

South Sydney Development Control Plan 1997 Amendment Part H: Green Square Town Centre



April 2006

city of villages

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This amendment commenced operation on 26 April 2006

Further amendments commenced operation on 22 August 2008

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1 Introduction

1.1 Land to which this Plan Applies

This Development Control Plan (DCP) applies to the Green Square Town Centre land, shown edged in heavy black on the map marked Figure 1.1 – Green Square Town Centre, but only insofar as such land has been rezoned under *South Sydney Local Environmental Plan 1998 (Amendment No 17)-Green Square Town Centre* from time to time.

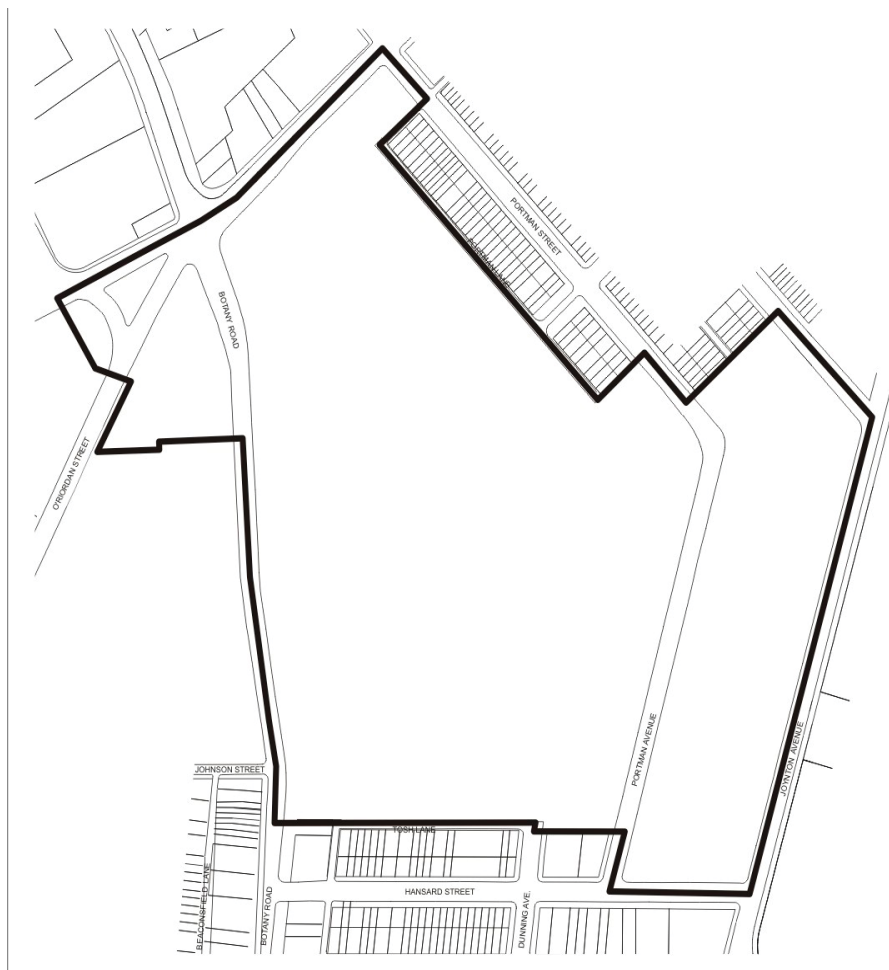


Figure 1.1 - Green Square Town Centre

1.2 Commencement

This DCP was approved by the Council of the City of Sydney on 10 April 2006 and noted by the Central Sydney Planning Committee on 6 April 2006. The DCP commenced operation on 26 April 2006, but only applies to such land within the Green Square Town Centre which has been rezoned under *South Sydney Local Environmental Plan 1998 (Amendment No 17)-Green Square Town Centre* from time to time.

The DCP amendment was approved by the Council of the City of Sydney on 4 August 2008 and noted by the Central Sydney Planning Committee on 31 July 2008. The DCP, as amended, commenced operation on the 22 August 2008.

1.3 Relationship to other Environmental Planning Instruments

South Sydney Development Control Plan 1997 is amended by inserting this DCP after Part G: Special Precincts.

1.4 Green Square Town Centre

In the event of any inconsistencies between this section of the DCP and any other provisions of the DCP, the provisions in this section prevail in so far as the extent of the inconsistency.

1.5 Relationship to Other Planning Documents

This DCP supports the provisions of *South Sydney Local Environmental Plan 1998 (Amendment No 17)-Green Square Town Centre (LEP)*.

1.6 How to Use this Development Control Plan

The Green Square Town Centre DCP is part of a package of planning controls and guidelines prepared to facilitate and encourage the development of the Town Centre at Green Square. These planning controls and guidelines should be read in conjunction and include:

South Sydney Local Environmental Plan 1998 (Amendment No 17)-Green Square Town Centre

This planning instrument defines permissible land uses, development sites, building height and gross floor area.

The LEP breaks up the land to which it applies into public domain and development sites. The method of achieving the planning objectives (including development of the public domain) is established in the LEP through the use of development agreements prior to any subdivision and development of the land.

The LEP is essentially an enabling document, and this DCP supports the LEP detailed planning controls for the Town Centre.

Green Square Town Centre Design Guidelines

Supporting the LEP and DCP is a further document, a set of non statutory building guidelines depicting potential development solutions that can be achieved through the application of the planning controls contained in the LEP and DCP. Reference may be made to the Design Guidelines document in the preparation of Development Applications although the use of such guidelines in no way represents an in principle approval by the consent authority. The guidelines are provided as a set of worked examples only and applicants are encouraged to develop their own responses to the objectives of this DCP and the particular circumstances of each individual site within the future Green Square Town Centre.

State Government Plans and Policies

There are a number of State Government Plans and Policies that apply to development in the Green Square Town Centre. These include:

- *State Environmental Planning Policy No.65 – Design Quality of Residential Flat Development (and accompanying Residential Flat Design Code);*
- *State Environmental Planning Policy No.55 – Remediation of Land (and accompanying Contaminated Land Planning Guidelines);*
- *State Environmental Planning Policy No.11 – Traffic Generating Developments;*
- *The Metropolitan Strategy City of Cities – A Plan for Sydney's Future.*

These policies and plans should be referenced in the preparation of all development applications.

Background information

This DCP has been based on the findings of various environmental planning studies undertaken for the Green Square Town Centre. Appendix 2 provides a list of these studies which should be referenced in the preparation of all development applications.

Key terms used in this Development Control Plan

Green Square Redevelopment Area – the overall Green Square urban renewal area comprising 278 hectares taking in parts of Alexandria, Beaconsfield, Rosebery, Waterloo and Zetland.

Green Square Town Centre – the designated town centre for the Green Square Redevelopment Area (the subject of this DCP) comprising of 14.7 hectares.

Town Core – that part of the Green Square Town Centre defined as the focus of commercial and retail activity, community interaction, community facilities, transport interchange and containing the Town Square.

Town Square – the Green Square Town Square comprising the Civic Plaza and Neighbourhood Plaza.

2.1 Vision

The Vision for Green Square Town Centre is for a vibrant residential, commercial and cultural heart for the Green Square Redevelopment Area. It will be home to approximately 5,500 residents and about 7,000 people are expected to work in the Town Centre. It will be a place where people can live, work and go out either during the day or at night, for entertainment, cultural and community activities.

The mix of transport modes will provide a high level of access and mobility making connections from east to west and north to south simple. The Town Centre will also be a place to enjoy cycling and walking.

New development will join seamlessly with adjacent neighbourhoods, with new buildings at the edges, at a compatible scale and adding to the existing character. The new buildings will also help to reinforce the character of existing and new streetscapes.

The Town Centre will provide a network of open spaces, providing places for relaxation and recreation as well as venues for community events. The new public plazas will form the focus of the Town Centre, and will act as a primary focus for cultural events.

Commercial and retail activities will be concentrated around the Green Square Railway Station and the Town Square, the area known as the Town Core and along major roads. The residential areas will be concentrated further from the station adjacent to the existing neighbourhoods.

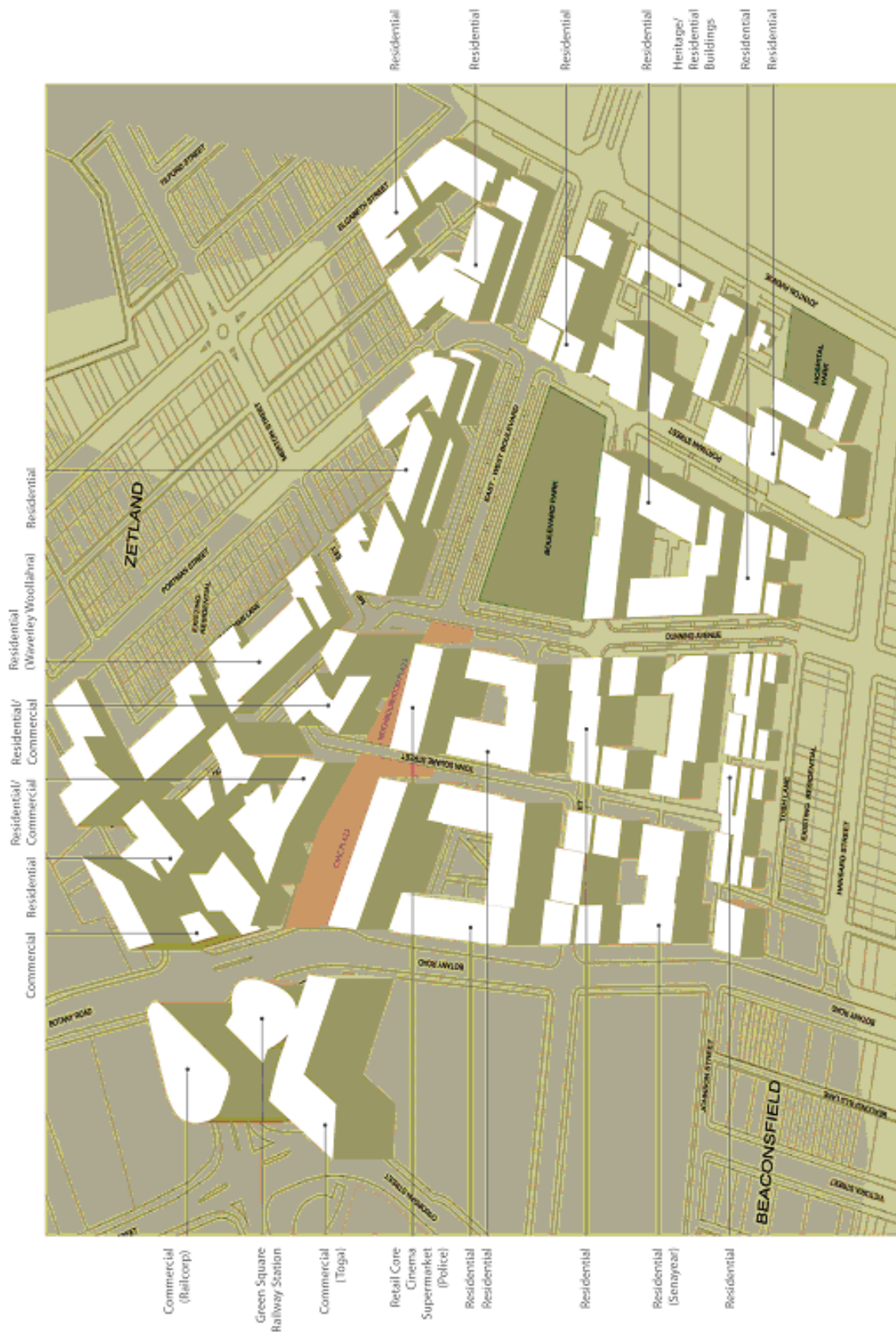


Figure 2.1 - Green Square Town Vision
Note: Building shapes are indicative only

2.2 Guiding Principles

The Green Square Town Centre is the most important element within the Green Square Redevelopment Area. The Town Centre will be a focal point for economic and residential development in the southern part of the City of Sydney. It provides the opportunity to make significant improvements to the public domain, develop new residential communities and increase employment.

The development of the Town Centre is to be undertaken through the implementation of the Guiding Principles set out below:

Public Domain

- To develop and provide a high quality public domain.
- To establish parks, plazas and appropriately designed open spaces.
- To establish a coordinated approach to the detailed design of the public domain.
- To provide for the integration of public art in the design of the public domain that provides for creative expression.
- To provide for a public domain that is designed to be inclusive, safe, functional and meaningful to local communities.
- To provide for a public domain design that includes landmarks and symbols with distinctive local social and cultural meaning.
- To provide for a public domain design that is fully accessible by everyone, encourages diverse social interaction, and is adaptable.
- To provide for a public domain design that accommodates public events in an open primary space and multiple active and passive activities.

Land Use

- To enable a mixture of uses that capitalise on its unique location and social diversity.
- To separate service delivery from public spaces.
- To develop mixed residential and commercial buildings in the Town Core.
- To establish location criteria for specific types of activities.

Social Development

- To identify social planning requirements and required community facilities.
- To establish a socially sustainable mix of residential unit types.
- To provide for adequate disabled person's access in accordance with the City's policies.
- To provide for the integration of social planning requirements and community facility planning which are critical to the social and economic health of the Green Square Town Centre.
- To provide for development that creates equitable access for everyone.
- To provide for development that considers and addresses social and cultural factors.
- To provide for development that recognises and reflects the history and aspirations of the place and local communities.
- To provide for development that responds to the needs of local communities and provides employment and training opportunities for local people.
- To provide for development that creates appropriate, adaptable and affordable housing.
- To provide for development that maximises safety.

Integrated Transport

- To develop an area where it is safe and pleasant to walk and cycle.
- To establish a hierarchy of safe well designed streets.
- To establish an integrated pedestrian, cycle and public transport network that encourages sustainable travel behavior.
- To ensure that the design, layout and management of buildings will promote walking, cycling and public transport use.
- To provide appropriate amounts of private and communal parking that reinforces commercial activities while limiting local traffic congestion.

Environmental Management

- To implement the principles of Ecologically Sustainable Development.
- To effectively manage storm water runoff.
- To use water conservation and energy conservation techniques in development.

Building Design

- To encourage energy and water efficient buildings.
- To encourage adaptable building design.
- To facilitate block-edge design for mixed commercial/residential buildings.
- To facilitate courtyard building forms for residential buildings.

Urban Design

- To establish appropriate building heights and setbacks that help define cohesive urban forms.
- To integrate the Town Centre with the wider Green Square Redevelopment Area.
- To provide a legible public domain.
- To establish the configuration of streets.

2.3 Urban Structure

The main structural elements within the Town Centre are a “core” area (the “Town Core”), a major east west boulevard and the future Boulevard Park. These elements provide the opportunity to establish linkages between the Green Square Railway Station and the eastern edge of the wider Green Square Redevelopment Area. Other plazas, parks and public spaces as well as active building frontages are attached to these elements to reinforce future pedestrian movements, commercial activities and to provide opportunities for integrated transport networks. Secondary streets and through-site links will provide fine grain connections with surrounding areas. (Refer to Figure 2.2 – Structure Plan.)

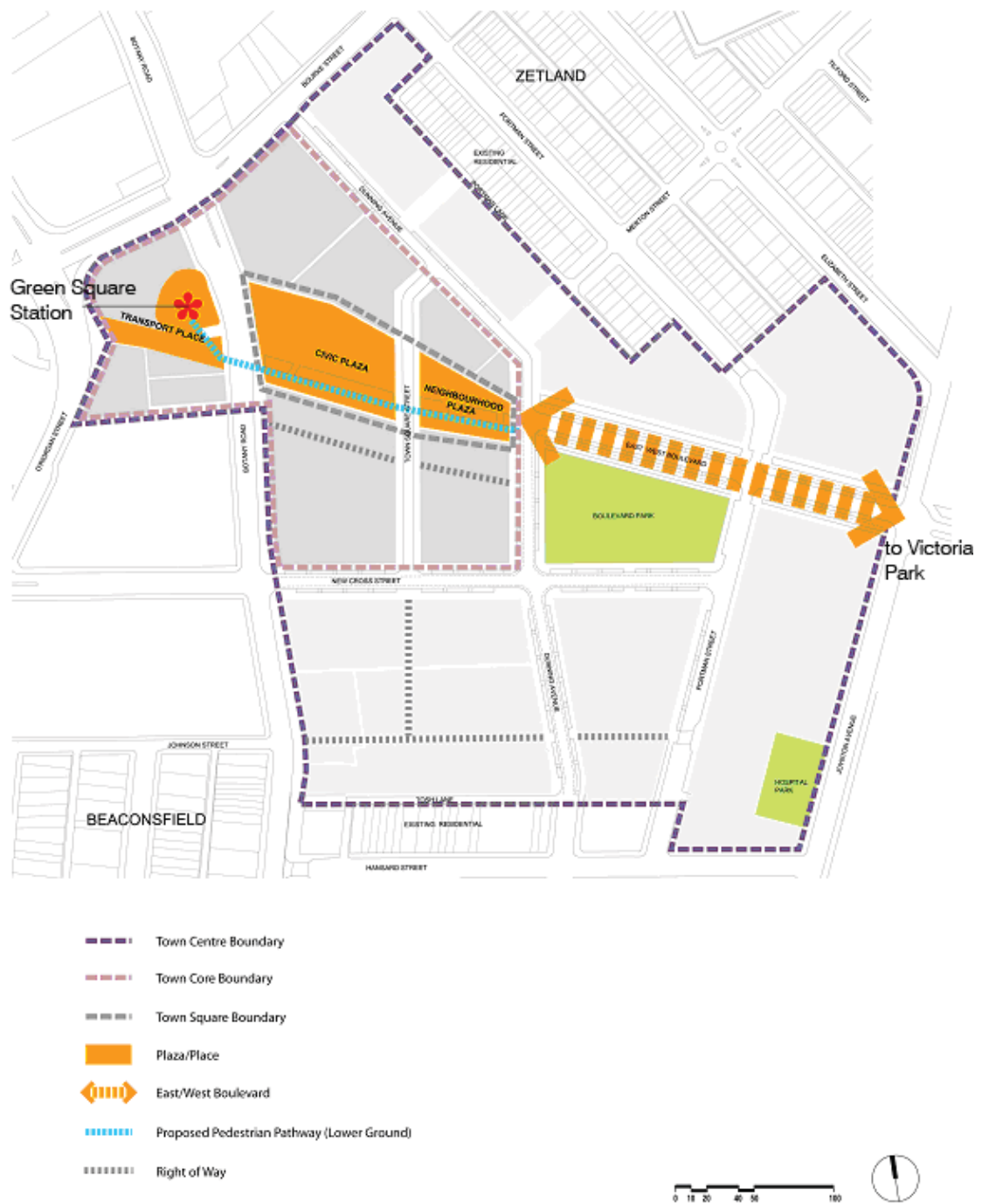


Figure 2.2 - Structure Plan

3 Location Of Desired Activities

Objectives

- To provide locational criteria for a range of land use activities.
- To reinforce desirable activity patterns that promote the function of the Town Centre.
- To create and reinforce the hierarchy and character of streets.
- To indicate the requirements for and location of community facilities.
- To encourage sensitive integration of land use with the surrounding urban context.
- To take advantage of the site's location and access to public transport, proximity to the Sydney Central Business District (CBD) and the surrounding network of educational and cultural institutions.
- To develop vibrant retail and other active uses at ground level, and in appropriate areas throughout the site.

Provisions

3.1 Distribution of Land use and Activities

- a. The distribution of activities and corresponding building types and or buildings with adaptable floor space within the Town Centre shall be as required by the map titled Figure 3.1 – Land Use and Public Domain.
- b. In Development Sites with a permitted mix of Retail, Commercial and Residential floor space, mixed use buildings are encouraged. However this does not preclude development solutions proposing a number of single use buildings which demonstrably improve the amenity of the development and its interface with the public domain.
- c. In mixed use buildings containing Retail, Commercial and Residential floor space, Retail floor space should be at the lower levels to interface with the public domain and provide activation with Commercial floor space above. Residential floor space should generally be at the upper levels to benefit from solar access and view amenity.
- d. In mixed use buildings containing Commercial and Residential floor space, Commercial floor space should be at the lower levels with Residential floor space at the upper levels to benefit from solar access and view amenity.
- e. Threshold elements may contain a range of community and other land uses in accordance with the plan of management adopted by Council.
- f. A multi-purpose community facility must be provided in the Town Core. This may include a library, cultural and general community space and older people space.
- g. The development of multiple retail outlets per block frontage is encouraged. A minimum of 3 retail outlets per block street frontage on the public plaza should be provided.

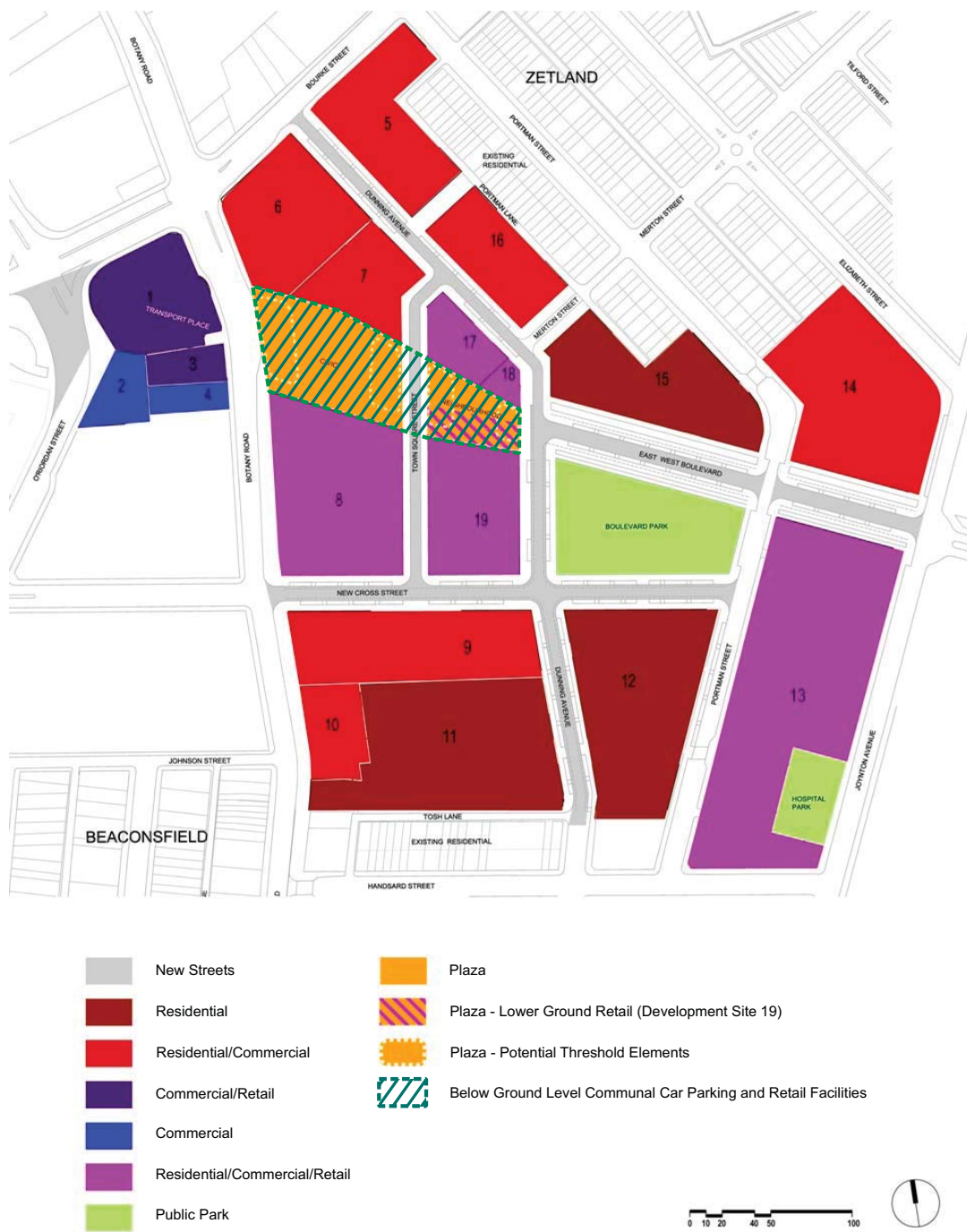


Figure 3.1 - Land Use and Public Domain

4 Public Domain

Introduction

The creation of a significant public domain framework is an integral part of the Green Square Town Centre. Unlike many other redevelopment areas there is a limited existing public domain fabric within the land to which this DCP applies.

As a result roads, public spaces, plazas and parks need to be provided to establish an appropriate framework in which development may take place.

Objectives

- To establish the Town Centre as the focal point of the Green Square Redevelopment Area.
- To establish diverse and sustainable public spaces, plazas and parks that encourage social interaction and use by everyone.
- To enhance pedestrian amenity and safety.
- To integrate the existing and new Green Square Town Centre and surrounding communities by providing recreation areas, a sense of place, social networking and community focus for all.
- To help foster a distinctive community identity that reflects the diversity of the local area.
- To provide appropriate amenity, solar access and shelter across a range of times.
- To provide an integrated network of open space and public domain areas that complements those in the wider area, and that facilitate and enhance the lifestyle of proposed residents and users.
- To link the public domain through a network of cycling and pedestrian linkages.
- To ensure the provision of an improved social amenity and spatial definition.
- To provide a sense of enclosure, shelter, vitality, and identity within the public domain.
- To allow for potential elevated public or commercial buildings in the Town Square.
- To enable the development of below ground transport facilities to support the land uses surrounding and within the public domain.
- To ensure that any car parking provided beneath the public domain will minimise the overall provision and impact of car parking for properties surrounding and within the public domain through the use of a communal car park and shared car parking spaces.
- To enable limited below ground retail uses in appropriate locations where these are associated with publicly accessible areas.
- To ensure that any below ground retail and transport facilities are designed and accessed so as to minimise the impact on the amenity and safety of all users of the public domain.
- To ensure that the design of the below ground transport and retail facilities will be integrated into the design of the public domain.

Provisions

4.1 Public Spaces, Plazas and Parks

- a. Public spaces must have clear, accessible, safe and convenient linkages, especially to the Railway Station, Civic and Neighbourhood Plaza, and Boulevard Park.
- b. Public spaces will have a sense of entry.
- c. Active frontages within the public spaces that support informal surveillance and connection with adjacent buildings are to be encouraged.
- d. The design of the Civic and Neighbourhood Plazas should provide a sense of enclosure and primary spaces that are well defined.
- e. Civic and Neighbourhood Plazas are to have reference to local social and cultural history and aspirations delivered through their development.
- f. Public spaces will be designed to accommodate multiple, diverse users and activities and the flexibility to adapt to future needs.
- g. Public spaces should have clear pedestrian movement routes, seating and zones for activities that are clearly defined and encourage use.
- h. Public spaces are to have a distinctive theme or character that is meaningful to the local community and provide opportunities for creative expression.
- i. Public spaces should be designed to maximise accessibility and safety.
- j. Boulevard Park should provide a minimum of 5,500m² of public open space in the form of a park.
- k. Boulevard Park will provide for deep soil planting, and should not have car parking or access beneath it.
- l. High quality landscaping must be provided with the use of devices such as planting indigenous tree species, pavement design and other appropriate elements to the satisfaction of the City's Public Domain Team.
- m. All landscaping should be compatible with the flood risk i.e. where dense planting is proposed it should not be in a location that interferes with overland flow paths.
- n. Landscaping, plant species and structures such as walls must withstand temporary flood inundation.
- o. Boulevard Park should be designed to be child friendly.
- p. The design of the public domain shall have regard for the assessment and apply the design criteria defined in the *Green Square Town Centre Social Impact Assessment* (2003).
- q. The design of the public domain shall integrate public art planning through reference to the public art strategy adopted by Council at that time.

Name	Location	Purpose	Activity	Requirements (eg deep soil planting etc)
Hospital Park	Joynton Ave	Green space/Park.	Reading, sitting, potentially small pitch or board games.	Should include existing heritage and cultural values and mature plants.
Boulevard Park	Adjacent to East West Boulevard.	Village Green/Green space.	Play (informal or formal).	Soft landscape elements. Design should reflect the desire line to the hospital site. Deep soil planting throughout.
East West Boulevard	Link from the Town Centre to Victoria Park.		Designed predominantly for cycle and pedestrian movements, as well as a possible light rail link.	Ensure sufficient space is provided for the potential introduction of light rail. Deep soil zones should be provided along the Boulevard.

Name	Location	Purpose	Activity	Requirements (eg deep soil planting etc)
Civic Plaza	Central between Transport Place and Neighbourhood Plaza.	Focus for community identity and cultural participation. Encouragement of a sense of place and meaning making through ceremony and symbol. Social networks and participation in community life.	Public meetings, activities for all age groups at ground level. Below ground bicycle and communal car parking facilities, access and retailing facilities.	More generous space than adjacent plazas, becomes less hard edged and introduces perforations in the plaza surface. Includes a water feature. Ensure sufficient space is provided for the potential introduction of light rail.
Transport Place	Green Square station, western side of Botany Road.	Pedestrian and cycle access and transport interchange.	Interchange with east-west bus services and north south rail services. It will provide direct pedestrian connections to Civic Plaza, and other side of Botany Road, employment to the west.	Concourse retailing and services permissible.
Neighbourhood Plaza	Eastern Plaza	Social networks and participation in community life.	Cafes restaurants, local shops and speciality shops. Bicycle and communal car parking facilities, access, retail facilities and a supermarket are permitted beneath the primary public plaza level.	Direct and accessible physical and visual connections with the ground floor retail. Ensure sufficient space is provided for the potential introduction of light rail.

Table 4.1 - Key Characteristics of Parks and Plazas

4.2 Elements within the Public Domain

Figure 3.1 identifies opportunities for the provision of built elements within the Civic and Neighbourhood Plazas. The purpose of these threshold elements is to improve social amenity, spatial definition through a sense of enclosure, shelter, vitality and identity and activation of the public domain.

These elements may be buildings occupied for public or commercial purposes and may be elevated, allowing at grade permeability. They may be permanent pieces of art satisfying practical objectives as identified above (ie sense of enclosure, shelter).

They may be temporary elements introduced for the purposes of creating an event or variety and adaptability of the spaces which reappear and disappear associated with the event (ie time of year, markets, etc).

Associated with these elements are the introduction of critical public space elements such as lighting, water, signage and urban furniture. These elements can be related to the threshold elements and provide a continuum through the spaces.

Specific details associated with the introduction of these threshold elements is referred to in Section 4.4

- a. Public art elements that designate spaces and provide character are encouraged.

- b. Spaces that are adaptable and can accommodate temporary structures, for events such as markets should be provided.
- c. Critical public space elements such as lighting, water, signage and street furniture must be provided throughout the public domain.
- d. Buildings may be permitted within the public domain in areas identified as Potential Threshold Elements in the Public Domain in the map titled Figure 3.1 – Land Use and Public Domain.
- e. Small structures for uses such as toilets, kiosks and community spaces are permissible in the public domain.
- f. Any building in the public domain must consider impacts on the amenity of surrounding buildings or the public domain including:
 - Solar amenity;
 - Disruption of the function of the place;
 - Obstacles to pedestrian movements; and
 - Future incompatible uses.

4.3 Pedestrian Amenity and Safety

- a. All public spaces must be designed to meet *Crime Prevention Through Environmental Design* (CPTED) principles (DUAP 2001).
- b. Open sightlines and landscaping that allows high levels of public surveillance by users and residents are to be provided.
- c. A clear distinction between private and public open areas must be made.
- d. External lighting (AS for pedestrian lighting AS1158) which makes visible potential 'hiding spots' must be provided.
- e. Entrances to public open space that encourage pedestrian use and provide visual security through the establishment of clear sightlines are to be provided.
- f. The public domain is to be designed to ensure there are no dead ends or similar.

4.4 Design Criteria for Public Spaces

The following section outlines performance criteria to be addressed in the design of public domain spaces in the Town Centre. The design of these space is expected to be of a high quality and environmentally sustainable. These criteria are designed to create a strong sense of a civic space in the Town Centre.

Boulevard Park

Boulevard Park lies at the eastern end of the Town Core. Its principle purpose is to serve as the major park for the Town Centre. The following section is to act as a guide in the planning and design of Boulevard Park.

Objectives

- To act as the primary soft landscaped resource for the Town Centre.
- To provide a recreation focus for surrounding development.
- To facilitate cross-site pedestrian connections.
- To form a component of the overland flow path.
- To achieve a high degree of year round solar access.
- To integrate landscape with interpretative art elements, including the management of stormwater.

- To be adaptable as a performance space with informal seating areas.
- To use the design of public domain elements and furniture, and the materiality of surfaces within the public domain, to create a distinctive character.

Attributes

- Delineated by East West Boulevard, Dunning Avenue, New Cross Street, Portman Street.
- Significant open space prior to arrival at Town Core from East.
- Deep soil soft landscape capacity.
- Existing trees along Portman Street.

Elements

- Surface inclination and levels.
- Soft landscaping.
- Architectural elements, urban furniture.
- Public amenities, BBQ's, shade structures.

Desired Character

- Integral part of Town Centre Public Domain.
- Soft landscape counterpoint to Plazas.
- Accommodate range of experiences and activities.

Adaptability

- Passive and active recreation.
- Outdoor performances, events.

Neighbourhood Plaza

Objectives

- To act as the main retail and entertainment centre for the Green Square Town Centre, including supporting below ground bicycle and communal car parking facilities.
- To act as linear termination of the East West Boulevard, and a signifier for entry into the Town Core.
- To assist in integrating the plaza level with the below ground level through the use of threshold elements and continuation of public domain design themes.
- To use the design of street furniture and other public domain elements in the establishment of a sense of place.

Attributes

- Accessible connection from Dunning Avenue down to Town Square Street.
- Activated Below Ground Retail connected to Plaza Retail.
- Below Ground bicycle and communal car parking.

Elements

- Water as public art.
- Connection to Below Ground Public Domain Retail and parking.
- Threshold element at Dunning Avenue and/or Town Square Street.
- Taxi lay-by on Town Square Street.

- Public amenities.
- Specialty retail, with the possibility of a supermarket.
- Entertainment, i.e. cinema complex.

Desired Character

- Activation of Retail edges.
- Al-fresco dining on southern edge.
- All-weather connections across the plaza.
- Integration of landscaping within Ground and Below Ground Level.
- Provision of areas of natural light to Below Ground Level.

Adaptability

- To enable temporary markets – growers, specialty produce.
- To enable non-staged performance spaces.

Civic Plaza

Objectives

- To be capable of staging community and district events.
- To act as an extension of the retail and below ground communal car parking functions of the Neighbourhood Plaza.
- To protect user amenity through the use of acoustic screening measures where necessary.
- To emphasise the eastern entry to the Town Core Plaza.
- To assist in the integration of the plaza level with the Below Ground through the use of threshold elements and continuation of public domain design themes.
- To integrate the performance spaces and seating into the public domain, through the manipulation of landscape levels and the use of adaptable street furniture, lighting, and other public domain elements.
- To bridge Botany Road, through the continuation of public domain design themes and signature elements.

Attributes

- Accessible connection from Town Square Street down to Botany Road.
- Below Ground bicycle and communal car parking and access to Green Square Station.
- High degree of traffic noise from Botany Road.
- Main lunch-time recreation plaza space.

Elements

- Water.
- Multiple connections to Below Ground Public Domain retail and parking.
- Threshold element to Botany Road.
- Threshold element to Town Square Street.
- Taxi lay-by on Town Square Street.
- Bus stand on Botany Road.
- Public amenities.
- Large plaza area.
- Soft landscaping.

Desired Character

- Activation of Retail and Showroom edges.
- Al-fresco dining on southern edge.
- Activation of centre of plaza.
- Variety of outdoor 'rooms' exposed, sheltered, sunny, shaded, intimate, expansive.
- Pedestrian connections across water element.
- Integration of landscaping within Ground and Below Ground Level.
- Provision of areas of natural light to Below Ground Level.

Adaptability

- Larger markets.
- Outdoor performances (staged and/or seated) – music, theatre, cinema. – which are capable of being expanded.
- Sporting events.

Transport Place

Objectives

- To capitalise on the high visibility location to establish a specific identity for the Green Square Town Centre.
- To emphasise the role of the Transport Place as an entry point – to the Town Core, Green Square Station, the commercial buildings.
- To bridge Botany Road through the continuation of public domain design themes and signature elements.
- To serve as a transport interchange for bus and train services.

Attributes

- Accessible connection from Botany Road down to O'Riordan Street.
- Below Level access to Green Square Station.
- High degree of traffic noise from Botany Road.
- High degree of exhaust pollutants from Botany Road.

Elements

- Water.
- Connections to Green Square Station.
- Bus stand on Botany Road.
- Connections across Botany Road – Plaza level, Below Ground, pedestrian, symbolic.
- Public amenities.

Desired Character

- Arrival at Town Centre and Town Core.
- Sense of Place – nodal.
- Clear access to other Plazas.
- Clear access to Green Square Station.
- Effective interface between train and bus.

Adaptability

- Sustainable activity during peak and off-peak travel times.

Below Ground Public Domain

Objectives

- To act as an integral component of a multi-layered public domain, with the accommodation of activities spanning more than one level.
- To be easily navigable and legible as part of the overall Town Core public domain.
- To provide an accessible connection throughout the public domain, and between parking areas.
- Accommodation of multi-level activities spanning Ground and Below Ground.

Attributes

- All weather connection from Green Square Railway Station through to Neighbourhood Plaza, under Botany Road and Town Square Street.
- Multiple connections to plazas.
- Visual connections between Ground and Below Ground providing access to natural light.

Elements

- Penetrations in plazas connecting Threshold elements to Below Ground.
- Below Ground Retail at Neighbourhood Plaza.
- Publicly accessible parking.
- Integration of plaza water element.
- Integration of plaza surface elements – materials, landscaping, urban furniture, art.
- Graphic signage for pedestrians and cyclists.

Desired Character

- Integral part of Town Centre Public Domain; materials, water elements, urban furniture and landscaping.
- Arrival lobby with appropriately scaled floor to ceiling heights.
- Clear wayfinding with well designated connections.

Adaptability

- All weather markets.
- Expansion of Below Ground activities.

5 Development and Building Design

Objectives

- To implement desirable urban form.
- To ensure appropriate building separation on large development sites to facilitate the provision of courtyard areas and appropriate residential amenity.
- To facilitate the design and development of residential apartment buildings.
- To facilitate the provision of a socially sustainable mix of residential units.
- To facilitate the design and development of commercial and retail buildings.
- To facilitate the design and development of mixed use buildings.
- To integrate the design of buildings with the broader public domain.
- To establish minimum requirements for the design of buildings.

Provisions

5.1 Urban Form and Development Potential

a. Urban Form

The permissible building forms within the Town Centre and relevant urban design principles are shown in the table below.

Type	Description	Principles
1. Block Edge	Build to building line to abut streets and to present defined edge elements. Multi-storey.	Suitable for residential, commercial or retail.
2. Courtyard	Build to create internal courtyard areas intended as communal open space Multi-storey.	Suitable for residential, commercial or retail.
3. Heritage	Existing heritage buildings.	Suitable for adaptive reuse for residential, retail or offices with building forms retained intact.
4. Corner Buildings	Corner building or building element .	Volumetric expression of corner. Address street frontages.
5. Retail /Commercial/ Residential Building	Ground floor retail, first floor commercial with residential uses above. Located in the Town Core	Diversity of retail uses on ground floor

Table 5.1 - Urban Form

b. Developable Floor Area

The total amount of gross floor area and development mix within each development site is as specified in the LEP.

Development of any site

- Shall not exceed the total gross floor area indicated; and
- Shall comply with the indicated development mix, except where it can be demonstrated that due to specific site design and or economic feasibility considerations that strict compliance will not result in the optimum development outcome for the site. In such case a variation of up to 10% on the development mix for each type of use shall be permitted.

c. Vehicular Entry

Vehicular entry points are not permitted in locations as marked in Figure 5.1 – Through Site Links and Vehicular Entry.

d. Apartment Entry Points

Ground floor apartments that face the street are encouraged to have direct street access.

e. Through Site Links

Through site linkages in the form of pedestrian connections, rights of way or permeable building forms are to be provided in accordance with the localities shown on Figure 5.1 – Through Site Links and Vehicular Entry.

Through site linkages will only be approved where they comply with the standards identified in Table 5.2 – Through Site Links.

Performance Criteria	Provision	Notes
1. Location	As per the Green Square Town Centre – Vehicle and Pedestrian Access. No two links within the same development site being closer than 50m apart. Alignment of linkage points with other links or public spaces.	
2. Design	Minimum overall width 6m. Minimum footpath width 3m. Continuous path of travel. Lighting. Signage indicates name of link and street or place it connects to and that it is publicly accessible. Route to be shown diagrammatically.	In accordance with AS1428 – Equitable Access. In accordance with AS1158 - Pedestrian Lighting.
3. New Utilities	Utilities such as but not limited to electricity substations, car park exhausts or ventilation, telecommunications facilities are not permissible.	Utilities to be sited unobtrusively.
4. Way finding	Direct route with unencumbered sight lines. Integrated landscape, lighting and street furniture design scheme.	
5. Accessibility	Publicly accessible.	In accordance with AS1428 – Equitable Access. Potentially subject to closure at night to maintain safety.
6. Security	Permissible only where surrounding building design permits passive surveillance. Design consistent with Crime Prevention Through Environmental Design Principles.	Refer to NSW Police Service's <i>Crime Prevention Through Environmental Design</i> document (CPTED).
7. Building Permeability (through site links through or under buildings)	Minimum building height 2 storeys. Portal Proportions - width not less than 6m, height not less than 6m. Maximum length of portal to be 18m. Must be publicly accessible.	Potentially subject to closure at night to maintain safety.

Table 5.2 - Through Site Links

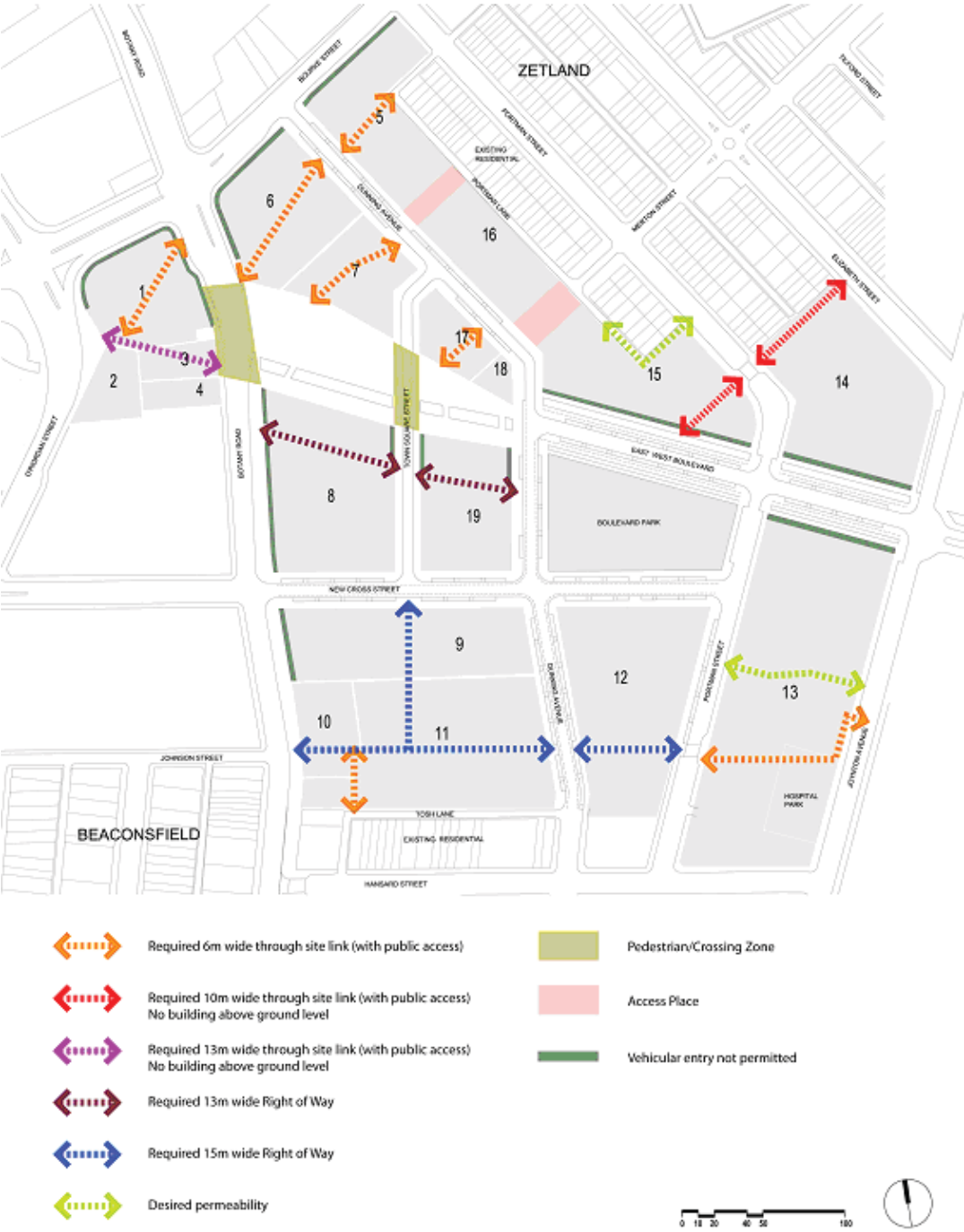


Figure 5.1 - Through Site Links and Vehicular Entry

f. Building Separation for residential buildings shall be in accordance with the following provisions:

Height	Between habitable rooms and balconies	Between habitable rooms and Non- habitable rooms	Between Non-habitable rooms
Up to four storeys	12m	9m	6m
Five to eight storeys	18m	13m	9m
Nine storeys and above	24m	18m	12m

Table 5.3 - Building Separation

Note

Building separation standards may be varied according to site context and constraints. Development that proposes building separations less than those described above, must demonstrate to the satisfaction of the consent authority that daylight access to the public domain and residential buildings, urban form and visual and acoustic privacy have been achieved, consistent with the intent of the provisions.

- g. Residential Apartment Size and Mix within each development site and or building shall be in accordance with the following standard/table:

Apartment Type	Internal Area M ²	Private Open Space M ²	Percentage Mix
3 bedroom	Greater than 95	Refer to Table 5.5 - Private Open Space	10-30%
2 bedroom	65-95		40-80%
1 bedroom	50-65		10-30%
Studios	30-50		5-10%
Adaptable Housing (note: refer to the City's Access DCP 2004 for accessibility requirements)	As above		20% of apartments will be adaptable (refer to table 5.6)
Work/Live	100-150		Up to 10%
Affordable Housing	50 (1bed) 70 (2 beds) 95 (3 beds)		

Table 5.4 - Residential Apartment Size and Mix

- h. Solar Performance – Public Spaces

The established solar access target level between the hours of 12 noon and 2.00pm in mid-winter has been set at 35% of the combined Civic and Neighbourhood Plazas. The heights of buildings adjacent to the plazas as set out in the Green Square Town Centre Height Map in the LEP have been set to ensure that the solar access for the plazas can be readily met.

Elements in the public domain (refer to Section 4.2) may have an impact on the solar access performance targets stated above. Variation to solar amenity will be at the sole discretion of the consent authority.

5.2 Private and Communal Open Space

- a. Private Open Space

Private Open Space shall be provided for apartments in accordance with the following standards:

	Dwelling Size	Area required	Dimensions
Balconies	Small (< 65 m ²)	8-10 m ²	Min depth of 2m (2.4m preferred).
	Medium (65-90 m ²)	10-12 m ²	Min depth of 2m (2.4m preferred).
	Large (> 95 m ²)	12-20 m ²	Min depth of 2m (2.4m preferred).
Ground level, structure or podium.	All sizes	20-25 m ² min	Min depth 4m for ground level) Min depth 2.4m for structure or podium.)

Table 5.5 - Private Open Space

- b. Communal Open Space

- Not more than 50% of communal open space provided at ground level shall be paved or of other non-permeable materials;
- Landscaping to be in accordance with an approved landscape plan.

5.3 Building Design

a. Building Setbacks, Modulation and Articulation

For the purposes of meeting the urban design objectives for the town centre buildings are to be designed in accordance with the following provisions:

- (1) Where irregular building alignments are permitted as shown on Figure 5.2 – Building Alignments and Setbacks, buildings may be setback at regular intervals to a depth of 2m from the street setback to aid in building design, modulation and articulation.
- (2) Where Figure 5.2 – Building Alignments and Setbacks identifies requirements for the setback of upper floors and landscaped areas buildings are required to be designed in accordance with the standards shown on the plan.
- (3) The 8m landscape setback on Portman Street is required for the purposes of protecting existing trees and is required for the full height of buildings.
- (4) Be designed to meet CPTED principles.

Notes

Building Setbacks refer to the setbacks of upper floors or design elements at the height of the fourth storey on the future East West Boulevard.

Landscaped Setbacks refers to the setback for the purposes of providing landscape treatments and is required for the full height of buildings.

b. Building Heights

The height of a building includes roofs and parapets. The LEP allows lift overruns and plant rooms to exceed the height controls. This may occur only where they have been designed to minimise adverse visual impacts or are designed as integrated elements of the building.

c. All applicants are required to refer details of their development proposal to the Sydney Airport Corporation Limited for assessment.

d. The minimum height of floors shall be in accordance with the following provisions:

Commercial	3.5m floor to floor
Retail	3.5m floor to floor
Residential	3.0m floor to floor 2.7m floor to ceiling for habitable rooms.

e. Street Setbacks

Buildings are required to be predominantly built to the street with a zero (0) setback except where variations are permitted as shown on Figure 5.2 – Building Alignments and Setbacks. Where variations are permitted it is to facilitate building articulation, modulation, the provision of landscaped setbacks and the development of appropriate building forms.

Note

Variations to Street Setbacks are permitted to facilitate building modulation and articulation consistent with the urban design objectives for the town centre. Building articulation and modulation requirements are dealt with in more detail in Section 5.3 a.



Figure 5.2 - Building Alignments and Setbacks

f. Building Elements

Buildings are to be designed in accordance with the following standards:

Performance Criteria	Provision	Notes
1. Adaptable Design - Commercial and Retail	Employ structural systems which may include: Align structural walls, columns, service core between floors. Minimise internal structural walls. Floor levels as specified in Section 5.3 d. Knock out panels between offices and shops. Strata titling prohibited within the retail floor space of Development Site 19.	Adaptable layouts in order to accommodate: Changing needs over time. The provision of community facilities, libraries, child care and other social requirements as identified in Section 2. Maximum flexibility in the configuration of buildings.
2. Adaptable Design - Residential	Employ structural systems which may include: Align structural walls, columns, service core between floors. Lightweight internal walls. Minimise internal structural/load bearing walls. Multiple entries and circulation cores.	Adaptable layouts in order to accommodate: Changing demographics. Family life cycle.
3. Awnings - Retail - Commercial - Residential	Location as specified. Minimum awning height 3.2m. Awning widths to be a minimum width of 3m or 600mm less than distance to kerb. Fixed 3-4m awnings to northern side of public plaza areas (no street frontages). Glass awning must not be provided on residential strata buildings. Vertical canvas blinds suspended from fixed awning are prohibited. Continuous over extent of retail frontage and building entries. Over building entries. Over common building entries.	Refer Figure 5.3 Awnings, Colonnades and Entries.
4. Drive-way Access Points	To be located outside of vehicular entry not permitted zones. The design of driveways and parking areas generally to be in accordance with the requirements set out in the Guide to Traffic Generating Developments (RTA).	Refer Figure 5.1 Through Site Links and Vehicular Entry.
5. Commercial and Retail Access Points	From main address streets. Corner locations.	
6. Residential Access Points	From main address streets.	
7. Colonnades	Location as specified. Designed within the range of the following dimensions/proportions: Min. 3m width and 3.5-7m height.	Refer Figure 5.3 Awnings, Colonnades and Entries. To be integrated into building and block design.
8. Balconies	Articulation elements such as open balconies, screening, sun shading, may project 500mm forward of the building setback.	

Performance Criteria	Provision	Notes
9. Building Corners	Buildings shall address street frontages. Designs should explore solutions for volumetric expression through indentations, first or upper level projections or by partially setting back. Corner splays should be minimised or avoided.	
10. Retail Frontage	A mix of active retail frontages is encouraged.	Glazed shop fronts required. Solid walls prohibited.

Table 5.6 - Building Elements

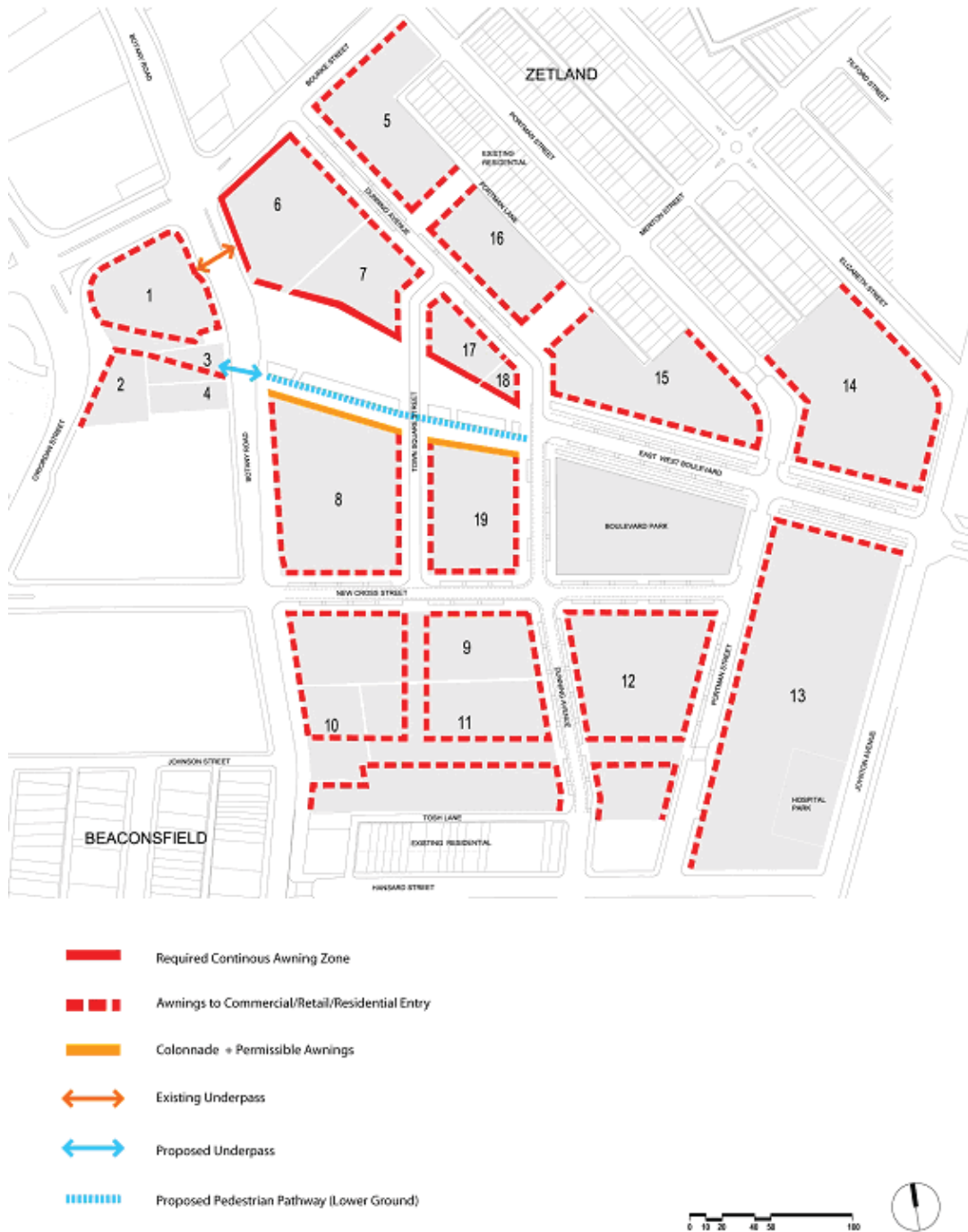


Figure 5.3 - Awnings, Colonnades and Entries

g. Internal Arrangements – Apartment Amenity

The internal arrangements for apartments shall be in accordance with the following standards:

Performance Criteria	Provisions	Notes
1. Solar Access - Town Core	Living rooms and private open spaces for at least 70% of apartments are to receive a minimum of two hours direct sunlight on 22 June.	Town Core – Refer Figure 2.2. In considering compliance with the above, regard will be given to sunlight access to adjoining balconies of living rooms; appropriate urban form, site orientation and other constraints.
2. Solar Access – Outside Town Core	Living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of 3 hours direct on 22 June.	Town Core – Refer Figure 2.2 In considering compliance with the above, regard will be given to sunlight access to adjoining balconies of living rooms; appropriate urban form, site orientation and other constraints.
3. Single Aspect Dwellings	Limited in depth to 8m from a window. Limit south facing single aspect apartments to maximum 10% of the total apartments in the development.	
4. Apartment Depth	The maximum apartment building depth is 18m.	Excluding balconies.
5. Ventilation	Sixty per cent (60%) of apartments across the site must be naturally cross-ventilated.	
6. Internal Storage	Studio Apartments = 6m ³ One Bedroom Apartments = 6m ³ Two Bedroom Apartments = 8m ³ Three Bedroom (+) Apartments = 10m ³	Excluding kitchen cupboards and bedroom wardrobes. Note: In each apartment 50% of required storage may be located in the basement or within common areas.
7. Basement Storage	May include 50% of required internal apartment storage.	Dedicated storage areas attached to each car parking space or centralised storage area. Area excluded from total floor space.

Table 5.7 - Internal Arrangements – Apartment Amenity

5.4 Signs

Due to the specific urban design objectives for the Green Square Town Centre the provisions of this DCP supplement the City of Sydney Signage and Advertising Structures DCP. Signs are to be provided in accordance with the following standards:

Performance Criteria	Provisions	Notes
1. Prohibited signs and signage structures	Painted signs, animated signs, free standing signs, sky signs, above awning signs, roof signs, A-Frame signs.	
2. Design of signs	Signs are to be designed as part of the original building design and must be incorporated as the overall architectural presentation of the proposed buildings and awnings.	For all new development.
3. Illuminated Signs	Illuminated signs are not to conflict with residential amenity.	At the discretion of the consent authority.
4. Content	Designed to identify the premises, business or residence only.	Signs designed to advertise products attached to buildings are prohibited.
5. Signs within the Town Core	Temporary signs within the Town Core only. Signs may contain advertising.	At the discretion of the consent authority.

Performance Criteria	Provisions	Notes
6. Detached and free-standing signs in the public domain	Signs for public purposes only including directional and public facility naming.	Advertising prohibited.
7. Number of signs	One sign per commercial/retail tenancy except on corner properties.	

Table 5.8 - Signs

5.5 Landscape

a. Landscape Plans

Development proposals for buildings and the public domain are required to provide a landscape plan that:

- Provides landscape schemes for all private, communal and landscape areas or setbacks.
- Differentiates between private and public space.
- Landscape plans are required for all major development proposals for buildings and the public domain.

b. Podiums, Roofs and Paved Areas

Drainage and irrigation is to be provided to all planted areas on podiums within buildings.

Where landscaping is to be provided on roofs, podiums or other paved communal spaces the following standards apply:

Type and size (canopy at maturity)	Min. soil Volume	Min. Soil Depth	Min. Soil Area
Large trees (16m canopy)	150 cubic metres	1.3 metre	10 metre x 10 metre area or equivalent
Medium trees (8 metre canopy)	35 cubic metres	1 metre	6 metre x 6 metre or equivalent
Small trees (4m canopy)	9 cubic metres	800mm	3.5 metre x 3.5 metre or equivalent
Shrubs	N/A	500-600mm	N/A
Ground Cover	N/A	300-450mm	N/A
Turf	N/A	100-300mm	N/A

Table 5.9 - Podiums, Roofs and Paved Areas

- c. Within the Town Core a minimum of 500mm of soil for planting beds above car parking or subterranean structures must be provided.

5.6 Social Environment

- Development applications shall have regard for the assessment and apply the design criteria defined in the *Green Square Town Centre Social Impact Assessment* (2003).
- Development applications shall include a public art plan developed through reference to a public art strategy that has been adopted by Council at that time.

6 Street Hierarchy, Traffic and Transport

Objectives

- To encourage sustainable travel behavior through the use of public transport and provision of pedestrian and bicycle facilities.
- To provide a coherent structure of streets that compliments existing streets that are adjacent to the Green Square Town Centre.
- To maximise the use of on-street parking to assist the viability of neighbourhood retail uses in preference to large, off-street car parks.
- Provide for the opportunity for some pooled parking below the public plaza that may belong/be used by other sites and locations within the Town Centre.

Provisions

6.1 Bicycle Parking

- a. Bicycle parking is to be provided in the vehicle parking area.
- b. Bicycle parking is to be provided in the form of Class 2 compounds, as specified in AS 2890.3 - *Bicycle Parking Facilities*.
- c. Bicycle parking facilities may be located in storage areas if access to parked bicycles is not impeded by the design or location of the storage area.

6.2 Car Parking

- a. Below ground or semi-basement car parking is to be provided within each block of development.
- b. Where below ground parking is to occur along the street edge of a site, parking must be not more than 1200mm above the street level.
- c. Car parking should be provided in accordance with the *South Sydney Development Control Plan 11 – Transport Guidelines for Development 1996* (or any subsequent replacement Plan) and any relevant *Australian Standards*.

6.3 Public Transport

- a. Bus stops and bus routes must be provided in consultation with the State Transit Authority and in locations identified in Figure 6.1 – Transport Structure Plan.
- b. The design of the East West Boulevard including the plaza section at its western end is to provide adequate width for a possible high capacity transport corridor.

6.4 Traffic Signals

- a. Traffic signals will be provided at critical intersections shown in Figure 6.1 – Transport Structure Plan to control traffic and facilitate pedestrian movements.

6.5 Communal Car Parking

- a. Communal car parking under the public plazas is identified Figure 6.1 – Transport Structure Plan.
- b. The design of the below ground communal car park must be integrated with any public domain plans applicable to the Green Square Town Centre from time to time, including:
 - (i) the location of vehicular entrances and exits to the car park;
 - (ii) deep soil planting areas and water features; and

- (iii) pedestrian and bicycle entrances and exits and associated storage and facilities.
- c. The design of the communal car park should, where possible, be integrated into the design of the adjoining buildings, or allow for integration with future buildings on the adjacent development sites, for example through the provision of direct access to adjacent buildings.
- d. The design of the communal car park should maximise the safety and security of all users, such as the use of measures that maximise natural surveillance including, where possible, the provision of access to buildings at lower levels directly from the car park.
- e. The design of the communal car park should maximise opportunities for the adaptive reuse of all or part of the car park area.
- f. Prior to the granting of development consent, Council must be satisfied that adequate arrangements have been made for the provision of car parking spaces for community uses: If no policy has been adopted by Council in this regard, the following minimum allocations will be required:
 - (i) 20 spaces for staff and users of community facilities (excluding accessible spaces for people with mobility impairment);
 - (ii) 10 accessible spaces for people with mobility impairment;
 - (iii) 6 spaces of a size and design capable being utilised for community buses unless site constraints indicate that the design and access arrangements required to accommodate such vehicles will have a detrimental impact on the development of the car park or public domain; and
 - (iv) 6 spaces dedicated for car share scheme use.
- g. Parking and facilities provided in accordance with sub-clause f should be located to maximise accessibility to the public domain and/or community use, for example, by being located adjacent to lift access.
- h. Measures should be incorporated into the design and management of the communal car park to maximise the operation of the car parking spaces for communal use and may include:
 - (i) nominated hours for the communal use of allocated car parking spaces;
 - (ii) incentives to ensure the frequent turnover of car parking spaces throughout the day;
 - (iii) encouraging uses and users to enter into arrangements for the use of spaces by multiple users.

6.6 Street network

- a. The road network is to be in accordance with Figure 6.1 – Transport Structure Plan and with the typical cross sections on Figures 6.2 to 6.9.
- b. Street widths must be consistent with Table 6.1 – Town Centre Street Hierarchy.
- c. Roads will provide traffic lanes, cycle lanes and bus stops as appropriate to the function in the road hierarchy as shown by Figure 6.1 – Transport Structure Plan.

Street Type	Dimensions	Function	Landscape Design
East West Boulevard	Total width 36m. 9m dual carriageway with parking in between trees. Cycleway 2.5m. Grass/gravel verge with tree planting. Footpaths may vary in location and width. The minimum footpath width is to be 3.6m.	Significant avenue providing frontage for medium rise residential and mixed use buildings and Boulevard Park. Major east west road and pedestrian/cycle/ possible high capacity transport corridor. Generous grass verged areas provide deep soil planting for four rows of trees in staggered planting with dedicated cycleway.	Bitumen road surface and parking bays. Permeable surfaces to trees. Wide grass and/or ground cover planting areas.
Local Access Street	Total road reservation generally 20m. One transit lane in each direction with parking bays between trees to each side. Minimum 3.2m pedestrian pavement.	Local access street with kerb side parking. Adjacent development 4-8 storeys in height, predominantly residential, possibly some ground floor commercial use.	Bitumen road surface and parking bays.
Town Square	Total reservation 16m. 6m wide carriageway with parking in recessed bays to one side only. 3.6m wide pedestrian pavements.	This is a relatively narrow reservation designed to create a more intimate city street as a contrast to the more expansive urban plaza areas. Adjacent mixed use sites with retail, commercial, cinemas and residential above. Will provide service access and egress as well as access to basement car parking.	Bitumen road and parking bay surfaces.
Right-of-way	Total width 15m.	Provides frontage for low rise apartments. Slow speed, more intimate than typical streets. Provides vehicular access and casual limited parking. Flush concrete kerbs and bollards.	Relatively uniform pavements.

Table 6.1 - Town Centre Street Hierarchy

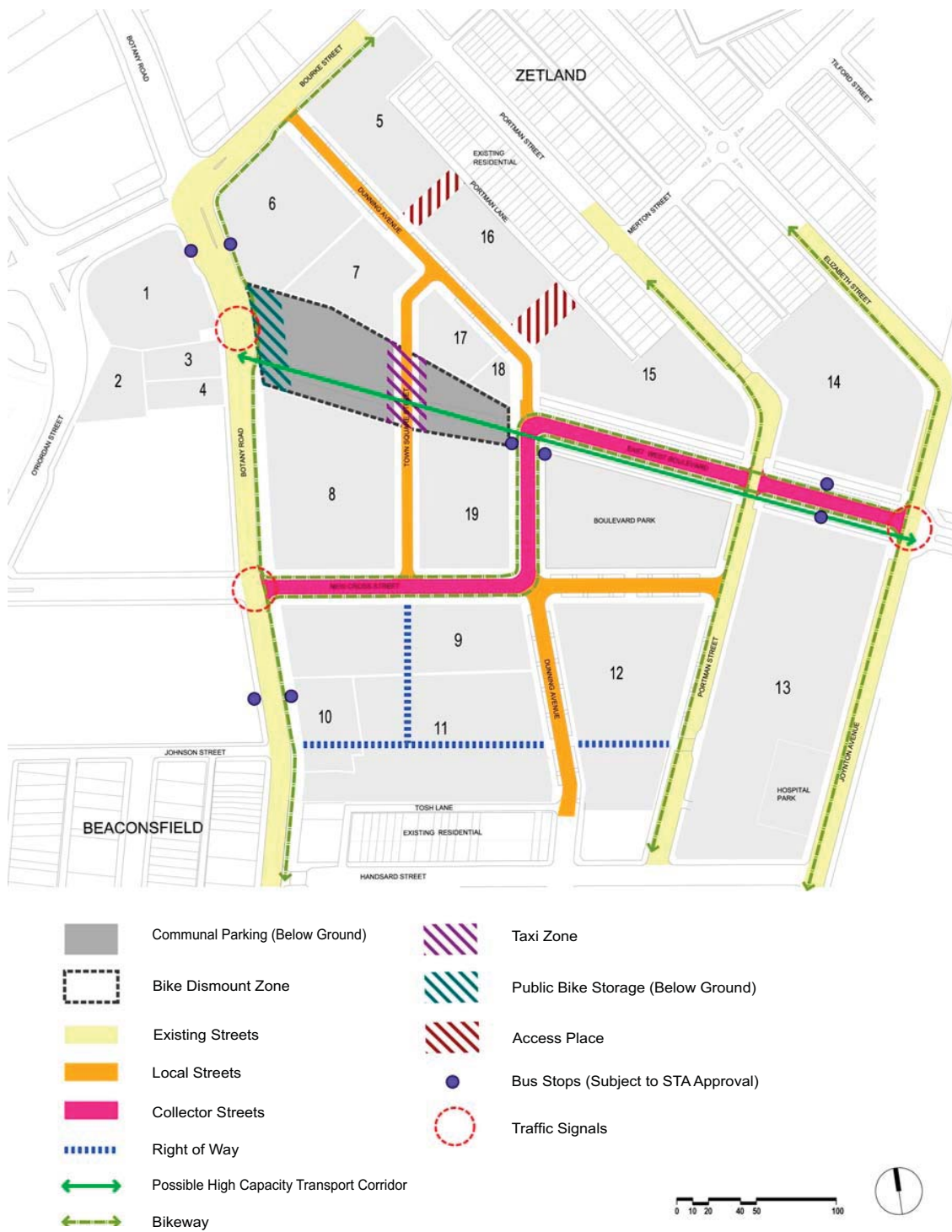


Figure 6.1 - Transport Structure Plan

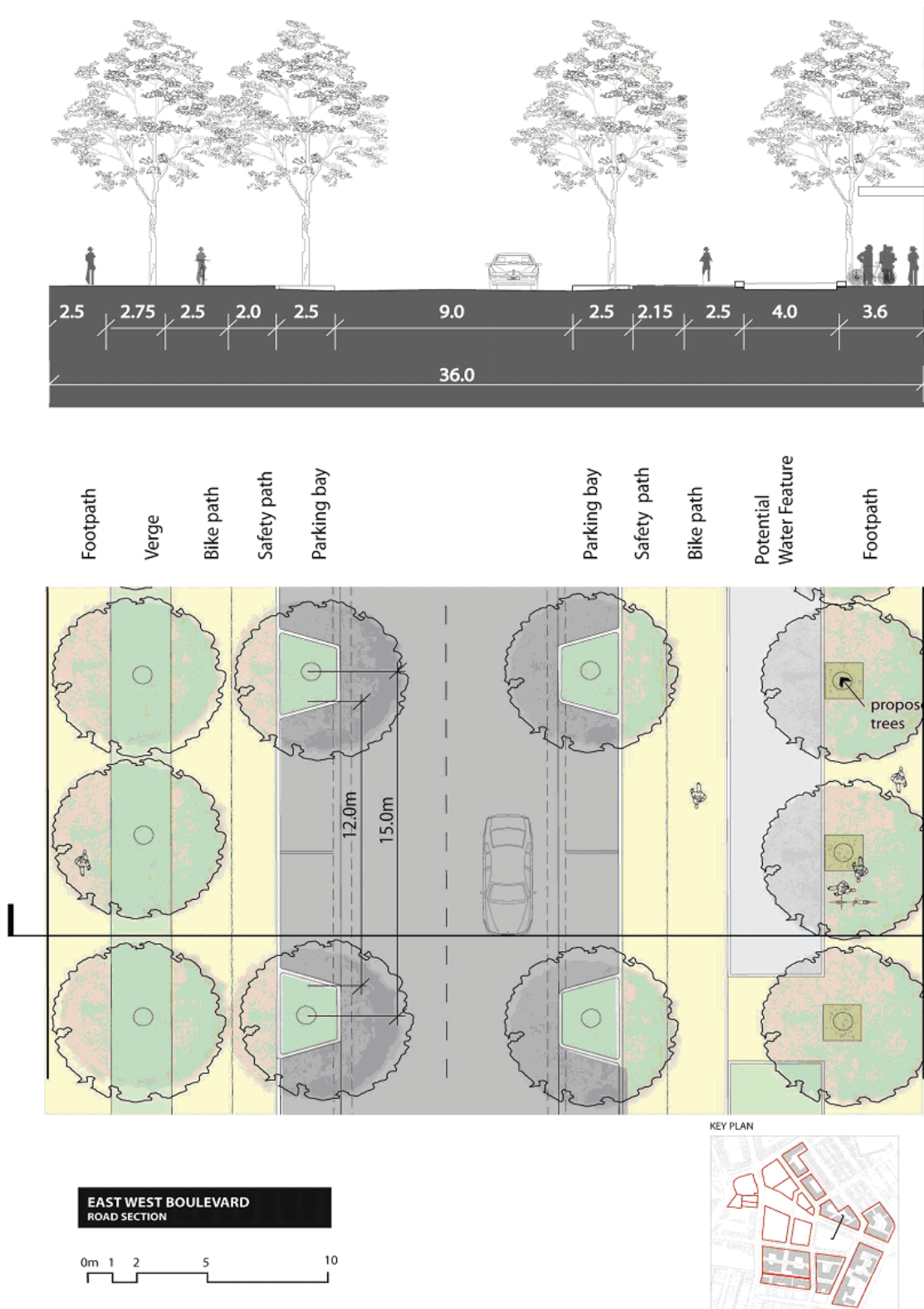


Figure 6.2 - East West Boulevard

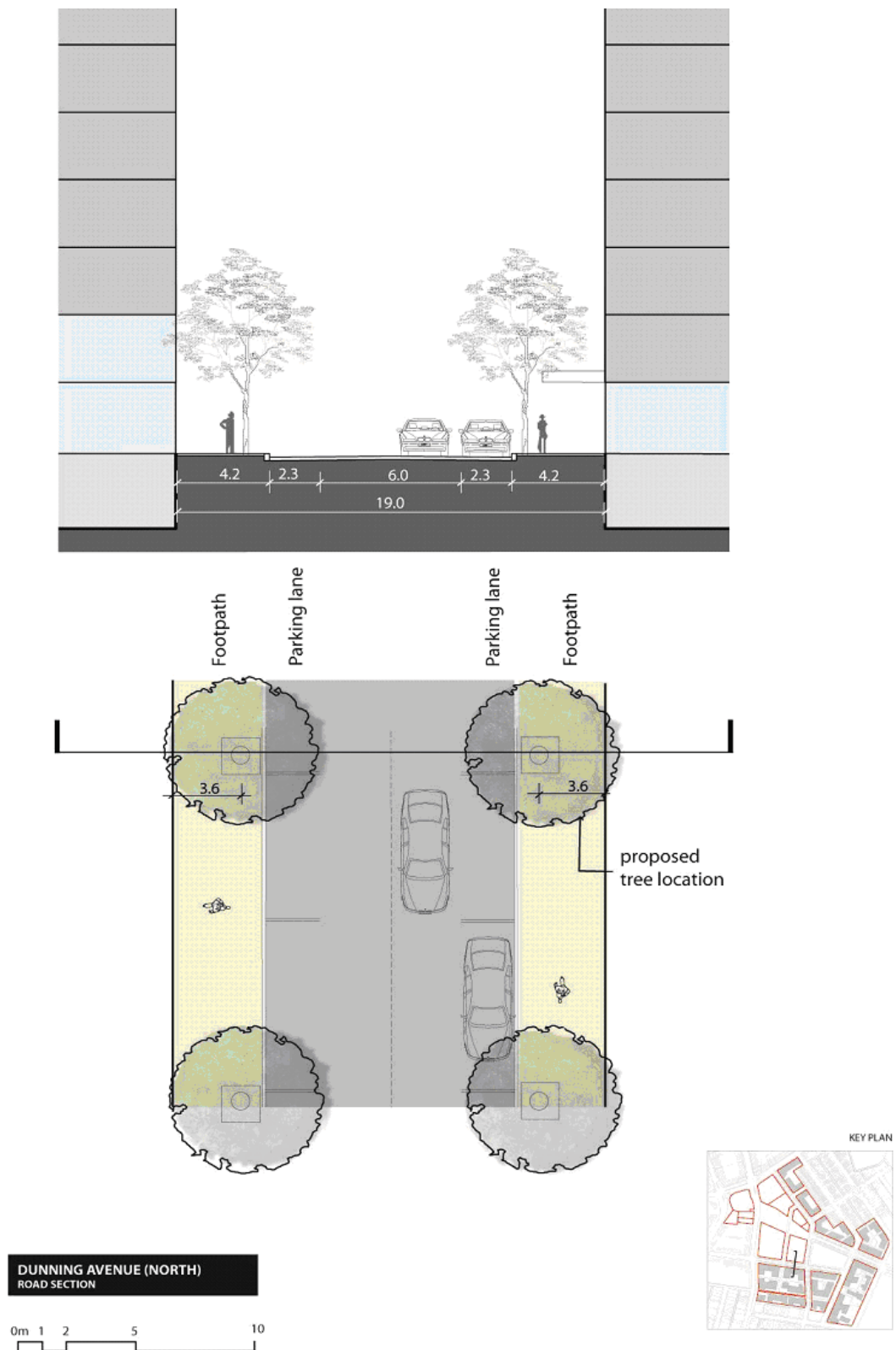


Figure 6.3 - Dunning Avenue (North)

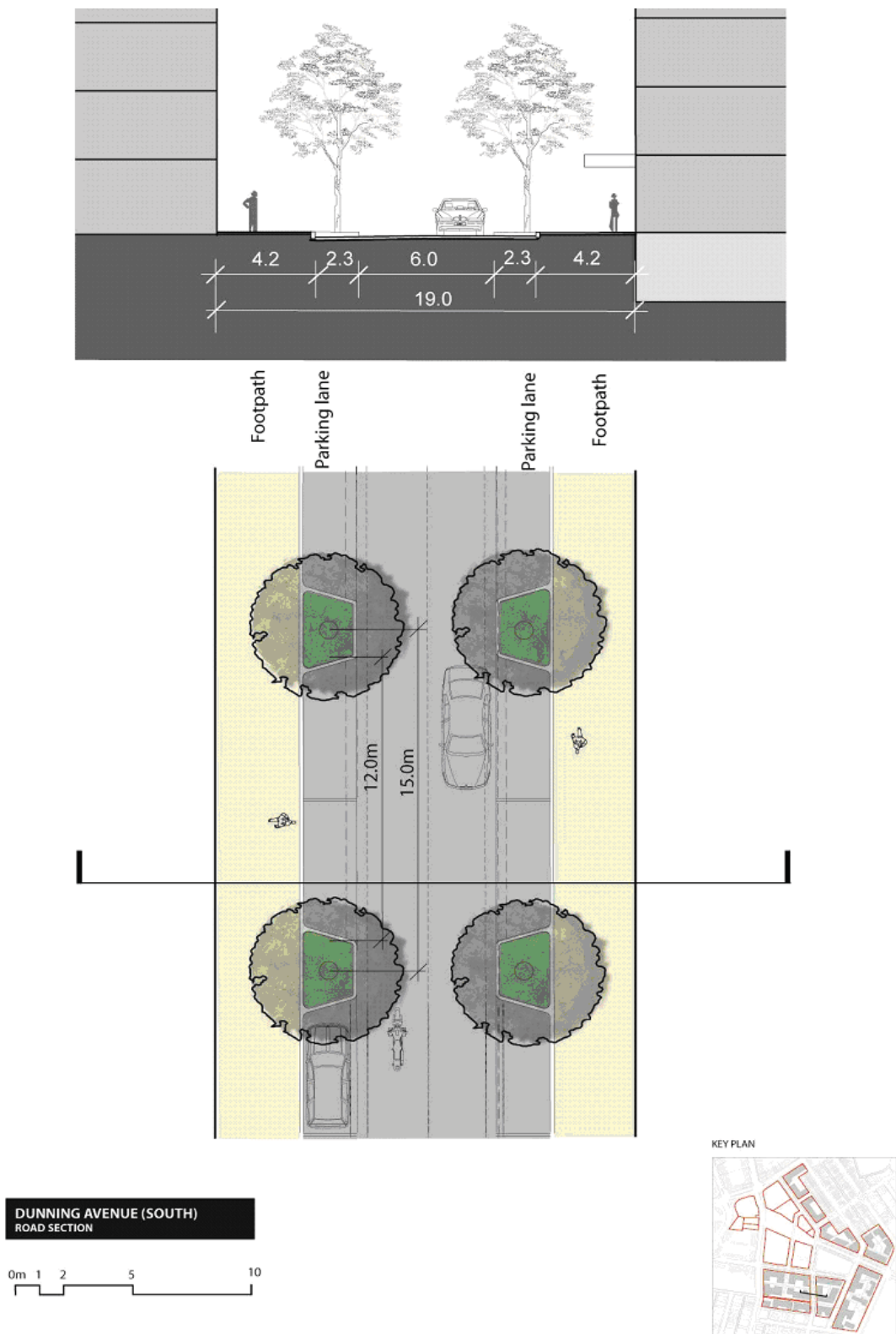


Figure 6.4 - Dunning Avenue (South)

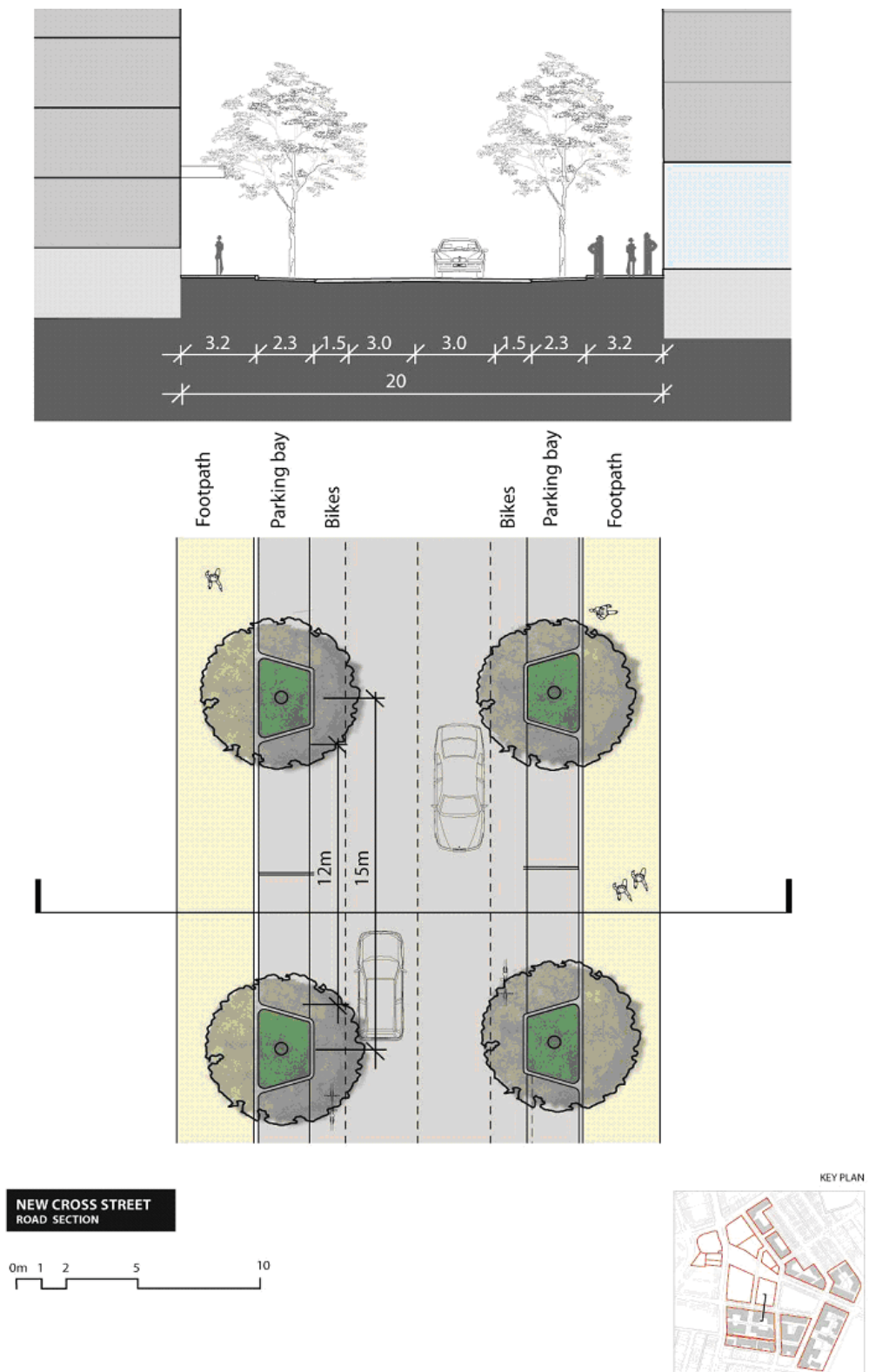


Figure 6.5 - Town Square Street

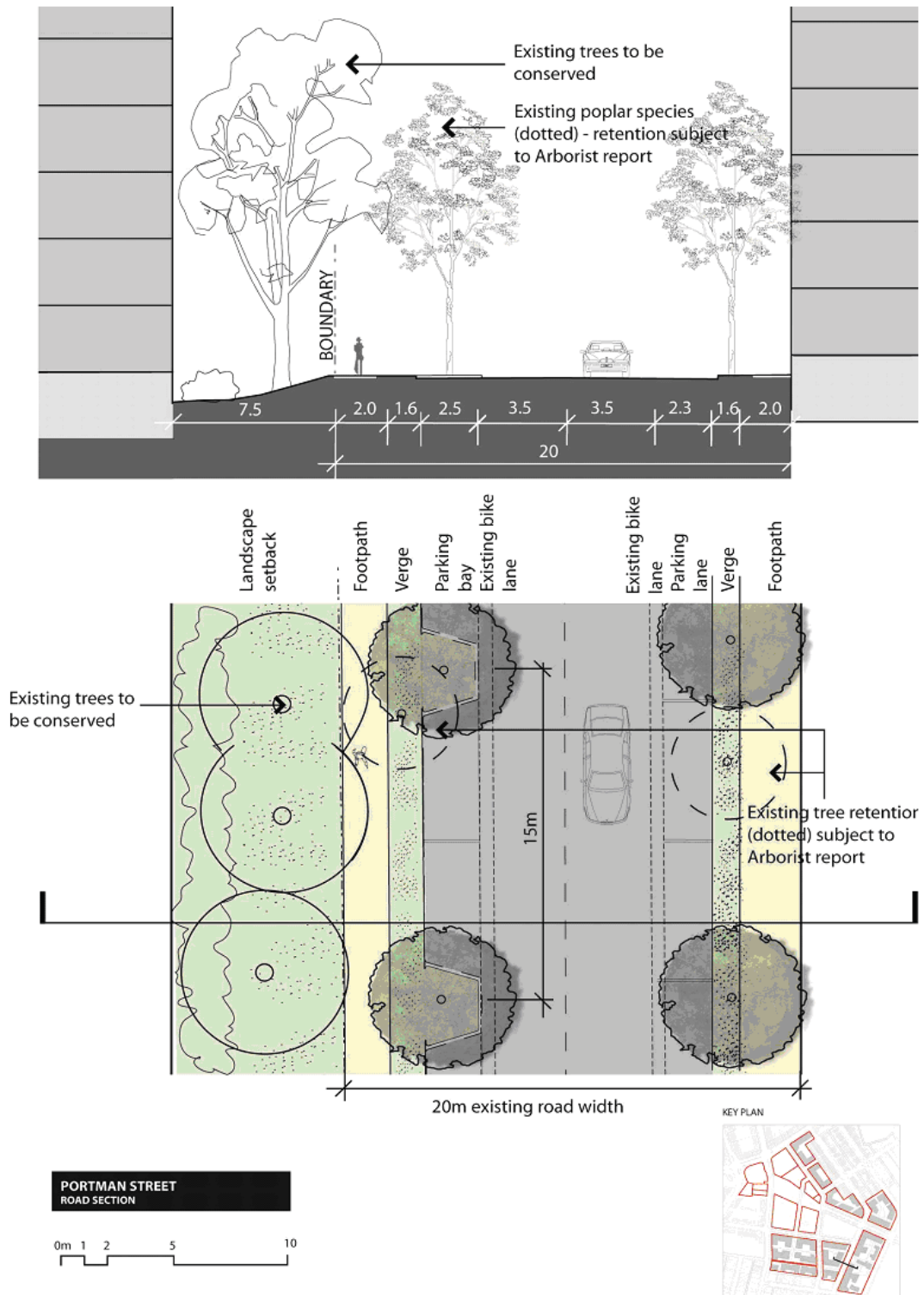


Figure 6.6 - Portman Street

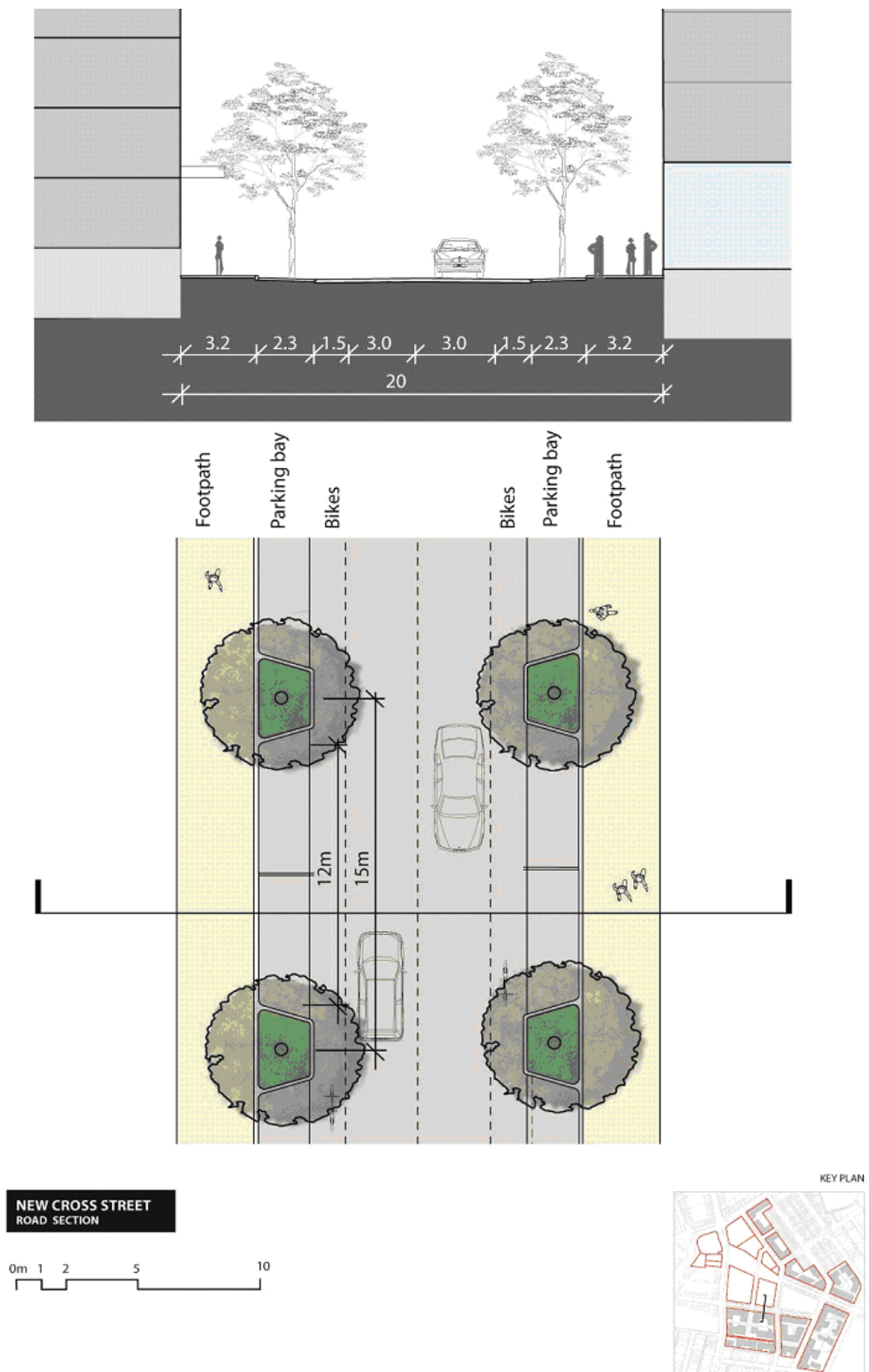


Figure 6.7 - New Cross Street

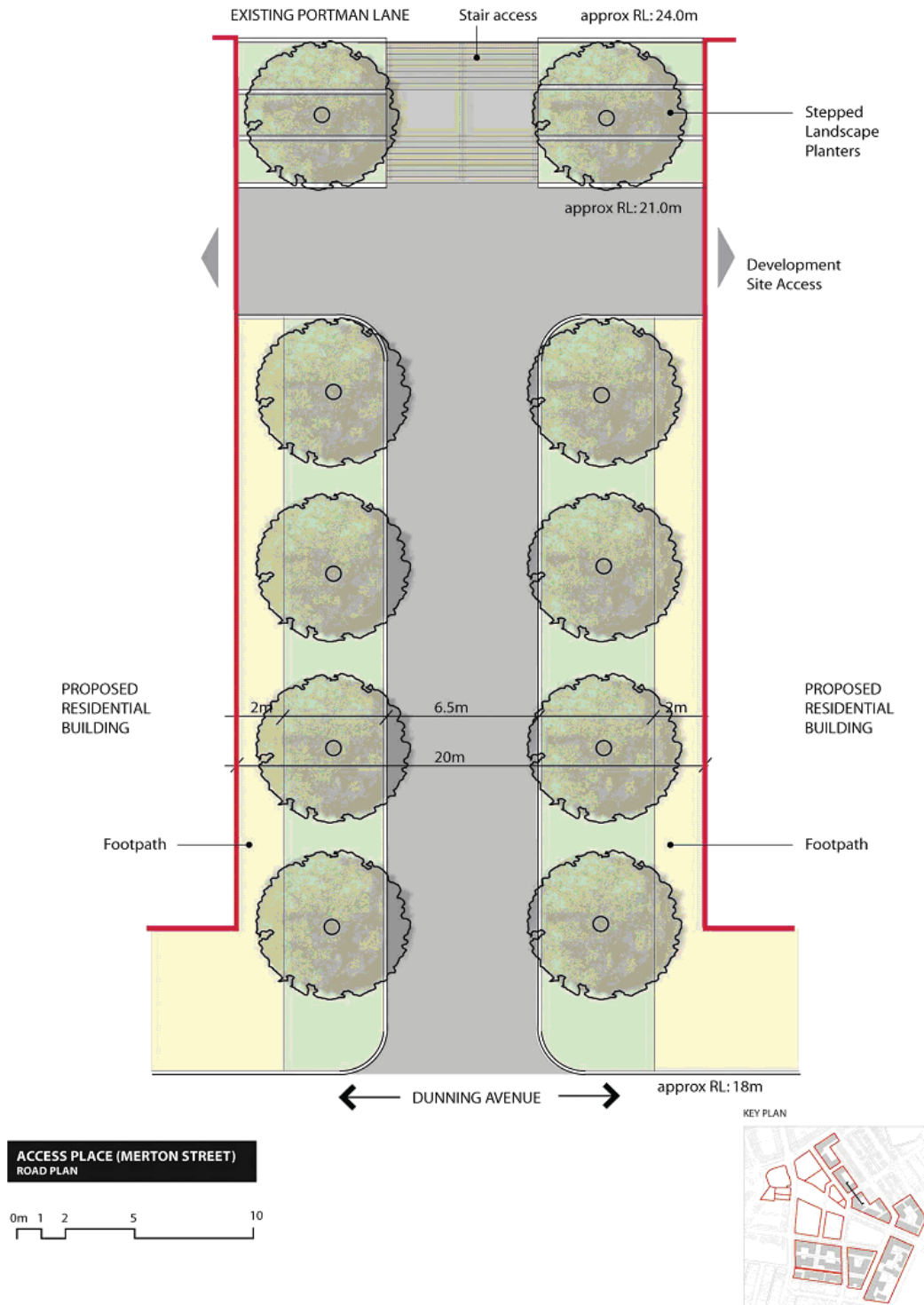


Figure 6.8 - Access Place (Merton Street)

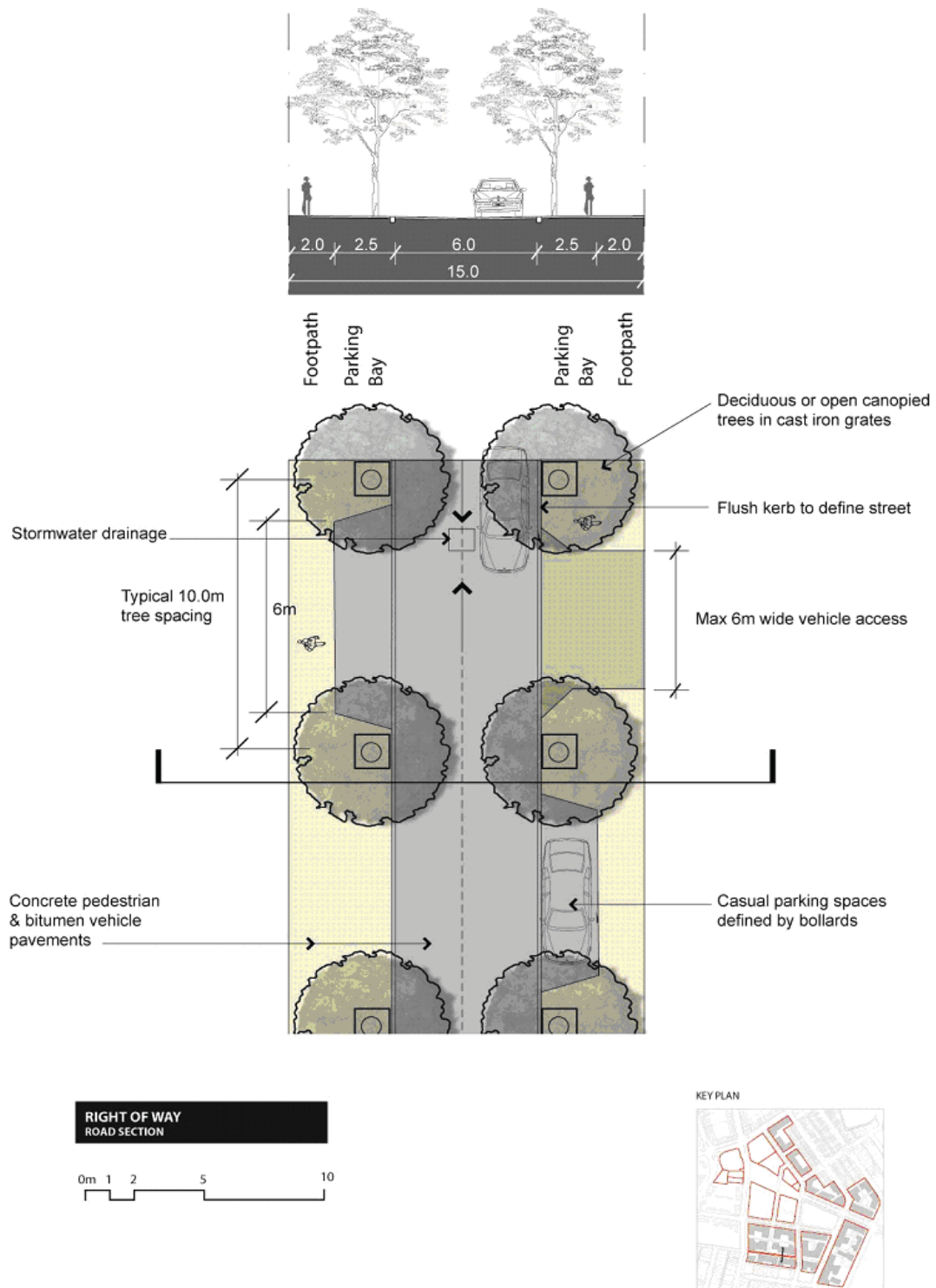


Figure 6.9 - Right-of-Way

7 Environmental Management

Objectives

- To set minimum ecologically sustainable development baseline targets and encourage innovative outcomes.
- To encourage efficient use of water and energy and reduce mains consumption of potable water.
- To ensure new development will not be subjected to undue flood risk, nor exacerbate the potential for flood damage or hazard to existing development.
- To facilitate development in a manner that adequately takes account of the flood risks and hazards.
- To ensure that public safety and the level of flood protection represents best practice and is in accordance with the *NSW Floodplain Development Manual*(2005).
- To ensure stormwater management is appropriate to the site and its surrounds and is integrated into public domain and open space design.

Provisions

7.1 Residential Buildings

- a. Residential buildings must comply with BASIX ratings for energy and water consumption, or any other relevant applicable NSW State legislation.

7.2 Ecologically Sustainable Non-residential Buildings

- a. Commercial office buildings must achieve a minimum rating of four (4) stars under the Green Star Office Design tool. A certified rating demonstrating a minimum four (4) stars under Green Star Office Design Assessment tool must be submitted prior to the issue of a construction certificate.
- b. Commercial office buildings must achieve a minimum rating of four 4 stars under the Green Star Office As Built tool. A certified rating demonstrating a minimum four (4) stars under Green Star Office As Built tool must be submitted prior to occupation.
- c. In addition to the above commercial office buildings must achieve a minimum rating of four point five (4.5) stars under the Australian Buildings Greenhouse Rating Scheme. A certified rating demonstrating a minimum four (4.5) stars under the Australian Buildings Greenhouse Rating Scheme must be submitted prior to the issue of a construction certificate.

7.3 Public Green Space Irrigation

- a. At least 50% of the water used for irrigation of public open space should be drawn from a recycled water or harvested rainwater source. The design of public green space may include:
 - use of drought tolerant plants and grasses;
 - use of water retaining media mixed into soil.
- b. Public green space is to include sub-surface drip irrigation systems controlled by timers using soil moisture or rainfall sensors.

7.4 Stormwater and Water Sensitive Urban Design Principles

- a. The post-development peak flows from the Green Square Town Centre must not exceed the corresponding pre-development peak flows.

- b. Water Sensitive Urban Design principles must be incorporated in the design of the public domain and private accessways.
- c. The design of all streets, public domain elements and hard paved and landscaped surfaces must reflect current best practice water sensitive urban design to the satisfaction of the City's Public Domain Team.
- d. The types of pollutants, estimated pollutant loadings and level of pollutant retention should reflect current best practice and as a minimum, be consistent with the objectives and recommendation presented in Australian Runoff Quality and the WSUD Technical guidelines document (refer note).

Notes

Engineers Australia, 'Australian Runoff Quality – A Guide to Water Sensitive Urban Design' 2005.

NSW Stormwater Trust and Upper Parramatta River Catchment Trust, 'Water Sensitive Urban Design – Technical Guidelines for Western Sydney' 2004.

7.5 Flood Risk Management

- a. Development applications for land within the flood liable portions of the Green Square Town Centre must be prepared in accordance with the assumptions and flood information documented in the *Green Square – West Kensington Flood Study* (or current version thereof). The flood study would either confirm that this is the case or where not, undertake additional flood studies in accordance with the *NSW Floodplain Development Manual* (2005).
- b. Proposed development must, at a minimum, comply with the Flood Planning Levels (FPLs) as documented in Table 7.1.
- c. Any portion of the building or structure lower than the nominated FPL is to be built from flood compatible materials (ie materials that will not experience any significant damage as a result of the ingress or passable of floodwaters, including debris).
- d. All services associated with the development are to be flood proofed to the nominated FPL or the Probable Maximum Flood (PMF), whichever is higher. Flood proofing is to be undertaken using a combination of measures sufficient to ensure that the structure and building contents are able to withstand the forces due to the ingress or passage of floodwaters, including debris.
- e. All flood sensitive equipment (including non-submersible electric motors and switches) is to be located above the FPL, or if in basements protected to the nominated FPL or the PMF, whichever is higher.
- e. A suitably qualified engineer is to certify that the structure can withstand the forces of floodwater, debris and buoyancy in the PMF flood event.
- f. Overland flow paths and other stormwater management systems must be designed such that personal safety is not compromised. In the event of a PMF flood vertical evacuation procedures must be considered.

7.6 Flood Management Approach

- a. The proposed development must provide a flood management system that is compatible with the approach shown in Figure 7.1. The approach incorporates a combination of overland flowpaths, covered flowpaths and an upgraded culvert system.

- b. The scheme is to be designed to convey the existing 1% Annual Exceedance Probability (AEP) and larger flows within acceptable limits of flood hazard (as defined by the *NSW Floodplain Development Manual* (2005)). It should ensure that:
- discharges from Portman Street are controlled in a manner that does not create adverse impacts on flood levels upstream;
 - the dimensions, alignments and grades of the flow paths are such that the resulting flood risk and hazards are acceptable;
 - there are no adverse impacts created for properties downstream of the site; and
 - compensatory works may be required.
- c. The performance of the scheme should be demonstrated across a range of design events in a manner consistent with the *NSW Floodplain Development Manual* (2005).
- d. The flood management system must provide sufficient capacity for handling existing design (pre-development) flow conditions.
- e. For events larger than the 1% AEP event (up to the PMF), the topography of roads, accessways, drainage easements, and the boulevard should be capable of functioning as overland flow paths, in accordance with the principles of the *NSW Floodplain Development Manual* (2005).

7.7 Staging

- a. The construction program for the Green Square Town Centre should include a strategy for managing the on- and off-site impacts of overland flows at each stage of the development in accordance with the *NSW Floodplain Development Manual* (2005).

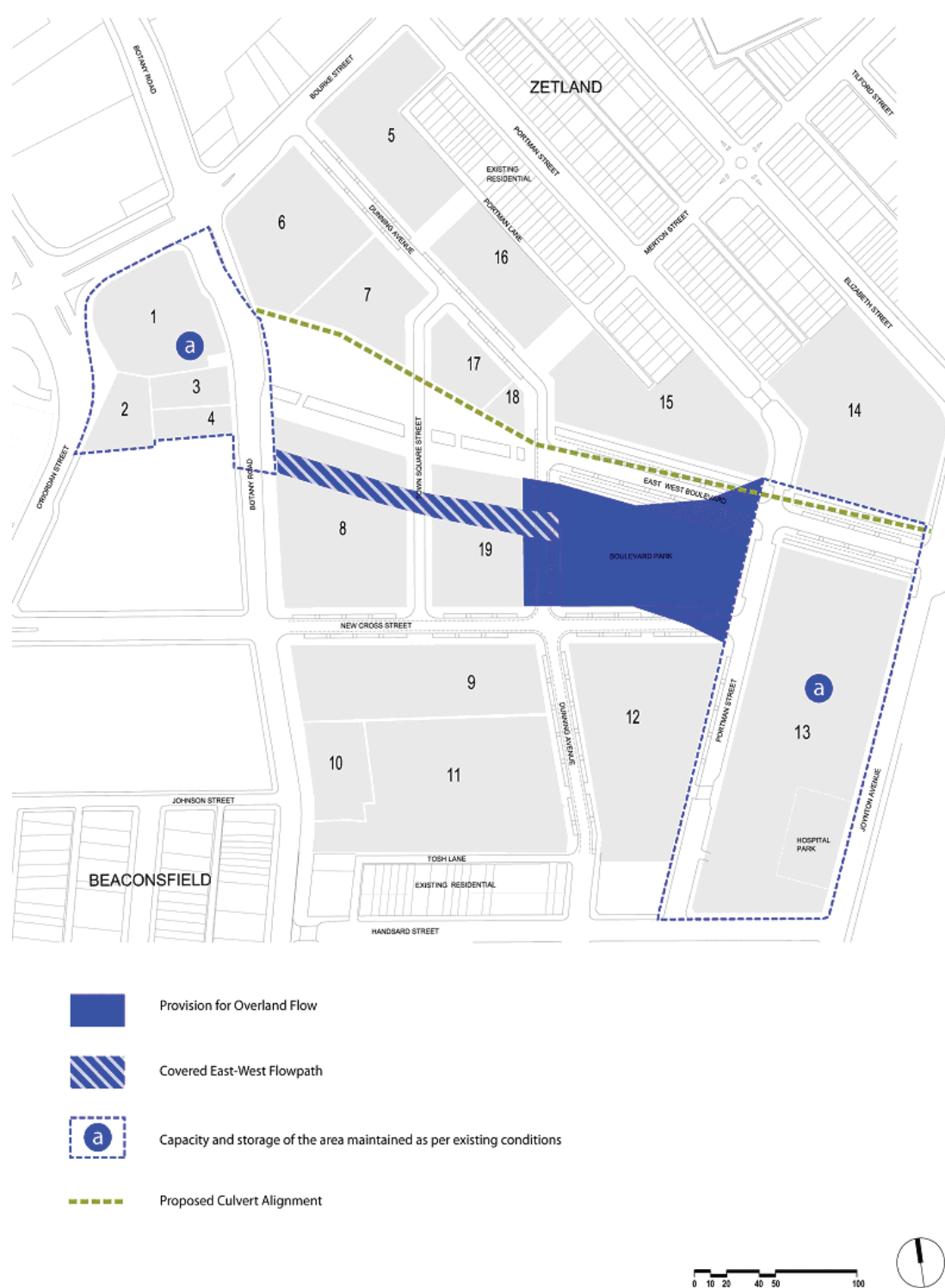


Figure 7.1 - Flood Management

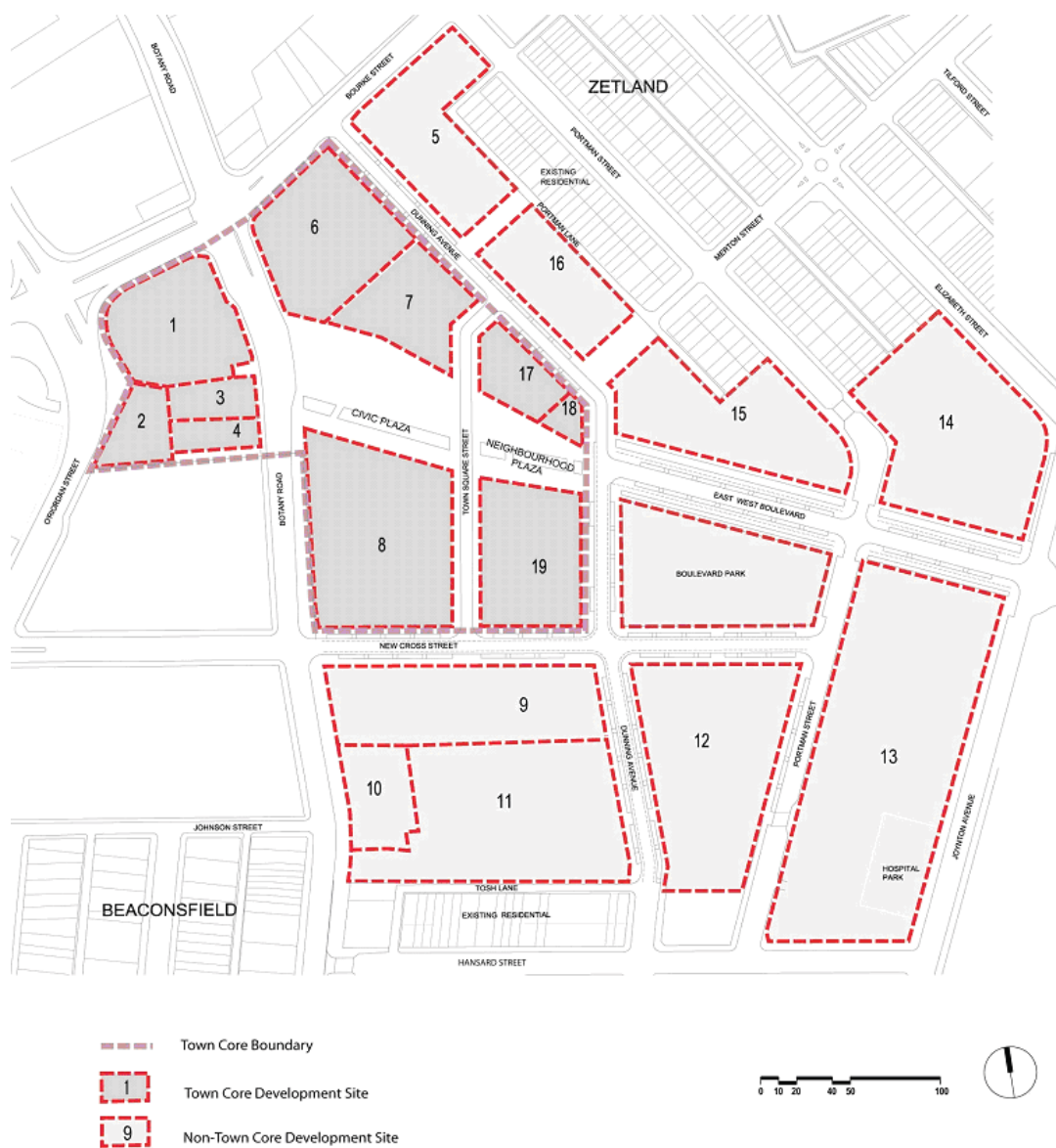
Item	Flood Planning Level
Residential Properties	
<i>Habitable Room Floor Level:</i>	
• inundated by mainstream flooding,	1% AEP + 0.5 m.
• inundated by local drainage flooding,	1% AEP + 0.5 m or if the depth of flow in the 1% AEP is <0.25 m then 2 x the depth of flow with a minimum of 0.3 m above the surrounding surface.
• all other properties.	0.3 m above surrounding ground
<i>Non-Habitable Floor Level such as a garage (excluding underground garages) or laundry for which development approval is required:</i>	
• inundated by mainstream or local drainage flooding.	1% AEP
Underground Garage or Car Park	
For this purpose an underground garage or car park is where the floor of the car park is more than 1 m below the surrounding natural ground.	
<i>Single property owner with not more than 2 car spaces:</i>	
• inundated by mainstream or local overland flooding,	1% AEP + 0.5 m
• car park outside floodplain.	0.3 m above the surrounding surface
<i>All others:</i>	
• inundated by mainstream or local overland flooding,	1% AEP + 0.5 m (as a minimum) or a level that is determined based on a review of the PMF, whichever is the higher.
• car park outside floodplain.	0.3 m above the surrounding surface
Industrial/Commercial Properties	
It is assumed that all properties will be advised of the flood risk, either from existing studies or investigations by the proponent.	
• floor level of a small business,	1% AEP
• floor level of a large business,	merits approach presented by the applicant
• floor level of schools and child care facilities,	merits approach presented by the applicant
• residential floors within tourist establishments,	1% AEP + 0.5 m
• housing for older people or people with disabilities,	1% AEP + 0.5 m (as a minimum) or a level that is determined based on a review of the PMF, whichever is the higher.
• above ground car park.	1% AEP
Critical Facilities	
These include: hospitals and ancillary service; communication centres; police, fire and SES stations; major transport facilities, sewerage and electricity plants; any installations containing infrastructure control equipment, any operational centres for use in a flood.	
• floor level,	1% AEP + 0.5 m (as a minimum) or a level that is determined based on a review of the PMF, whichever is the higher.
• access to and from.	1% AEP + 0.5 m (as a minimum) or a level that is determined based on a review of the PMF, whichever is the higher.

Note

The Flood Planning Level (FPL) refers to the minimum building floor levels. For underground parking or other forms of underground development, the FPL refers to the minimum level at each access point. The higher of any FPL will prevail.

Table 7.1 - Flood Planning Levels for the Town Core Precinct

Appendix 1 – Development Sites Diagram



Appendix 1 - Development Sites

Appendix 2 – Supporting Studies

The following supporting studies have been prepared:

- *Green Square Town Centre Design Guidelines*, LFA (Pacific) Pty Ltd/Turner + Associates Architects, 2006
- *Public Art Statement*, Wendy Carlson, 2003
- *Assessment of Flood Management Issues*, Webb, McKeown & Associates Pty Ltd, 2005
- *Infrastructure Services Report*, GHD, 2003
- *Remediation Report, Environmental Monitoring Services*, as updated 2005
- *Transport Report*, Masson Wilson Twiney Pty Ltd, as updated 2004
- *Retail Market Assessment*, Foresight Partners Pty Ltd, as updated 2004
- *Social Considerations*, P/P/M Consultants, 2003
- *Ecological Assessment Report*, Kevin Mills & Associates, 2003
- *Wind Effects*, Vipac Engineers and Scientists Ltd, 2004
- *Acoustic Assessment Report*, Wilkinson Murray, 2003
- *Social Impact Assessment*, Envriometrics, 2003