Revised Development Control Plan

Strathfield Triangle Precinct

City of Canada Bay Council

FINAL | November 2020

Contents

1 Introduction

1.1 Aim and purpose of this DCP

The purpose of this Development Control Plan (DCP) is to provide design criteria, background, objectives, and controls, to achieve desirable development outcomes for the Strathfield Triangle. This DCP supplements Canada Bay Local Environment Plan 20## (CBLEP 20##) by providing detailed development principles, controls and guidelines.

This DCP outlines the desired future character for Strathfield Triangle; establishes the preferred outcomes for the public domain; sets in place design guidelines for the planning and layout of sites and for the architectural resolution of the buildings.

This DCP was developed through a process of ongoing discussion with stakeholders and over 12 months of planning, design and economic investigations to maximise the amenity of Strathfield Triangle in both public and private spaces.

1.2 Interpretation

Terms in this DCP generally have the meaning ascribed to them in the *Environmental Planning and Assessment Act 1979* and the CBLEP 20##).

1.3 Land covered by this DCP

This DCP applies to land identified on **Figure 1**. The Triangle is generally bound by Parramatta Road to the north, the railway corridor to the west and south, and Leicester Avenue to the east.

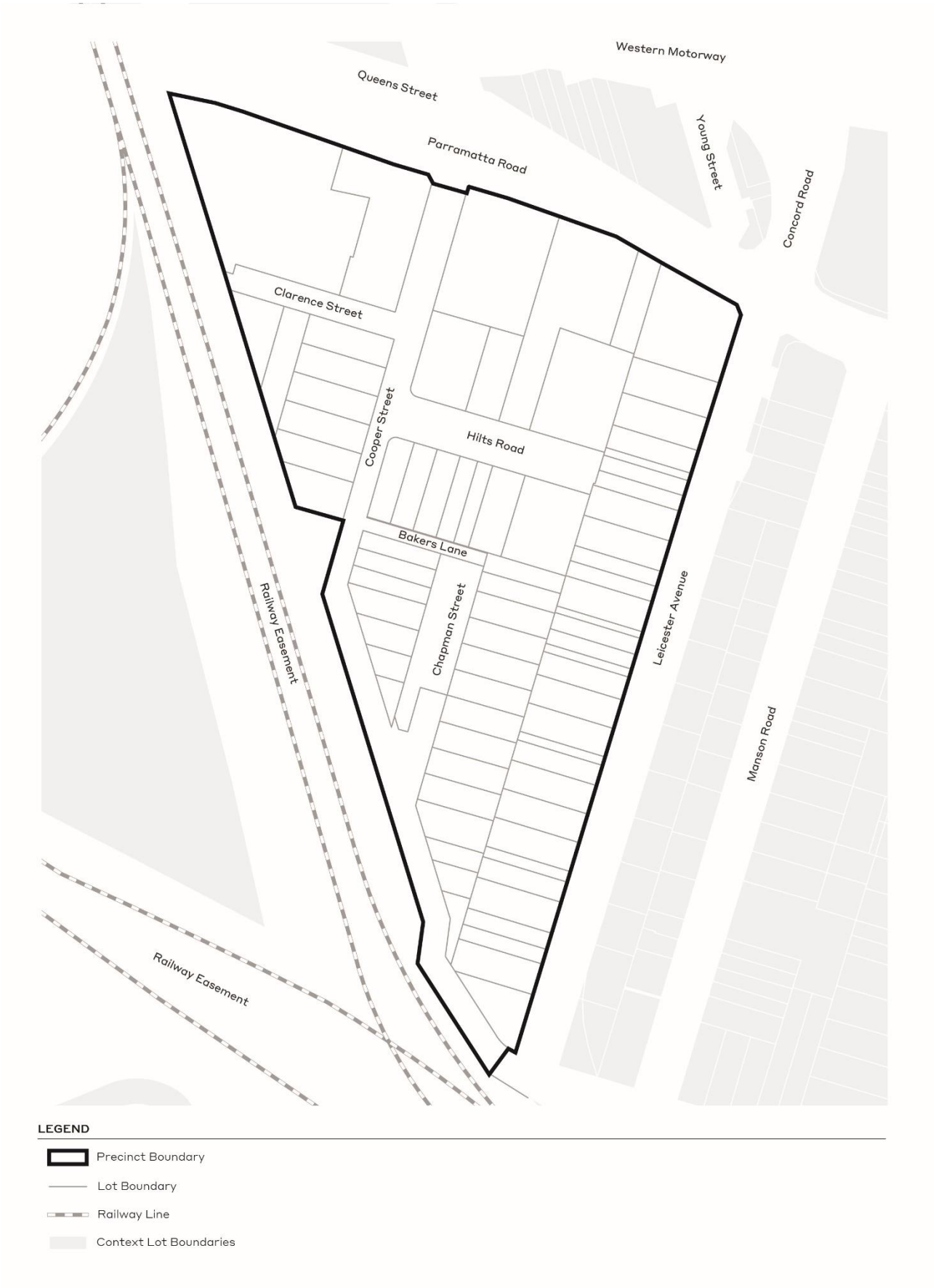

Figure 1 Land within Strathfield Triangle

1.4 Relationship to other documents

This DCP adopts the following provisions of the City of Canada Bay Development Control Plan 2017:

- Part 3 General Information;
- Part 4 Heritage;
- Part 9 Signs and Advertising; and
- Part 10 Child Care Centres.

A provision of this DCP will have no effect to the extent that:

- it is the same or substantially the same as a provision in the CBLEP 20## or another environmental planning instrument (EPI) applying to the same land; or
- it is inconsistent with a provision of the CBLEP 20## or another EPI applying to the same land, or its application prevents compliance with a provision of the CBLEP 20## or another EPI applying to the same land.

In either case the provision in the CBLEP 20## or other EPI will prevail.

This DCP should be read in conjunction with:

- The Strathfield Triangle Public Domain Plan 2020:
- The Canada Bay Local Environmental Plan 20##;
- The City of Canada Bay Specification for the Management of Stormwater;
- The City of Canada Bay Contaminated Land Policy;
- The City of Canada Bay Strathfield Triangle Section 7.11 Contributions Plan;
- The City of Canada Bay Planning Agreements Policy;
- The City of Canada Bay Public Art Strategy (2008-13); and
- The City of Canada Bay Cultural Plan (2008-13).

The onus is on any prospective applicant to check with Council if there are any additional or updated documents relevant to the Triangle that should be considered when making an application.

1.5 Date of approval & Commencement of this DCP

This DCP was adopted by the City of Canada Bay Council on <TBC> and commenced operation on <TBC>.

1.6 State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development

The controls in this DCP support the design quality principles of *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development* (SEPP 65).

The Principles apply to proposals that are subject to the provision of SEPP 65, being residential flat buildings that comprise or include:

- Three or more storeys (not including levels below ground level provided for car parking or storage, or both, that protrude less than 1.2 metres above ground level), and
- Four or more self-contained dwellings (whether or not the building includes uses for other purposes, such as shops), but does not include a Class 1a building or a Class 1b building under the Building Code of Australia (e.g. townhouses or villas where dwellings are side by side).

The Apartment Design Guide (ADG) provides consistent planning and design standards for apartments across the State. It provides design criteria and general guidance about how development proposals can achieve the nine design quality principles identified in SEPP 65. Such development is to have regard to SEPP 65 and the Apartment Design Guide in addition to the relevant provisions contained within this DCP.

1.7 Public domain plan

Council proposes key improvements to the public domain. These improvements include:

- Creation of a central public park;
- Widening of the northern part of Cooper Street to accommodate new footpaths and cycle ways;
- Realignment and creation of new southern part of Cooper Street, including new intersection with Leicester Avenue;
- Creation of five (5) pedestrian links connecting Hilts Road, Leicester Avenue and Cooper Street to new public open space;
- New rear laneway access for properties fronting Leicester Avenue;
- Closure of Chapman Street to vehicular traffic and incorporate into the new park and development sites;
- Closure of southern portion of Cooper Street and incorporation into development site.

It is anticipated that these improvements, coupled with specific building control amendments within this DCP, will result in high quality and amenity for both private and public open spaces. Other figures showing the future desired urban form of the Triangle are included in Section 5 and 6 of this DCP.

These improvements to the public domain are to be implemented and created through a mixture of the following:

- Dedication of land by developers;
- Section 7.11 Contributions;
- Voluntary Planning Agreements between Council and developers;
- Formal closure and disposal of the southern section of Cooper Street and Chapman Street.

These improvements will be undertaken over a period of time. It is anticipated that this commitment to an improved public domain will have flow-on effects, in particular, stimulating better quality urban/building design and the creation of an identifiable area of public open space for residents of the Strathfield Triangle Precinct.

The design of the proposed public park should include interpretive material that recognises and provides publicly accessible information about the late nineteenth and early twentieth century development of the Strathfield Triangle Precinct.

Aims and controls relating to the future public domain for Strathfield Triangle Precinct is detailed in Section 4.

2 Context and objectives

2.1 Context

The Strathfield Triangle is a 5.5 hectare precinct within the Canada Bay local government area (LGA). It is a triangular shaped parcel of land bounded to the north by Parramatta Road, to the east by Leicester Avenue, and to the west and south by the rail corridor. Figure 1 (above) shows the Precinct's existing subdivision pattern and road layout.

The Triangle is surrounded by major transport corridors that create barriers to its integration with the urban fabric of Strathfield. It has a predominantly residential character with retail uses at ground floor fronting Parramatta Road. Its proximity to the Strathfield town centre and railway station has led to the precinct being identified as an area suitable for urban renewal.

More recently, a number of key developments have been approved and constructed within the Triangle. These developments have transformed the character of the Triangle into an area of medium and high density residential development. This emerging residential character is expected to continue to evolve in the Triangle. However, future development will need to provide for high quality building design and facilitate public domain improvements (to be implemented by Council) to ensure residents enjoy appropriate levels of amenity and access to local services and facilities.

There are opportunities for improved access to regional cycleways, the railway station and bus interchange, Strathfield town centre and the Bakehouse Quarter.

2.2 Strathfield Triangle Objectives

The over-arching objectives for the Strathfield Triangle are to:

- Develop the Triangle with a compatible mix of retail and residential development which capitalises on its proximity to Strathfield rail station, Strathfield town centre and the Bakehouse Quarter;
- Improve connectivity throughout the precinct;
- Ensure that building types respond to site conditions, with the tallest buildings addressing the widest spaces along the railway line and Parramatta Road to create a strong urban edge and to act as an acoustic and visual buffer;
- Provide a centrally located area of accessible and safe public open space that can be enjoyed by all residents;
- Protect and enhance the amenity of public and private open space;
- Maximise both private and public open space areas and provide deep soil zones suitable for mature tree planting;
- Minimise the impact of garage entrances and parking areas on vehicular movements, streetscape and deep soil zones;
- Reduce traffic congestion and increase road safety with vehicle access from a future shared zone to be provided only from the rear of development fronting Leicester Avenue;
- Improve vehicle access around the Triangle with road widening and the realignment of Cooper Street;
- Design for building adaptability, conservation of water and energy resources;
- Improve overland stormwater routes and reduce run-off occurring between sites and to other areas; and
- Minimise single orientation and south facing apartments.

These objectives are shown in Figure 2: Strathfield Triangle Precinct Indicative Masterplan.

Figure 2 Strathfield Triangle Precinct Indicative Masterplan

3 Site amalgamation

Site amalgamations will result in a more efficient built form. This is particularly true of corner sites which could be integrated with adjoining land to both maximise development potential and provide enhanced amenity for building occupants and for users of public, communal and private open space.

Aims

A.1. To accommodate a change in building type or increase in density where existing lots are too small;

A.2. To encourage consolidation of allotments for development in order to promote the efficient use of land and to avoid the isolation and sterilisation of individual sites;

A.3. To ensure adequate residential amenity is achieved;

A.4. To produce a high quality urban form which does not preclude future development opportunities; and

A.5. To facilitate improved public domain infrastructure through dedication of land, while ensuring adequate lot sizes for highest and best use development.

Controls

C.1. Redevelopment allotments must occur wherever possible in accordance with the amalgamation patterns indicated in Figure 3.

Figure 3 Land Dedication and Amalgamation Plan

4 Public Domain

4.1 General

Aims

A.1. To facilitate the delivery of the intended public domain for Strathfield Triangle Precinct.

A.2. Introduce additional east-west and north-south connections to create a clear, legible and permeable network of streets and pedestrian and cycling links.

A.3. Improve accessibility for vehicular movements into and out of the Strathfield Triangle Precinct.

A.4. Introduce a central green open space that supports a range of passive and active recreational activities.

A.4. Provide an integrated network of open space and public domain areas for passive recreation, to enhance the lifestyle of residents and promote social interaction.

A.5. Ensure open space and green links are located to assist with stormwater management, provides deep soil zones and maximise rainfall infiltration.

Controls

C.1. New streets, through-site links and public open space are to be provided in the locations identified in **Figure 3**: Strathfield Triangle Precinct – Land Dedication and Amalgamation Plan and **Figure 4**: Strathfield Triangle Precinct – Public Domain and Local Infrastructure

C.2 Where required by Council, new streets, through-site links and public open space is to be dedicated to Council in the locations identified on **Figure 4** Strathfield Triangle Precinct – Public Domain and Local Infrastructure

C.3 Any land dedicated to Council shall be free of encroachments and structures and be clear to the sky.

C.4. New or upgraded streets are to integrate utilities underground within the street reservation, with services located underground and in a manner that facilitates tree planting.

C.5. The landscaping and materials used for streets, through-site links and public open space is to respond to the neighbourhood's character and to be in accordance with Appendix 2 – Engineering Specification of the Canada Bay Development Control Plan.

Figure 4 Public Domain and Local Infrastructure

4.2 Movement Network

This DCP promotes a number of modifications to the current road network to improve access, reduce traffic congestion and increase on-street safety. The DCP proposes the realignment of Cooper Street and the conversion of Bakers Lane into a Shared Zone surrounding a new public open space.

This DCP also proposes the improvement of pedestrian access within Strathfield Triangle. Improved pedestrian access and amenity will be achieved by widening footpaths along the northern part of Cooper Street and providing new pedestrian access to the new public open space from Hilts Road, Leicester Avenue and Cooper Street.

4.2.1 Pedestrian movement

People with disabilities, elderly people, and people pushing strollers and bicycles make up a large proportion of our population. Equitable access means providing a barrier- free environment where all people who live, work and visit the Triangle can enjoy the public domain, access commercial areas, apartments and all communal use areas within residential developments.

Aim

A.1. To ensure that all residents, including users of strollers and wheelchairs, and people with bicycles, are able to reach and enter their apartment and use communal areas via minimum grade ramps, paths, access ways or lifts.

Controls

C.1. Developments are to comply with the Disability Discrimination Act 1992 and with the accessibility standard as set out in Australian Standard AS 1428 Design for Access and Mobility for minimum grade accesses of 1:14 to apartments and communal areas;

C.2. Design of pedestrian access to apartments and communal use areas is to consider the following:

a. entrances to apartments are able to be accessed from a car parking area, public or private road by people using wheelchairs or strollers;

b. access to the main living areas of the apartment building is to be provided either via minimum grade ramps, paths, access ways or lifts;

c. where an apartment development contains groups of buildings, more than one accessible entrance is to be considered in order to provide access to all apartments; and

d. all communal areas are to be connected via an accessible route to each apartment.

4.2.2 Through-site links

Pedestrian circulation should reinforce the street network. Consolidated development offers the opportunity to create, extend or enhance connections to support the pedestrian network. A key opportunity is for a pedestrian link to be provided between Hilts Road and Leicester Avenue.

Aims

A.1. To incorporate pedestrian links through new developments, at points where they are most legible and safely connected to the existing street and pedestrian network.

A.2. To maximise the potential number of different journeys through the Triangle, to enrich and enliven the pedestrian experience.

A.3. Provide an east-west and north-south pedestrian connections between the proposed Central Park and Leicester Avenue, for use by all residents.

Controls

C.1. Through-site links are to be provided in the locations identified in **Figure 4**: Strathfield Triangle Precinct – Public Domain and Local Infrastructure and in accordance with the standards set out in **Table 1** Street network characteristics.

4.2.3 Vehicular movement and access

Aims

A.1. To improve vehicle access and safety, and to reduce traffic congestion throughout Strathfield Triangle.

A.2. To facilitate safer and more efficient pedestrian and cycle access between key areas within Strathfield Triangle.

A.3. Ensure new developments achieve high quality ground level relationships between the buildings and all public domain interfaces.

A.4. To ensure that vehicles can access each site safely and conveniently;

A.5. To integrate vehicle and service access without compromising street character, landscape design or pedestrian amenity and safety; and

A.6. To minimise traffic congestion on key roads and avenues.

A.7. To minimise the visual dominance of vehicle access points.

Controls

C.1. Streets are to be provided in the locations identified in **Figure 4**: Strathfield Triangle Precinct – Public Domain and Local Infrastructure, the standards set out in **Table 1** Street network characteristics and **Figures 6 - 15**: Street Sections.

C.2 Major access and egress points are to be consistent with **Figure 5:** Vehicular access and circulation.

C.3. Circulation is to be consistent with **Figure 5:** Vehicular access and circulation.

C.4. Traffic signals are to be introduced at the junction of Leicester Avenue and the Cooper Street realignment as shown in **Figure 5:** Vehicular access and circulation.

C.5. Car parks are to be designed so that vehicles do not queue or reverse across pedestrian crossings or footpaths.

C.6. Vehicular access is to be designed to give priority to pedestrians and cyclists by continuing the type of footpath material and grade.

C.7. Where possible adjoining developments are to share or amalgamate vehicle entry and exit points.

C.8. Pedestrian and vehicle access is to be clearly differentiated, and separated by at least 3 metres.

C.9. Driveways and car park entries are to be limited in number and no wider than 6 metres.

C.10. Doors to car park entries are to be set back from the building line by at least 500mm.

Table 1: *Street network characteristics*

Type	Reservation Width	Lane width		Verge Width
		Traffic lane	Parking	
Transport Corridor Parramatta Road *Refer Figure 5 - Section A*	19.6m	5 travel lanes 5 x 2.4m	N/A	3.7m
Arterial Road Leicester Avenue *Refer Figure 6 - Section B*	20m	4 travel lanes 4 x 3m	N/A	Western verge: 3.2m wide (2m footpath + 1.2m nature strip) Eastern verge: existing verge to be retained except at new signalised intersection
Main Street Cooper Street (North) *Refer Figure 7 - Section C*	16m	2 travel lanes 2 x 3.25m	2 parking lanes 2 x 2.3m	Western verge: 1.5m (1.1m footpath + 0.4m car door buffer zone) Eastern verge: 3.4m (3m shared path + 0.4m car door buffer zone)
Main Street Cooper Street (Central) *Refer Figure 8 - Section D*	13-15m (varies)	2 travel lanes 2 x 3.25m	1 parking lanes 1 x 2.3m	Western verge: varies 0.9-1.8m (0.9–1.8m nature strip only) Eastern verge: varies 3.4-6.1m (3m shared path + 0.4m car door buffer zone + 0-3.4m nature strip)
Main Street Cooper Street (South) *Refer Figure 9 - Section E*	18.5m	3 travel lanes + median 2 x 3.2m 1 x 3.9m (0.4m median island)	N/A	Northern Verge: 4.65m wide (3m shared path + 1.65m nature strip) Southern verge: 3.15m wide (1.5m footpath + 1.65m nature strip)
Local Street 1 Hilts Road *Refer Figure 10 - Section F*	20m	2 travel lanes 2 x 3.25m	2 parking lanes 2 x 2.5m	Northern verge: 4.4m wide (2m footpath + 2m nature strip + 0.4m car door buffer) Southern verge: 4.2m wide (3m shared path + 0.8m nature strip + 0.4m car door buffer zone)
Local Street 2 Clarence Street *Refer Figure 11 - Section G*	12m	2 travel lanes 2 x 3m	1 parking lane 1 x 2.1m	Northern verge: 1.9m wide (existing verge to be retained) Southern verge: 2m wide (1.6m footpath + 0.4m car door buffer zone)
Shared Zone Bakers Street *Refer Figure 12 - Section H*	6m	1 slow-speed travel lane (10km/h)	N/A (allowance for loading and emergency parking zone)	6m wide shared pedestrian, cycle & vehicular zone - to prioritise safe pedestrian/cycle movement
Laneway Through-site Link *Refer Figure 13 - Section I*	6m	N/A No vehicular access	N/A No vehicular access	6m wide shared pedestrian and cycle zone only - embellished with garden bed & tree plantings, and street furniture.

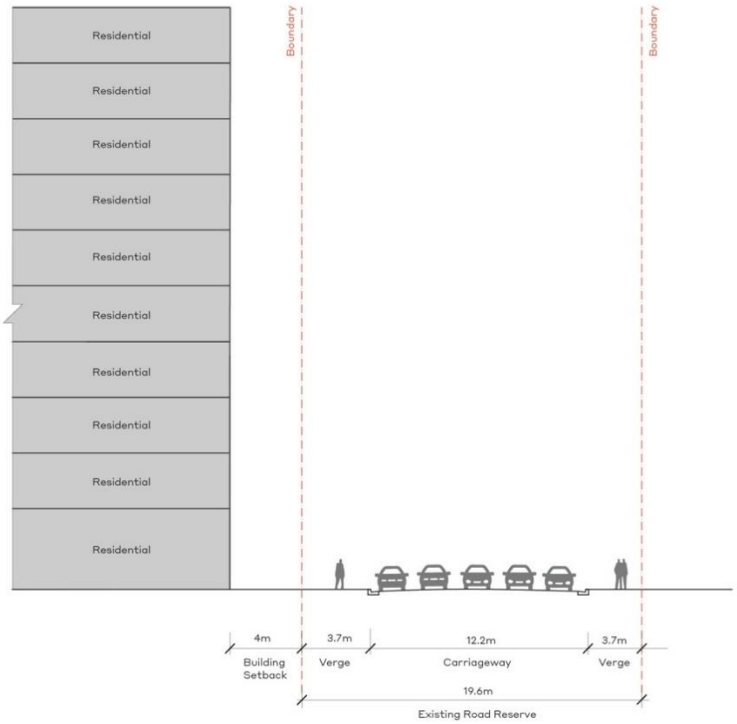

Figure 5 Section A - Parramatta Road

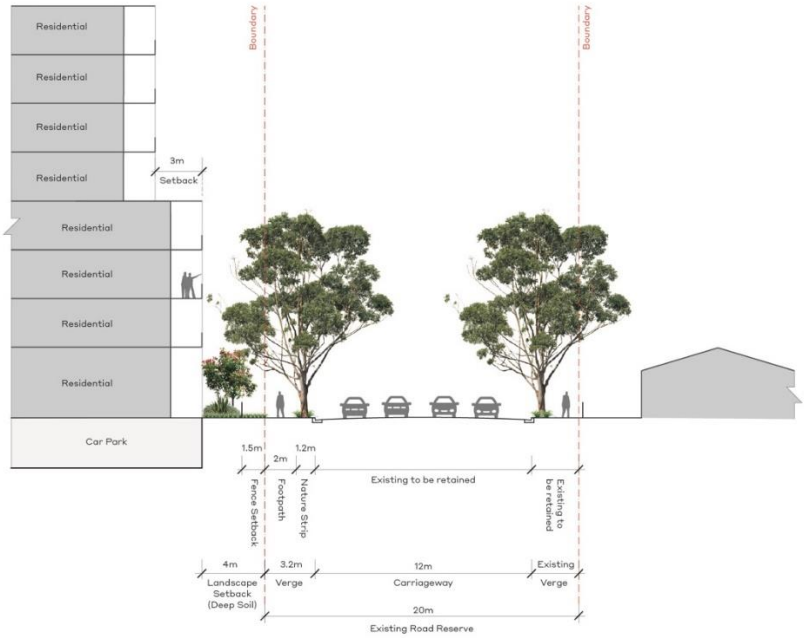

Figure 6 Section B – Leicester Avenue

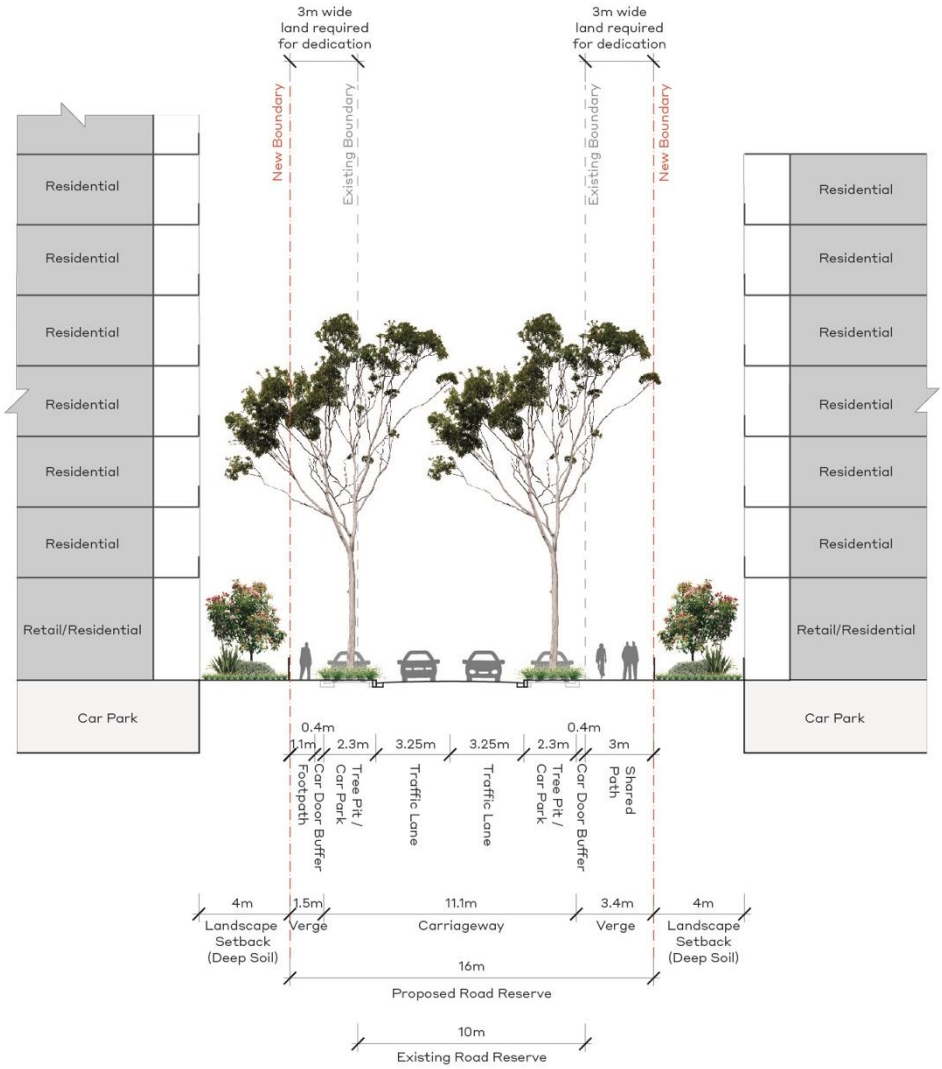

Figure 7 Section C – Cooper Street (North)

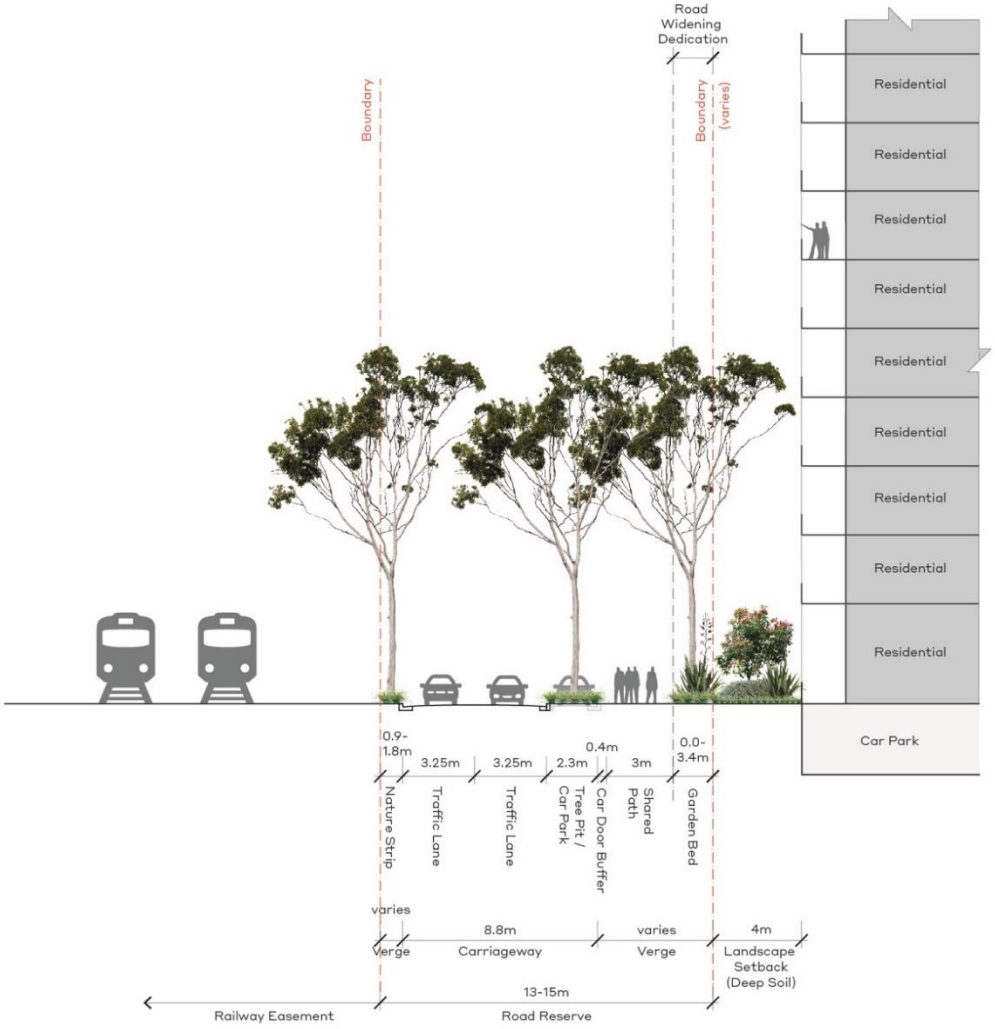

Figure 8 Section D – Cooper Street (Central)

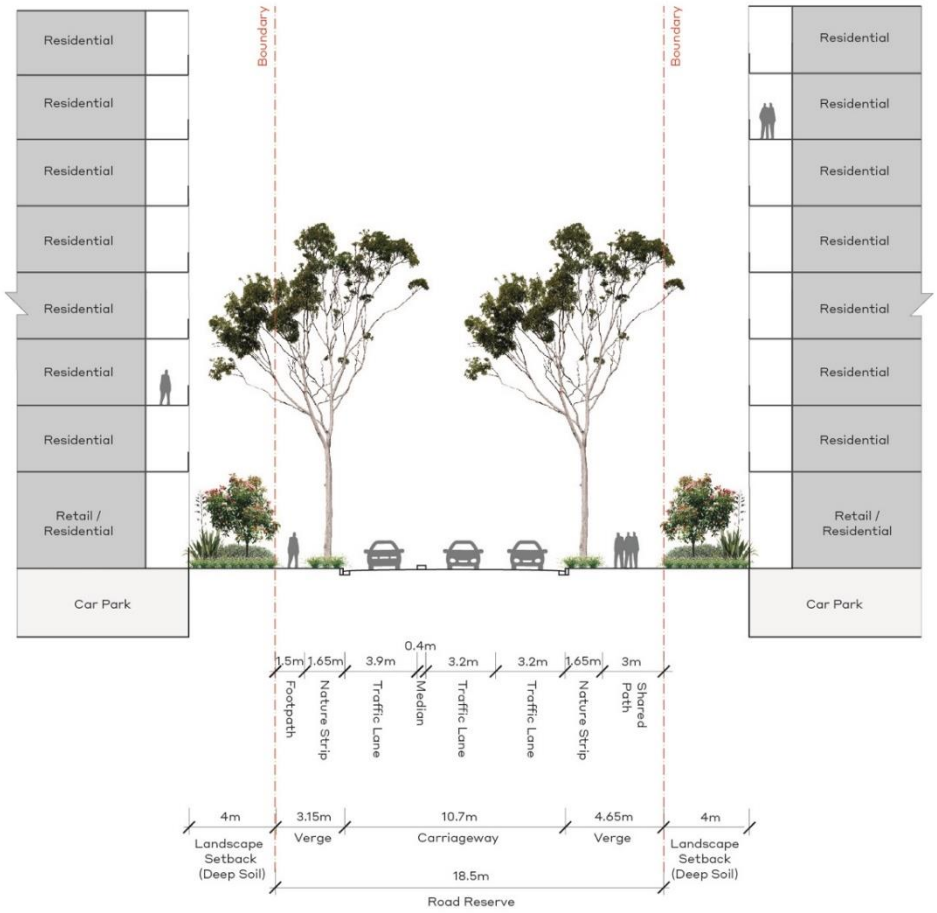

Figure 9 Section E – Cooper Street (South)

Figure 10 Section F – Hilts Road

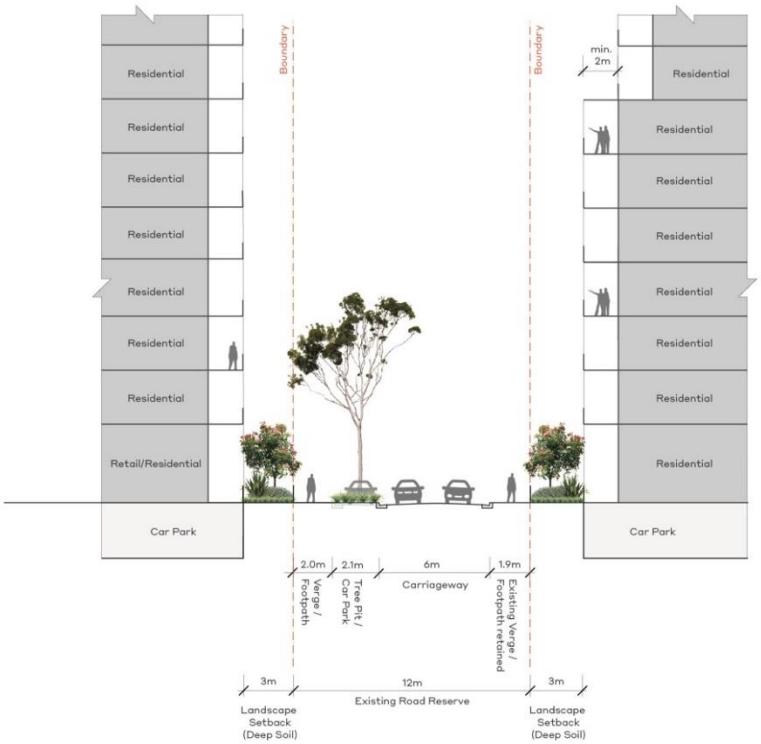

Figure 11 Section G – Clarence Street

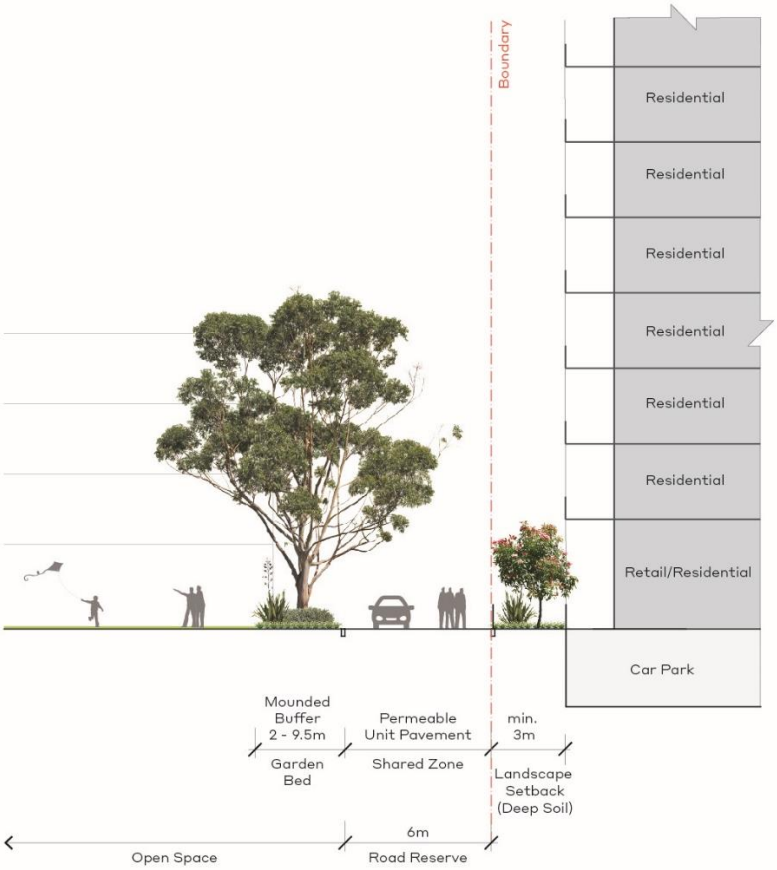

Figure 12 Section B – Shared zone (between Central Park and proposed building)

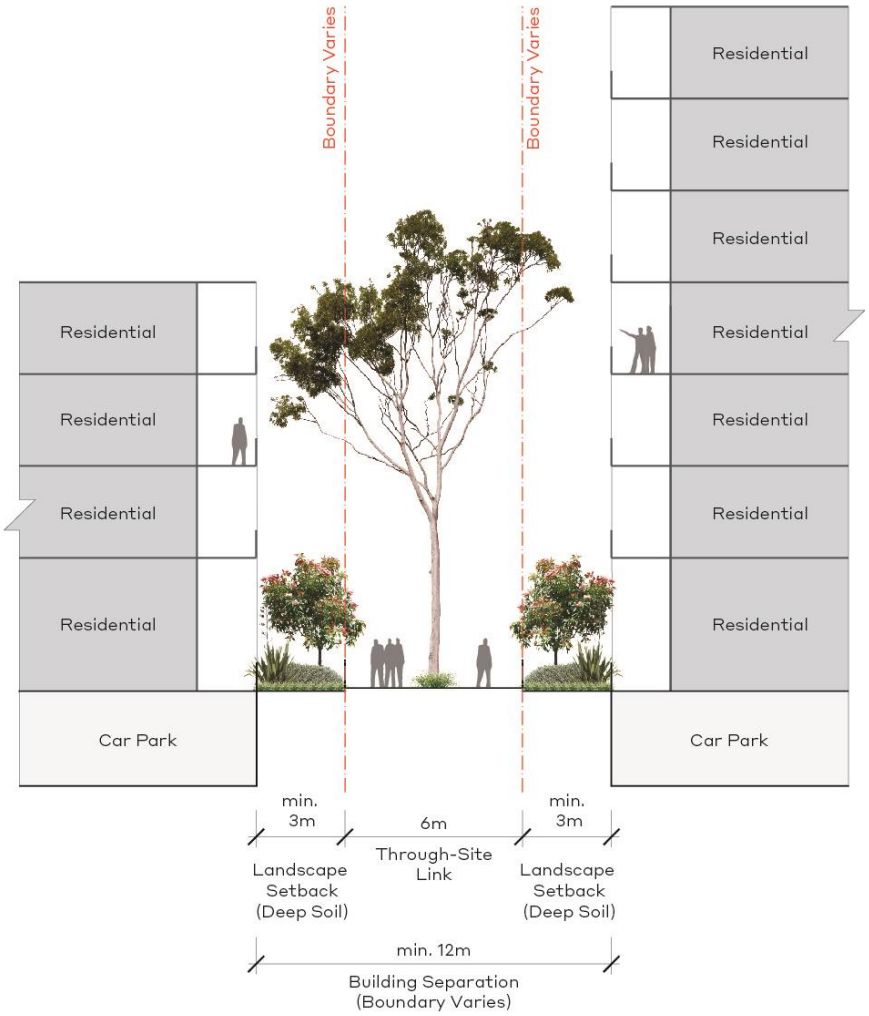

Figure 13 Section I – Through-site link (between Leicester Avenue and Bakers Lane)

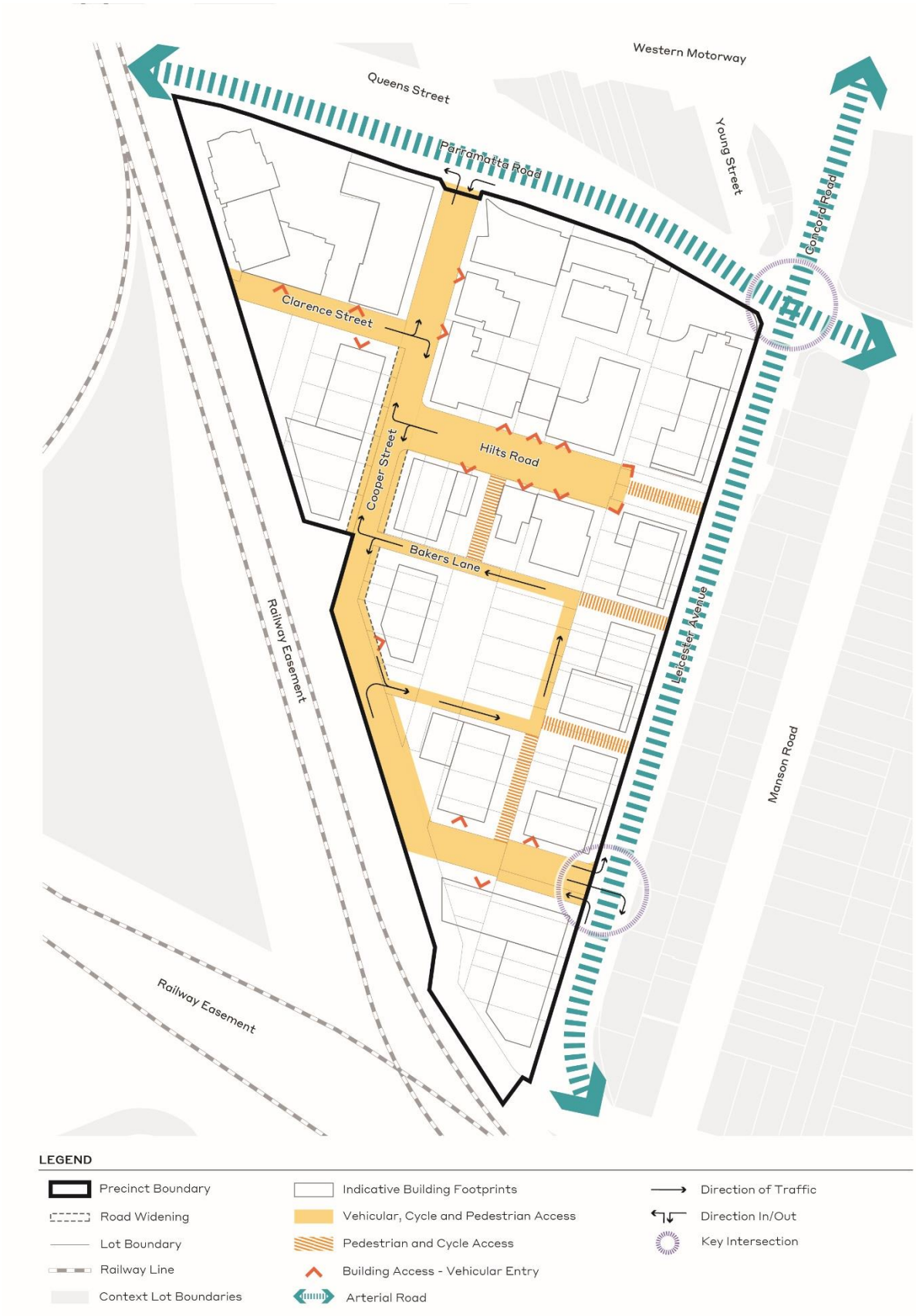

Figure 14 Vehicular access and circulation

4.3 Open Space Network

Public and private open space intended for the precinct under the Strathfield Triangle Public Domain Plan 2020 is illustrated in **Figure 5.**

The proposed new public park will form the 'heart' of the precinct, linking with a network of green streets and pedestrian links. Pedestrian site through links additionally provide visual corridors to and from the surrounds of Strathfield Triangle Precinct.

Aims

A.1. To provide a high level of physical and visual access to proposed open space areas within the precinct.

A.2. To create a new central park that provides functional open space for passive and recreational activities for residents within the precinct.

A.3. To maximise deep soil zones in public open spaces to be suitable for mature tree planting and facilitates stormwater infiltration.

A.4. To encourage the use of public places (footpaths, and public open space) for casual interaction, walking, sitting and relaxing

Controls

C.1. Future development must incorporate new public open space identified within **Figure 15:** Public open space network.

C.2 Open space areas are to be generally consistent with the requirements and guidelines set out in **Table 2:** Public open space characteristics.

C.3 Central Park is to be designed so that it provides opportunities for passive and active recreation.

C.4 The design of the new urban plaza should provide passive recreation space with adequate seating.

Table 2: *Public open space characteristics*

Type	Requirements	Guidelines
Central Park	Public open space area of approximately 2,470m^2 Primarily for informal passive and active recreation	Located between Cooper Street and Leicester Avenue and bounded by proposed shared zone Has a predominantly open, natural character, with large grassed areas dominating the open space area Provides for deep soil planting Contains active recreational facilities such as children's play equipment Several passive recreational facilities including a pavilion with amenity block (incl. accessible toilet and sink), seating and BBQ facility Shade trees are incorporated into the design of the park, particularly around its periphery New pathways along the edges of the park.
Urban Plaza	Minimum area of 140m^2 Primarily for informal passive recreation	Located at the end of the share zone on the corner of former Chapel Street and Cooper Street Has a predominantly open hard paved urban space that caters for potential outdoor dining/seating opportunities Trees and associated vegetation in the western part of the Plaza delineates this pedestrian space from Cooper Street Incorporate high quality embellishments, including seating, bins and lighting

Figure 5 Public Open Space

4.4 Tree Canopy

Aims

A.1. To encourage future development to adapt and be more resilient to extreme heat.

A.2. To enhance the amenity of streets and open space areas.

A.3. To increase the urban tree canopy of the existing and proposed street and laneway network.

A.4. To provide a variety of tree sizes and tree species.

A.5 To ensure the future protection and maintained health of trees within the Strathfield Triangle Precinct.

Controls

C.1. Development is to provide a minimum canopy cover generally in accordance with **Table 3**.

C.2. Tree selection is to be in accordance with Canada Bay tree selection tables (Table C-H & C-I) contained within Part C of the Canada Bay DCP 2013.

C.3. The mix of tree sizes should be provided generally in accordance with **Table 4**.

C.4. When planted within a potentially constrained soil environment (such as on-structure or where other subsurface conditions would be expected to constrain root development and available rooting volumes) trees are to be planted in accordance with the soil volumes shown in **Table 5**.

C.5. Where possible, trees identified in **Figure 14:** Tree Retention Plan are to be retained as part of any future development.

C.5. An arborist report is to be provided as part of any future development application

C.6. When planted within a paved area, trees should be planted within a well-designed and designated tree pit, with adequate drainage and soil volumes shown in **Table 5**.

C.7. Where existing trees are located within planned undergrounding routes, mitigation measures shall be employed to avoid incursions into the tree(s) calculated Tree Protection Zones

C.8. Trees are to be planted a minimum of 800mm (where possible) from the face of adjoining road kerbs or parking lanes.

Table 3 Target Projected Canopy Cover

Component	Target Projected Canopy Cover
Streets and Laneways	50%
Parks	75%
Private Developments	15%

Note 1: Canopy cover is to be measured as the projected canopy from the tree (m²) based on a reasonable estimate of the mature size of the selected tree.

Note 2: Calculation of canopy cover for private development may include trees planted at the ground level of the buildings, as well as trees planted at upper levels of the buildings (e.g. podium of rooftop). It may also include any canopy overhanging from an adjoining area of the public domain.

Table 4 Targeted Mix of Trees

Tree Type	Canopy Spread/Height	Indicative Proportion
Small	Less than 10m	20%
Medium	Greater than 10m	45%
Large	Greater than 15m	25%

Tree Type	Canopy Spread/Height	Indicative Proportion
Civic	Greater than 25m (height or spread)	10%

Table 5 Required Soil Volumes (per Tree)

Projected Canopy Cover	Approx. Soil Volume (m^3)
4m	8-10
6m	20-25
8m	30-40
+10m	50-70

Note: Trees require a minimum of 0.6m^3 of soil for every m^2 of projected canopy cover. The soil volume per tree may be marginally reduced if trees share soil volume with other adjoining trees, or if the soil is subject to regular irrigation. To provide the required soil volumes, it may be necessary to consider the use of larger tree pits and planting areas, structural support systems, or 'vaulted' soil pits with pavement bridging over the root zones.

Figure 14 Tree Retention Plan

5 Urban form

5.1 Urban form principles

This section contains controls and guiding principles for development within the Strathfield Triangle. These are further explained in Section 6.0, where specific controls for particular streets are set out and cross-referenced where necessary.

Principles to guide the future urban form and character of the area are:

Integrate the Triangle sympathetically with its surroundings

- Edges: The built form along the edges of the Triangle should be visually integrated with adjoining areas through the use of landscape elements to soften 'hard' edges, particularly at the interface of the Triangle with the railway corridor. Provide generously proportioned areas for the provision of mature trees in the Triangle to promote better integration of the area with surrounding streetscape and landscaping.

Define and form good urban spaces

- Urban pattern: Spaces where people feel safe, and where interaction and a range of activity can occur, is encouraged. Buildings should define the edges of streets and public spaces with legible building entries addressing the public realm.
- Perimeter development: Buildings that define internal areas of private open space do not need to do so uniformly. The variation in size and shape of blocks, the location of development sites in relation to roads, rail and landscape, variations in road width and the need to consider building orientation, will result in a range of development footprints and building heights providing interest to the urban form.
- Activation of street frontages: The seamless visual and physical integration of public and private areas is a key objective for the DCP. This integration is encouraged through the creation of active street frontages for both retail and residential developments. Active street frontages and integration of the private and public areas will increase on-street safety, promote community interaction and encourage improvements in building design.
- Where retail/commercial premises are permitted an active street frontage means: development that by its nature and type of operation encourage access by the general public directly and conveniently from the adjoining public realm. For residential development, it is desirable for building entrances, courtyard gates and fenestrations to habitable rooms address the street or other parts of the public realm.

5.2 Building Uses

The proximity of the site to the Strathfield Town Centre and Railway Station provides the opportunity for medium to high density residential development in the precinct within walking distance to a range of urban amenities. The promotion of more intensive forms of urban development for the Triangle and the location of two major arterial roads on its boundaries provides the opportunity for retail premises along the Parramatta Road frontage of the precinct, as well as a section of Hilts Road.

Aim

A.1. To contribute to active street edges on the ground floor of residential flat buildings and provide adequate passive surveillance to public domain areas.

Controls

C.1. Locate retail premises at ground level where permitted in accordance with Figure 2: Strathfield Triangle Precinct Indicative Masterplan.

C.2. The remainder of the Triangle is a preferred location for medium to high density residential use.

5.3 Building Heights

The following objectives and provisions relate to the height in storeys. These controls work together with the maximum building height control in the Canada Bay Local Environmental Plan 2013, which establishes the maximum permissible height for each lot.

Building Heights within Strathfield Triangle must respond to the surrounding context, in particular building interface with railway infrastructure and existing heritage items on the east side of Leicester Avenue, and maintaining solar access to existing and proposed open space and public domain.

Taller built form is to be placed towards the railway infrastructure to the west, to block noise impacts for the eastern portion of Strathfield Triangle. Building height is to transition to lower street wall heights along Leicester Avenue, providing a more appropriate response to the surrounding heritage low rise residential context.

Aims

A.1. Ensure development reinforces the existing and desired neighbourhood character with an appropriate height in storeys.

A.2. Ensure development in proximity to heritage items relate in scale to the existing neighbourhood character in terms of height in storeys, and do not diminish the ability for these items to be interpreted within their historic context.

A.3. High rise development is sited to mitigate noise impacts from existing rail infrastructure.

Controls

C.1. Development is not to exceed the maximum number of storeys as shown on **Figure 16**: Maximum Building Heights (in storeys).

C.2. Distribution of building height across the Strathfield Triangle Precinct is to respond to the following key principles:

a. taller buildings are to be located toward the railway corridor to help define the edge of the Triangle;

b. buildings will also act as an acoustic buffer to other parts of the Triangle and overshadowing will be of the corridor, rather than neighbouring buildings; and

c. buildings step heights down in the centre of the Triangle to protect residential and on-street amenity.

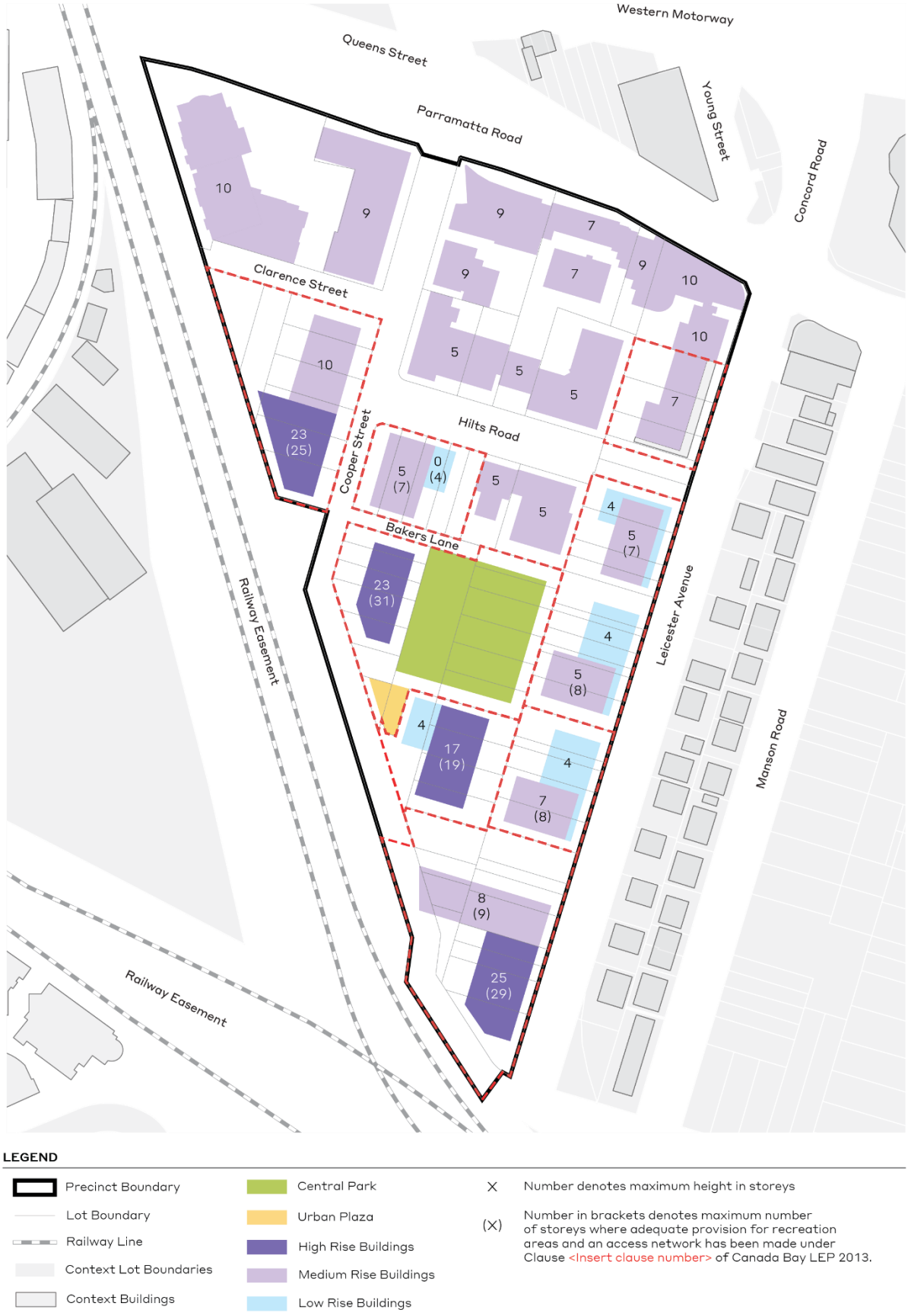

Figure 6 Maximum Building Heights

5.4 Setbacks

The setback is the distance between a development's build-to line and the front, side and rear boundaries of the site. Front setbacks define the scale of the streetscape. Upper level setbacks is the distance between a development's street frontage and tower frontage. Upper level setbacks seek to facilitate high rise density, while maintaining an appropriate street frontage height at a human scale, and providing an appropriate response to adjoining heritage contexts. Building height, setback and separation controls together seek to ensure new development relates to the character of Strathfield Triangle neighbourhood and its intended streetscape.

Because they provide a transition between areas of the public (street and footpath) and private domain, setbacks can have a significant impact on the character of the street and influence the amenity of building occupants and users.

Aims

A.1 Front setbacks reinforce the street profile with consistent build-to lines

A.2 Front setbacks provide opportunities for planting and other landscape elements

A.3 Side and rear setbacks are to consider building amenity, privacy, access, solar access and open space areas.

A.4 Upper level setbacks are to soften visual and bulk impacts of high rise development and provide appropriate height transitions to neighbouring heritage items to the east of Leicester Avenue.

Controls

C.1 Minimum building setbacks are to be provided in accordance with those shown in **Figure 17**: Building Setbacks.

C.2 For residential ground floor uses, ground level setbacks are to be landscaped setbacks, incorporating:

a. deep-soil areas

b. Landscaping and plant species to soften the interface between new development and public domain.

C.3 Where land is dedicated under Section 4.1, buildings are to be set back from the new street frontage property boundary.

Figure 7 Building Setbacks

6 Design guidelines

6.1 Building design

6.1.1 Façade composition and articulation

Architectural composition is a combination of articulation and modulation of the external walls of the building. It includes major elements such as structural columns and the expression of floor plates, as well as finer architectural details. The three dimensional modelling of a building's façade has a significant impact on its appearance and apparent scale.

Aims

A.1 To ensure that new developments have well articulated and harmonious facades which define the public domain and create an appropriate human scale;

A.2 To ensure that the exterior of the building reinforces the character and continuity of existing and/or proposed streetscapes;

A.3 To reflect the building's use and orientation, giving it an identity and visual interest;

A.4 To ensure that building openings are clearly visible from the street

A.5 To ensure that building elements, such as balustrades, awnings and signage are integrated; and

A.6 To ensure that corners are articulated to address both street frontages.

Controls

C.1. Facades are to incorporate a balance of horizontal and vertical elements, to visually address any apparent building bulk. This may be achieved by the use of strong lines of verandahs, balconies, brick coursing and openings.

C.2. Unrelieved facades, such as those created by curtain walling, large expanses of glass and concrete, are to be avoided.

C.3. The composition of a building facade or series of facades is to form a rhythm that complements and is in harmony with the streetscape. The facade composition is to respond to environmental and energy needs, such as sun shading, light shelves and wind mitigation.

C.4. Mechanisms which can be employed are:

a. definition of a base, middle and top related to the overall proportion;

b. setting back the top level on taller buildings; and setting back at upper levels to maintain a consistent street wall height (see Section 5.3 Building heights and Section 5.4 Setbacks);

c. appropriate use of a mixture of window types;

d. balustrade detailing which relates to the type and location of the balcony and its impact on the façade;

e. clear identification of building entries; and

f. the use of architectural features which give pedestrian scale at street level.

6.1.2 Corner buildings

Corner buildings act as visual markers, identifying the ends and beginnings of blocks. Where there are long blocks or where the road bends, corner buildings help to locate and orientate the driver, cyclist or pedestrian. For a large development, the definition of a 'corner building' is limited to that part of a development on the corner of two streets or roads rather than describing the whole building.

Important corners within the Strathfield Triangle are:

- the corner of Parramatta Road and Leicester Avenue;
- the bend in Cooper Street where it adjoins the railway line and the southern tip of the Triangle, at the existing intersection between Leicester Avenue and Cooper Street.

Aims

A.1 To ensure that corner buildings reinforce the street pattern as visual 'markers' at the ends of each block;

A.2 To respond to and address the different characteristics of the streets;

A.3 To encourage high quality and innovative design for corner buildings; and

A.4 To enhance the legibility of key corner locations within the Triangle through the use of unique and recognisable building designs.

Controls

C.1 Buildings are to align with and reflect the physical characteristics of each street by:

a. Accentuation of the topography; and

b. Reinforcing the scale and spatial relationships between elements of each corner site.

C.2 Corner buildings are to reflect the architecture, hierarchy and characteristics of the streets they address.

C.3 Upper level setbacks may be increased to accentuate key corners, increase articulation and add more interest to corner building design.

See also Section 5.3 Building Heights.

6.1.3 Awnings

An awning is a structure attached to the front of a building, usually overhanging a public area or walkway. Continuous awnings are a feature of many of Sydney's older retail shopping areas and Parramatta Road has extensive lengths of continuous awnings over groups of shops and other small-scale commercial uses.

Aims

A.1 To provide all weather protection at street level;

A.2 To identify and protect entries to buildings;

A.3 To give new development a pedestrian scale; and

A.4 To contribute to safety and security for pedestrians and people entering buildings.

Controls

C.1 Locate awnings over ground level entries to commercial and residential apartment buildings fronting Parramatta Road;

C.2 Awnings are to be in the height range 3.6-4 metres; and

C.3 Awnings are to be no deeper than 3.6 metres, and may extend over public footpaths to within 600mm of the kerb face, so long as street trees are not required. In this instance, awnings may not extend closer than 1.5 metres to the centre of the tree hole. (In general within the Strathfield Triangle, buildings are set back from the front boundary and awnings will therefore not extend over the whole width of the footpath).

6.1.4 Roof design

A roof includes the exterior surface and its supporting structures on the top of a building. Roofs are often visible from the street and can be seen from a distance as part of the area skyline. The silhouette, materials and colour of roofs are therefore important contributors to the visual impression of an individual building as part of a skyscape.

Aims

A.1 To ensure that roofs of new development do not detract from the streetscape; and

A.2 To provide roofscapes in keeping with the future desired character of the Triangle as an area of high quality urban development.

Controls

C.1. Roof forms are to:

a. generate an interesting skyline and enhance views from adjoining developments;

b. relate to the size and scale of the building.

C.2. Outdoor recreation areas located on flat roofs are to be landscaped and incorporate shade structures and wind screens to encourage use;

C.3. The maximum roof top service zone height is 5m;

C.4. The roof top service zone (comprising all plant and machinery) is to be set back a minimum of 4m from the parapet;

C.5. The total area in plan for roof top services may not exceed 80 per cent of the building footprint area;

C.6. Lift towers, machinery plant rooms, chimneys, stacks, vent pipes and television antennae should be designed to minimise their visibility and size;

C.7. The design of rooftop structures is to be integrated with the overall building design; and

C.8. Rooftop signage is not permitted.

6.2 Public domain interface

Where public and private spaces are co-located on the street, they create a ‘zone’ or an ‘edge condition’ which is the public domain interface. This ‘zone’ varies from street to street depending on the many different combinations of elements it contains: street trees, footpaths, walls and fences, landscaping in the front setback of private developments, entrances and openings to buildings, awnings and canopies, lighting and signage.

The relationship between the public domain, private open spaces and buildings has a significant impact on the quality, safety and accessibility of public spaces.

6.2.1 Entrances

Entrances define the threshold between the public street and private areas within the building. They are usually part of the building, yet integrated with external spaces. Entrances may lead into a common entry or directly into the private space of an apartment from the street.

Aims

A.1 To ensure safe, secure access;

A.2 To create entrances which are legible and provide an identity for the development; and

A.3 To orientate the visitor.

Controls

C.1 Entrances are to be a clearly identifiable element of the development when viewed from the street. Avoid entry elements to buildings which are concealed, or ambiguous (ie. it is unclear if they are part of the public or the private part of the development);

C.2 Provide a direct physical connection from the street into the development and from the entry foyer to circulation spaces;

C.3 Design entrances and associated circulation spaces of an adequate size to facilitate movement of furniture between public and private spaces;

C.4 Provide sheltered, well lit and highly visible spaces to enter the building, meet and collect mail; and

C.5 Provide separate entries for:

a. pedestrians and cars;

b. commercial and residential tenants; and

c. residences located at ground level.

C.6. Individual entries to ground floor apartments facing a street or through-site link are to be maximised.

6.2.2 Active frontages

Active frontages include:

- Retail premises entrances;
- Shared community spaces;
- Entrance lobbies to residential buildings.

The value of active frontages is increased by aligning residential buildings to the street and orientating doors, windows and balconies to facilitate passive surveillance of the public realm.

Aims

A.1 To encourage transparency - the ability to clearly see what is happening on the street and in the areas between the street and the building - rather than 'hidden' activity.

A.2 To maximise passive surveillance (being able to overlook the street and footpath from windows or balconies).

A.3 To provide access directly to the street (ground floor apartments having individual entries from the footpath).

A.4 To maximise building openings and minimise the extent of blank walls onto the street, especially at ground level.

A.5 To allow opportunities for the shared use of private open space adjacent to front boundaries where appropriate.

Controls

C.1 Active frontages are to be provided in the locations identified as an 'active edge' in **Figure 2**: Strathfield Triangle Precinct Indicative Masterplan.

C.2 A 40 sqm community space is to be provided on the ground floor and co-located with food and beverage or other retail activation in locations identified as an 'active edge' in **Figure 2**: Strathfield Triangle Precinct Indicative Masterplan. The community space is to be designed to:

a. facilitate flexible access for hirers (e.g., online booking system and key card/ security code access)

b. provide sufficient storage, to ensure the space can be used for a range of activities (e.g., to store tables, chairs and other occasional equipment);

c. include a kitchenette, with basic fit-out including sink, microwave – to enable basic catering for community events;

d. meet universal design and accessibility standards, i.e. access for people with a disability or mobility issues;

e. provide adequate provision of toilets: minimum one disabled access unisex; and

f. include design features to maximise natural light and ventilation.

C.3 All residential buildings, except buildings on Parramatta Road, should include habitable rooms at ground level to allow passive surveillance of the street.

C.4 Minimise the number and width of vehicle access points to developments, and/or locate them off side or rear streets and lanes.

C.5 Provide separate entrances to commercial and residential development. Ensure that entrances are clearly visible and well lit.

C.6 Shutters and grills are to have a minimum 70% transparency.

C.7 Opaque or reflective glass is not permitted at ground level.

6.3 Private open space & landscape

Landscaping softens the appearance of new development and can be used to control solar access, privacy, air quality and in some cases, stormwater management.

The use of rooftops for the purpose of communal open space is encouraged. However the use of rooftops should not be provided as an alternative to ground floor open space.

6.3.1 General

Aims

A.1 To provide sufficient open space and ensure open space is functional and attractive.

Controls

C.1 Design open space to create a high quality address and setting for buildings to complement the adjacent public domain;

C.2 A minimum of 50 per cent of the front setback area is to be planted.

C.3 Private open spaces to all dwellings on the ground floor are to be located to address the street and be accessible from the footpath.

6.3.2 Communal open space

Communal open space is part of privately owned developments which is accessible to and designed for the shared benefit of residents.

Aims

A.1 To provide a focus or "heart" for development;

A.2 To maximise the site potential for semi-continuous vegetation corridors with mature trees and soft landscaping; and

A.3 To enhance the public domain, where appropriate, by providing views of tree canopies and through open space areas.

Controls

C.1 Ensure a minimum of 50 per cent of the communal space area is unpaved and planted;

C.2 Ensure communal open space is designed to provide:

a. A balance of sunshine and shade;

b. Accessible and safe routes through the area between buildings;

c. Privacy for dwellings and their associated outdoor spaces;

d. Service areas that are accessible and screened.

6.3.3 Deep soil

Aims

A.1 To ensure there is sufficient deep soil on each site and throughout the Triangle to retain stormwater, manage the water table and water quality, and support the growth of medium to large trees:

Control

C.1. A minimum of 20 per cent of the site's communal open space is to be deep soil;

C.2. Areas included as deep soil are to have a minimum dimension of 2m x 2m;

C.3. Consolidate areas of deep soil within sites and between adjacent sites to increase the benefits;

C.4. Locate basement car parks predominantly within the building footprint; and

C.5. Plant a minimum of one large tree with a mature minimum height of 12m in deep soil, per 60m² of Communal Open Space.

6.3.4 Fences & walls

Fences and walls include all vertical or landscape elements designed to define boundaries between one space and the next, or to rationalise a change in level.

Aims

A.1 To define the edges between public and private land;

A.2 To define the boundaries between areas within the development having different functions or owners;

A.3 To provide privacy and security; and

A.4 To avoid screening entrances or openings overlooking the street or front landscaped areas.

Controls

C.1. Fences are to:

a. Provide privacy and security while not eliminating views, outlook, light and air;

b. Be low and/or open, so that front setback areas are clearly visible from the Street;

c. Be visually permeable at the front of developments;

d. Use the designs and materials suitable for the desired future character of the area.

C.2. Retaining walls are to:

a. Be limited in length and height along street frontages; and

b. Relate to the design of the overall building.

C.3. Fences and retaining walls can add amenity, beauty and functionality to private and communal open spaces by incorporating some of the following:

a. Benches and seats;

b. Planter boxes;

c. Pergolas and trellises;

d. Barbeques;

e. Water features; and

f. Composting boxes and worm farms.

6.3.5 Landscape elements

Private and public areas can contain landscaped elements either directly planted into the ground and/or above car parking. The Triangle has a 'green' character which is created by the existing street tree planting, tree canopies visible in the centre of blocks and front gardens. The principles of the landscape framework are to build on existing vegetation in Cooper Street and Leicester Avenue and to use feature street trees in the east-west streets.

Within developments, deciduous trees are suitable for shading windows and open space areas in summer, and allowing solar access in winter. Pergolas on balconies and courtyards can be used to create shaded and private areas for outdoor living, while different species of trees and shrubs of varying heights can be used for shading walls and windows.

Aims

A.1 To add value to residents' quality of life within the development by providing privacy, a pleasant outlook and views;

A.2 To reduce storm water run-off;

A.3 To improve the microclimate and solar performance within the development; and

A.4 To improve urban air quality.

Controls

C.1. High quality landscape design should be provided in all developments including indigenous species, landmark sculptures, pavement design and other appropriate elements;

C.2. Existing vegetation is to be retained and incorporated into new development where appropriate;

C.3. Native species are to form the basic plant material for all streets;

C.4. East-west streets are also to use feature trees to accentuate the view corridors;

C.5. Use appropriate species to provide shade for public spaces and to cast shade on walls of the building which catch low-level sun;

C.6. Vegetation is to:

a. be in scale with the development;

b. relate to street planning;

c. relate to the building form; and

d. be robust and easily maintained.

C.7. Landscape design is to:

a. provide for private gardens on ground floor apartments where appropriate;

b. facilitate stormwater infiltration by use of permeable surfaces;

c. reduce the overland flow with vegetation; and

d. roof and balcony gardens are to have a minimum soil depth of 800mm.

6.4 Amenity

Amenity is a way of describing the added value which good design can give to people's living and working environments. It is about how we live, rather than just where we live. Amenity includes considerations of comfort, safety and security, and the services provided in a development.

Developments with good amenity can improve the quality of life for their occupants and users, and importantly also contribute to the quality of the street, the block and the area as a whole. Design which follows the guidelines below for solar access and overshadowing as well as natural ventilation, can also make a positive contribution to the conservation of natural resources and in consequence to environmental sustainability.

Many of the issues covered in this DCP Residential flat buildings within Strathfield Triangle are subject to the *Apartment Design Guide*, which seeks to achieve good amenity, in particular the relationship of the building and its dwellings to the street and the provision of open space.

The following development controls are to be applied in addition to the design guidance of the *Apartment Design Guide* and SEPP 65, for all residential flat buildings.

6.4.1 Acoustic privacy

Acoustic privacy is a measure of sound insulation between apartments and between external and internal spaces. With increases to density there is the potential for an increase in noise generation, which will affect people living closely to each other and to major noise sources like Parramatta Road and the railway corridor.

Aims

A.1 To carefully site and design development to give reasonable acoustic privacy within residential apartments and within private open space;

A.2 To take into account the specific environmental conditions of the site. Within the Strathfield Triangle the aim is to buffer internal blocks from noise from Parramatta Road and the railway corridor, through the placement of taller buildings on these edges. Service rooms and circulation cores can further buffer living and bedroom spaces from noise sources; and

A.3 To minimise noise transmission between apartments.

Controls

C.1 Development should have consideration for the following sound insulation requirements:

a. Building Code of Australia;

b. NSW Government NSW Road Noise Policy;

c. Development near Rail Corridors and Busy Roads – Interim Guideline; and

e. Australian Standard AS/NZS 2107:2000 - Acoustics.

C.2 Site buildings to attenuate noise transmission; i.e., locate individual buildings and groups of buildings to act as noise barriers.

C.3 Design apartments so that more active uses within apartments face the street and quieter uses address internal spaces.

C.4 Co-locate similar functional uses internally and between apartments, for example quiet rooms back onto quiet rooms, bathrooms onto bathrooms.

C.5 Enhance acoustic privacy between dwellings by locating service uses, storage areas and circulation spaces against party walls.

C.6 Locate noise sensitive open space areas away from any noise source and / or protect them with screening devices (fences, walls, soft landscaping).

C.7 Buildings adjacent to the railway line are to consider the provisions of State Environmental Planning Policy (Infrastructure) 2007 and related guidelines. Advice should be sought from an appropriately qualified acoustic engineer in relation to the mitigation of rail-related impacts on development.

6.4.2 Flexible housing and dwelling mix

Aim

A.1 To create a vibrant and self sustaining community with housing suitable for many life stages.

A.2 To provide housing that is easily modified for occupation and visitation by people with disabilities and progressive frailties.

Controls

C.1 Provide the following quantities of apartment types to all residential and mixed use developments:

a. a minimum of 15 per cent studio or one bedroom apartments; and

b. a minimum of 15 per cent three or more bedroom apartments.

C.2. Adaptable Housing units are to be designed and constructed to meet the performance requirements and provide the essential features required by AS4299 Adaptable Housing at the rates specified in the following table.

Total number of dwellings	Number of adaptable dwellings to be provided
Between 0 and 14	1 dwelling
Between 15 and 21	2 dwellings
Between 22 and 29	3 dwellings
30 or more	15% of total dwellings

Note: *Where the total number of adaptable housing units to be provided is not a whole figure, the figure is to be rounded up to the next whole figure.*

6.4.3 Safety & security

Designing for safety - and the perception of safety - can make a difference between an area which is lively, well-used, and vibrant, and one which becomes a no-go area. An integrated design for both the public domain and private developments, with emphasis on crime prevention through environmental design can reduce opportunities for crime.

Safety and security in this context means the ability of the design to provide safe ground level entry and exit during all times of the day and night for residents and to improve safety on the streets and other public spaces adjacent to the development.

Aims

A.1 To ensure that the siting and design of buildings (their entrances, openings, active frontages, lighting, uses, access arrangements) contribute to the actual and perceived safety and security of the building for residents, workers and visitors;

A.2 To encourage the use of public places (footpaths, and public open space) for casual interaction, walking, sitting and relaxing; and

A.3 To ensure that each development, as well as the entire area of Strathfield Triangle Precinct, is safe and secure for residents and visitors alike.

Controls

C.1 A formal crime risk assessment will be required for any development that is likely (in the Council's opinion) to increase the opportunity of anti-social behaviour or activity.

C.2 All large scale residential developments (more than 20 new dwellings) are to undergo a crime risk assessment as part of the development assessment process.

C.3 Developments are to clearly define the path of travel from public through to private space.

C.4 Entrances are to:

a. be orientated towards the public domain (street) and ensure visibility between entrances, foyers and the street;

b. provide direct and well-lit access between car parks and dwellings, between car parks and lift lobbies, and to all unit entrances;

c. optimise security by grouping a maximum of 8 dwellings around a common lobby;

d. provide separate access and foyers for retail premises and residential uses in mixed use buildings; and

e. entrances to residences at ground level are to be separated.

C.5 Surveillance is to be facilitated by:

a. views over public open spaces from living areas where possible;

b. casual views of common internal areas, such as lobbies and foyers, hallways, recreation areas, and car parks; and

c. bay windows and balconies.

C.6 All common areas, including entrances, indoor car parks, corridors and walkways are to be well lit with clear lines of sight. Recesses and unlit alcoves which might conceal intruders are to be avoided.

C.7 Access to apartments from the balconies, roofs and windows of neighbouring buildings is to be controlled;

C.8 Access to car parks from public and common areas is to be controlled.

C.9 Provide an audio or video intercom system at the entry or in the lobby for visitors to communicate with residents.

C.10 Development is to provide a secure entry point for all dwellings.

6.5 Car Parking

6.5.1 On-site parking

This DCP promotes public transport use by minimising car parking requirements. Underground and semi-underground (undercroft) car parking will reduce the visual impact of car parking and help to retain good amenity for users of communal and private open space.

Aims

A.1 To ensure adequate provision of safe and secure car parking for residents and visitors;

A.2 To maximise communal and private open space;

A.3 To retain and protect deep soil zones in the centre of each courtyard block; and

A.4 To use undercroft parking, where appropriate, to elevate residential uses at ground floor level (for privacy reasons) and to allow some natural ventilation to the car park.

Controls

C.1 Provide basement or undercroft car parking within the footprint of new development;

C.2 At grade car parking is not permitted to ensure a high quality public domain is provided;

C.3 Basement car parking is to be naturally ventilated where possible.

C.4 Security doors are to be provided to basement car parks;

C.5 Provide dedicated bicycle storage in accordance with the City of Canada Bay DCP; and

C.6 Parking provision should be in accordance with the following table:

Residential	All dwelling types	max 1 space per dwelling
	Visitors	1 space per 5 apartments
	Service vehicles	1 space per 50 apartments for first 200 apartments plus 1
Business/Retail	Refer to RTA guidelines for traffic generating development	

C.7 Developments exceeding 200 dwellings are to allocate one car parking space in a convenient location on the street frontage for use by a car share company to contribute to a car share scheme for the Strathfield Triangle.

C.8 Adequate notices on behalf of the car share company are to be displayed within developments to clearly advise the provision of the car share spaces.

C.9 Where a residential development provides adaptable housing units in accordance with this DCP, one accessible car parking space should be provided for each adaptable unit. This is in addition to any accessible parking required by this DCP.

6.6 Environmental design

6.6.1 Derailment Protection

Aim

A.1 To ensure the safety of future building occupants within development adjacent to the rail corridor.

Control

C.1 All multi-storey buildings within 20 metres of the rail corridor will need to meet the requirements of the Australian Standard AS5100 in relation to derailment protection.

6.6.2 Stormwater, detention & sediment

This section deals with the requirements relating to the management of stormwater.

Council's stormwater Controls provide guidelines for the management of stormwater runoff from all types of developments within the City of Canada Bay Council Local Government Area. Accelerated erosion and sedimentation is a major issue affecting the landscape amenity of urban areas. The effects of sedimentation are evidenced by:

- Blockages of stormwater drainage systems;
- Increased flooding due to reduced channel capacity;
- Infilling of water bodies and water courses;
- Increased algal blooms and nuisance aquatic plant growth;
- Diminished water clarity; and
- Adverse effects on fishery habitats.

This section also contains guidelines for erosion and sediment control for building construction activities associated with all development.

Aims

A.1 To provide uniform guidelines and application of systems to achieve consistency in the assessment and conditioning of development applications in relation to stormwater runoff from all developments.

A.2 To minimise any adverse impact on properties caused by stormwater runoff from developments.

A.3 To ensure that the water quality of receiving waterways is not adversely affected by pollutants such as nutrients, pathogens, and siltation, resulting from development sites.

A.4 To ensure that uniform stormwater controls are applied throughout the whole of the City of Canada Bay Council local government area.

A.5 To ensure development does not have an adverse effect on water quality or drainage systems, particularly during the construction phases.

A.6 To ensure appropriate sediment and erosion controls are in place throughout construction and stabilisation.

A.7 To protect existing vegetation and significant trees.

Controls

C.1 Development applications must consider the following:

a. The provision of safe overland flowpaths within developments and on public land;

b. The definition of floodways for major storms within developments and on public land;

c. The provision of controls such as on-site stormwater detention, community basins and the like and on-site retention systems to reduce and control stormwater runoff;

d. The application of alternative methods for merit based stormwater control and conveyance devices;

e. The removal of flood affected development from known floodways and the prohibition of future developments in such floodways;

f. The provision of minimum free-boards for assigning floor levels to reduce the risk of flood damage to property;

g. The installation of pipe/channel systems to minimise hazard to pedestrian and vehicular traffic caused by uncontrolled surface stormwater runoff; and

h. The installation of water quality control devices, such as trash screens, gross pollutant traps, water quality ponds and the like, to protect the quality of receiving waters

***Note**: The guidelines to achieve the above controls are provided in the City of Canada Bay "Specification for the Management of Stormwater" document. The Specification is to be used when preparing development applications and can be obtained on Council's website http://www.canadabay.nsw.gov.au or from Council's Customer Services Centre.*

C.2 Applications involving site disturbance, excavation or filling must be accompanied by details of the proposed method of erosion and sediment control on site. Commercial developments may require the submission of a more detailed Erosion and Sediment Control Plan.

C.3 Details shall be submitted to Council showing how it is proposed to prevent the deposition of soil, silt etc. from the site onto Council's road reserve and into its drainage system.

C.4 All construction and maintenance associated with erosion and sediment control measures must be supervised by personnel with relevant training and/or demonstrated knowledge in erosion and sediment control.

C.5 All sediment control measures must be maintained at a workable capacity until permanent rehabilitation measures have been successfully completed.

C.6 Erosion and sediment control measures are to be implemented on site, while sediment trapping measures are to be located at all points where stormwater can enter inlet pipes or leave the activity or development site.

C.7 Where possible, all vehicular site access should be provided by a single vehicle entrance point.

C.8 Topsoil within the potential area to be disturbed shall be stockpiled (at least 2 metres away from drainage lines) and re-spread on all exposed areas after final land shaping.

C.9 Stockpiles of topsoil, sand, aggregate, spoil or other material must be stored clear of any drainage line or easement, natural watercourse, kerb or road surface.

C.10 Drains, gutters, roadways and accessways shall be kept free of sediment and to the satisfaction of Council.

C.11 All ground shall be stabilised, topsoiled and revegetated as soon as final ground sloping or trimming has been completed. Disturbed areas must be stabilised within 14 days of completion or as approved by Council.

C.12 Sedimentation controls are to be maintained until stabilisation has been completed.

C.13 All sewer, water, power, communications and drainage trenches shall be backfilled, compacted up to the adjoining ground level and topsoiled within 24 hours of inspection and then stabilised to prevent erosion.

C.14 Surface waters released from the site during demolition and construction phases shall not be released to Council's road reserve without first passing through an effective, Council approved silt removal facility. Details shall be submitted in the Sediment and Erosion Control Plan.

6.6.3 Waste minimisation, storage & removal

This section of the DCP aims to encourage efficient building design and effective ongoing management systems for the handling of waste, recyclable materials, garden organics and bulky household items in all developments.

The landfilling of waste pollutes the earth, air and water. Much of what was considered waste is now seen as a resource with the continual improvement of waste recovery technologies. The design of buildings, and construction processes, will minimise and even avoid the generation of waste. The provision of adequate and appropriately located storage facilities will ensure recovery of materials for recycling or re-use and allow efficient, effective and safe removal of waste.

Council is required under the Local Government Act to provide waste services for all residential properties in its LGA and levy each rating notice accordingly. Therefore this section of the DCP applies to the domestic waste stream (garbage and recycling and where applicable, bulky household items and garden organics). As such, Council will supply all domestic waste and recycling bins to residential developments to ensure uniformity of services across the LGA. Council's standard bins are 240 litre recycling (for use in compartments on floors) and 660 litre recycling and garbage bins for use in the centralised waste and recycling rooms. Waste storage facilities are to be designed to accommodate these standard bin sizes. To minimise the floor space required for the storage of bulk bins Council offers the option of a twice weekly service of waste and recycling. Collection days will be nominated by Council.

This section of the DCP also addresses waste and recycling generated by commercial and mixed use developments. Council is responsible for ensuring that adequate waste and recycling facilities are available at these types of developments and that waste removal is efficient, safe and has minimum impact on the local area.

This section of the DCP excludes hazardous, medical or any liquid waste which requires special licences, storing and disposal arrangements. If the intended use of a premises is foreseen to generate these types of waste, storage facilities are required to be shown on drawings, handling and disposal procedures and practices are to be addressed in the waste management plan and copies of licenses and government approvals will need to be supplied to Council.

General controls

C.1. On site storage for waste and recycling facilities must be provided in designated areas for all new developments. The minimum storage space required is to be based on 120 litres of garbage and recycling generated per unit per week. The area should be located so as not to cause offence to adjoining property owners or occupiers with regard to smell, visual appearance, noise disturbance and traffic.

C.2. Source separation facilities and containers shall be provided in kitchens for waste to be divided into separate waste streams to encourage the composting and recycling of materials.

C.3. Common composting facilities should be provided at accessible locations away from dwellings to every residential development for garden waste and organic kitchen waste.

C.4. Consideration should be given to bin storage space for garden organics that are not able to be composted on site ie. thick branches as garden organics cannot be disposed of in Council serviced garbage bins.

C.5. Source separation facilities shall be provided on building sites so that different waste streams may be easily separated during construction and demolition to encourage the re-use and recycling of materials. The source separation facilities are to be clearly indicated on the drawings. Tipping dockets for disposal and recovery of all wastes are required to be held on site during this phase and are subject to auditing and/or inspection by Council.

C.6. In the design of buildings waste should be minimised by:

a. Matching building dimensions to standard sizes of building materials;

b. Using recycled materials;

c. Selecting materials that can be re-used or recycled in the future; and

d. Utilising component parts that may be easily replaced.

C.7. A Waste Management Plan is required as part of the development application documents for all developments.

C.8. Plans and drawings of the proposed development that highlight the location of and space allocated to the waste management facilities and the nominated waste collection point must be included in the Waste Management Plan. The path of access for both users and collection vehicles must also be highlighted.

Controls for multi-unit residential development

C.9. In multi-unit residential development containing 20 or more dwellings a bulk garbage and recycling collection service is required. Council supplies 660 ltr bulk recycling and garbage bins. Provision must be made for waste collection vehicles to enter and service all bins on site. Bins cannot be presented on the pedestrian footway for servicing.

C.10. Garbage chutes are required for all buildings more than 3 storeys in height. All garbage chutes are required to discharge into a compaction unit. Compaction units shall not compact above the ratio of 2:1. Consideration should be given to a chute system that is able to be adapted in the future or space allocated for an additional chute system to be installed, to accept recyclables. It is anticipated that future improvements in resource recovery technologies will allow recyclables to be recovered via a chute system.

C.11. Garbage chute outlets must discharge into the central waste and recycling room. The building caretaker should not be required to transfer waste from one side of the building to the other in order to get it from the chute outlet to the waste and recycling room. All transferring of waste from the central waste and recycling room to the collection point must occur underground.

Spatial requirements

C.12. Space must be allocated and a receptacle supplied inside each unit for waste and recycling, each with the capacity to store 2 days' worth of waste and recycling.

Waste service compartments

C.13. In buildings where a chute system is required to be installed, a waste service compartment must be provided on each floor to contain the garbage chute hopper and at a minimum, storage space for 2 days recyclables per unit (34 ltrs) generated on that floor.

C.14. The waste service compartment must have enough space to allow easy use of the chute hopper and manoeuvring of no more than 2 x 240 litre recycling bins. Doors should open outwards to allow maximum storage unless prevented by BCA requirements.

C.15. The space required to collect recyclables within the service compartment will depend upon the number of units on each floor and how frequently the recyclables are transferred to the waste and recycling room. It is recommended that recyclables are transferred daily, however this arrangement will only work when there is a full-time cleaner or maintenance person employed and they are instructed to empty recycling from waste compartment rooms. A service elevator should be considered.

Centralised garbage and recycling room

C.16. A centralised waste and recycling room must be provided in an area that is accessible to the users and easy for servicing. The waste and recycling room must be located within the underground carpark or basement. The clearance to the garbage room must be no less than 3.8 m high to allow waste collection vehicles to service bins on site. Waste collection vehicles must move in a forward direction at all times. Where it is not possible to provide this level of access for waste collection vehicles, an alternate area will be required for bin servicing and/or storage. The alternate area must be located on the property boundary line, have a layback of suitable size and be constructed to accommodate collection vehicles. For OH & S reasons access to the alternate servicing/storage room for servicing shall be from the layback to ensure bins are serviced with minimal handling.

C.17. In high rise residential developments where there is a full time caretaker on site, it is advisable that access to waste facilities by residents is limited to only the service compartments located on each floor, and the bulky items storage area. This is to help prevent contamination of recycling bins. Council will not collect recycling bins that are contaminated with unacceptable materials.

C.18. A room or caged area must be allocated for the storage of discarded bulky household items awaiting collection and should be incorporated within the waste and recycling room. The space shall be adequate in size to meet the needs of the residents and shall be divided into sections ie. metals, e-waste, mattresses to maximise resource recovery. The ongoing management of disposal/recovery of these items is to be addressed in the waste management plan. The allocated space must be a minimum of 5m³. Consideration should be given to allocating space for a charity clothing bin, printer cartridge and toner bottle and mobile phone recovery bins as these items are able to be recovered by the private sector at no charge to bodies corporate. Implementation of these types of recovery options will reduce the overall waste generated in these development sites.

Residential amenity

C.19. Residential dwellings must be adequately insulated from noise and smell if they are adjacent to or above:

a. chutes or waste storage facilities, or

b. chute discharge, or

c. waste compaction equipment, or

d. waste collection vehicle access points.

C.20. Where possible, chutes should not situated adjacent to habitable rooms due to the noise from hopper use and waste falling down the shaft.

Waste Management

C.21. The Waste Management Plan must describe how the waste management system will work and who is responsible for the transfer of waste and recycling for each stage of the process.

C.22. Signage in waste storage compartments must encourage residents to wrap garbage prior to placement in chutes, specify that no dangerous or bulky items be placed in chutes and provide information about what is acceptable in the recycling system.

Commercial premises

C.23. A waste and recycling room must be provided on each floor level within a retail development. The waste and recycling area must have the capacity to store at least one (1) day's volume of waste and recycling likely to be generated on that floor level.

C.24. Material from the waste and recycling room must be transferred to the centralised waste and recycling room or holding area daily or more frequently, as required.

C.25. If more than 10m³ of non-compacted waste and recycling is calculated to be generated per day (as described in the Waste Management Plan), the central waste and recycling room must be separate from the goods receivable dock or service vehicle bay area.

C.26. The waste and recycling area should be flexible in design so as to allow for a variety of bin sizes and types and future changes in the use of the commercial units.

Controls for Mixed Use Developments

C.27. Where a development mixes residential with commercial uses, the waste handling, storage and collection system for residential waste (from the residential area) and commercial waste (from the commercial area) are to be completely separate and self-contained. They must have separate keys and locking systems.

C.28. The Waste Management Plan prepared for a mixed use development must identify the collection points and management systems for both residential and commercial waste streams.

C.29. The waste handling and management system for each component of the mixed development must comply with the relevant provisions of this DCP (eg. separate residential and commercial collection areas).

C.30. Sufficient space must be allocated in each waste and recycling storage room to store the amount of waste likely to be generated in each respective part of the development.

C.31. Each waste and recycling room must be located in an area that is easily accessible for waste services collection vehicles and convenient to the users.

C.32. Measures must be taken to ensure that noise and odour from the commercia waste facilities does not impact on residents.

C.33. Commercial tenants in a mixed development must be actively discouraged from using the residential waste facilities.

C.34. The waste storage and recycling area shall be designed to enable each separately tenanted or occupied area within the building or complex to be provided with a designated and clearly identified space for the housing of sufficient commercial bins to accommodate the quantity of waste and recycling material likely to be generated.

6.6.4 Site facilities

Site facilities include loading areas, garbage areas, mail boxes, external stores, end of cycle trip facilities laundries and clothes drying areas. Development should provide appropriate site facilities for retail, commercial and residential uses, and locate and design them to minimise their impact on the streetscape.

Controls

C.35. Loading facilities must be provided via a rear lane or side street where such access is available.

C.36. Adequate garbage and recycling areas must be provided to all developments. These areas are to be visually integrated to minimise their visibility from the street. Such facilities must be located away from openable windows to habitable rooms to avoid amenity problems associated with smell and noise.

C.37. To achieve amenity, provide either communal or individual laundry facilities to every dwelling, and at least one external clothes drying area. The public visibility of this area should be minimised. Clothes drying is only permitted on balconies that are permanently screened from public view.

C.38. To avoid visual clutter, all apartments are to have a balcony that has portion of the balustrade which has a minimum height of 1.4 metres and minimum width of 1.5 metres wide to screen drying clothes.

C.39. To optimise convenience, lockable mail boxes should be provided close to the street, integrated with front fences or building entries.

C.40. To minimise the negative impact of smells on occupants on upper levels ducted vents must be provided to commercial kitchens.

C.41. To facilitate the maintenance of communal open space, garden maintenance storage including connections to water and drainage should be provided.

C.42. To encourage sustainable transport options provide change rooms, showers and lockers for people walking, running or cycling to work on all employment generating development. Locate these facilities close to secure bicycle parking.

6.6.5 Pedestrian access, parking and servicing

Most people experience some form of mobility impairment at some stage during their lives which may be caused by a variety of factors including ageing as well as injury and disease. It is important that access to the facilities of

the Strathfield Triangle is made easy for a wide variety of people. The creation of a barrier-free environment in all public spaces, premises and associated spaces will ensure that all people who live, work or visit are able to access and use all spaces, services and facilities and participate in community life.

Controls

C.1. To cater for mobility impairment provide at least one main entry with convenient, barrier-free access in all buildings. Access should be direct and without unnecessary barriers. Obstructions which cause difficulties should be avoided. These include:

a. Uneven and slippery surfaces;

b. Steep stairs and ramps;

c. Narrow doorways, paths and corridors;

d. Devices such as door handles which require two hands to operate, or revolving doors.

C.2. To cater for mobility impairment, appropriately designed and convenient seating and ablutions should be provided.

C.3. To cater for drivers with mobility impairment, adequate parking should be provided for people with mobility diseases and safe, easy and convenient access to the building.

C.4. To cater for visitors with mobility impairment, the proportion of visitable dwellings should be maximised.

C.5. An assessment of the accessibility of developments is to accompany all development applications for new buildings and substantial alterations to existing buildings involving changes to pedestrian access.

6.6.6 Heritage

This section deals with the requirements relating to buildings of heritage significance, whether or not they are listed as heritage items on the Canada Bay Local Environmental Plan or other applicable statutory planning instrument.

The housing in Leicester Avenue within the Strathfield Triangle Precinct has been recognised as having heritage significance. It is also recognised that, within the context of the Strathfield Triangle Precinct, there is limited potential for viable use or adaptive re-use of these houses.

Aim

A.1 To provide an appropriate record of the housing in Leicester Avenue prior to redevelopment of individual or multiple sites.

Controls

C.1 Prior to demolition of any of the existing houses in Leicester Avenue an archival photographic record of the house shall be prepared and a copy supplied to Council.

C.2 Archival photographic records shall be prepared in accordance with the guidelines in the Heritage Council publication Photographic Recording of Heritage Items Using Film or Digital Capture 2006.

C.3 Development applications for new buildings along Leicester Avenue will include a report prepared by a suitably qualified heritage consultant detailing how interpretive material dealing with the heritage significance of the demolished buildings on Leicester Avenue can be incorporated into any new development on the site.

6.6.7 Services & facilities

Aims

A.1 To ensure that site facilities are effectively integrated into the development and are unobtrusive;

A.2 To ensure facilities are provided that provide for the social and recreational needs of residents; and

A.3 To provide and integrate site services and facilities in a sensitive manner so that they relate to the development, enable easy access, and require minimal maintenance.

Controls

Communal Meeting space:

C.1 Provide an internal communal meeting space in residential flat buildings with over 20 units that has a minimum area of 40m²; and

C.2 The meeting space should be located on the ground floor and conveniently accessed by residents.

Laundries and clothes drying:

C.3 Provide secure open air clothes drying facilities that are easily accessible, adequately screened from the public domain and communal open spaces, and have a high degree of solar access;

C.4 Provide a clothes drying area on the balcony that is:

a. screened from the public view; and

b. well ventilated.

Ancillary and service structures:

C.5 Locate satellite dishes, telecommunication antennae and any ancillary structures away from the street frontage or any public or private property adjacent to the site to reduce visual impact;

C.6 Provide mailboxes adjacent to the major entrance and integrated into a wall where possible, ensuring that they are secure and can accommodate large articles such as newspapers.