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D2 Residential Development

2.1. Single Dwellings

The following developments are covered by this section:

- a) single dwelling development; and
- b) alterations and additions to existing single dwelling development.

This section provides specific controls for single dwellings in addition to the general controls elsewhere in this DCP.

2.1.1 Residential Character



The residential character of any neighbourhood is determined by:

- 1) Location and density of development:
 - a) proximity to busy centres or major roads
 - b) residential density and mix of housing types
 - c) proximity to heritage precincts
 - d) frontage to public parks.



- 2) The local landscape and its configuration:
 - a) flat or sloping;
 - b) well-vegetated or cleared;
 - c) frontages to streams or the Nepean River.



3. Predominant patterns of planning and design
 - a) displayed by local buildings and their gardens;
 - b) setbacks and building separation;
 - c) height, scale and bulk;
 - d) garaging;
 - e) articulated forms and varied plantings.

A. Objectives

The objectives of this Section are:

- a) To establish overall guidelines for environmentally appropriate development
- b) To adopt the form and character of established neighbourhoods to guide environmentally appropriate design and development; and to stimulate a vibrant streetscape that preserves traces of Penrith's past.
- c) To ensure that new development does not detract significantly from the quality and amenity of existing dwellings and private gardens.

2.1.2 Setbacks and Building Envelope

A. Objectives

Building setbacks and envelopes are established to:

- a) reflect the character of established garden suburbs,
- b) provide for establishment of vegetation and reasonable separation between buildings
- c) To provide a high level of visual and acoustic privacy for residents and neighbours in dwellings and private open space.
- d) To ensure that building design minimises overlooking problems
- e) achieve site-responsive development
- f) protect the amenity of occupants by controlling:
 - i) visual impacts relating to height and bulk of buildings;
 - ii) the impact of loss of privacy, overshadowing and loss of views.

B. Controls

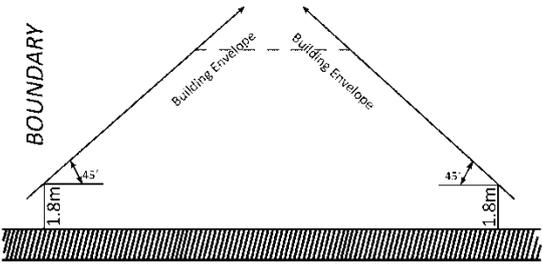
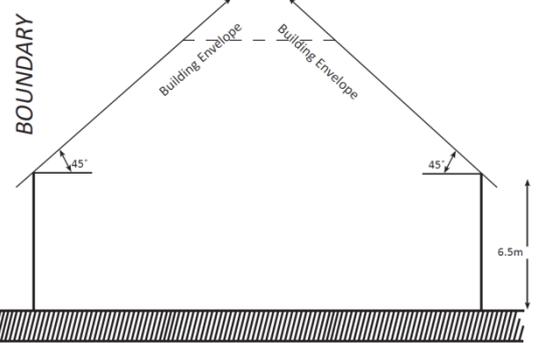
1. Minimum front and side setbacks:

- a) Front setback is the greater of either
 - i) 5.5m, or
 - ii) The average of the setbacks of the adjoining properties
- b) Front setbacks for corner sites are;
 - i) Primary street frontage (measured on the shortest boundary, as in a) above
 - ii) Secondary street frontage is 3m to external walls and 5.5m to garage entrances. verandahs and pergolas are permitted to encroach 1.5 m beyond the adopted setback
- c) Encroachments to front setbacks
 - i) Verandahs and pergolas are permitted to encroach 1.5m beyond the setback to the primary street frontage
 - ii) Garages, carports and parking spaces, other than stacked parking or driveways, are not permissible within the front setback
- d) Side setbacks to external walls should be a minimum of 900mm.
- e) Rear setbacks
 - i) The minimum rear setback for a single storey building (or any single storey component of a building) is 4m
 - ii) The minimum rear setback for a two storey building (or any two storey component of a building) is 6m
 - iii) Minor, partial or point encroachments into the above rear setbacks may be considered on irregular shaped lots
 - iv) Rear setback areas are to be used predominantly for the provision of a landscaped area
- f) Exceptions to rear setbacks - consideration may be given to the erection of a non-habitable building or structure that does not comply with the minimum setback requirements if it can be demonstrated it will have minimal adverse impact on the subject property or any adjoining property.

2. Building Envelope

- a) Development is to be contained within the building envelope for the site. As shown in Figure D2.1 below, the building envelope means a height plane over the site at 45° from a specified height above natural ground level at the side boundaries of the site.

Figure D2.1: The building envelope is measured from natural ground level perpendicular to the side boundary at any given point along the wall.

Zone	Maximum building envelope
R2 Low Density Residential	 <p>The diagram shows a cross-section of a building envelope. A vertical line on the left is labeled 'BOUNDARY'. A horizontal line at the bottom represents the ground level. Two diagonal lines representing the roof slope meet at a peak. The angle between the roof slope and the ground level is marked as 45°. A vertical dimension line on the left indicates a height of 1.8m from the ground level to the boundary line.</p>
R3 Medium Density Residential	 <p>The diagram shows a cross-section of a building envelope. A vertical line on the left is labeled 'BOUNDARY'. A horizontal line at the bottom represents the ground level. Two diagonal lines representing the roof slope meet at a peak. The angle between the roof slope and the ground level is marked as 45°. A vertical dimension line on the right indicates a height of 6.5m from the ground level to the boundary line.</p>

- b) Encroachments – consideration may be given to minor encroachments to the building envelope for:
- i) Eaves and gutters
 - ii) Chimneys and antennas
 - iii) Pergolas, or
 - iv) Where it is demonstrated the encroachment is necessary to improve the design, external appearance or utility of the building and the variation will not impact adversely on the amenity of an adjoining property.

2.1.3 Development on Sloping Land

A. Objectives

- a. To ensure that development responds to topographical constraints.
- b. To minimise the bulk and scale of dwellings on steep slopes.
- c. To minimise the amount of cut and fill on sloping land.

B. Controls

- 1. The subdivision layout on cross slopes should incorporate wider/larger lots on steeper

land.

2. Floor levels/building platforms are to be stepped in response to the existing topography of the site.
3. Excavation or filling for the purpose of erecting a dwelling or ancillary development should not exceed 600mm in depth as measured from natural ground level.
4. Ground floor levels are to be a maximum of 800mm above natural ground level.
5. All retaining walls forward of the garage line must be constructed with masonry materials and finished to complement the house design.
6. With the exception of corner lots, where slopes exceed 10%, retaining walls may exceed 1m in height for a side boundary and 1.8m in height for a rear boundary, if comprehensive site benching is undertaken at the time of subdivision to produce a whole of site solution.
7. Lots with a side cross slope exceeding 5%, must respond to the slope of the land with either split level, drop edge beam, or bearer and joist design (or a combination of these).
8. Where front to back slopes are steep (i.e. approximately greater than 9%) house designs must respond to the topography of the land with either split level, dropped edge beam, or timber frame floor (bearer and joist) design - or a combination of these.
9. Garden retaining walls within lots are not to exceed 0.9m in height. Any remaining slope is to be graded out.
10. On lots sloping downhill to the street, dwellings shall be designed and constructed to achieve driveway and access gradients of no greater than 20% slope. This may be achieved by cutting the garage space into the slope within the building footprint. Dwellings should be terraced down the slope with activating features such as decks or balconies facing the street.
11. On lots sloping downhill from the street, dwellings shall be designed and constructed to optimise filling to achieve driveway and access gradients of no greater than 20% slope. This may be achieved by elevating garage and entry features within the building footprint. Dwellings should be terraced down the slope with features such as decks and balconies located towards the rear of the dwelling.
12. On lots sloping downhill from the street, the privacy of adjoining dwellings down slope should be preserved by providing screening vegetation between observable platforms and adjoining private open space areas, or integrating features such as timber screens to decks, or partially opaque windows where privacy is essential and screening vegetation is impractical.

2.1.4 Landscaped Area

A. Objectives

- 1) To retain a reasonable proportion of each site for landscaped garden areas,
- 2) To conserve significant existing vegetation, and
- 3) To provide appropriate separation between neighbouring dwellings and preserve private open space corridors along rear fence lines.

B. Controls

1) The minimum landscaped area of a site is:

Zone	Minimum landscaped area % of the site
R1 Residential General	40
R2 Low Density Residential	50
R3 Medium Density Residential	40
R4 High Density Residential	35

- 2) Calculation of landscaped area does not include areas of the site;
 - a) Less than 2m in width
 - b) Hard surface areas such as buildings, driveways and paved areas.
- 3) Calculation of landscaped area may include up to 15m² of any verandah, deck or patio that is attached to a dwelling at ground floor level and is associated with a landscaped area that is designated open space for that dwelling
- 4) A portion of the landscaped area should be connected to or directly adjacent to a living area of the dwelling.

2.1.5 Building Design/Site Works

A. Objectives

- 1) New buildings should show characteristics of established suburban neighbourhoods with;
 - a) dwellings oriented to face the street,
 - b) building forms that are stepped or articulated,
 - c) development that relates to the shape of the surrounding garden areas, and
 - d) development that does not detract significantly from the privacy and amenity of existing dwellings and private gardens.
- 2) Dwellings should be surrounded by private gardens, their facades should display a variety of materials and shading structures,
- 3) Garages should be integrated with the overall architectural form of the dwelling and designed so as not to dominate the street frontage.
- 4) Development responds to topography of the site and minimizes site disturbance.

B. Controls

- 1) Articulation
 - a) "Articulate" all building forms and facades:
 - i) stepping floor plans should be capped by a variety of roof forms and pitches;

- ii) every elevation should incorporate windows;
 - iii) walls should be overhung by shady verandahs, awnings and carports.
- 2) Bulk and Scale
- a) Two storey buildings to be designed as a combination of one and two storey elements with a variety of setbacks from boundaries
 - b) External walls are not to be longer than 8m between distinct corners or features such as projecting verandahs and awnings or banks of windows.
 - c) All balconies and decks higher than 800mm above existing ground level shall incorporate privacy measures such as screening or landscape planting.
- 3) Design
- a) Dwellings should front the street, and display a traditional configuration with:
 - i) The front door and a window to a habitable room facing the street
 - ii) Garages integrated within the building façade
 - iii) The size of driveways minimised, retaining sufficient area for landscaping of front gardens
- 4) Garages
- a) Must be setback at least 1m behind the building line of the dwelling
 - b) The total width of all garage doors facing a primary or secondary road frontage must not exceed;
 - i) If the lot has a width less than 15m measured at the building line – 4.8m
 - ii) If the lot has a width of more than 15m measured at the building line – 6m.
- 5) Corner Lots
- Development on corner lots is to be designed and orientated so as to address both street frontages and include appropriate design features and articulation.
- 6) Parking
- a) Parking is to be provided at the rate of:
 - i) A minimum of one space behind the building alignment
 - ii) Two spaces for each dwelling with two or more bedrooms, at least one of which is located behind the building alignment. Stacked parking is acceptable for additional spaces.

2.1.6 Solar Planning

A. Objectives

- a. Improve the energy efficiency of dwellings and achieve a high standard of residential amenity.
- b. To ensure adequate residential amenity through the provision of sunlight access and good solar amenity to the living spaces and private open space areas of dwellings.
- c. To recognise the reasonable expectation for a dwelling to have the ability to access sunlight.

B. Controls

- 1) Demonstrate that dwellings meet acceptable solar standards and that existing neighbouring and proposed private open spaces receive adequate solar access:
 - a) maximise potential for solar gain by placing windows in all exterior walls that are exposed to northern sun;
 - b) ensure that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to living zones of the dwelling, and the living zones of any adjoining dwellings;
 - c) ensure that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to 40% of the main private open spaces of the dwelling and main private open spaces of any adjoining dwellings, and
 - d) where existing overshadowing by buildings and fences reduces sunlight to less than this, sunlight is not further reduced by more than 20%.

2.1.7 Garden Design and Fences

A. Objectives

Gardens should be landscaped, surrounded by fences that enable surveillance of public places and are compatible with neighbourhood character.

B. Controls

- 1) Retaining walls:
 - a) generally should be no taller than 600mm;
 - b) should be separated from any associated fence by a planter-bed at least 500mm wide, minimising the apparent overall height of fencing;
 - c) should be separated from any driveway by a landscaped verge at least 500m wide, to prevent impact damage from vehicles.
- 2) Fencing;
 - a) Meets the requirements of the Dividing Fences Act 1991
 - b) Fences should be generally no taller than 1.8m or up to 2.4m on sloping sites, including the height of any retaining wall.
 - c) Fences along boundaries forward of the front building alignment should not be taller than 1.2m and consist of see-through construction;
 - d) Fences along shared driveways or fronting a public park should be 1m tall, or if taller, of see-through construction.
 - e) Fences in any location that can be seen from the street or fronts a public park frontage should not be constructed of solid metal panels.
 - f) If frontage is to a noisy thoroughfares solid masonry walls are acceptable to a maximum of 1.8m if corners and planting beds are incorporated every 5m.
 - g) Fencing of a "see-through Construction" includes panels set into a timber frame or between brick piers, where:
 - h) Any solid base is not taller than 600mm; and
 - i) Panels are spaced timber pickets or palings, or palisade fencing.

- 3) The rear boundary setback should provide:
 - a) The principal area of private open space;
 - b) a corridor of habitat, and a green backdrop that is visible from the street;
 - c) conservation for any existing corridor of mature trees; and/or
 - d) an interlocking canopy of low to medium-height trees and shrubs; predominantly species indigenous to the soils of Penrith City.
- 4) Planting along side boundaries is to provide small-to medium height canopy trees for sun-shading and privacy separation between neighbouring dwellings and yards;
- 5) Planting along narrow service areas is to provide feature plantings of ground covers pavers or an alternative water-permeable material such as river pebbles.
- 6) Street frontages are to;
 - a) be sympathetic to the natural setting and character in form materials and colour; and
 - b) incorporate mixed species of trees, shrubs, and accent plantings including flowers, ground covers and turf;
 - c) along noisy thoroughfares: noise attenuation with an interlocking canopy formed by at least two rows of trees under planted with dense hedges.
 - d) maximize natural surveillance from the street to the building and from the building to the street.

2.1.8 Significant Landscapes

A. Background

- 1) Across Penrith, there are many significant natural landscape precincts including:
 - a) frontages to the Nepean River;
 - b) escarpment footslopes in Leonay and Emu Heights;
 - c) the Cranebrook escarpment;
 - d) Glenmore Park, adjacent to the Mulgoa Nature Reserve;
 - e) wooded hillsides in South St Marys;
 - f) individual streetblocks identified by Council's Register of Significant Trees and Gardens; and
 - g) in Kingswood: Werrington Creek.
- 2) Across Penrith there are several significant landscape precincts such as parklands and open space corridors including:
 - a) parklands and open space corridors:
 - b) corridors along South and Ropes Creeks;
 - c) Chapman Gardens, Kingswood; and
 - d) Victoria Park, St Marys.

B. Objectives

In areas of particular significance to natural conservation or high environmental character, new development should demonstrate detailed design measures to protect that conservation significance or character.

C. Controls

For sites located within significant landscapes:

- 1) maintain natural topography and features such as rock outcrops;
- 2) preserve established trees, preferably as blocks or corridors of several trees;
- 3) ensure that long term survival of established trees is not affected by the location of buildings and pavements or construction works;
- 4) preserve clusters of established trees as blocks or corridors;
- 5) consider a wider side boundary setback as landscaped corridor to preserve trees and provide vistas between neighbouring buildings;
- 6) on sloping sites garages may be located at street-level within the front set-back, subject to an "open" design similar to a screened carport;
- 7) on sloping sites dwellings should be split-level designs, with the lowest floor level no higher than 1m above natural ground level;
- 8) in general, new plantings should be species indigenous to the local soil type, reinforcing visual and habitat values.

2.1.9 Significant Townscapes

A. Background

Across Penrith, there are many significant townscape precincts, including:

- a) heritage conservation areas of Lemongrove and Derby Street;
- b) the Warwick Street neighbourhood;
- c) the "Duration Cottages" in St Marys;
- d) surrounding Cook Park, St Marys South;
- e) the "Permanent Cottage Area", St Marys North;
- f) post-war subdivision, St Marys North;
- g) other areas identified in the Penrith Heritage Study.

B. Objectives

In areas of particular significance to urban conservation, new development should demonstrate detailed design measures that protect heritage significance or character.

C. Controls

- 1) In neighbourhoods with townscape significance, new dwellings should:
 - a) adopt the predominant width, height, scale and stepping of floorplans that are characteristic of existing buildings;
 - b) adopt roof pitches and forms that match neighbouring buildings;

- c) minimise the width and area of driveways visible from public frontages, and conceal garages from public frontages;
 - d) incorporate simple detailing of building forms and openings, rather than attaching "stuck-on" details to gable ends and verandahs;
 - e) incorporate garages that are either concealed behind new buildings, or designed like a screened verandah;
 - f) conserve vegetation that has visual or historical significance.
- 2) For redevelopment of sites that have an existing cottage the existing dwelling wherever possible should be maintained and alterations should be designed so that they are sympathetic to the character or heritage value of the original building by:
- a) maintaining the general configuration of surrounding garden areas and setbacks from side boundaries;
 - b) with additions located to the rear of the existing building; and
 - c) within or behind the original roofline; or
 - d) capped by a new roof matching the pitch and form of the original;
 - e) consider verandahs and awnings to screen elevations and reduce the scale of new walls.

2.2 Dual Occupancies

The following developments are covered by this section:

- a) dual occupancy development; and
- b) alterations and additions to existing dual occupancy development.

This section provides specific controls for dual occupancy development in addition to the general controls elsewhere in this DCP.

2.2.1 Residential Character

A. Background

The residential character of any neighbourhood is determined by:



- 1) Location and density of development:
 - a) proximity to busy centres or major roads;
 - b) residential density and mix of housing types;
 - c) proximity to heritage precincts;
 - d) frontage to public parks.



- 2) The local landscape and its configuration:
 - a) flat or sloping;
 - b) well-vegetated or cleared;
 - c) frontages to streams or the Nepean River.



3) Predominant patterns of planning and design, displayed by:

- a) local buildings and their gardens;
- b) setbacks and building separation;
- c) height, scale and bulk;
- d) garaging;
- e) articulated forms and varied plantings.

2.2.2 Preferred Configuration for Dual Occupancy Development

A. Objectives

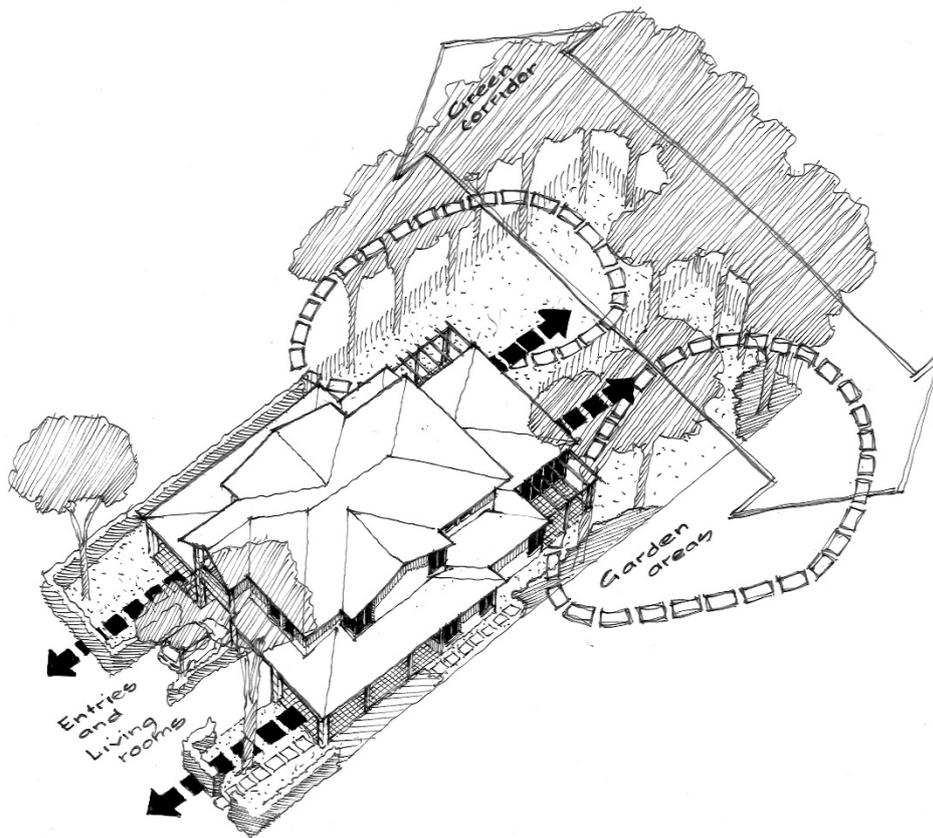
- 1) Dual occupancies should adopt key features of established suburban design.
- 2) Two dwellings fronting the street, with their entrances, the windows to principal living rooms and private gardens facing the street or rear boundary, as seen in figure D2.2.

B. Controls

- 1) New development should incorporate the traditional configuration of the cottages and cottage gardens that define the character of Penrith's established neighbourhoods, because:
 - a) traditional development demonstrates social and urban design benefits, particularly the orientation of dwellings and their private open spaces towards the street rather than overlooking neighbouring dwellings and gardens;
 - b) patterns of buildings and private gardens in established neighbourhoods have visual and symbolic richness that are valued by their community;
 - c) the use of traditional features softens the popular perception that redevelopment is changing the traditional character of Penrith City.
- 2) There are several possible types of dual occupancy development:
 - a) attached: as semi-detached pairs fronting the street, or one dwelling set behind another;
 - b) detached: either two dwellings fronting the street, or one dwelling set behind another.
- 3) In order to reflect patterns of traditional development, the preferred configuration for dual occupancies involves a "green corridor" of trees and shrubs along rear boundaries:
 - a) conserving remnant vegetation;
 - b) providing new shelter and habitat;
 - c) contributing to streetscape; and
 - d) providing a green outlook for dwellings.

- 4) In order to reflect patterns of traditional development, the preferred configuration for dual occupancies involves Substantial back garden areas:
 - a) adjoining neighbouring back yards;
 - b) surrounded by stepping building forms, predominantly of a single storey.
- 5) In order to reflect patterns of traditional development, the preferred configuration for dual occupancies involves garages integrated with the design of buildings and front gardens:
 - a) allowing living areas and entrances to remain visible from the street;
 - b) maximising the area available for front garden plantings.

Figure D2.2



2.2.3 Alternative Configuration for Dual Occupancy Development.

A. Background

Dual occupancy development might also involve retention and renovation of an existing dwelling. In that situation, the new dwelling may be sited behind the dwelling to be retained. Because this form of development replaces the back-yard with a new dwelling, it is not entirely consistent with traditional suburban design. Nevertheless, the potential for undesirable visual and amenity impacts can be minimised by adopting features that are typical of traditional development.

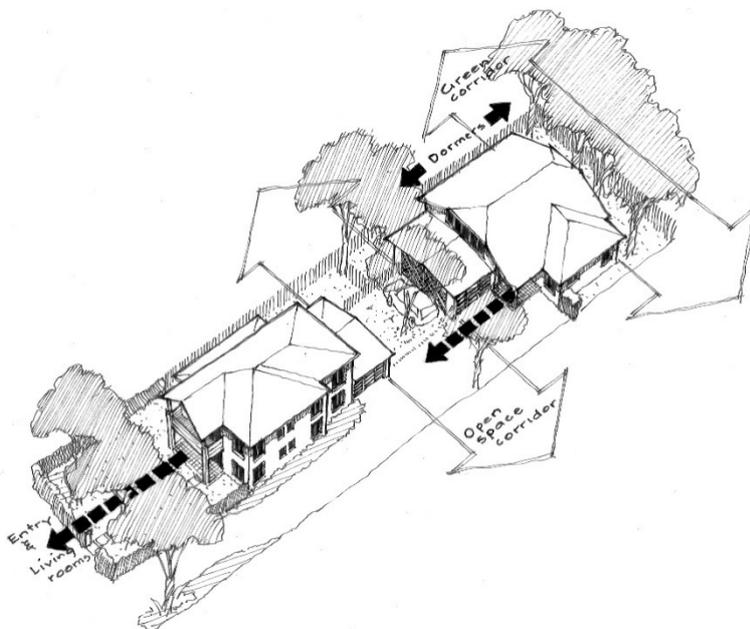
B. Objectives

Both dwellings, their entrances, the windows to their principal living rooms and private gardens face the street or the rear boundary.

C. Controls

- 1) Where dual occupancy development involves two dwellings placed one behind the other a "green corridor" of trees and shrubs along rear boundaries (as shown in figure D2.3):
 - a) conserving remnant vegetation;
 - b) providing new shelter and habitat;
 - c) contributing to streetscape; and
 - d) providing a green outlook for dwellings.
- 2) Where dual occupancy development involves two dwellings placed one behind the other buildings should be separated by a corridor of open space to:
 - a) lined with shady trees;
 - b) as garden courtyards; or
 - c) open car-parking courts.
- 3) Where dual occupancy development involves two dwellings placed one behind the other parking areas are to be concealed from the street to avoid the appearance of "garage architecture".
- 4) Where dual occupancy development involves two dwellings placed one behind the other verandahs and private garden courts are required to fill the front garden to:
 - a) encourages active use by residents;
 - b) provides for attractive street-frontages.

Figure D2.3



How much floor space is appropriate to your site

2.2.4 Urban form

A. Objective

New buildings should show characteristics of traditional suburban development: dwellings oriented to face the street, building forms stepped or articulated, and integrated with the shape of surrounding garden areas.

B. Controls

- 1) Both dwellings should front the street, and display a traditional orientation with:
 - a) a semi-detached configuration, and an individual architectural appearance for each dwelling (that is, non-symmetrical); and
 - b) living rooms and entrances facing the street rather than neighbouring properties; and
 - c) extensive private gardens to the rear adjacent to neighbouring yards; and
 - d) garages integrated within the building façade, ensuring that at least one principal living room and the entry to each dwelling are visible from the street; and
 - e) the size of driveways minimised, retaining sufficient area for attractive front gardens.
- 2) For any dwelling behind the street frontage:
 - a) a single storey appearance; and
 - b) living rooms, entrances and any dormer windows should face the street and / or the landscaped rear boundary setback; and
 - c) private gardens fill the rear setback; and
 - d) conceal garages from the street
- 3) Avoid "gun-barrel" style developments with long buildings, long straight driveways and rows of uniform width garden courtyards:
 - a) for attached dwellings, use stepped walls to cast shadows and reduce apparent scale of buildings;
 - b) for detached buildings that are set one behind the other, separate each building by an "open space corridor" at least 4m wide running across each site:
 - a combination of garden areas and parking courtyards; or
 - open parking spaces lined by an "avenue" of shady, overhanging trees;
- 4) "Articulate" all building forms and facades by design measures that cast deep shadows across every elevation:
 - a) external walls should not be longer than 5m between distinct corners;
 - b) use a variety of roof forms and pitches;
 - c) provide windows in every elevation;
 - d) use a variety of shady verandahs, awnings and car-ports.

2.2.5 Front and Rear Setbacks

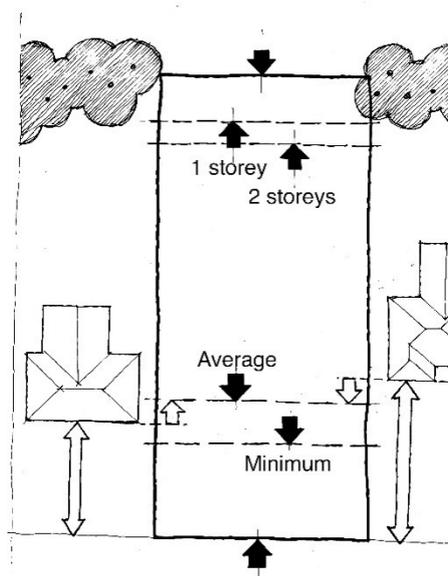
A. Objective

Setbacks are to reflect the character of established garden suburbs, and provide for development of flora and fauna corridors (as shown in figure D2.4).

B. Controls

- 1) Development must be within the development footprint which is determined by the maximum development footprint for your site by:
 - a) The minimum rear setback for a single storey building (or any single storey component of a building) is 4m.
 - b) The minimum rear setback for a two storey building (or any two storey component of a building) is 6m.
 - c) Adopting an average 6m rear setback on irregular shaped allotments; and
 - d) Adopting a front setback that matches the neighbourhood character.
- 2) Within the rear boundary setback:
 - a) there shall be no building encroachments either above or below ground (eaves excepted);
 - b) maximise the amount of undisturbed soil, encouraging rapid growth of healthy trees and shrubs;
 - c) where there are physical encumbrances such as open drains, increase the setback accordingly.
- 3) Determine an appropriate front setback:
 - a) either average the setbacks of
 - b) the immediate neighbours; or
 - c) adopt a 5.5m minimum whichever is the greater dimension;
 - d) and provide extensive landscaping within the front setback area.
- 4) Permissible encroachments within the front setback are:
 - a) verandahs and pergolas only;
 - b) with a maximum 1.5m encroachment.
- 5) Garages and parking spaces are not permissible within the front setback, other than stacked parking or driveways leading to a garage.

Figure D2.4



2.2.6 Building Envelope and Side Setbacks

A. Objective

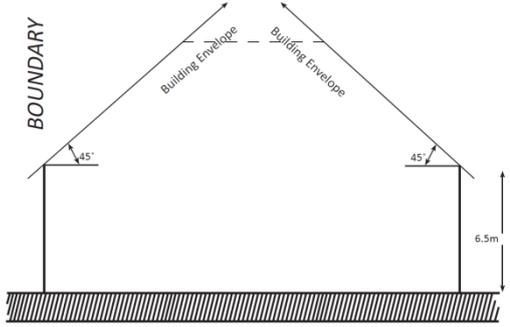
Comply with building envelope controls, minimise disturbance to existing topography and natural soil-profiles, and provide for reasonable landscaped separation between neighbouring buildings.

B. Controls

- 1) Development is to comply with the building envelope for the site. The building envelope means a height plane over the site at 45 degrees from a specified height above natural ground level at the side boundaries of the site, as shown in Figure D2.5.

Figure D.2.5: The building envelope is measured from natural ground level perpendicular to the side boundary at any given point along the wall.

Zone	Maximum building envelope
R2 Low Density Residential	

Zone	Maximum building envelope
R3 Medium Density Residential	

- 2) The building envelope, and the apparent rise in storeys and external wall heights, shall be measured relative to:
 - a) side boundaries only; and
 - b) existing ground level.
- 3) Only minor encroachments through the building envelope shall be permitted:
 - a) eaves to main roofs;
 - b) chimneys and antennas;
 - c) pergolas.
- 4) Cut and fill and ground floor heights are restricted by the following:
 - a) provide stepping building platforms in line with existing topography with floors no higher than 1m above natural ground level;
 - b) restrict cut-and-fill to a maximum of 500mm;
 - c) provide effective sub-soil drainage.
- 5) Pitches for main roofs are to be in accordance with the following:
 - a) for single-storey dwellings: not greater than 35 degrees, providing for attic rooms;
 - b) for two storey dwellings: not greater than 25 degrees, in order to reduce the visual scale of buildings.
- 6) Setbacks from side boundaries should be varied to articulate walls to side boundaries by the following:
 - a) maximise setbacks (and landscaped area) beside neighbouring cottage back-yards;
 - b) Otherwise, a minimum 900 mm setback at ground level for walls no longer than 10m;
 - c) a greater set-back for second storey walls, consistent with the building envelope.
- 7) Zero setbacks from the side boundary are not permissible except for single garages with an open appearance. In addition these garages are to be no taller than 2.1 m at the boundary.
- 8) For any dwelling placed behind another fronting the street, attic rooms are permissible subject to:
 - a) being within the prescribed building envelope
 - b) within a hipped or gabled roof where the maximum roof pitch is 35 degrees

- c) provided that dormer windows do not face side boundaries.

2.2.7 Driveways and Parking Areas

A. Objective

Provide on-site parking at a level that encourages use of public transport. Minimise the area required for parking, encourage efficient land use and maximise the area available for landscaping and gardens.

B. Controls

- 1) Provide onsite parking in accordance with parking section of this DCP.
- 2) Garages for attached dwellings should:
 - a) occupy not more than 50% of any street frontage;
 - b) flanked by at least one principal living room that faces the street with secondary windows facing the side boundary for light and ventilation.
- 3) For dwellings located one behind the other, driveways should:
 - a) be separated from dwellings by a landscaped verge at least 1m wide;
 - b) where possible, also separated from boundary fences by a landscaped verge;
 - c) prevent adverse long-term effect upon any vegetation that must be preserved;
 - d) provide for effective and healthy landscaping along all site boundaries;
 - e) drain by gravity to Council's stormwater network.

2.2.8 Landscaped Area

A. Objective

Retain a reasonable proportion of each site for landscaped garden areas, conserve significant existing vegetation, and provide reasonable separation between neighbouring dwellings.

B. Controls

- 1) Landscaped areas should be:

Zone	Minimum landscaped area % of the site
R1 Residential General	40
R2 Low Density Residential	50
R3 Medium Density Residential	40
R4 High Density Residential	35

- 2) Landscaped areas should provide:
 - a) effective separation between neighbouring dwellings; and

- b) healthy growth of new trees and shrubs; and
 - c) long-term survival of existing vegetation required by Council to be preserved (both on-site and on neighbouring properties); and
 - d) private courtyards for all dwellings and a green outlook; and
 - e) civic gardens along street frontages.
- 3) Landscaped areas are required to:
- a) have a minimum width of 2m and serve as functional spaces;
 - b) should include private courtyards measuring a minimum of 30m²;
 - c) may include verandahs or patios that open directly to private courtyards;
 - d) do not include substantially-paved areas such as buildings, driveways and covered garages;
 - e) that part of any easement exceeding 10% of the site area shall not be included in the landscaped area calculation.

2.2.9 Solar Planning

A. Objective

- a) Improve the energy efficiency of dwellings and achieve a high standard of residential amenity.
- b) To ensure adequate residential amenity through the provision of sunlight access and good solar amenity to the living spaces and private open space areas of dwellings.
- c) To recognise the reasonable expectation for a dwelling to have the ability to access sunlight.

B. Controls

- 1) The applicant must demonstrate that dwellings meet acceptable solar standards and that existing neighbouring and proposed private open spaces receive adequate solar access by:
 - a. Providing shadow diagrams prepared by a qualified technician for all two-storey buildings and additions;
 - b. Illustrating the impacts of proposed development upon existing neighbouring dwellings and their open space areas;
 - c. Demonstrating shadows cast by neighbouring buildings;
 - d. Maximising potential for solar gain by placing windows in all exterior walls that are exposed to northern sun;
 - e. Ensuring that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to living zones (ie areas other than bedrooms, bathrooms, kitchen and laundry) of each dwelling, and the living zones of any adjoining dwellings;
 - f. Ensuring that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to 40% of the main private open spaces of the dwelling and main private open spaces of any adjoining dwellings; and
 - g. In situations where the existing overshadowing by buildings and fences reduces sunlight to less than the minimums noted above, the development is to not further reduced sunlight to the specified areas by more than 20%.

Urban Design Important Details

2.2.10 Significant Landscapes & Townscapes

A. Background

- 1) Across Penrith, there are many significant townscape precincts, including:
 - a) heritage conservation areas of Lemongrove and Derby Street;
 - b) the Warwick Street neighbourhood;
 - c) the "Duration Cottages" in St Marys;
 - d) surrounding Cook Park, St Marys South; and
 - e) other areas identified in the Penrith Heritage Study.
- 2) Across Penrith, there are many significant landscape precincts including:
 - a) frontages to the Nepean River;
 - b) footslopes to the escarpment in Emu Heights and Leonay;
 - c) Glenmore Park, adjacent to the Mulgoa Nature Reserve;
 - d) wooded hillsides in St Marys South;
 - e) individual streetblocks, such as the block surrounded by Derby, Lethbridge, Doonmore and Evan Streets;
 - f) Cranebrook escarpment.

B. Objective

In areas of particular significance to urban conservation, environmental character, new development should demonstrate detailed design measures that protect and complement heritage significance or character.

C. Controls

- 1) Development of sites located in areas of landscape significance are to:
 - a) maintain natural topography and features such as rock outcrops;
 - b) preserve established trees, preferably as blocks or corridors of several trees;
 - c) ensure that long term survival of established trees is not affected by the location of buildings and pavements or construction works;
 - d) incorporate new plantings that reinforce the visual and habitat values;
 - e) use split-level building designs that step up hillside sites: and
 - f) ensure that the lowest floor level is not higher than 1m above natural ground;
 - g) on sloping sites, garages and parking areas may be located at street-level within the front set-back, subject to an "open" design similar to a screened carport;
 - h) in general, new plantings should be species indigenous to the local soil type, reinforcing visual and habitat values
- 2) In neighbourhoods with townscape significance, new development should:
 - a) conserve vegetation that has visual or historical significance;
 - b) adopt the predominant width, height, scale and stepping of floor plans demonstrated by existing buildings;

- c) adopt roof pitches and forms that match neighbouring buildings;
 - d) minimise the width and area of driveways visible from public frontages, and conceal garages from public frontages (corner sites excepted);
 - e) incorporate simple detailing of building forms and openings, rather than attaching "stuck-on" details to gable ends and verandahs.
- 3) Redevelopment of sites with an existing cottage within a significant landscape or townscape areas are to:
- a) maintain the existing dwelling wherever possible; and
 - b) locate a new dwelling within the former back-yard;
 - c) emphasise the use of verandahs and awnings around all elevations to reduce the scale of long walls.

2.2.11 Corner Sites and Park Frontages

A. Objective

For allotments facing two streets or adjoining a public park, apply traditional principles of orientation and articulation to both of the public frontages.

B. Controls

- 1) measure the building envelope relative to the longest common residential boundary; and
- 2) the rear setback and the averaged front setback may be measured relative to the shortest residential boundary;
- 3) minimum setbacks from the secondary street frontage to external walls is to be no less than 3m
- 4) minimum setbacks from the secondary street frontage to garage entrances is to be 5.5m;
- 5) minimum setbacks from the secondary street frontage to verandahs is to be 3m;
- 6) living rooms, dwelling entrances and verandahs may face either street frontage;
- 7) garages should have an "open" design (similar to screened carports or verandahs), and should architecturally divide each development into two individual dwellings;
- 8) development should appear as two buildings, with facades to both buildings not longer than 20m facing either street (excluding attached garages of an "open" design);
- 9) dormer windows to attic rooms may face either street frontage, but should not overlook a side boundary,
- 10) the area of driveways visible from the street should be minimised, providing for maximum front garden areas;
- 11) garden areas facing the street should be landscaped as private courtyards attached to dwellings.

2.2.12 Building Design

A. Background

The preferred form for dual occupancy development is a pair of dwellings, either attached or detached, that directly face a street frontage.

B. Objective

New developments should appear as individual dwellings surrounded by gardens, with facades that incorporate a variety of materials and shading structures.

C. Controls

- 1) Dormer windows apply traditional design practices including:
 - a) capped by hipped or gabled roofs, within the building envelope, and no taller than the ridgeline of the building's principal roof;
 - b) appear predominantly glazed, or open and have a vertical proportion;
 - c) occupy not more than 25% of any roof measured in elevation;
 - d) meet guidelines for privacy and solar planning; and
 - e) dormer face to sit above the roof plane, i.e. not to rise continuous from ground level.
- 2) Development should demonstrate a variety of architectural features:
 - a) to express the street frontage as two individual dwellings: attached features such as balconies and verandahs;
 - b) to down-play the appearance of garages awnings and balconies that overhang garage entries are to be used and the garage shutters used should incorporate windows, or semi-transparent screens of lattice, battens or similar materials;
 - c) to minimise scale and bulk the alignment of walls should be stepped and corners should be overhung by verandahs or awnings, or broken by windows and doors;
 - d) to accentuate articulation of building forms incorporate a variety of windows and doors in all visible walls, use a range of projecting roofs, awnings and verandahs and provide a combination of building materials: painted and face brickwork, and light-weight cladding.

2.2.13 Energy Efficiency

A. Objective

Dwellings shall be configured and constructed to minimize the energy required for space heating, cooling or lighting.

B. Controls

- 1) All new dual occupancy development should employ construction techniques that provide appropriate thermal mass such as:
 - a) ground floor: slab-on-ground;
 - b) walls: masonry internal walls to ground floor are desirable.
- 2) All new dual occupancy development should adopt an appropriate orientation for rooms and windows including:
 - a) living areas - facing within 30 degrees of solar north is desirable;
 - b) windows - at least 50% of glazing facing solar north is desirable, unprotected glazing facing east, west or south shall be avoided and for every habitable room, windows in two external walls are desirable;
- 3) All new dual occupancy development should provide effective shading from summer sun including:
 - a) Overhanging eaves: at least 450mm wide;

- b) Adjustable exterior shading devices for windows and doors to habitable rooms, and to skylights;
 - c) Pergolas over courtyards.
- 4) All new dual occupancy development should employ effective glazing including:
- a) for any large south-facing window: high performance glass e.g. double glazing in thermal break frames;
 - b) windows and doors facing east, south or west: high performance glass e.g. Double glazing in thermal break frames;
 - c) all windows and external doors: weather-stripping should be used.
- 5) All new dual occupancy development should adopt a configuration for dwellings that promotes cross-ventilation including:
- a) living areas and bedrooms with two external walls for windows;
 - b) particularly important for attic rooms.

2.2.14 Design of Dwellings and Private Courtyards

A. Objective

Dwellings and their private courtyards should achieve high levels of amenity, and demonstrate traditional practices of suburban design

B. Controls

- 1) A reasonable area of private open space should be provided for each dwelling:
 - a) a minimum of 30m²;
 - b) including one area measuring at least 6m by 4m, suitable for outdoor dining; and
 - c) located immediately next to, and level with, living or dining rooms; and
 - d) also incorporating an area for outdoor clothes-drying at least 2m wide, exposed to sunlight and breeze, screened from view by a fence or wall at least 1.8m tall; and
 - e) with access direct to the street or a common driveway through a courtyard at least 2m wide; or via a carport with an open design.
- 2) Landscaped areas should maximise the area available for private courtyards and gardens:
 - a) the front and rear boundary setbacks should be used for private residential gardens;
 - b) common open space should be restricted to the verges of any shared driveway.

C. Controls

- 1) Rooms within a dual occupancy development should have dimensions and an area that:
 - a) can accommodate the range of furniture typically associated with their function; and
 - b) recognise that furnishing options may be restricted by the location of windows and doors;
 - c) acknowledge that access and furnishing options may be restricted by raked attic ceilings;
 - d) provide flexibility to meet the needs of future occupants: for example home business activities and aged residents.

2.2.15 Garage Design

A. Objective

Garages should be designed to serve a variety of purposes, and their appearance should contribute to the overall diversity of building form and design.

B. Controls

- 1) Garage and parking areas should be planned to:
 - a) minimise disruption to traditional or established streetscapes by concealing from the street;
 - b) provide flexible accommodation for vehicles, domestic pets, storage, and covered areas for outdoor recreation (as shown in figure D2.6);
 - c) minimise transmission of noise to adjoining dwellings;
 - d) provide secure parking;
 - e) allow for maintenance access to rear garden courtyards; and
 - f) provide for effective and healthy landscaping along verges and boundaries.
 - g) permit all turning movements, full opening of vehicle doors as defined by AS 2890.6-2009;
- 2) For dwellings that require two spaces:
 - a) provide at least one covered space;
 - b) for dwellings located one behind the other: the second space may be an open court facing the side driveway; or
 - c) for paired dwellings facing the street: the second space may be stacked on the driveway in front of the covered space. Please refer to figure D2.7.
- 3) Garages and parking spaces are not permissible within the front setback

Figure D2.6: Dimensions permit turns, opening of doors and storage

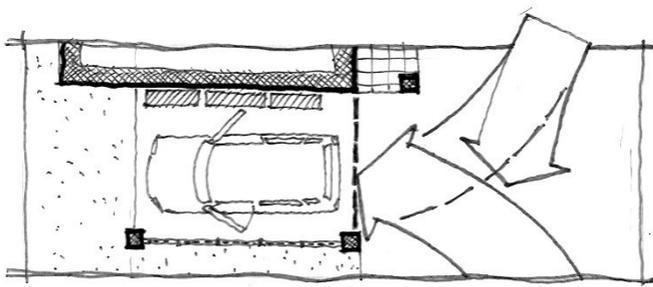
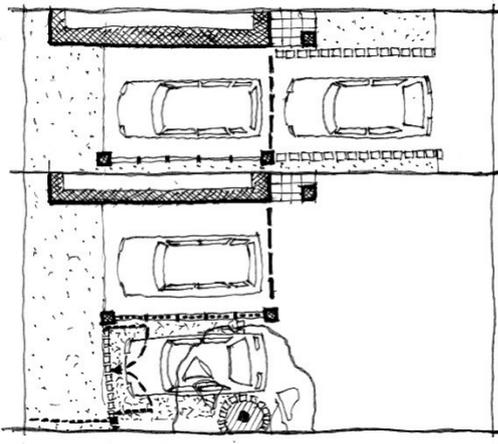


Figure D2.7: Two spaces – one covered plus one open, either stacked or paired



C. Controls

- 1) Design of covered garages to consider the following:
 - a) low, open appearance similar to a wide verandah;
 - b) if exposed at the end of a building, enclosed by semi-transparent screens that provide for natural ventilation and effective security (rather than surrounded by masonry walls);
 - c) with shutters that have windows, or are semi-transparent screens providing natural ventilation and effective security.

2.2.16 Garden Design

A. Objective

Gardens should be landscaped according to the function of each area, and should provide a backdrop that is appropriate to each adjacent room.

B. Controls

- 1) The rear boundary setback should provide:
 - a) private garden courtyards;
 - b) a corridor of habitat, and a green backdrop that is visible from the street;
 - c) conservation for any existing corridor of mature trees; or
 - d) an interlocking canopy of low to medium-height trees and shrubs;
 - e) predominantly species indigenous to the soils of Penrith City.
- 2) Alongside boundaries, provide:
 - a) small-to medium height canopy trees for sun-shading and privacy separation between dwellings;
 - b) within the verges to any common driveway: hedges fronting windows to any dwelling;
- 3) Alongside boundaries within private courtyards provide:
 - a) feature plantings of ground covers and shrubs growing to fence height at maturity;
 - b) a level area of well-drained turf, or an alternative water-permeable material such as river pebbles.
- 4) Street frontage plantings should provide:

- a) private gardens for street-front dwellings;
- b) a civic garden frontage appropriate to the established neighbourhood character; and
- c) mixed species of trees, shrubs, and accent plantings including flowers and ground covers;
- d) level areas of well-drained turf; and
- e) along noisy thoroughfares: noise attenuation with an interlocking canopy formed by at least two rows of trees underplanted with dense hedges.

Figure D2.08

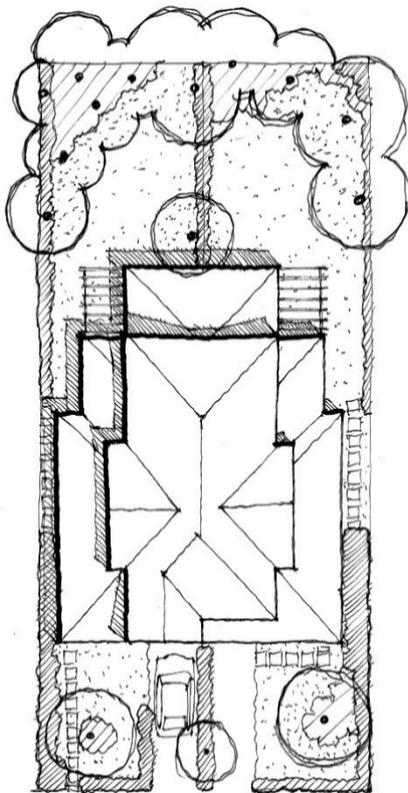


Figure D2.8 above depicts:

- Thickly planted rear gardens
- Courtyard shade and screening
- Median planting dividing driveways
- Civic street frontage.

2.2.17 Paving Design

A. Objective

Design driveways and paved areas as attractive and functional components of development, complementing the designs of garden areas and buildings, and providing effective management for stormwater run-off.

B. Controls

- 1) Hard paved surfaces should:
 - a) maximise the area available for landscaping and gardens;
 - b) impose no adverse long term effect on any vegetation that Council requires preserved.
- 2) Driveways and associated parking courts should:
 - a) provide an attractive "address" for any dwellings without a direct frontage to the street;
 - b) minimise the area and width of driveways along the street-frontage;
 - c) be overlooked by continuously-occupied rooms such as kitchens and living rooms;
 - d) be divided into panels by bands of contrasting materials or pavers;
 - e) provide barrier-free access continuous from the street to the entrance of each dwelling;
 - f) provide for landscaping as continuous verges along both sides, or as a verge beside dwellings with plantings in pavement cut-outs along a boundary fence;
 - g) incorporate materials and a profile that maximise the potential for direct infiltration of rainfall (other than in areas of recognised high soil salinity);
 - h) collect and channel run off into grated sumps located strategically and integrated with the design of surface pavement.
- 3) Courtyard paving should be provided:
 - a) at the threshold to each doorway leading from a dwelling: at least 1m wide;
 - b) beneath clothes lines;
 - c) where outdoor storage of garbage bins is proposed;
 - d) in the form of widely spaced pavers, or porous unit paving, maximising direct infiltration of rainfall.

Figure D2.9

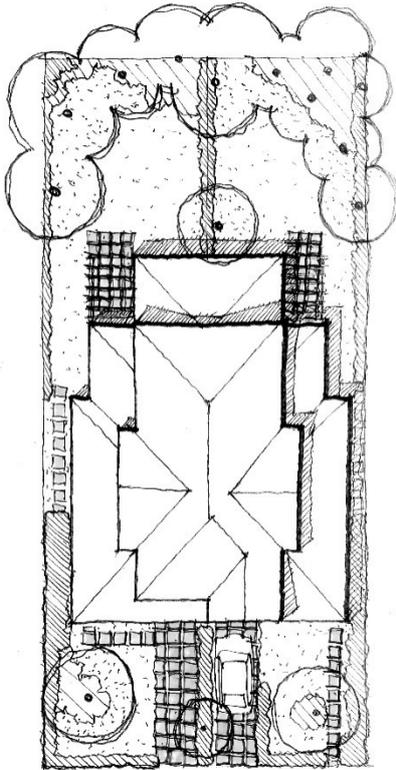


Figure D2.9 above diagram depicts:

- a) Courtyard paving – a threshold at least 1m wide outside each doorway and beneath clothes lines
- b) Driveways - Step around verge plantings alongside dwellings or trees planted into pavement cut-outs or median plantings
- c) Feature paving at the threshold to the street.

2.2.18 Fences and Retaining Walls

A. Objective

Fences, courtyard walls and boundary retaining walls should be compatible with neighbourhood character, and should be integrated with the design of buildings and garden areas.

B. Controls

- 1) Be sympathetic to the natural setting and character in form, materials and colour.
- 2) Maximise natural surveillance from the street to the building and from the building to the street.
- 3) Be structurally adequate, in accordance with the Building Code of Australia, and meets the Dividing Fences Act.
- 4) Fences should be no taller than:
 - a) 1.8m generally; and
 - b) 2.4m on sloping sites, including the height of any retaining wall.
- 5) Fences along boundaries forward of the front building alignment:

- a) should not be taller than 1.2m, or if taller, of see-through construction;
 - b) should not be constructed of metal panels;
 - c) walls of solid construction and taller than 1.2m (such as courtyard walls) should be set back at least 2m from the front boundary (to allow for landscaping) and should not occupy more than 50% of the allotment width.
- 6) Fences along boundaries along driveways and separating existing multi-unit housing, or fronting a public park should be 1m tall, or if taller, of see-through construction;
 - 7) Fences along boundaries around private courtyards should minimise cross-viewing and the transmission of noise;
 - 8) Fences along boundaries in any location that can be seen from the street or a public park frontage should not be constructed of metal panels;
 - 9) Fences along boundaries fronting noisy thoroughfares:
 - a) solid masonry walls are acceptable to a maximum of 1.8m; and
 - b) incorporating corners and planting beds every 5m;
 - 10) Where fencing affects easements or stormwater flow paths: consult with Council and the relevant authority.
 - 11) Fencing of a "see-through" construction includes:
 - a) panels set into a timber frame or between brick piers; where
 - b) any solid base is not taller than 1m; and
 - c) panels are spaced pickets or palings, or lattice.
 - 12) Retaining walls:
 - a) generally should be no taller than 500mm;
 - b) should not cut through roots of any tree required by Council to be preserved;
 - c) should be separated from any associated fence by a planter-bed at least 500mm wide, minimising the apparent overall height of fencing;
 - d) should provide drainage for any associated planter-bed;
 - e) should be separated from any driveway by a landscaped verge at least 500mm wide, to prevent impact damage from vehicles.

2.2.19 Visual and Acoustic Privacy and Outlook

A. Objective

- a. Provide an outlook from dwellings and their private open space, and achieve levels of acoustic and visual privacy that are reasonable for a residential neighbourhood.
- b. The recommended night-time internal noise levels in living and sleeping areas is 35-40 dB(A). – WHO.
- c. To provide a high level of visual and acoustic privacy for residents and neighbours in dwellings and private open space.
- d. To ensure that building design minimises overlooking problems.

B. Controls

- 1) Demonstrate a package of measures that achieves reasonable privacy:

- a) for adjacent dwellings: at least 3m between any facing windows, screened by landscaping or other means including courtyard walls, or pergolas to prevent cross viewing from first storey windows;
 - b) dormer windows generally to be oriented to face the street or the rear boundary;
 - c) private courtyards should be screened by pergolas and masonry walls to prevent direct cross-viewing and excessive transmission of noise;
 - d) screening measures, including:
 - i) offsetting of windows; or
 - ii) oblique orientation for windows; or
 - iii) external screens to windows; or
 - iv) courtyard walls and pergolas;
 - v) note that landscaping (other than established trees and shrubs that are proposed to be retained) should not provide the principal means of screening;
 - e) rooms other than bedrooms should have any windows facing a driveway screened by landscaped verges at least 2m wide;
 - f) bedroom windows facing a driveway should be screened by masonry walls at least 1.5m tall located at least 1m from the face of the window;
 - g) All balconies and decks higher than 800mm above existing ground level shall incorporate privacy measures such as screening or landscape planting.
 - h) for windows of habitable rooms with a direct outlook onto windows of habitable rooms of adjacent dwellings:
 - i) are offset by a distance sufficient to limit views between windows; or
 - ii) have sill heights of 1.7 m above floor level; or
 - iii) have fixed obscure glazing in any part of the window below 1.7 m.
- 2) Demonstrate measures that protect dwellings from external noise sources:
- a) windows to ground-level living rooms screened by landscaped verges at least 2m wide;
 - b) within any dwelling, bedrooms should not adjoin the garage or living rooms of a neighbouring dwelling; internally, bedrooms should be segregated and separated from living areas by hallways, stairs or service rooms;
 - c) sound resisting construction of separating walls, floors and windows, in accordance with BCA;
 - d) zoning of dwellings into active living areas and passive sleeping areas, separated by corridors and/or service zones;
 - e) plant and equipment should be effectively screened and located away from sleeping areas;
 - f) along frontages to noisy arterial roads or the rail corridor:
 - i) locate habitable rooms and private open spaces away from noise sources and if required protect with appropriate noise shielding devices;
 - ii) comply with the requirements of relevant noise and vibration guidelines published by the NSW Government. The NSW Government sets standards in relation to acceptable noise levels for all operations and land uses through the Environment

Protection Authority's Environmental Noise Control Manual. These standards apply in all cases.

- iii) provide a detailed acoustic design report that demonstrates compliance with the above requirements;
- iv) provide a certificate of compliance at completion of construction;
- v) under extreme circumstances identified by Council, employ fixed glazing with air-conditioning for street-frontage bedrooms.

2.2.20 Safety and Security

A. Objective

Achieve a high level of passive security within and surrounding dwellings.

B. Controls

- 1) Encourage a sense of community:
 - a) dwelling entrances, the window to at least one continuously-occupied room and private courtyards should face the street and/or a common driveway;
 - b) fences should be designed to facilitate glimpses or filtered views from dwellings and private courts to the street and to driveways.
- 2) Ensure that at least one continuously-occupied room in each dwelling (a kitchen or living room) overlooks:
 - a) the front street;
 - b) driveways and garage forecourts.
- 3) Prevent concealment of intruders by:
 - a) uniform lighting levels across common areas such as driveways;
 - b) planning which does not provide hidden recesses;
 - c) along common pathways: selection of appropriate plant species according to height and density.

2.2.21 Accessibility and Adaptability

A. Objective

Ensure that dwellings are accessible to persons with impaired sight or partial mobility.

B. Controls

- 1) Demonstrate that planning and design measures do not prevent access by people with disabilities:
 - a) access pathways should slope gently and evenly, with a non-slip finish and no steps between the street frontage and principal building entrances;
 - b) stair nosings should have a distinctive colour and texture;
 - c) dwellings should have:
 - i) dimensions consistent with AS 1428.1-Design for access and mobility.
 - ii) hallways at least 1m wide.
 - iii) circulation areas in bathrooms at least 1m wide.

- 2) Demonstrate that dwellings have been designed to meet the needs of an ageing population:
 - a) incorporate design measures which are appropriate to people with disabilities; and
 - b) employ lever-type door handles and traditional cruciform tap-handles; and
 - c) provide for future low-cost modifications to bathrooms:
 - i) future removal of hobs from shower recesses;
 - ii) provision for future attachment of grab-rails to walls.
 - d) provide for future low-cost modifications to kitchens including replacement of underbench shelves with drawers & attachment of grab-rails.
 - e) provide appropriate levels and location of lighting.

2.2.22 Storage and Services

A. Objective

Ensure that each dwelling has reasonable private storage space and waste management areas/facilities, and that meters, service cupboards and aerials are integrated with the design of buildings.

B. Controls

- 1) Provide storage for household items:
 - a) at least 10m³ per dwelling; either
 - b) as cupboard space within the dwelling in addition to wardrobes; or
 - c) within a lockable garage, not encroaching upon the parking space; or
 - d) in weather-proof lockers that are not visible from the street.
- 2) Letter boxes should be provided according to Australia Post specifications:
 - a) adjacent to the front boundary;
 - b) located conveniently for residents entering the site (by car or on foot);
 - c) integrated with the design of landscaped areas, fences and buildings.
- 3) Demonstrate that dwellings have been designed to accommodate home-based telecommunications facilities and information technologies by allowing for:
 - a) additional telephone lines and outlets;
 - b) additional electrical outlets;
 - c) satellite or cable-based reception.

2.3. Secondary Dwellings

The following developments are covered by this section:

- a) secondary dwellings; and
- b) alterations and additions to existing secondary dwellings.

This section provides specific controls for secondary dwellings in addition to the general controls elsewhere in this DCP.

A. Objectives

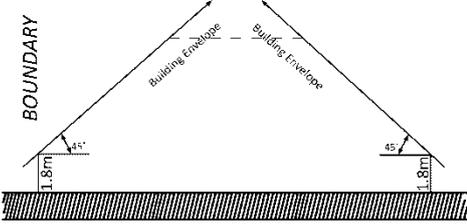
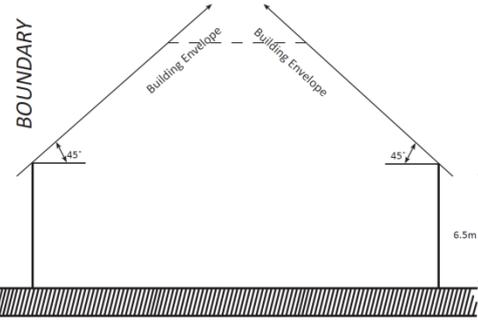
- a) To encourage a diversity of affordable housing.
- b) To provide housing and accommodation options for a range of family types and age groups.
- c) To promote innovative housing solutions compatible with the surrounding residential environment.
- d) To require secondary dwellings to be compatible with the existing built environment and residential character.
- e) To ensure that conversion of existing structures to secondary dwellings incorporates a satisfactory level of design and appearance which results in a high quality of residential amenity.
- f) To ensure that secondary dwelling development does not compromise the provision of onsite car parking provided for an existing or new dwelling house on the lot.
- g) Provide an outlook from dwellings and their private open space and achieve levels of acoustic and visual privacy that are reasonable for a residential neighbourhood.
- h) To ensure adequate residential amenity through the provision of sunlight access and good solar amenity to the living spaces and private open space areas of dwellings.
- i) To recognise the reasonable expectations for a dwelling to have the ability to access sunlight.

B. Development Controls

2.3.1 General

- 1) The minimum lot size for a secondary dwelling is 450m². On battleaxe allotments this does not include the area of the access handle.
- 2) Conversions of existing outbuildings will only be considered where:
 - a) The building meets the standards required by the Building Code of Australia (BCA) and;
 - b) The principal dwelling complies with the provisions of this DCP- i.e. compliance with parking requirements.
- 3) Secondary dwellings shall have a maximum of two bedrooms.
- 4) Development is to comply with the building envelope for the site. The building envelope means a height plane over the site at 45 degrees from a specified height above natural ground level at the side boundaries of the site, as shown in Figure D2.10

Figure D2.10: The building envelope is measured from natural ground level perpendicular to the side boundary at any given point along the wall.

Zone	Maximum building envelope
R2 Low Density Residential	
R3 Medium Density Residential	

Encroachments – consideration may be given to minor encroachments to the building envelope for;

- i. Eaves and gutters
- ii. Chimneys and antennas
- iii. Pergolas, or
- iv. Where it is demonstrated the encroachment is necessary to improve the design, external appearance or utility of the building and the variation will not impact adversely on the amenity of an adjoining property.

2.3.2 Site Coverage

- 1) The erection of a secondary dwelling must not compromise the landscape requirements for the primary dwelling.
- 2) Landscaped areas should be:

Table D2.3.1: Minimum landscape area

Zone	Minimum landscaped area % of the site
R1 Residential General	40%
R2 Low Density Residential	50%

Zone	Minimum landscaped area % of the site
R3 Medium Density Residential	40%
R4 High Density Residential	35%

- a) a minimum width of 2m;
 - b) do not include substantially-paved areas such as buildings, driveways and covered garages;
 - c) alongside boundaries: should increase in width next to the back yards of neighbouring dwellings.
- 3) Landscaped areas should provide:
- a) long-term survival of existing vegetation that is required by Council to be preserved (both on-site and upon neighbouring properties); and
 - b) effective separation between neighbouring dwellings; and
 - c) side boundary setbacks that facilitate effective day lighting and natural ventilation of dwellings; and
 - d) private gardens and a green outlook from dwellings; and
 - e) conditions for healthy growth of new trees and shrubs; and
 - f) "civic" gardens along street frontages.

2.3.3 Siting and Design

- 1) For the conversion of an existing building, or part of an existing dwelling, into a secondary dwelling, applicants must demonstrate that the setbacks of the existing building, structure or garage have minimal impact on the following:
 - a) Scale and streetscape of the surrounding locality;
 - b) Surrounding properties, particularly in respect to overshadowing, loss of privacy and visual impact.
- 2) All balconies and decks higher than 800mm above existing ground level shall incorporate privacy measures such as screening or landscape planting.
- 3) For new secondary dwellings, the following controls apply:
 - a) Secondary dwellings must be located behind the front building line of the primary dwelling;
 - b) The minimum setback to the secondary street frontage is 3m;
 - c) The minimum side setback for a detached secondary dwelling is 900mm;
 - d) The minimum rear setback for a detached secondary dwelling is 3m; and
 - e) Where located above a garage facing a rear laneway, the building may be built to the rear boundary.
- 4) Notwithstanding any compliance with the front, side and rear setback controls, the applicant must also demonstrate that the proposed building setbacks:

- a) Maintain the established street character;
- b) Allow neighbours adequate access to sunlight and views;
- c) Preserve established tree and vegetation corridors;
- d) Provide adequate separation between buildings to protect adjoining buildings from overlooking and loss of amenity; and
- e) Reduce the visual bulk of new building work.

2.3.4 Private Open Space

- 1) The secondary dwelling must have more than 24m² of usable private open space.
- 2) The private open space area must be more than 4m wide.
- 3) The living area of the secondary dwelling should connect to the private open space areas.

2.3.5 Design and Materials

- 1) Secondary dwellings must complement and enhance the primary dwelling on site by interpreting and translating any positive characteristics found on site in terms of construction, façade design and materials.
- 2) Metal or corrugated iron materials should be avoided, with the exceptions of roofs.
- 3) External building materials and their colours should be compatible with the character of the locality.

2.3.6 Facilities

- 1) As a minimum, the secondary dwelling should include:
 - a) A kitchen/kitchenette;
 - b) A bathroom;
 - c) A living room; and
 - d) A bedroom.
- 2) A common laundry may be provided to service both the principal and secondary dwellings.

2.4 Multi Dwelling Housing

The following developments are covered by this section:

- a) multi dwelling housing development; and
- b) alterations and additions to existing multi dwelling housing development

This section provides specific controls for multi dwelling housing in addition to the general controls elsewhere in this DCP.

2.4.1 Residential Character

A. Background

The residential character of any neighbourhood is determined by:



- 1) Location and density of development:
 - a) proximity to busy centres or major roads;
 - b) residential density and mix of housing types;
 - c) proximity to heritage precincts;
 - d) frontage to public parks.



- 2) The local landscape and its configuration:
 - a) flat or sloping;
 - b) well-vegetated or cleared;
 - c) frontages to streams or the Nepean River.



- 3) Predominant patterns of planning and design
 - a) displayed by local buildings and their gardens;
 - b) setbacks and building separation;
 - c) height, scale and bulk;
 - d) garaging;
 - e) articulated forms and varied plantings.

2.4.2 Preferred Configuration for New Dwellings

A. Objectives

- a) New multi dwelling housing development should adopt key features of established suburban design.
- b) Dwellings, their entrances and private courtyards look towards the street, or to the rear boundary.

B. Controls

- 1) New multi dwelling housing development should incorporate the traditional configuration of the cottages and cottage gardens that define the character of Penrith's established neighbourhoods, because:
 - a) Traditional development demonstrates social and urban design benefits, particularly the orientation of dwellings and their private open spaces towards the street rather than overlooking neighbouring dwellings and gardens;
 - b) Patterns of buildings and private gardens in established neighbourhoods have visual and symbolic richness that are valued by their community;
 - c) the use of traditional features softens the popular perception that redevelopment is changing the traditional character of Penrith City.
- 2) Within the relevant zones, established development is detached buildings or semi-detached pairs which are:
 - a) separated from one another by landscaped courtyards;
 - b) stepped floor plans and projecting verandahs;
 - c) capped by a variety of pitched roofs.
- 3) Within the relevant zones, established development provides a "green corridor" of trees and shrubs along the rear boundary:
 - a) conserving remnant vegetation; and

- b) providing new shelter and habitat; and
 - c) contributing to streetscape.
- 4) Within the relevant zones, established development provides a front garden setback which may be filled by verandahs and private garden-courts (as shown in Figure D2.11):
- a) encourages active use by residents;
 - b) provides for attractive front gardens.
- 5) Within the relevant zones, established development provides parking areas which are concealed from the street and consequently avoids the appearance of "garage architecture".

Figure D2.11



How much floor space is appropriate to your site?

2.4.3 Development Site

A. Objectives

- a) Identify planning and design options that are appropriate to the shape and size of each development lot, and to the location of neighbouring buildings.
- b) Identify planning and design responses that address impacts on surrounding streetscapes.

B. Controls

- 1) A minimum lot frontage and lot width of 22m is required for multi dwelling housing development within the following zones:
 - a) the R3 Medium Density Residential Zone
 - b) the R4 High Density Residential Zone
- 2) Where an adjoining property with a frontage of under 22m is likely to be isolated by a proposed development, applicants should provide documentation which demonstrates that a reasonable attempt has been made to purchase and incorporate the isolated site.

- 3) If a property has been isolated by adjacent development despite Development Site control 2, development applications for multi-dwelling housing will be considered on a merits basis.
- 4) For the purposes of calculating lot size and lot width, the lot does not include the area of any access corridor or right-of-carriageway.

2.4.4 Urban Form

A. Objectives

New buildings should show characteristics of traditional suburban development: dwellings oriented to face the street, building forms stepped or articulated, and integrated with the shape of surrounding garden areas.

B. Controls

- 1) For dwellings fronting the street, adopt a traditional orientation:
 - a) living rooms, verandahs and the paths to entrances face the street rather than neighbouring properties; and
 - b) private gardens fill the front setback area; and
 - c) garages are concealed behind dwellings.
- 2) Dwellings behind the street frontage should adopt similar principles:
 - a) living rooms and entrances face the street, and / or the landscaped rear boundary setback; and
 - b) private gardens fill the rear setback area.
- 3) Avoid "gun-barrel" style developments with long rows of attached dwellings, long straight driveways and rows of uniform width garden courtyards:
 - a) break buildings into separate blocks, each one not longer than 20m;
 - b) provide "open space corridors" between buildings at least 4m wide across each site (this does not include front/rear setback areas);
 - c) a combination of garden areas and parking courtyards; or
 - d) open parking spaces that are lined by an "avenue" of shady, overhanging trees;
 - e) along common driveways, step the alignment of buildings, and / or their external walls plus eaves;
 - f) at the head of common driveways, a distinctive building or landscape feature should terminate the vista from the street.
- 4) "Articulate" building forms by design measures that cast deep shadows:
 - a) separate neighbouring buildings by irregularly-shaped garden courts that are at least 3m wide;
 - b) external walls should not be longer than 5m between distinct corners;
 - c) the upper storey surrounded by a larger ground floor plan that incorporates projecting rooms, shady verandahs and carports;
 - d) use a variety of roof forms and pitches;
 - e) include windows in every elevation.

2.4.5 Front and Rear Setbacks

A. Objectives

Setbacks are to reflect the character of established garden suburbs, and provide for development of flora and fauna corridors.

B. Controls

- 1) Determine the maximum development footprint for your site:
 - a) The minimum rear setback for a single storey building (or any single storey component of a building) is 4m.
 - b) The minimum rear setback for a two storey building (or any two storey component of a building) is 6m.
 - c) adopt a front setback that matches the neighbourhood character.
- 2) Within the rear boundary setback:
 - a) there shall be no building encroachments either above or below ground (eaves excepted);
 - b) maximise the amount of undisturbed soil, encouraging rapid growth of healthy trees and shrubs;
 - c) where there are physical encumbrances such as open drains, increase the setback accordingly.
- 3) Determine an appropriate front setback:
 - a) either average the setbacks of the immediate neighbours; or
 - b) a 5.5m minimum whichever is the greater dimension.
- 4) Permissible encroachments within the front setback are:
 - a) verandahs and pergolas only which are a 4.5m minimum setback to the face of the verandah or pergola; and maximum 50% of elevation.
- 5) Garages and parking spaces are not permissible within the front setback.

Figure D2.12 illustrates these features.

Figure D2.12: Multi Dwelling Housing Development



2.4.6 Building Envelope and Side Setbacks

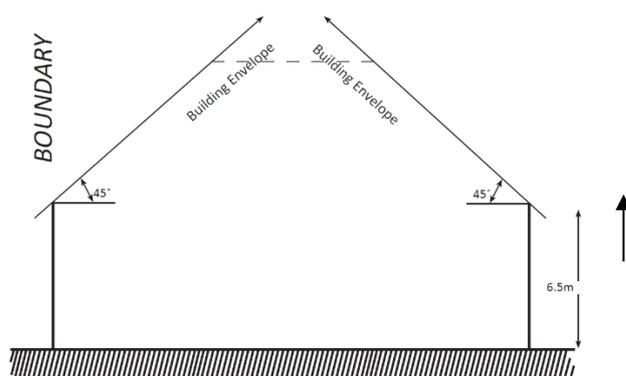
A. Objectives

Comply with building envelope controls, minimise disturbance to existing topography and natural soil-profiles, and provide for reasonable landscaped separation between neighbouring buildings.

B. Controls

- 1) Development is to comply with the building envelope for the site. The building envelope means a height plane over the site at 45 degrees from a specified height above natural ground level at the side boundaries of the site, as shown in Figure D2.13.

Figure D2.13: The building envelope is measured from natural ground level perpendicular to the side boundary at any given point along the wall.



- 2) The building envelope shall be measured relative to:
 - a) Side boundaries only; and
 - b) Existing ground level.

- 3) Only minor encroachments through the building envelope shall be permitted:
 - a) eaves to main roofs
 - b) chimneys and antennas
 - c) pergolas.
- 4) Cut and fill and maximum ground floor heights:
 - a) on sloping sites provide stepping building platforms in line with existing topography with floors no higher than 1m above natural ground level;
 - b) restrict cut-and-fill to a maximum of 500mm; and
 - c) provide effective sub-soil drainage.
- 5) Pitches for main roofs are not to be in excess of 25 degrees in order to reduce the visual bulk of the building.
- 6) Provide reasonable separation and landscaping between neighbouring buildings, consistent with the following parts of this section:
 - a) Driveways and parking
 - b) Landscaped area
 - c) Solar planning; and
 - d) Privacy and outlook.
- 7) Setbacks from side boundaries should be varied to articulate walls to side boundaries:
 - a) a minimum setback of 2m, but only
 - b) along not more than 50% of any boundary.
- 8) Zero setbacks from the side boundary are not permissible except for single garages or carports with an open appearance according to - Garage design, not taller than 2.1 m at the boundary.

2.4.7 Driveways and Parking Areas

A. Objectives

Provide on-site parking at a level that encourages use of public transport. Minimise the area required for parking, encourage convenient parking, allow easy access to parking areas and maximise the area available for landscaping and gardens.

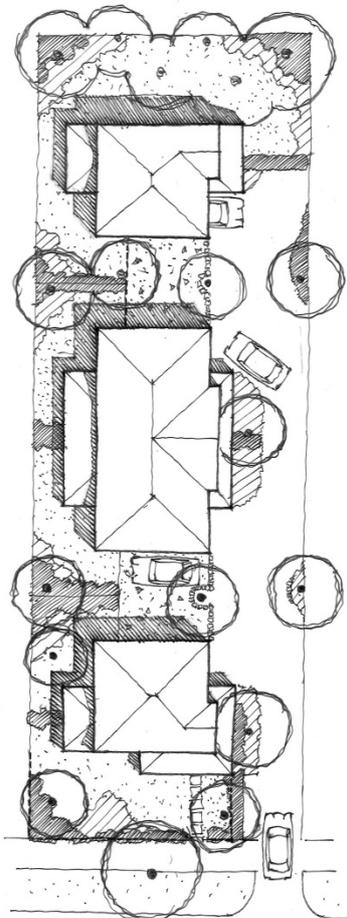
B. Controls

- 1) Provide on-site parking in accordance with the parking section of this DCP.
- 2) Driveways should:
 - a) have a minimum paved width of 3m providing one-way movement;
 - b) incorporate passing-bays and queue space at the street frontage where more than 5 dwellings are served, and driveways are longer than 30m;
 - c) minimise the paved area within the front setback;
 - d) be separated from dwellings by a landscaped verge at least 1m wide;
 - e) where possible, also separated from boundary fences by a landscaped verge;
 - f) prevent adverse long-term effect upon any vegetation that must be preserved;

- g) provide for effective and healthy landscaping along all site boundaries;
 - h) provide for landscaping as continuous verges along both sides, or as a verge beside dwellings with plantings in pavement cut-outs along a boundary fence;
 - i) drain by gravity to Council's stormwater network.
- 3) Garages and parking spaces should:
- a) not be located in the front setback;
 - b) should not directly face the street;
 - c) be setback at least 6.5m from the outside driveway kerb.
- 4) Basement carparking may be permitted on development lots with a minimum lot frontage of 22m.

Figure D2.14 illustrates the key features required for driveway and parking areas.

Figure D2.14: Aerial illustration of multi dwelling housing



2.4.8 Landscaped Area

A. Objective

Retain a reasonable proportion of each site for landscaped garden areas, conserve significant existing vegetation, and provide reasonable separation between neighbouring dwellings.

B. Controls

1) Landscaped areas should provide:

- a) effective separation between neighbouring dwellings;
- b) healthy growth of new trees and shrubs;
- c) long-term survival of existing vegetation required by Council to be preserved;
- d) private courtyards for all dwellings and a green outlook;
- e) front gardens that contribute to an attractive streetscape; and
- f) where more than 10 dwellings are proposed, a centrally located communal open space area that is accessible and available to all residents of the development, comprising 10% of the minimum landscaped area requirement.
- g) The area of common open space proposed can be reduced where larger areas of private open space are provided for individual dwellings. Where there is no common open space proposed private courtyards must be a minimum of 40m².

2) Landscaped area must meet the following requirements:

a) Landscaped areas should be:

Zone	Minimum landscaped area % of the site
R1 Residential General	40
R3 Medium Density Residential	40
R4 High Density Residential	35

- b) have a minimum width of 2m – with no basement encroachment; and containing unexcavated soil to promote landscaping that is effective and healthy;
- c) may include terraces and patios located not higher than 0.5m above ground and pedestrian pathways to building and dwelling entrances;
- d) do not include substantially-paved areas such as buildings, driveways and covered garages;
- e) should include verges that surround car parking areas and open driveways;
- f) should provide a reasonable area of private open space in accordance with the part within this section on design;
- g) where more than one building is proposed, that part of any easement exceeding 10% of the site area shall not be included in the landscaped area calculation.

2.4.9 Solar Planning

A. Objectives

- a. Improve the energy efficiency of dwellings and achieve a high standard of residential amenity.
- b. To ensure adequate residential amenity through the provision of sunlight access and good solar amenity to the living spaces and private open space areas of dwellings.
- c. To recognise the reasonable expectation for a dwelling to have the ability to access sunlight.

B. Controls

- 1) The applicant must demonstrate that dwellings meet acceptable solar standards and that existing neighbouring and proposed private open spaces receive adequate solar access by:
 - a) Providing shadow diagrams prepared by a qualified technician for all two-storey buildings and additions;
 - b) Illustrating the impacts of proposed development upon existing neighbouring dwellings and their open space areas;
 - c) Demonstrating shadows cast by neighbouring buildings;
 - d) Maximising potential for solar gain by placing windows in all exterior walls that are exposed to northern sun;
 - e) Ensuring that the proposed development provides a minimum of 4 hours sunlight between 9am and 3pm on 21 June, to living zones (ie areas other than bedrooms, bathrooms, kitchen and laundry) of each dwelling, and the living zones of any adjoining dwellings;
 - f) Ensuring that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to 40% of the main private open spaces of the dwelling and main private open spaces of any adjoining dwellings;
 - g) In situations where the existing overshadowing by buildings and fences reduces sunlight to less than the minimums noted above, the development is to not further reduced sunlight to the specified areas by more than 20%.
 - h) Applications shall include: shadow diagrams for two-storey buildings or additions prepared by a qualified technician for 9am, 12 noon and 3pm on June 21 and any other time required by Council.

Urban design

2.4.10 Significant Townscapes and Landscapes

A. Background

- 1) Across Penrith, there are many significant townscape precincts, including:
 - a) heritage conservation areas of Lemongrove and Derby Street;
 - b) the Warwick Street neighbourhood;
 - c) the "Duration Cottages" in St Marys;
 - d) surrounding Cook Park, St Marys South; and

- e) other areas identified in the Penrith Heritage Study.
- 2) Across Penrith, there are many significant landscape precincts including:
- a) footslopes to the escarpment in Emu Heights and Leonay;
 - b) wooded hillsides in St Marys South;
 - c) individual streetblocks, such as the block surrounded by Derby, Lethbridge, Doonmore and Evan Streets;
 - d) frontages to the Nepean River;
 - e) Cranebrook escarpment; and
 - f) Chapman Gardens.

B. Objectives

In areas of particular significance to urban conservation, environmental character, new development should demonstrate detailed design measures that protect and complement heritage significance or character.

C. Controls

- 1) In neighbourhoods with townscape significance, new development should:
- a) conserve vegetation that has visual or historical significance;
 - b) adopt the prevailing configuration of garden areas, particularly the street's predominant front boundary set-back;
 - c) adopt the predominant width, height, and scale of existing buildings;
 - a) ensure that floor plans are stepped or articulated similar to the shape or form of surrounding buildings;
 - b) adopt roof pitches, ceiling heights and forms that match neighbouring buildings;
 - c) minimise the width and area of driveways visible from public frontages;
 - d) conceal garages from public frontages (corner sites excepted).
- 2) In areas with significant vegetation:
- a) aim to preserve established trees as blocks or corridors;
 - b) ensure that the location of buildings and pavements does not affect long term survival of established trees;
 - c) incorporate new plantings that reinforce the visual and habitat values;
 - d) in general, new plantings should be species indigenous to the local soil type, reinforcing visual and habitat values.
- 3) New development should not aim to provide a direct copy of traditional buildings:
- a) simple detailing of building forms and openings is preferred to the use of "stuck-on" detailing applied to gable ends and verandahs;
 - b) the pitch and form of roofs, and articulation of floor plans are of particular importance;
 - c) frequent use of shadow-casting elements such as verandahs and awnings is important to reduce the scale of long walls;
 - d) traditional proportions for window and door openings should be employed;

- e) use of traditional joinery details for windows, doors and verandahs and fences should be concentrated in elevations that are visible from public places

2.4.11 Corner Sites and Park Frontages

A. Objectives

For allotments facing two streets or adjoining a public park, apply traditional principles of orientation and articulation to both of the public frontages.

B. Controls

- 1) For allotments with a second street frontage, the second frontage should adopt key principles from other parts of this Section including:
 - a) The development site;
 - b) Urban form;
 - c) Landscaped area.
- 2) For corner lots and park frontages:
 - a) the rear and front setbacks may be measured relative to the shortest boundaries;
 - b) living rooms, dwelling entrances and verandahs may face either public frontage;
 - c) building forms should be articulated;
 - d) dormer windows may face either public frontage, and
 - e) the area of driveways visible from public frontages should be minimised.
- 3) For frontages to a second street:
 - a) minimum setback to dwellings and garage entrances should be 5.5m;
 - b) minimum verandah setback should be 3m;
 - c) each building should be no wider than 20m;
 - d) adjacent buildings should be separated by garden corridors at least 2m wide that provide direct access from rear courtyards to the street;
 - e) garden areas facing the street should be landscaped as private courtyards.
- 4) Along park frontages:
 - a) dwellings and private courtyards should face the park;
 - b) minimum dwelling or verandah setback should be 2m, for not more than 50% of the total building elevation;
 - c) each building should be no longer than 20m;
 - d) adjacent buildings should be separated by "open space corridors" at least 5m wide;
 - e) screen plantings are not necessary.

2.4.12 Building Design

A. Objectives

New developments should appear as a collection of single or semi-detached dwellings separated by gardens and ancillary structures, with facades designed to incorporate a variety of materials and shading structures.

A variety of overhanging roofs and projections at ground floor level; a range of materials and finishes; windows inserted into every visible wall; garages concealed to the rear of dwellings

Articulated forms, projecting verandahs and varied finishes facing the side boundary.

B. Controls

- 1) Development should incorporate a variety of architectural features to minimise the apparent scale and bulk of two storey buildings:
 - a) stepped alignment of walls;
 - b) projections in the ground floor plan;
 - c) rooms that extend beyond the upper storey;
 - d) attached verandahs and carports;
 - e) a variety of shadow-casting roofs:
 - f) wide eaves;
 - g) projecting verandahs and awnings;
 - h) pergolas.
- 2) Development should incorporate features that are typical of housing in established areas:
 - a) stepped walls and articulated roof-forms;
 - b) windows and doors inserted into all visible walls;
 - c) a variety of materials including lightweight cladding and brickwork both face and painted.
- 3) Variety in architectural features should be apparent in all visible facades:
 - a) facing the street;
 - b) facing side driveways; and
 - c) facing neighbouring residential properties.

2.4.13 Energy Efficiency

A. Objectives

Dwellings shall be configured and constructed to minimise the energy required for space heating, cooling or lighting.

B. Controls

- 1) All new multi dwelling housing development should employ construction techniques that provide appropriate thermal mass such as:
 - a) ground floor: slab-on-ground;

- b) walls: masonry internal walls to ground floor are desirable.
- 2) All new two storey townhouse development should provide effective insulation including:
 - a) roofs and top-floor ceilings: sarking and batts with a minimum total rating of R3;
 - b) walls: sarking and batts with a minimum total rating of R1.5
- 3) All new multi dwelling housing development should adopt an appropriate orientation for rooms and windows including:
 - a) living areas - facing within 30 degrees of solar north is desirable;
 - b) windows - at least 50% of glazing facing solar north is desirable, unprotected glazing facing east, west or south shall be avoided and for every habitable room, windows in two external walls are desirable;
- 4) Where multi dwelling housing development cannot achieve the desired orientation, higher compliance with other energy efficiency standards shall be achieved.
- 5) All new multi dwelling housing development should provide effective shading from summer sun including:
 - a) Overhanging eaves: at least 450mm wide;
 - b) Adjustable exterior shading devices for windows and doors to habitable rooms, and to skylights;
 - c) Pergolas over courtyards.
- 6) All new multi dwelling housing development should employ effective glazing including:
 - a) for any large south-facing window: high performance glass e.g. double glazing in thermal break frames;
 - b) windows and doors facing east, south or west: high performance glass e.g. Double glazing in thermal break frames;
 - c) all windows and external doors: weather-stripping should be used.
- 7) All new multi dwelling housing development should adopt a configuration for dwellings that promotes cross-ventilation including:
 - a) living areas and bedrooms with two external walls for windows;
 - b) particularly important for attic rooms.

2.4.14 Design of Dwellings and Private Courtyards

A. Objectives

Dwellings and their private courtyards should achieve high levels of amenity, and demonstrate traditional practices of suburban design.

B. Controls

- 1) A reasonable area of private open space should be provided for each dwelling:
 - a) a minimum of 25m²;
 - b) including one area measuring at least 5m by 4m, suitable for outdoor dining; and
 - c) located immediately beside, and level with, living or dining rooms; and
 - d) also incorporating an area for outdoor clothes-drying at least 2m wide, exposed to sunlight and breeze, screened from view by a fence or wall at least 1.8m tall; and

- e) with access direct to the street or common driveway;
 - f) through a courtyard at least 2m wide; or
 - g) via a carport with an open design.
- 2) Landscaped areas should maximise the area available for private courtyards and gardens:
- a) the front and rear boundary setbacks should be used for private gardens,
 - b) common open space should be restricted to driveway verges.
- 3) Rooms within a villa development should have dimensions and an area that:
- a) can accommodate the range of furniture typically associated with their function; and
 - b) recognise that furnishing options may be restricted by the location of windows and doors;
 - c) acknowledge that access and furnishing options may be restricted by raked attic ceilings;
 - d) provide flexibility to meet the needs of future occupants: for example home business activities and aged residents.

2.4.15 Garage Design

A. Objectives

Garages should be designed to serve a variety of purposes, and their appearance should contribute to the overall diversity of building form and design.

B. Controls

- 1) Garage and parking areas should be planned to:
- a) minimise disruption to traditional or established streetscapes by concealing from the street;
 - b) provide flexible accommodation for vehicles, domestic pets, storage, and covered areas for outdoor recreation;
 - c) minimise transmission of noise to adjoining dwellings;
 - d) provide secure parking;
 - e) allow for maintenance access to rear garden courtyards; and
 - f) provide for effective and healthy landscaping along verges and boundaries.
 - g) permit all turning movements, full opening of vehicle doors as defined by AS 2890.1-1993;
- 2) Basements should have:
- a) a low appearance, rising no higher than 1.5m above ground;
 - b) natural ventilation, either screen walls; or terraced embankments, with each step a maximum of 500mm, and landscaped as part of the side boundary court;
 - c) a "capping" of private courtyards or balconies opening from the lowest level of dwellings (if basements extend beyond the main building walls);
 - d) vehicle entrances designed to complement the architecture and landscaping of each building:

- e) individual up and down ramps;
 - f) a central median;
 - g) overhung by balcony structures; and
 - h) undercover storage:
 - i) garbage and recycling bins in a secured area located close to the street entrance and detailed according to Council codes; and
 - ii) household items: in secured enclosures for each dwelling, or associated with secured private parking spaces.
- 3) For dwellings that require two spaces:
- a) provide at least one covered space;
 - b) for dwellings located one behind the other: the second space may be an open court facing the side driveway; or
 - c) for paired dwellings facing the street: the second space may be stacked on the driveway in front of the covered space;
 - d) stacked parking is permitted where the second space is supplied between a driveway and another space, stacked spaces are not permitted behind garages.
- 4) Garages and parking spaces are not permissible within the front setback.

Design of covered garages to consider the following:

- a) low, open appearance similar to a wide verandah;
- b) if exposed at the end of a building, enclosed by semi-transparent screens that provide for natural ventilation and effective security (rather than surrounded by masonry walls);
- c) with shutters that have windows, or are semi-transparent screens providing natural ventilation and effective security.

2.4.16 Garden Design

A. Objectives

Gardens should be landscaped according to the function of each area, and should provide a backdrop that is appropriate to each adjacent room.

B. Controls

- 1) The rear boundary setback should provide:
- a) private garden courtyards;
 - b) a corridor of habitat, and a green backdrop that is visible from the street;
 - c) conservation for any existing corridor of mature trees; or
 - d) an interlocking canopy of low to medium-height trees and shrubs;
 - e) predominantly species indigenous to the soils of Penrith City.
- 2) Alongside boundaries, provide:
- a) small-to medium height canopy trees for sun-shading and privacy separation between dwellings;
 - b) within the verges to any common driveway: hedges fronting windows to any dwelling;

- 3) Alongside boundaries within private courtyards provide:
 - a) feature plantings of ground covers and shrubs growing to fence height at maturity;
 - b) a level area of well-drained turf, or an alternative water-permeable material such as river pebbles;
 - c) street frontage plantings should provide:
 - d) private gardens for street-front dwellings;
 - e) a civic garden frontage appropriate to the established neighbourhood character; and
 - f) mixed species of trees, shrubs, and accent plantings including flowers and ground covers;
 - g) level areas of well-drained turf; and
 - h) along noisy thoroughfares:
 - i) noise attenuation with an interlocking canopy formed by at least two rows of trees under planted with dense hedges.

2.4.17 Paving Design

A. Objectives

Design driveways and paved areas as attractive and functional components of development, complementing the designs of garden areas and buildings, and providing effective management for stormwater run-off.

B. Controls

- 1) Hard paved surfaces should:
 - a) maximise the area available for landscaping and gardens;
 - b) impose no adverse long term effect on any vegetation that Council requires preserved.
- 2) Driveways and associated parking courts should:
 - a) provide an attractive "address" for any dwellings without a direct frontage to the street;
 - b) minimise the area and width of driveways along the street-frontage;
 - c) be overlooked by continuously-occupied rooms such as kitchens and living rooms;
 - d) be divided into panels by bands of contrasting materials or pavers;
 - e) provide barrier-free access continuous from the street to the entrance of each dwelling;
 - f) provide for landscaping as continuous verges along both sides, or as a verge beside dwellings with plantings in pavement cut-outs along a boundary fence;
 - g) incorporate materials and a profile that maximise the potential for direct infiltration of rainfall (other than in areas of recognised high soil salinity);
 - h) collect and channel run off into grated sumps located strategically and integrated with the design of surface pavement.
- 3) Courtyard paving should be provided:
 - a) at the threshold to each doorway leading from a dwelling: at least 1m wide;
 - b) beneath clothes lines;
 - c) where outdoor storage of garbage bins is proposed;

- d) in the form of widely spaced pavers, or porous unit paving, maximising direct infiltration of rainfall.

2.4.18 Fences and Retaining Walls

A. Objectives

Fences, courtyard walls and boundary retaining walls should be compatible with neighbourhood character, and should be integrated with the design of buildings and garden areas, and provide casual surveillance of public and common areas.

B. Controls

- 1) Fences should be no taller than:
 - a) 1.8m generally; and
 - b) 2.4m on sloping sites, including the height of any retaining wall.
- 2) Fences along boundaries forward of the front building alignment:
 - a) should not be taller than 1.2m, or if taller, of see-through construction;
 - b) should not be constructed of metal panels;
 - c) walls of solid construction and taller than 1.2m (such as courtyard walls) should be set back at least 2m from the front boundary (to allow for landscaping) and should not occupy more than 50% of the allotment width.
 - d) Be sympathetic to the natural setting and character in form, materials and colour
 - e) Maximise natural surveillance from the street to the building and from the building to the street.
 - f) Be structurally adequate, in accordance with the Building Code of Australia, and meets the Dividing Fences 1991.
- 3) Fences along driveways and separating existing multi-unit housing, or fronting a public park should be 1m tall, or if taller, of see-through construction;
- 4) Fences along boundaries around private courtyards should minimise cross-viewing and the transmission of noise;
- 5) Fences along boundaries in any location that can be seen from the street or a public park frontage should not be constructed of metal panels;
- 6) Fences along boundaries fronting noisy thoroughfares:
 - a) solid masonry walls are acceptable to a maximum of 1.8m; and
 - b) incorporating corners and planting beds every 5m;
- 7) Where fencing affects easements or stormwater flow paths:
consult with Council and the relevant authority.
- 8) Fencing of a "see-through" construction includes:
 - a) panels set into a timber frame or between brick piers; where
 - b) any solid base is not taller than 1m; and
 - c) panels are spaced pickets or palings, or lattice.
- 9) Retaining walls:

- a) generally should be no taller than 500mm;
- b) should not cut through roots of any tree required by Council to be preserved;
- c) should be separated from any associated fence by a planter-bed at least 500mm wide, minimising the apparent overall height of fencing;
- d) should provide drainage for any associated planter-bed;
- e) should be separated from any driveway by a landscaped verge at least 500mm wide, to prevent impact damage from vehicles.

2.4.19 Visual and Acoustic Privacy and Outlook

A. Objectives

- a. Provide an outlook from dwellings and their private open space, and achieve levels of acoustic and visual privacy that are reasonable for a residential neighbourhood.
- b. To provide a high level of visual and acoustic privacy for residents and neighbours in dwellings and private open space.
- c. To ensure that building design minimises overlooking problems.

B. Controls

- 1) Demonstrate a package of measures that achieves reasonable privacy:
 - a) for adjacent dwellings: at least 3m between any facing windows, screened by landscaping or other means including courtyard walls, or pergolas to prevent cross viewing from first storey windows;
 - b) dormer windows generally to be oriented to face the street or the rear boundary;
 - c) private courtyards should be screened by pergolas and masonry walls to prevent direct cross-viewing and excessive transmission of noise;
 - i) screening measures, including:
 - ii) offsetting of windows; or
 - iii) oblique orientation for windows; or
 - iv) external screens to windows; or
 - v) courtyard walls and pergolas;
 - vi) note that landscaping (other than established trees and shrubs that are proposed to be retained) should not provide the principal means of screening;
 - vii) rooms other than bedrooms should have any windows facing a driveway screened by landscaped verges at least 2m wide,
 - viii) bedroom windows facing a driveway should be screened by masonry walls at least 1.5m tall located at least 1m from the face of the window;
 - d) for windows of habitable rooms with a direct outlook onto windows of habitable rooms of adjacent dwellings:
 - i. are offset by a distance sufficient to limit views between windows; or
 - ii. have sill heights of 1.7 m above floor level; or
 - iii. have fixed obscure glazing in any part of the window below 1.7 m.

- e) All balconies and decks higher than 800mm above existing ground level shall incorporate privacy measures such as screening or landscape planting.
- 2) Demonstrate measures that protect dwellings from external noise sources:
- a) windows to ground-level living rooms screened by landscaped verges at least 2m wide,
 - b) within any dwelling, bedrooms should not adjoin the garage or living rooms of a neighbouring dwelling; internally, bedrooms should be segregated and separated from living areas by hallways, stairs or service rooms;
 - c) sound resisting construction of separating walls, floors and windows, in accordance with BCA;
 - d) zoning of dwellings into active living areas and passive sleeping areas, separated by corridors and/or service zones;
 - e) plant and equipment should be effectively screened and located away from sleeping areas;
 - f) along frontages to noisy arterial roads or the rail corridor:
 - g) locate habitable rooms and private open spaces away from noise sources and if required protect with appropriate noise shielding devices.

2.4.20 Safety and Security

A. Objectives

Achieve a high level of passive security within and surrounding dwellings.

B. Controls

- 1) Encourage a sense of community:
 - a) dwelling entrances, the window to at least one continuously-occupied room and private courtyards should face the street and/or a common driveway;
 - b) fences should be designed to facilitate glimpses or filtered views from dwellings and private courts to the street and to driveways.
- 2) Ensure that at least one continuously-occupied room in each dwelling (a kitchen or living room) overlooks:
 - a) the front street;
 - b) driveways and garage forecourts.
- 3) Prevent concealment of intruders by:
 - c) uniform lighting levels across common areas such as driveways;
 - d) planning which does not provide hidden recesses;
 - e) along common pathways: selection of appropriate plant species according to height and density.

2.4.21 Accessibility and Adaptability

A. Objectives

Ensure that dwellings are accessible to persons with impaired sight or partial mobility.

B. Controls

- 1) Demonstrate that planning and design measures do not prevent access by people with disabilities:
 - a) Access pathways should slope gently and evenly, with a non-slip finish and no steps between the street frontage and principal building entrances.
 - b) Stair nosings should have a distinctive colour and texture.
 - c) Dwellings should have:
 - i. Dimensions consistent with AS1428.1-1998 Design for access and mobility and AS4299-1995 Australian Adaptable Housing
 - ii. Hallways at least 1m wide
 - iii. Circulation in bathrooms at least 1m wide.
 - d) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Housing Standards AS1428-1998 and AS4299-1995.
 - e) Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard regarding parking for people with a disability.
- 2) Demonstrate that dwellings have been designed to meet the needs of an ageing population:
 - a) incorporate design measures which are appropriate to people with disabilities; and
 - b) employ lever-type door handles and traditional cruciform tap-handles; and
 - c) provide for future low-cost modifications to bathrooms:
 - d) future removal of hobs from shower recesses;
 - e) provision for future attachment of grab-rails to walls.
 - f) provide for future low-cost modifications to kitchens including replacement of underbench shelves with drawers & attachment of grab-rails.
 - g) provide appropriate levels and location of lighting.

2.4.22 Storage and Services

A. Objectives

Ensure that each dwelling has reasonable private storage space and waste management areas/facilities, and that meters, service cupboards and aerials are integrated with the design of buildings.

B. Controls

- 1) Provide storage for household items:
 - a) at least 10m³ per dwelling; either
 - b) as cupboard space within the dwelling in addition to wardrobes; or
 - c) within a lockable garage, not encroaching upon the parking space; or
 - d) in weather-proof lockers that are not visible from the street.

- 2) Letter boxes should be provided according to Australia Post specifications:
 - a) adjacent to the front boundary;
 - b) located conveniently for residents entering the site (by car or on foot);
 - c) integrated with the design of landscaped areas, fences and buildings.
- 3) Demonstrate that dwellings have been designed to accommodate home-based telecommunications facilities and information technologies by allowing for:
 - a) additional telephone lines and outlets;
 - b) additional electrical outlets;
 - c) satellite or cable-based reception.

2.5 Residential Flat Buildings

The following developments are covered by this section:

- a) residential flat buildings; and
- b) alterations and additions to existing residential flat buildings.

This section provides specific controls for residential flat buildings in addition to the general controls elsewhere in this DCP.

2.5.1 Residential Character

A. Objective

In established areas new development should be planned and designed to reflect the character of traditional neighbourhoods established prior to 1970.

B. Background

The residential character of any neighbourhood is determined by:



1) Location, and density of development:

- a) proximity to busy centres or major roads;
- b) residential density and mix of housing types;
- c) proximity to heritage precincts;
- d) frontage to public parks.



2) The local landscape and its configuration:

- a) flat or sloping;
- b) well-vegetated or cleared;
- c) frontages to streams or the Nepean River.



- 3) Predominant patterns of planning and design
 - a) displayed by local buildings and their gardens;
 - b) setbacks and building separation;
 - c) height, scale and bulk;
 - d) garaging;
 - e) articulated forms and varied plantings.

2.5.2 Preferred Configuration for Residential Flat Buildings

A. Objective

- 1) New residential flat building development should adopt key features of established suburban design.
- 2) Dwellings, their entrances and private courtyards look towards the street, or to the rear boundary.

B. Controls

- 1) New residential flat building development should incorporate the traditional configuration of the cottages and cottage gardens that define the character of Penrith's established neighbourhoods, because:
 - a) Traditional development demonstrates social and urban design benefits, particularly the orientation of dwellings and their private open spaces towards the street rather than overlooking neighbouring dwellings and gardens;
 - b) Patterns of buildings and private gardens in established neighbourhoods have visual and symbolic richness that are valued by their community;
 - c) the use of traditional features softens the popular perception that redevelopment is changing the traditional character of Penrith City.
- 2) Within the relevant zones, established development is detached buildings or semi-detached pairs which are:
 - a) separated from one another by landscaped courtyards;
 - b) stepped floor plans and projecting verandahs;
 - c) capped by a variety of pitched roofs.
- 3) Within the relevant zones, established development provides a "green corridor" of trees and shrubs along the rear boundary:
 - a) conserving remnant vegetation; and

- b) providing new shelter and habitat; and
 - c) contributing to streetscape.
- 4) Within the relevant zones, established development provides a front garden setback which may be filled by verandahs and private garden-courts:
- a) encourages active use by residents;
 - b) provides for attractive front gardens.
- 5) Within the relevant zones, established development provides parking areas which are concealed from the street and consequently avoids the appearance of "garage architecture".

How much floor space is appropriate to your site?

2.5.3 The Development Site

A. Objective

Identify planning and design options that are appropriate to the shape and size of each development lot, and to the location of neighbouring buildings.

B. Controls

- 1) Determine a minimum lot width for residential flat buildings:
 - a) adopt a minimum lot width of 20m in the R4 High Density Residential zone.
- 2) For the purposes of calculating lot size and lot width, the lot does not include the area of any access corridor or right-of-carriageway.

2.5.4. Urban Form

A. Objective

New buildings should show characteristics of traditional suburban development: dwellings oriented to face the street, building forms stepped or articulated, and integrated with the shape of surrounding garden areas.

B. Controls

- 1) For dwellings fronting the street, adopt a traditional orientation:
 - a) living rooms, verandahs and the paths to entrances face the street rather than neighbouring properties; and
 - b) private gardens fill the front setback area; and
 - c) garages are concealed behind dwellings.
- 2) Dwellings behind the street frontage should adopt similar principles:
 - a) living rooms and entrances face the street, and / or the landscaped rear boundary setback; and
 - b) private gardens fill the rear setback area.
- 3) Avoid "gun-barrel" style developments with long rows of attached dwellings, long straight driveways and rows of uniform width side setback:
 - a) step the alignment of all facades – generally one corner and a substantial indentation for every 10m run of wall;

- b) divide buildings into separate wings – a deep indentation located centrally in the longest walls; or a central garden courtyard;
- c) vary the width of side setbacks – a combination of garden courtyards and access ways; and
- d) lined by an “avenue” of shady overhanging trees;
- e) cap the stepped floor plan with a variety of pitched roof forms;
- f) windows should be inserted into every elevation.

2.5.5 Landscaped Area

A. Objective

Retain a reasonable proportion of each site for landscaped garden areas, conserve significant existing vegetation, and provide reasonable separation between neighbouring dwellings.

B. Controls

1) Landscaped areas should provide:

- a) effective separation between neighbouring dwellings;
 - i) healthy growth of new trees and shrubs;
 - ii) long-term survival of existing vegetation required by Council to be preserved;
 - iii) private courtyards for all dwellings and a green outlook;
 - iv) front gardens that contribute to an attractive streetscape; and
 - v) where more than 10 dwellings are proposed, a centrally located communal open space area that is accessible and available to all residents of the development, comprising 10% of the minimum landscaped area requirement.

3) Landscaped area must meet the following requirements:

a) Landscaped areas should be:

Zone	Minimum landscaped area % of the site
R1 Residential General	40
R4 High Density Residential	35

- b) have a minimum width of 2m – with no basement encroachment; and containing unexcavated soil to promote landscaping that is effective and healthy;
- c) may include terraces and patios located not higher than 0.5m above ground and pedestrian pathways to building and dwelling entrances;
- d) do not include substantially-paved areas such as buildings, driveways and covered garages;
- e) should include verges that surround car parking areas and open driveways;
- f) should provide a reasonable area of private open space in accordance with the part within this section on design;

- g) where more than one building is proposed, that part of any easement exceeding 10% of the site area shall not be included in the landscaped area calculation.

2.5.6 Front and Rear Setbacks

A. Objective

Setbacks are to reflect the character of established garden suburbs, and provide for development of flora and fauna corridors.

B. Controls

- 1) Determine the maximum development footprint for your site:
 - a) The minimum rear setback for a single storey building (or any single storey component of a building) is 4m
 - b) The minimum rear setback for a two storey building (or any two storey component of a building) is 6m.
- 2) Within the rear boundary setback:
 - a) there shall be no building encroachments either above or below ground (eaves excepted);
 - b) maximise the amount of undisturbed soil, encouraging rapid growth of healthy trees and shrubs;
 - c) where there are physical encumbrances such as open drains, increase the setback accordingly.
- 3) Determine an appropriate front setback:
 - a) either average the setbacks of the immediate neighbours; or
 - b) 5.5m minimum whichever is the greater dimension.
- 4) Permissible encroachments within the front setback are:
 - a) verandahs and pergolas only which are a 4.5m minimum setback to the face of the verandah or pergola; and maximum 50% of elevation.
- 5) Garages and parking spaces are not permissible within the front setback.

2.5.7 Side Setbacks

A. Objective

Minimise disturbance to existing topography and natural soil-profiles, and provide for reasonable landscaped separation between neighbouring buildings.

B. Controls

- 1) Cut and fill and maximum ground floor heights:
 - a) on sloping sites provide stepping building platforms in line with existing topography with floors no higher than 1m above natural ground level;
 - b) restrict cut-and-fill to a maximum of 500mm; and
 - c) provide effective sub-soil drainage.
- 2) Pitches for main roofs are not to be in excess of 25 degrees in order to reduce the visual scale.

- 3) Zero setbacks from the side boundary are not permissible, other than awnings to main building entrances.

2.5.8 Visual and Acoustic Privacy and Outlook

A. Objective

- a. Provide an outlook from dwellings and their private open space, and achieve levels of acoustic and visual privacy that are reasonable for a medium-density residential neighbourhood.
- b. To provide a high level of visual and acoustic privacy for residents and neighbours in dwellings and private open space.
- c. To ensure that building design minimises overlooking problems.

B. Controls

- 1) Demonstrate a package of measures that achieves reasonable visual privacy between adjacent dwellings:

- a) windows oriented towards their own private garden courtyard; and / or
- b) at least 9m between any windows that face each other; and / or
- c) screening measures, including:
 - i) offsetting of windows; or
 - ii) oblique orientation for windows; or
 - iii) external screens to windows; or
 - iv) courtyard walls and pergolas;

note that landscaping (other than established trees and shrubs that are proposed to be retained) should not provide the principal means of screening;

- d) for windows of habitable rooms with a direct outlook onto windows of habitable rooms of adjacent dwellings:
 - i) are offset by a distance sufficient to limit views between windows; or
 - ii) have sill heights of 1.7m above floor level; or
 - iii) have fixed obscure glazing in any part of the window below 1.7m.

2.5.9 Solar Planning

A. Objective

- a. Improve the energy efficiency of dwellings and achieve a high standard of residential amenity.
- b. To ensure adequate residential amenity through the provision of sunlight access and good solar amenity to the living spaces and private open space areas of dwellings.
- c. To recognise the reasonable expectation for a dwelling to have the ability to access sunlight.

B. Controls

- 1) The applicant must demonstrate that dwellings meet acceptable solar standards and that existing neighbouring and proposed private open spaces receive adequate solar access by:
 - a) Providing shadow diagrams prepared by a qualified technician;

- b) Illustrating the impacts of proposed development upon existing neighbouring dwellings and their open space areas;
- c) Demonstrating shadows cast by neighbouring buildings;
- d) Maximising potential for solar gain by placing windows in all exterior walls that are exposed to northern sun;
- e) Ensuring that the proposed development provides a minimum of 4 hours sunlight between 9am and 3pm on 21 June, to living zones (i.e. areas other than bedrooms, bathrooms, kitchen and laundry) of each dwelling, and the living zones of any adjoining dwellings;
- f) Ensuring that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to 40% of the main private open spaces of the dwelling and main private open spaces of any adjoining dwellings;
- g) In situations where the existing overshadowing by buildings and fences reduces sunlight to less than the minimums noted above, the development is to not further reduced sunlight to the specified areas by more than 20%.

Urban design

2.5.10 Significant Townscapes & Landscapes

A. Objective

In areas of particular significance to urban conservation, environmental character, new development should demonstrate detailed design measures that protect and complement heritage significance or character.

B. Controls

- 1) In neighbourhoods with townscape significance, new development should:
 - a) conserve vegetation that has visual or historical significance;
 - b) adopt the prevailing configuration of garden areas, particularly the street's predominant front boundary set-back;
 - c) adopt the predominant width, height, and scale of existing buildings;
 - d) ensure that floor plans are stepped or articulated similar to the shape or form of surrounding buildings;
 - e) adopt roof pitches, ceiling heights and forms that match neighbouring buildings;
 - f) minimise the width and area of driveways visible from public frontages;
 - g) conceal garages from public frontages (corner sites excepted).
- 2) In areas with significant vegetation:
 - a) aim to preserve established trees as blocks or corridors;
 - b) ensure that the location of buildings and pavements does not affect long term survival of established trees;
 - c) incorporate new plantings that reinforce the visual and habitat values;
 - d) in general, new plantings should be species indigenous to the local soil type, reinforcing visual and habitat values.
- 3) New development should not aim to provide a direct copy of traditional buildings:

- a) simple detailing of building forms and openings is preferred to the use of "stuck-on" detailing applied to gable ends and verandahs;
- b) the pitch and form of roofs, and articulation of floor plans are of particular importance;
- c) frequent use of shadow-casting elements such as verandahs and awnings is important to reduce the scale of long walls;
- d) traditional proportions for window and door openings should be employed;
- e) use of traditional joinery details for windows, doors and verandahs and fences should be concentrated in elevations that are visible from public places

2.5.11 Corner Sites and Park Frontages

A. Objective

For allotments facing two streets or adjoining a public park, apply traditional principles of orientation and articulation to both of the public frontages.

B. Controls

- 1) For allotments with a second street frontage, the second frontage should adopt key principles from other parts of this section including:
 - a) The development site;
 - b) Urban form;
 - c) Landscaped area;
 - d) Side setbacks.
- 2) For corner lots and park frontages:
 - a) the rear and front setbacks may be measured relative to the shortest boundaries;
 - b) living rooms, dwelling entrances and verandahs may face either public frontage;
 - c) building forms should be articulated for both frontages;
 - d) all fences along public frontages should be designed in accordance with the parts in this section on fences and retaining walls;
 - e) driveway access should be from the shortest street frontage, with garages concealed from both public frontages; and
- 3) For frontages to a second street:
 - a) minimum setback to dwellings and garage entrances should be 5.5m;
 - b) minimum verandah setback should be 3m;
 - c) garden areas facing the street should be landscaped as private courtyards.
 - d) Facing the street corner, the profile of the buildings should be varied with:
 - a) A distinctive roof element; and/or
 - b) Limited encroachments: external walls to corner rooms that measure up to 5 m in width may extend 2m beyond both street front setbacks
- 4) Along park frontages:
 - a) dwellings and private courtyards should face the park;
 - b) minimum dwelling or verandah setback should be 2m, for not more than 50% of the total building elevation;

- c) screen plantings should be employed to conceal driveways and basement parking.

2.5.12 Building Design

A. Objective

New developments should appear as a collection of single or semi-detached dwellings separated by gardens and ancillary structures, with facades designed to incorporate a variety of materials and shading structures.

A variety of overhanging roofs and projections at ground floor level; a range of materials and finishes; windows inserted into every visible wall; garages concealed in basements.

Basement parking enables access from dwellings to private open space, located both at ground level, and/or set upon a podium not higher than 1.5m above ground.

B. Controls

- 1) Development should incorporate a variety of architectural features to minimise the apparent scale and bulk of buildings and to reflect typical features of established cottage developments:
 - a) walls with alignments that step in both plan and section;
 - b) windows and doors inserted into all visible walls;
 - c) a variety of pitched roofs, predominantly hipped.
 - d) lower storeys that project beyond the line of the top storey, and are capped by roofs; or terraces to the upper storey apartments;
 - e) the top storey designed as a "penthouse" with extensive glazing in the form of windows and large doors surrounded by terraces and pergolas;
 - f) a variety of overhangs that cast shadows including:
 - i) roofs with wide eaves;
 - ii) awnings and pergolas;
 - iii) balconies enclosed by corner columns and a variety of balustrades;
 - iv) wide terraces at ground level;
 - g) variation in building materials, for example:
 - i) a "solid" masonry base;
 - ii) intermediate levels that appear lighter: coloured or painted brickwork, with projecting "screens" of balconies that are located in particular at corners of buildings;
 - iii) a lightweight "penthouse" upper storey, capped by overhanging roofs and open pergolas, with terraces and balconies surrounded by open-style balustrades.
- 2) Variety in architectural features should be apparent in all visible facades including:
 - a) facing the street;
 - b) facing side driveways; and
 - c) facing neighbouring residential properties.
- 3) Basements for car parks should rise no higher than 1.5m above ground provide a minimum 2.2m vertical clearance for vehicles.

2.5.13 Energy Efficiency

A. Objective

Dwellings shall be configured and constructed to minimize the energy required for space heating, cooling or lighting.

B. Controls

- 1) Adopt a configuration for dwellings that promotes cross-ventilation:
 - a) corner apartments with two external walls;
 - b) apartments that sit between two opposite external walls.
- 2) Adopt an appropriate orientation for rooms and windows:
 - a) living areas - facing within 30 degrees of solar north is desirable;
 - b) windows - at least 50% of glazing facing solar north is desirable; unprotected glazing facing east, west or south shall be avoided; for every room, windows in two external walls are desirable;
 - c) where the desired orientation cannot be achieved, higher compliance with other energy efficiency standards shall be achieved.
- 3) Provide effective shading from summer sun and employ effective glazing:
 - a) overhanging eaves: at least 450mm wide;
 - b) external, adjustable screening for windows, doors and skylights to habitable rooms;
 - c) pergolas over courtyards;
 - d) for any large south-facing window:
high performance glass eg. double glazing in thermal break frames;
 - e) windows and doors facing east, south or west: high performance glass eg. double glazing in thermal break frames;
 - f) all windows and external doors: weather-stripping should be used.

2.5.14 Design of Dwellings and Private Courtyards

A. Objective

Dwellings and their private courtyards should achieve high levels of amenity, and demonstrate traditional practices of suburban design.

B. Controls

- 1) Common circulation areas should facilitate access by people carrying parcels and removal of furniture:
 - a) corridors at least 1.2m wide;
 - b) stairs with landings at least 1.2m deep.
- 2) A reasonable area of private open space should be provided for each dwelling:
 - a) for dwellings at ground level:
 - i) a minimum of 20m²;
 - ii) as courtyards at ground level; and / or
 - iii) terraces located not higher than 1.5m above ground level; and

- iv) for street-front dwellings: individual entrances to terraces or courtyards from the street;
- b) for dwellings above ground - balconies that are a minimum of 10m²;
- c) all required open space should include one area:
 - v) measuring at least 2.5m by 2.5m;
 - vi) suitable for outdoor dining; and
 - vii) located immediately next to, and level with, a living or dining room; and
 - viii) incorporating an area for outdoor clothes drying that is visually-screened to a height of at least 1.5m above floor level;
 - ix) Landscaped areas should maximise the area available for private courtyards and gardens.
- 3) Dwellings should have rooms that are planned and oriented:
 - a) to maximise privacy,
 - b) to provide a "green" outlook across open space;
 - c) to facilitate natural ventilation and day lighting.
- 4) Rooms should have dimensions and an area that:
 - a) can accommodate the range of furniture typically associated with their function; and
 - b) recognise that furnishing options may be restricted by the location of windows and doors.

2.5.15 Garages

A. Objective

Garages should be designed to serve a variety of purposes, and their appearance should contribute to the overall diversity of building form and design.

B. Controls

- 5) Garage and parking areas should be planned to:
 - a) minimise disruption to traditional or established streetscapes by concealing from the street;
 - b) provide flexible accommodation for vehicles, domestic pets, storage, and covered areas for outdoor recreation;
 - c) minimise transmission of noise to adjoining dwellings;
 - d) provide secure parking;
 - e) allow for maintenance access to rear garden courtyards; and
 - f) provide for effective and healthy landscaping along verges and boundaries.
 - g) permit all turning movements, full opening of vehicle doors as defined by AS 2890.1-1993;
- 6) Basements should have:
 - i) a low appearance, rising no higher than 1.5m above ground;
 - j) natural ventilation, either screen walls; or terraced embankments, with each step a maximum of 500mm, and landscaped as part of the side boundary court;

- k) a "capping" of private courtyards or balconies opening from the lowest level of dwellings (if basements extend beyond the main building walls);
 - l) vehicle entrances designed to complement the architecture and landscaping of each building:
 - m) individual up and down ramps;
 - n) a central median;
 - o) overhung by balcony structures; and
 - p) undercover storage:
 - iii) garbage and recycling bins in a secured area located close to the street entrance and detailed according to Council codes; and
 - iv) household items: in secured enclosures for each dwelling, or associated with secured private parking spaces.
- 7) For dwellings that require two spaces:
- a) parking may be arranged in a stacked configuration
- 8) Garages and parking spaces are not permissible within the front setback.

2.5.16 Garden Design

A. Objective

Gardens should be landscaped according to the function of each area, and should provide a backdrop that is appropriate to each adjacent room.

B. Controls

- 1) The rear boundary setback should provide:
 - a) private garden courtyards;
 - b) a corridor of habitat, and a green backdrop that is visible from the street;
 - c) conservation for any existing corridor of mature trees; or
 - d) an interlocking canopy of low to medium-height trees and shrubs;
 - e) predominantly species indigenous to the soils of Penrith City.
 - 2) Alongside boundaries, generally provide:
 - a) small-to medium height canopy trees for sun-shading and privacy separation between dwellings;
 - b) within the verges to any common driveway: hedges fronting windows to any dwelling;
 - 3) Along driveway verges and surrounding parking basements:
 - a) screen plantings of small to medium canopy trees;
 - b) beds of continuous ground cover;
 - c) common pathways to building entrances according to the part below on Paving Design
- Street frontage plantings should provide:
- a) private gardens for street-front dwellings;
 - b) a civic garden frontage appropriate to the established neighbourhood character; and

- c) mixed species of trees, shrubs, and accent plantings including flowers and ground covers;
- d) level areas of well-drained turf; and
- e) along noisy thoroughfares:
 - i) noise attenuation with an interlocking canopy formed by at least two rows of trees under planted with dense hedges.

2.5.17 Paving Design

A. Objective

Design driveways and paved areas as attractive and functional components of development, complementing the designs of garden areas and buildings, and providing effective management for stormwater run-off.

B. Controls

- 1) Hard paved surfaces should:
 - a) maximise the area available for landscaping and gardens;
 - b) impose no adverse long term effect on any vegetation that Council requires preserved.
- 2) Generally paving should:
 - a) provide an attractive "address" for any dwellings without a direct frontage to the street;
 - b) minimise the area and width of driveways along the street-frontage;
 - c) be overlooked by continuously-occupied rooms such as kitchens and living rooms;
 - d) be divided into panels by bands of contrasting materials or pavers;
 - e) provide barrier-free access continuous from the street to the entrance of each dwelling;
 - f) provide for landscaping as continuous verges along both sides,
 - g) collect and channel run off into grated sumps located strategically and integrated with the design of surface pavement.
 - h) Incorporate outdoor storage of garbage bins awaiting collection.

2.5.18 Fences and Retaining Walls

A. Objective

Fences, courtyard walls and boundary retaining walls should be compatible with neighbourhood character, and should be integrated with the design of buildings and garden areas, and provide casual surveillance of public and common areas.

B. Controls

- 1) Fencing must:
 - a) Be structurally adequate, in accordance with the Building Code of Australia, and meets the *Dividing Fences Act 1991*.
 - b) Be sympathetic to the natural setting and character in form, materials and colour;
 - c) Maximise natural surveillance from the street to the building and from the building to the street.
- 2) Fences should be no taller than:

- a) 1.8m generally; and
 - b) 2.4m on sloping sites, including the height of any retaining wall.
- 3) Fences along boundaries forward of the front building alignment:
- a) should not be taller than 1.2m, or if taller, of see-through construction;
 - b) should not be constructed of metal panels;
 - c) walls of solid construction and taller than 1.2m (such as courtyard walls) should be set back at least 2m from the front boundary (to allow for landscaping) and should not occupy more than 50% of the allotment width.
- 4) Fences along driveways and separating existing multi-unit housing, or fronting a public park should be 1m tall, or if taller, of see-through construction;
- 5) Fences along boundaries around private courtyards should minimise cross-viewing and the transmission of noise;
- 6) Fences along boundaries in any location that can be seen from the street or a public park frontage should not be constructed of metal panels;
- 7) Fences along boundaries fronting noisy thoroughfares:
- a) solid masonry walls are acceptable to a maximum of 1.8m; and
 - b) incorporating corners and planting beds every 5m;
- 8) Where fencing affects easements or stormwater flow paths: consult with Council and the relevant authority.
- 9) Fencing of a "see-through" construction includes:
- a) panels set into a timber frame or between brick piers; where
 - b) any solid base is not taller than 1m; and
 - c) panels are spaced pickets or palings, or lattice.
- 10) Retaining walls:
- a) generally should be no taller than 500mm;
 - b) should not cut through roots of any tree required by Council to be preserved;
 - c) should be separated from any associated fence by a planter-bed at least 500mm wide, minimising the apparent overall height of fencing;
 - d) should provide drainage for any associated planter-bed;
 - e) should be separated from any driveway by a landscaped verge at least 500mm wide, to prevent impact damage from vehicles.

2.5.19 Safety and Security

A. Objective

Achieve a high level of passive security within and surrounding dwellings.

B. Controls

- 1) Encourage a sense of community:
- a) Each common stairwell should serve no more than 10 dwellings.
 - b) The public street and /or common pathways should be overlooked by:
 - i) Entrances to dwellings or to ground level; terraces;

- ii) Windows to living rooms, dining rooms and/or kitchens; and
 - iii) Private terraces and balconies
 - c) fences should be designed to facilitate glimpses or filtered views from dwellings and private courts to the street and to driveways.
- 2) Ensure that at least one continuously-occupied room in each dwelling (a kitchen or living room) overlooks:
- a) the front street;
 - b) driveways and garage forecourts.
- 3) Prevent concealment of intruders by:
- a) uniform lighting levels across common areas such as driveways;
 - b) planning which does not provide hidden recesses;
 - c) along common pathways: selection of appropriate plant species according to height and density.

2.5.20 Accessibility and Adaptability

A. Objective

To provide safe and easy access to buildings to enable better use and enjoyment by people regardless of age and physical condition, while also contribution to the vitality and vibrancy of the public domain.

B. Controls

- 1) Demonstrate that planning and design measures do not prevent access by people with disabilities:
- a) access pathways should slope gently and evenly, with a non-slip finish and no steps between the street frontage and principal building entrances;
 - b) stair nosings should have a distinctive colour and texture;
 - c) dwellings should have:
 - d) dimensions consistent with AS 1428.1-Design for access and mobility.
 - e) hallways at least 1m wide.
 - f) circulation areas in bathrooms at least 1 m wide.
- 2) Demonstrate that dwellings have been designed to meet the needs of an ageing population:
- a) incorporate design measures which are appropriate to people with disabilities; and
 - b) employ lever-type door handles and traditional cruciform tap-handles; and
 - c) provide for future low cost modifications to bathrooms:
 - i) future removal of hobs from shower recesses;
 - ii) provision for future attachment of grab-rails to walls.
 - d) provide for future low-cost modifications to kitchens including replacement of under bench shelves with drawers & attachment of grab-rails.
 - e) provide appropriate levels and location of lighting.

- 3) 10% of all dwellings or a minimum one dwelling, whichever is greater, must be designed in accordance with the Australian Adaptable Housing Standard (AS4299-1995), to be capable of adaptation for people with a disability or elderly residents.
- 4) Where possible, the mandatory adaptable dwellings shall be located on the ground floor.
- 5) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Housing Standard (AS4299-1995).
- 6) Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard regarding parking for people with a disability.

2.5.21 Storage and Services

A. Objective

Ensure that each dwelling has reasonable private storage space and waste management areas/facilities, and that meters, service cupboards and aerials are integrated with the design of buildings.

B. Controls

- 1) Provide storage for household items:
 - a) at least 10m³ per dwelling; either
 - b) as cupboard space within the dwelling in addition to wardrobes; or
 - c) within a lockable garage, not encroaching upon the parking space; or
 - d) in weather-proof lockers that are not visible from the street.
- 2) Letter boxes should be provided according to Australia Post specifications:
 - a) adjacent to the front boundary;
 - b) located conveniently for residents entering the site (by car or on foot);
 - c) integrated with the design of landscaped areas, fences and buildings.
- 3) Demonstrate that dwellings have been designed to accommodate home-based telecommunications facilities and information technologies by allowing for:
 - a) additional telephone lines and outlets;
 - b) additional electrical outlets;
 - c) satellite or cable-based reception.

2.6 Non Residential Developments

The following developments are covered by this section:

- a) Any proposed non residential development proposed in a residential zone.

This section provides specific controls for non residential development in residential zones in addition to the general controls elsewhere in this DCP.

A. Objectives

Non-residential development should be planned and designed according to principles of traditional suburban design, and to preserve the amenity of residential neighbourhoods.

B. Controls

- 1) Principles of urban form and urban design that apply to permissible residential development should be adopted for non-residential development.

- 2) Particular attention should be paid to:

The development site including front setbacks, rear setbacks dual frontage situations.

- a) Urban form including:

- i) traditional building design features;
- ii) traditional garden frontages;
- iii) orientation of building entrances;
- iv) continuously occupied rooms facing the street;
- v) detailed consideration of significant townscapes or landscapes;
- vi) signs.

- vii) driveways and parking including:

- provision of on-site parking appropriate to the proposed use, and in accordance with the parking requirements of this DCP;
- minimise site coverage by paved areas;
- conceal garages from views available from public parks and streets;
- locate driveways and parking areas away from any neighbouring residential development;

- b) landscaped area- provision and design of the required minimum area with detailed design of gardens and paving;

- c) side setbacks to provide for effective landscaped separation from adjacent developments;

- d) solar planning and energy efficiency - minimised overshadowing of adjacent properties and minimise requirements for mechanical heating and cooling of interiors;

- e) privacy - protect the amenity of adjacent properties;

- f) storage and building services - sufficient to meet requirements generated by the proposed development and located to protect the amenity of adjacent developments.

- g) privacy – protect the amenity of adjacent properties;

- h) storage and building services – sufficient to meet requirements generated by the proposed development and located to protect the amenity of adjacent residents.

2.7 Proposed Road Pattern Designs

The following developments are covered by this section:

- 1) Development patterns shall be consistent with the road patterns as shown in Figures D2.15 to D2.18:

Figure D2.15: Proposed road pattern for Kohlenberg Close in the vicinity of Brougham Street, Emu Plains

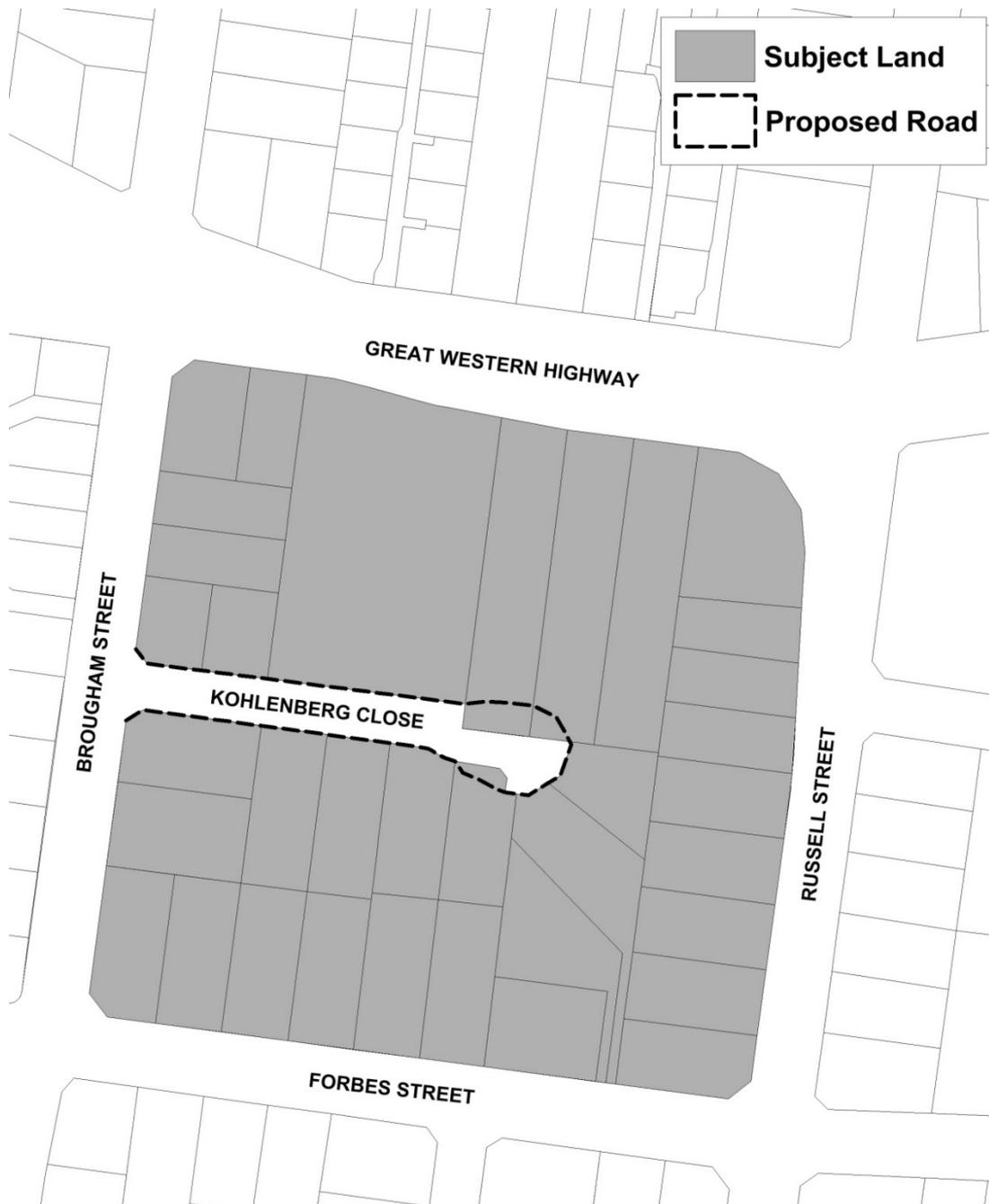


Figure D2.16: Proposed road pattern for Acorn Street in the vicinity of Grey Street, Emu Plains



Figure D2.17: Proposed road pattern in the vicinity of Towle Close, Emu Plains



Figure D2.18: Proposed road pattern in the vicinity of Stock Avenue, Kingswood



This section provides specific controls for development where specific road patterns have been identified. In the event of any inconsistency between this section and the rest of this DCP, the requirements of this section prevail.

A. Objectives

- 1) To facilitate the creation and construction of public roads,
- 2) To create a strong nexus between public roads and future development,
- 3) To maintain and enhance the amenity, safety and access of these public roads.

B. Controls

1) Street Frontage

Development on land that abuts a proposed road (as shown in Figure D2.15 to D2.18) shall be oriented to the proposed road and provide pedestrian and vehicular access to the proposed road.

2) Fencing

Any fencing along the frontage to the proposed road must be “see-through” construction and should not be taller than 1.2m.

Fencing of a “see-through” construction includes:

- a) Panels set into a timber frame or between brick piers; where
- b) Any solid base is not taller than 1m; and
- c) Panels are spaced pickets or palings, or lattice.

3) Landscaping

Despite the landscaped area controls contained elsewhere within Section D2 of this Development Control Plan:

A maximum of 10% reduction in the minimum landscaped area requirement may apply to development of the specified sites where an application proposes construction of the proposed road and subsequent dedication of the land.