The Hills Development Control Plan (DCP) 2012

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THE HILLS Sydney's Garden Shire

Part D Section 4

Target Site,Pennant Hills Road
Carlingford

D4

INDEX

1. INTRODUCTION

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

This Section has been prepared to provide direction and control of the development of the 179 Pennant Hills Road Target Site in The Hills Shire.

1.1. LAND TO WHICH THIS SECTION OF THE PLAN APPLIES

This Section applies primarily to land known as 179 Pennant Hills Road (Lot C2 DP 101 334).

1.2. OBJECTIVES

The objectives of this Section are:

(i) To demonstrate best practice in urban and residential design and to act as a model development and prototype for other target sites within the Shire.

(ii) To provide detailed design and environmental standards for the development.

(iii) To ensure that all development is compatible with, and has minimum impact on adjoining dwellings and offers high levels of amenity for existing and future residents.

(iv) To provide opportunities for housing choice and affordability in order to meet the broader housing needs of the community while retaining the landscaped amenity of the Shire.

(v) To provide a basis for rezoning part of the target site.

2. OBJECTIVES AND DEVELOPMENT CONTROLS

The objectives, performance criteria and standards for development within the Target site are divided into a number of key areas and discussed throughout this Section. The Site Analysis and its opportunities are also addressed in terms of development control objectives, performance criteria and development control.

In addition to those policies, guidelines and documents specified in Section 1.4 of Part A - Introduction, this Target Site Section is to be read in conjunction with other relevant Sections including:

- Part B Section 4 – Multi Dwelling Housing
- Part B Section 5 – Residential Flat Buildings

Where any provision of this Section is inconsistent with any provision of any other Section of the DCP, the provisions of this Target Site Section shall prevail.

2.1. SITE PLANNING

OBJECTIVES

(i) To ensure that the design of the development is of high quality and sensitive to its environment, the site layout and building design needs to consider the existing characteristics, opportunities and constraints of both the sites and their surroundings.

(ii) To achieve a coherent site layout and development which relates to the natural contours of the site and contributes to the character of the area.

(iii) To enhance the existing character and amenity of Pennant Hills Rd.

(iv) To ensure no through traffic between Pennant Hills Rd and Sandringham Drive.

(v) To provide adequate communal open space which enhances the quality of the built environment and increases the opportunity for increased community safety.

DEVELOPMENT CONTROLS

(a) Future Development to be located generally in accordance with Figure 1 below.

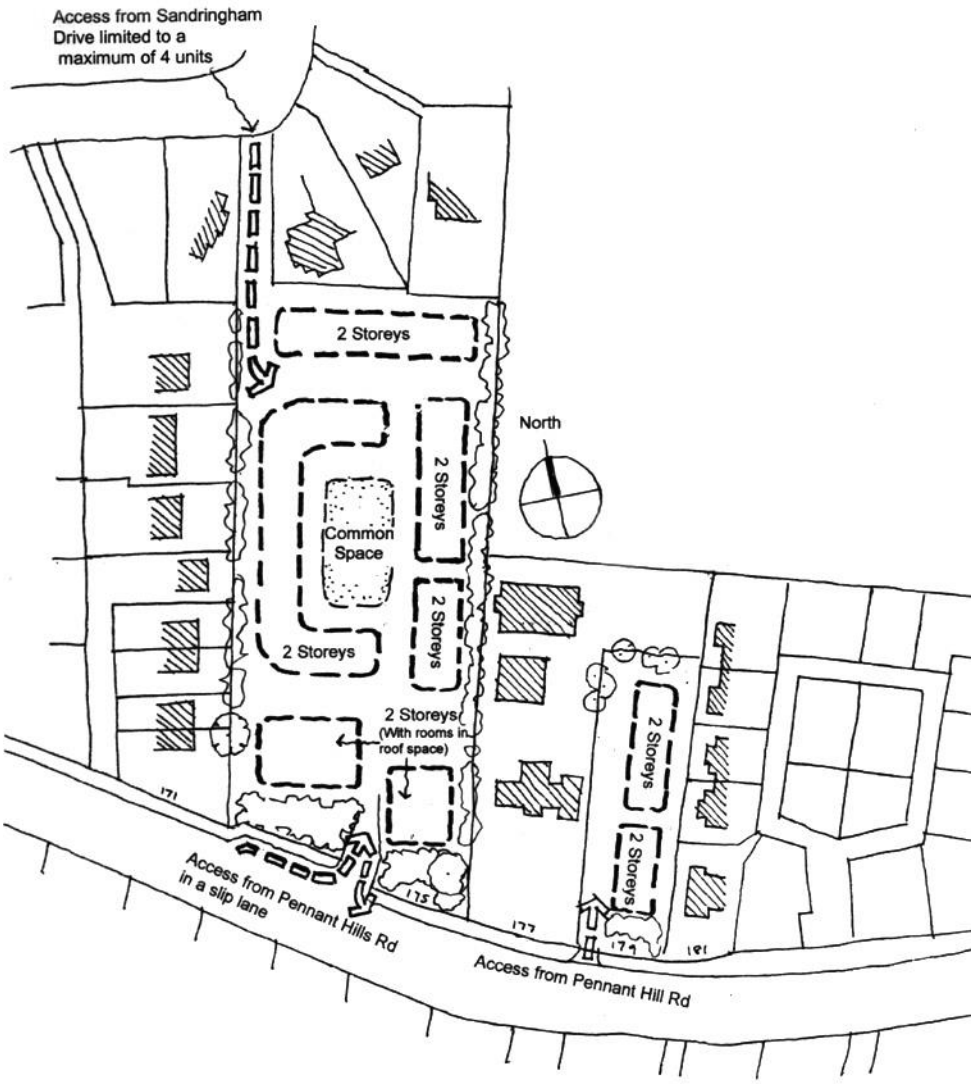


Figure 1 Site planning

Establishing an attractive public domain which is overlooked by building frontages is a key objective of the design.

Figure 2 Communal space

Townhouses along Pennant Hills Road are often out of scale and too close to front boundary having no room for deep soilplanting and mature trees along the ridge road.

Large institutional 2/3 storey buildings behind mature trees and landscaping.

Figure 3 Street character

Typical townhouse environment:
- Mainly hard surface driveways
- Little room for deep soil planting
- Tokenistic landscaping

Enough space for deep soil planting and meaningful central open space.

Figure 4 Landscaping

2.2. STREETSCAPE AND BUILT FORM

OBJECTIVES

(i) To ensure that new development is sensitive to the landscape setting and environmental conditions of the locality.

(ii) To ensure that the appearance of housing is of a high visual quality, enhances the streetscape and complements good quality surrounding development.

(iii) To encourage streetscape variation whilst maintaining a high level of amenity for the development.

(iv) To ensure that the appearance of housing is of a high visual quality and enhances the streetscape and the urban environment.

(v) To allow flexibility in the siting of new buildings and ensure the bulk and scale of new development protects reasonable neighbour amenity and maintain appropriate residential character.

PERFORMANCE CRITERIA

(a) The design of buildings should reflect and complement the streetscape to Pennant Hills Road with an appropriately landscaped setback and building styles, which reflect the institutional and grand nature of buildings along the ridge top in the locality. Materials should be a mix of masonry and render finishes.

(b) Building design should aim to create external elements, which visually break up the street facing façade, with elements such as verandas, pergolas and porches as well as gables and roof detailing. Side elevations to street frontages should be similarly considered and corner-turning buildings be created.

(c) Other quantitative controls relating to streetscape are those established by this plan relating to landscaping, height and building setbacks.

(d) Buildings should be designed to fit within the setback and height requirements of this section, in order to ensure that the intended bulk, scale and amenity of the development is achieved.

(e) The site should comprise a variety of housing types, which may include multi dwelling housing and residential flat buildings.

(f) Pitched roofs with eaves are the preferred choice of roof form for development, as these exist in the adjoining residential area.

DEVELOPMENT CONTROLS

(a) Dwellings should be orientated to maximise solar access and enjoy views.

(b) External walls of a residential flat building shall not exceed 12 metres in length unless a return balcony, change in material or plane or other method is adapted to break the straight run of brickwork.

(c) Any fence or wall along the Pennant Hills Rd boundary shall have a maximum height of 1.2 metres when of solid construction or be up to a maximum 1.8 metres with 50% solid construction.

(d) The minimum internal floor area for each individual unit, excluding common passageways, car parking spaces and balconies should be in accordance with Part B Section 4 – Multi Dwelling Housing and Part B Section 5 – Residential Flat Buildings

Examples of building elements which can visually break up the street facing facade:

- eaves
- tiled roof
- front verandahs/elements
- front fence/hedge piers
- mix of face brick and render

Figure 5 Building character

2.3. DENSITY

OBJECTIVES

(i) To provide density controls for a variety of building forms within an integrated development to achieve the desired character of a residential environment.

(ii) To provide the opportunity for increased densities in appropriate localities having regard to opportunities for increased housing densities.

(iii) To provide opportunities for a mix of housing development forms within an integrated development.

DEVELOPMENT CONTROL

(a) A maximum overall gross residential density of 95 persons per hectare for a small lot housing development, based upon the following occupancy rates:

Dwelling Type	Occupancy Rate
Existing dwelling	3.5 persons
1 Bedroom Unit	1.3 persons
2 Bedroom Unit	2.1 persons
3 Bedroom Unit	2.7 persons
4 Bedroom Unit	3.5 persons

2.4. SITE REQUIREMENTS

OBJECTIVES

(i) To ensure development sites have sufficient areas to provide adequate access, open space and building separation.

(ii) To enable development on the 'target site' to have regard to the relationship with adjoining developments.

(iii) To provide residential flat building development on part of the 'target site' that addresses the existing street character of larger building forms along Pennant Hills Road.

PERFORMANCE CRITERIA

(a) To encourage the amalgamation of allotments to form better overall developments and more opportunities to provide for landscaping, common open space and better design of development sites.

DEVELOPMENT CONTROLS

Site Area

(a) Where residential flat buildings will be integrated with multi dwelling housing development the minimum site area for 'target site' development shall be 9000 m^2 with a maximum of 27% of the site area for proposed residential flat buildings.

Site Frontage

(b) The minimum allotment frontage for the selected 'target site' is 24.5 metres. Where residential flat building development will be integrated with multi dwelling housing the minimum allotment frontage is 30 metres.

Site Access

(c) Access driveways should be centrally located within any proposed residential flat building development or site.

2.5. SETBACKS

OBJECTIVES

(i) To provide setbacks that complement the streetscape of the area while allowing flexibility in siting of buildings.

(ii) To allow for the adequate provision of landscaping throughout the development and protect the visual quality of the community and private open space areas.

(iii) To minimise any adverse impacts on adjoining properties such as privacy and overshadowing.

PERFORMANCE CRITERIA

(a) Setbacks shall complement the streetscape of the established area.

(b) Setbacks shall provide sufficient area for landscaping to complement building form.

(c) The setbacks of proposed buildings are to minimise any adverse impacts such as over shadowing and privacy on to adjacent properties.

DEVELOPMENT CONTROLS

Front Setback to Pennant Hills Road

(a) The minimum front setback shall be 10m for all buildings except where a 3 metre wide slip lane is required. Where buildings front the slip lane the minimum setback permitted will be 7 metres subject to an average setback of 10 metres being achieved across the frontage of the building.

(b) Front boundary setbacks shall be in accordance with Figure 6 over.

Side and Rear Setbacks - Multi Dwelling Housing

- 179 Pennant Hills Road:

(a) The minimum side setback shall be 4.5 metres to the boundary of an existing adjoining property for one storey developments. For two storey developments the minimum setback to the boundary of an adjoining property shall be 6 metres.

Side and Rear Setbacks –Residential Flat Buildings

(a) Setbacks shall be in accordance with Figure 6 over.

(b) For two storey developments the minimum setback to the boundary of an adjoining property shall be 6 metres. However a variation of the 6 metre setback to 4.5 metres is permissible where obscure glazed or highlight windows to upper floors are used, and where the proposal does not unduly overlook or overshadow adjacent dwellings. These areas are shown as hatched areas on Figure 6.

(c) The minimum setback for habitable roof areas shall be 6 metres to the boundary of an existing adjoining property.

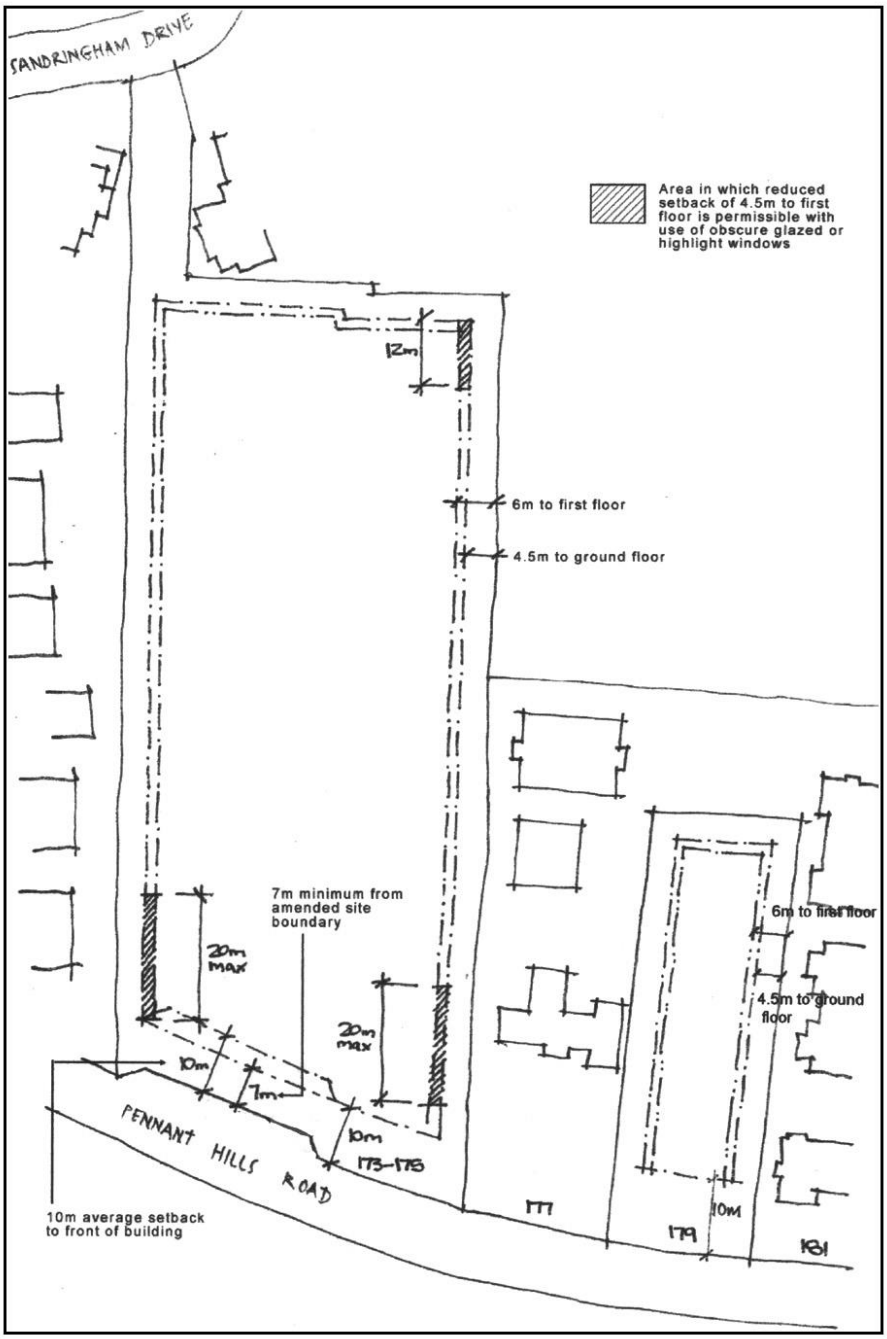


Figure 6 Boundary setbacks

2.6. BUILDING HEIGHT

OBJECTIVES

(i) To ensure that development has minimal impact on neighbouring properties to south, east & west in terms of building bulk, shadows, privacy and views.

(ii) To ensure the scale of development integrates well with landscape and topography, and reflects the scale of existing buildings along Pennant Hills Road.

(iii) To optimise opportunities with regard to view and solar access.

PERFORMANCE CRITERIA

(a) The height of walls does not result in significant loss of amenity to adjacent dwellings and land.

(b) Building height relates to the landform with minimal cut and fill.

DEVELOPMENT CONTROLS

(a) Refer to Clause 4.3 *Height* of Buildings of The Hills Local Environmental Plan 2012.

(b) The maximum height of multi dwelling housing shall be two storeys. Height controls are as shown in Figure 7.

(c) Multi dwelling housing is to be located so that the ground floor does not exceed 1m above the natural ground level immediately below except in the area shown hatched in Figure 8. Dwellings in the area shown hatched may have a floor level up to 2 metres above natural ground level providing the applicant can demonstrate that there will be no adverse impact on the privacy of adjoining properties.

This exception is required for the following reasons:-

- to allow the provision of a relatively level common area located in the centre of the development.
- This zone still ensures any development within 6.5 metres of the property boundary is within one metre of existing ground level to protect the amenity of adjoining neighbours.
- Part of the area shown hatched contains a tennis court and previous excavation occurred to allow the court to be constructed. Part of the fill in this area will be required to fill the court area back to the natural ground level in place prior to the construction of the court.

(d) The maximum height of residential flat buildings shall be 12 metres to ridge and 8 metres to the eaves, measured from natural ground line. Residential flat buildings may include habitable dwellings contained within the roof space to a maximum of 60% of the roof area, with use of dormer window structures. Building forms which are two storeys plus 'dwellings in the roof' are permissible on the Pennant Hills Road frontage of Nos. 173-175 to respond to typical building forms along the road in this locality. Additional variations in the roof form are permissible where they face away from Pennant Hills Road. Height controls are shown in Figs 7.

(d) A storey is defined as 'a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above. It does not include parking, service or storage areas contained within a basement which is located below ground providing that the ground floor is not more than one metre above natural ground line.

Figure 7 Building height

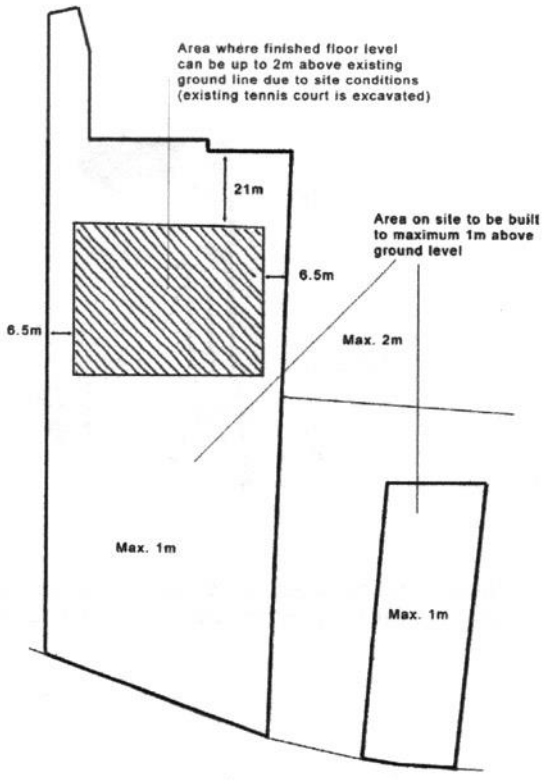


Figure 8 Height of ground floor above natural ground line

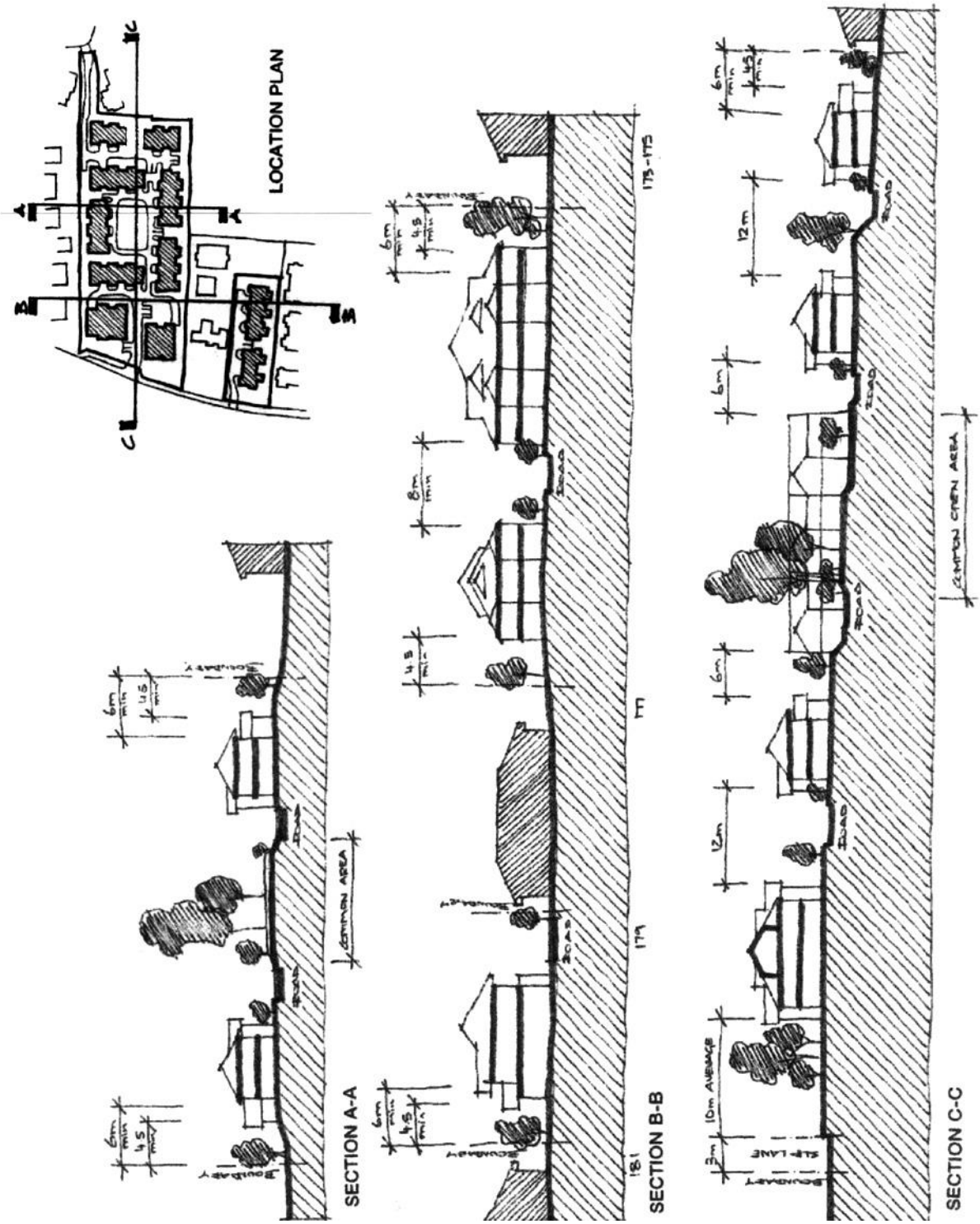


Figure 9 Sections – Building setbacks and locations

These cross-sections are representative and illustrate a variety of cross-sections through the site.

2.7. BUILDING SEPARATION

OBJECTIVES

(i) To ensure privacy between buildings.

(ii) To avoid overlooking of living spaces and private open space.

PERFORMANCE CRITERIA

(a) Create privacy between dwellings with screening as necessary.

DEVELOPMENT CONTROLS

(a) The minimum separation required between residential flat buildings shall be 12 metres.

Note. as recommended in "Better Urban Housing Guidelines for Urban Housing"

(b) Use of utility and rooms and service functions such as bathrooms is appropriate to the minimum separation façade. Where habitable rooms are proposed these should have obscure or highlight glazing.

(c) Direct views from living rooms of dwellings into open space or the interior of other dwellings are to be screened or obscured.

(d) A maximum of four multi dwelling housing units will be permitted along the northern boundary shared with 31-35 Sandringham Drive. These four units shall be split into two buildings and the minimum separation between the two buildings shall be 6 metres.

2.8. ACCESS & CAR PARKING

OBJECTIVES

(i) To ensure that vehicular access to and from the development is simple, safe and direct.

(ii) To provide adequate and convenient parking for resident and visitor vehicles so as to maintain the amenity of the adjoining properties and the efficiency of the road network.

(iii) To promote the creation of a safe environment for pedestrians.

PERFORMANCE CRITERIA

(a) Resident and visitor parking shall be provided according to the performance standard.

(b) Resident car parking for the residential flat building component of the development shall be underground to minimise the height of building above natural ground line.

(c) Driveway design shall provide safe and efficient ingress and egress to the site.

(d) The design of driveways and parking areas shall minimise the visual impact of hard paved areas.

(e) The driveway design shall make provision for service vehicles where practicable.

(f) All driveways and open car parking spaces and access ways should be suitably landscaped and lit to enhance the amenity of the site and provide security.

(g) Car parking areas and access ways should be designed surfaced and sloped to facilitate stormwater infiltration on the site.

DEVELOPMENT CONTROLS

(a) Off-street parking should be provided within the site for dwellings at the rate of 1 space per 1 bed dwelling and 2 spaces per 2-4 bed dwelling

Note. the above car parking rates are to be rounded up to the nearest whole number.

(b) Covered car parking shall comprise lockable type single garages with a minimum clear dimension of 5.5 metres x 3.0 metres and double garages with a minimum clear dimension of 5.5 metres x 5.4 metres.

(c) Visitor spaces are to be provided at a rate of two spaces for every five dwellings, within the development with any part spaces being rounded up and they shall have a minimum dimension of 5.5 metres x 2.6 metres.

(d) Manoeuvring areas to all parking spaces shall comply with Australian Standard 2890.1 and shall have a minimum turning area of 6.7 metres. A one metre wide turfed area with rolled mountable kerbs can be located within this minimum clearance providing vehicle manoeuvring is not restricted. The layout shall ensure that all vehicles enter and leave in a forward direction.

(e) External parking spaces are to be an extra 300mm wider where they adjoin a solid wall.

(f) Visitor spaces are to be accessible at all times and are not to be located behind security gates.

(g) Parking areas within the front setback are discouraged and in this regard, no more than 2 spaces shall be provided within the setback area.

(h) Car parking areas should be separated by any adjoining property boundary by a 2 metre wide landscaped strip.

(i) Driveways should be separated by any adjoining property boundary by a one metre wide landscaped strip.

(j) Driveways are to have a minimum width of 6 metres at the property boundary for a distance of 6 metres. Internal driveways shall have a minimum width of 3 metres with adequate provision for passing provided, and be designed to accord with Council's Car Parking requirements - Part C Section 1.

(k) All car parking areas and spaces shall be designed in accordance with Car Parking requirements – Part C Section 1.

(l) Traffic and parking arrangements for No 173-175 and 179 Pennant Hills Rd:

- The primary vehicle access point to No 173-175 Pennant Hills Rd will be off Pennant Hills Road as shown in Fig 11. This may require a left turn deceleration slip lane across the site frontage of 173-175 Pennant Hills Rd subject to approval with the RMS.
- A secondary access to service a maximum of four dwellings to No 173-175 Pennant Hills Rd is to be provided off Sandringham Drive to the north of the site, providing this does not link to the main access from Pennant Hills Road.
- The access driveway for No 179 Pennant Hills Rd should be at the western end of the Pennant Hills Rd boundary. Selection of landscaping to avoid obstruction of sight distance and angling entry to allow entry to the site quickly but safely.
- All car parking areas and spaces shall be designed in accordance with Car Parking requirements – Part C Section 1.
- The main access driveway should be min. 5 metre wide with mountable kerbs.
- The secondary access driveways should be min. 3 metres wide with mountable kerbs.
- Parking aisles to satisfy Australian Standard 2890.1.
- Driveways should be designed to allow adequate access not only for residents but also for emergency and service vehicles, with space to allow up to an 11 metre rigid truck to enter and leave Pennant Hills Road in a forward direction.

(m) Traffic and parking arrangements must also satisfy the following Road and Maritime Services requirements:

- Provision of one vehicular access, with left in left out movements only, for each development at 173-175 and 179 Pennant Hills Road, Carlingford.
- Vehicle crossovers are to be constructed with one metre wide splays to facilitate efficient ingress /egress for the site.
- Front boundary fences are to be designed in such a way so as to not impede common sight between vehicles and pedestrians using the public footway.
- If security gates are to be used at any Pennant Hills Road access point, they must be located an appropriate distance into the site so that the stationary vehicles do not impede movements on Pennant Hills Road.
- The left turn deceleration lane is to be in accordance with Australian Standards and RMS Design Guidelines (i.e. a minimum length of 40 metres from start of entry taper to the tangent point of the entry curve).
- Driveway access design for Pennant Hills Road is to restrict movements to left in left out. As it is unlikely that it will be possible to construct a central median island on Pennant Hills Road, an island separating ingress and egress movements is to be constructed as part of the driveway works, similar to a seagull treatment, so as to channel vehicles appropriately and deter right turn movements. Additionally, the use of No Right Turn signs may be required.
- All road works are to be undertaken by the developer. The Roads and Maritime

Services will not incur any costs associated with the road works described above.

(n) Consideration should be given to the design of the access driveway from Sandringham Drive to minimise the speed and potential noise impacts on adjoining properties. Design measures such as pinch points, speed bumps and other possible design options should be assessed and the design measure that will minimise the impact on adjoining properties must be implemented.

2.9. OPEN SPACE

2.9.1. LANDSCAPED AREA

OBJECTIVES

(i) To provide open space which enhances the buildings.

(ii) To provide useable out door open areas for residents.

(iii) To provide a satisfactory relationship between buildings and open space.

(iv) To provide a configuration of open space which enhances the amenity of the overall development while providing a total landscaped site area of 50%.

(v) Landscaping is to be appropriately scaled and located relative to both the building bulk, incorporating existing vegetation where possible .

(vi) To enhance the quality of the built environment by providing opportunities for landscaping.

(vii) To provide landscaped areas that respond to the requirements of recreational use as well as providing for the visual amenity and psychological well being of residents.

PERFORMANCE CRITERIA

(a) A well designed and well built landscape which improves the image of the development and enhances the streetscape should be provided.

(b) The landscape should retain and enhance existing significant vegetation on the site.

(c) Trees and other planting should be used to achieve an improved level of privacy between units while still allowing casual surveillance for safety. Trees should be selected to allow for winter sun entry and some summer shading to courtyards/principal living areas.

(d) Areas of deep soil planting should be specified within both public and private areas in order to allow for mature tree growth.

(e) Location of any water management infrastructure should be carefully considered so as not to compromise tree planting in the public domain.

(f) High quality landscaping should include significant tree planting, well defined entrances, play areas and kerbside planting. These are considered important elements for the creation of a good setting for urban housing, and should be encouraged.

(g) The landscaping should incorporate species indigenous to the area and those, which will not cause damage to adjacent buildings or driveways. Indigenous species selected with reference to Council's preferred planting list are particularly appropriate for landscaped setbacks to Pennant Hills Road, and common open space areas. Elsewhere exotic species to a defined landscape theme can be considered.

(h) Fencing in or adjacent to communal open space areas is to be of a height, design and construction, which promotes passive surveillance, and adds to the streetscape and visual character of the development.

(i) All boundary fencing is to have a minimum height of 1.8 metre when measured from the finished ground level in the courtyard or common landscaped space on the site being developed.

(j) A 2 metre landscaping strip, containing advanced planting, which when mature will provide a landscape screen to adjoining properties 31-35 Sandringham Drive, must be provided along the northern boundary of 173-175 Pennant Hills Road.

DEVELOPMENT CONTROLS

(a) A minimum of 50% of the site shall be provided with landscaped areas, exclusive of access driveways and parking. This 50% landscaped area can include up to 5% porous hard paving, which allows for stormwater infiltration, and where these porous areas complement common open space and they:

- Improve the quality of open space for recreation and for use by residents within the development.
- Improve the quality of the landscaped and built environment by denoting separate hard landscape areas that are for use by both pedestrians and vehicles, through the use of differing surface materials and textures and that are integral with the common open space design.
- Fully integrate with the landscape design as part of the overall development of the site.

(b) The 50% landscaped area requirement will be made up of private open space (courtyards/gardens) and common open space. Private open space areas will be contiguous to the dwelling for which it is provided.

(c) Semi-private open space that adjoins common open space shall be enclosed with a wall or fence of minimum height 900mm with a maximum height of 1200mm and shall not be more that 50% solid.

(d) Advanced planting is to be provided to front setback areas of dwellings, particularly the Pennant Hills Road frontage, and to the common central open space.

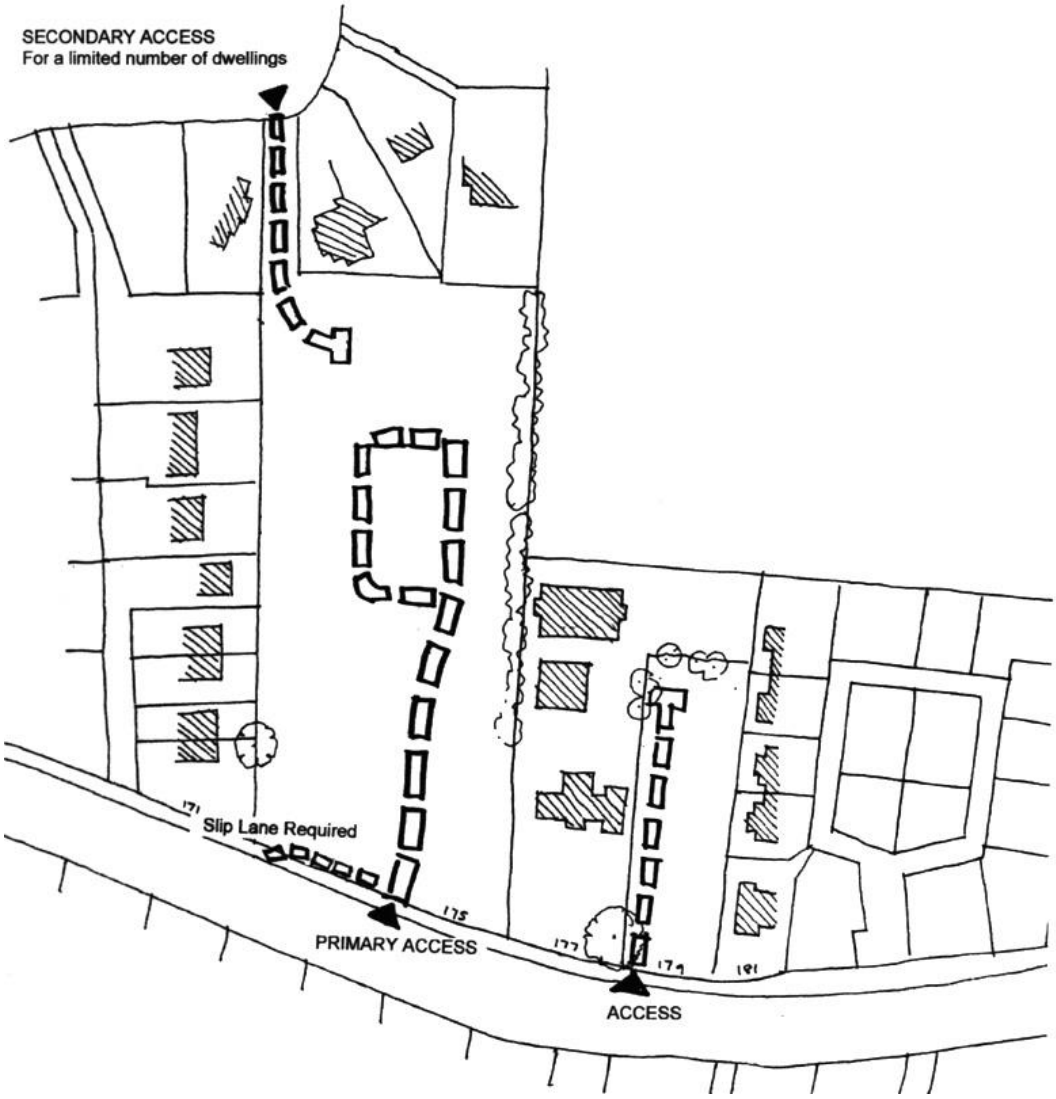


Figure 10 Access

2.9.2. PRIVATE OPEN SPACE

OBJECTIVES

(i) To provide adequate open space areas for the enjoyment and use by residents.

(ii) To enhance the quality of the built environment by providing opportunities for landscaping.

(iii) To provide an open space area within the development for the recreation of residents and children's play and which creates a visual and physical extension of private open space to the front of dwellings.

DEVELOPMENT STANDARDS

Reference should be made to the relevant category of development listed below.

For all dwellings (except residential flat buildings)

(a) Each dwelling is to be provided with an area of private open space equal to 50% of the floor area of the dwelling. However up to 50% of the dwellings may be provided with an area of private open space equal to 35% of the floor area of the dwelling, subject to the balance of the area being added to the common open

space requirement for the development. These areas shall have a minimum dimension of 2 metres.

(b) An area of 10m^2 private open space can be provided separately to the dwelling where these semi-private areas complement adjoining common open space. These semi-private areas shall be a min 10m^2 and shall have a minimum dimension of 2 metres and shall be enclosed with a wall or fence of minimum height 900mm with a maximum height of 1500mm and shall not be more that 50% solid. These semi-private areas shall be continuous with the main private open space where possible.

(c) Private open space areas should include an area of 24m^2 with a minimum dimension of 4 metres which is directly accessible from a living area. Screening or fencing (minimum 1.8 metres) to the rear courtyards should be provided where necessary to ensure privacy for users of this open space.

(d) Private open areas should be directly accessible from the primary living area and shall be relatively level for a minimum of 3 metres from the dwelling.

For dwellings in the residential flat building:

(e) Private open space shall be accessible from the living area of dwellings.

(f) For dwellings with ground level access, private open space shall be provided with a minimum width of 4 metres and a depth of 3 metres.

(g) This private open space shall be provided within one metre of natural ground level and may be included as part of the minimum landscaped area requirements.

(h) Enclosing screen walls or fences where provided shall be designed to ensure privacy from communal open space, access ways or external roads.

(i) In order to provide useable open space to dwellings above ground level, a balcony or terrace is to be provided to each dwelling, which shall have a minimum area of 10m^2 and a minimum dimension of 2 metres.

2.9.3. COMMON OPEN AREA

OBJECTIVES:

(i) To provide common open space for use by residents for relaxation and recreation.

(ii) To provide common landscaped space that improves the visual amenity of the development with adjoining dwellings as well as between proposed dwelling clusters within the development, and allows for greater psychological well being of the residents.

(iii) To provide common landscaped areas between the development and the street frontage.

(iv) To provide opportunities for additional landscaping which add to the amenity of the site.

DEVELOPMENT CONTROLS

173-175 Pennant Hills Road

(a) In order to provide for the recreational needs of the residents, a common open space is to be provided in a singular parcel. Such open space area is to include equipment such as seating, shade structures, BBQ and children's play equipment for passive recreational use.

(b) The centrally located common open space shall have an area equal to 10m^2 per dwelling in a multi dwelling housing development and 20m^2 per residential flat and will include areas of level space to accommodate children play area or recreation facilities.

If any dwelling in a multi dwelling housing dwelling is not provided with 50% of the floor area of the unit as private open space the area of private open space not provided within the courtyard must be added to the minimum common open space requirement. (Refer to Section 3.9.2 Development Control (a)).

(c) Additional common landscaped space will be provided along the street frontage of Pennant Hills Rd, along the Sandringham Dr access and throughout the site which will improve the visual amenity of the development.

(d) The maximum change in level between the kerb height of the internal road and the finished level of the common open space shall be 600mm.

(e) A pedestrian link should be provided between the pedestrian entrances of the residential flat

buildings and the common open area in the centre of the site. The pathway link should be direct, and maintain lines of sight along the pathway from the residential flat building to the communal area. Landscaping shall define the pathway route to enhance site legibility.

179 Pennant Hills Road

(f) If more than 5 dwellings are proposed on this site a common open space equivalent to $10m^2$ per unit must be provided with a minimum dimension of 12 metres.

2.10. SOLAR ACCESS

OBJECTIVES

(i) To ensure reasonable access to sunlight for living spaces within buildings and open space areas around the buildings.

(ii) To ensure no adverse overshadowing of habitable rooms or the principal area of private open space of adjoining properties occurs.

PERFORMANCE CRITERIA

(a) Buildings are to be designed and sited to minimise loss of solar access to adjacent buildings.

(b) To ensure common open space areas receive adequate sunlight.

(c) Design of dwellings is to maximise solar access to living rooms, where possible.

(d) Deciduous species should be planted to improve solar access where appropriate, particularly to the north of solar courtyards.

(e) In order to maximise solar access, living areas of buildings should where possible, be located on the north side of the dwelling, with north facing walls orientated between 20^o west and 30^o east of true north.

DEVELOPMENT CONTROLS

(a) Buildings should be designed to enable private open space areas to enjoy at least four hours of sunlight to 50% of the areas between 9.00 am and 3.00 pm on 21 June. Where this cannot be achieved, provision for additional solar access to the windows of the primary living area for a similar time period will be considered.

(b) The proposed development shall be designed to ensure solar access to adjoining properties is retained and these living and landscaped areas receive at least four hours of sunlight between 9.00 am and 3.00 pm on 21 June.

(c) Buildings should be arranged on 173-175 Pennant Hills Road and 179 Pennant Hills Road to optimise solar access opportunities. The plan in Figure 11 shows the principle of establishing north or east/west facing courtyard/balcony opportunities to create the optimum solar outcome.

(d) Shadow diagrams are to be submitted to demonstrate compliance with the criteria described above.

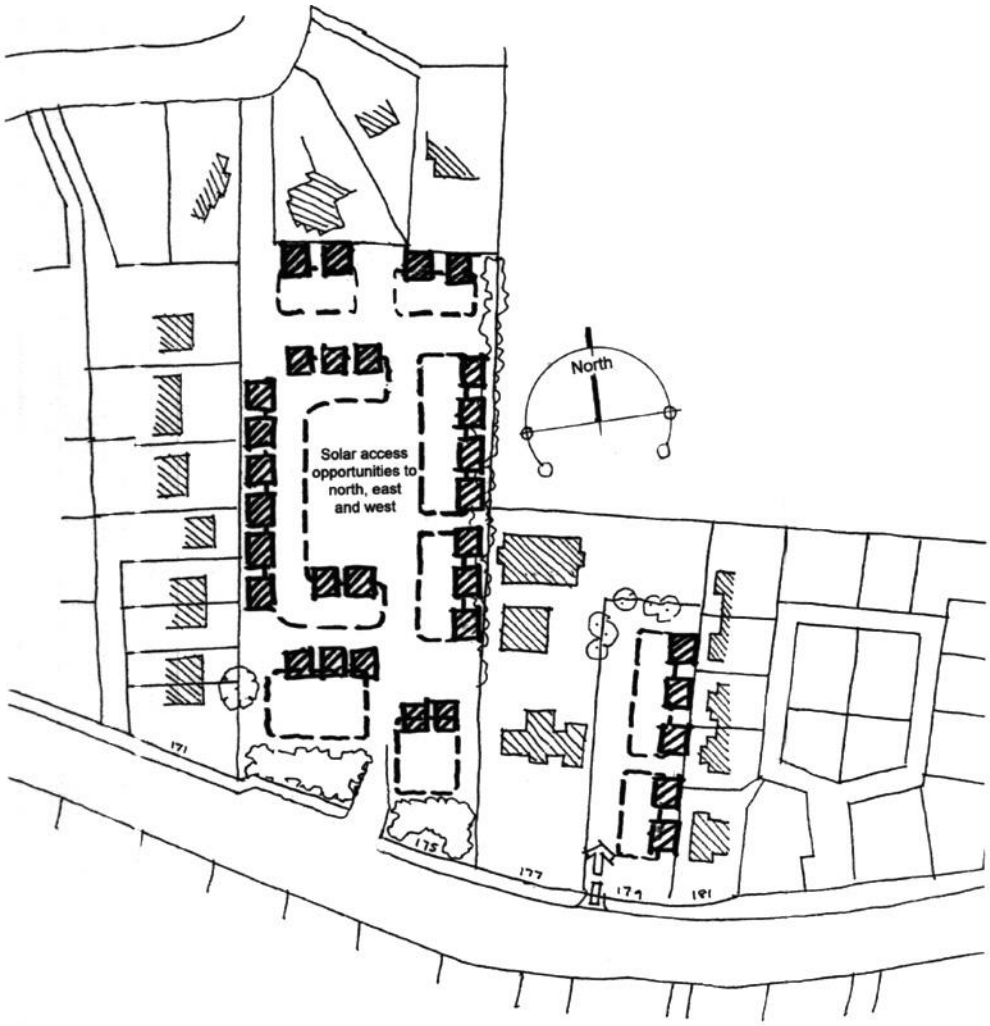


Figure 11 Solar access

2.11. ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

OBJECTIVES

(i) To achieve energy efficient and environmentally sensitive developments.

(ii) To encourage the use of renewable, energy efficient materials and fixtures that is durable and cost effective in accordance with Councils objectives.

(iii) To consider the long term impact of production and use of materials and products used in the development.

(iv) To provide adequate insulation and thermal mass to enhance the thermal comfort of residents and to reduce energy usage within the development.

(v) To maximise use of natural lighting and to minimise energy usage through energy efficient fittings.

(vi) To reduce water consumption of the development.

(vii) To explore the use of alternate renewable energy systems.

DEVELOPMENT CONTROLS

(a) All dwellings should be designed to maximise cross-ventilation where possible.

(b) All dwellings should utilise solar access to living areas where possible.

(c) All toilet cisterns to have a AAA dual flush rating. All showerheads to have a AAA rating. Appliances are to be water efficient, preferably with a AAA rating.

(d) Roof orientation and pitch of all new dwellings/buildings should be designed and suitable for potential use of solar collectors.

(e) Landscape design should assist in microclimate management through the location and selection of appropriate trees and planting allowing solar access to living areas of new dwellings.

(f) All building shall adopt:

- Waste recycling and water re-use strategies and actions.
- Energy and water efficient fittings.
- Stormwater run of infiltration, detention and treatment.
- Retention of suitable vegetation within the site and providing suitable re-vegetation where required.

(g) All common open space, pathways, and parking area lighting shall be powered by a grid interactive Photo-voltaic Solar System.

2.12. VISUAL & ACOUSTIC PRIVACY

OBJECTIVES

(i) To site and design buildings in a manner which considers the visual and acoustic privacy of nearby dwellings and private open space.

(ii) To contain noise between dwellings or in communal areas without reasonable transmission to adjoining dwellings.

(iii) Dwellings should be arranged so that reasonable internal privacy and privacy in respect to adjoining residences and private open space is achieved.

PERFORMANCE CRITERIA

(a) Any dwellings located close to Pennant Hills Road or affected by traffic noise from Pennant Hills Road are to comply with the criteria for road and traffic noise contained in the publication "Environmental Criteria for Road Traffic Noise", prepared by the Environmental Protection Agency May 1999.

(b) An acceptable acoustic environment can be achieved for noise sensitive rooms and for outdoor recreation spaces by means of:

- Use of noise resistant walls, ceilings, floors and roofing material.
- Site planing and layout.
- Location of noise sensitive rooms.
- Use of double glazing where required.
- Use of fencing, balconies and walls as noise buffers.
- Landscaping.

(c) Direct views from living rooms of dwellings into adjoining private open space or the interior of other dwellings is to be screened or obscured.

DEVELOPMENT CONTROLS

(a) The development should achieve LA10 (20 minute) noise level or less in habitable rooms, with windows and external façade doors closed, shall be less than 40dBA.

(b) The development should achieve LA10 (20 minute) noise level or less in habitable rooms, with windows and doors 'normally' open (i.e. at least 50% of flow area of the room), shall be less than 50dBA. This requirement may be equally satisfied by the alternate provision of either a mechanical or natural ventilated system or a special acoustic design solution as approved by Council.

(c) Dwellings that face Pennant Hills Rd are to be designed to achieve acceptable internal noise levels, based on AS 3671 – Road Traffic Noise Intrusion Guidelines.

(d) Dividing walls and floors shall be constructed to limit noise transmission to 45 STC (Sound Transmission Class) in accordance with part F(5) of the Building Code of Australia.

(e) An acoustic study will be required to demonstrate that the objectives and criteria for acoustic privacy can be met.

(f) All costs associated with provision of acoustic measures in (a) to (e) above are to be provided by the developer at no cost to the Roads and Maritime Services.

(g) Second storey windows on the elevations fronting 31-35 Sandringham Drive shall have a

minimum sill height of 1.5 metres from the second storey floor level except where obscured glass or similar material is used to restrict views into adjoining properties.

2.13. WASTE MANAGEMENT

Refer to Part B Section 4 – Multi Dwelling Housing and Part B Section 5 – Residential Flat Buildings.

2.14. STORAGE

OBJECTIVES

(i) To ensure that each dwelling has reasonable private storage space.

(ii) Storage requirements include household items either within the dwelling or in a secure garage.

DEVELOPMENT CONTROL

(a) At least 10 m^3 must be provided for storage per dwelling within the dwelling or within a lockable garage. If located within a garage it must not encroach into the parking space. Storage areas are to have a min height of 2.1 metres.

2.15. DRAINAGE AND WATER QUALITY

OBJECTIVES

(i) To provide for on-site detention of site drainage.

(ii) To ensure that development does not exacerbate downstream drainage problems.

(iii) To ensure the quality of water leaving the site does not create downstream water quality problems.

(iv) To allow for future provision of stormwater storage and reuse for individual dwellings.

PERFORMANCE CRITERIA

(a) Water sensitive urban design (WSUD) principle should be employed in the management of the sites stormwater in terms of water retention, reuse and cleansing.

DEVELOPMENT CONTROLS

(a) Council requires the preparation of a Stormwater Management Plan, which includes:

- On-site detention for the 1:100 year event to reduce the possible adverse impacts of overland flow.
- An on-site detention system is required which is likely to be in the form of underground detention tanks. The location of these to detain water should be considered as an integral part of the site design. It is important that the location of any infrastructure does not compromise other site design outcomes in terms of suitable landscaping.
- Drainage easements will be required where the development property does not drain directly into the existing stormwater drainage system or a public road.
- Erosion and sedimentation controls and plan are to be provided in accordance with the document "Managing Urban Stormwater from Construction Sites", produced by the NSW Department of Housing August 1998.
- Pollution control pits are required to ensure improved water quality at discharge point to Council's drainage system. These control pits can either be installed at the point of discharge or as a central unit prior to discharge into the detention system.
- Allow for provision of a communal rainwater tank, or storage facilities for the domestic and landscape reuse of stormwater, integrated into the OSD system, as allowed by Council. A rainwater re-use system with a minimum capacity of 2000 litres per dwelling (including residential flat building dwellings) must be provided. Re-use of the rainwater shall occur in accordance with the requirements set out in Appendix 2 Water Sensitive Urban Design of the Hills Development Control Plan.
- Developments within the Upper Parramatta Catchment area will have to comply with any requirements of the relevant Authority.

2.16. SECURITY

OBJECTIVES

(i) To ensure personal and property security within the site for residents and visitors.

(ii) To provide for proper demarcations between private and public spaces.

(iii) To enhance perceptions of community safety.

PERFORMANCE CRITERIA

(a) Buildings should be designed to overlook public and communal streets and spaces to provide for casual surveillance by residents.

(b) Buildings, fences and landscaping should clearly define territory and ownership of all public, communal, semi-private and private space.

(c) Appropriate lighting should be provided to all pedestrian paths between public and communal areas, parking areas and building entries.

(d) Building entries to provide security and safety for both residents and visitors.

(e) Anti Graffiti measures should be provided in the design of any fencing or walling to Pennant Hills Road.

2.17. ACCESS & ADAPTABILITY

OBJECTIVES

(i) To provide 'visitability' across common property and to provide convenient conditions for the use of strollers and similar.

(ii) To provide a small number of dwelling units suitable for use by disabled people.

DEVELOPMENT CONTROLS

(a) Applications for development approval shall be accompanied by an 'Access Plan' that demonstrates the compliance of the proposed development with Australian Standard 1428 Part 1.

(b) At least 1, or 5 percent of the units in any development of 20 or more units must be either:

- An accessible unit to Australian Standard 1428 part 2, suitable for a wheelchair user; or
- Meeting Class B adaptability under Australian Standard 4299.

(c) Each unit so provided above shall have an accessible car parking bay complying with Australian Standard 2890 for people with a disability, and be accessible to a pick-up and drop-off point.

(d) A lift is to be provided for all residential flat buildings to serve all dwellings over two storeys above ground level.

(e) A fence, with a lockable gate, shall be provided in a location on the site where it restricts pedestrian access through the site from Pennant Hills Road to Sandringham Drive. Only residents of the development should be permitted access through the gate.

2.18. CONTAMINATION ASSESSMENT

OBJECTIVES

(i) To ensure additional soil testing is undertaken prior to any development occurring to determine whether the site is contaminated.

(ii) To ensure if the site is identified as being contaminated that the site is remediated prior to any development proceeding.

DEVELOPMENT CONTROLS

(a) A further soil contamination report must be submitted with any development application for this target site to confirm whether or not the site is contaminated. The report will need to be prepared in accordance with Council's Guidelines for the Management of Contaminated Sites. If the soil contamination report identifies any contamination a remediation plan will be required to be submitted prior to any approval being granted by Council.

Note. A Preliminary Soil Contamination Study – May 2003 has been submitted to Council. While the report indicates that no soil contamination found further testing will be required.

(b) Where a remediation plan is submitted and endorsed by Council any development approval granted will be in the form of deferred commencement consent. The deferred commencement condition will require remediation of the site in accordance with the remediation plan before final approval is granted.

2.19. DEVELOPER CONTRIBUTIONS

Applicants should consult with Council's Section 94 Contribution Plan.

2.20. SYDNEY WATER REQUIREMENTS

OBJECTIVE

(i) To ensure the requirements of Sydney Water are addressed in the development of the site.

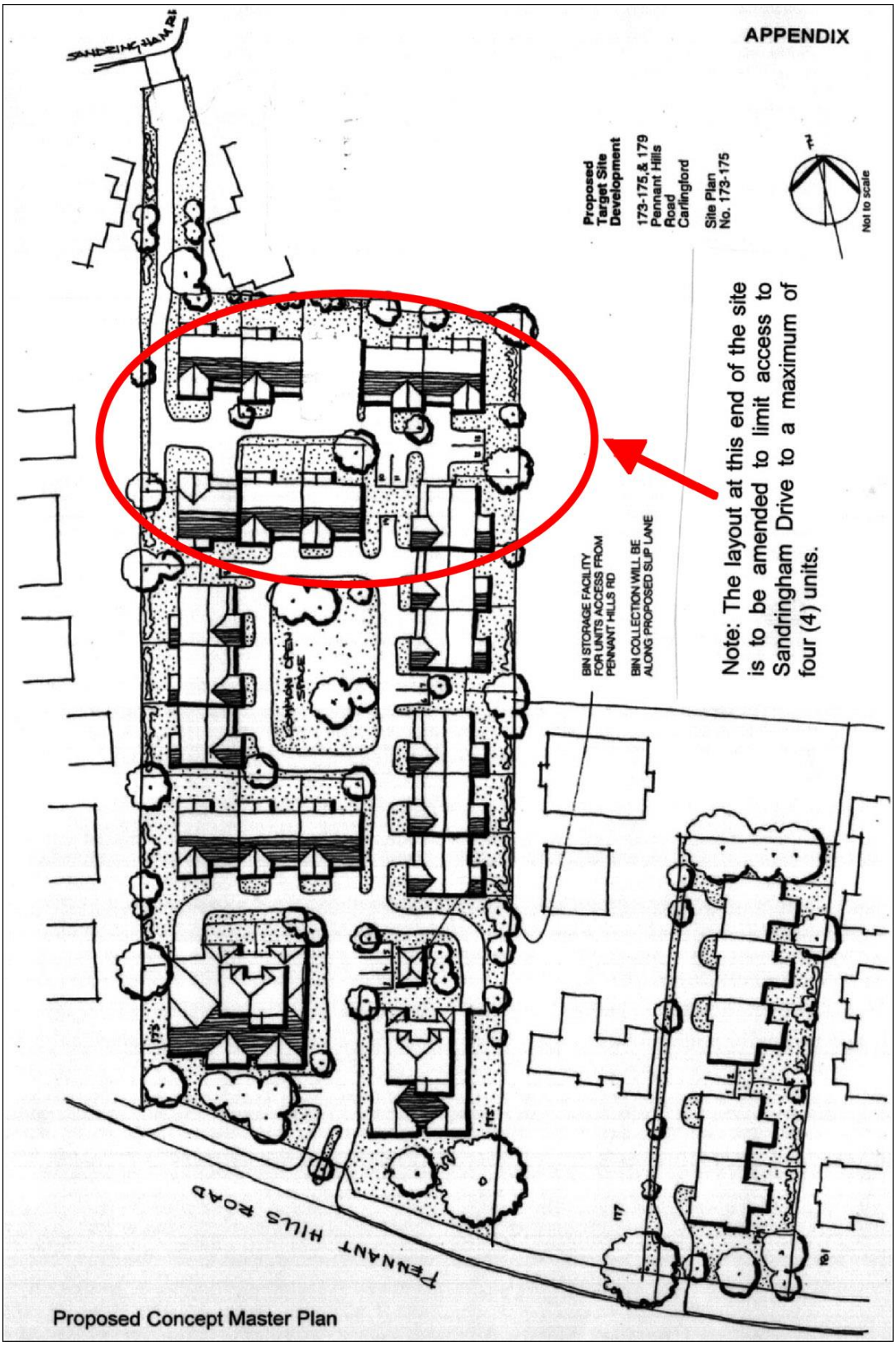
DEVELOPMENT CONTROLS

(a) A Section 73 Certificate must be obtained from Sydney Water. This will be a condition of any development approval granted by Council.

(b) All development over or adjoining any Sydney Water Services must comply with Sydney Water's "Guidelines for Building Over/Adjacent to Sydney Water Sewers"; (available from Development Coordination Branch of Sydney Water or Council's Forward Planning Team*).

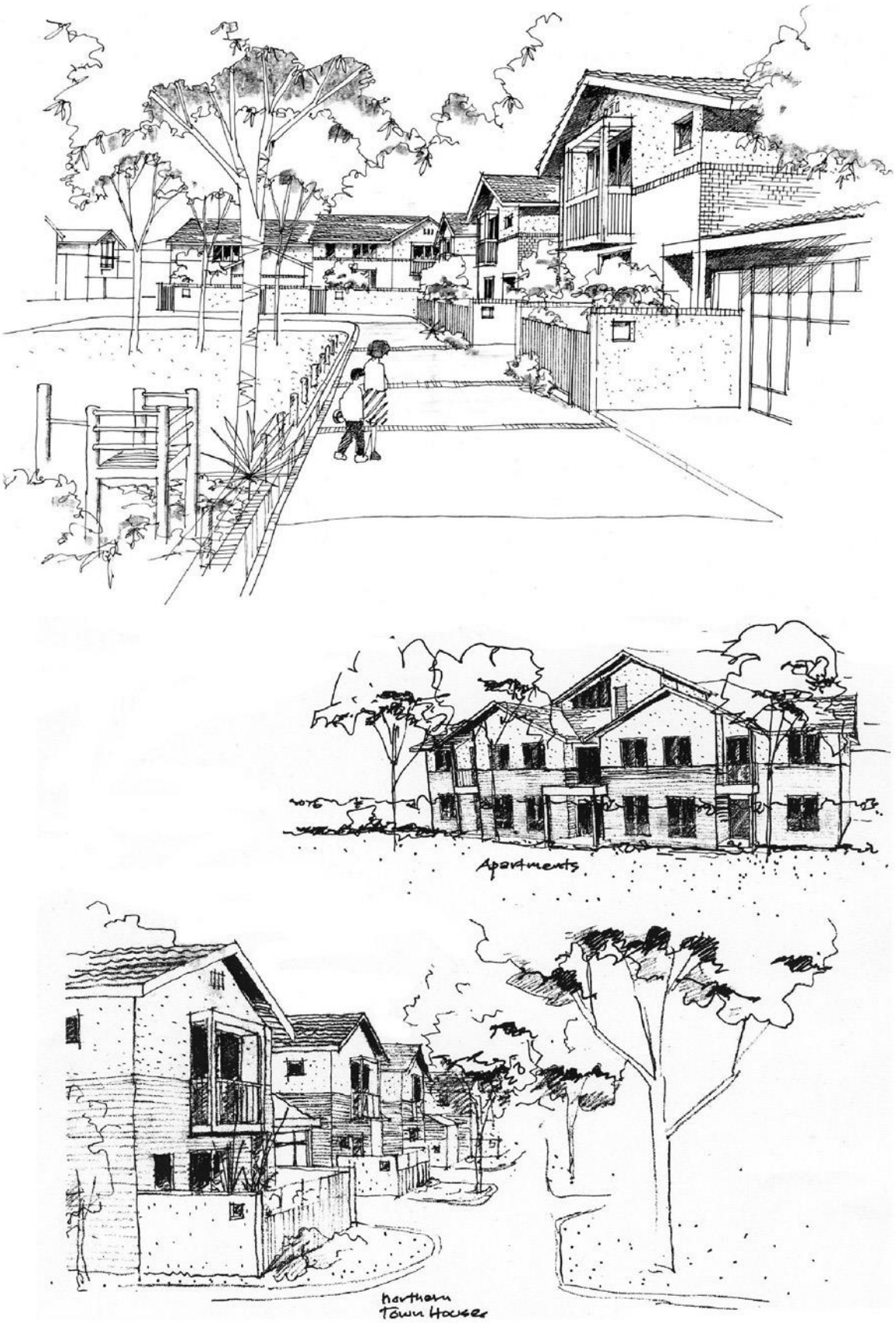
(c) In preparing the landscape plan for the site care should be taken to ensure species that have invasive root systems, that could potentially cause damage to water and sewer pipes, are not used. A schedule of species that Sydney Water consider unsuitable for propagation near water and sewer pipes are available from the Development Coordination Branch of Sydney Water or Council's Forward Planning Team*.

* Council's copies of these documents are saved as Doc No4734111 in ECM.



PROPOSED CONCEPT MASTER PLAN

APPENDIX 1



PROPOSED BUILDING FORM AND CHARACTER