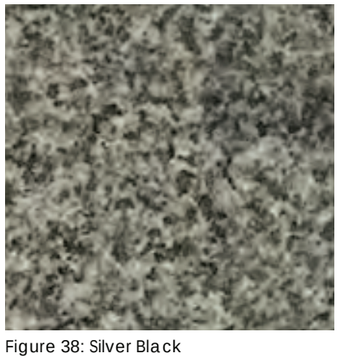
Figure 38: Silver Black

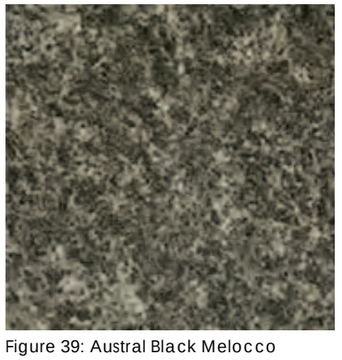
Figure 39: Austral Black Melocco


Figure 40: Hazy White

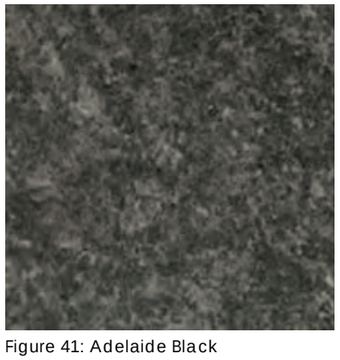
Figure 41: Adelaide Black

9 Paving

Station Street and The Kingsway	
Pavers	Bluestone pavers with an inlay to unify Station Street and The Kingsway. **Main Body:** Huon Bluestone or Basalt Bluestone or equivalent **Inlay:** Hazy White and/or Silverblack or equivalent approved by Council.
Size	600 x 300 x 40mm
Finish	Sandblasted or blasted
Vehicle Crossing	Vehicle crossovers to increase to 50mm thickness
Kerb Ramp	Standard natural grey colour (no added oxide) to Council standard specifications.
Pritchard Street	
Pavers/Footpath	In-situ concrete Natural grey colour (no added oxide)
Size	If not specified in the DCP or PDP, footpath width subject to site conditions
Finish	Standard natural grey colour (no added oxide)
Vehicle Crossing	Vehicle crossover shall be minimum 100mm thick with F72 reinforcement.
Service Lanes	
Pavers/Footpath	In-situ concrete **Entrance of Laneway:** Asphalt with interlock paving band
Size	If not specified in the DCP or PDP, footpath width subject to site conditions
Finish	Standard natural grey colour (no added oxide)
Note: Final design to suit grades and vehicle loads to the approval of council's representative.	

9.1 Tactile Ground Surface Indicator

Tactile Ground Surface Indicators (TGSIs) shall be incorporated into the continuous path of travel for warnings of hazards or a direction indicators to assist persons of vision impairment to navigate the built environment.

WARNING + DIRECTIONAL TACTILE

Finishes

a. Single unit, manufactured for hardwearing polyresin.

b. Warning Tactile featuring an engraved, concentric circle design on the horizontal face with a smooth bevelled edge around its perimeter (Refer Figure 42).

c. Directional Tactile featuring an engraved and machined grooved face L 290mm x W 35mm x H 5mm.

Recommended Locations

d. TGSIs shall be used prior to kerb ramps (where required), vehicle crossovers, at any steps or ramps, or a warning of any overhead hazard. Directional tactiles should be used at public facility locations such as bus stops.

Guidelines

e. TGSIs should be slip resistance AS/NZ4586-2013 Appendix A class P5 (very low).

f. Installation of tactiles shall comply with Accessibility Standards AS 1428.1-2009.

g. TGSIs should be installed to manufacturer's specifications.

(Refer Figure 43)

Proprietary Product

h. DTAC Stainless Steel Classic Ecotac PVD Black (DTO 120) or approved equal.

i. DTAC 120 Urethane Classic Directional tactile (DIRP0705B) or approved equal.

Figure 42: Location of Warning Tactile at Steps (*Source: Pinterest.com*)

Figure 43: Tactile Ground Surface Indicator (*Source: DTAC*)

10 Street Furniture

The selection of street furniture makes reference to the outcomes from the "Wentworthville Stories, Schemes and Dreams" public art making strategy. A colourful palette for the street furniture contributes to a vibrant setting and backdrop for the Centre's streetscapes.

Objectives

a. To provide robust and enduring products suitable for high public usage.
b. To respond to the character in particular locations through site specific designs.
c. To provide aesthetically pleasing, functional, comfortable and quality street furniture.
d. To largely provide a standard furniture palette throughout the centre for ease of operation and maintenance of the public domain.

General layout of furniture

The layout of furniture shall be located as follows;

e. Outside the clear path of travel for universal access (Refer Figures 44 and 45).
f. Within designated furniture zones.
g. Where possible to establish cluster of furniture to minimise clutter.
h. Be located with consideration to street trees and street lighting layouts and building entries.
i. In accordance with the required egress zone from the face of the kerb to allow for car overhang and door swing, as well as access to the parked cars.
j. In accordance with required setbacks from kerb ramps, driveways and pedestrian crossings.

When placing furniture in the Furniture Zone, the following clearances are recommended:

- 600mm of Parking Egress zone from face of kerb to allow car overhang and door swing.
- Min. 1m from driveway crossings.
- Min. 2m from the landing of kerb ramps.
- Min. 15m from the intersection unless in kerb extensions.

Accessibility

All furniture in the public domain shall be in accordance with the Disability Discrimination Act 1992 (DDA) provisions and include the following:

k. Adequate seats with arm and back rests that comply with DDA requirements in desired pedestrian routes and places.
l. Distribution of seats to provide frequent resting places for elderly people within the Town Centre.
m. Maximum 65mm gap under any element (e.g. barrier, planter box or bus shelter) to pavement surface.
n. Adequate hardstand around street furniture elements to allow wheelchair access where required.

Environmental Responsibility

The selection of furniture shall prioritize the use of environmentally responsible and sustainable materials as follows:

o. Compliance with product stewardship policies (e.g. Forest Stewardship Council/FSC), eco-preferred content.
p. Ability to be recycled or reused at the end of life cycle.
q. Locally or regionally sourced to minimise shipping needs.

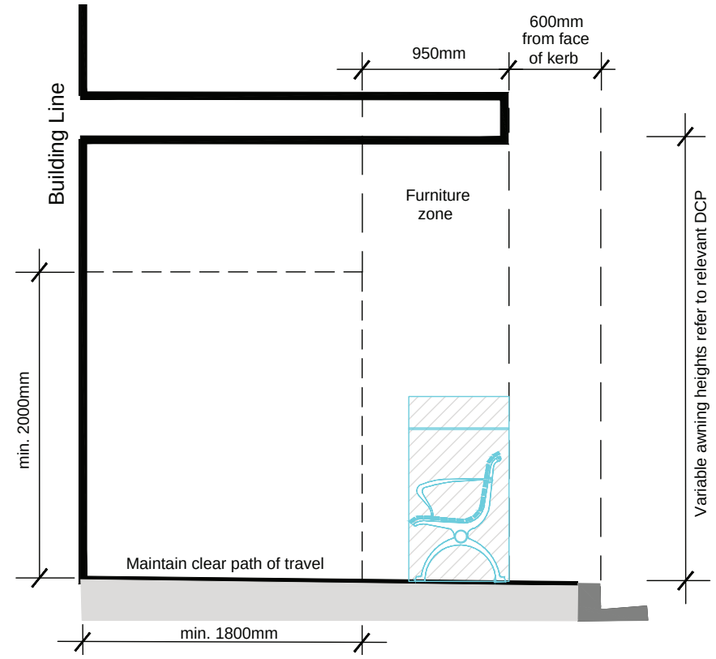

Figure 44: Section - Location of Street Furniture

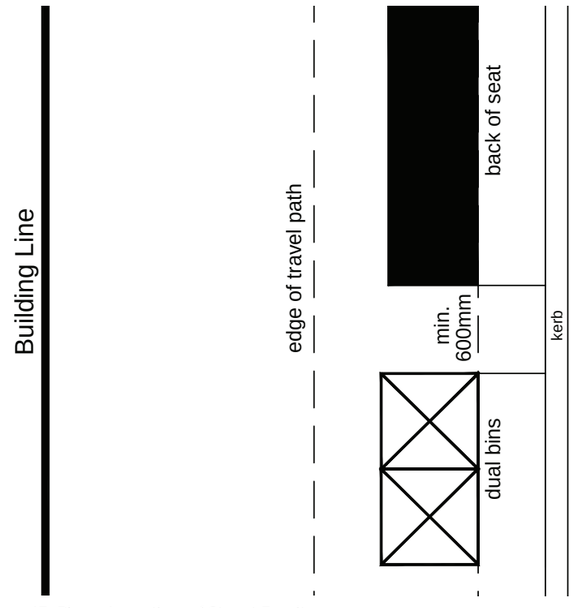

Figure 45: Plan - Location of Street Furniture

10 Street Furniture

10.1 Dual Rubbish Bin Enclosure

Objectives

a. To remove rubbish from the Centre effectively
b. To prevent access to birds and dogs
c. To accommodates a 240L wheelie bin

Materials

d. Fully fabricated 316 Stainless Steel Bins with no opening insert

Specification

e. Dual 240L rubbish and recycling bin enclosure with Cumberland City Council logo

Finishes

f. Laser Cut design (one panel)
g. Flat sloped roof with rectangle openings
h. Pink (Telemagenta) Gloss RAL4010 for general rubbish
i. Brilliant Yellow Gloss YE087A for recycling

Guidelines

j. Locate bin enclosure at the periphery of high density pedestrian areas, especially those where pedestrians may be temporarily delayed, such as at intersections, pedestrian crossing and bus stops.
k. Clearance distance of the bin enclosure from the kerb line shall be 600mm minimum.
l. Bin enclosure should be sited without impeding pedestrian movement.
m. Bin enclosures are to be sited maximum 20 metres apart.
n. Bin enclosure should accommodate a 240L wheelie bin.
o. Surface fixed bin enclosures should incorporate adjustable leg mounting to allow for level installation and to provide a minimum 20mm gap between ground and enclosure.

Proprietary Product

p. Street Furniture Australia Frame Dual Bin enclosure or approved equal.

10.2 Bollard

Objectives

a. To improve safety by providing a barrier for vehicular access to pedestrian spaces.
b. To provide controlled vehicle access points

Materials

c. Grade 304 stainless steel pipe

Specification

a. Fixed and removable bollard

Finishes

b. Linished

Guidelines

c. Bollards to be sited in areas where vehicle overrun may be prevalent causing safety concerns for pedestrians i.e. corners and changes in kerb alignment.
d. Locate bollards within 600mm of the kerb line.
e. Where applicable, bollards should have a minimum clearance of 500mm from any gutter ramps or other obstacles to maintain pedestrian flow.
f. Utilise removable bollards where authorised entry is required to public areas that are in general pedestrian areas.
g. Utilise Council Standard locking device, which are orientated away from vehicle traffic.
h. All works to be in accordance with AS1657 (2013).
i. Slanted top to deter birds.
j. Available with customised Council logo or reflective tape.

Proprietary Product

k. LEDA SSR Regal Bollard range or equivalent.
l. **Fixed Bollard:** Subsurface fixing to manufacturer's details.
m. **Removable Bollards:** Surface mounted; Refer to Cumberland Council standards regarding locking system.

Figure 46: Dual Rubbish Bin Enclosure with Public Art (*Source: Street Furniture Australia*)

Figure 47: Bollards (*Source: Street Furniture Australia*)

10 Street Furniture

10.3 Bike Racks

Objectives

a. To promote health and well being by encouraging cycling access to the Town Centre.

b. To provide safe and secure bike parking facilities.

Materials

c. Stainless Steel, subsurface mounted bike rack

Finishes

d. Linished or electropolished

Recommended Locations

e. To be sited in groups of 2-3 within designated kerb blisters and in proximity to key civic destinations including Dunmore Plaza and Wentworthville Train Station.

Guidelines

f. Bicycle parking should not impede on pedestrian traffic flow.

g. Site specific designed bike rack clusters are subject to Council approval.

h. Layout and design should be in accordance with AS 2890.3(2015) Class 3 Bicycle Parking Facility.

i. Where sub-surface installation is not practical, surface mounted alternative will be considered.

Proprietary Product

j. Slim Hoop Bike Ring 270mm W x 850mm H or approved equal

10.4 Drinking Fountain

Objectives

a. To provide accessible free drinking water within the Centre.

b. To enable filling of water bottles.

Materials

a. Aluminium or Grade 316 stainless steel body, stainless steel nozzle and value.

Finishes

b. Powder coated colour: Bondi Blue Gloss (Interpon Bondi Blue YJ046A)

Recommended Locations

c. Two key civic destinations, including one in Dunmore Plaza and one in proximity to Wentworthville Train Station

Guidelines

d. Drinking fountains should be compliant with DDA accessibility guidelines.

e. Waste water from drinking fountains could be diverted to nearby tree pits or garden beds to meet Water Sustainable Urban Design Objectives. This should be investigated at installation.

Proprietary Product

f. Street Furniture Australia Arqua Fountain 450 Ø x 770 D x 1125 H or approved equal.

Figure 48: Site Specific Bike Racks are Encouraged - Penrith Mall

Figure 49: Drinking Fountain (*Source: Street Furniture Australia*)

10 Street Furniture

10.5 Drainage Grates

Objectives

a. To provide safe and accessible pedestrian pavements.

b. To capture water runoff on paved areas greater than 120m$^{2.}$

c. Where possible, to redirect water into adjacent planter beds, rainwater gardens and tree planting.

Materials

d. Corrosion resistant polycrete channels with galvanised or stainless steel drain

Specification

a. Modular Grated Trench Drainage System

Finishes

b. Final finish to be approved by Council

Recommended Locations

c. As required within the streetscape design to collect water runoff from pedestrian paved areas.

Guidelines

d. Grates should be:

- Heel safe with maximum slot widths of 10mm
- Certified to AS3996 Load Class D (210kN)
- Compliant with AS 4586:P4 – Slip resistance classification for Wet Pendulum Test
- Compliant with AS 4586: R10/R10 – Slip resistance classification for Oil-Wet Inclining Platform Test

e. Consideration to inclusion of artworks within the grate system are encouraged.

Proprietary Product

f. Final grate system to be approved by Council

10.6 Fence

Objectives

a. To assist with the safe movement of roadside users.

Materials

b. Hot dipped galvanised steel 2 metre modular panels

Specification

a. RMS steel pedestrian fence

Finishes

b. Powder coated Black

Recommended Locations

c. Intersections, pedestrian crossings, level changes or wherever pedestrian traffic control is required.

Guidelines

d. Type 1 fence should:

- Be designed and specified by NSW RMS
- Comply with relevant Australian Standards for roadside pedestrian control
- Be install to manufacturers specifications

e. Where sub-surface installation is not practical, surface mounted alternative could be considered.

Proprietary Product

f. RMS Type 1 pedestrian fence or approved equal

Figure 50: Artwork within Drainage Grate - Alfred Street - Custom House Sydney

Figure 51: Powder Coated Black Fence

10 Street Furniture

10.7 Seats and Benches

SEATS

Seats and benches that are accessible and comfortable to all users will be placed selectively throughout the Centre.

Specification

a. Seats with back

Materials

b. Arch legs subsurface mounted

Finishes

c. **Frame: Colour:** Interpon Textura Monument GL329A
d. **Armrests:** polished
e. **Batons:** Colour: Interpon Sable Core Ten Textured GX350A

Recommended locations

f. At 30-50m intervals along the streetscape and minimum 600mm offset from the back of the kerb.
g. Perpendicular to the kerb in the Furniture Zone where space permits.
h. Orientate the seats towards the building façade when located in the Furniture Zone and towards the street when located near the building line.
i. Benches are to be provided in open space where pedestrian safety is not dependent on the direction it should face.
j. Do not place seats in footpaths less than 3.5m wide nor areas of high and fast pedestrian traffic volumes.

Guidelines

k. Seats and benches shall be robust and vandal proof with strong frames and batons.
l. Armrests should be added to 50% of seats installed within the Centre.

Proprietary Product

m. Classic Galleria DDA or approved equal 590mm W x 835mm H x 1750 or 2100 L
n. Batons 40 x 20mm

Supplier

o. Street Furniture Australia

BENCHES

Specification

a. Bench Seat

Finishes

b. Arch legs subsurface mounted
c. Armrests - polished

Recommended locations

d. To be sited in locations where access to seat from both sides is desirable.

Guidelines

e. Armrests should be added to 50% of benches installed to meet Australian accessibility requirements.
f. Location of bench seat shall not impede upon pedestrian movement.

Proprietary product

g. Classic Galleria Bench 615mm W x 435mm H x various lengths

Supplier

h. Street Furniture Australia

Figure 52: Seat with Back (*Source: Street Furniture Australia*)

Figure 53: Bench (*Source: Street Furniture Australia*)

10 Street Furniture

10.8 Wentworthville Centre Lighting

Objective

a. To upgrade street lighting using Multifunction poles to achieve combined energy efficiency LED lighting, banner compatibility, effective CCTV coverage and future Smart City capaability.

b. To illuminate the Centre for safe passageways for pedestrians and vehicles

c. To avoid visual glare from light source that may affect the safety of drivers and pedestrians

Guidelines

Carriageway lighting and pedestrian lighting shall;

- Achieve a high colour rendering and a high level of vertical luminance to maximise personal safety (to detailed lighting design).
- Use a light source that emits no light above the horizontal plane.
- Use multifunction poles that may accomodate the full suite of RMS accessories including traffic and pedestrian signals, signage, cameras and traffic signal outreaches to 10m as well as street names and banners as required.
- Achieve vehicular and pedestrian lighting in accordance with AS/NZS1158.1.
- Provide supplementary lighting at pedestrian crossings as required to AS/NZS 1158.4 Part 4.

Festivals and Events

Other light pole specifications to be determined in consultation with Council officers that will assist with Festivals and Events within the Centre shall include:

- 3-phase power outlets at strategic locations to support festivals and events.
- Fixtures and structural support for Christmas decorations and catenary lines.
- Rigging points, fixtures and structural support for catenary lines and other incidental attachments to suit special event and animation requirements according to agreed design aspirations.
- Spare conduits for possible future power supply needs.

10.9 Street Lighting

Materials

a. Extruded aluminium pole, ground level anti-vandalism cladding

Specification

b. Multfunction smart pole

Finishes

c. Powder coated aluminium

Recommended locations

d. All locations within the Wentworthville Centre where lighting, traffic signals, or banners are required.

e. Where possible layout of poles to be located in place of existing light poles with the exception of Dunmore Street (between Garfield Street and Station Street), where poles shall be placed in the median subject to final lighting design.

f. Ensure that street light poles are set back from the kerb face by 700mm to minimise the risk of collision by vehicular traffic.

Guidelines

g. All works should be accordance with AS1158.3-1:2005; AS3000:2007; AS4100:1998; AS1163:2009; AS1554.1:2011.

h. Install all light poles in the public domain with footings and bolt assemblies buried below the finished pavement surface.

Supplier

- HUB Street Equipment or approved equivalent

10.10 Pedestrian Lighting

Objectives

a. To provide pedestrian lights within the Centre in areas where pedestrian traffic is to be encouraged at night, but where other sources of light do not meet the lighting category criteria.

b. To reduce risk of vandalism and minimise interference with awnings by setting pedestrian lights at a height.

Materials

a. Light Pole – Multipole 168 Mini

Specifications

b. LED Luminaire – to recommendation of designer and manufacturer.

c. Footing – Footing, holding-down bolts and the like shall be designed by a qualified practicing structural engineer.

Recommended Locations

d. Dunmore Street Plaza

Figure 54: Multifunction Smart Pole, Auburn

Figure 55: pedestrian Lighting Wellington NZ

10 Street Furniture

10.11 Catenary Lighting

Specification

a. Lighting system on a high tension suspended cable system to be used in plazas, laneways and pedestrian priority areas in order to differentiate the space from the surrounding environment and create a more intimate and informal atmosphere.

Recommended locations

b. Provide art lights in areas where pedestrian traffic is to be encouraged at night, and to create atmosphere and vibrancy within the Wentworthville Centre.

Guidelines

c. All lighting is subject to final approval by Council.

d. Light source should be LED, min. 65 lumens/watt with lamp LED life min. 80% at 50,000H. LED CCT may be selected for site specific applications subject to Council approval.

e. Light distribution can be asymmetric or symmetric. Above 0° horizontal, the light output ratio should be ≤ 10% of lamp lumens.

f. Lamp luminaire should have min. IP65 rating, and min. IK04 rating.

g. Art light to be installed at a height to reduce risk of vandalism and to minimise interference with awnings.

Figure 56: Urban Catenary Lights (*Source:Pinterest.com*)

10.12 Public Art

Public art is an important aspect of the revitalisation of the Centre Public art has the ability to unify the Centre with a theme or identify the core of the Centre or the entry. At a pedestrian scale it can assist in wayfinding and provide visual interest for pedestrians.

Public art can instill beauty and symbolic meaning as both independent installations and into functional objects such as seats, grates, lighting, railings, to create a sense of place and identity.

Public art proposals will be subject to Council's approval processess.

Figure 57: Public Art San Jose California (*Source: Spence Little, San Jose*)

10.13 Public Art - Lighting

Specification

a. Distinctive temporary night time lighting that celebrates the vibrancy of the Wentworthville Centre and the local community.

b. Light art proposals will be reviewed on a case by case basis to activate a space and/or create a unique atmosphere.

Recommended locations

c. Provide art lights in areas where pedestrian traffic is to be encouraged at night, and to create atmosphere and vibrancy within the Wentworthville Centre.

d. Set art light installations at a height to reduce risk of vandalism and to minimise interference with awnings.

Guidelines

e. Where possible light art should provide sufficient lighting to comply with the recommended AS1158 lighting levels. This should be confirmed by a lighting designer. If compliance is not achieved other lighting elements must be considered as part of the overall lighting scheme.

f. Minimisation of glare and glare sources are paramount; lighting is not to distract but enhance the artwork.

g. Mounting of Luminaires should not affect viewing of the artwork during the day nor at night time.

h. Light art is to comply with OH&S issues of public safety.

i. Strobing or flashing light art will not be considered.

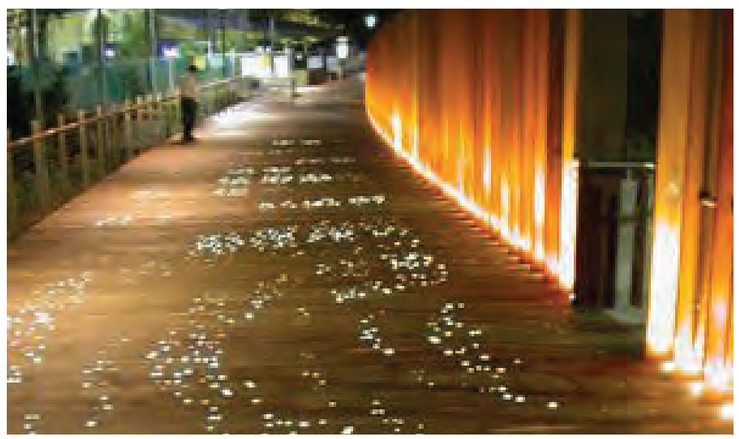

Figure 58: Elevated Walkway, University of Sydney (*Source: Sydney.edu.au*)

11 Utilities

PUBLIC UTILITIES

Objectives

a. To make adequate provision in the Centre for the accommodation of a range of public utilities.

b. Access to and installation of these facilities to be in accordance with relevant Industry and Australian Standards.

11.1 Service Pits

Materials

a. As required by the utility

b. Lids shall be infill type unless specifically disallowed by the owner of the asset.

Layout and location

c. As determined by services installations.

d. To the maximum extent possible, set service pit lids to conform to surrounding pavement levels and at the same orientation as the pavers.

e. Access to and installation of utilities must conform to the following industry and relevant Australian Standards: AS3084:2003, AS1939:1990, AS3996:2006, AS4198:1994, ACA TS008, TS009.

11.2 Telephone Kiosks

Guidelines

a. If a single phone kiosk is to be used, along the road reserve, locate at least 750mm from kerb edge.

b. If a double kiosk is to be used (back to back), along the road reserve, locate at least 1000mm from kerb edge.

c. Refer to Telstra regarding installation requirements.

d. Do not locate phone booths near public toilets or ATM's due to public safety concerns.

Layout and Locations

a. Retain the two phone kiosks in similar locations within the Centre on Dunmore Street and The Kingsway.

Advertising Signage

- Advertising signage associated with Phone Kiosks will be subject to final approval by Council.

Figure 59: Telephone Kiosk

11.3 Public Toilets

Guidelines

a. Proposed toilets should be located on the Kingsway with a minimum of two toilets (both unisex).

b. Preference is given for architecturally designed non-automated toilets.

c. All structures must comply with disability access codes and relevant Australian Standards.

Figure 60: Public Toilet - St James Park Glebe

11 Utilities

11.4 Bus Shelter

Bus stops along Dunmore Street will be upgraded as follows:

a. Existing two bus shelters east of Station Street will be integrated with the design of the future building.

b. Existing bus stop opposite the Mall Site (northern side of Dunmore Street) will be formalised and integrated with the design of the future building.

c. The existing bus stop on the southern side of Dunmore Street Plaza to the west of the Mall Site through site link to include a formalised shelter. Refer to Section 7.7.

Guidelines

d. At a minimum all bus stops shall include a seat with arm rests, regulatory bus signage (R5-20) (AS1742.11:1999) and appropriate tactile paving shall be included in the final design.

e. Preference shall be given for seats to be located under shelter structure. Alternatively seats may be located minimum 1000mm offset from back of kerb and outside the clear path of travel .

Advertising Signage

f. Advertising signage associated with Bus Shelters will be subject to final approval by Council.

Figure 60A: Standard Bus Shelter

11.5 Public Transport Vehicle Parking

REGULATORY SIGNAGE AND LINE MARKING

Parking

Materials

a. Signage: as a minimum regulatory parking zone signs (R5-21 and R5-10) to be located at entry/exit points from a loading zone (to AS1742.11:1999).

b. Line marking: aggregate modified acrylic latex polymer (nominal thickness 3mm) to AS4049.2:2005.

Layout and location

c. Provision subject to Council determination

Loading Zones

d. Signage: as a minimum regulatory loading zone signs (R5-23) to be located at entry/exit points from a loading zone (to AS1742.11:1999).

e. Line marking: aggregate modified acrylic latex polymer (nominal thickness 3mm) to AS4049.2:2005.

Taxi Zones

f. Signage: as a minimum regulatory taxi zone signs (R5-21) to be located at entry/exit points from a taxi zone (to AS1742.11:1999).

g. Line marking: aggregate modified acrylic latex polymer (nominal thickness 3mm) to AS4049.2:2005.

Bus Zones

h. Signage: as a minimum regulatory bus zone signs (R5-20) to be located at entry/exit points from a loading zone (to AS1742.11:1999).

i. Line marking: aggregate modified acrylic latex polymer (nominal thickness 3mm) to AS4049.2:2005.

PEDESTRIAN CROSSINGS

Materials

a. Flat top road hump coloured concrete (Coloured Concrete Systems CCS Onyx) median infill 25MPa with F72 mesh located centrally. Approach ramps to be plain concrete.

b. Line marking- aggregate modified acrylic latex polymer (nominal thickness 3mm) to AS4049.2:2005.

Layout and location

c. Provision subject to Council and RMS determination. All works to be in accordance with the RMS Technical Direction TDT 2002/04.

PEDESTRIAN REFUGE + TRAFFIC ISLAND

Layout and Location

a. Provide at locations where determined in the context of a general traffic plan for the Centre and to Council approval. All works shall be in accordance with RMS Road Design Guide: Part 4.

THRESHOLD

Materials

a. Refer to Pedestrian Crossings and apply as relevant.

Layout and Location

b. Provision subject to Council determination.

12 Local Infrastructure Contributions: Funding Allocation

Guidelines

a. The Developer will be responsible for the upgrade works that interface with the street frontage to the standard and in accordance with this Public Domain Plan.

b. The Developer can not seek monetary offset for Public Domain works listed below

c. Local Infrastructure Contributions (Section 7.11 of the Environmental Planning & Assessment Act 1979) are being collected for public domain works at Wentworthville Centre as follows:

- Dunmore Street High Pedestrian Activity Zone:- 50% apportioned.
- Station Street and Dunmore Street East:- 50% apportioned
- Pritchard Street East:- 50% apportioned.
- Pritchard Street and Station Street intersection:- 50% apportioned.
- Slip lane Cumberland Highway to Pritchard Street:-100% apportioned.
- New Laneways and laneway widening:- Progress by Developers.

d. Public Domain works to be in accordance with the Works Schedule prepared by Council.

e. Construction works for the Public Domain to be approved by Council's representative prior to final signoff.

Note: 50% apportioned amount = 50% allocation amount identified in the contributions plan.

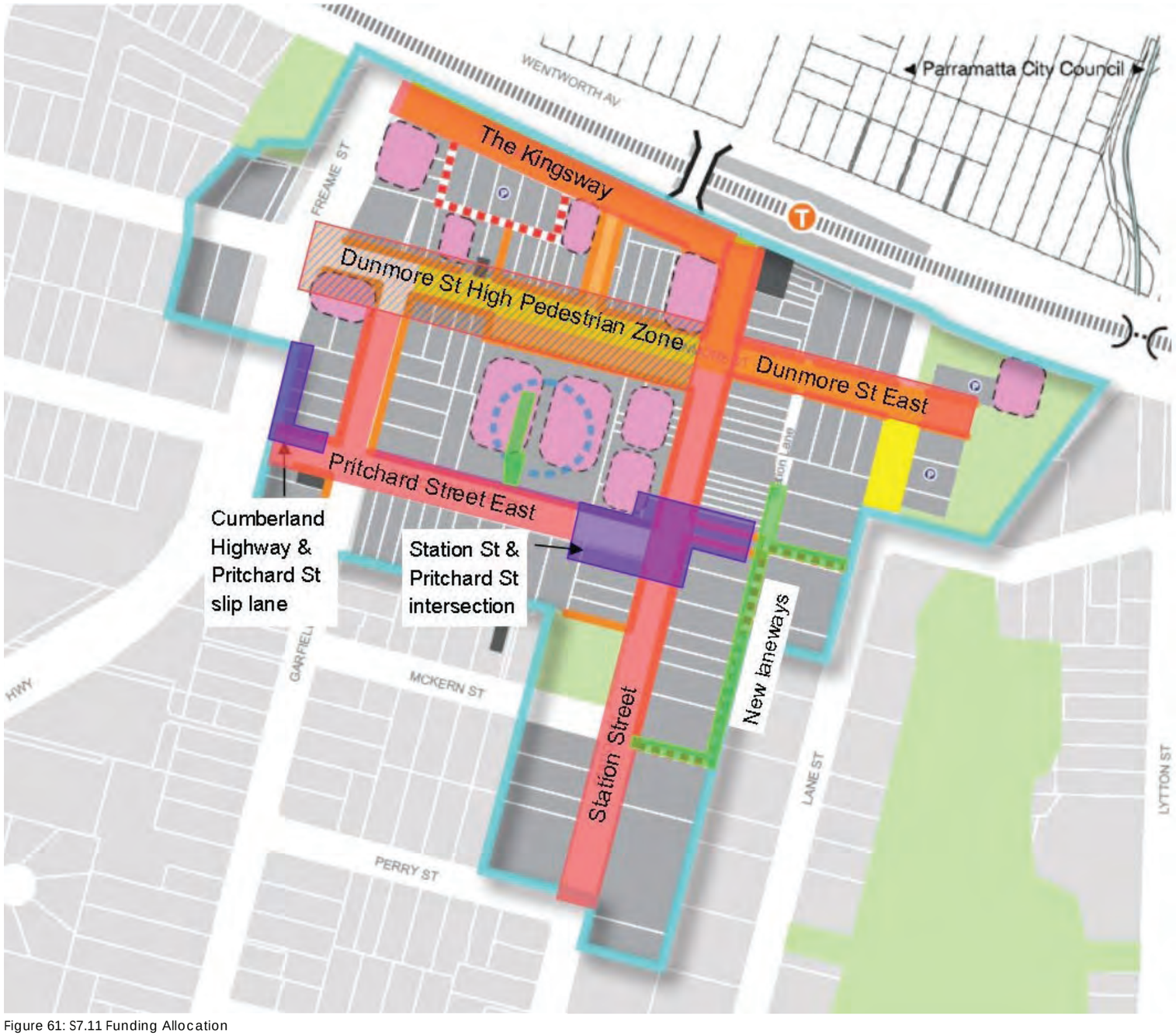

Figure 61: S7.11 Funding Allocation

13 Implementation of Works

The Wentworthville Centre Public Domain Plan vision, aims and objectives form the basis from which the detailed design works, public consultation and funding sources may be established for the long-term implementation of the public domain improvements.

Staging

A combination of short and long term measures should be established for the implementation of public domain improvements. It is envisaged that the short-term measures will address immediate priorities and form the basis for on-going works.

Proposed measures include:

a. Coordinate the public domain plan with the revitalisation of the Wentworthville Town Centre.

b. Ensure consistent approaches and enforceable requirements for developers to contribute to the installation of public domain finishes at the frontage of new developments.

This staging is based on currently available information and may be subject to change.

Short Term (1-5 years)

1. Upgrade Station Street including new paving, street furniture, street lighting and tree planting. Upgrade parking arrangements including new line marking and signage.
2. Remove existing public toilet.
3. Upgrade laneway adjacent to old post office building including new footway and lighting.
4. Upgrade bicycle path adjacent Cumberland Highway onto The Kingsway.
5. Provide temporary (surface mounted) seats and new bins on Dunmore Street until the development of Dunmore Street Plaza.

Medium Term (6-10 years)

6. Implement works for Dunmore Street Plaza and the High Pedestrian Activity Area (HPAA) along Dunmore Street between Garfield Street and Station Road subject to the commencement of development of the Wentworthville Mall Site.
7. Upgrade The Kingsway and Dunmore Street East including new paving, street furniture, street lighting and tree planting. Upgrade parking arrangements including new line marking and signage.
8. Upgrade Pritchard Street

Long Term (10 + years)

9. Implement the full Centre by-pass, subject to RMS approval.

Other works to be undertaken by Council:

10. Street Lighting Plan, including sub station works
11. Sydney Water works

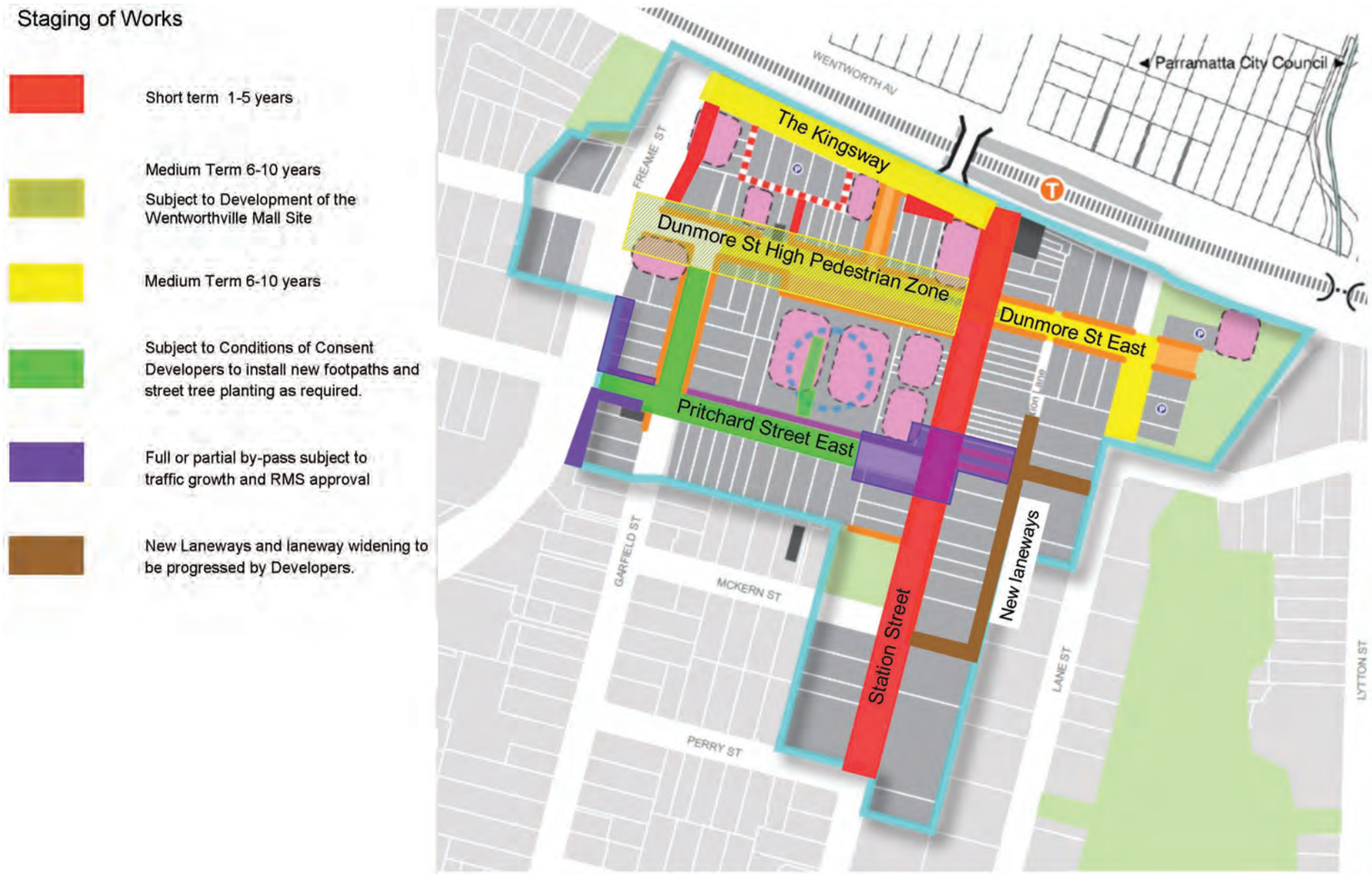

Figure 62: Staging of Public Works