

ATTACHMENT 3

DRAFT

Baulkham Hills Development Control Plan

Pennant Street Target Site



December 2011

Baulkham Hills Shire Council

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BHDCP Part E Section X – Pennant Street Target Site

1. INTRODUCTION

This Section of the Baulkham Hills Development Control Plan (BHDCP) has been prepared to provide direction and control for the development of the Pennant Street Target Site, Castle Hill, located in the Castle Hill Major Centre.

This Section of the DCP must be read in conjunction with Part A – Introduction of this DCP.

1.1. LAND TO WHICH THIS SECTION OF THE DCP APPLIES

This Plan applies to the area outlined in red in Figure 1, being the area bounded by Gay Street, Old Castle Hill Road and Pennant Street, Castle Hill.



Figure 1. Pennant Street Target Site

1.2. AIMS AND OBJECTIVES OF THIS SECTION OF THE DCP

~~The aim of this Section of the DCP is to provide site-specific development objectives and controls for future residential development.~~

The objectives of this Section of the DCP are:

- To provide a clear vision and desired future character for the Pennant Street Target Site;

- To encourage innovative and high quality architectural outcomes that add to the character of the site with particular emphasis

on landmark features, landscape areas, semi-public and private spaces and pedestrian amenity;

- To provide detailed design guidance for the creation of an iconic, high quality public domain;
- To encourage all developments to address the public street frontage and provide an attractive, safe pedestrian environment;
- To ensure development will not detrimentally affect the environment of any adjoining land and that satisfactory measures are incorporated to ameliorate any impacts arising from proposals; and
- To encourage appropriate landscaping of developments that contributes to the appearance and amenity of the development site and adjoining public domain areas.

1.3. RELATIONSHIP WITH OTHER PLANS AND POLICIES

In addition to the policies, guidelines and documents specified in Part A – Introduction to the Baulkham Hills DCP, this Section is to be read in conjunction with other relevant Sections of the DCP, including:

- Part C Section 7 - Apartment Buildings
- Part D Section 1 - Parking
- Part D Section 2 - Signage
- Part D Section 3 - Landscaping

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.

This section should also be considered in relation to DCPs and Plans applying to the upgrade of Old Northern Road, the draft Castle Hill Public Domain Plan, BHDCP Part E Section 21 - Terminus Street Precinct and BHDCP Part E Section 25 – Crane Road Precinct.

2. URBAN CONTEXT

2.1. CASTLE HILL MAJOR CENTRE

The Pennant Street Target Site is situated within the Castle Hill Major Centre (the Centre). The Department of Planning has identified Castle Hill as a Major Centre in the draft North West Subregional Strategy (December 2007). Castle Hill is the premier centre within The Hills Shire Local Government Area and warrants a high quality urban development, an efficient local road network and the provision of quality civic infrastructure.

Castle Hill consists of retail, commercial, residential and community uses. Over the past two decades the Centre has experienced rapid growth in the quantity of retail floor space, predominately as a result of the expansion of the existing Castle Towers Shopping Centre.

Continued growth of the Centre is anticipated in the future, including an expected growth in traffic volumes and a growth in demand for retail, commercial and residential floorspace. Developments anticipated in the Centre include the Castle Towers Stage 3 expansion, bus interchange, the planned bus transitway link, the Castle Hill Mainstreet Project civic improvements, the draft Castle Hill Centre Public Domain, the completion of the Castle Hill Ring Road, the planned widening of Showground Road and the development of the Terminus Street and Crane Road Precincts. Within this context the intensification of development on the Pennant Street Target Site is proposed.

2.2. PENNANT STREET TARGET SITE

The Pennant Street Target Site lies immediately to the north of the Castle Hill Major Centre. As such, any future use and development of the Site is influenced, to a degree, by the activities and development that take place within the Centre and the overall role, function and structure of the Centre.

Analysis of the Pennant Street Site's context can be distilled into the following elements: -

- Landform;
- Development and Uses;
- Traffic and Access; and
- Urban Structure.

Landform

The ~~Castle Hill Major~~ Centre straddles a prominent ridge. The Pennant Street site overlooks the western side of the ridge. The presence of the ridge generates the following opportunities and constraints:-

- Views out of the site to the Centre enhance future resident amenity;
- Views into the site provide opportunities to enhance Centre character;
- Opportunities to explore a range of building heights that are not out of keeping with a densely developed commercial centre located on top of the ridge; and
- The presence of a high retaining wall along the southern boundary which provides elevated exposure reinforcing opportunities to enhance the character of the Centre.

Development and Uses

The Centre exhibits a strict separation of land uses with predominantly low density, low scale residential development to the north of the site and high density, high scale commercial development to the south of the site. There is negligible mixed use development within the Centre. Furthermore the Centre is predicted to experience significant development pressure and demand for additional commercial, retail and residential floor space in the medium to long term as the Shire continues to grow and public transport and access improve.

The pattern and scale of uses and development generate the following opportunities and constraints:

- Opportunities to provide a range of dwelling types for residents who may seek and enjoy close proximity, and convenient access, to a Centre at higher densities;
- The need for sensitivity to ensure that the low density residential character to the north of the site is protected; and
- The need to accommodate the impacts of intense commercial development that exists to the south and possibly to the west in the future.

Vehicle Traffic and Pedestrian Access

The ~~Castle Hill~~ Major Centre enjoys vehicular, and pedestrian / bicycle access networks that are destined for significant improvements in the short to medium term. These improvements include the pending completion of the ring road and bus interchange, as well as the development of a rapid bus transitway

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along Showground Road. The vehicle and pedestrian network generates the following opportunities and constraints: -

- The need for good pedestrian access out of the Site to the Centre; and
- The presence of the Ring Road along the southern boundary of the site precludes major vehicle egress from, and access to, the Site; and
- The impacts of the Ring Road by way of dust, noise, vibration and local pollution need to be accommodated.

Urban Structure

The structure of the Centre is dominated by the retail presence of the Castle Towers Shopping Centre, the

important role of Old Northern Road as the traditional "main street" and pedestrian access focused on the road. Council's Mainstreet Project reinforces its role as the locality's principle public space. This generates the following opportunities and constraints: -

- The recognition that future development and use of the site will act as a buffer, and will be the interface, between two very different components of the Centre structure (i.e. intense commercial and residential), and this presents opportunities for higher or a graduation in residential densities; and
- The need to provide good access to the Centre's facilities and activities from the site.

spaces and streetscapes, enhancing their safety and vitality.

3. DEVELOPMENT CONTROLS

The objectives and development controls for development of the Pennant Street Target Site are set out in this section of the DCP.

3.1. DESIRED FUTURE CHARACTER

The development controls will facilitate a unique development that seeks to balance quality, higher density residential living with the leafy, green suburban character of the Shire. In doing this, the development will seek to:

- Establish a strong green character to offset higher residential densities.** *The development will provide ample provision of a variety of quality open spaces to soften the impacts of the substantial built forms. This will include internal ground level courtyards, shared terrace spaces and roof gardens, vertical landscaping features, a large semi-public central open space and enhancements to the surrounding streetscapes. These will be supplemented by large, outdoor living areas for residents which will overlook these spaces and provide unrivalled internal amenity for residents.*
- Be well-connected and integrated with the surrounding areas.** *The subject site marks a transition between the Castle Hill Centre to the south, and the low-rise residential area to the north. The development will seek to connect these areas primarily through a semi-public, through-site link that will facilitate movement between these areas. Development will address the surrounding public*

- Mitigate adverse off-site impacts to surrounding residential properties.** *As the development will represent a significant shift from the existing character of the surrounding neighbourhood, it must respond as best as possible to limit any adverse off site impacts to these properties, allowing them to continue to experience a reasonable level of amenity.*
- Building setbacks will be consistent with the surrounding streetscape qualities and provide space for high quality landscaping.** *Higher building forms will be set away from the street to minimise the impacts of overlooking and overshadowing. Detailed design of the development will create heavily modulated building facades which incorporate a variety of harmonious architectural features, colours and textures to minimise visual bulk.*
- Support the functioning of the Castle Hill Centre and create a high quality, landmark building.** *In addition to helping to diversify the centre, the development will deliver substantial residential floorspace in the area and contribute to increased housing diversity in the Shire. The design of the development will comprise a unique, quality architectural character and will be an exemplar of green design. In doing so, it will become a landmark building in the area and will raise the design standard not only in the Centre, but in the entire Shire.*
- Create a development that represents good design in terms of scale and built form.** *The*

built form on the site is to take a podium and tower arrangement. The use of podiums along Gay Street helps provide scale at the pedestrian level to achieve a more comfortable street environment. The tower element is to be setback further from the road frontage, particularly along Gay Street to minimize the bulk and scale of the tower at ground level. Landscaping is encouraged on podiums to act as a green sanctuary for future residents.

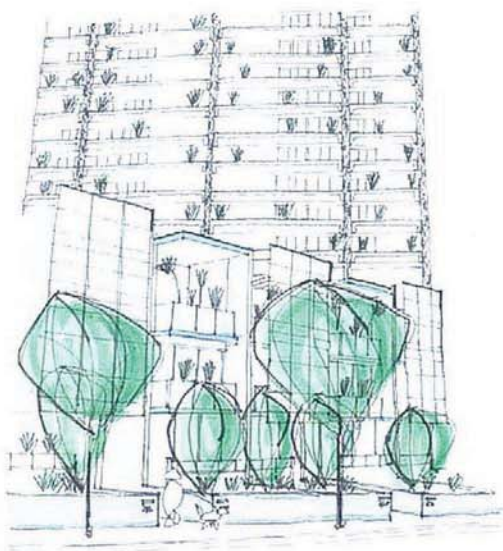


Figure 2. Desired Future Character

Development will promote smaller scale building form along Gay Street and Old Castle Hill Road, with higher tower elements at the middle of the site and along Pennant Street.

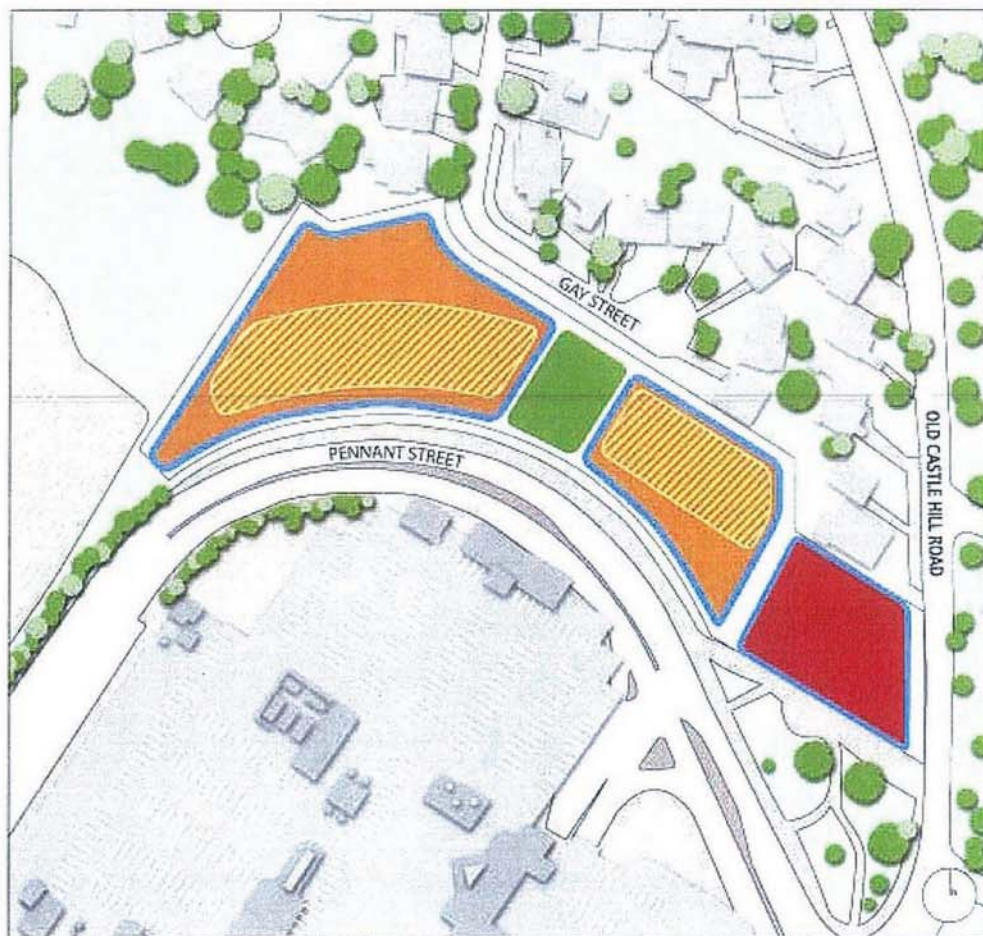
3.2. SITE PLANNING

3.2.1. OBJECTIVES

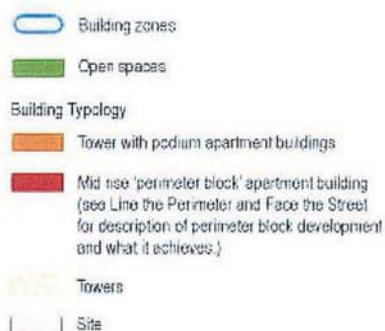
- (i) To achieve a site layout that maximises residential development opportunities whilst providing ample, quality open spaces.
- (ii) To create a coherent and legible site layout that is easy for users to understand and navigate.
- (iii) To integrate the development into surrounding areas.
- (iv) To create development that is responsive to sensitive interfaces.
- (v) To create a landmark development that positively contributes to the functioning and attractiveness of Castle Hill Centre.

3.2.2. DEVELOPMENT CONTROLS

- (a) Development shall occur in three distinct development areas as identified in Figure 3;
- (b) The maximum height of future development shall be 18 storeys/54metres;
- (c) The proposed development is to have building height transition in accordance with Section 3.4 Building Height;
- (d) The built form shall take a podium/tower arrangement and comply with controls in section 3.5 Podium and Tower Built Form;
- (e) The podium development along Gay Street shall be a maximum height of two (2) storeys in height / 9 metres above natural ground level and be designed to a pedestrian scale at street level;
- (f) Tower element shall be set back a minimum of eight (8) metres from all boundaries;
- (g) The tower element shall have a narrow building footprint to create more slender building forms;
- (h) Buildings shall be setback in accordance with section 3.3 Setbacks, to respect the streetscape and built form conditions in surrounding areas;
- (i) All setback areas shall be appropriately landscaped in accordance with Section 3.11 Landscape and Vegetation;
- (j) A central open space shall create an inviting, quality pedestrian link between Gay Street and the public footpath along Pennant Street;
- (k) Development shall front all active edges of the site;
- (l) Development along Gay Street shall be designed to a domestic scale at street level;
- ~~(m) Buildings shall be setback to respect the streetscape and built form conditions in surrounding areas;~~
- ~~(n) Buildings above four storeys shall utilise tower elements to create more slender building forms;~~
- (o) Future development to be located generally in accordance with building zones shown in Figure 3;
- (p) Development shall front all adjoining public open space to provide casual surveillance of the area;
- (q) Maximum building footprints shall not exceed 80% of each building zone; and
- (r) The central open space shall be partly accessible by the public.



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**Line the perimeter**

Lining the edges of blocks with a perimeter of buildings is the best way to: accommodate a diversity of building types and uses at medium-high densities, while ensuring that buildings relate positively to the public realm

Face the street

The most fundamental requirement in structuring built form within development blocks is to make a clear distinction between public fronts and private backs. Buildings which front streets, squares and parks present their public face to the outside world and give life to it. Public fronts and private backs are made distinct when primary access is from the street, the principal frontage. Where this principle is not followed, stand-alone pavilion buildings often expose blank sides, car parking and rear servicing to the street.

Figure 3. Site Planning

3.3. BUILDING SETBACKS

3.3.1. OBJECTIVES

- (i) *To ensure development is setback from the street at ground level in a way that respects the character of the adjoining streetscapes.*
- (ii) *To create sufficient opportunities for landscaping, open spaces and outdoor living areas which contribute to establishing a garden setting on the site.*
- (iii) *To protect the amenity of adjoining public spaces through appropriate building siting.*

3.3.2. DEVELOPMENT CONTROLS

- (a) Setbacks shall be sympathetic with the existing qualities of the adjoining streetscapes and provide sufficient area for ground level landscaping;
- (b) In buildings above four storeys in height, setbacks shall be used to create distinct podium and tower forms;
- (c) Setbacks shall minimise overlooking, overshadowing and visual impacts on surrounding residential areas;
- (d) Upper level setbacks shall be used to create useable terrace and roof spaces in buildings above four storeys; and
- (e) Building setbacks shall be in accordance with Figure 4.

**Building Footprint**

- 3** Potential extent of building footprint with distance from boundary denoted on plan in metres

Podium Setback

- 5.0m setback after 2 storeys
- 3.0m setback after 2 storeys
- Setback to tower after 2 storeys

Note: Where no setback to podium is indicated the top of the building can extend to the building footprint indicated

- Indicative tower footprint - Ratio of tower to podium as defined is to be respected

Site

Site Interface

- Gay Street
- Pennant Street
- GIC Site
- Old Castle Hill Road
- Public Park
- Adjoining residential property on Castle Hill Road (North of Site)

Building Interface

- 3m setback from Gay street boundary, 5m setback from building edge after 2 storeys.
- 5m setback from Pennant Street boundary, 3m setback from building edge after 2 storeys.
- 5m setback from western site boundary
- 3m setback from western site boundary
- No Setback
- No Setback

Figure 4. Building Setbacks

3.4. BUILDING HEIGHT

3.4.1 OBJECTIVES

- (i) To ensure development contributes to a significant amount of additional residential floorspace within the Castle Hill Centre.
- (ii) To minimise adverse impacts on the public realm.
- (iii) To use higher building heights to achieve a landmark development on the site.

3.4.2 DEVELOPMENT CONTROLS

- (a) 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) The combined height of the podium/tower shall be a maximum of 18 storeys / 54metres.
- (c) Permanent and temporary structures shall be included in the maximum building height of the building.
- (d) The height of development along Gay Street and Old Castle Hill Road shall respect the scale of development in these areas;
- (e) Building height shall transition from low to high between Gay Street and Pennant Street, with higher building forms along Pennant Street;
- (f) Higher building forms shall be designed to limit the impacts of overshadowing and overlooking on surrounding sensitive areas;
- (g) Variations in building heights and roof forms across the site and within individual buildings shall be used to reduce visual bulk and add to visual interest (Figure 5); and
- (h) Maximum building heights shall be in accordance with Figure 6;
- ~~(i) Tower elements shall comprise various building heights to create a unique feature and reduce its apparent visual bulk.~~

3.5. PODIUM AND TOWER BUILT FORM

3.5.1 OBJECTIVES

- (iv) To ensure that podiums are responsive to the surrounding residential character, in terms of height and design.
- (v) To ensure that towers minimise the bulk and scale of the proposed development and reflect a slender built form.

3.5.2 DEVELOPMENT CONTROLS

- (a) The built form is take a podium and tower arrangement with an overall maximum height of 18 storeys / 54 metres.
- (b) The maximum height of the podium shall be in accordance with Figure 6.
- (c) The podium shall have building transition as identified in Figure 6.
- (d) The podium development along Gay Street shall have a maximum height of two (2) storeys in height / 9 metres above natural ground level and be designed to a pedestrian scale at street level.
- (e) The podium frontage along Gay Street at ground level is to be setback a minimum of 3 metres from the sites boundary, as shown in Figure 4.
- (f) An upper level setback of 5 metres to Gay Street above the second floor of the podium, as shown in Figure 4.
- (g) Podium design along Gay Street shall respect the lower scale of surrounding development.
- (h) Podium facades along Gay Street shall establish a strong vertical rhythm and use a variety of materials and textures to respond to the surrounding low-rise character, as shown in Figure 8.
- (i) The podium design expression shall be deliberately distinctive and separate from the building forms above.
- (j) Tower elements are to be sited towards the Pennant Street boundary as identified in Figure 4.
- (k) Tower elements shall have a narrow building footprint to create more slender building forms.

- (l) Tower elements shall comprise various building heights to create a unique feature and reduce its apparent visual bulk.



Figure 5. Variation in roof form

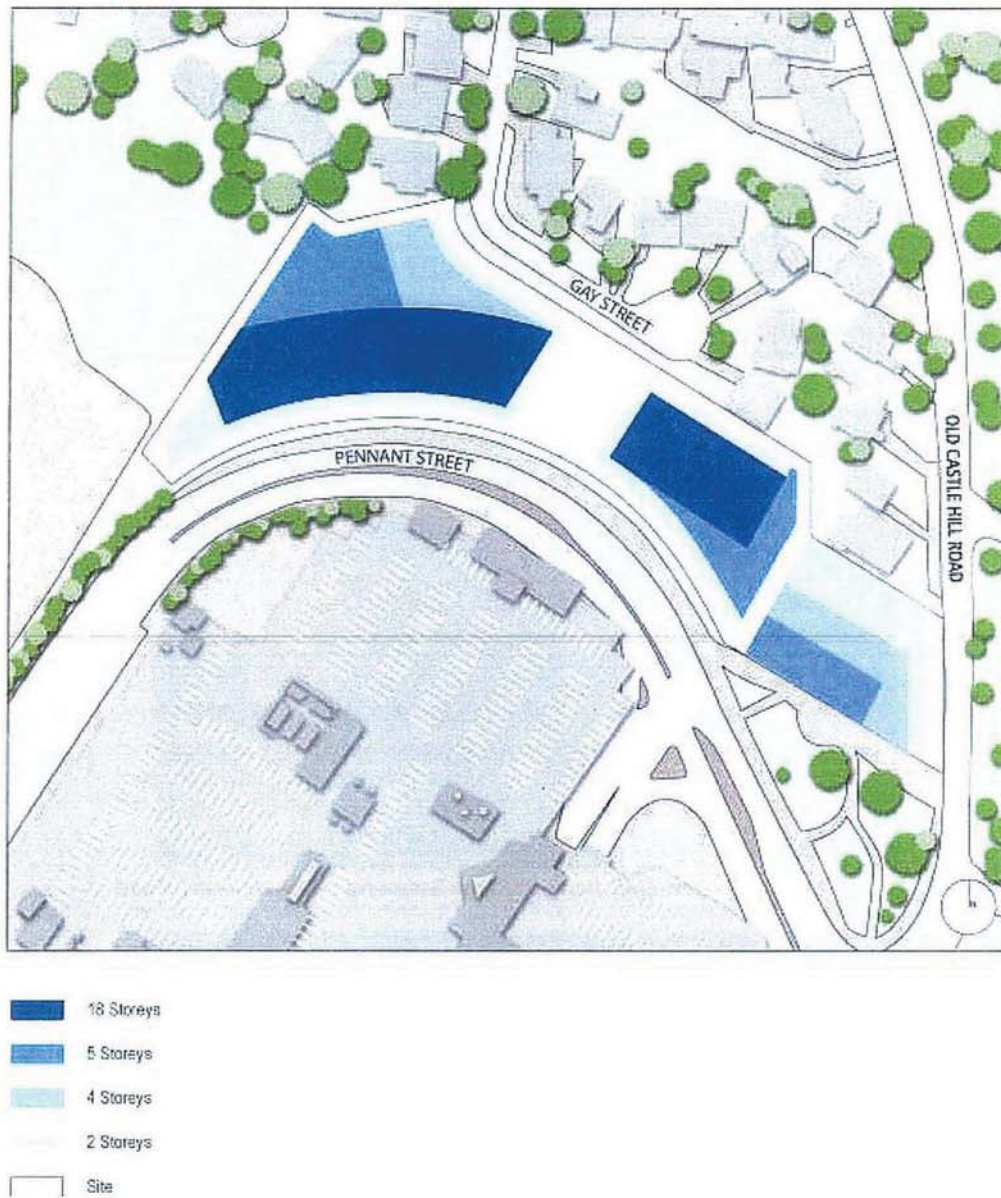


Figure 6. Building Height



Figure 7a. Indicative view from intersection of Old Northern Road and Pennant Street



Figure 7b. Indicative view east along Pennant Street from Showground Road

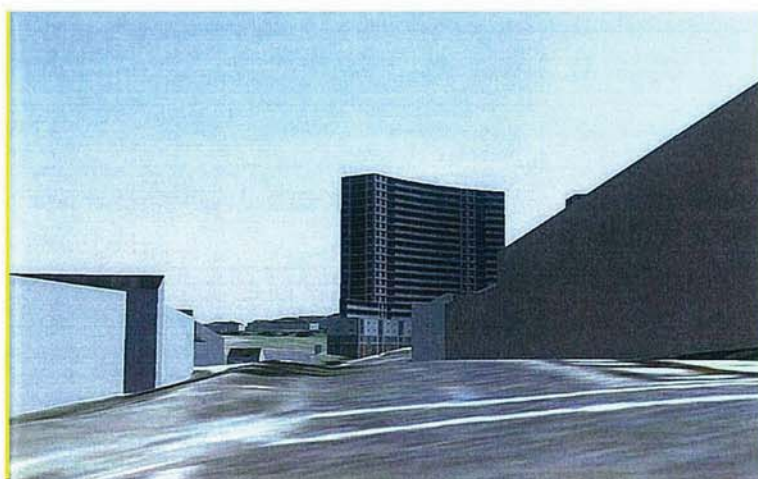


Figure 7c. Indicative view east along Pennant Street from Castle Street

3.6. ARCHITECTURAL STYLE AND CHARACTER

3.6.1. OBJECTIVES

- (i) To achieve a 'landmark' development that sets a high standard of design excellence and positively contributes to the surrounding neighbourhood and centre.
- (ii) To ensure the architectural response acknowledges the characteristics and scale of the surrounding development and seeks to reduce the impact of higher building forms.
- (iii) To ensure the architectural style conveys a distinctive 'green' character.

3.6.2. DEVELOPMENT CONTROLS

- (a) Buildings should be designed with a clear base, podium and top to reduce visual bulk;
- (b) Building facades should be well articulated with textures, materials, colours, windows and recessed elements to soften the visual bulk of the development (Figure 8);
- (c) Buildings shall use a diverse range of natural and visually appealing materials;
- (d) Building materials shall be predominantly non-reflective and may potentially include masonry, timber, painted and rendered finishes;
- (e) Subdued colours and tones shall be encouraged, with bright colours used sparingly to accent building features and provide visual interest;
- (f) Building design along Gay Street shall respect the lower scale of surrounding development;
- (g) Building facades along Gay Street shall establish a strong vertical rhythm to the street;
- (h) Building facades should be designed to add to the visual interest of the surrounding areas;
- (i) Where appropriate, roof forms such as pitched roofs and gable ends may be used to provide architectural character and visual interest to the development;
- (j) Roof areas intended for use as shared open space shall be designed with flat roofs that provide for accessibility and safety of users;
- (k) Foyer entries should be clearly defined to communicate points of entry; and
- (l) Terrace / rooftop areas shall be adequately enclosed with fencing that adds visual interest to the roof forms.

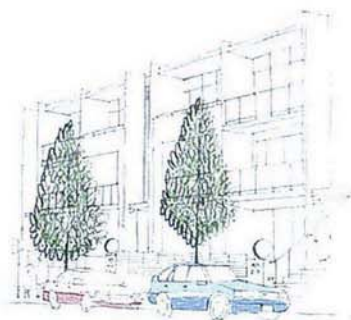


Figure 8. Building Articulation

Development along Gay Street should establish a strong vertical rhythm and use a variety of materials, and textures to respond to the surrounding low-rise residential character.

3.7. STREETScape AND PUBLIC REALM

3.7.1. OBJECTIVES

- (i) To contribute to the creation of attractive, safe and useable streets and semi-public / public spaces.

3.7.2. DEVELOPMENT CONTROLS

- (a) Streetscapes, semi-public and public spaces shall be designed to enhance pedestrian convenience, amenity and comfort and connect the development with adjacent areas;
- (b) The interface of development with any adjacent streetscapes and public spaces shall be clearly defined and designed to enhance the comfort / safety of the user;
- (c) Buildings shall address any shared open space and adjacent public areas to increase the natural surveillance of these areas and contribute to their safety and security (Figure 9);
- (d) Building design shall avoid creating opportunities for personal concealment;
- (e) All public spaces, building entries, car parks and internal access ways shall be provided with adequate lighting;
- (f) Blank facades shall not dominate the streetscape;
- (g) Any exposed parking structures shall be designed to increase their attractiveness to the public realm whilst providing for adequate security of the area;

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- (h) Lighting and directional signage shall be provided to all pedestrian paths, car parking areas, building entries and public spaces;
- (i) Unique and attractive human-scale lighting shall be provided along the public footpath to the south of the site to enhance its safety and amenity;
- (j) All fencing or walls shall be constructed of similar materials, colours and textures and shall be compatible with the design, materials and colours of the building;
- (k) Front fences or walls along Gay Street and the Pennant Street interface shall be no higher than 1.2 metres provided the design of the fence or wall incorporates opening or other design elements that maintain at least 60% transparency through the fence or wall;
- (l) Front fences or walls along Old Castle Hill Road shall be no higher than 1.8 metres provided the design of the fence or wall incorporates opening or other design elements that maintain at least 80% transparency through the fence or wall; and
- (m) Fences or walls along the site's western interface shall be predominantly solid and no higher than 1.8 metres.

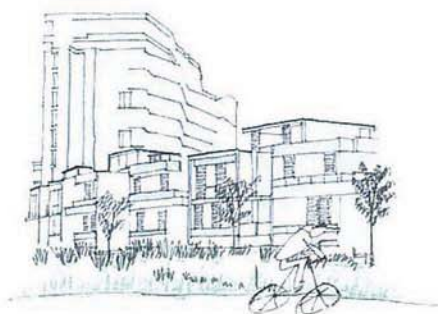


Figure 9. Buildings address open space

Development should front adjoining public spaces to increase natural surveillance and help integrate development into the surrounding area.

3.8. CAR PARKING AND VEHICULAR ACCESS

3.8.1. OBJECTIVES

- (i) *To ensure that vehicular access to and from the development is simple and safe and does not compromise the safety or amenity enjoyed by more vulnerable road users.*

- (ii) *To provide sufficient and accessible parking for residents and visitors so as to maintain the amenity of adjoining properties and the efficiency of the road network.*

3.8.2. DEVELOPMENT CONTROLS

- (a) On site parking shall be provided at the following rates:

	RATE
1 Bedroom Unit	1 space
2 Bedroom Unit	1.5 spaces
3 Bedroom Unit	2 spaces
Visitor	2 spaces for every 5 dwellings

- (b) Car parking shall generally be provided underground;
- (c) Driveway design shall provide safe and efficient access/egress to the site;
- (d) The design of driveways and parking areas shall minimise the visual impact of hard paved areas;
- (e) The design of driveways and parking areas shall take into account pedestrian walkways and give priority to pedestrian crossings;
- (f) The driveway design shall make provision for service vehicles where practicable;
- (g) Car parking access to the site shall be provided at a single access point along Gay Street, as indicated in Figure 10; and
- (h) The design and configuration of accessways and driveways shall be in accordance with BHDCP Part D Section 1 – Parking.

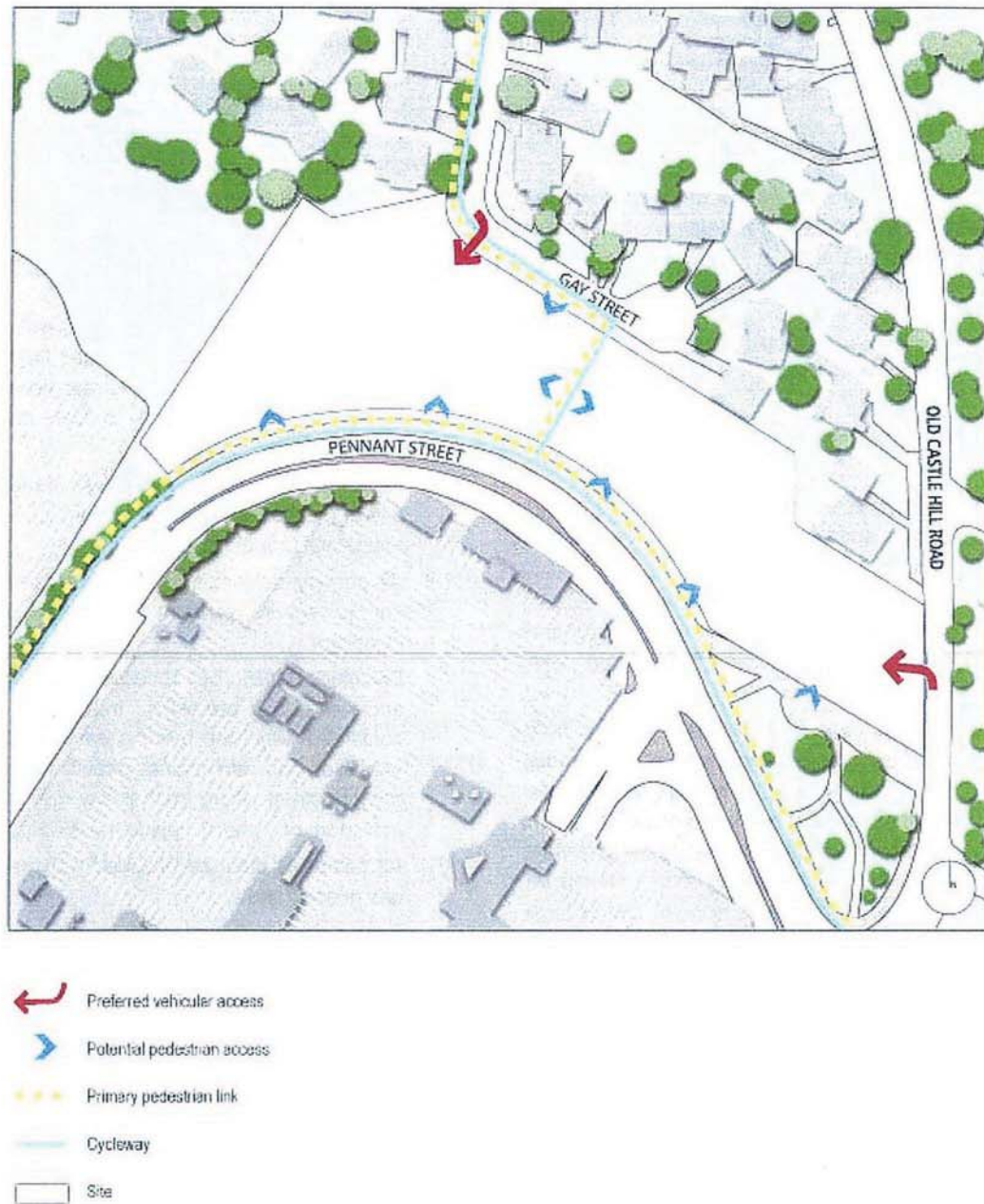


Figure 10. Vehicular, Pedestrian and Cycle Access

3.9. PEDESTRIAN AND CYCLE ACCESS**3.9.1. OBJECTIVES**

- (i) *To ensure pedestrian and cycle access to, from and through the development is simple, safe and direct.*
- (ii) *To facilitate cycling trips in the area by providing adequate and secure bicycle storage.*

3.9.2. DEVELOPMENT CONTROLS

- (a) Pedestrian access should generally be in accordance with Figure 10;
- (b) Development shall provide separate pedestrian access from the street, separately defined to vehicular access;
- (c) A clearly defined, direct pedestrian pathway through the central open space shall be provided to facilitate movement through the site;
- (d) Pedestrian and cycle access between Gay Street, Old Castle Hill Road and Pennant Street through the proposed development shall be provided with adequate signage; and
- (e) Bicycle storage areas shall be provided for both residents and visitors. Provision shall be at the rate of one (1) secure bicycle storage space per apartment. Resident cycle parking shall be located in secure rooms at ground level with separate provision for each building. Cycle parking rooms should be collocated with the foyer areas, and will ideally have a separate entry. Fixings to enable bikes to be locked securely should be provided for 50% of the cycles expected in each cycle parking room.

3.10. PRIVATE AND SHARED OPEN SPACE**3.10.1. OBJECTIVES**

- (i) *To ensure the ample provision of high quality private and shared open spaces that contribute to the creation of a strong, green garden character.*
- (ii) *To integrate areas of common open space into building design to allow for the development of a sense of community.*
- (iii) *To ensure that private and shared open spaces respect the privacy of adjoining and adjacent residents.*
- (iv) *To ensure the safety and security of shared open space.*

- (v) *To ensure the provision of at least one large central open space at ground level to provide a focal point to the development.*

3.10.2. DEVELOPMENT CONTROLS**Private Open Space**

- (a) All balconies and/or roof top areas conveniently accessible from a main living area must have a minimum area of 10sqm, with a minimum dimension of 2.5 metres;
- (b) South facing balconies shall be recessed a minimum of 1.5m and utilise solid balustrades to minimise the impacts of street noise along Pennant Street and create a high degree of privacy to residents;
- (c) North facing balconies shall be designed to prevent unreasonable overlooking of adjacent residential properties;
- (d) All primary balconies shall be no deeper than 4m to ensure sunlight penetration into all dwellings;
- (e) Balconies shall be recessed and partially enclosed. All balconies must be entirely contained within the building envelopes except balconies on elevations directly fronting a primary street where the balcony may extend a maximum of 1 metre outside the envelope;
- (f) All balconies shall be provided with water and gas outlets; and
- (g) Each dwelling shall provide an area of useable private open space, or private courtyard area, which has direct private access from the dwelling;

Shared Open Space

- (a) Areas of shared open space above the ground floor such as terrace or rooftop gardens shall be provided to maximise landscape opportunities and improve the internal amenity of the development;
- (a) Residences shall overlook shared open spaces where possible to improve their visual amenity and increase the natural surveillance of these areas.
- (b) The location of all shared open space areas shall have regard to such requirements as solar access, outlook, privacy and the location of adjoining dwellings to make these spaces as attractive and useable to residents as possible;

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- (c) Shared open space shall generally be located in accordance with Figure 12;
- (d) The central open space shall be a minimum of 30m wide along Gay Street and Pennant Street;
- (e) A minimum of ~~80%~~ 50% of terrace / rooftop areas must be used for shared open space;
- (f) Terrace / rooftop areas must be adequately enclosed with fencing as per relevant safety requirements;
- (g) Where possible, each building shall incorporate a central, shared courtyard at ground level that is overlooked by residences;
- (h) Shared open spaces are to include equipment such as seating, shade structures, barbeques and children's play equipment. Consideration should also be given to the provision of a swimming pool; and
- (i) Common room and hard stand outdoor play area shall be provided as part of the overall development of the site.

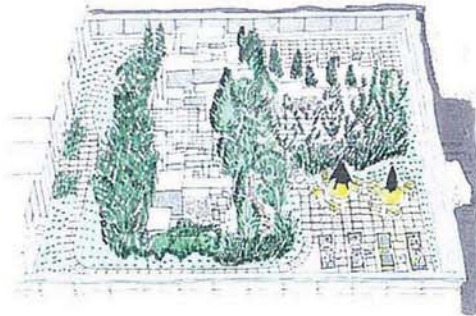


Figure 11. Roof Top Open Space

Rooftop areas are excellent spaces for providing useable and quality shared open spaces that can meet some of the passive recreation needs of residents and contribute to the development of a sense of community. These areas can be sensitively designed to integrate servicing requirements and screen them from the view of users.

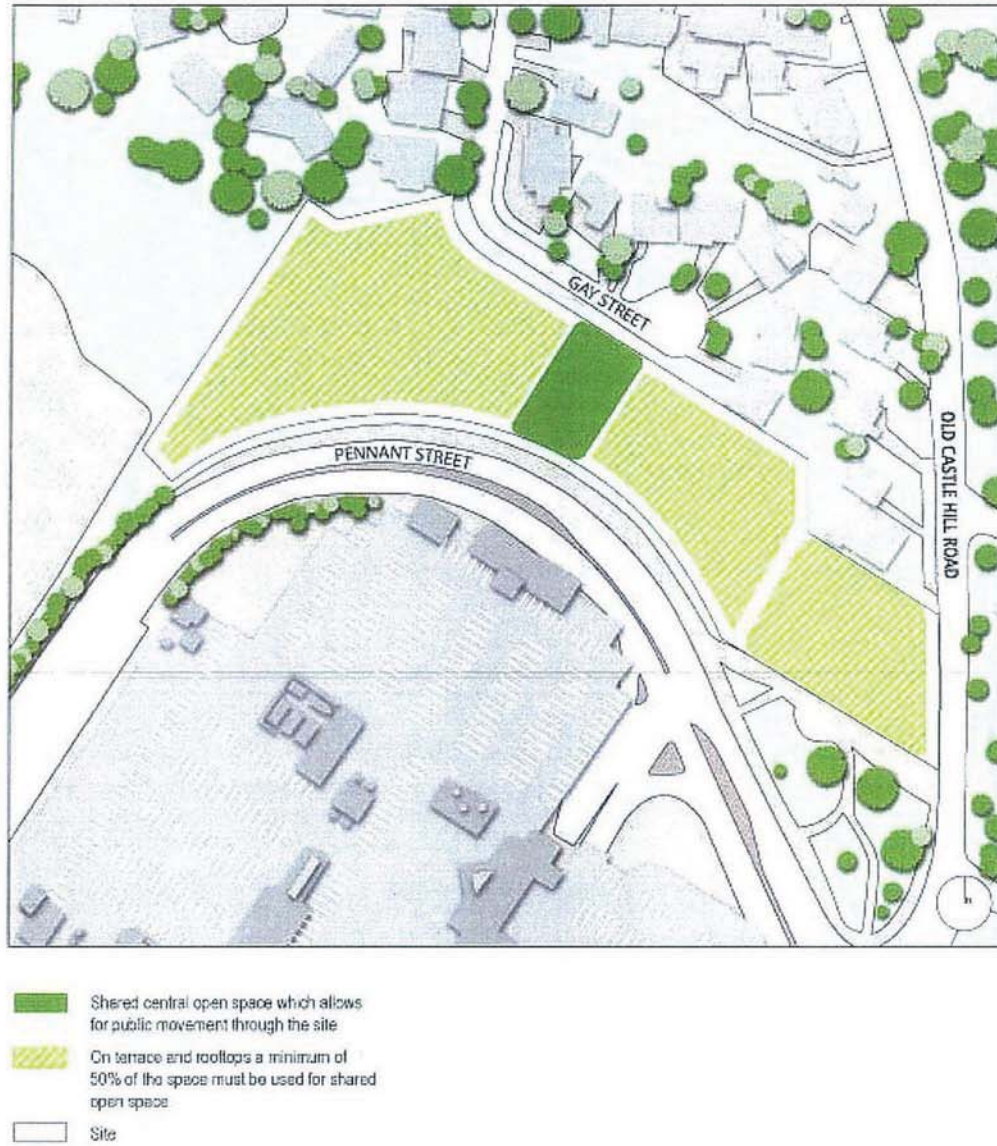


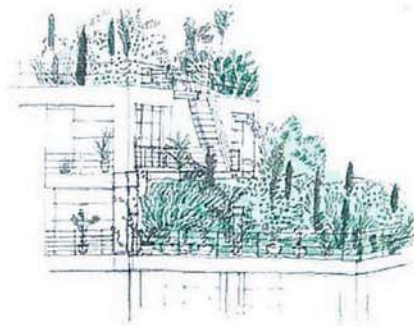
Figure 12. Open Space

3.11. LANDSCAPE AND VEGETATION**3.11.1. OBJECTIVES**

- (i) *To maximise landscaping opportunities that contribute to the establishment of a garden setting through the provision of high quality and appropriate landscaping.*
- (ii) *To achieve a landscape design that is well integrated into the design of the development.*
- (iii) *To ensure that landscape design contributes to the safety and security of the development and its' surrounding areas.*

3.11.2. DEVELOPMENT CONTROLS

- (a) A landscape plan shall be submitted by a suitably qualified landscape architect and include but not limited to both botanical and common names, quantity of plants, pot sizes and height at maturity.
- (b) High quality landscaping shall be provided in all shared open spaces.
- (c) Building setbacks shall be appropriately landscaped to improve the amenity of the development and assist in protecting the privacy of residents in surrounding properties;
- (d) Landscaping design shall be used as a strategy to break up the massing of the development;
- (e) Shared open spaces shall be landscaped to achieve a high degree of amenity;
- (f) Landscape design shall support the safety and security of private and public spaces within, and around the edges of, the development;
- (g) Landscape design shall seek to mitigate the impacts of sunlight to reduce building heating and cooling loads;
- (h) Species selection shall utilise native vegetation to minimise water usage;
- (i) Clean stemmed, branching trees shall be planted along the street edges of Gay Street, Old Castle Hill Road and Pennant Street and be compatible with the existing characteristics of the streetscape;
- (j) Shrubs less than 1 metre tall and clean stemmed trees shall be used in areas adjacent to public spaces to minimise opportunities for concealment;
- (k) A minimum of 20% of shared open space on ground level must be suitable for deep planting. In cases, where underground parking limits the soil depth, landscape beds/tubs to provide additional soil depth must be provided.
- (l) Landscaping of all shared terrace / roof spaces shall be easy to maintain and not compromise the structural integrity of the building;
- (m) Terrace / roof spaces shall be capable of being planted with climbing plants and falling plants selected to spill over the edge of the terrace onto the building façade (Figure 13);
- (n) Landscaping of shared terrace / roof spaces shall consider the effects of wind and seek to mitigate its effects to users;
- (o) Buildings shall incorporate vertical landscaping features along the building façade to contribute to the buildings green character and soften the visual bulk of the building;
- (p) All exposed car parking structures must be masked with attractive landscaping features to enhance their appearance;
- (q) The central open space shall contain linear rows of clear stemmed trees to provide shade and facilitate clear views and safe movement through the site; and
- (r) All landscaping works within the public domain shall be consistent with the draft Castle Hill Public Domain Plan.

**Figure 13. Roof Top and Terrace Landscaping**

Terrace / roof areas provide excellent landscaping opportunities which can contribute to creating a strong green character.

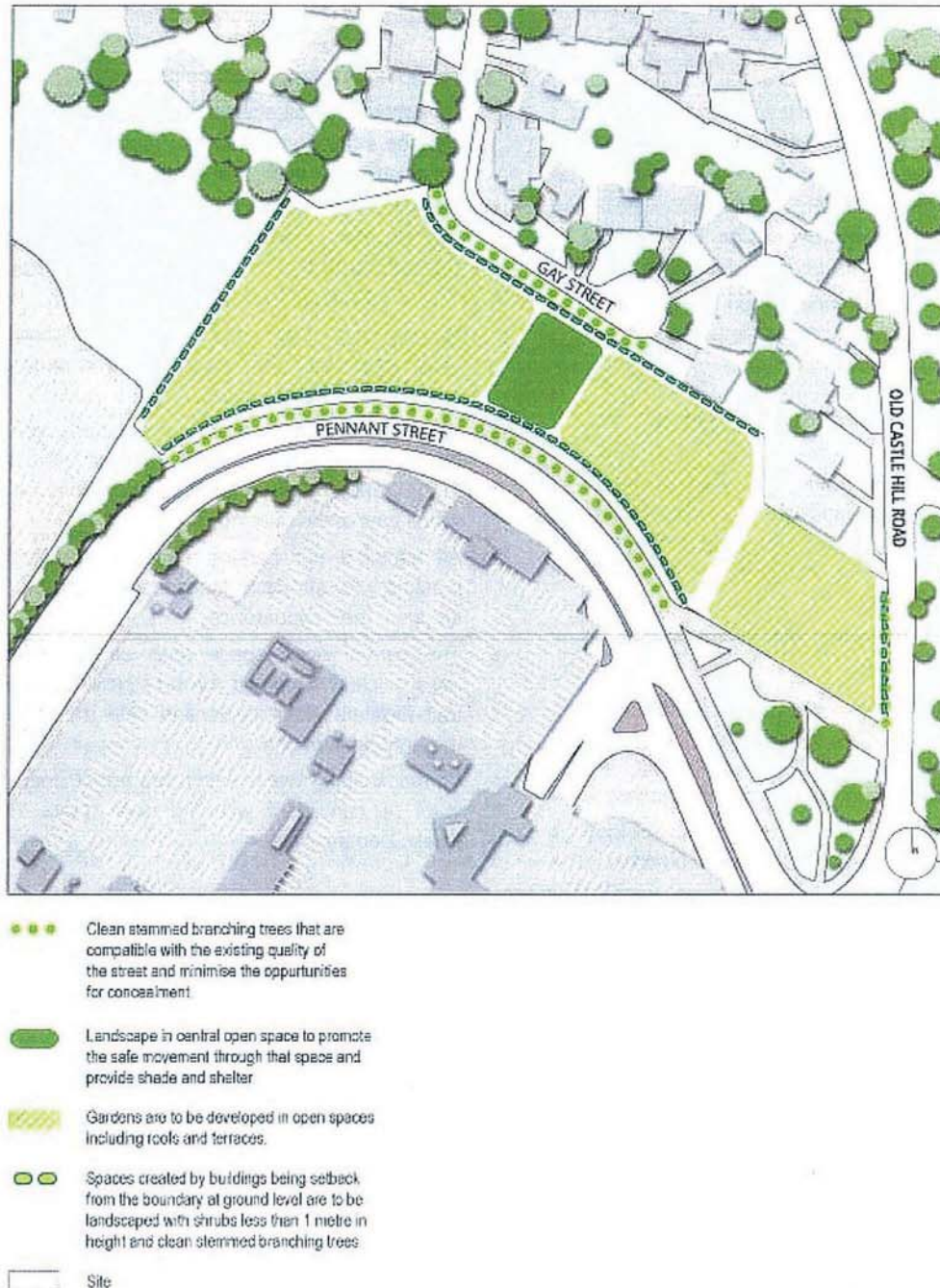


Figure 14. Landscaping

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3.12. PLANTING ON STRUCTURES**3.12.1. 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.

3.12.2. 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
 - 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: 300-450mm
- (f) Turf:
 - minimum soil depths: 100-300mm
- (g) Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.

3.13. INTERNAL FLOOR AREA

Refer to Residential Flat Building Part C Section 7.

3.14. CEILING HEIGHT**3.14.1. OBJECTIVES**

- (i) To increase the sense of space in apartments and provide well proportioned rooms; and
- (ii) To promote the penetration of daylight into the depths of the apartment.

3.14.2. DEVELOPMENT CONTROLS

- (a) Ceiling heights shall be measured from finished floor level (FFL) to finished ceiling level (FCL). These are minimums only and not preclude higher ceilings, if desired.
- (b) In general, 2.7 metre minimum for all habitable rooms on all floors, 2.4 metres if the preferred minimum for all non-habitable rooms, however 2.25 is permitted.

3.15. ECOLOGICALLY SUSTAINABLE DEVELOPMENT**3.15.1. OBJECTIVE**

- (i) To reduce the energy requirements associated with constructing, operating and maintaining development.
- (ii) To conserve and protect water resources.
- (iii) To minimise the amount of material waste leaving the site.

3.15.2. DEVELOPMENT CONTROLS

- (a) Development will achieve a 6 Star Green Star accredited rating;
- (b) Building design shall maximise opportunities for natural ventilation such as cross-ventilation, operable windows, ventilators and shafts;
- (c) Building envelopes shall be fitted with high efficiency windows and insulation;
- (d) Highly efficient HVAC systems shall be installed to reduce the energy required for heating and cooling;
- (e) Lighting of shared spaces shall avoid unnecessary energy use;
- (f) Sustainable building materials shall be used in building design where possible;
- (g) Sustainable drainage systems shall be incorporated within the development to manage stormwater impacts;

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- (h) Hard surfaces shall be minimised to reduce stormwater outflows on external drainage infrastructure;
- (i) Opportunities for rainwater capture, storage and reuse shall be considered in building design;
- (j) Opportunities to recycle organic waste shall be integrated into development and appropriately managed;
- (k) Triple glazed windows and insulation with an R value of at least 3 shall be used in building design;
- (l) Photo sensors and dimming control gear shall be used in shared spaces such as corridors and foyers where incoming daylight meets indoor lighting needs at least part of the time;
- (m) Occupancy sensitive lighting controls shall be used in areas with intermittent occupation such as utility rooms, bicycle storage areas other ancillary areas;
- (n) Heat / Energy Recovery Ventilation systems shall be used in HVAC design;
- (o) Eave overhangs, pergolas and other shading structures shall be used in building design to permit winter sun and screen summer sun;
- (p) Sustainable building materials such as FSC-certified timbers, recycled materials and other materials with low embodied energy shall be considered in building design;
- (q) Bio-retention areas such as swales and rain gardens shall be used to filter and mitigate stormwater runoff;
- (r) Rainwater capture features such as rain water tanks shall be integrated into building design;
- (s) Non-potable water shall be reused for uses such as toilet flushing, landscape irrigation and on-site water features;
- (t) Waterless or very low water flow hydraulic fixtures shall be installed in all residences and shared open spaces;
- (u) All residences shall be provided with 'Green Waste' bins for disposing organic waste; and
- (v) Waste-sorting bins shall be provided to all internal and external spaces to facilitate materials recycling.

3.16. 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

3.17. SOLAR ACCESS AND OVERSHADOWING**3.17.1. OBJECTIVES**

- (i) To ensure reasonable access to sunlight for living spaces within buildings and open space areas around dwellings.
- (ii) To ensure adjacent open spaces, living spaces in dwellings, and public places are not deprived of reasonable access to sunlight.

3.17.2. DEVELOPMENT CONTROLS

- (a) A minimum of 2 hours of direct sunlight between 9am and 3pm on June 22nd is to be available to the majority of balconies, living room spaces and private and communal open space areas of the proposed dwellings; and
- (b) The primary living areas and private open space of existing dwellings are to receive a minimum of 4 hours of direct sunlight between 9am and 3pm on June 22nd. This is to be achieved by, but not limited to:
 - Building siting;
 - Living area orientation;
 - Location of windows;
 - Tree species;
 - Pergolas;
 - Eaves;
 - Fencing;
 - Roof pitch; and
 - Building height.

3.18. OVERLOOKING AND ACOUSTIC PRIVACY**3.18.1. OBJECTIVES**

- (i) To limit views into adjoining private open spaces and living rooms.
- (ii) To protect residents from external noise.
- (iii) To contain noise between dwellings and control unreasonable transmission to adjoining dwellings.

3.18.2. DEVELOPMENT CONTROLS

- (a) Private open space and habitable rooms of proposed and adjacent existing dwellings shall be reasonably protected from overlooking by attending to, but not being limited to:
- Building layout;
 - Location, size and design of windows and balconies;
 - Screening devices; and
 - Landscaping.
- (b) Private open space areas and habitable rooms shall be reasonably protected from uncomfortable levels of external noise by attention to, but not being limited to, the following:
- Use of noise resistant wall, ceiling, floor and roof material;
 - Site planning;
 - Location of habitable rooms away from the noise source;
 - Use of ~~double~~ triple glazing; and
 - Use of fencing porches and walls as noise buffers.
- (c) Building design elements are to be applied to improve visual and acoustic privacy such as recessed balconies and/or vertical fins between adjacent balconies, vegetation and louvers and pergolas which limit overlooking of lower dwellings and/or private open space.
- (d) Building facades are to be acoustically sound treated with triple glazing.
- (e) External air conditioning units are to be located and screened in order to minimise noise and visual impacts on neighbours. Air conditioners must not exceed 5dB(A) above the background noise level.
- (f) Habitable rooms of dwellings adjoining Pennant Street and Old Castle Hill Road shall be designed and located to limit internal noise levels to a maximum of 45dB(a) in accordance with AS 3671 – Road Traffic; and
- (g) In order to safeguard occupants from loss of amenity as a result of undue sound being transmitted, separating walls and floors between dwellings or sole occupancy units, shall be constructed in accordance with the requirements of the Building Code of Australia.

3.19. SITE FACILITIES AND SERVICES**3.19.1. OBJECTIVES**

- (i) To provide site facilities which are adequate and conveniently located for residential needs.
- (ii) To provide site facilities which facilitate more sustainable lifestyles for residents.
- (iii) To ensure site facilities are practical, attractive and can be easily maintained.

3.19.2. DEVELOPMENT CONTROLS

- (a) Rubbish and recycling bin enclosures, letter boxes, and other site facilities should be adequate in size, durable, weatherproof, visually integrated with the development and be located having regard to the protection of residential amenity, vehicle services access, visual impact and resident access;
- ~~(b) A minimum of 10sqm of dedicated storage space shall be provided to each dwelling with a minimum clearance height of 2.1 metres from floor level;~~
- ~~(c) A shared laundry facility shall be provided for use by at least 30% of residences. Laundries shall be provided to each dwelling.~~
- ~~(d) A communal gardening facility shall be provided that allows space for residents to share tools / gardening materials;~~
- (e) Letter boxes shall be provided in accordance with the delivery requirements of Australia Post;
- (f) A communal rubbish storage area shall be provided within the site. The storage area shall:
- not be located between the front alignment of the building and the road;
 - be of a construction material that is the same as the construction material of the development and of a similar style and colour;
 - include a bin wash down facility;
 - have a sufficient capacity in accordance with Council's waste management requirements; and
 - be located to the satisfaction of Council to permit acceptable access by refuse vehicles.

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- (g) Provision shall be made for a single common television / radio antenna to service each building within the development.
- (h) Minimise the visual intrusiveness of service elements including telecommunications facilities by integrating them into the design of the roof.

3.20. STORAGE**3.20.1. 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.

3.20.2. DEVELOPMENT CONTROLS

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

Apartments

- Studio apartments – 6m³
- One-bedroom apartments – 6m³
- Two-bedroom apartments – 8m³
- Three plus bedroom apartments – 10m³

3.21. STORMWATER MANAGEMENT**3.21.1. OBJECTIVES**

- (i) To control stormwater runoff to mitigate the effect on adjoining properties and existing local drainage systems before, during and after construction.
- (ii) To ensure development does not increase flooding or prejudice the effectiveness of existing flood mitigation measures.
- (iii) To provide for the management of stormwater in an efficient, equitable and environmentally sustainable way in accordance with Council's ESD objectives.
- (iv) To provide for the on-site detention of stormwater drainage.
- (v) To encourage the storage and reuse of stormwater.

3.21.2. DEVELOPMENT CONTROLS

Water Sensitive Urban Design

- (a) The best practice principles of WSUD are to be applied during the construction and post construction phases of development. Schemes that promote water capture, reuse initiatives and water quality management measures are to be employed, as described in documents including, but not limited to:

- On-site Stormwater Detention Handbook, Version 4 2005, UPRCT;
- Australian Runoff Quality, Engineers Australia, 2006; and
- Water Sensitive Urban Design – Technical Guidelines for Western Sydney, May 2004, Prepared by UPRCT by URS.

These are required for all new commercial and residential developments, or where the increase in impervious area over a site is greater than 150sqm. Common open space and publicly accessible courtyard areas may be utilised for WSUD initiatives;

- (b) Rainwater tanks are to be installed to enable the reuse of rainwater. Overflow from rainwater tanks must be connected to a piped drainage system;
- (c) The construction of any structure or the placement of fill is not permitted within the 1% AEP storm flood area, a watercourse, drainage depression or piped / un-piped drainage easement; and
- (d) Concentrated stormwater flows must discharge to a lawful point of discharge. This may require the creation of drainage easements over downstream properties.

3.22. WASTE MANAGEMENT

Refer to Residential Flat Building Part C Section 7 for waste management requirements.

3.23. EROSION AND SEDIMENT CONTROL**3.23.1. OBJECTIVES**

- (i) To minimise land degradation, water pollution and damage to infrastructure from accumulated sediment.

3.23.2. DEVELOPMENT CONTROLS

- (a) Applications for development approval shall be accompanied by an Erosion and Sediment

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Control Plan (ESCP) which will describe the measurements to be taken at development sites to minimise land disturbances and erosion and control sediment pollution of waterways. ESCPs are to clearly identify the erosion and sediment control measures to be used (see Part A – Introduction).

- (b) Erosion and Sediment Control Plans shall be prepared in accordance with "Managing Urban Stormwater – Soils and Construction", produced by the NSW Department of Housing.

3.24. PUBLIC IMPROVEMENT WORKS**3.24.1. OBJECTIVES**

- (i) To provide public improvement works to contribute to the orderly development of the site and effectively manage additional traffic.
- (ii) A condition of a development consent may be imposed if it requires the carrying out of works (whether or not being works on land to which the application relates) relating to any matter referred to in Section 79C(1) applicable to the development subject of the consent (Section 80A (1) (f) of the EP&AA Act 1979).

3.24.2. DEVELOPMENT CONTROLS

- (a) The following public work improvements shall be provided prior to the completion and occupation of the development: -

(i) A roundabout at the intersection of Gilham Street and Old Castle Hill Road.

(ii) An extension of the concrete footpath along the southern side of Gilham Street from the existing concrete footpath along Old Castle Hill Road to Gay Street, and along Gay St up to the development site.

3.25. AVIATION REQUIREMENTS**3.25.1. OBJECTIVES**

- (iii) To ensure future development does not adversely affect the safety and operational efficiency of air space.

3.25.2. DEVELOPMENT CONTROLS

- (b) Each corner of the building (tower element) shall be provided with low intensity red obstacle lights.
- (c) Consultation with the Civil Aviation Safety Authority (CAS) shall be undertaken and written evidence submitted to Council.

3.26. 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 (8 Copies)

ACOSUTIC REPORT (8 Copies)

SITE PLANS (8 Copies)

SITE ANALYSIS (8 Copies)

ARCHITECTURAL PLANS (8 Copies)

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

PRELIMINARY ENGINEERING DRAINAGE PLANS (8 Copies)

- Including any On Site Detention Plans

LANDSCAPE PLAN (8 Copies)

EARTHWORKS PLAN (8 Copies)

SIGNAGE PLANS (8 Copies)

- See Part D Section 2 – Signage

STREETSCAPE PERSPECTIVE (1 Copy)

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.

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- 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 (8 Copies)**DESIGN VERIFICATIONS**

- As per SEPP 65 requirements

BASIX CERTIFICATE (2 Copies)**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.
- 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.