CHAPTER 1

RESIDENTIAL DEVELOPMENT

and the Lismore Health Precinct Zone R3 Medium Density Residential (including non-residential development)

lismore city council

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1. INTRODUCTION

1.1 Name and application of this DCP Chapter

The Residential Development Chapter of Council's Development Control Plan (DCP) provides for flexible, modern and innovative housing design. Council's aim is to promote housing diversity and residential densities appropriate for the Lismore LGA. Provision has been made for flexible guidelines that allow for appropriately designed housing types. Essentially, the Chapter promotes improved built form and high quality urban design.

The planning controls contained in this Chapter apply to development applications for building, altering or using land for the construction of residential development, including ancillary structures such as sheds, pools and garages in the Lismore LGA in both urban and non-urban zones. This Chapter also provides information with respect to Council's requirements for residential and non-residential development in the Lismore Health Precinct, comprising the land zoned R3 Medium Density Zone in the vicinity of Lismore Base Hospital.

1.2 Objectives of this Chapter

The objectives of this Chapter are to:

- Support increased residential infill and increase densities close to local services and facilities, particularly in areas such as the Lismore CBD and the Lismore Health Precinct.
- Foster a high standard of design, both functional and aesthetic, which takes due regard of the needs of occupants, neighbours and the availability of local amenities.
- Encourage development that is sympathetic to the topography of the land and the scale and character of the surrounding development.
- Promote a wider choice in housing to satisfy the demand of a variety of household types and lifestyles.
- Provide for sustainable building design and siting which takes advantage of climatic factors and maximises solar access and thermal comfort.
- Ensure that residential development has minimal environmental impact.
- Ensure that non-residential development in the Lismore Health Precinct is designed in a manner that it is compatible with the residential development in the locality.

1.3 How does this Chapter work?

The specific requirements for residential development addressed by this chapter are divided into primary *Elements* which comprise specified *Design Principles, Performance Criteria and Acceptable Solutions*.

In some cases both *Performance Criteria and Acceptable Solutions* are specified, but in other cases only *Performance Criteria* are specified. The *Performance Criteria and Acceptable Solutions* are numbered consecutively for ease of reference.

Development proposals must be consistent with the *Design Principles* outlined in Part 3 of this document. This can be achieved by meeting the *Acceptable Solution* or alternatively, Council may be prepared to approve development proposals that demonstrate consistency with *Design Principles* and *Performance Criteria*. This approach enables the development of innovative schemes that meet particular characteristics of a site.

Applicants are strongly encouraged to contact Council early in the design process as early engagement assists in minimising conflicts through the development application process and reduces assessment timeframes.

1.4 Relationship to other plans

This Chapter needs to be read in conjunction with the Lismore Local Environmental Plan 2012 (LLEP 2012), remaining Chapters of the Lismore Development Control Plan and relevant State Environmental Planning Policies.

Note: For residential developments and shop top housing in the Lismore CBD and Lismore Health Precinct comprising three or more storeys and that have four or more units, the provisions of Housing *State Environmental Planning Policy* and associated *Apartment Design Guide* may apply to the development application.

2. DEFINITIONS

Terms not defined in LEP 2012 dictionary are defined in this section.

adaptable housing is housing designed for people with changing physical needs as they grow older or lose full mobility.

common open space means the open space area which is available and accessible to all residents.

deep soil zone means areas of soil not covered by buildings or structures within a development that allow infiltration of rainwater to the water table and reduce stormwater run off.

expanded dwelling means an **dwelling** comprising a main building and a maximum of three habitable outbuildings.

functional open space means the main area of private open space which is part of the primary open space area located directly accessible to the living area of the dwelling and capable of being landscaped or screened to ensure that the area has privacy from adjoining development.

medium density means a residential development containing three or more dwellings on one site such as residential flat buildings and multi-dwelling housing.

north refers to true solar north. This direction is taken to be 11^{o} west of magnetic north in the Lismore City area.

primary open space means the part of the site or building which is designed, or developed, or capable of being maintained and used as lawn, courtyard or planted gardens and is available for use and enjoyment of the occupants of the development and:

- includes rooftop spaces, swimming pools, walkways, tennis courts, balconies, gazebos or
- other similar structures, used for the recreational enjoyment of open space.
- excludes drying yards, garbage handling and storage areas, areas used for movement or
- parking of vehicles, and any setback or open space which is less than two metres in width.

roads and maritime services (RMS) roads are the Bruxner Highway, Bangalow Road, Nimbin Road, Blue Knob Road, Dunoon Road, Rous Road, Coraki Road, Eltham Road)

small lot means an allotment of land which has a minimum area of less than 400m^2.

small lot housing – means dwellings on allotments that have a minimum area of less than 400m^2.

Figure 1: How the Chapter Works

3. DESIGN PRINCIPLES

High quality design leads to more liveable residential development. Good design is linked to the site and locality, existing built form, climate and the community's aspirations and needs (Figure 2). In Lismore, residential development needs to be sustainable and take into account the sub-tropical climate, community preference for outdoor living, topography and relationship to adjoining properties. Providing for a more diverse range of housing options that will meet the changing needs of the community is also important. The following principles provide a guide to achieving good design and will help to retain and improve the amenity of Lismore's residential areas. These principles are linked to the individual elements in this Chapter as shown in Figures 1 and 2.

Principle 1 **Bulk, Height, Scale**

Consideration of the impact of the scale, bulk and height of new development on adjoining buildings. The bulk and height of a proposed development needs to be compatible with or respectful of the desired streetscape and character of the area.

Principle 2 **Amenity**

Proposed development is to optimise amenity by providing adequate separation between buildings, access to sunlight, natural ventilation, visual and acoustic privacy and open spaces.

Principle 3 **Built form**

Built form, which includes site coverage, setbacks, earthworks, the type and size of a building should contribute to the character of streetscapes and the public domain, and not physically and visually dominate the street. In areas undergoing transition, such as the Lismore Health Precinct, infill development needs to balance the competing challenges of providing for increased densities whilst respecting existing building forms.

Principle 4 **Aesthetics**

Achieving good quality aesthetics requires the consideration of building elements, materials and colours. Building design needs to contribute to the streetscape and character of the area by taking account of the natural and built environment, building elements, materials and colours.

Principle 5 **Density**

Site density, the number of dwellings or units per site, needs to be suitable for each lot. Densities need to be consistent with those in the area or Council's future intentions for the area. Consideration needs to be given to the capacity of local infrastructure, availability of public transport and access to services.

Principle 6 **Landscape and Open Space**

Landscaping that integrates well with a proposed building improves the aesthetic quality of both the site and adjoining streetscape and enhances privacy and site amenity. Landscaping also plays a significant role in enhancing the local environment

Open space within a development is to be available, accessible and of a sufficient size that suits the needs of residents. The design of open space and associated landscaping needs to be integrated with the overall design of the development.

Principle 7 **Vehicle Parking, Access and Manoeuvring**

Car parking, access and manoeuvring areas are an integral part of a well designed development, ensuring the safety of vehicles and pedestrians and minimising physical and visual impacts on both the proposed residential development and adjoining properties.

Principle 8 **Resource, Energy and Water Efficiency**

Buildings need to be sustainably designed, using energy, water and natural resources in an efficient manner.

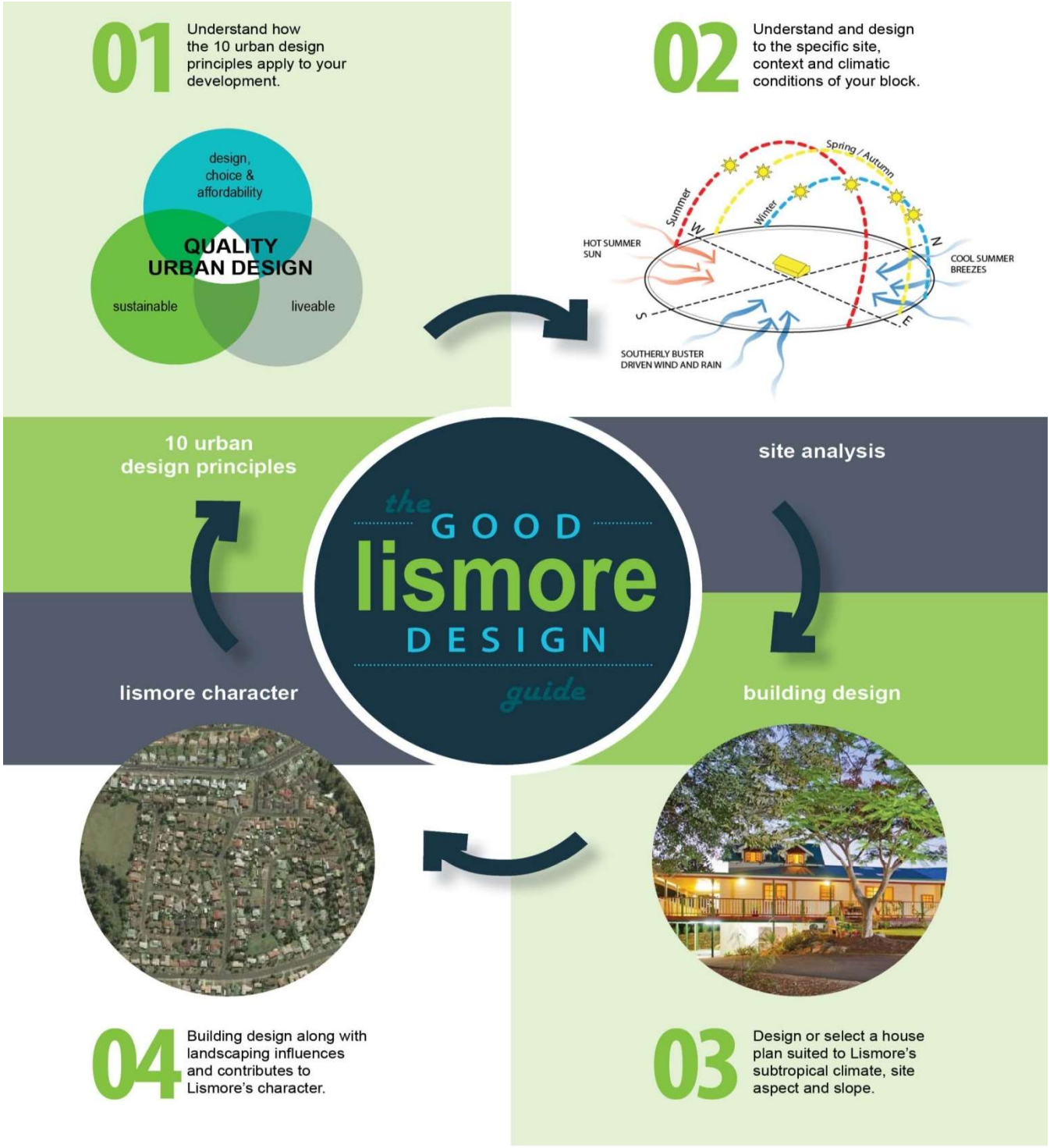
Principle 9 **Diversity of Residential Development**

Improved housing choice in sustainable locations contributes towards meeting the community's needs for particular housing. More housing is required for a range of lifestyle needs, including students, older residents, and smaller households. A smaller housing type not only meets an important need, it improves the viability of services and facilities, and provides for the efficient use of infrastructure. Housing needs to be more flexible, adaptable and affordable. Secondary dwellings, shop top housing and small lot housing will make an important contribution to improving diversity.

Principle 10 Crime prevention through environmental design (CPTED)

Appropriate design of development can prevent and discourage crime. Passive surveillance of private, communal and public space can be achieved through quality design. Good design means fewer dark areas, creating safe access, providing spaces with appropriate lighting and allowing for desired activities. Clearly delineating private open space from streets and shared space and creating a sense of ownership can contribute to discouraging crime. Good design optimises safety and security, both internal to the development and for the public domain.

Figure 2: How to Apply the Design Principles



Integrated Design Approach - The Residential Development Chapter of Council's Development Control Plan (DCP) encourages flexible, modern and innovative housing design. The idea is to promote housing diversity and residential densities appropriate to the context, climate and character for the Lismore LGA.

4. GENERAL PROVISIONS

4.1 Element – Setbacks, Design, Density and Height

The design of buildings has an important influence on urban character, amenity and streetscape. If viewed from the street, buildings need to be attractive and compatible with other dwellings in the street, particularly in relation to scale and bulk. Adverse impacts on adjacent development, land use and streetscape should be minimised.

Building height affects the scale of a dwelling and therefore the associated impact on the character of a neighbourhood.

Setbacks have the potential to significantly affect a building's appearance from the street and adjoining properties. Sufficient space is needed around a building for landscaping, open space, to maintain privacy and to provide on-site car parking. Space between buildings also impacts on built form and amenity. Flexibility in the siting of dwellings will provide for variety in housing design.

Relevant Design Principles: 1, 2, 3, 4, 5

<table>
<tr><th>Performance Criteria</th><th>Acceptable Solutions</th></tr>
<tr><td>Setbacks
P1 Development is sited and designed taking into account:
a) the topography of the land;
b) the relationship to adjoining premises and the street;
c) the locality that establishes the overall setting of the site;
d) the character and scale of surrounding development;
e) maximising solar access to both indoor and outdoor livings area, allowing sufficient space for landscaping and maintaining privacy and amenity;
f) the compatibility of the garage and carport with the dwelling.

New development is to have minimal impact on the environment.

Figure 3 provides examples of how the above can be achieved.</td><td>Setbacks
A1.1 Buildings, (not including earthworks, retaining walls and fencing elements), are setback 6m from the boundary fronting the street in zones R1, R2, R3 and RU5.

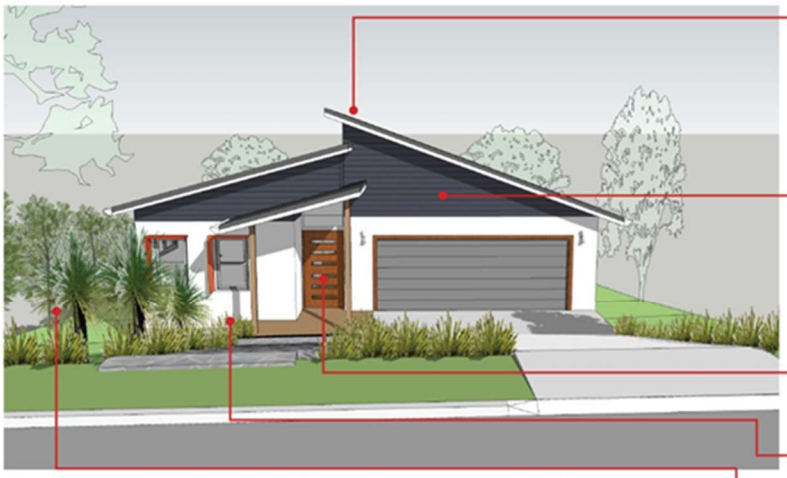
A1.2 For a corner allotment in zones R1, R2, R3 and RU5, the setback is 6m from the primary street and 3m from the secondary road.

A1.3 Buildings on allotments with rear lane frontage must be sufficiently setback to ensure vehicular parking can be accommodated completely off road. Where the garage is perpendicular to the lane, it must be setback 5.5m.

A1.4 Buildings are setback 15m from the boundary fronting the street in zones RU1, R5 and E3 unless A1.5 applies.

A1.5 Buildings in zones RU1, R5 or E3 with frontage to RMS roads (see Definitions) are to be setback 28m from the boundary fronting the street.</td></tr>
<tr><td>Design
P2 Building materials complement the materials of the neighbouring building/s and are compatible with the subtropical climate</td><td></td></tr>
<tr><td>Density
P3 Dwelling density and site coverage are consistent with the character and amenity of the residential area.</td><td>Density
A3 Provided the development satisfies other criteria in section 4, the dwelling density per site area for multi dwelling housing shall not exceed the following:
<table><tr><th>Dwelling Size</th><th>Site area per dwelling with lot < 1200m^2</th><th>Site area / dwelling with lot > 1200m^2</th></tr><tr><td>1 bedroom</td><td>200m^2</td><td>180m^2</td></tr><tr><td>2 bedroom</td><td>250m^2</td><td>220m^2</td></tr><tr><td>3 bedroom</td><td>300m^2</td><td>270m^2</td></tr></table></td></tr>
</table>

Figure 3: Building Design and Siting



Streetscape - A combination of clearly identifiable front door or access, articulated building form through roof design and material choice with front yard landscaping contributes strongly to a streets visual amenity.

Mix of roof forms provides good internal volumes encouraging natural light and ventilation as well as contributing towards street elevation articulation.

Mix of materials including masonary, render, lightweight materials break up the buildings form, references traditional housing materials and provides a good thermal balance.

Legible front door and pedestrian access separate from driveway.

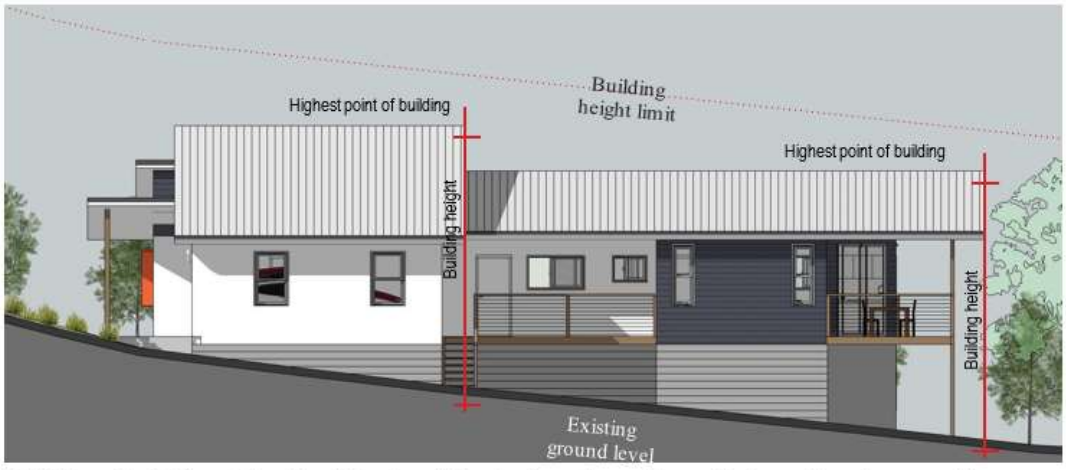
Generous sized windows overlooking the street.

Use of landscaping instead of high or solid boundary fences creates a more welcoming street address.

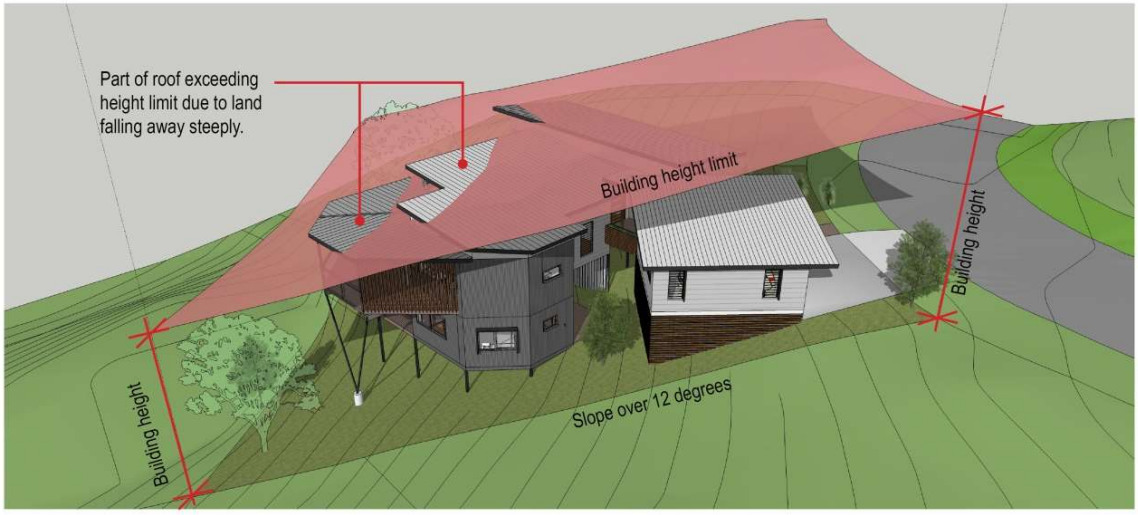
Building Height, Bulk and Scale **P4** The development is of a height that will ensure: • Consistency with the prevailing height of other buildings in the vicinity; • Adequate daylight for habitable rooms and open space areas; • Minimal overshadowing and overlooking of adjoining premises; • Compatibility with the local streetscape and character of the area; • The height is consistent with the height of adjoining residences, thereby reducing bulk and loss of residential amenity. Figures 4 and 5 demonstrate how building height is measured and overlooking of adjoining premises is minimised. Figure 6 demonstrates how overlooking impacts can be reduced. ***Note:*** *Section 11 outlines additional examples of preferred building form for taller residential buildings (3 levels or more) within the Lismore Health Precinct.*	**Building Height, Bulk and Scale** **A4.1** Buildings comply with the building height controls specified in the Lismore Local Environmental Plan 2012. **A4.2** Development is progressively set back from boundaries as building height increases so as to minimise adverse impacts on existing or future development on adjoining properties by way of overshadowing, reducing privacy or unreasonably obstructing views.

Figure 4: Measuring Building Height

Building Height Measurement - is the height of a building at any point of a building and is the vertical distance between the existing ground level and the highest point of the building. Refer to LEP height map for height limits.

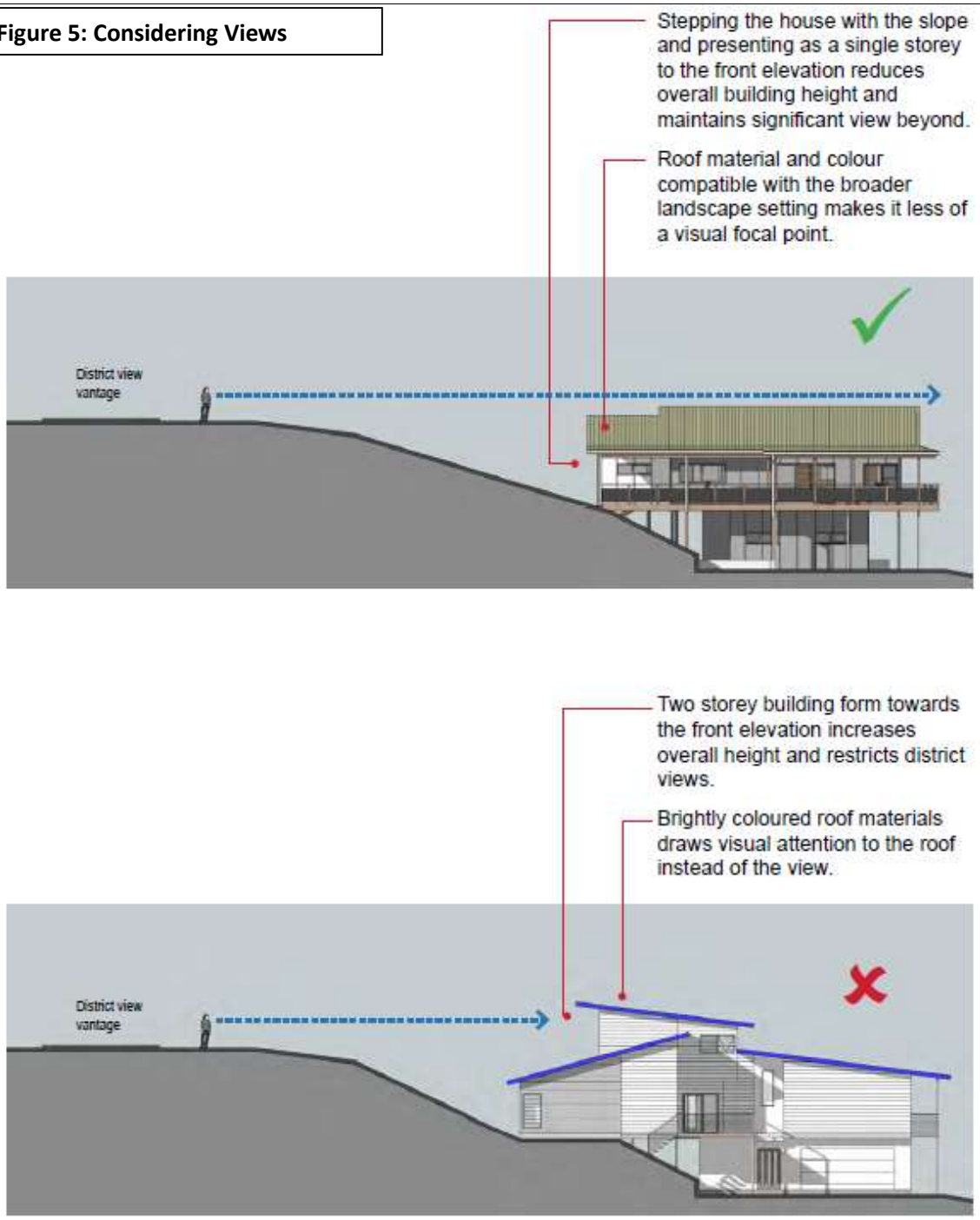


Building Height on Sloping Blocks - On sloping sites, sites with irregular slope or where earthworks have taken place, building height measurement is based on the same definition as being the vertical distance between the existing ground level and the highest point of the building.



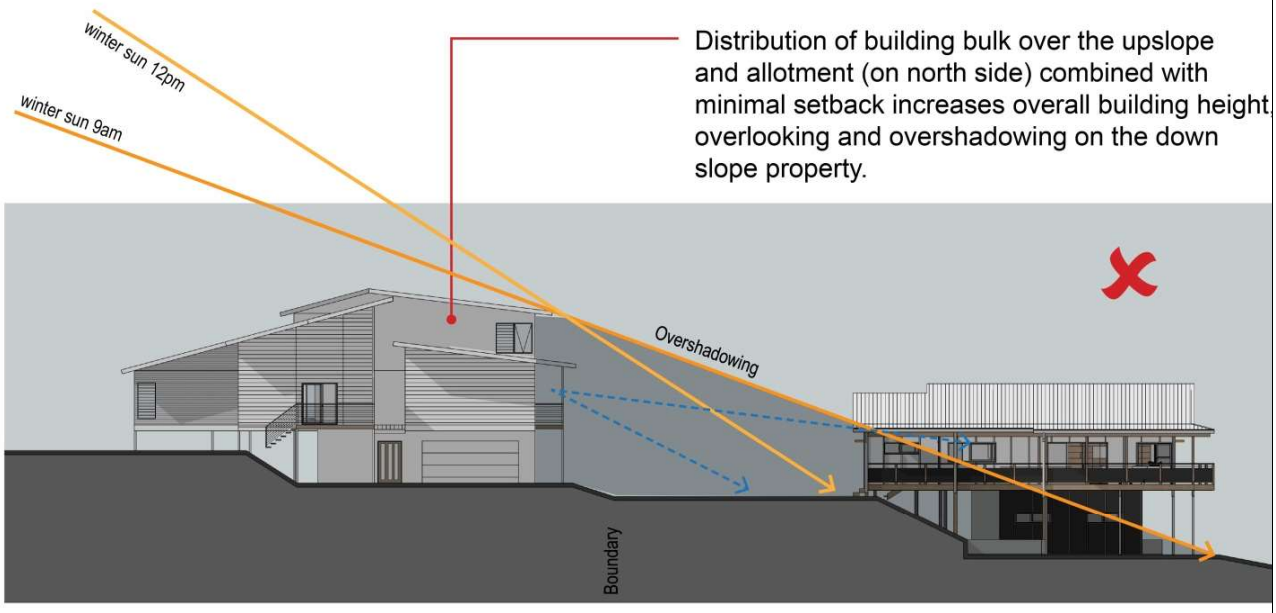
Variations to height on steeply sloping allotments (12 degrees an over) to achieve an appropriate roof form will be considered where there will be negligible amenity impacts on neighbouring properties.

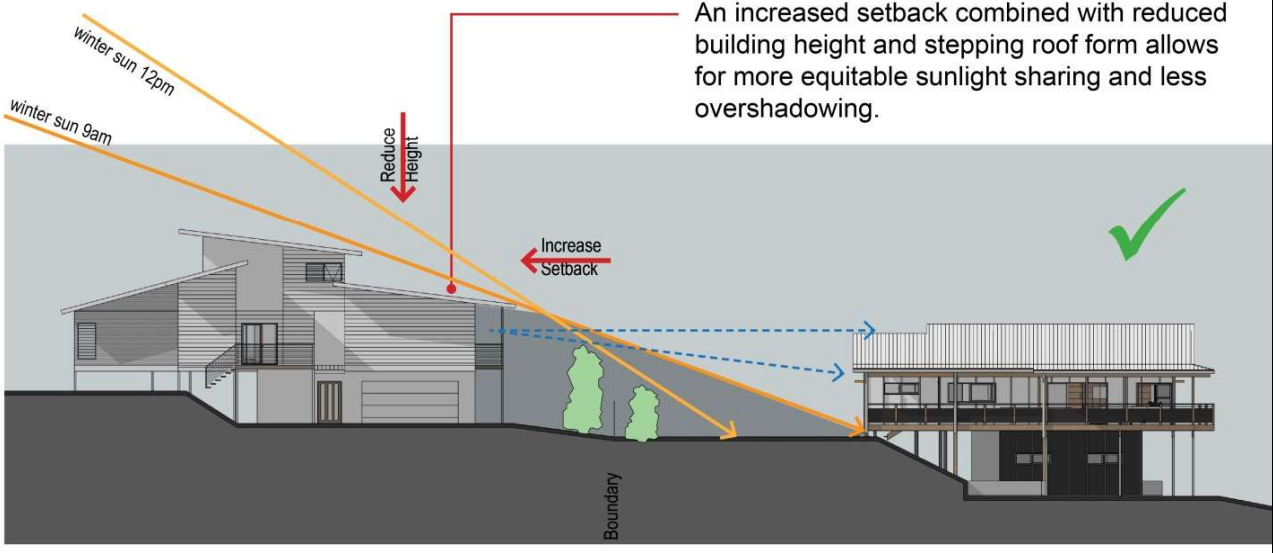
Figure 5: Considering Views



Considering significant views - A combination of restrained building height and use of materials which blend harmoniously with the natural landscape reduce impacts on escarpment and scenic views. If building within an important view field, it is important to understand what an appropriate building level height is without impeding the view.

Figure 6: Overlooking and overshadowing





Limiting overshadowing impacts - Appropriate building setbacks and building heights combined with an understanding of solar path and site orientation all influence overshadowing impacts. If building on the north side of adjoining private open space, rear yard or living areas, increase setback and reduce building height near to the boundary. Alternate roof forms including different pitches can also significantly reduce overshadowing impacts.

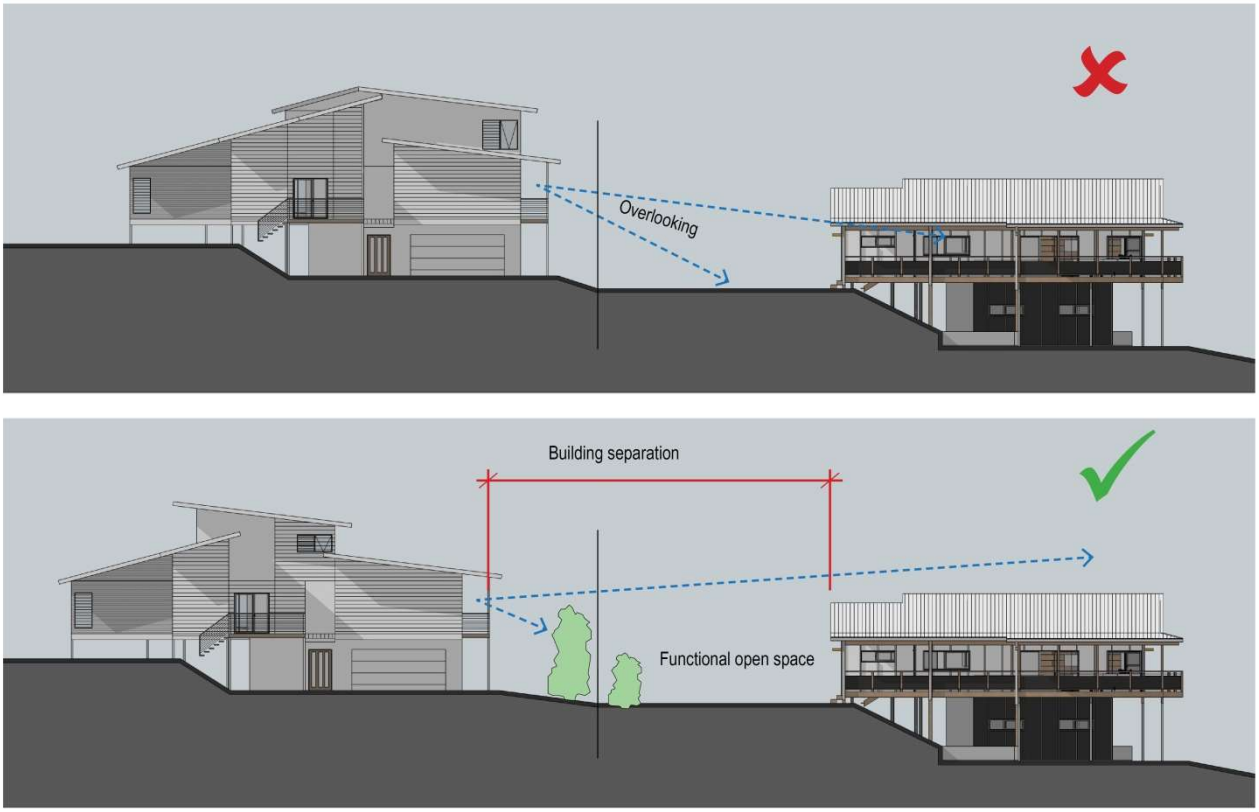
4.2 Element – Visual Privacy

Visual privacy is an important consideration in residential building design, particularly as higher residential densities are achieved. Acceptable levels of visual privacy need to be maintained between adjoining dwellings through building design and landscaping.

Relevant Design Principle: 1, 2, 3, 4, 5, 6, 10

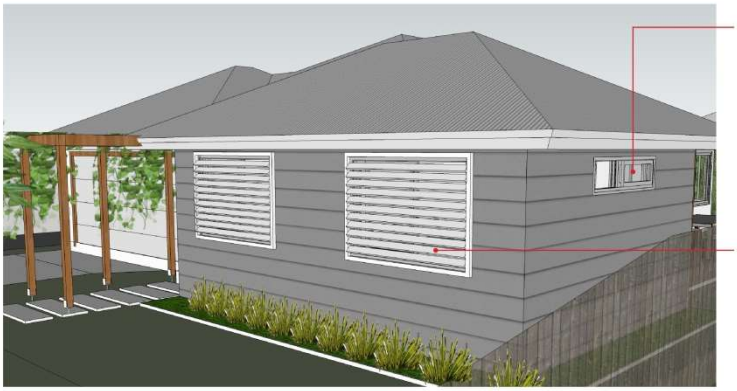
Performance Criteria	Acceptable Solution
P5 Overlooking of the internal living areas of adjacent dwellings is to be minimised by: • careful building layout; • spatial separation of buildings; • location and design of windows and balconies; and • the use of screen walls, fences and landscaping. **Figures 7 and 8** demonstrate how this can be achieved.	**A5.1** Maintain visual privacy between dwellings by: • offsetting windows alongside boundaries; • installing windows at different heights to the adjoining buildings; • installing garden beds along the boundary line which are mass planted with appropriate trees and shrubs that also define usable open space. Figures 7 and 8 illustrate how this can be achieved. **A5.2** A courtyard with a depth of at least 10 metres is maintained between dwellings in multi dwelling housing developments where courtyards face each other. **A5.3** Where habitable room windows look directly at habitable room windows in an adjacent dwelling, privacy is protected by: (a) window sill heights being a minimum of 1.5 metres above floor level; and/or (b) fixing permanent screens that are durable and have a maximum of 25% openings; and/or (c) installing obscure glass; and/or (d) if at ground level, screen fencing to a maximum height of 1.8 metres. **A5.4** Decks, verandahs, terraces, balconies and other external living areas within 4 metres from a side or rear boundary are screened with a maximum opening of 25%.

Figure 7: Visual Privacy



Visual Privacy - Achieving visual privacy enables freedom to carry out private activities within all internal spaces without being overlooked which can significantly undermine an occupants level of comfort and amenity. Visual privacy is about understanding sources of overlooking and designing to mitigate. Increasing building separation (building setbacks) and planting screening vegetation to overlooked boundaries improves privacy particularly to functional open space areas.

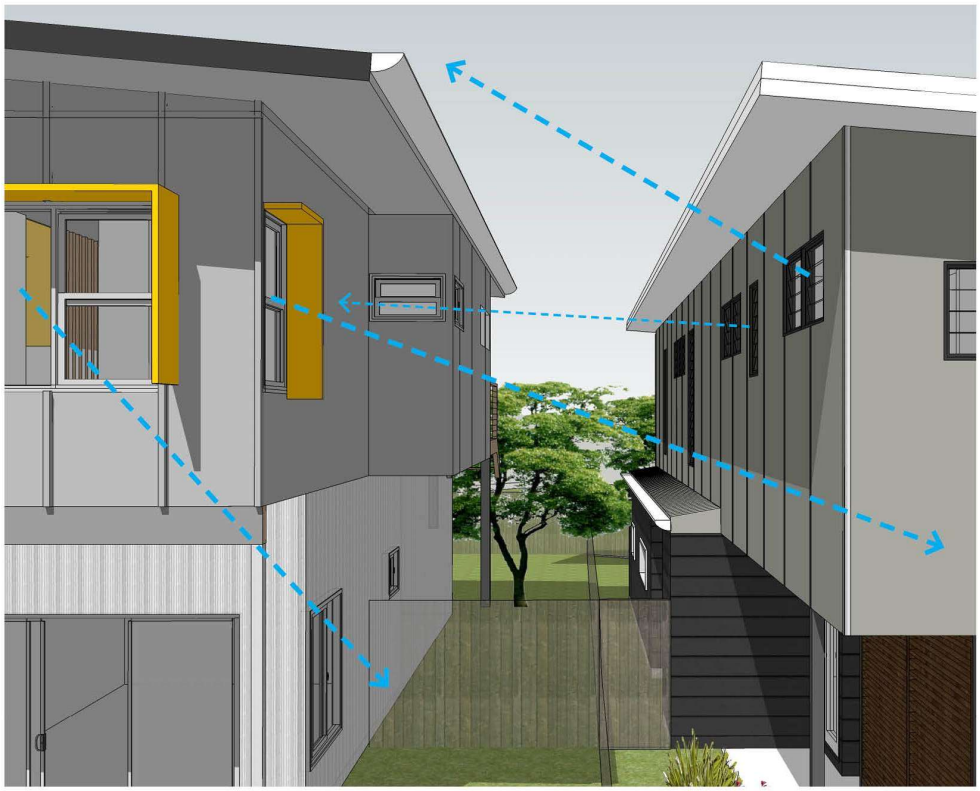
External screens - The use of vertical and horizontal screens, particularly between decks and private open space provides a level of privacy by obscuring a direct line of sight. A privacy screen may be required where decks (particularly elevated) are within 4.0m from a side or rear boundary.



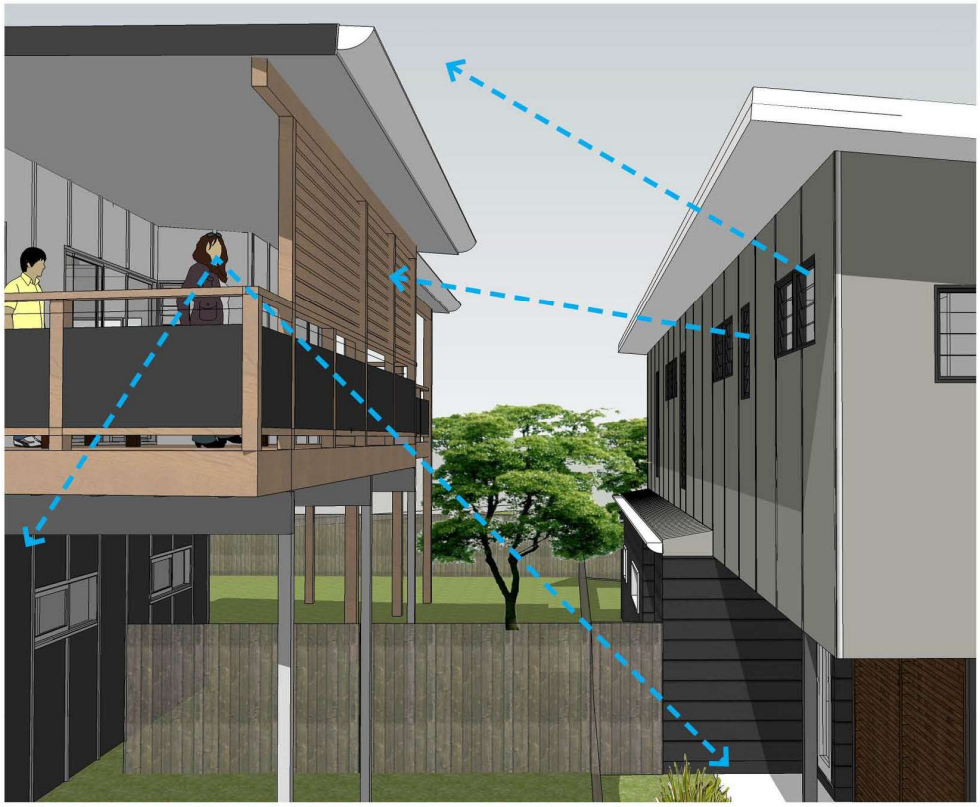
Offset and high level windows - Along side boundaries, try and offset windows with neighbouring windows to avoid direct line of sight into neighbouring internal spaces. Also include windows at different heights and obscure glass.

Screening windows - Providing an external screen to exposed windows provides visual privacy to internal spaces as well as an effective means of providing solar control.

Figure 8: Visual Privacy for Two Storey Dwellings



Visual privacy - Achieve visual privacy between dwellings, particularly along side elevations by offsetting windows, using different window sill heights, stepping and projecting building form to create different outlooks and where necessary use window hoods and external shutters. Landscaping also greatly assists in creating visual privacy.



Screening - Privacy screens may be required on decks, balconnies and verandahs, especially elevated ones, if they are within 4.0m of side boundarys to restrict overlooking into neighbouring internal spaces and outdoor amenity areas. Generally orientate decks (and view fields) towards the street or rear yard.

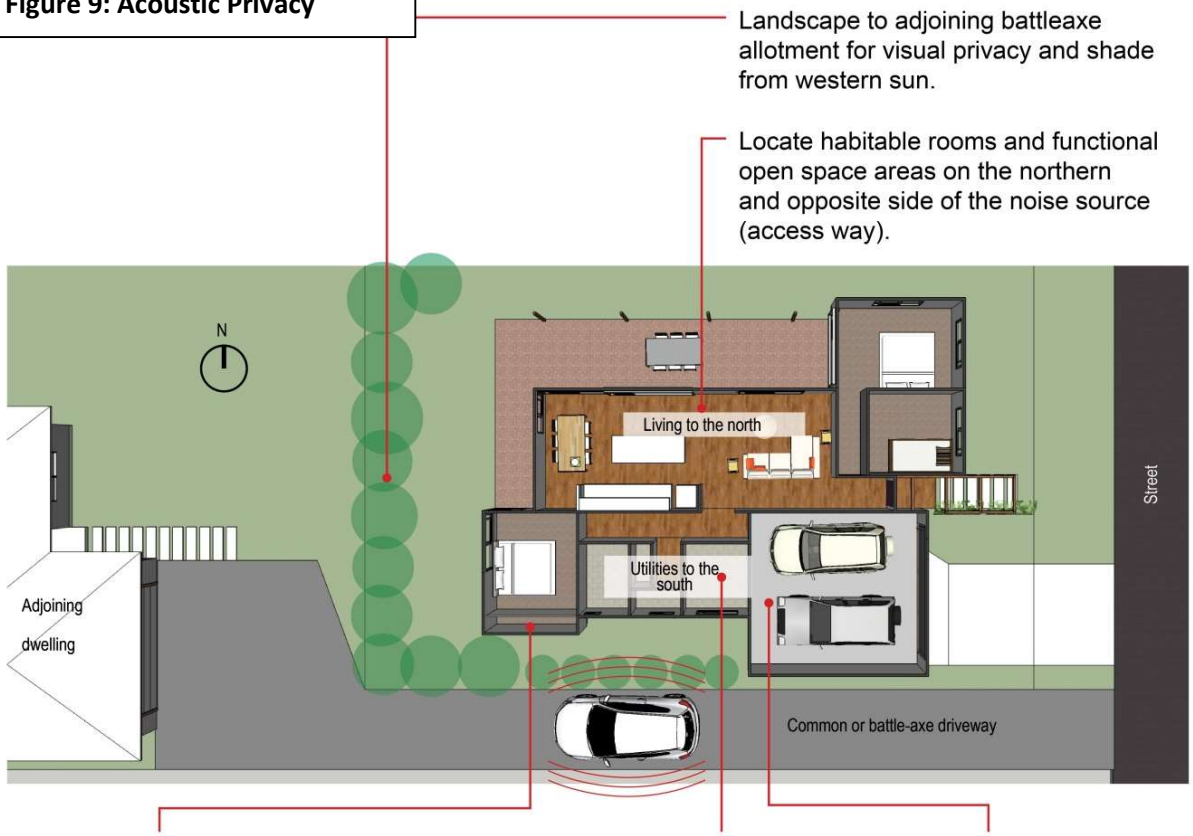
4.3 Element - Acoustic Privacy

Noise from a busy road or neighbouring land uses can have a significant effect on residential amenity so it is imperative that appropriate measures are put in place to minimise this impact. Dwellings can be designed and sited appropriately to minimise impacts from external noise.

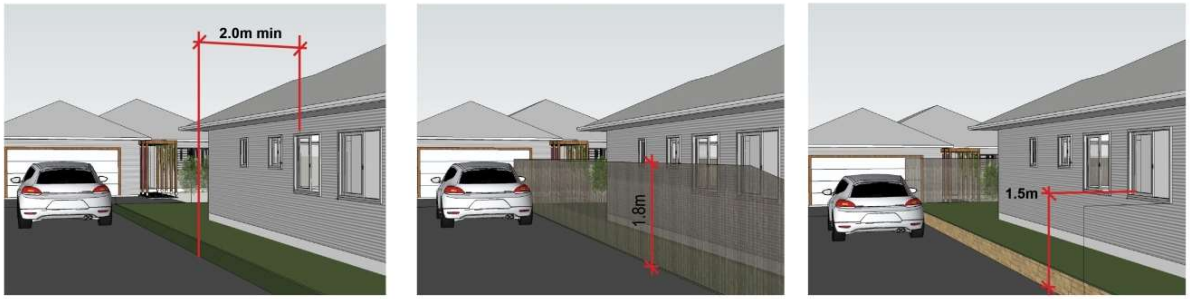
Relevant Design Principle: 1, 2, 3, 4, 5, 6, 10

Performance Criteria	Acceptable Solutions
P6 The siting of buildings, room layout, window and wall location and the use of materials minimise impacts from external noise sources. Figure 9 illustrates how this can be achieved.	**A6.1** Garages and driveways are located away from bedrooms of adjacent dwellings. **A6.2** No common driveway is located within 2 metres of the window of a habitable room unless there is screening at least 1.8 metres high between the window and the driveway or a vertical separation of at least 1.5 metres between the driveway level and the window sill.

Figure 9: Acoustic Privacy



Site planning for acoustic and visual privacy - Where possible locate habitable rooms on the north side of the block and on the opposite side of where a common driveway or noise source is located. Configure utility rooms and garages to adjoin the common access to act as a noise buffer. Where bedrooms adjoin the access way, consider locating a wardrobe along the adjoining wall to act as a noise buffer and increase the density of insulation. Step the building plan to allow for greater building separation and opportunity to plant vegetation for visual screening.



Acoustic privacy - No common driveway should be located within 2.0m of the window of a habitable room unless there is screening at least 1.8m high between the window and the driveway or unless there is a vertical separation of at least 1.5m between the driveway level and the window sill.

4.4 Element - Open Space and Landscaping

Open Space and landscaping are an important component of any residential development and contribute significantly to overall streetscape appearance and the amenity, function and micro-climate of the dwelling.

Adequate private open space needs to be provided, with easily maintained landscaping integrated with the dwelling design.

Relevant Design Principles: 2, 3, 5, 6, 8, 10

<table>
<tr><th>Performance Criteria</th><th>Acceptable Solutions</th></tr>
<tr><td>P7 Adequate open space and landscaped area is provided on site:
• to cater for the requirements of occupants for relaxation, dining, entertainment, recreation and children's play;
• for service functions such as clothes drying and domestic storage;
• to facilitate groundwater recharge and reduce stormwater surcharge; and
• to enhance the aesthetics and amenity of the development and adjoining premises.

Figure 12 provides examples of how to meet this criterion</td><td>A7.1 Landscaping and open space shall comprise 40% of the site. 70% of the landscaping and open space area is to be permeable.
Note: Permeable areas are to be used for growing plants, grasses and trees.

A7.2 Any area of less than 1 m^2 or 1 m in width is not counted in the required landscaped and open space area.</td></tr>
<tr><td>Open Space
P8 Open space for each dwelling shall be well defined, functional, usable and accessible from living areas with access to natural light.

Figures 10 and 11 show how this can be achieved.</td><td>A8.1 The following minimum areas of total and functional open space are provided.

<table>
<tr><th>Development Type</th><th colspan="2">Primary Open Space*</th><th colspan="2">Functional Open Space</th></tr>
<tr><th></th><th>Minimum Area</th><th>Minimum Dimension</th><th>Minimum Area</th><th>Minimum Dimension</th></tr>
<tr><td>Detached dwellings (on lots > 400m^2)</td><td colspan="4">There is no specific requirement; however all dwellings shall have suitable private open space areas which are functional.</td></tr>
<tr><td>Detached dwellings (on lots < 400m^2)</td><td>80m^2</td><td>2.5m</td><td>25m^2</td><td>4m</td></tr>
<tr><td>Secondary dwelling</td><td>35m^2</td><td>3m</td><td>15m^2</td><td>2.5m</td></tr>
<tr><td>Dual occupancies, attached & semi-detached dwellings, multi-dwelling housing and residential flat buildings</td><td>35m^2</td><td>3m</td><td>16m^2</td><td>4m</td></tr>
<tr><td>Multi dwelling housing & residential flat buildings above</td><td>20m^2</td><td>2.5m</td><td colspan="2">For units above the ground floor, 20m^2 of private open space per unit shall be provided at ground floor</td></tr>
</table>
</td></tr>
</table>

	ground level			level in common open space areas.

***Note:** The calculation of open space shall not include areas used for vehicle parking or movement, setback areas less than 1 metres in width, land steeper than 15% or any area occupied by a rainwater tank.*

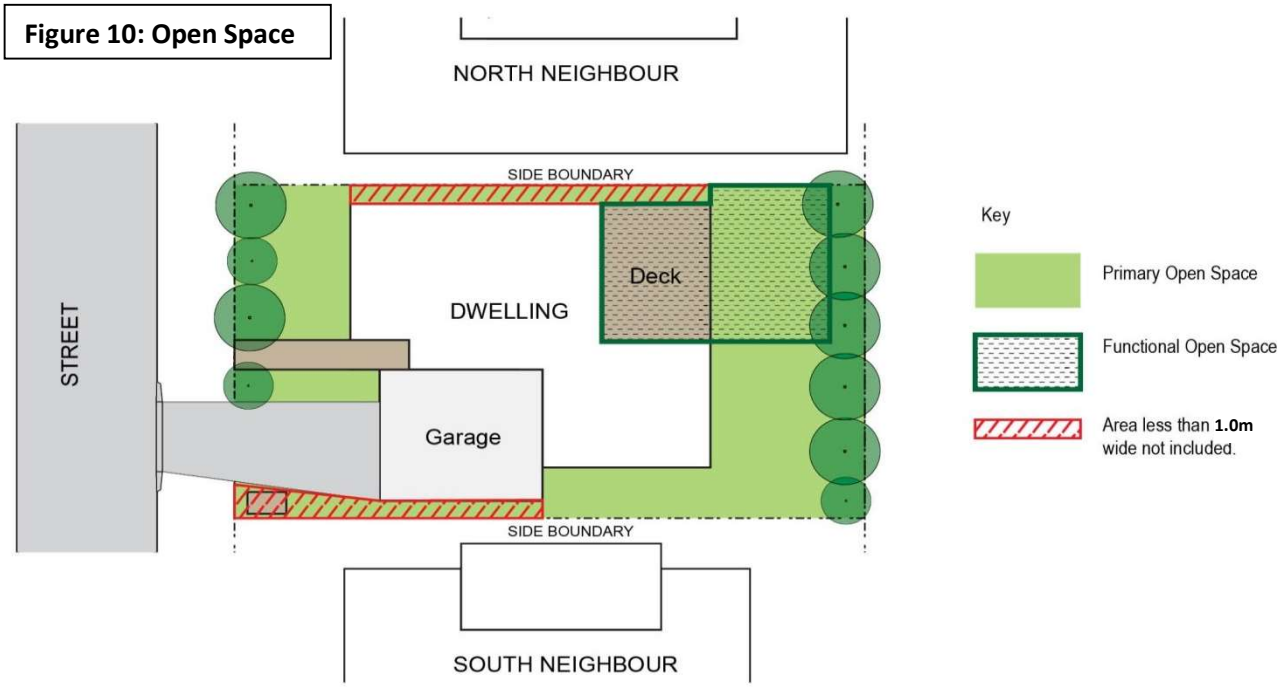
A8.2 Multi dwelling housing, shop top housing or residential flat buildings with no direct ground level access to living areas shall provide a 10m^2 screened balcony or roof garden with a minimum dimension of 2.5m.

P9 Private open space is located and designed to:

- Accommodate the needs of the residents;
- Integrate outdoor living spaces with habitable areas;
- Take advantage of the natural features of the site;
- Provide visual and acoustic privacy between the principal dwelling and other adjoining residential development.

A9.1 Functional open space shall be landscaped, fenced or screened where necessary to maintain privacy and ensure amenity.

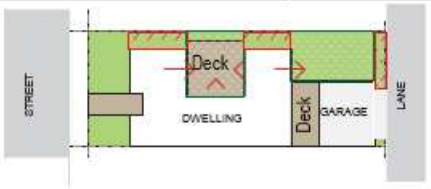
Figure 10: Open Space



Open Space

Each dwelling is to have well defined, functional and usable open space.

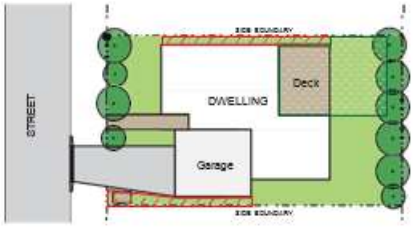
Figure 11: Open Space – Housing Typologies Note: total and primary have the same meaning



Primary open space
Functional open space
<1.0m
Integrate indoor & outdoor

Small lot house (<400m²)

- Aim to integrate internal living spaces with open space areas.
- Best orientate open space to benefit from solar path.
- Shade planting to reduce heat gain within the dwelling and increase privacy from neighbours.



80m²
25m²
<1.0m

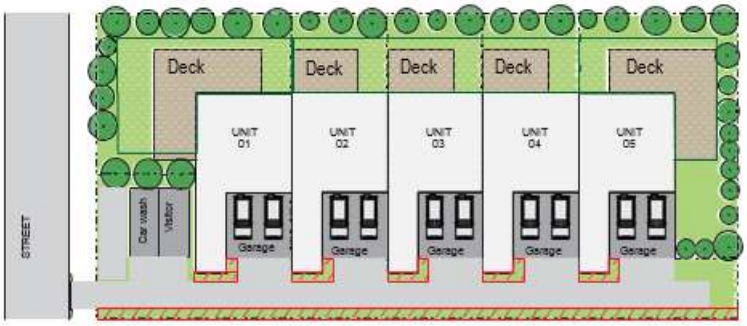
Detached house (>400m²)

- Detached dwelling is to have 80m² of primary open space of which 25m² is to be functional open space.
- Aim to integrate internal living spaces with open space areas.
- Located open space areas to benefit from solar path.
- Shade planning to reduce heat gain within the dwelling and increase privacy from neighbours.

35m²
16m²
<1.0m

Dual Occupancy

- Each dual occupancy dwelling is to provide 35m² of which 16m² is to be functional open space.
- Provide outdoor open space areas to supplement internal living areas.
- Adjoin open space areas to increase building separation between dwellings.
- Shade planting to reduce heat gain within the dwelling and increase privacy from neighbours.



35m²
16m²
<1.0m

Medium density housing

- Each ground floor dwelling is to have access to 35m² of primary open space area of which 16m² is to be functional open space.
- Each non-ground floor dwelling to have access to 20m² of common open space area at ground floor level.
- Each non-ground floor dwelling is to have a 10m² screened balcony or roof garden with a minimum dimension of 2.5m.

Open Space for housing typologies – Each dwelling is to have a well-defined, functional and usable open space. Functional open space is an area directly accessed off a living area forming the main outdoor living and recreation area. Primary open space is the balance of area outside of the building envelope, hardstand and areas less than 2.0m wide or steeper than 15%.

Figure 12: Landscaping requirements

Delineate street frontage through a combination of a low mixed-material fence and a combination of layered and screening landscape.

Primary and functional open spaces orientated to the north/north east and achieves seamless transition to north and east facing decks and functional open space area.

Integrated refuse storage area.

Delineate separate pedestrian access with different non-slip and non-trip surface material.

Outdoor decks and verandahs can be included within the functional open space calculation.

Lightwells / internal landscape courtyard provides light, airflow and landscape aspect into every unit.

Smaller lineal landscape spaces, whilst not contributing to the overall primary and functional open space calculations (<2m) assist with site rainwater infiltration and provides opportunity for planting.

Landscape Calculations		
Total Site Area	1620m²	
Total Landscape Area	650m² or 40%	
Unit No	Primary Open Space	Functional Open Space
Unit 01	190m²	35m²
Unit 02	45m²	16m²
Unit 03	55m²	16m²
Unit 04	45m²	16m²
Unit 05	135m²	35m²

Typical Landscape Plan for Multi Dwellings Development - A landscape plan is to be prepared in accordance with the Council's Landscaping Guidelines (Amended April 2007).

4.5 Element – Earthworks, Retaining Walls and Erosion controls

Building design needs to respond to the natural slope and topography. On steeper sites spilt level housing built from steel or timber framing is desirable to limit the size of single slab on ground and the need for excessive earthworks and retaining walls.

Soil erosion represents a major environmental problem leading to loss of top soil, sedimentation of natural and built drainage systems, reduced water quality and damage to the aquatic environment. Soil erosion from development sites needs to be prevented both during and after construction.

While erosion from a single building site may appear negligible, the cumulative impact from many sites can be significant. Areas which are disturbed or exposed during the construction phase are susceptible to soil erosion. Severe erosion may cause landslips and gullying which limit the potential future use of the land.

Relevant Design Principle: 2, 3, 4

Performance Criteria	Acceptable Solutions
Earthworks **P10** Earthworks and retaining walls:- a) Preserve the stability of the site and adjoining land; b) Minimise site disturbance from excessive cut and fill. c) Minimise adverse physical, visual and privacy impacts from excessive cut and fill. d) Minimise adverse impact on streetscape. e) Are integrated with landscaping. f) Ensure that structures are stable and safe. Figures 13 and 14 illustrate how this criteria can be satisfied.	**A10.1** The maximum height for cut and fill is 1.8 metres above or below natural ground level except where it is incorporated into the dwelling structure. **A10.2** The height of retaining walls is limited to 1.8 metres above natural ground level and constructed of materials that complement the streetscape and site landscaping. Note: Retaining walls in excess of 1.2m require a report from a suitably qualified structural engineer. **A10.3** All areas containing cut or fill are to be drained, stabilised and landscaped to prevent surface erosion. **A10.4** If the cut or fill is located less than 1m from any boundary, a maximum depth of 1m is permitted. Any retaining wall above 600mm must be suitably designed and approved prior to construction so that structural integrity can be confirmed. In addition, the retaining wall is to be set back so as to allow adequate provision of drainage wholly within the subject allotment. **A10.5** The horizontal distance between a cut and a filled area shall be equal to the height or depth of the fill or cut, whichever is the greater. **A10.6** Earthworks and retaining walls are located at least 1.5m from any sewer main or Council stormwater drainage line, or the equivalent invert depth of the main or line, whichever is the greater. **A10.7** Earthworks and retaining walls do not encroach into any registered easement.

Figure 13: Building on Sloping Sites

Flat block (0-6 degrees or 0-10%)

- Single slab on ground acceptable.
- Split and stepping slab acceptable.
- Drop edge slab beam to 1.2m acceptable.

Medium slope (6-12 degrees or 10-21.5%)

- Part slab on ground (garage area), part post and beam construction.
- May be suitable for stacked two storey single slab on ground.
- Split or series of slab on ground.
- Incorporate garages to lower level with living spaces and decks to the upper level to take advantage of views, light and breeze.

Steep Slope (over 12 degrees or >21.5%)

- Not suitable for single slab on ground.
- Split or series of slab on ground.
- Part slab on ground, part post and beam construction.
- Pole construction.
- Limit upslope construction on slopes over 18 degrees (32.5%).

Upslope

- Site falls from the rear boundary to the street.
- Often presents as two storey building to the street and single storey to the rear yard.
- Elevate living space to upper level for light, air and view.
- Structure could include slab on ground to lower level and post and beam to the rear (single storey) section of the dwelling.

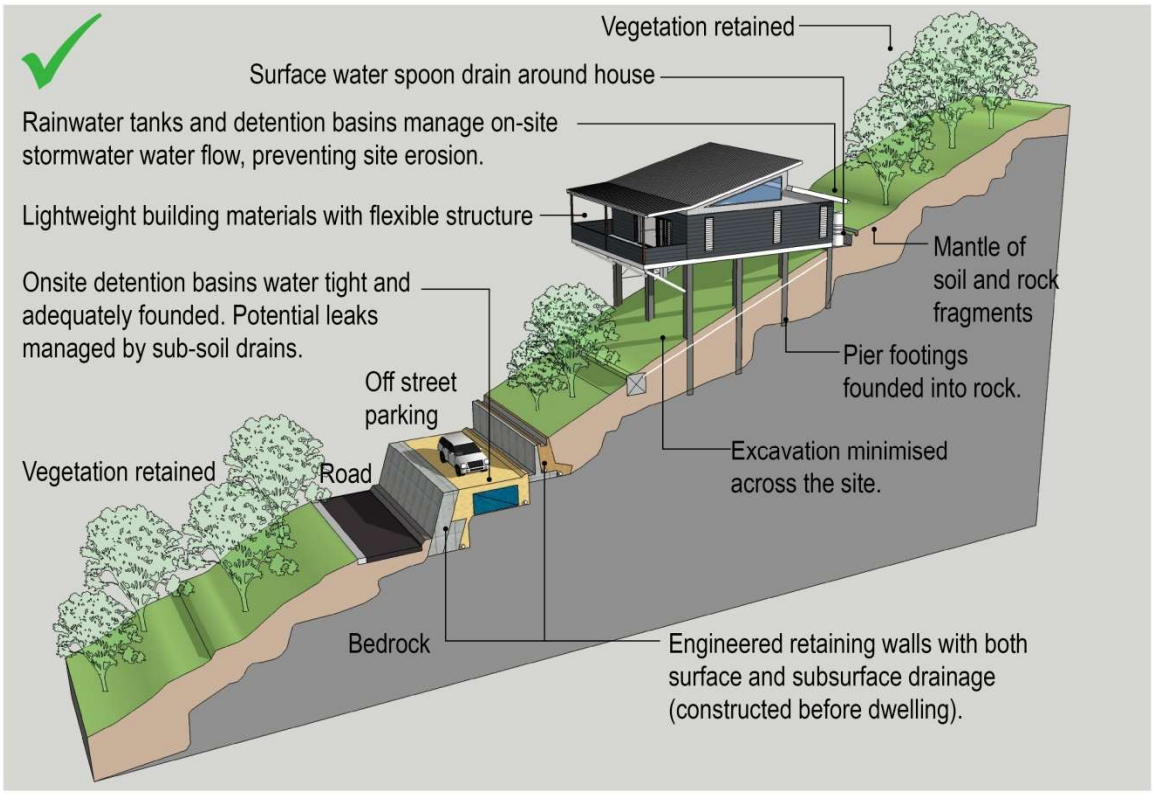
Down slope

- Site falls from the rear boundary to the street.
- Often presents as single storey building to the street and two storey to the rear yard.
- Living space to upper (street) level for light, air and view.
- Structure could include slab on ground to lower level and post and beam to the rear (single storey) section of the dwelling.

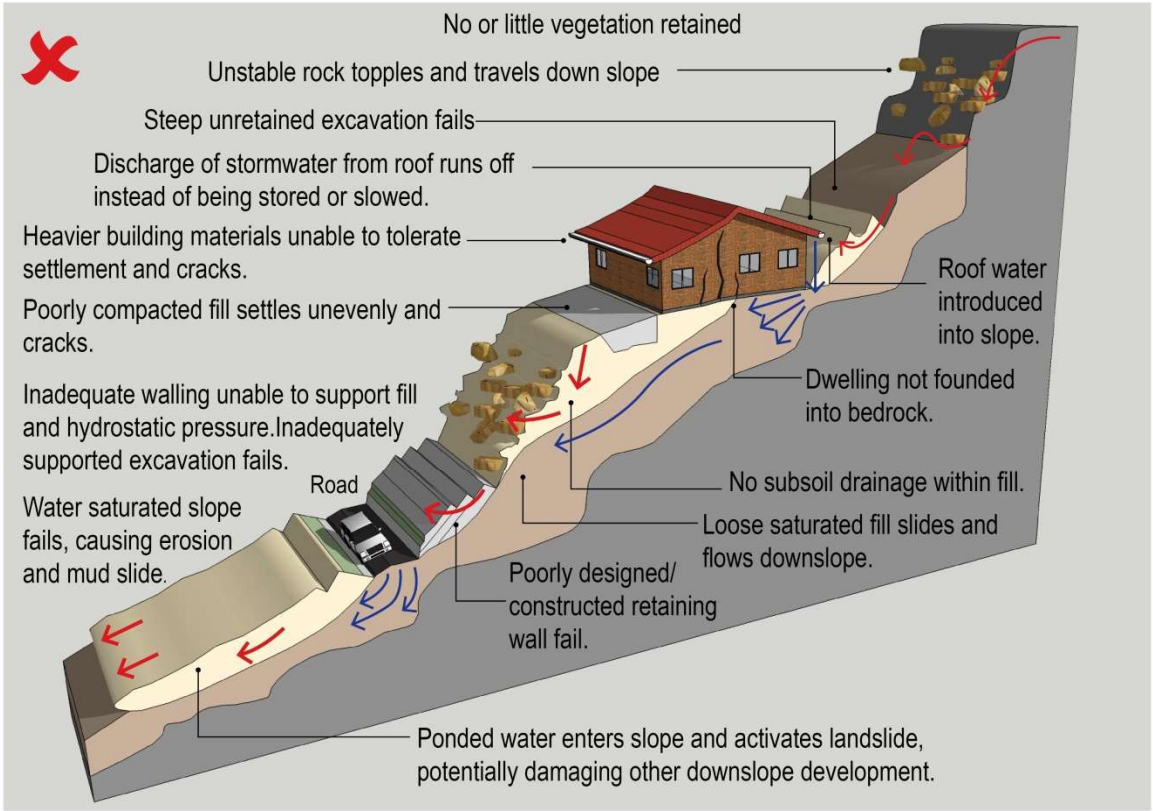
Side slope

- Consider split house design with garage on lower side of the block and living space / decks over.
- Dependent on degree of slope, garage could be setdown with a few steps.

Figure 14: Hillside Construction



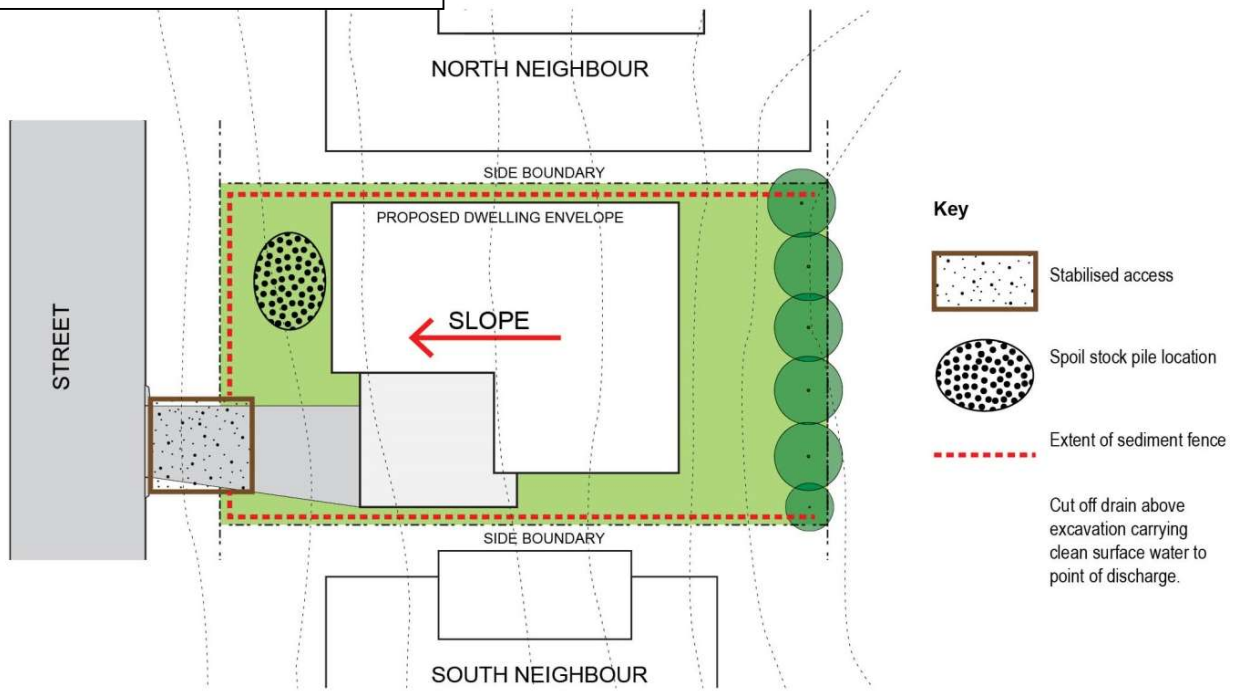
Example of good hillside construction practice - Lightweight building with post and beam structural system piered into rock. All cuttings are reinforced with engineer designed retaining walls. An integrated drainage, water and storage system reduces possibility to undermine sub-surface soil structure.



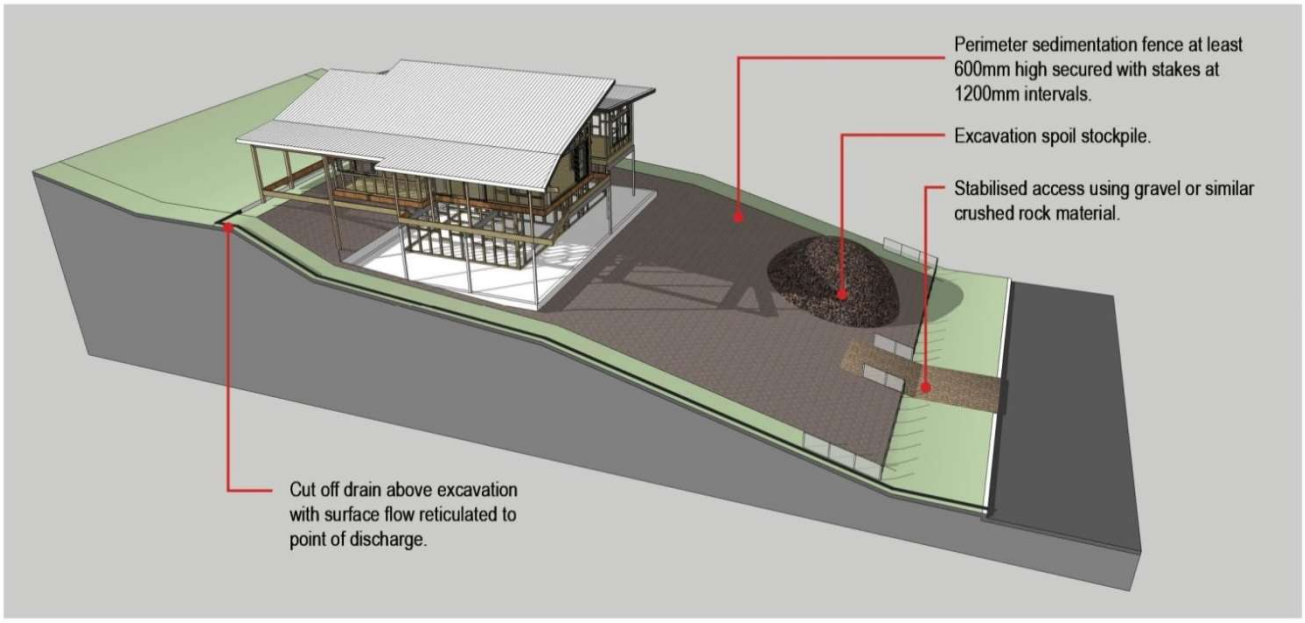
Example of poor hillside construction practice - Site excavation to facilitate slab on ground construction which is not founded to sub-surface rock. Poorly compacted site fill combined with poor retaining walls and poor integration of site drainage leads to a higher risk of undermining and erosion of the site.

Erosion Controls **P11** Where there is potential for soil erosion, measures are in place that: • Minimise loss of top soil; • Minimise sedimentation of natural and built drainage systems; and • Limit impacts on the aquatic environment and water quality. Figure 15 provides examples of this is achieved.	**Erosion Controls** **A11** Soil erosion and sediment controls are in accordance with *Guidelines for the Control of Erosion and Sedimentation on Building and Development Sites - Lismore City Council.*

Figure 15: Erosion & Sediment Control



Erosion and Sediment Control Plan - The issues to consider when preparing a sediment and erosion control plan are, identifying the extent of the sediment fence (height could vary dependent on slope), identifying a suitable location to stockpile spoil and nominating a stablised access crossing.



Erosion and Sediment Control Plan

The key elements of sediment and erosion control planning are identifying the extent of the sedimentation fence (height could vary dependent on slope), identifying a suitable location to stockpile spoil which is easily accessible and nominating the site access 'shake down' crossing.

4.6 Element – Off Street Car Parking, Carports, Garages, Outbuildings and Driveways

Sufficient off street parking and circulation areas need to be provided for residents and visitors. This needs to be done in a way that does not have a visual impact. The amount and location of parking will vary according to the size of the dwelling.

Relevant Design Principle: 1- 10

<table>
<tr><th>Performance Criteria</th><th>Acceptable Solutions</th></tr>
<tr><td>P12 The development shall contain adequate visitor and resident car parking, taking into account:

• the number and size of proposed dwellings;
• availability of public transport;
• availability of on-street car parking;
• locations of non-residential uses such as schools and local shops;
• the possible demand for car parking space from adjoining properties;
• overflow parking;
• the car parking requirements of people of differing socio-economic status, age, cultural background.

Figure 16 provides examples of how to achieve off street car parking provisions for single dwellings, dual occupancies and multi dwellings.</td><td>A12.1 For single dwellings two (2) off street car parking spaces are provided. Car spaces are to comply with applicable front building line (front setback). However, where the building line is <6m, parking spaces must be at least 5.5 metres from the front boundary. Figure 16 provides examples of how this is achieved.

Note: This is to allow parking of vehicles wholly within the property boundaries.

A12.2 For attached and detached dual occupancies of up to 125m² total combined floor space, one (1) level off street car parking space is provided for each dwelling behind the building line. Where the total combined floor area of the dual occupancy exceeds a total of 125m², two (2) off street car parking spaces per unit are provided.

A12.3 Where only one (1) car parking space is to be provided, it must be under cover. Where more than one (1) parking space is to be provided, at least one (1) is to be under cover.

A12.4 The number of off street parking spaces for multi-dwelling housing shall be:

<table>
<tr><th>No. of Bedrooms</th><th>Car parking Spaces/Unit</th></tr>
<tr><td>1</td><td>1</td></tr>
<tr><td>2</td><td>1.5</td></tr>
<tr><td>3 or more</td><td>2</td></tr>
<tr><td colspan="2">Visitor Parking</td></tr>
<tr><td>Multi dwelling housing and residential flat.</td><td>1 space for each five dwelling units.</td></tr>
</table>

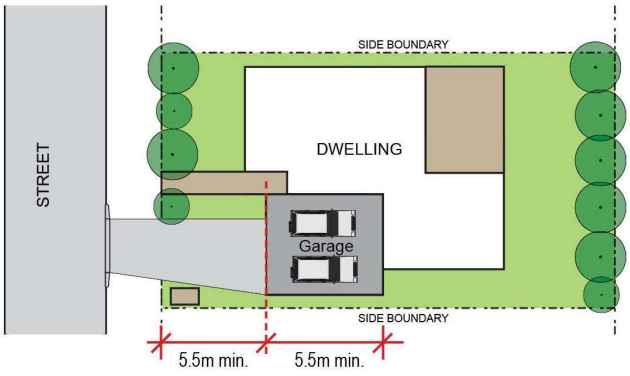
Note: Shop top housing in the CBD is not required to provide car parking spaces.</td></tr>
<tr><td>P13 Off street car parking is convenient, safe and accessible for all residents and visitor car parking is located within a convenient distance of the development.</td><td>A13.1 Each dwelling unit is to have one covered parking space, located as close as practicable to the dwelling unit.

A13.2 Where six or more visitor spaces are required, the spaces shall be located in groups of three and not scattered individually around the development. All visitors' spaces shall be clearly marked.</td></tr>
<tr><td>P14 Carports, garages and outbuildings do not dominate the streetscape and are compatible with the building height, roof form, detailing, materials and colours of the main building.

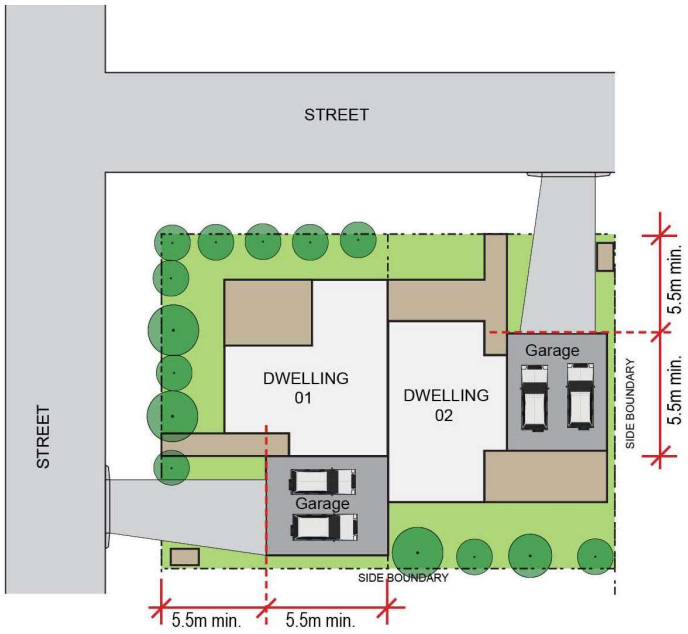
Figures 17 and 18 demonstrate how to locate and design garages, carports and outbuildings to minimise impacts on streetscape amenity.</td><td>A14.1 Detached carports, garages and outbuildings that are in front of the dwelling in Residential R1, R2, R3 and RU5 zones, shall not have a floor area greater than 60m² and an external wall height of 3.3 metres above natural ground.

A14.2 On steeply sloping sites (over 20%), it may be better to provide a detached garage or carport to reduce the length of steep drive and reduce the amount of cut and fill required. Where garages and carports are required to be located in front of the building line, they should be designed to be compatible with the main building in terms of height, roof form, materials detailing and colour.</td></tr>
<tr><td>P15 The design, surface and slope of car parking and manoeuvring areas facilitates on-site stormwater infiltration.</td><td>A15 No acceptable solution.</td></tr>
</table>

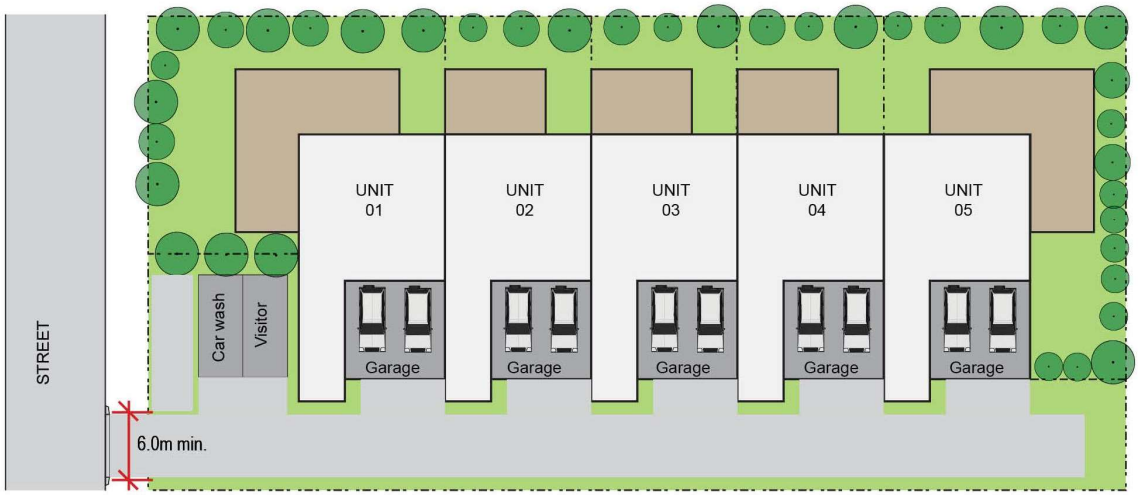
Figure 16: Off Street Parking



Off street parking for single dwellings - Each single dwelling is to provide two off street car spaces behind the building line. The minimum setback for a garage door is 5.5m fronting a public road to allow cars to turn into a driveway without impeding the road or footpath. The garage is to be at least 5.5m in length to accommodate a normal vehicle size.

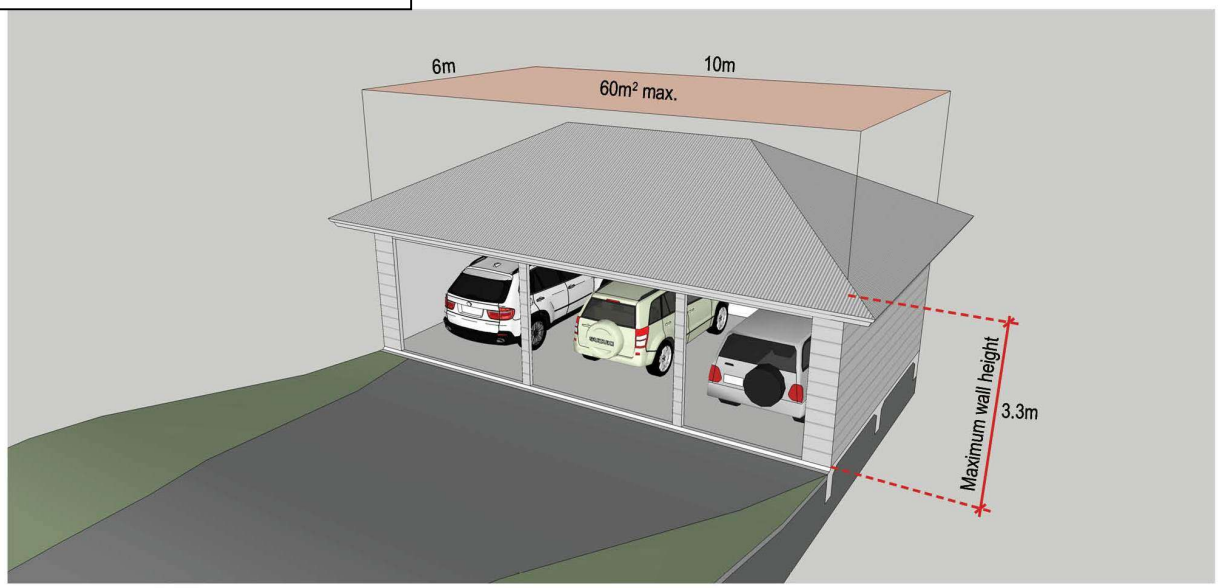


Off street parking for dual occupancies - Where the floor area exceeds 125m^2, two off street car spaces are required. On corner sites, despite the secondary frontage having a building line setback of only 4m, the garage door still needs to be setback 5.5m.



Off street parking for multi dwellings - Within multi dwelling houses, one space is required for a one bedroom unit, 1.5 spaces for 2 bedroom unit and 2 spaces for a three bedroom unit. One visitors space is required per five units and should be located in a legible easy to access location. Where multiple visitors spaces are required, these should be located in groups of three. It is also best practice to incorporate a permeable surface car space designated for car washing.

Figure 17: Carports & Garages



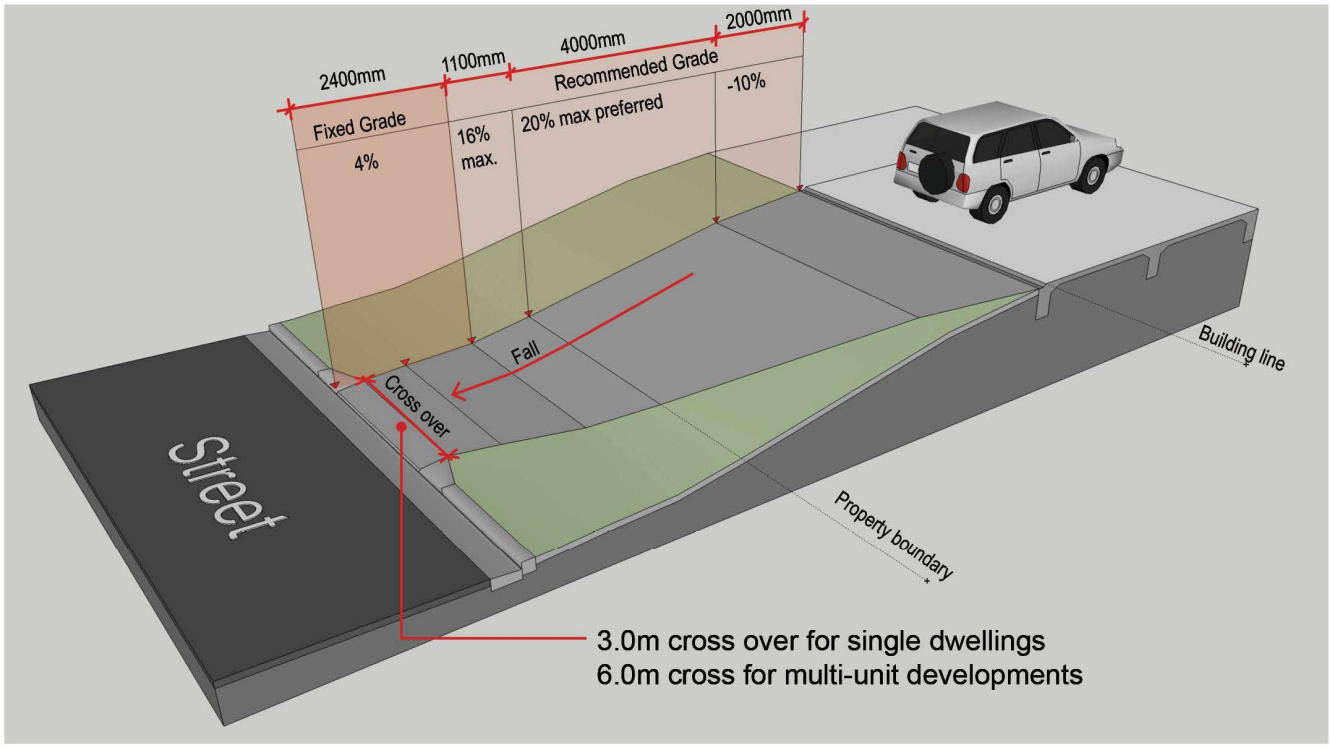
Detached carports and garage envelope - Detached carports, garages and outbuildings are limited to 60m^2 with a maximum wall height level of 3.3m which will allow for three vehicles. Building materials, colour and roof forms should be consistent with the main building.

Driveways **P16** Driveways are located and designed to: • safely accommodate the grade and turning radius limitations of modern vehicles; • minimise visual impacts from hard paving areas. Figures 18 and 19 demonstrate how to achieve safe grades over the footpath, between the footpath and the lot and between the driveway and the garage on steeper slopes.	**A16.1** Vehicles can safely enter and reverse from a lot in a single movement. **A16.2** Where a street carries more than 5000 vehicles per day all vehicles can move in a forward direction when entering or leaving the site. New driveways entering onto such roads should be avoided unless no other alternative is available. **A16.3** The maximum gradient for driveways is 25% with a maximum change in grade of 12.5%. **A16.4** Where lots fall steeply below street level, the garage or carport is constructed closer to the street to reduce the need for steeply sloping driveways and large amounts of cut and fill. **A16.5** Driveways are integrated with the site using landscaping and appropriate drainage and erosion control measures, particularly on steep slopes. **A16.6** The location and design of driveways is consistent with the Subdivision and Infrastructure Chapters of this Development Control Plan, the Northern Rivers Design Manual and the Lismore City Council Design and Construction Specification Vehicular Access Policy.

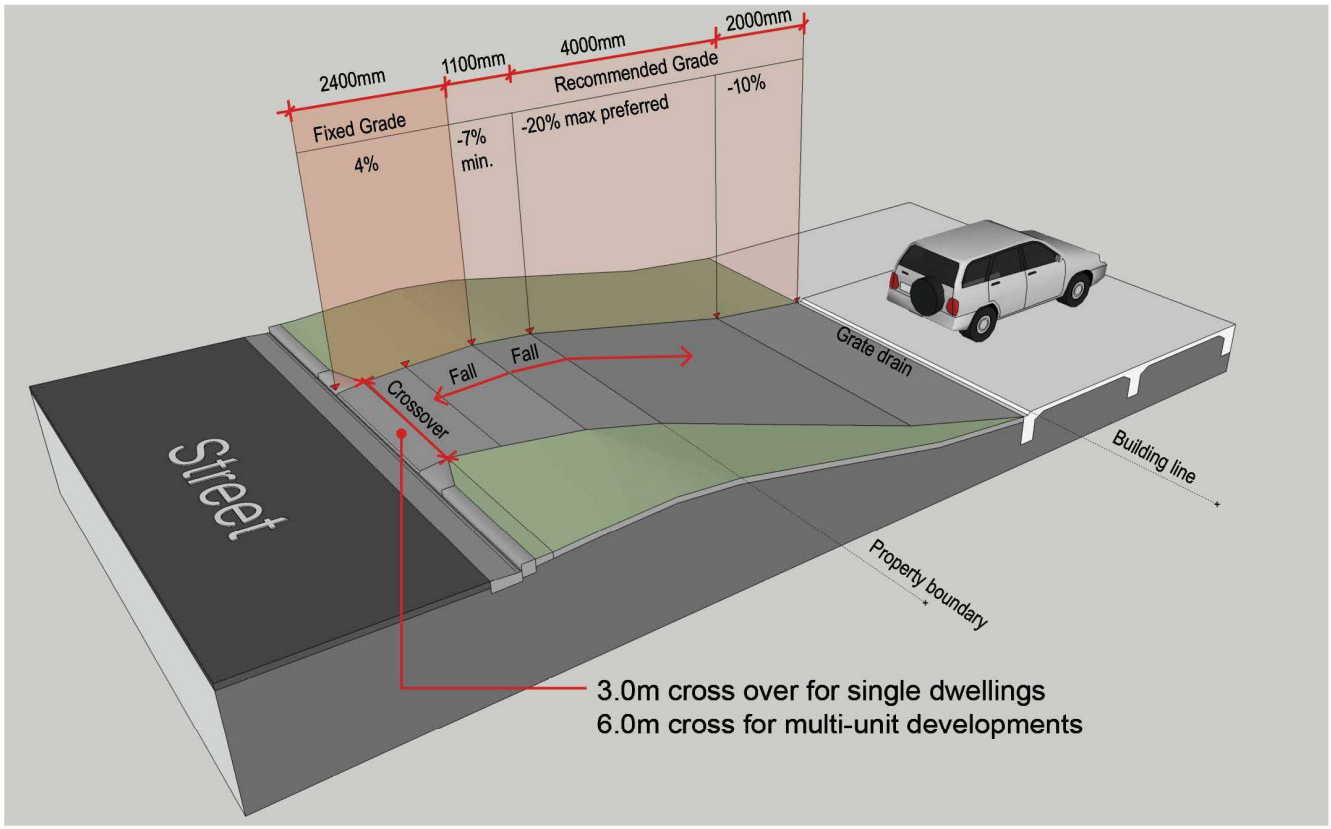
Figure 18: Carports & Garages on Steep sites

Detached carports and garages on sloping sites - On steeply sloping sites (over 20%), it may be better to provide a detached garage or carport to reduce the length of steep drive and reduce the amount of cut and fill required. Where garages and carports are required to be located in front of the building line, they should be designed to be compatible with the main building in terms of height, roof form, materials, detailing and colour.

Figure 19: Driveways



Upslope driveway - Vehicle access to sites are to be in accordance with Council's standard cross-over detail, chapters 5 & 6 Subdivision and Infrastructure and Australian Standard 2890. The maximum preferable grade for a driveway is 20%. The maximum change in grade is 12.5%. The minimum driveway cross over for single dwellinsg is 3.0m and 6.0m for mult-unit dwellings.



Downslope driveway - Vehicle access to sites are to be in accordance with Council's standard cross-over detail, chapters 5 & 6 Subdivision and Infrastructure and Australian Standard 2890. The maximum preferable grade for a driveway is -20%. The maximum change in grade is 12.5%. The minimum driveway cross over for single dwellinsg is 3.0m and 6.0m for mult-unit dwellings.

4.7 Element - Fences

Appropriately designed, located and constructed fences can improve residential amenity with the provision of privacy, safety for residents and pets, potential noise reduction, delineation of public and private space, and in some instances can reduce glare from vehicle lights.

The majority of fences in all zones can be constructed as Exempt Development under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* (Codes SEPP) subject to criteria. These provisions are aimed at providing guidance for fencing that is not permissible as Exempt Development.

The Codes SEPP should be read in conjunction with the following controls. The following fencing controls are generally limited to Zones R1, R2, R3, R5 and RU5.

Relevant Design Principles: 1, 2, 3, 4, 5, 10

Performance Criteria	Acceptable Solutions
P17.1 Fences Fences must not: • Impair driver or pedestrian visibility at road intersections; • Prevent residents of a dwelling from casually observing the adjacent street; • Detract from the streetscape in terms of fencing design, material, scale or colours; • Prevent emergency access by safety and emergency vehicles and personnel	**A17.1 Fencing height limits** • Front fence – 1.2m Note: A front fence is any fence or like barrier erected forward of the building line setback, whether it is erected on the boundary or not. • Side fence – 1.2m within the building line setback and 1.8m for the remainder. • Rear Fence – 1.8m, unless the rear fence is the primary frontage and front fence provisions may apply. Note: State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 also provides for fences as Exempt Development subject to criteria in all zones. **A17.2 Variations in height limits** Front and side fences within the building line setback higher than 1.2m but not higher than 1.8m may be permitted in the following circumstances: • Adjoining land used for business or commercial purposes, in cases where screening from the adjoining business activity is necessary to protect residential amenity; • Where it is demonstrated that traffic noise and lights impact from car headlights on a public road will create adverse impacts on residential amenity in the absence of a higher fence; • Necessary for safety, noise mitigation or to enclose the primary open space area. **A17.3** Front fencing design that exceeds 1.2 m height limit Any front fence higher than 1.2m must be: • Constructed of a mix of materials with 50% transparency and integrated landscaping; or • Located not less than 50cm inside the front boundary with the area in front of the fence to be landscaped; or • Articulated with recessed sections of a minimum 0.9m x 0.9m at a maximum interval of 5m to allow planning of vegetation.

P18 Corner allotments Fencing of corner allotments must allow for reasonable enclosure of outdoor open space areas for privacy and security, while minimising the impact of the fence on the streetscape, safe sight distance and traffic and pedestrian safety.	**A18 Corner allotments** Fencing of the secondary frontage will be allowed up to 1.8m high on the boundary, up to either of the following alignment setbacks from the primary street: • The required building line setback in that location (6m in zones R1, R2, R3, and RU5; and 15m in Zone R5); or • If the existing dwelling is forward of the established building line setback, in line with the existing dwelling
P19 Gates Gates or openings in fences must facilitate safe entry and exit conditions for vehicles to and from public roads. Fences or gates must not create or contribute to unsafe sight distance restrictions for vehicles entering or exiting neighbouring properties.	

Figure 20: Front Fence

Good front fence - The use of a timber picket fence establishes a consistency with the main dwellings materials and is of a scale and height compatible with the street. The spacing of the picket fences allows for some visual permeation across the site whilst also clearly delineating the property boundary.

Figure 21: Fencing

Front fences - Front fences are to be a maximum of 1.2m high and achieve at least 50% transparency. Lower more visually permeable front fences improve surveillance and security as well as improves the visual amenity allowing front gardens to be seen from the street. Integrate landscaping with fence design.

4.8 Element - Service Areas and Waste Management

The provision of site facilities including mail boxes, waste collection areas and clothes drying areas are an integral component of residential development. Appropriate design and location of these service areas can enhance visual amenity and maximise functionality for residents.

Waste management is relevant to all stages of a buildings life cycle including construction, operation and demolition. This element should be read in conjunction with DCP Chapter 15 – Waste Minimisation.

Relevant Design Principles: 4

Performance Criteria	Acceptable Solutions
Service Areas **P20** Site facilities such as waste bin enclosures, storage areas and clothes drying areas are to be conveniently accessible and visually unobtrusive. Figure 22 illustrates how this can be achieved	**Service Areas** **A20.1** At least three (3) m^2 is provided for each dwelling to accommodate 3 x 240 litre bins. The storage area is paved and in a location readily accessible to the waste collection point. **A20.2** Medium density collective storage areas for waste bins are to be adequately screened from the street, located behind the front setback and should not cause odour or noise impacts for neighbours **A20.3** Suitable waste collection areas are to be provided for medium density development and the use of street frontages for large numbers of bins is to be avoided. **A20.4** A paved and screened drying area of at least $7m^2$ is provided for each dwelling unit in medium density development. **A20.5** Common television antenna be provided for medium density development
Waste Management Plans **P21.1** Appendix B of DCP Chapter 15 Waste Minimisation is to be completed and submitted with a development application for dwelling houses, semi-detached dwellings and dual occupancies. **P21.2** No performance criteria for medium density development	**Waste Management Plans** **A21.1** A site waste minimisation and management plan is to be submitted with the development applications for dwelling houses, semi-detached dwellings and dual occupancies in accordance with Section 4.1 DCP Chapter 15 Waste Minimisation. **A21.2** A site waste minimisation and management plan is to be submitted with the development applications for

	medium density development in accordance with Section 4.2 DCP Chapter 15 Waste Minimisation.

Figure 22: Service Areas

Garbage bin store - This slatted screen successfully screens the garbage bin storage area.

Gas bottle store - This storage area for the gas bottles is enclosed well ventilated and easy to access as required, however the structure integrates well with the dwelling.

Poor garbage bin location - Failure to consider the location of garage bins and other utility storage can lead to poor outcomes. In this example the garbage bins are within full view of the street and block the dwellings primary entrance.

4.9 Element – Orientation, Glazing and Shade Control

The subtropical climatic conditions of Lismore, located on the far north coast of New South Wales, generally allow for comfortable outdoor living all year round. Lismore is characterised by warm, humid, and often wet, summers with mild dry winters. Climatic extremes in Lismore can present a combination of hot, humid summer days and cold overnight winter temperatures. Various design features (passive solar design) can be incorporated into a dwelling to maximise year round thermal comfort. Orientation; the location of habitable and non-habitable rooms; eaves; verandas; appropriate glazing; insulation; materials and colour; landscaping; and the incorporation of indoor / outdoor spaces are central to passive solar design. A passive solar house will use its own structure to enhance winter solar access and summer shade and maximise the cooling effect of summer breezes. The house can "passively" control the indoor climate.

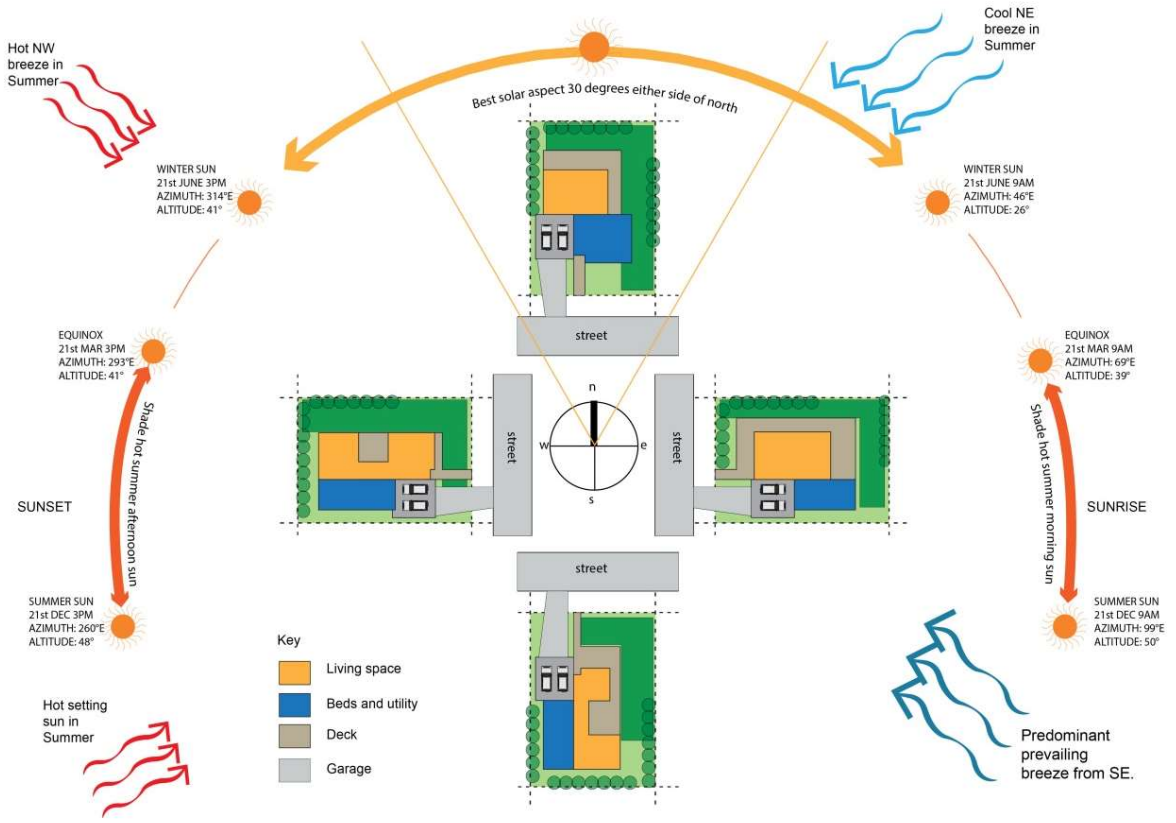
Relevant Design Principle: 2, 5, 8

Performance Criteria	Acceptable Solutions
P22 Development is designed to incorporate passive solar design to maximise winter sun and summer shade. Figures 23 and 24 demonstrate how this is achieved	**A22.1** Orientation of the length of the building is between 30° east of north and 15° west of north where permitted by the configuration of the lot. This will maximise winter solar access and summer shade. **A22.2** For new and infill development maintain at least 3 hours solar access to 50% of private open spaces of the proposed development, and to 50% of private open space of adjoining properties, between 9.00am and 3.00pm on June 21. **A22.3** Locate a living room on the northern side of the dwelling to receive suitable solar access. Rooms such as bedrooms, bathrooms, toilets and laundries are located on the southern side to provide buffers to summer heat and/or winter wind. **A22.4** Eaves, awnings, pergolas or deciduous vines and trees are used to provide shade.
P23 Windows are located to maximise winter sun penetration and to provide shading from summer sun. Figure 24 demonstrates how this can be achieved.	**A23.1** Windows are located to maximise opportunities for cross ventilation. **A23.2** Windows of north facing habitable rooms receive at least three hours of sunlight between 9 am and 3pm on 21 June.

Energy and Water Efficiency

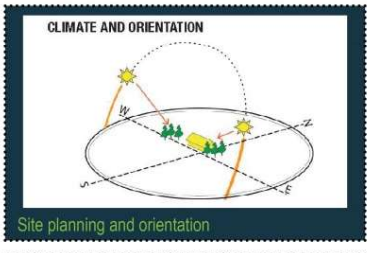
An application for residential development must be accompanied by a NSW Building Sustainability Index (BASIX) assessment which measures the potential performance of all dwelling types against sustainability indices to reduce water and energy consumption. A BASIX assessment focuses on three components of sustainable building design, namely water, energy and thermal comfort. For further information refer to the NSW Government: Planning and Environment web page www.basix.nsw.gov.au.

Figure 23: Orientation & Passive Design

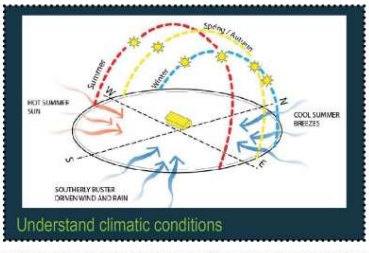


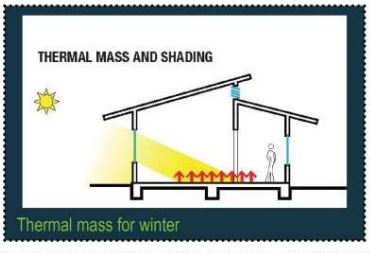
Passive design principles:

- Generally plan your living spaces including lounge room, kitchen, dining areas to have access to northern sun.
- Maximise your north facing backyard or garden space.
- Located garages and utilities to the western or southern corners.
- Provide deck spaces which flow directly from living spaces.
- Use decks, awnings, overhangs and landscaping to provide shade to hot western summer sun.
- Locate windows to provide opportunity for cross ventilation.



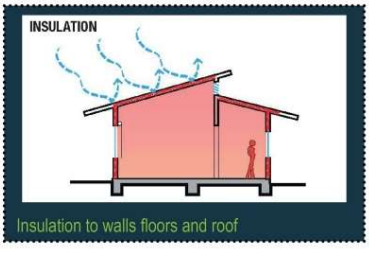
Site planning and orientation


Understand climatic conditions

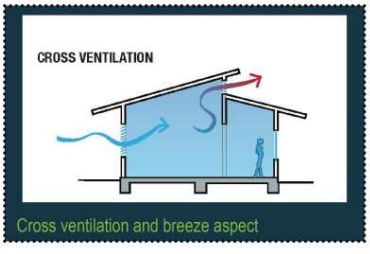


Thermal mass for winter


Deep eaves for shading in summer



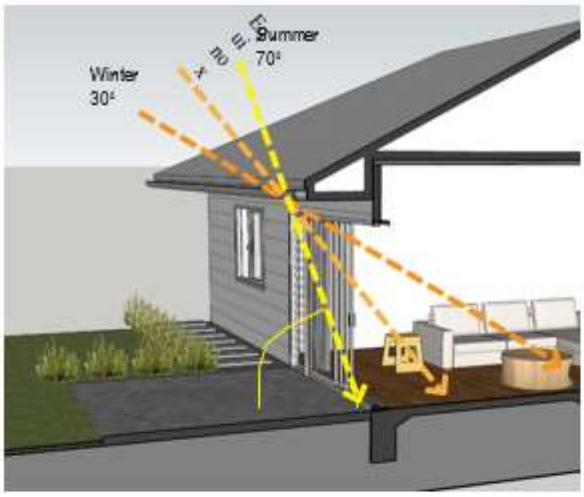
Insulation to walls floors and roof



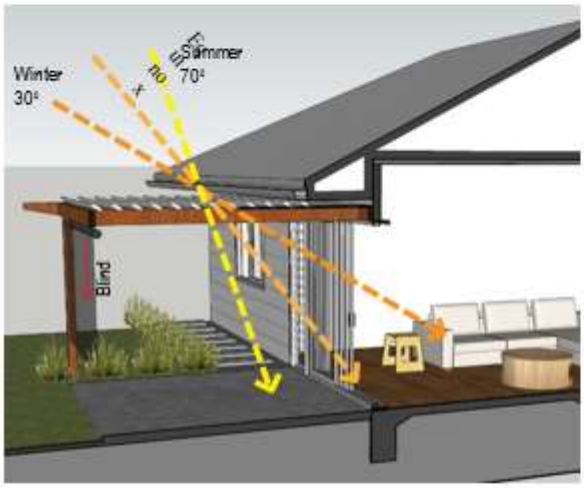
Cross ventilation and breeze aspect

Orientation and passive design - Every dwelling or site orientation can be planned and designed to take advantage of solar path and prevailing breezes. By embedding passive design principles in dwelling design can reduce energy costs and facilitate more comfortable indoor and outdoor spaces. It is important that key indoor space relate to external living spaces and that adequate provision has been made for shading during the hot summer months.

Figure 24: Sunlight & Shade Control



Eave depth - Design eaves which have a depth of at least 600mm. This may need to be increased on north facing elevations. Project a 70 degree line from the outer edge of the eave/ gutter to determine the amount of summer sun penetrating internal spaces. Similarly project a 30 degree line representing winter months.



Pergolas and awnings - Shade structures including pergolas, awnings and verandahs not only provide valuable shade from the hot summer sun, but extend internal living spaces outdoors. Different roof materials provide different levels of sunlight and shading control. Fixed louvres should be between 30-50º to allow winter sun, but block summer sun. Variable louvres provide control during summer and winter months.

Vertical drop down blinds during summer may be required on eastern and western elevation when the sun is at a lower angle.

Landscaping - Integrating landscape design to work with your internal configuration is important to achieving a good balance of sun shading and thermal control. Plant western elevations to provide shade from the hot summer sun. Integrating deciduous vines with shade structures can provide summer sun protection, increased privacy as well as an attractive backdrop.

Glazing and shade control - Within Lismore's climatic context, it is important to control the amount of sunlight penetration into indoor spaces. North facing habitable spaces should locate windows to maximise winter sun penetration however these windows will need to be shaded during summer months, through the use of eave depth, awnings, pergolas or deciduous vines and trees.

4.10 Element - On-Site Sewage and Waste Water Management

This Element applies to development applications for residential development on land that is not connected to Council's reticulated sewerage system. These provisions are generally limited to rural, large lot residential and village zones with the exception of Caniaba, Nimbin and North Woodburn within Zone RU5 Village.

Sewage and waste water needs to be managed on-site to protect the environment and public health.

Relevant Design Principle: 8

Performance Criteria	Acceptable Solutions
P24 On-site sewage and waste water generated from the dwelling is treated so that:- a) Public health is maintained b) Land, soil, groundwater and surface waters are protected from untreated sewage and waste water; c) Community amenity is protected from odour; & d) Wastewater is reused as an effective resource.	**A24.1** In areas not serviced by a reticulated sewerage system, on-site sewage management systems are installed in accordance with Council's *On-Site Sewage and Wastewater Management Strategy*.

5. EXPANDED DWELLING

An expanded dwelling is a single dwelling comprising a main building and a maximum of three (3) habitable outbuildings.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solutions
P25 The size, location and design of buildings ensures that each building is used by the residents of the main dwelling.	**A25.1** A maximum of three (3) outbuildings are provided and are connected to the main building by paths with an all-weather surface. **A25.2** All buildings are contained within a radius no greater than 20 metres from the perimeter of the main building. **A25.3** One outbuilding is limited to a maximum gross floor area of 45m² and the others are limited to a maximum of 30m². **A25.4** Each separate outbuilding may consist of a maximum of two (2) rooms with an ensuite or bathroom. **A25.5** No outbuilding is to contain a kitchen. **A25.6** No more than one laundry is provided, which may be contained in either one of the outbuildings or the main building.

6. SMALL LOT HOUSING

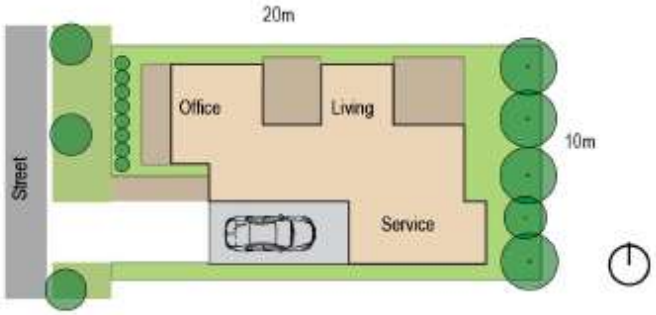
Small lot housing is generally located close to services and requires careful design responses to overlooking, overshadowing, provision of private open space and car parking and impacts on streetscape. Small lot housing provides for diversity in housing stock and assists in creating more compact and sustainable residential areas.

This section should be read in conjunction with the small lot housing provisions in Part 3 General Housing Code, State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solutions
P26 Small lot housing is of an appearance, scale, height and bulk in keeping with the local residential character and amenity of the area.	**A26.1** The materials and building form complements the materials and building form of adjoining dwellings. **A26.2** Building height is no higher than 8.5 metres as provided in the Lismore Local Environmental Plan 2012. **A26.3** The minimum distance between the external building wall and the side boundary is 0.9 metres.
P27 Small lot housing is designed to: • achieve adequate solar access and privacy for occupants and adjoining neighbours; and • ensure it does not adversely affect the residential amenity of adjacent residences with regard to overshadowing, privacy and overlooking and building mass and scale as seen from neighbouring premises and the street. Figure 25 provides examples of how to meet this criterion for a range of lot sizes.	**A27.1** The design of small lot housing demonstrates:- • Adequate privacy within and between dwellings, including adjoining dwellings; & • Adequate access to natural light and natural ventilation. **A27.2** Development applications for dwellings on lots less than 400m^2 to be in accordance with a Plan of Development approved by Council at subdivision stage. **A27.3** Vehicle access and car parking to be provided at the rear of the lot.

Figure 25: Small Lot Housing



200m² lot

Single storey Detached House

2 bed plus home office to street

Single car parking to south

900mm side setback to south

Front setback equal or greater than adjoining front setbacks.

North facing decks

280m² lot

Two storey Courtyard House

3 bedroom

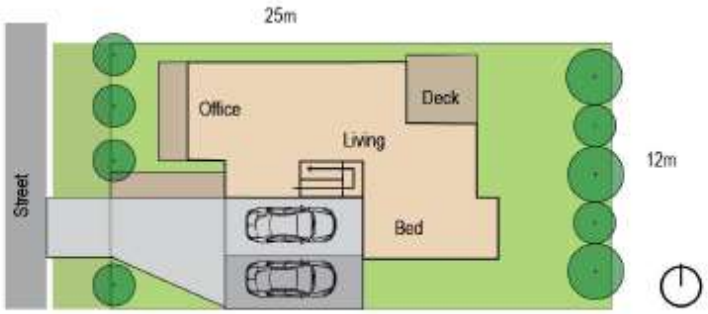
Rear access with home office over garage

Front setback equal or greater than adjoining front setbacks.

Zero side setback to south 900mm to north

North facing decks

Large rear landscaped deck



300m² lot

Two storey Detached 4 Bed House

One garage and one car port with zero setback to the south

Home office to street

900mm side setback to south

Front setback equal or greater than adjoining front setbacks.

North east facing rear decks

Small lot housing configurations - The design of the small lot dwelling should relate to the scale and lot configuration of the allotment and the relationship with the street. Floor plans should seek to maximise habitable spaces to the north and creating private outdoor amenity areas which relate seamlessly with indoor spaces.

7. SECONDARY DWELLINGS

A secondary dwelling is a small self-contained dwelling built on the same lot as the principal dwelling. An increased supply of secondary dwellings will provide greater housing diversity and assist in the provision of more compact, sustainable urban development.

Secondary dwellings are permitted with consent under *State Environmental Planning Policy (Housing) 2021* and/ or Lismore LEP 2012 in the R1 General Residential, R2 Low Density Residential, R3 Medium Density Residential, R5 Large Lot Residential and RU5 Village zones.

The Housing SEPP and LEP set the maximum dwelling gross floor area and the minimum site area. The maximum gross floor area under the LEP is whichever of the following is greater:

a) 60m^2
b) 25% of the total floor area of the principal dwelling

Note: The floor area is a development standard under LEP clause 5.4(9). This maximum floor area cannot be increased in accordance with LEP clause 4.6(8)(c).

The SEPP provides for a minimum site area of 450m^2 and additional car parking is not mandatory.

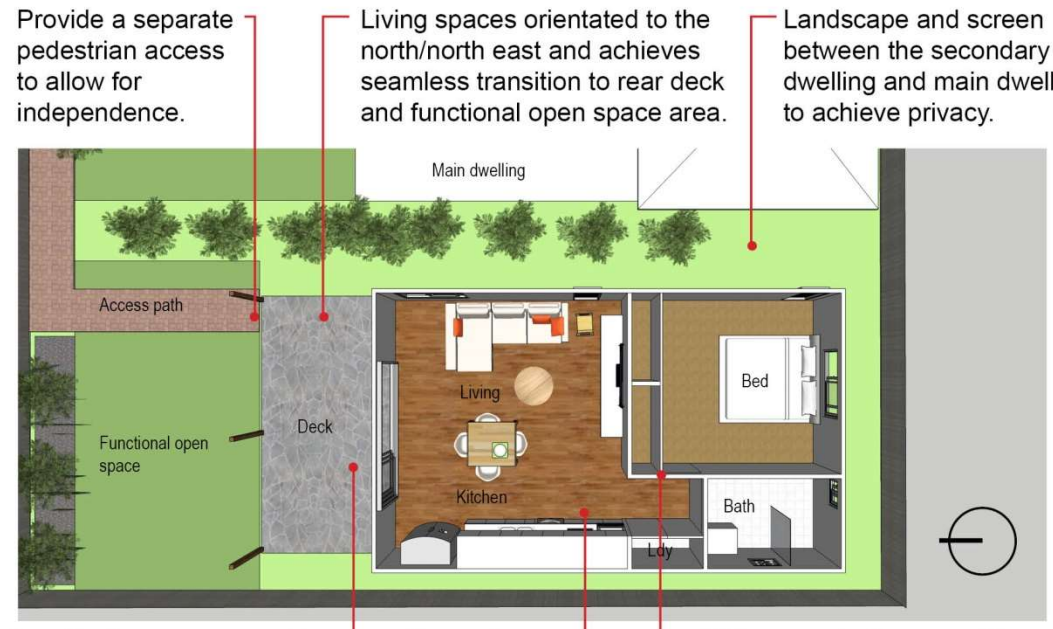
Secondary dwellings may also be Complying Development under the Housing SEPP in certain circumstances. Schedule 1 of the Housing SEPP detail the requirements for complying development. The provisions of this DCP do not apply to complying development.

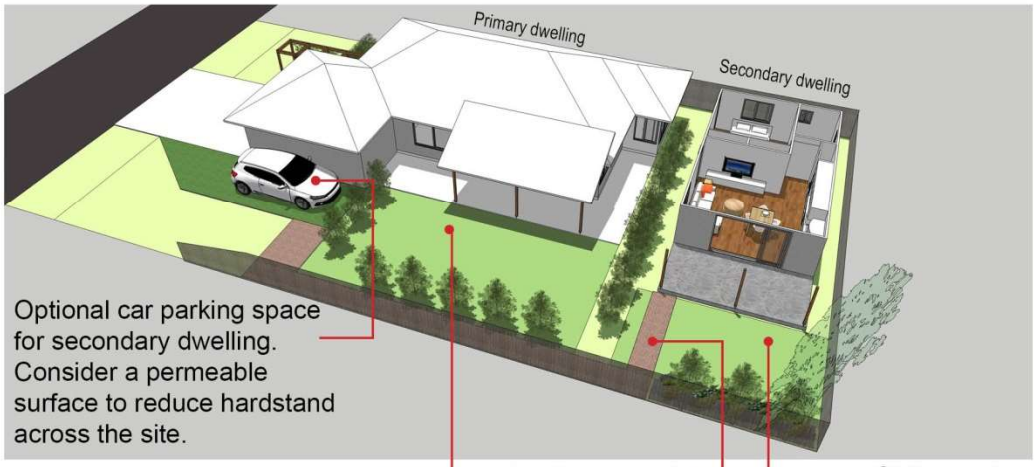
The provisions of this DCP, as well as those listed below, also apply to secondary dwellings

Relevant Design Principle: 1 – 10

Performance Criteria	Acceptable Solution
P28 The design of secondary dwellings: a) is complementary to the principal dwelling, the constraints of the site and surrounding development. b) ensures visual and acoustic privacy between the principal dwelling and other adjoining residential development. c) provides optimum solar orientation to maximise natural light and thermal comfort. Figure 26 illustrates how to achieve compatibility with the principal dwelling, visual and acoustic privacy and maximisation of natural light	
P29 The development of a secondary dwelling does not compromise the car parking requirements of the principal dwelling. Figure 26 demonstrates how this can be achieved.	**Note**: Consistent with the Housing SEPP, there is no requirement for separate car parking.

Figure 26: Secondary Dwelling Example





The secondary dwelling should be designed harmoniously with the primary dwelling in terms of overall size and scale, height, roof forms and building materials. Alternate roof forms are acceptable subject to design review.

8. SHOP TOP HOUSING

Shop top housing refers to one or more dwellings located above ground floor retail or business premises. Shop top housing in the Lismore CBD and other business zones will diversify housing stock in locations close to services, transport and facilities. Increased residential development in the CBD will improve casual surveillance and revitalise the area after normal retail trading hours.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solution
P30 The dwelling has direct residential access from a street or laneway.	**P30.1** Each dwelling shall have direct unrestricted access that is separate from the retail or business premises.
P31 In a new building each dwelling has access to private open space for the residents.	**A31.1** Private open space, either at ground level or in the form of a balcony must be at least 20m² and directly accessible from the living area.
P32 External lighting, privacy and potential noise impacts on the occupants of the dwelling (s) are minimised.	**A32.1** The impact of external noise is minimised by locating bedrooms away from noise sources. **A32.2** The dwelling contains sound attenuation measures.
P33 Amenities and services for residents are located and provided to ensure convenient and safe access.	**A33.1** Each dwelling shall have its own amenities, separate from the commercial or retail use. **A33.2** Dwellings with access to ground level private open space shall be provided a screened clothes drying area. **A33.4** Each dwelling shall have convenient access to a mail box and a lockable storage facility.

Note: In addition to these controls, development applications for shop top housing will be assessed under the relevant Clauses of the *Environmental Planning and Assessment Regulations 2000* that deal with fire safety matters and compliance with the Building Code of Australia.

9. ADAPTABLE HOUSING

Adaptable housing is housing that is *designed* in a way that can easily, and at minimal extra initial cost, be modified as the needs of households change over time. This form of housing caters for people with mobility impairment, other disabilities or progressive frailty.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solutions
P34 Dwellings are designed to readily accommodate modifications, with access for residents and visitors with disabilities.	**A34.1** One adaptable dwelling per five dwellings is provided for developments with more than five dwellings. **A34.2** Adaptable housing is to be consistent with *Australian Standard 4299-1995 – Adaptable Housing.*

10. RURAL DUAL OCCUPANCY (DETACHED)

Clause 4.2C of the Lismore LEP allows for dual occupancies within the RU1 Primary Production Zone. To ensure that this type of development is consistent with the LEP requirements that:

(a) the development will not impair the use of the land or adjoining land for agriculture or rural industries, and
(f) the development will not have an adverse impact on the scenic amenity or character of the rural environment.

The following provisions apply:

- Dwellings should be clustered within the same general vicinity and/or around other existing buildings such as farm sheds in order to minimise the footprint of the residential use of agricultural land and to reduce the likelihood of land use conflict with adjoining properties.
- A single driveway to both dwellings is preferred in order minimise the footprint of driveways on the agricultural use and scenic amenity of the land. In the event that a second driveway is sought, applicants must demonstrate consistency with the relevant LEP clauses and also demonstrate suitable sight lines are available to traffic at the road access point. In this regard, driveways should comply with the NRLG Handbook for *Driveway Access to Property.*

11. LISMORE HEALTH PRECINCT

Background

The Lismore Health Precinct comprises the area surrounding the Lismore Base Hospital, generally as bounded by: Brewster Street to the west; Orion Street to the north; Hunter Street, Bent Street and Rotary Park Reserve to the east; and McKenzie Street and Uralba Street to the south.

Council's planning objectives for the Health Precinct are to:

- Encourage additional residential densities in a location which is readily accessible to employment, transport, education and recreation facilities;
- Support additional specialist medical practices and health services facilities to be established in close proximity to the Lismore Base Hospital; and
- Provide design controls to encourage and facilitate change, in a manner which is compatible with the existing residential and non-residential character of the locality.

In 2016-17, Council changed the Lismore LEP and DCP to provide for increased building heights and residential densities within parts of the Precinct. These changes enable four and five storey buildings to be erected in parts of the Precinct, as compared to the typical 8.5m (2 storey) height control across most of the Lismore LGA, including the area surrounding the Health Precinct.

Residential Development – 1 and 2 Storeys

For 1 and 2 storey residential development in the Health Precinct, the general provisions of Chapter 1 Residential Development apply.

Residential Development – 3 or More Storeys

For residential developments in the Health Precinct comprising three or more storeys and that have four or more units, the provisions of *State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development (SEPP 65)* and associated *Apartment Design Guide* will apply to the development application by virtue of the provisions of the SEPP. Council will therefore require applications to comply with the planning provisions contained within the Apartment Design Guide, particularly those contained within *Part 3 'Siting the Development'* and *Part 4 'Designing the Development'*. Where a provision is nominated within the Design Guide as a 'Design Criteria' particular weight will be applied to this provision in the assessment of the application.

Whilst the *SEPP 65 Apartment Design Guide* will apply to taller (ie above 2 storeys) residential developments within the Health Precinct, Council is keen to ensure that future development is particularly responsive to the sub-tropical climate and existing general building style in the locality. To achieve these outcomes, the additional design criteria

documented in the table below apply.

Figure 27 provides illustrations with respect to the key design criteria applicable in the Health Precinct.

Design Outcomes Taller Residential Development (3 Storeys or More)

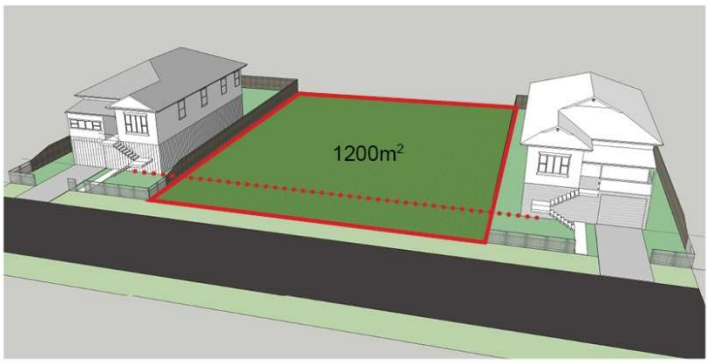
<table>
<tr><th>Performance Criteria</th><th>Acceptable Solution</th></tr>
<tr><td>P35 Taller buildings are designed having regard to architectural best practice</td><td>A35 The planning provisions contained within the Apartment Design Guide are complied with, particularly those contained within Part 3 'Siting the Development' and Part 4 'Designing the Development'.</td></tr>
<tr><td>P36 Taller buildings are located on sites of a suitable size to enable buildings to be offset from property boundaries, achieve good orientation and to provide substantial onsite landscaping.</td><td>A36 The site has an area of at least 1200m^2.</td></tr>
<tr><td>P37 Development is sited and designed taking into account the relationship to adjoining premises and the street.</td><td>A37.1 The development setback shall be 6 metres.

A37.2 For a corner allotment the setback is 6m from the primary street and 4m from the secondary road.</td></tr>
<tr><td>P38 For taller buildings deep soil zones provide areas on site that allow for and support healthy plant and tree growth compatible with a predominately residential precinct.</td><td>A38 Deep soil zones on site meet the following minimum requirements:

<table>
<tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr>
<tr><td>less than 650m^2</td><td>-</td><td rowspan="4">7%</td></tr>
<tr><td>650m^2 - 1,500m^2</td><td>3m</td></tr>
<tr><td>greater than 1,500m^2</td><td>6m</td></tr>
<tr><td>greater than 1,500m^2 with significant existing tree cover</td><td>6m</td></tr>
</table>
Source: Apartment Design Guideline</td></tr>
<tr><td>P39 For taller buildings, adequate building separation distances are shared equitably between neighbouring sites to achieve reasonable levels of external and internal visual privacy.

Note: For buildings less than 2 storeys, the setbacks for residential development apply.</td><td>A39 – Minimum separation distances from buildings to the side and rear boundaries are as follows:
<table>
<tr><th>Height</th><th>Habitable Rooms and Balconies</th><th>Non-habitable Rooms</th></tr>
<tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr>
<tr><td>Up to 16m (5 storeys)</td><td>9m</td><td>4.5m</td></tr>
</table>
Source: Apartment Design Guideline</td></tr>
<tr><td>P40 Taller buildings are designed and sited to reduce the visual scale of the development and amenity impacts on adjoining properties.</td><td>A40.1 Buildings are designed to provide a 3 storey presentation to the street, with the 4th and/or 5th storey set back at least 3m from the front building elevation
A40.2 The development is provided as a series of buildings, rather than one large building.</td></tr>
</table>

P41 Taller buildings include design references to the architectural character of existing residential dwellings in the locality	**A41.1** Roof structures form part of the building elevation when viewed from the street and include pitched, hipped and gabled elements, clad with low reflective materials. **A41.2** A variety of building materials are incorporated into the design, including masonry brick and lightweight cladding materials such as weatherboard. **A41.3** Buildings address the public street, with ground floor units provided with direct pedestrian access from the street. **A41.4** Vehicle and pedestrian points of entry are separated. **A41.5** Windows and deep balconies and / or decks are provided facing the public street. **A41.6** The front building setback is landscaped with soft landscaping and includes trees for shade and screening.
P42 In Uralba Street the form, bulk, scale, roof lines, setbacks, height, orientation, materials, articulation, fenestration, finishes and detailing of development of premises containing or adjacent to a building identified as having local architectural significance in the Lismore Heritage Study 1995, (Perumal Murphy Wu) are sympathetic to and respectful of: • the architectural significance of the place; and • the contribution of the place to the local streetscape of the surrounding area; and • do not detract from the appearance of retained existing buildings when viewed from a public place.	
P43 On-site car parking does not dominate the front setback.	**A43.1** Carparking areas are provided either at the rear of the site or integrated into the building form via under croft parking. **A43.2** Car parking access is provided via integrated access points. **A43.3** No car parking is provided within the front building setback.
P44 Any additional traffic generated from a proposal will require the upgrade of road frontages or other external road works.	**A44** Road standard along the frontage must meet the requirements set out in Chapters 5A, 5B and 6 of the DCP respectively.

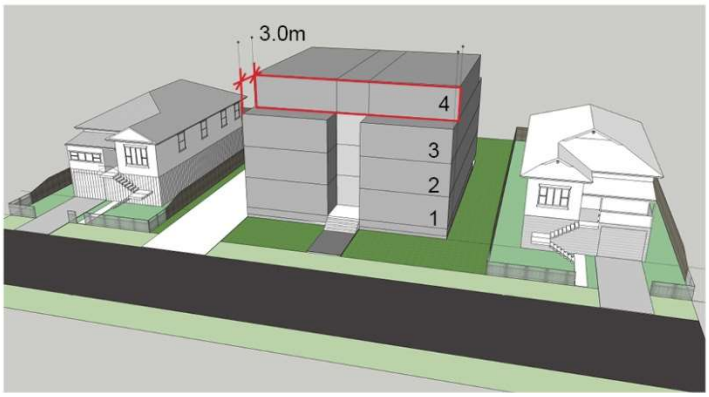


Lot size and setback

Setbacks should be established to take into account the relationship to the street and adjoining premises. Development sites require a site area of 1200sqm.

Landscape and deep soil zone

Provide landscape deep soil zones to allow for and support plant and tree growth. Plan common outdoor areas to have good sunlight access. Use side boundary landscaping to achieve privacy.



Building massing

Buildings are to be design to provide a 3 storey presentation to the street with the upper 4th and/or 5th levels to be setback 3.0m from the front building elevation. Articulate the building into intersecting volumes rather than a singular volume.

Materials and Form

Integrate with existing residential character with design of roof forms, use of building materials and building detailing. Provide balconies which overlook the street.

Figure 27 – Residential Development 3 or more storeys – Given the Lismore Health precinct is a transitional area, new development should respect the existing amenity of adjoining lower density development in terms of privacy, overlooking and overshadowing as well as providing consistency of roof forms and building materials.

Figure 27 – Residential Development 3 or more storeys – Given the Lismore Health precinct is a transitional area, new development should respect the existing amenity of adjoining lower density development in terms of privacy, overlooking and overshadowing as well as providing consistency of roof forms and building materials.

Preferred Design Outcomes – Non-Residential Development in the Lismore Health Precinct

The town planning framework in the Lismore Health Precinct enables certain forms of non-residential development including health services facilities (medical centres and consulting rooms) and community facilities to occur with the consent of Council.

Council is keen to ensure that such development is compatible with the existing and proposed building form in the locality. In this regard, it is expected that future development within the Precinct will continue to be predominately residential in form. As such, non-residential development needs to be designed such that a sympathetic interface is provided between residential and non-residential development in the Precinct. To achieve these outcomes, the additional design criteria documented in the table below apply.

Design Outcomes for Non-Residential Development in the Lismore Health Precinct

Performance Criteria	Acceptable Solution
General Requirements	
P45 Non-residential developments designed to be compatible with the scale and form of residential development in the Health Precinct and contain design references to the existing architectural character of the area.	**A45.1** Roof structures form part of the building elevation when viewed from the street and include pitched, hipped and gabled elements, clad with low reflective materials. **A45.2** A variety of building materials are incorporated into the design, including masonry brick and lightweight cladding materials such as weatherboard. **A45.3** Buildings address the public street, with any ground floor commercial units provided with direct pedestrian access from the street. **A45.4** Vehicle and pedestrian points of entry are separated. **A45.5** Windows and deep balconies and / or decks are provided facing the public street. **A45.6** The front building setback is landscaped with soft landscaping and includes trees for shade and screening. **A45.7** Fencing in the front setback is residential in scale and form and includes at least 50% visually permeable elements.
P46 Development is sited and designed taking into account the relationship to adjoining premises and the street.	**A46.1** Development setback shall be 6 metres. **A46.2** For a corner allotment the setback is 6m from the primary street and 4m from the secondary road.
P47 Developments minimise overlooking of the internal living areas of adjacent dwellings by careful building layout, spatial separation of buildings, location and design of windows and balconies, screen walls, fences and landscaping.	**A47 –** Refer to Part 4.2 – Element, Visual Privacy, Acceptable Solutions
P48 Earthworks and retaining walls:- • Preserve the stability of the site and adjoining land; • Minimise site disturbance from excessive cut and fill. • Minimise adverse physical, visual and privacy impacts from excessive cut and fill. • Minimise adverse impact on streetscape. • Are integrated with landscaping. • Ensure that structures are stable and safe.	**A48** – Refer to Chapter 1, Part 4.5 – Element, Earthworks, Retaining Walls and Erosion controls
P49 Site facilities such as waste bin enclosures and storage areas are conveniently accessible and visually unobtrusive.	**A49.1** At least 3m^2 is provided for each 'waste service' to a commercial unit. The storage area is in a location readily accessible to the waste collection point. **A49.2** Collective storage areas for garbage bins are screened by landscaping or fencing. **A49.3** The development application is to be accompanied by a Site Waste Minimisation and Waste Management Plan in accordance with DCP Chapter 15.

<table>
<tr><td>P50 Adequate provision is made for onsite car parking and loading facilities in locations which do not dominate the front setbacks.</td><td>A50.1 Carparking is provided on site in accordance with the rates and design requirements of Chapter 7 Off Street Carparking.
A50.2 Carparking areas are provided either at the rear of the site or integrated into the building form via under croft parking.

A50.3 No car parking is provided within the front building setback.

A50.4 Loading docks and the like are located at the rear or side of the premises.

A50.5 For specialist medical practices ‘stacked parking’ may be provided for staff working at the premises only when a parking management plan accompanies the application which demonstrates that staff can conveniently access these spaces.</td></tr>
<tr><td>P51 Signage does not dominate facades and is included as an integral part of the building design.</td><td>A51 Advertising and signage should be in accordance with Chapter 9 - Outdoor Advertising Structures of the Lismore Development Control Plan.</td></tr>
<tr><td>P52 Any additional traffic generated from a proposal will require the upgrade of frontages or other external road works.</td><td>A52 Road standard along the frontage must meet the requirements set out in Chapters 5A, 5B and 6 of the DCP respectively.</td></tr>
<tr><td colspan="2">Taller Buildings (3 levels or more)</td></tr>
<tr><td>P53 Taller buildings are located on sites of a suitable size to enable buildings to be offset from property boundaries, achieve good orientation and to provide substantial onsite landscaping.</td><td>A53 The site has an area of at least 1200m^2.</td></tr>
<tr><td>P54 For taller buildings deep soil zones provide areas on site that allow for and support healthy plant and tree growth compatible with a predominately residential precinct.</td><td>A54 Deep soil zones on site meet the following minimum requirements:
<table><tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr><tr><td>less than 650m²</td><td>-</td><td rowspan="4">7%</td></tr><tr><td>650m² - 1,500m²</td><td>3m</td></tr><tr><td>greater than 1,500m²</td><td>6m</td></tr><tr><td>greater than 1,500m² with significant existing tree cover</td><td>6m</td></tr></table>Source: Apartment Design Guideline
A54.2 Deep soil zones are provided in locations which assist in buffering the development from adjoining residential uses.</td></tr>
</table>

<table>
<tr>
<td>P55 For taller buildings, adequate building separation distances are shared equitably between neighbouring sites to achieve reasonable levels of external and internal visual privacy.

Note: For buildings less than 2 storeys, the setbacks for residential apply.</td>
<td>A55 – Minimum separation distances from buildings to the side and rear boundaries are as follows:
<table>
<tr><th>Height</th><th>Habitable Rooms and Balconies</th><th>Non-habitable Rooms</th></tr>
<tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr>
<tr><td>Up to 16m (5 storeys)</td><td>9m</td><td>4.5m</td></tr>
</table>
Source: Apartment Design Guideline</td>
</tr>
<tr>
<td>P5<s>6</s> Taller buildings (3 levels or more) are designed and sited to reduce the visual scale of the development and amenity impacts on adjoining properties.</td>
<td>A56.1 Buildings are designed to provide a 3 storey presentation to the street, with the 4th / 5th storeys set back at least 3m from the front building elevation.

A56.2 The development is to give the appearance of a series of buildings, rather than one large building.</td>
</tr>
<tr>
<td>P57 In Uralba Street the form, bulk, scale, roof lines, setbacks, height, orientation, materials, articulation, fenestration, finishes and detailing of development of premises containing or adjacent to a building identified as having local architectural significance in the Lismore Heritage Study 1995, (Perumal Murphy Wu) are sympathetic to and respectful of:
• the architectural significance of the place; and
• the contribution of the place to the local streetscape of the surrounding area; and
• do not detract from the appearance of retained existing buildings when viewed from a public place.</td>
<td></td>
</tr>
</table>

Figure 28 - Non-residential Development – A range of land uses are permissible within the Lismore Health precinct including cetain non-residential forms including medical practices and community facilities. Non-residential development should include active uses to street frontages inlcuding cafes or health service facilities

as a clear and legibe foyer entrance to building(s) and passage to carparks which is preferably lcoated at the rear.

References

1. *North Coast Urban Design Guidelines*, *Department of Planning, 2008*
2. *The Australian Model Code for Residential Development (AMCORD, Commonwealth Department of Housing and Regional Development), 1997*
3. *Lismore Housing Strategy, July 2012*
4. *Lismore Housing Strategy Action Plan*
5. *State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development (SEPP 65) and associated Apartment Design Guide*