The Hills Development Control Plan (DCP) 2012

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Part D Section 12 Carlingford Precinct





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1. INTRODUCTION

This Section of the DCP must be read in conjunction with Part A – Introduction of this DCP and Part C Section 6 - Flood Controlled Land.

This Section of the DCP has been prepared to guide future development permissible within the Carlingford Precinct under The Hills Local Environmental Plan 2012.

1.1. LAND TO WHICH THIS SECTION OF THE PLAN APPLIES

This plan applies to land bounded by Jenkins Road to the west, Pennant Hills Road to the south and east and Moseley Street to the north within the local government area of The Hills as shown in Figure 1 and referred to in this section of the DCP as the Carlingford Precinct.

1.2. AIMS AND OBJECTIVES OF THIS SECTION OF THE DCP

The aim of this Section of the DCP is to provide parameters to guide development in the Precinct for a range of built forms that allow for a mix of housing styles, commercial, retail and community uses. This Section of the DCP, in association with a Section 94 contributions plan for the Precinct also proposes upgrades of open space, vehicular and pedestrian access, public realm and upgrades of existing infrastructure for electricity, drainage and roads.

The objectives of this Section of the DCP are:

- (i) To provide a clear vision and the desired future character for the revitalization of the Carlingford Precinct;
- (ii) To formulate structure plans and a Master plan in response to the opportunities and constraints identified and incorporating the following design concepts for the Carlingford Precinct:
 - Streetscape character, particularly in the vicinity of Thallon and James Streets, including the concept of street level activity with living above and that adjacent public spaces be augmented and upgraded;
 - Increased height and density, in targeted locations, will be used as a mechanism to ensure that the desired future character for

the Precinct and public infrastructure can be achieved;

- Integration of floodplain management with adjoining development to achieve high quality open spaces;
- Alternative development approaches/patterns to address site specific issues within the Precinct; and
- Undergrounding of local and 132kv power lines to improve streetscape appearance and street lighting.
- (iii) To create a high quality, aesthetically pleasing, and functional Precinct for future residents.

Where any provision of this Section of the DCP is inconsistent with any provision of any other Section of the DCP, the provisions of this Section of the DCP shall prevail to the extent of that inconsistency.

1.3. SEPP 65 DESIGN QUALITY

Development of the residential flat buildings envisaged by this section of the plan are subject to the requirements of State Environmental Planning Policy (SEPP) No. 65 – Design Quality of Residential Flat Development. Applicants should provide a submission with the development application demonstrating compliance with these requirements.

1.4. STRUCTURE OF THIS SECTION

This document has been divided into following five parts:

- 1. Introduction
- 2. Urban Context
- 3. Structure Plan and Masterplan
- 4. Precinct-wide Built Form Controls
- 5. Key Site Built Form Controls





Figure 1. Precinct Boundary

2. URBAN CONTEXT

2.1. OPPORTUNITIES AND CONSTRAINTS

The Precinct's opportunities and constraints are discussed in the supporting document for this Section of the DCP. The opportunities and constraints are synthesised in ways to provide for the development of the Precinct to the densities envisaged by Council's resolution and draft Precinct Plan 2005 while optimising urban design quality and environmental outcomes. See Figure 2 – Opportunities and Constraints.

There are a series of constraints that apply across the Precinct. These include the essentially immovable elements that tend to delineate, separate and punctuate the Precinct as a whole. These elements include the rail line with its station and heritage building, major roads and pedestrian routes, topography, drainage lines, existing overhead power lines and pylons. Land subject to overland flow paths occurs in both the northern and southern sides of the Precinct. Such land is both an opportunity and a constraint to development and has been influential in the structure planning for the Precinct.

Other constraints include the existing multi unit buildings that are unlikely to change due to their being under strata title, commercial developments and the fragmented pattern of land ownership.

The Precinct includes characteristics that are opportunities for development including amalgamated key sites, proximity to the railway station, topography, the relationship of sites to the road hierarchy, public open space, property boundaries, edges, nodes, slopes, drainage, roads, landmarks, existing developments, pedestrian desired lines and areas of potential high residential amenity or public activity and commercial opportunities.

The integration of the opportunities and constraints determines the suitability of a locality for a particular combination of spatial organisation, land use, built form and unit density, design approach to public realm, landscape theme, and movement system including traffic management. In this way areas of the same desired future character and built form are reflected by appropriate controls.

This process has led to the identification of a range of development scales and densities that generally

decrease moving from the south of the Precinct to the north, further from the train station and village centre.

2.2. KEY SITES

The major opportunity to achieve a coordinated, holistic development of the Precinct is the existence of several 'key sites'. These key sites comprise large land holdings that are mainly under single ownership, in locations critical to the establishment of a village centre and suitable for buildings containing a relatively large number of units. As a result, developments of a substantial size and complexity can be delivered promptly. In this way the development of these sites will be the catalyst for the redevelopment of the Precinct. These sites are identified as block numbers in Figure 3 – Key Sites and are described as follows:

Block 3	Jenkins Road and
	Thallon Street
Block 4	2-12 James Street
Block 6	1-7 Thallon Street
Block 17	Janell Crescent
Block 5	The 'Service station
	site' on corner of
	Pennant Hills Road
	and Jenkins Road
Block 16	The 'Bunnings site' at
	the corner of Pennant
	Hills Road and Post
	Office Street

This Section of the DCP recognises the role of the key sites and proposes development controls to ensure their development will contribute to achieving the objectives of this plan. The urban design, functional and socioeconomic outcomes proposed for these sites are the expression of the opportunity to:





Figure 2. Opportunities and Constraints

- Provide landmark buildings denoting the core of an urban village centred around the train station, open space, pedestrian and cycle connections, and community facilities.
- Provide street level active uses and human scale in the village centre.
- Provide a substantial number of residential units in close proximity to the train station.
- Contribute to the local open space network while ensuring development applies water sensitive urban design principles.
- Provide open spaces to act as place making elements at a neighbourhood scale and the focus for outdoor activity in the areas of Janell Crescent.
- Provide landmark buildings at key gateways to the Precinct on Pennant Hills Road including the Bunnings site and the service station site.



Figure 3. Key Sites

3. STRUCTURE PLAN AND MASTERPLAN

3.1. STRUCTURE PLAN AND MASTERPLAN PROCESS

The interaction of the following parameters were analysed to inform the structure plans and masterplan:

- Access and transport;
- Stormwater management;
- Street hierarchy;
- Response of building bulk to topography;
- Design excellence (NSW Residential Flat Design Code);
- Open space and recreation;
- Public domain improvements;
- Pedestrian connections;
- Sustainability and water sensitive urban design;
- Infrastructure upgrades;
- Adaptive reuse of the railway heritage building and access to train station; and
- Streetscape.

3.2. URBAN DESIGN PRINCIPLES

For each of the above parameters a set of design principles were identified. These principles are based on best practice, such as the co-location of drainage reserves and public open space.

Other principles are based on efficiency of connections and access, convenience and the synergies of place making such as locating highest residential densities close to the train station and civic areas. These principles are to ensure the creation of a quality living environment with appropriate relationship between residential buildings, public infrastructure and public realm and in response to topography.

The existing buildings of the railway station, in association with the Council owned library, future community facilities, open space and increased residential densities near the railway station provide a central focus and landmark for the Precinct and create a strong identity for the existing centre as a potential Town Centre. The following four layered series of structure plans show the major urban design proposals for the Precinct regarding:

- access and circulation;
- open space;
- public domain; and
- building height and floor space ratio.

The desired future character statements for the Precinct outlined below are informed by the structure plans. Each structure plan includes a set of guiding urban design principles.

The structure plans inform the masterplan/indicative built form plans thus expressing the guiding principles. These plans show the distribution of the different built forms, the relationship of open space to built form, and the integration of outcomes to improve the public domain, open space, vehicle circulation and pedestrian links.

A set of development controls for each of the key sites are proposed as well as development standards for the whole of the Precinct and generic controls applying to all development. These provisions are set out in the following sections of this document.

3.3. DESIRED FUTURE CHARACTER STATEMENTS

3.3.1. SOUTHERN PRECINCT

The character of the southern end of the Precinct in the vicinity of the train station will be largely determined by the development of landmark buildings on the key sites and their role in creating street oriented village built form and character, open spaces and a civic plaza linked to the station.

In key sites affected by electricity easements, developments can contribute to publicly accessible open space with strong connections to the local open space network and civic area.

Buildings on key sites and in the southern side of the Precinct generally have been placed to provide transition in building scale and to provide natural ventilation, solar access, outlook from apartments and year round sunlight to communal open spaces.

Streetscapes are to be resident and visitor friendly in an urban landscaped setting associated with a street hierarchy that promotes a safe pedestrian and vehicular environment. The landscape works in the public realm help to define the character areas in the Precinct. These characters range from the more urban, civic and train station oriented village to the suburban character further from the train station.

3.3.2. NORTHERN PRECINCT

The northern end of the Precinct will comprise lower scale residential flat buildings interspersed with existing multi unit developments.

The built form of development will reflect a transition of scale between the larger residential flat buildings concentrated around the train station in the south of the Precinct and the smaller scale residential flat buildings proposed in the land north of Post Office Street.

Street setbacks are to complement the proposed garden setting in contrast to the strong street edge, activated urban village character of development closer to the train station.

Additional streets are proposed to complement this relationship of buildings to the public domain and establish a finer grained street hierarchy and built forms. Private and communal open space within developments is encouraged to visually compliment the public realm and where feasible, allow some public access.



Communal open space with controlled public access to compliment developments (Source: Residential Flat Design Code, 2002)



Urban character around train station with active retail on ground floor (Source: Residential Flat Design Code, 2002)

3.4. STRUCTURE PLAN - ACCESS AND CIRCULATION

Principle: Street Hierarchy and Permeability

- Extend the northern section of Boundary Road to connect with Tanderra Street.
- Improve vehicular safety with the closure of Janell Crescent and the provision of new vehicular access arrangements from Shirley Street.
- Arrange open space and pathways to focus on the train station and link to open space/ community facilities to the east of the station also to connect to the James Ruse locality on the west of Jenkins Road (see Figure 5: Structure Plan – Open Space Strategy).
- Establish a network of cycle/pedestrian access tracks throughout the open space network of the Precinct to connect with public transport links and routes beyond the Precinct (see Figure 6: Structure Plan – Public Domain).

Principle: Proximity to Transport

- Locate the proposed residential flat buildings with highest density closest to the train station to maximise infrastructure use, improve convenience for commuters and to contribute to a critical mass for a future civic/transport hub.

Principle: Upgrade of existing road networks and footpath surfaces and traffic management works

 Provide progressively the road improvements and traffic management measures shown in Figure 4 in consultation and conjunction with Council, with possibilities for planning agreements.

- Install new signalised traffic signals and traffic management structures such as kerb blisters, medians and lane treatments in accordance with recommendations of the Carlingford Precinct Plan Traffic Report (May 2008) prepared by Masson/Wilson/Twiney Traffic and Transport Consultants.
- Install high quality pedestrian and cycle pathways in an efficient and coherent network designed to enhance the pedestrian experience.
- Improve local traffic management in accordance with the Carlingford Precinct Plan Traffic Report including the provision of a bus stop and 'kiss and ride' passenger set down area at the train station, intersection upgrades, roundabouts and signalisation.



Figure 4. Structure Plan – Access and Circulation

3.5. STRUCTURE PLAN - OPEN SPACE STRATEGY

Principle: Linking of existing and potential open space areas

- The existing open space in the south of the Precinct is an opportunity to combine with the proposed open space "green spine" created by undergrounding of the electricity lines and dual use of flood prone land.
- The combination of the former easement with an overland stormwater flow path enhances the scenic and environmental outcomes of this element with the possibility of creating water features.
- Create a civic square addressing the entrance to the train station and connected to open space links associated with electricity easements.
- Install play equipment in safe and appropriate locations within open space.

Principle: Open space and built form relationships

- Several key sites close to the train station have easements for the existing electricity pylons. Once the pylons are removed, the former overhead easement can contribute to publicly accessible open space surrounding new developments and linked to the open space adjacent to Council's existing library building.
- In areas further from the train station, use key sites and flood prone land to create communal open spaces and new parks addressed by buildings. These parks help to impart a garden suburb character to complement residential buildings set in generous private / communal open space
- In areas further from the train station, site planning for buildings could aim to amalgamate private green spaces to optimise deep soil planting areas, communal open space, shared views and landscape and contribute to the garden suburb theme.

Principle: Quality residential open space areas

 Communal open space at ground or podium level for residents is to be provided. This open space should enhance the quality of the built environment by providing opportunities for landscaping in a parkland setting as well as providing a visual and activity focus for the new residential community created through this development.

- All communal open space areas are to accommodate appropriate facilities such as picnic and barbeque areas, children's play area and grassed areas for passive recreational use. Developments are to include designated communal open space areas with year round solar access.
- Water Sensitive Urban Design (WSUD) guidelines and On-site Stormwater Detention (OSD) principles are to be incorporated in both private and communal open space design.



Figure 5. Structure Plan – Open Space Strategy

3.6. STRUCTURE PLAN - PUBLIC DOMAIN

Principle: Streetscape

- Street tree planting and landscaping is to be consistent with the Carlingford Precinct Public Domain Plan.

Principle: Public domain improvements

- Embellish the existing public open space to the west of the rail reserve. The railway station, rail reserve and public open space near the scout hall are major organising elements in the Precinct. This is an opportunity to increase the pedestrian connections to the park and its attractiveness for recreation of the future residents of the Precinct.
- A public square on the west of the train station to act as a gateway entry point.
- Create new public parks using WSUD for floodways associated with the site amalgamations producing key sites in the Janell Crescent area.

Principle: Infrastructure upgrades

- It is proposed to underground both the street power lines and the high voltage power lines and pylons to remove the visual impact of the existing structure and provide public open space within the easement.

Principle: Pedestrian connections

- Provide improved footpath connections and unified hardscape treatment of the public realm.
- Provide cycle and pedestrian paths responding to desire lines.

Principle: Adaptive re–use of the railway heritage building

 The existing heritage building in the train station curtilage may have the potential for adaptive reuse. This would be an opportunity to add variety and activity to a future civic precinct that centres on the station and the public open space adjacent to the railway reserve.

Principle: Stormwater management

- Site planning and development generally must respond to the recommendations of Council's Carlingford Stormwater Study and Management Plan.
- On the southern side of Post Office Street a major opportunity arises from site amalgamation to provide a series of linked open spaces. These spaces could be combined with a stormwater capture system incorporating linked retention basins along the water course to form a "green spine" linking the upper Pennant Hills Road section of the Precinct to the lower section being the public open space adjacent to the railway line.
- Install a variety of bio-retention measures including grass depressions and swales on street edges and within open space.

Principle: Sustainability and WSUD

- Development in the Precinct will be required to undertake sustainability initiatives: stormwater capture, bio-retention basins, integration of watercourses with open space and landscaping.

3.7. STRUCTURE PLAN (INDICATIVE BUILDING HEIGHT AND FSR)

Principle: Building heights should increase the closer sites are to the train station

- Concentration of the residential density close to the station will maximise usage of the train service by the maximum number of people in the shortest, most convenient walking distance from the station.
- Concentration of high-rise buildings close to the station will provide an orienting landmark for the village centre.

Principle: Built Form Should Address Open Space

 In areas further from the train station, building placement should address adjacent open space to allow interaction of residents with that space and for passive surveillance.

Principle: Built Form Should Respond To Street Hierarchy

- In general, the low-rise buildings are proposed together with lower FSR limits on the local roads within the northern part of Precinct. This approach responds to the lower scale suburban desired future character for areas further from the train station.
- Maximum of 9 storeys is proposed for development fronting Pennant Hills Road. This is to achieve a presence associated with deep setbacks for major planting, footpath upgrades and pedestrian amenities.

3.8. ILLUSTRATIVE MASTERPLAN

Principle: Response of Building Bulk and Scale to Topography

- Site specific development controls are to be provided for Key Sites in the vicinity of the train station to minimise overshadowing and create pedestrian scale podiums containing retail and commercial uses and associated public open spaces.
- High rise developments are to be concentrated in the low ground close to the train station. This is an opportunity for the apparent height of high rise buildings to be diminished when viewed in their topographic context. The proposed building

envelopes thus take up the opportunity for the prominence of tower buildings to be visually absorbed by the backdrop of the slopes leading up to the ridge lines along which runs Pennant Hills Road.

- Provide for home office and ancillary commercial and convenience retail uses on ground floor areas of developments on pedestrian routes to the train station.
- In areas further from the train station, the built form, site coverage, setbacks and composition of boundaries and building placement are to create a garden suburb character. This character should complement, in style and function, the public open space adjacent to the train station and community facilities to the east. This integrated approach is key to producing a synergy and coherence between private development and the public realm. This will be a unique place making force for a possible civic hub in the vicinity of the train station/scout hall.

Principle: Design Excellence (NSW Residential Flat Design Code)

- Buildings that are close to the train station should be in the form of a slender tower and positioned so as to minimise impacts on privacy and overshadowing of open space and adjacent development.
- Iconic buildings located at gateways, nodes and major intersections.

Principle: Built Form and Setbacks are to Relate to Street Hierarchy

- On the axial boulevards of the Precinct, built form, height and landscaping is to be of a scale that signifies the importance of these major urban elements and their intersections.
- Setbacks in the Thallon Street area are to contribute to the urban village character.
 Setbacks in the remainder of the southern part of the Precinct are to contribute to the landscaped character while allowing flexibility in the siting of buildings. The setbacks of proposed buildings are designed to minimise adverse impacts such as overshadowing and privacy on adjacent and adjoining properties.
- Key sites are identified sites that can accommodate landmark buildings.
- Other key sites are identified in flood prone land that can act as dual usage parks and stormwater retention basins.



Figure 7. Illustrative Masterplan

4. PRECINCT-WIDE BUILT FORM CONTROLS

The following development controls apply to development across the Precinct.

4.1. FLOORSPACE RATIO

4.1.1. OBJECTIVES

- (i) To ensure that the bulk and scale of the development is in keeping with the site area and its surroundings in accordance with Council's ESD objective 7;
- (ii) To ensure that the bulk and scale of development does not reduce the amenity of adjacent residential or other land uses;
- (iii) To control the density of residential development; and
- (iv) To prevent excessive site coverage.

4.1.2. DEVELOPMENT CONTROLS

(a) Floor space ratio of a proposed development within the Precinct must not exceed the maximum ratio specified for that development site in the Floor Space Ratio Map of The Hills LEP 2012.

4.2. BUILDING HEIGHT

4.2.1. OBJECTIVES

- (i) To ensure that buildings reflect the existing landform of the neighbourhood, including ridgelines and drainage depressions;
- (ii) To protect privacy and amenity of surrounding residential developments and allotments in accordance with Council ESD objective 7;
- (iii) To ensure that development responds to the desired scale and character of the street appropriate in different parts of the Precinct; and
- *(iv)* To allow reasonable daylight access to all developments and the public domain.

4.2.2. DEVELOPMENT CONTROLS

- (a) The height of proposed development within the Precinct must not exceed the maximum height specified for that development site in the Building Height Map in The Hills LEP 2012. The maximum height of the building at any point shall be measured from the natural ground level to the ridge of the roof or top of the flat roof slab or top of the parapet if there is parapet on the roof slab. Natural ground level means the actual physical level of the site as existing prior to development taking place.
- (b) For the purpose of this part of The Hills DCP, building heights as specified in the Building Height Map in The Hills LEP 2012 equal to number of storeys depicted in the following table:

Building Height	Equivalent Storeys
10m	2 storeys
16m	4 storeys
21m	6 storeys
27m	9 storeys
28m	9 storeys, with retail at ground floor and commercial at first floor
33m	11 storeys
57m	18 storeys, with retail at ground floor and commercial at first floor

(c) Development on sloping sites is to be stepped so that the ground floor does not exceed one metre above natural ground level immediately below any point on the ground floor.

4.3. SITE COVERAGE

4.3.1. OBJECTIVES

- (i) To ensure an appropriate balance of open space surrounding buildings within their site area, reflecting the different scales of development appropriate in the north and south of the Precinct;
- (ii) To provide solar access; and
- (iii) To control building bulk by working in conjunction with the FSR and height limits that help differentiate the desired future character appropriate in the north and south of the Precinct.

4.3.2. DEVELOPMENT CONTROLS

(a) Building site coverage shall not exceed of 35% of site area.

"Building" for the purpose of this control is defined as the building footprint to the outside of the external walls excluding underground parking structures no more than 1.2 metres above ground and where roof of the parking structure is a private or communal open space.

4.4. SITE REQUIREMENTS

4.4.1. OBJECTIVES

- (i) This control is to encourage the amalgamation of sites thus promoting the efficient use of land;
- (ii) To promote developments compatible with the desired Precinct character; and
- (iii) To encourage orderly development in regular allotment patterns.

4.4.2. DEVELOPMENT CONTROLS

(a) The minimum site area of development sites shall be consistent with the site areas specified in the potential site amalgamation plan (Figure 8).



Figure 8. Potential Site Amalgamation Guide Plan

4.5. DEEP SOIL ZONES

Definition of deep soil zone: Areas of natural ground within the site that have relatively natural soil profiles retained.

4.5.1. OBJECTIVES

- (i) To assist with the management of the water table;
- (ii) To assist with the management of water quality; and
- (iii) To improve the amenity of developments through the retention and/or planting of large and medium size trees.

4.5.2. DEVELOPMENT CONTROLS

(a) A minimum of 25 percent of the unbuilt upon area of a site is to be a deep soil zone; alternatively, 15% of the total site area, whichever is greater.

4.6. RESIDENTIAL FLAT BUILDING -APARTMENT SIZE

4.6.1. OBJECTIVES

- To provide a diversity of residential flat building/ apartment types, which cater for different household requirements now and in the future; and
- (ii) To maintain equitable access to new housing by cultural and socio-economic groups.

4.6.2. DEVELOPMENT CONTROLS

- (a) Single-aspect apartments should be limited in depth to 8 metres from a window.
- (b) The back of a kitchen should be no more than 8 metres from a window.
- (c) The width of cross-over or cross-through apartments over 15 metres deep should be 4 metres or greater to avoid deep narrow apartment layouts.
- (d) Buildings not meeting the minimum standards listed above, must demonstrate how satisfactory day lighting and natural ventilation can be achieved, particularly in relation to habitable rooms (see Daylight Access and Natural Ventilation).

4.7. SETBACKS

Building setback requirements are shown in Figure 9 and for the Key Sites in Section 5 of this DCP. The objectives and development controls for each are set out below.

4.7.1. OBJECTIVES

6m setback:

- (i) To allow for the higher buildings proposed in the Thallon / James Street area to relate closely to the street; and
- (ii) To allow buildings fronting Boundary Road and Shirley Street to form the basis of a more regular streetscape/built form relationship.

8m setback:

- (i) To allow for new buildings along Jenkins Road to match the setback of the existing multi unit developments along the street;
- (ii) To allow visual separation from the traffic on Jenkins Road and space to install road noise attenuation structures within each development;
- (iii) To allow for buildings along Post Office Street sufficient space to provide substantial landscaping to create a boulevard character; and
- (iv) In parts of the Precinct further from the train station, to allow privately owned land upon to be landscaped and embellished so as to complement the landscape themes of the public realm of the open space.

10m setback:

- *(i)* To reinforce the north south and east west axes in the Precinct; and
- (ii) To create a green edge along Pennant Hills Road to allow for street tree planting, future footpath widening and bus shelters.

4.7.2. DEVELOPMENT CONTROLS

- (a) 6m setback: The front façade of buildings are to be set back a minimum of 6m from the front boundary of the site.
- (b) 8m setback: The front façade of buildings are to be set back a minimum of 8m from the front boundary of the site.

(c) 10m setback: The front façade of the building is to be setback 10m from the front boundary of the site.

Building Side and Rear Setbacks

4.7.3. OBJECTIVES

Side Setbacks

- (i) To minimise the impact of development on light, air, sun, privacy, views and outlook for neighbouring properties, including future buildings;
- (ii) To retain or create a rhythm or pattern of development that positively defines the streetscape so that space is not just what is left over around the building form;
- (iii) To allow modulation of end walls for structures higher than 4 storeys.

Rear Setbacks

- (i) To maintain deep soil zones to maximise natural site drainage and protect the water table;
- (ii) To maximise the opportunity to retain and reinforce mature vegetation;
- (iii) To optimise the use of land at the rear and surveillance of the street at the front; and
- *(iv)* To maximise building separation to provide visual and acoustic privacy.

4.7.4. DEVELOPMENT CONTROLS

- (a) Side and rear setbacks must comply with building separation, open space and deep soil zone controls in this Section of the DCP.
- (b) Rear setback is to be a minimum of 8m.
- (c) Side setbacks are to be a minimum of 4.5m to walls and 6m to windows from ground floor to fourth storey, and 6 metres for walls and windows above the fourth storey.
- (d) Primary and secondary setback lines must comply with building separation, open space and deep soil zone controls in this DCP.
- (e) Where setbacks are limited by lot size and adjacent buildings, internal courtyards that limit the length of walls facing boundaries may be proposed. This approach must comply with

building separation, open space and deep soil zone controls in this DCP.

- (f) In general, no part of a building or above ground structure may encroach into a setback zone.
 Exceptions are access to underground parking structures.
- (g) A 450mm articulation zone is permitted for non floor space building elements such as fins louvers, shading devices and balconies.
- (h) Future development is to be located in accordance with the setbacks in Figure 9, and, for the Key Sites, in Section 5 of this DCP.



Figure 9. Setback Controls

4.8. BUILDING SEPARATION AND TREATMENT

4.8.1. OBJECTIVES

- (i) To ensure that new development is scaled to support the desired area character with appropriate massing and spaces between buildings;
- (ii) To provide visual and acoustic privacy for existing and new residents;
- (iii) To control overshadowing of adjacent properties and private or shared open space;
- (iv) To allow for the provision of open space of an appropriate size and proportion for recreational activities for building occupants; and
- (v) To provide deep soil zones for stormwater management and tree planting.

4.8.2. DEVELOPMENT CONTROLS

(a) The minimum dimensions within a development, for internal courtyards and between adjoining sites shall be:

Buildings up to 4 storeys

- 12 metres between habitable rooms/balconies;
- 9 metres between habitable/balconies and nonhabitable rooms; and
- 6 metres between non-habitable rooms.

Buildings from 5 to 8 storeys

- 18 metres between habitable rooms/balconies;
- 12 metres between habitable rooms/balconies and non-habitable rooms; and
- 9 metres between non-habitable rooms.

Buildings 9 storeys and above

- 24 metres between habitable rooms/balconies;
- 18 metres between habitable rooms/balconies and non-habitable rooms; and
- 12 metres between non-habitable rooms.

4.9. BUILDING DEPTH

4.9.1. OBJECTIVES

- (i) To ensure that the scale of the development is consistent with the existing or desired future context;
- (ii) To provide adequate amenity for building occupants in terms of solar access and natural ventilation; and
- (iii) To provide for dual aspect apartments.

4.9.2. DEVELOPMENT CONTROLS

- (a) Building Depth: In general, a residential flat building depth of approximately 18 metres from glass line to glass line is appropriate. Developments that propose depths wider than 18 metres from glass line to glass line must demonstrate how satisfactory daylight and natural ventilation are to be achieved. The building envelope includes the articulation zone (balconies, bay windows, shading devices). Exceptions may be made to allow projections beyond the building where they are an appropriate minimum distance above the finished ground level. These exceptions do not include bay windows and balconies.
- (b) The 18 metre from glass line to glass line guideline generally applies to street wall buildings, buildings with dual aspects and buildings with minimal side setbacks.
- (c) Freestanding buildings (the big house or tower building types) may have greater depth than 18 metres only if can be demonstrated that they achieve satisfactory daylight and natural ventilation.
- (d) Building depth is to be in combination with other controls to ensure adequate amenity for building occupants. For example, a deeper plan may be acceptable where higher floor to ceiling heights allow solar access or where apartments have a wider frontage.
- (e) Building Length: In general, a residential flat building length of approximately 50 metres is appropriate. Developments more than 50 metres in length must demonstrate how satisfactory day lighting and natural ventilation are to be achieved. Note: this parameter for buildings on key sites is subject to site specific controls.

4.10. LANDSCAPE DESIGN

4.10.1. OBJECTIVES

- (i) To ensure a high quality public domain that is compatible with the achievable built forms and appropriate for the desired future character of the Precinct;
- (ii) To add value to the quality of life of residents within the Precinct in the forms of privacy, outlook and views;
- (iii) To improve stormwater quality and reduce quantity;
- (iv) To improve the microclimate and solar performance within the development;
- (v) To improve urban air quality; and
- (vi) To contribute to biodiversity.

4.10.2. DEVELOPMENT CONTROLS

- (a) Development is to provide landscaping in accordance with The Hills Development Control Plan Part C Section 3 - Landscaping.
- (b) Landscaping of the public domain is to be undertaken in accordance with the provisions of the Carlingford Precinct Public Domain Plan. This includes, but is not limited to, kurb and gutter construction, paving, landscaping, street furniture, lighting and street tree planting.

4.11. OPEN SPACE

4.11.1. OBJECTIVES

- *(i)* To provide residents with passive and active recreational opportunities;
- (ii) To provide an area on site that enables soft landscaping and deep soil planting;
- (iii) To ensure that communal open space is consolidated, configured and designed to be useable and attractive; and
- (iv) To provide a pleasant outlook.

Provide high quality design for communal open spaces to encourage outdoor activities.



(Source: Residential Flat Design Code)



(Source: Residential Flat Design Code)

4.11.2. DEVELOPMENT CONTROLS

- (a) The area of communal open space required should be at least 30 percent of the site area. (Larger sites may have potential for more than 30 percent.)
- (b) Provision of roof top communal open space will be considered when calculating the area of communal open space for mixed use developments with retail and commercial uses where it is not possible to provide 30 percent of the site area in communal open space at ground level.
- (c) Private open space must be readily accessible from living areas of dwelling units.

- (d) The minimum area of private open space for each apartment at ground level must be 25m^{2.} The minimum dimension is 4 metres.
- (e) In order to provide useable open space to dwellings above ground level, any balcony or terrace shall have a minimum area of 10m² and a minimum depth of 2 metres.

4.12. BALCONIES

4.12.1. OBJECTIVES

- (i) To provide all apartments with private open space;
- (ii) To ensure balconies are functional and responsive to the environment thereby promoting the enjoyment of outdoor living for apartment residents;
- (iii) To ensure that balconies are integrated into the overall architectural form and detail of residential flat buildings; and
- (iv) To contribute to the safety and liveliness of the street by allowing for casual surveillance.

4.12.2. DEVELOPMENT CONTROLS

- (a) Provide primary balconies for all apartments with a minimum depth of 2 metres. Developments which seek to vary the minimum standards must demonstrate that negative impacts from noise and wind cannot be satisfactorily mitigated with design solutions.
- (b) The minimum area for a balcony is $10m^2$.



Provide residents with functional balconies (Source: Residential Flat Design Code)



Provide balustrades/railings for safety (Source: Residential Flat Design Code)

4.13. SOLAR ACCESS

4.13.1. OBJECTIVES

- (i) To ensure that solar access is provided to all habitable rooms and encouraged in all other areas of residential flat development;
- (ii) To provide adequate ambient lighting and minimise the need for artificial lighting during daylight hours; and
- (iii) To provide residents with the ability to adjust the quantity of daylight to suit their needs.

4.13.2. DEVELOPMENT CONTROLS

- (a) Buildings must be designed to ensure that adjoining residential buildings, and the major part of their landscape receive at least four hours of sunlight between 9am and 3pm on 21 June.
- (b) Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of four hours direct sunlight between 9 am and 3 pm on 21 June.
- (c) Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10 percent of the total units proposed. Developments which seek to vary from the

minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed (see Orientation and Energy Efficiency).

(d) Main windows should have suitable shading or other solar control to avoid discomfort (shutters/blinds/screens/retractable awnings).



Provide residents with means to adjust the quantity of daylight (Source: Residential Flat Design Code)



Articulate built form to allow daylight access to habitable rooms (Source: Residential Flat Design Code)

4.14. CAR PARKING PROVISION

4.14.1. OBJECTIVES

- (i) To ensure that all car parking demands generated by the development are accommodated on the development site;
- (ii) To minimise car dependency for commuting and recreational transport use and to promote alternative means of transport including public transport, bicycling, and walking;
- (iii) To provide adequate car parking for building users and visitors, depending on building type and proximity to public transport; and
- (iv) To integrate the location and design of car parking with the design of the site and the building.

4.14.2. DEVELOPMENT CONTROLS

- (a) Parking for residents is to be provided at the rate of 1 space per 1 bedroom apartment, 2 spaces per 2 bedroom apartment, and 2 spaces per 3 bedroom apartment. These car parking rates do not apply to the Key Sites identified in Section 5 of this part of the DCP.
- (b) Visitor parking is to be provided at the rate of 2 spaces per 5 apartments for all development within the Precinct.
- (c) All car parking required by Council shall be provided on-site in accordance with the requirements of Part C Section 1 – Parking of this DCP.
- (d) Car parking including visitor parking shall be located underground to minimise the height of buildings above natural ground level.
- (e) Visitor parking is to be located in easily accessible and identifiable areas.

4.15. VEHICLE ACCESS

4.15.1. OBJECTIVES

- *(i)* To ensure that vehicles may enter and leave the site in a safe and efficient manner; and
- (ii) To provide a legible and permeable road network.

4.15.2. **DEVELOPMENT CONTROLS**

- (a) Access to the site is to be in accordance with the requirements within Part C Section 1 – Parking of this DCP.
- (b) Ensure vehicular ingress and egress to the site is in a forward direction at all times.

- (c) Adequate provision shall be made for service vehicle access and service areas.
- (d) Driveways are to have a minimum width of 6 metres at the property boundary for a distance of 6 metres within the development to ensure easy entry/exit of vehicles.
- (e) Access to multi-level basement car parks should be provided in the form of a two-way ramp (two lane width - minimum 5.5m wide) or two separate single lane (minimum 3.0m wide) ramps.
- (f) The design and configuration of access ways and driveways shall be in accordance with Part C Section 1 - Parking of this DCP.
- (g) Locate vehicle entries away from main pedestrian entries and on secondary frontages.
- (h) All car parking areas and spaces shall be designed in accordance with The Hills Shire Part C Section 1 – Parking of this DCP.
- (i) Car parking space dimensions and gradient design shall be in accordance with the relevant Australian Standard. The relevant Australian Standard at present is Australian/New Zealand Standard AS/NZS 2890.1:2004 - "Parking Facilities - Part 1: Off-street car parking" (AS/NZS 2890.1:2004).

4.16. FENCES AND WALLS

4.16.1. OBJECTIVES

- (i) To define the edges between public and private land;
- (ii) To define the boundaries between areas within the development having different functions or owners;
- (iii) To provide privacy and security; and
- (iv) To contribute positively to the public domain.

4.16.2. DEVELOPMENT CONTROLS

- (a) The fencing materials chosen must protect the acoustic amenity and privacy of courtyards. Courtyard fences shall be constructed of masonry.
- (b) Where residential buildings are required to be set back 10m from the front boundary, fencing / walls fronting a street shall be setback a minimum of 2 metres. This is to allow for consistent street edge

landscaping, and shall include recesses and other architectural features.

- (c) All fencing or walls shall be combined and integrated with site landscaping.
- (d) The following fencing materials or finishes are not acceptable because of their poor visual appearance:
 - Pre-painted, profiled metal sheeting; and
 - Rendered finishes when the entire fence is rendered.
- (e) The use of natural materials is encouraged.
- (f) Front fences should not be of a height so as to prevent casual surveillance of the public realm and adjacent prosperities.
- (g) In mixed use developments containing non residential uses on the ground floor, front boundaries should be defined by accessible paved and landscaped areas to demarcate public from private realm.
- (h) Ground floor retail edges should have barrier free access and public amenities such as awnings.



Combined wall/fencing materials with planting elements to soften the hard edge (Source: Residential Flat Design Code)

4.17. ORIENTATION

4.17.1. OBJECTIVES

- (i) To optimise solar access to residential apartments within the development and adjacent development;
- (ii) To contribute positively to desired streetscape character;
- (iii) To protect the amenity of existing development; and
- (iv) To improve the thermal efficiency of new buildings.

4.17.2. DEVELOPMENT CONTROLS

(a) Orient and design buildings to maximise the number of dwellings with direct sunlight where possible. Ideally, face the long axis of the development up to 30 degrees east and 20 degrees west of true north. This is illustrated in Figure 10.





Figure 10: Building Orientation

- (b) Face living spaces to the north wherever possible.
- (c) No more than 10% of single aspect residential units are to face due south.

4.18. PLANTING ON STRUCTURES

4.18.1. OBJECTIVES

- *(i)* To contribute to the quality and amenity of communal open space on roof tops, podiums and internal courtyards; and
- (ii) To encourage the establishment and healthy growth of trees in urban areas.

4.18.2. DEVELOPMENT CONTROLS

- (a) Large trees such as figs (canopy diameter of up to 16 metres at maturity):
- minimum soil volume: 150 cubic metres
- minimum soil depth: 1.3 metre
- minimum soil area: 10 metre x 10 metre area or equivalent
- (b) Medium trees (8 metre canopy diameter at maturity):
- minimum soil volume: 35 cubic metres
- minimum soil depth: 1 metre
- approximate soil area: 6 metre x 6 metre or equivalent
- (c) Small trees (4 metre canopy diameter at maturity):
- minimum soil volume: 9 cubic metres
- minimum soil depth: 800mm
- approximate soil area: 3.5 metre x 3.5 metre or equivalent
- (d) Shrubs:
- minimum soil depths: 500-600mm
- (e) Ground cover:
- minimum soil depths: 300-450m
- (f) ⊤urf:
- minimum soil depths: 100-300mm
- (g) Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.

4.19. STORMWATER MANAGEMENT

4.19.1. OBJECTIVES

- (i) To control stormwater runoff and minimise discharge impacts on adjoining properties and into natural drainage systems before, during and after construction;
- (ii) To minimise the impacts of residential flat development and associated infrastructure on the health and amenity of natural waterways;
- (iii) To minimise the discharge of sediment and other pollutants to the urban stormwater drainage system during construction activity;
- (iv) To provide for the disposal of stormwater from the site in efficient, equitable and environmentally sensible ways in accordance with Council's ESD objective 3;
- (v) To provide for on-site detention of site drainage;
- (vi) To prevent flood damage to the built and natural environment, inundation of dwellings and stormwater damage to properties;
- (vii) To ensure that proposed development does not adversely affect the operational capacity of the downstream stormwater system;
- (viii) To encourage reuse, recycling and harvesting of stormwater to reduce wastage of water; and
- *(ix)* To encourage a reduction in water consumption.

4.19.2. DEVELOPMENT CONTROLS

- (a) Drainage easements will be required where the development property does not drain directly into the existing stormwater drainage system or a public road. Development Consent will not be issued until the submission of documents demonstrating the creation of any necessary easements over downstream properties.
- (b) Developments must comply with any requirements of the Sydney Catchment Management Authority.
- (c) On-site detention, water recycling, or water quality management systems may be required to Council's and/or the Sydney Catchment Management Authority requirements, to counteract an increase in stormwater runoff.
- (d) Drainage systems are to be designed and constructed in accordance with the design guidelines set out in "Design Guidelines for Subdivisions and Developments" published by The Hills Shire Council and "Australian Rainfall and Runoff" published by the Institution of Engineers, Australia (1987).

- (e) Discharge points are to be controlled and treated to prevent soil erosion, and may require energy dissipating devices on steeper topography, to Council's requirements.
- (f) Where necessary, downstream amplification of existing drainage facilities will be required including Council infrastructure if required.
- (g) Water Sensitive Urban Design (WSUD) principles shall be employed in the management of the site's stormwater in terms of water retention, reuse and cleansing in accordance with the "Water Sensitive Urban Design Technical Guidelines for Western Sydney" published by the Upper Parramatta River Catchment Trust (May 2004). In this regard the drainage design is to include measures to manage the water quality of stormwater runoff. At a minimum the design is to integrate bio retention filters along roadways, driveways and within open space areas.
- (h) On site detention tanks are only permitted in common areas within a proposed development (for example driveways, common open space and not within private courtyards).
- (i) Drainage systems are to be designed and constructed in accordance with the design guidelines set out in "Design Guidelines for Subdivisions and Developments" published by The Hills Shire Council and/or "Australian Rainfall and Runoff" published by Institution of Engineers, Australia (1987) and/or the Sydney Catchment Management Authority.
- (j) On-site detention systems, where required, are to be designed in accordance with (a) above.

Note: Where land is identified as flood controlled land, please refer to Part C Section 6 – Flood Controlled Land of the DCP.

4.20. BUILDING ENTRY

4.20.1. OBJECTIVES

- *(i)* To create entrances which provide a desirable residential identity for the development;
- (ii) To orient the visitor;
- (iii) To contribute positively to the streetscape and building facade design; and
- (iv) To provide entrances that are legible, safe, accessible and well lit.

4.20.2. DEVELOPMENT CONTROLS

- (a) Provide as direct a physical and visual connection as possible between the street and the entry.
- (b) Achieve clear lines of transition between the public street, the shared private circulation spaces and individual apartments.
- (c) Provide safe and secure access. Design solutions include:
 - Avoid ambiguous and publicly accessible small spaces in entry areas.
 - Provide a clear line of sight between one circulation space and the next.
 - Provide sheltered, well lit and highly visible spaces to enter the building, meet and collect mail.
- (d) Generally provide separate entries from the street for:
 - Pedestrians and cars.
 - Different uses, for example, for residential and commercial users in a mixed-use development
 - Ground floor apartments, where applicable.
- (e) Design entries and associated circulation space to be of an adequate size to allow movement of furniture between public and private spaces.

4.21. CEILING HEIGHT

4.21.1. OBJECTIVES

- (i) To increase the sense of space in apartments and provide well proportioned rooms;
- (ii) To promote the penetration of daylight into the depths of the apartment;
- (iii) To contribute to flexibility of use; and
- (iv) To achieve quality interior spaces while considering the external building form requirements.

4.21.2. DEVELOPMENT CONTROLS

- (a) Ceiling heights shall be measured from finished floor level (FFL) to finished ceiling level (FCL). These are minimums only and do not preclude higher ceilings, if desired.
- (b) In mixed use buildings: 3.3 metre minimum for ground floor retail or commercial and for first floor residential retail or commercial to promote future flexibility of use in residential flat buildings in mixed use areas: 3.3 metre minimum for ground floor to promote future flexibility of use.

- (c) In general, 2.7 metre minimum for all habitable rooms on all floors, 2.4 metres is the preferred minimum for all non-habitable rooms, however 2.25m is permitted.
- (d) For two storey units, 2.4 metre minimum for second storey if 50 percent or more of the apartment has 2.7 metre minimum ceiling heights.
- (e) For two storey units with a two storey void space,2.4 metre minimum ceiling heights.
- (f) Attic spaces shall have a 1.5 metre minimum wall height at edge of room with a 30 degree minimum ceiling slope.

4.22. FLEXIBILITY

4.22.1. OBJECTIVES

- *(i)* To encourage housing designs which meet the broadest range of the occupants' needs possible;
- (ii) To encourage adaptive re-use; and
- (iii) To save the embodied energy expended in building demolition.

4.22.2. DEVELOPMENT CONTROLS

- (a) Provide robust building configurations, which utilise multiple entries and circulation cores, especially in larger buildings over 15m long.
- (b) Utilise structural systems, which support a degree of future change in building use or configuration. Design solutions may include:
 - A structural grid, which accommodates car parking dimensions, retail, commercial and residential uses vertically throughout the building.
 - The alignment of structural walls, columns and services cores between floor levels.
 - The minimisation of internal structural walls.
 - Higher floor to floor dimensions on the ground floor and possibly the first floor.

4.23. GROUND FLOOR APARTMENTS

4.23.1. OBJECTIVES

- (i) To contribute to the desired streetscape of the range of localities in the Precinct and to create active safe streets; and
- (ii) To increase the housing and lifestyle choices available in residential flat buildings.

4.23.2. DEVELOPMENT CONTROLS

- (a) Optimise the number of ground floor apartments with separate entries.
- (b) Provide ground floor apartments with access to private open space, preferably as a terrace or garden.

4.24. INTERNAL CIRCULATION

4.24.1. OBJECTIVES

- *(i)* To create safe and pleasant spaces for resident circulation;
- (ii) To facilitate quality apartment layouts, such as dual aspect apartments;
- (iii) To contribute positively to the form and articulation of the building facade and its relationship to the urban environment; and
- (iv) To encourage interaction and recognition between residents to contribute to a sense of community and improve perceptions of safety.

4.24.2. **DEVELOPMENT CONTROLS**

- (a) In general, where units are arranged off a doubleloaded corridor, the number of units accessible from a single core/corridor should be limited to eight (8). Exceptions may be allowed:
 - For adaptive reuse buildings.
 - Where developments can demonstrate the achievement of the desired streetscape character and entry response.
 - Where developments can demonstrate a high level of amenity for common lobbies, corridors and units.

4.25. MIXED USE DEVELOPMENTS

4.25.1. OBJECTIVES

- (i) To support the integration of appropriate retail and commercial uses with housing;
- (ii) To create more active lively streets and urban areas, which encourage pedestrian movement,

service the needs of the residents and increase the area's employment base; and

(iii) To ensure that the design of mixed use developments maintains residential amenities and preserves compatibility between uses.

4.25.2. DEVELOPMENT CONTROLS

- (a) Choose a mix of uses that complement and reinforce the character, economics and function of the local area, for example, food retail, small-scale commercial and residential.
- (b) Desired uses at ground floor level of eighteen (18) storey buildings near the station include small supermarkets, post office, chemist, newsagent, bank and other service retail and commercial to meet the day-to-day needs of the local community.
- (c) Ensure the building positively contributes to the public domain and streetscape by:
 - Fronting onto major streets with active uses; and
 - Avoiding the use of blank walls at the ground level.

4.26. STORAGE

4.26.1. OBJECTIVES

- (i) To provide adequate storage for everyday household items within easy access of the apartment; and
- (ii) To provide storage for sporting, leisure, fitness and hobby equipment.

4.26.2. **DEVELOPMENT CONTROLS**

(a) In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates:

Residential Flat Buildings

- Studio apartments 6m³
- One-bedroom apartments 6m³
- Two-bedroom apartments 8m³
- Three plus bedroom apartments $-10m^3$.

Multi Dwelling Housing

As per Part B Section 4 – Multi Dwelling Housing of The Hills Development Control Plan.

4.27. NATURAL VENTILATION

4.27.1. OBJECTIVES

- (i) To ensure that apartments are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants;
- (ii) To provide natural ventilation in non-habitable rooms, where possible; and
- (iii) To reduce energy consumption by minimizing the use of mechanical ventilation, particularly air conditioning.

4.27.2. DEVELOPMENT CONTROLS

- (a) Sixty percent (60%) of residential units should be naturally cross ventilated.
- (b) Twenty five percent (25%) of kitchens within a development should have access to natural ventilation.
- (c) Developments, which seek to vary the minimum standards must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms.

4.28. AWNINGS

4.28.1. OBJECTIVES

- (i) To provide shelter for public streets; and
- (ii) In that part of the Precinct closer to the train station, to ensure signage is consistent with desired streetscape character and with the development in scale, detail and overall design.

4.28.2. DEVELOPMENT CONTROLS

- (a) Encourage pedestrian activity on streets by providing awnings to retail strips, where appropriate.
- (b) Contribute to the legibility of the residential flat development and amenity of the public domain by locating local awnings over building entries.
- (c) Enhance safety for pedestrians by providing underawning lighting.

4.29. FACADES

4.29.1. OBJECTIVES

- (i) To promote high architectural quality in residential flat buildings;
- (ii) To ensure that new developments have facades which define and enhance the public domain and desired street character; and
- (iii) To ensure that building elements are integrated into the overall building form and facade design.

4.29.2. DEVELOPMENT CONTROLS

- (a) Compose facades with an appropriate scale, materials and finishes, rhythm, and proportion, which response to the building use and the desired contextual character. Design should include but are not limited to:
 - defining a base, middle and top related to the overall proportion of the building;
 - expressing the variation in floor to floor height particularly at the lower levels;
 - articulating building entries with awnings, porticos, recesses, blade walls and rejecting bays;
 - selecting balcony types which respond to the street context, building orientation and amenity of the locality; and
 - incorporating architectural features which give human scale to the design of the building at street level; These include entrance porches, awnings, colonnades, pergolas and fences.
- (b) High quality materials and finishes for facades such as natural stone, granite or porcelain stoneware tiles must be used for the podium level of eighteen (18) storey buildings near the station.
- (c) Design facades to reflect the orientation of the site using elements such as sun shading, bay windows, as environmental controls depending on the façade orientation.
- (d) Express important corners by giving visual prominence to parts of the façade, for example, a change in building articulation, material or colour, roof expression or increased height.



Use of varying facade alignments and sunscreens articulate the taller mass of this building. (Source: Residential Flat Design Code)

4.30. ROOF DESIGN

4.30.1. OBJECTIVES

- (i) To provide quality roof designs, which contribute to the overall design and performance of residential flat buildings;
- (ii) To integrate the design of the roof into the overall facade, building composition and desired contextual response; and
- (iii) To increase the longevity of the building through weather protection.

4.30.2. DEVELOPMENT CONTROLS

- (a) Articulate the roof to break down its mass on larger buildings, to minimise the apparent bulk or to relate to a context of smaller building forms.
- (b) Design the roof to relate to size and scale of the building, the building elevations and three dimensional building form.
- (c) Design roofs to respond to the orientation of the site, for example, by using eaves to respond to sun access.
- (d) Minimise the visual intrusiveness of service elements by integrating them into the design of the roof.
- (e) Facilitate the use or future use of the roof for sustainable functions, for example, water management and photovoltaic applications.

- (f) Where habitable space is provided within the roof optimise residential amenity in the form of attics or penthouse apartments.
- (g) The use of roof space to provide communal open space areas incorporating facilities such as swimming pools, BBQ areas and seating is encouraged.



Articulation of rooflines to break up roof mass. (Source: Residential Flat Design Code)

4.31. ADAPTABLE HOUSING

In order to provide for disabled people and the aging population, apartments must be capable of adaptation so as to accommodate residents who may have special needs, declining mobility and sight. This is in addition to being appropriately designed for everyday pedestrian use.

4.31.1. OBJECTIVES

- (i) To ensure that developments provide appropriate and improved access and facilities for all persons (consistent with the provisions of Australian Standard AS1428.1-1998);
- (ii) To ensure designers/developers consider the needs of people who are mobility impaired and to provide greater than the minimum requirements for access and road safety;
- (iii) To ensure that building design does not prevent access by people with disabilities; and
- *(iv)* To incorporate design measures that are appropriate for people with disabilities.

4.31.2. **PERFORMANCE CRITERIA**

(a) Development to provide housing for a cross section of the community.

(b) All development applications for residential flat buildings should be accompanied by a report prepared by a suitably qualified Access Consultant addressing access and mobility provisions within the development.

4.31.3. DEVELOPMENT CONTROLS

- (a) All apartments required under this Section of the DCP to be adaptable dwellings and those which cannot be directly accessed from ground level are to be served by a lift.
- (b) Units with a floor level within 1.5m of the natural ground must be accessible to the front door of each unit.
- (c) At least 1 unit in each residential flat building with less than 20 units, or 5 percent of the units in any development of 20 or more units, must be either:
 - An accessible unit to AS 1428 Part 2, suitable for occupation by a wheelchair user; or
 - Meet Class B adaptability provisions under AS 4299.
- (d) Each unit so provided above shall have an accessible car parking bay complying with AS 2890 for people with a disability, and be accessible to a pick-up and drop-off point. An accessible route between the unit's dedicated car parking spaces and unit shall be provided.
- (e) All stairs intended for circulation between levels, whether external or internal, shall comply with AS 1428 Part 1, if they are located on common property.
- (f) At least 10% of toilets (but not less than 1 male and 1 female toilet) provided on the common property must be wheelchair accessible.
- (g) At least one entry to any common facilities on the common property must be wheelchair accessible.
- (h) An accessible pick-up and drop-off point can be located on the public road (with Council or RMS permission) or on the site, but it must allow for vehicles up to a coaster size bus to pick up and drop off.
- (i) Apartments are to be designed to permit adaptation of units so that they can change to meet future needs. Design features that might be included are:-
 - Lightweight or non-load bearing walls that can be removed to re-configure rooms; and
 - Wall panels that can be easily removed to connect adjoining apartments and cater for larger extended families.

(j) Development applications should address provisions contained in Council's "Making Access For All Guidelines" 2002.

4.32. SITE FACILITIES

4.32.1. OBJECTIVES

- (i) To provide site facilities which are adequate and conveniently located for resident needs; and
- (ii) To ensure facilities are practical, attractive and easily maintained.

4.32.2. PERFORMANCE CRITERIA

(a) Rubbish and recycling bin enclosures, letter boxes, and other site facilities should be adequate in size, durable, weather proofed and visually integrated with the development. Their location is to have regard to the protection of residential amenity, service vehicle access, visual impact and residential access.

4.32.3. DEVELOPMENT CONTROLS

Laundry Facilities

- (a) All apartments are to be provided with internal laundry facilities and internal drying facilities.
- (b) Laundries for town houses and small lot integrated housing shall be provided to each dwelling with a permanent or collapsible clothes line provided in a conveniently accessible courtyard.

Waste and recycling bins

Waste management requirements are to be in accordance with Part B Section 5 – Residential Flat Buildings.

Waste Management Planning

- (a) Demolition and construction works must maximise the reuse and recycling of building/construction materials in accordance with Council's ESD objectives and State and Federal Government waste minimisation targets.
- (b) All asbestos, hazardous and/or intractable wastes are to be disposed of in accordance with Workcover Authority and EPA requirements.
- (c) All Development Applications are to be accompanied by a Waste Management Plan that demonstrates appropriate project management

and construction techniques for ensuring waste minimisation including the re-use of waste on-site and off-site recycling.

The Waste Management Plan must include the following information:

- (a) Types of waste to be produced;
- (b) Quantities of waste likely to be produced;
- (c) On-site and/or off-site reuse and recycling methods for waste;
- (d) Details as to the contractor and destination of all waste materials;
- (e) Location of on-site separation and storage facilities for waste materials;
- (f) Design of waste management facilities for use by residents following occupation;
- (g) A Waste Data File (a file containing the Waste Management Plan together with records-waste receipts or dockets) of recycling and disposal of demolition and construction materials must be kept by the Construction Contractor responsible for the site.

A Waste Management Plan template is available from Council's website www.thehills.nsw.gov.au.

Mail Boxes

- (a) Mail boxes are to be generally incorporated into front fences, landscaped areas or integrated with individual building entry design.
- (b) Mail boxes should be in close proximity to the pedestrian entrance of all housing types, and be easily identifiable for ease of use.
- (c) The location of mail boxes and mail drop-off points will need to be confirmed with Australia Post.

4.33. ECOLOGICALLLY SUSTAINABLE DEVELOPMENT

Ecologically Sustainable Development (ESD), as identified in the National ESD Strategy, refers to development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It embodies the responsibility to maintain ecological processes (biodiversity and life support systems), quality of life and social interactions within a productive economic environment.

In order to fulfil Council's statutory responsibilities as required by Schedule 2 of the *Environmental* Planning and Assessment Regulation 2000 and the Local Government Amendment (ESD) Act 1997 and to meet its adopted goals and objectives as defined in Council's Environmental Management Plan development is required to comply with the Council's Sustainability Objectives.

4.33.1. OBJECTIVES

- (i) To apply precautionary principles where development is likely to cause short or long-term irreversible or serious threats to the environment;
- (ii) To address and allow for broad community involvement in respect to local issues of concern throughout the development process;
- (iii) To ensure that during the design, construction and operation of the development, that water leaving the site is of a quality and quantity comparable to that which is received;
- (iv) To ensure that biodiversity, and the integrity of ecological processes, are not compromised by the development; and
- (v) To promote the following during the design, construction and operation of any development:
 - The use of energy efficient materials and designs;
 - Utilisation of renewable energy and materials; and
 - Energy efficient technology.
- (vi) To follow the principles of the 'Waste Hierarchy' (reduce, reuse, recycle) in the use of materials and the design of waste recovery and disposal systems throughout the development process;
- (vii) To protect neighbourhood amenity and safety in the design, construction and operation of the development;
- (viii) To encourage the long term economic viability and health of the community in the development process; and
- (ix) To encourage the use of public transport, use of bicycles and pedestrian trips in the development and design process.

4.33.2. **DEVELOPMENT CONTROLS**

(a) As part of the Statement of Environmental Effects required to be submitted with all development applications a summary of the action taken in order to achieve these objectives must be included.

(b) To improve the air quality of the locality, the installation of wood heaters is not permitted.

4.34. BASIX

All development applications will be required to demonstrate that they meet the BASIX targets.

More information on BASIX can be found at the following website:

www.planning.nsw.gov.au

4.35. ACCESS, SAFETY AND SECURITY

4.35.1. OBJECTIVES

(i) Site and dwelling layouts are to ensure safe and convenient passage for residents and visitors.

4.35.2. **PERFORMANCE CRITERIA**

- (a) Consideration should be given to the needs of residents in regard to prams, wheelchair access and people with disabilities.
- (b) Footpaths, landscaped areas and driveway designs are to provide opportunities for surveillance and allow for the safe movement of residents and visitors.
- (c) Apartments and town houses are to have adequate lighting in commonly accessible areas.

4.35.3. DEVELOPMENT CONTROLS

- (a) Stairs and ramps are to have reasonable gradients and non-slip even surfaces. Refer to AS 1428.1 – 1988 Design for Access and Mobility and supplementary AS 1428.2 – 1992.
- (b) Access to dwellings is to be direct and without unnecessary barriers. For example, use ramps instead of stairs/steps, consider the height and length of handrails and eliminate changes in level between ground surfaces.
- (c) Development applications should address provisions contained in Council's "Safer by Design Guidelines" (2002).
- (d) Private areas in a development are to be clearly recognisable.

4.36. VISUAL AND ACOUSTIC PRIVACY

4.36.1. OBJECTIVES

- (i) To limit views into adjoining private open spaces and living rooms;
- (ii) To protect residents from external noise; and
- (iii) To contain noise between dwellings without unreasonable transmission to adjoining dwellings.

4.36.2. PERFORMANCE CRITERIA

- (a) The effective location of windows and balconies is preferred to the use of screening devices, high sills or obscured glass. Where these are used, they should have minimal negative effect on resident or neighbour amenity.
- (b) Direct views from the living rooms of dwellings into private open space or the interior of other dwellings should be obscured with landscaping, architectural detail and building design (refer to AMCORD).
- (c) Where minimum separation distances cannot be practically met, windows should be placed to minimise direct viewing between dwellings.
- (d) In general, dwellings are to be designed to limit the potential for noise transmission to living and sleeping areas of adjacent existing and future developments. Consideration should be given to minimising noise emissions from air conditioners, driveways and the like. This can be achieved by complying with the Building Code of Australia requirements.
- (e) Dwellings that adjoin Pennant Hills Road are to be designed to acceptable internal noise levels, based on AS 3671 – Road Traffic Noise Intrusion Guidelines.

4.36.3. **DEVELOPMENT CONTROLS**

- (a) Minimise direct overlooking of main internal living areas and private open space of dwellings both within and of adjoining development through building design, window locations and sizes, landscaping and screening devices.
- (b) Consider the location of potential noise sources within the development such as common open space, service areas, driveways, road frontage and provide appropriate measures to protect acoustic privacy by the careful location of noise-

sensitive rooms (bedrooms, main living areas) and double glazed windows.

- (c) The location of the plant and equipment for residential flat buildings should be designed so that the noise level does not exceed the background noise level. This is to reduce background noise level creep.
- (d) In regard to the town houses and small lot integrated houses, ideal positions or specifically designed positions for any air conditioners should be provided in the plans at development application stage.
- (e) Air conditioners shall be located a minimum of three (3) metres from any property boundary and must not exceed 5dB(A) above the background noise level or alternatively if there is no other option and the air conditioner is located within three (3) metres of any property boundary it must not exceed the background noise level.
- (f) Private areas in a development are to be clearly recognisable.

4.37. GEOTECHNICAL

4.37.1. OBJECTIVES

(i) To ensure the possibility of soil movement or slip does not adversely affect proposed development.

4.37.2. DEVELOPMENT CONTROLS

- (a) All development applications submitted to Council shall be accompanied by geotechnical appraisal report from a suitably qualified experienced Geotechnical Engineer.
- (b) The geotechnical appraisal report must satisfy Council that the possibility of soil movement or slip will not affect the proposed development of the site and outline recommendations to ameliorate any geotechnical impacts.

4.38. UNDERGROUNDING OF EXISTING POWER LINES

4.38.1. OBJECTIVES

- *(i)* To improve streetscape/public domain appearance; and
- (ii) To utilise the former overhead easements for open space and drainage purposes.

4.38.2. DEVELOPMENT CONTROLS

- (a) The existing overhead high voltage power lines on a development site must be undergrounded in accordance with the requirements of the relevant power supply authority and Clause 7.8 *undergrounding power lines at Carlingford* of The Hills Local Environmental Plan 2012.
- (b) A letter/correspondence from the relevant power supplying authority confirming that the applicant has consulted and made prior arrangements with the authority to underground the existing high voltage power lines within the site must be submitted with the Development Application.
- (c) Applicants are required to make satisfactory arrangements with Integral Energy for the provision of underground electricity to the site in accordance with Integral Energy's *Network Connection Contestable Works General Terms and Conditions Policy.*
- (d) Applicants are required to make satisfactory arrangements with the relevant authority(s) for the provision of underground telecommunications services to the site.
- (e) A new easement for undergrounded electrical works satisfying the relevant authority must be provided on site. This is to enable any future maintenance works for the undergrounded network.

4.39. DEVELOPER CONTRIBUTIONS

4.39.1. OBJECTIVES

- (i) To address the likely demands placed on public amenities and services as a result of the increase in residential development; and
- (ii) To determine a reasonable development contribution based on the impact of residential development.

4.39.2. DEVELOPMENT CONTROLS

- (a) Council will seek a Section 94 Contribution from developments within the Precinct.
- (b) Applicants should consult with Council's Section 94 Contributions Plan and Council's Officers to determine the required amount of Section 94 Contributions payable.

4.40. DEVELOPMENT NEAR RAIL CORRIDORS

4.40.1. OBJECTIVES

- (i) To minimise adverse impacts on rail safety; and
- (ii) To minimise impact of rail noise and vibration adjoining development.

4.40.2. DEVELOPMENT CONTROLS

- (a) New development and structures adjacent or near RailCorp facilities shall allow continued access to the rail corridor for maintenance.
- (b) Buildings should be designed so that objects cannot be thrown from windows or balconies into the rail corridor. This could be achieved through providing windows with a limited range of opening such as louvers, and by enclosing balconies.
- (c) All balcony and window design should meet the relevant BCA standards.
- (d) If excavation is involved, a geotechnical or site stability report needs to be prepared as part of the application.
- (e) Sound level in any bedroom must not exceed 35db(A) at any time between 10.00pm and 7.00am, and anywhere in the building (other than a garage, kitchen, bathroom or hallway) 40db(A) at any time.
- (f) If Council is of the view that development is likely to be affected by rail noise or vibration, a consent shall not be granted unless it is satisfied that appropriate measures will be taken to ensure that above sound levels are not exceeded.
- (g) New development and structures adjacent or near RailCorp facilities must allow continued access to the rail corridor for maintenance.

5. KEY SITE BUILT FORM CONTROLS

The controls for the development on these sites are set out below in the form of design principles, development standards and diagrams. These controls prevail over the Precinct Built Form Controls to the extent of any inconsistency.

5.1. BLOCK 3: JENKINS ROAD AND THALLON STREET

Design Principles

BUILDING HEIGHT

- By virtue of its location close to the train station, this site has the ability to provide development of substantial height to contribute to a landmark to denote the village centre. The eighteen (18) storey height limit for the tower on this site achieves this objective.
- The placement of 2 x 18 storey towers maximises solar access to the ground level of the site and to the above ground units; also to minimise overshadowing of adjacent buildings and open spaces.
- The six storey podium height for this key site provides street frontage development in a form and scale comfortable for civic life of the village centre and to allow for ground floor active uses. The placement and orientation of the eight (8) storey tower on the corner of James and Thallon Streets minimises overshadowing of development to the south.

FSR LIMIT

- The FSR limit for the key sites which are closer to the train station is higher than for sites further from the station. This is to encourage developments of substantial size thus creating a critical mass for the village centre.
- To ensure optimal mix of uses within buildings by specifying FSR components for residential and commercial uses.

BUILDING FOOTPRINT AND DEEP SOIL COVER

- Due to the electricity line / floodway easements, the building footprint is limited to 40% of the site. This allows adequate deep soil provision.
- Open space on the site is concentrated to its north side so as to maximise its amenity. This placement of open space maximises its ability to operate in conjunction with the open space of the former electricity easement to adjacent to the north.

BUILDING SETBACKS FROM BOUNDARIES

Setback from Thallon and Jenkins Streets:

• Eight (8) metre setback is required to ensure adequate solar access to the development and open space to the south. This setback also allows for landscaping and street tree planting. The setbacks from Thallon Street may be reduced to 6m for the first two storeys to encourage street level pedestrian activity.

Setback from James Street:

• Six (6) metre setback is required to allow for landscaping and street tree planting.

5.1.1. DEVELOPMENT CONTROLS

DEVELOPMENT PARAMETER	DEVELOPMENT CONTROLS
Building height	Refer to LEP Building Height Map – Carlingford Precinct.
FSR	Refer to LEP Floor Space Ratio Map – Carlingford Precinct.
Building site coverage	Maximum 40%

Vehicle access points and circulation	Refer to Figure 11
Car parking requirements	0.8 space per 1 br unit 1 space per 2 br unit 1.3 spaces for 3 br unit 2 visitor spaces per 5 units
Distribution of uses within the building	Retail commercial uses limited to ground floor
SEPP 65 compliance statement	Required
Deep soil planting	Minimum 15% of total site area



- (1) Residential Tower with podium including communal facilities on Ground Floor
 - Landscape area/Communal open space
- 3 Signature tower, located to minimise solar impact to the development south of James Street
- $\check{4}$ Active edges along Thallon St and James St
 - Articulated building corner
 - Forecourt to complement Civic Plaza at Station Entry
- 5678 Landscape courtyard

2

- Opportunity for communal roof garden to maximase solar access for the development south of James St
- 9 Articulated corner/built form addressing Jenkins St
- (10) Alternateive vehicular entry
- (11) Future green linkon existing powerline easement

Figure 11. Conceptual Built Form Controls: Block 3 Jenkins Road / Thallon Street



Figure 12. Dimensional Built Form Controls: Block 3 Jenkins Road / Thallon Street

5.2. BLOCK 4: 2-12 JAMES STREET

Design Principles

BUILDING HEIGHT

- Nos. 2-12 James Street, by virtue of their location close to the train station, have the ability to provide development of substantial height to contribute a landmark to denote the village centre.
- The development of Nos. 2-12 James Street should provide for orderly development by maximising opportunities for a shared basement layout and common open areas.
- Using the above urban design principles, Nos. 2-12 James Street may achieve two 18 storey towers. Placement of the towers minimises overshadowing of adjacent buildings and open spaces to the south (Figure 13).
- The six storey podium on Nos. 8-10 James Street provides development to the street frontage in a form and scale commensurate with the civic life of the village centre and to allow for ground floor active uses.
- Nos. 2-6 James Street will be developed to a maximum height of six storeys to maintain sufficient solar access to the existing low rise buildings to the south.

FSR LIMIT

- Due to its close proximity to the train station, the FSR limit for this key site is higher than sites further from the train station. This is to encourage developments of substantial size thus creating a critical mass for the village centre.
- To ensure an optimal mix of uses within buildings by specifying distribution of residential and commercial uses within the building.

BUILDING FOOTPRINT AND DEEP SOIL COVER

- Due to the more urban context to the site, a greater site coverage is appropriate. The building footprint is limited to 55% of the site. This allows deep soil provision of a minimum 15% of the total site area.
- Due to the more urban context to the site open space is provided on a rooftop podium.

BUILDING SETBACKS FROM BOUNDARIES

• Refer to Figure 14. The setbacks from the irregular boundaries of this key site vary in response to the need to provide solar access, pedestrian circulation space and to introduce modulation in the street wall.

DEVELOPMENT PARAMETER	DEVELOPMENT CONTROLS
Building height	Refer to LEP Building Height Map – Carlingford Precinct.
FSR	Refer to LEP Floor Space Ratio Map – Carlingford Precinct.
Building site coverage	Maximum 55%
Vehicle access points and circulation	Refer to Figure 13.
Car parking requirements	0.8 spaces per 1 br unit
	1 space per 1 br unit
	1.3 spaces for 3 br unit
	2 visitor spaces per 5 units
Distribution of uses within the building	Retail and commercial uses limited to ground floor
SEPP 65 compliance statement	Required
Deep soil planting	Minimum 15% of total site area

5.2.1. DEVELOPMENT CONTROLS



Forecourt

1

2

7

6 storey podium with ground floor retail/commercial to minimise overshadowing with opportunity for communal roof garden or solar panels

- 3 Communal open space/deep root planting area
- (4) Residential tower with ground floor retail
- 5 Potential vehicular access
- 6 Opportunity to extend Civic Plaza at station entry
 - Iconic bookend tower on Civic Plaza

Figure 13. Conceptual Built Form Controls: Block 4 2-12 James Street



Figure 14. Dimensional Built Form Controls: Block 4 2-12 James Street

5.3. BLOCK 6: 1-7 THALLON STREET

Design Principles

BUILDING HEIGHT

- Nos.1-7 Thallon Street by virtue of their location close to the train station have the ability to provide development of substantial height to contribute a landmark to denote the village centre. The eighteen (18) storey height limit for the elliptical shaped tower on this site achieves this objective.
- This key site contains both a higher rise landmark tower and a six storey rectangular building forming part of the podium aligned with Thallon Street.
- A second six storey podium element that aligns with the railway reserve and faces the open space to the north of the main tower.
- The two podium elements combine to create a courtyard area that addresses the retained railway heritage building.

FSR LIMIT

- The FSR limit for the various components of this key site which is close to the train station is higher than for sites further from the station. This is to encourage developments of substantial size thus creating a critical mass for the village centre.
- To ensure an optimal mix of uses within buildings by specifying FSR components for residential and commercial uses.

BUILDING FOOTPRINT AND DEEP SOIL COVER

- Due to the electricity line / floodway easements, the building footprint is limited to 40% of the site. This allows adequate deep soil provision.
- Open space on the site is concentrated to its north side so as to maximise its amenity. This placement of open space maximises its ability to operate in conjunction with the open space of the former electricity easement to adjacent to the north.

BUILDING SETBACKS FROM BOUNDARIES

• Setback from Thallon Street: There is an eight (8) metre setback requirement for the rectangular building fronting Thallon Street. This allows for street landscaping and outdoor activities such as cafes that will benefit from solar access to the north.

5.3.1. DEVELOPMENT CONTROLS

DEVELOPMENT PARAMETER	DEVELOPMENT CONTROLS
Building height	Refer to LEP Building Height Map – Carlingford Precinct.
FSR	Refer to LEP Floor Space Ratio Map – Carlingford Precinct.
Building site coverage	Maximum 40%
Vehicle access points and circulation	Refer to Figure 15
Car parking requirements	0.8 spaces per 1 br unit
	1 space per 2 br unit
	1.3 spaces for 3 br unit
	2 visitor spaces per 5 units
Distribution of uses within the building	Retail and commercial uses limited to ground floor
SEPP 65 compliance statement	Required
Deep soil planting	Minimum 15% of total site area





- 2 3 4 5 6 7 8 Future green link on existing powerline easement
 - Signature tower & podium located to minimise overshadowing to development south of James St
 - Opportunity to integrate existing heritage structure
 - opportunity to extend Civic Plaza at station entry
 - Active edge along Thallon St
 - Accessible paved plaza/forecourt on ground floor
 - Opportunity for communal roof garden

Figure 15. Conceptual Built Form Controls: Block 6 1-7 Thallon Street



Figure 16. Dimensional Built Form Controls: Block 6 1-7 Thallon Street

5.4. BLOCK 17: JANELL CRESCENT

Design Principles

 This is a key site by virtue of its large size which provides an opportunity to develop a substantial number of units in a single amalgamated site with strong connections to the local open space green spine of the Precinct.

BUILDING HEIGHT

- The higher elements of the development on this site are placed on either side of the electricity easement. This allows a separation between the two taller elements of approximately 35m.
- The taller elements are located so as to minimise overshadowing.
- Due to the considerable open space provided along the electricity easement in this site, the building heights are limited to eleven (11) storeys in order to achieve the nominated FSR of 2.3:1.

FSR LIMIT

- The FSR limit for the various components of this key site is to enable increased residential densities proximity to the public transport system consistent with the State plans, policies and strategies and The Hills Local Strategy.
- The site has frontage to an arterial road along Pennant Hills Road. For sites in this position in the hierarchy, more substantial buildings are appropriate.
- The site is within 400m of the train station, accordingly a higher FSR is appropriate to maximise public transport usage.

BUILDING FOOTPRINT AND DEEP SOIL COVER

- Due to the electricity line and floodway easements, the building footprint is limited to 40% of the site. This allows adequate deep soil provision.
- Open space on the site is concentrated in the centre of the site so as to maximise its ability to operate in conjunction with the open space of the electricity easement that runs east west through the site.

BUILDING SETBACKS FROM BOUNDARIES

- 12m setback from the centre line of the high voltage power lines.
- 6m side setbacks

- 6m setback to Shirley Street.
- 10m setback to Pennant Hills Road.

5.4.1. DEVELOPMENT CONTROLS

DEVELOPMENT PARAMETER	DEVELOPMENT CONTROLS
Building height	Refer to LEP Building Height Map.
FSR	Refer to LEP Floor Space Ratio Map.
Building site coverage	Maximum 40%
Vehicle access points and circulation	Refer to Figure 17
Car parking requirements	0.8 spaces per 1 br unit
	1 space per 2 br unit
	1.3 spaces for 3 br unit
	2 visitor spaces per 5 units
Distribution of uses within the building	Residential on all floors.
SEPP 65 compliance statement	Required
Deep soil planting	Minimum 15% of total site area



Key

- 1 Landscape plaza/ courtyard as a main consolidated open
- Parking entry & service roa
- Landscape strip to Pennant Hills Road
- Create new park at corner of Shirley Stre

Cito Doundani

- Vehicular sesses to site
- Landscape Strip along Pennant Hills Road

Figure 17. Conceptual Built Form Controls: Block 17 Janell Crescent



Figure 18. Dimensional Built Form Controls: Block 17 Janell Crescent

5.5. BLOCK 5: SERVICE STATION SITE ON CORNER OF PENNANT HILLS ROAD AND JENKINS ROAD

This is a key site because it's highly prominent location is ideal for a landmark development denoting the southern gateway to the Precinct.

Design Principles

BUILDING HEIGHT

- The eighteen (18) storeys are proposed for the tower element of the building due to its close proximity to the train station.
- The tower proposed on this key site is aligned to minimise its overshadowing of land to the south.
- The tower element is to have a similar axial alignment to the tower elements on the key sites in the Thallon Street area. This is a compatible contribution to the more prominent urban form of the village centre close to the station.
- The four storey podium proposed is to impart a comfortable scale to the street frontage that is compatible with the podiums containing active uses in the Thallon Street area.

FSR LIMIT

 The FSR limit for this site has been determined due to the limiting effect of site constraints and the lack of opportunity to amalgamate with other sites.

BUILDING FOOTPRINT AND DEEP SOIL COVER

• No restrictions apply to building footprint due to the highly constrained nature of the site.

BUILDING SETBACKS FROM BOUNDARIES

Minimum setbacks are required to be:

- 6m from the site's northern and eastern boundaries.
- 3m from Pennant Hills Road and Jenkins Street.
- Om for the tower façade at the apex of the street corner.

5.5.1. DEVELOPMENT CONTROLS

DEVELOPMENT PARAMETER	DEVELOPMENT CONTROLS
Building height	Refer to LEP Building Height Map.
FSR	Refer to LEP Floor Space Ratio Map.
Building site coverage	Unrestricted
Vehicle access points and circulation	Refer to Figure 19 Vehicular access prohibited from Pennant Hills Road
Car parking requirements	 0.8 spaces per 1 br unit 1 space per 2 br unit 1.3 spaces per 3 br unit 2 visitor spaces per 5 units
Distribution of uses within the building SEPP 65 compliance	Ground floor - commercial First, second and third storeys - home office Fourth to 18th storey - residential. Required
statement	No rostriction
Deep soil planting	ino restriction



Figure 19. Dimensional Built Form Controls: Block 5 Corner of Pennant Hills Road and Jenkins Road

5.6. BLOCK 16: BUNNINGS SITE AT CORNER OF POST OFFICE STREET AND PENNANT HILLS ROAD

This is a key site because it's highly prominent location is ideal for a landmark development denoting the northern gateway to the Precinct.

Design Principles

BUILDING HEIGHT

- The nine (9) storey tower element of the building proposed on this key site is located parallel to Pennant Hills Road.
- Two storey podium proposed is to impart a comfortable scale to the street frontage that is compatible with the podiums containing active uses in the Pennant Hills Road area.

FSR LIMIT

• The FSR limit is appropriate for a landmark building at a gateway to the Precinct.

BUILDING SETBACKS FROM BOUNDARIES

- Minimum 10m setback from Post Office Street and Pennant Hills Road to allow for pedestrian circulation space and active uses on the street frontage.
- Minimum 6m setback from Shirley Street and side boundaries.

5.6.1. DEVELOPMENT CONTROLS

DEVELOPMENT PARAMETER	DEVELOPMENT CONTROLS
Building height	Refer to LEP Building Height Map.
FSR	Refer to LEP Floor Space Ratio Map.
Building site coverage	Maximum 50%
Vehicle access points and circulation	Refer to Figure 20. Vehicular access prohibited from Pennant Hills Road.
Car parking	For Residential uses:
requirements	0.8 spaces per 1 br unit
	1 space per 2 br unit
	1.3 spaces per 3 br unit
	2 visitor spaces per 5 units
	Commercial uses:
	Parking requirements as per Part C Section 1 - Parking.
Distribution of uses within the building	Ground floor - commercial
	Level 1 and above - residential use.
SEPP 65 compliance statement	Required.
Deep soil planting	No restriction.



- Forecourt to commercial/retail on ground floor
- 2 Ground floor retail/home office and 6-9 storey residential above
- 3) Commercial parking on surface
- 4) Entry to undercroft/underground residential carpark
- 5) Pedestrian connection through retail on ground floor

Figure 20. Dimensional Built Form Controls: Block 16 Corner of Pennant Hills Road and Post Office Street

6. INFORMATION REQUIRED FOR A DEVELOPMENT APPLICATION

In preparing plans applicants must also address the submission requirements listed in this Section of the DCP relevant to the application. The following plans and details will be required with all development applications along with the relevant application form(s).

STATEMENT OF ENVIRONMENTAL EFFECTS

SITE PLANS

SITE ANALYSIS

ARCHITECTURAL PLANS

- Internal layout of unit/building (existing and proposed)
- Elevations
- Sections

PRELIMINARY ENGINEERING DRAINAGE PLANS

- Including any On Site Detention Plans

LANDSCAPE PLAN

EARTHWORKS PLAN

SIGNAGE PLANS

- See Part C Section 2 – Signage

STREETSCAPE PERSPECTIVE

MODEL

- For all developments comprising 10 or more units a scale model must be provided including adjoining properties at the time of the submission of the development application and be on display for the duration of the public exhibition period.
- Should a model not be submitted with the application, an immediate "stop the clock" order will be placed on the development application until the model is submitted.

WASTE MANAGEMENT PLAN

DESIGN VERIFICATIONS

As per SEPP 65 requirements

BASIX CERTIFICATE

Note. Refer to Part A – Introduction section 4.0 for general lodgement requirements and detailed requirements to be included in each of the above documentation.

REFERENCES

- Baulkham Hills Shire Council, 2002 Making Access For All.
- Department of Planning State Environmental Planning Policy No. 53 – Design Quality of Residential Flat Development.
- Carlingford Precinct Plan Traffic Report (May 2008), prepared by Masson/Wilson/Twiney Traffic and Transport Consultants.
- Faculty of the Constructed Environment, RMIT University et al, Australia's Guide to Good Design – Residential, prepared on behalf of the National Office for Local Government.
- NSW Planning Department, 2002, Residential Flat Design Code, Tools for improving the design of residential flat buildings.

