CHAPTER 1

RESIDENTIAL DEVELOPMENT

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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 in the Lismore LGA. This Chapter also provides information with respect to Council's requirements for 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 a 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 the Chapter works

The objectives of this Chapter provide an overall framework, with the urban design principles in Section 4 providing the context for each element, as shown in Figure 1. The urban design principles provide the framework for applicants to consider in the design process and are connected to the elements that follow.

Control elements comprise the Performance Criteria and Acceptable Solutions. Performance Criteria are statements on how to achieve the objectives of the chapter and meet the design principles and the acceptable solutions are one means of meeting the performance criteria. In most cases both performance criteria and acceptable are specified.

The use of performance criteria together with acceptable solutions allows Council to consider each proposal on its merits.

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. Council's Urban Designer is also able to provide advice as required.

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 *State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development (SEPP 65)* and associated *Apartment Design Guide* will apply to the development application. Early reference to these documents is recommended.

1.5 Structure of this DCP Chapter

Section 1 Sets out the objectives, when the provisions apply, how the performance based system works and how the Chapter relates to other plans.

Section 2 Provides a list of definitions. For definitions not listed, refer to the dictionary in the LLEP 2012.

Section 3 Urban design principles.

Section 4 General provisions applicable to residential development.

Sections 5 - 8 Specific controls for expanded dwellings, small lot housing, secondary dwellings and shop top housing.

Sections 9 - 10 Guidance for adaptable and flexible housing.

Section 11 Additional Design Criteria for the Lismore Health Precinct

2 DEFINITIONS

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.

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

flexible housing is housing designed to adapt to people's changing circumstances. As young couples have children they need more space, and later in life once children have left home, older people may need less space.

functional open space means the part of the open space area that is directly accessible to the living area of a dwelling and is 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.

Note: This needs to be read in conjunction with the multi dwelling housing definition in LEP 2012.

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

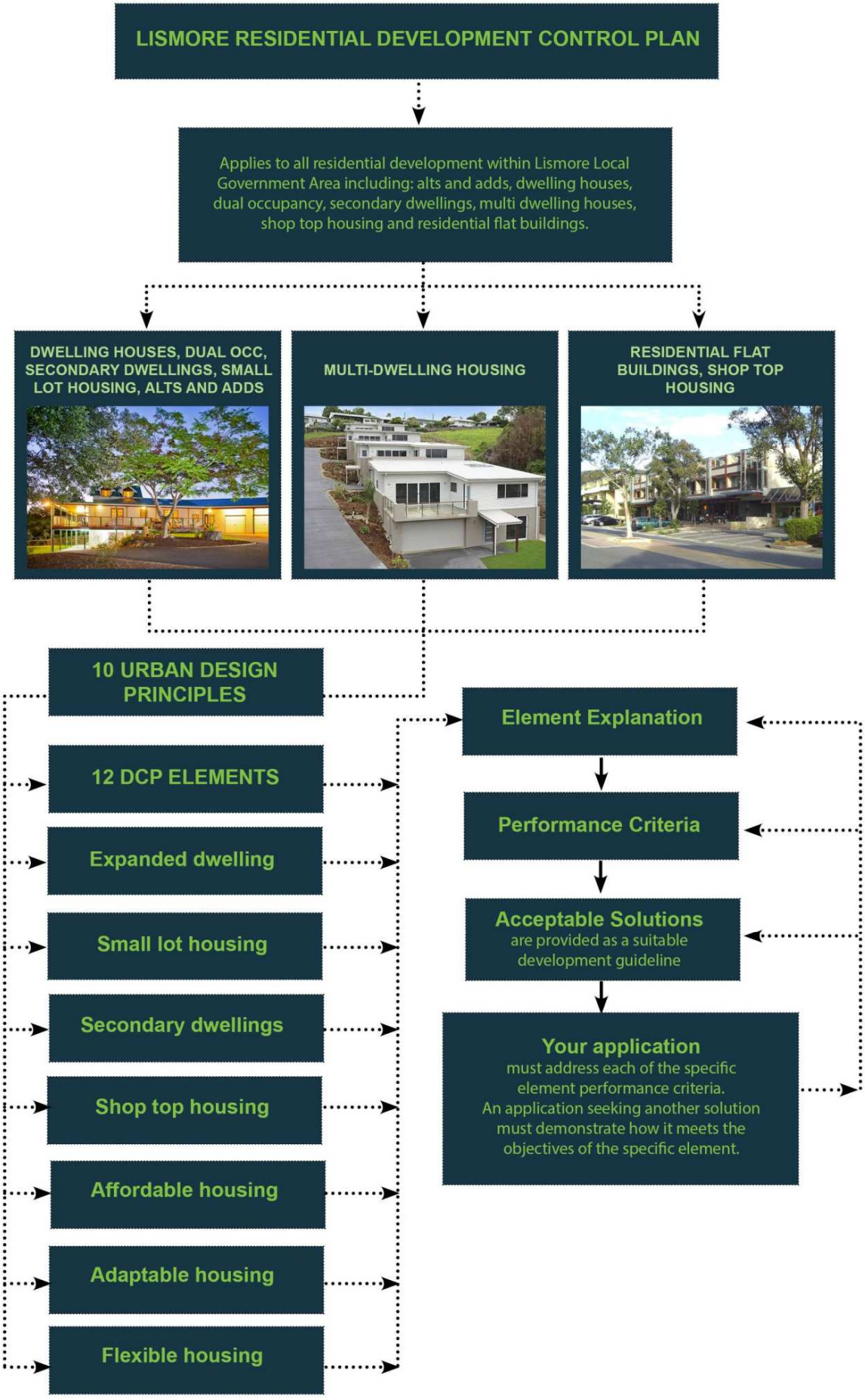
primary open space means the part of the site or building which is designed, or developed, or capable of being maintained and used as lawn, courtyard or planted gardens and is available for use and enjoyment of the occupants of the development and:

- includes rooftop spaces, swimming pools, walk ways, 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.

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

Good design leads to great urban places. 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, 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.

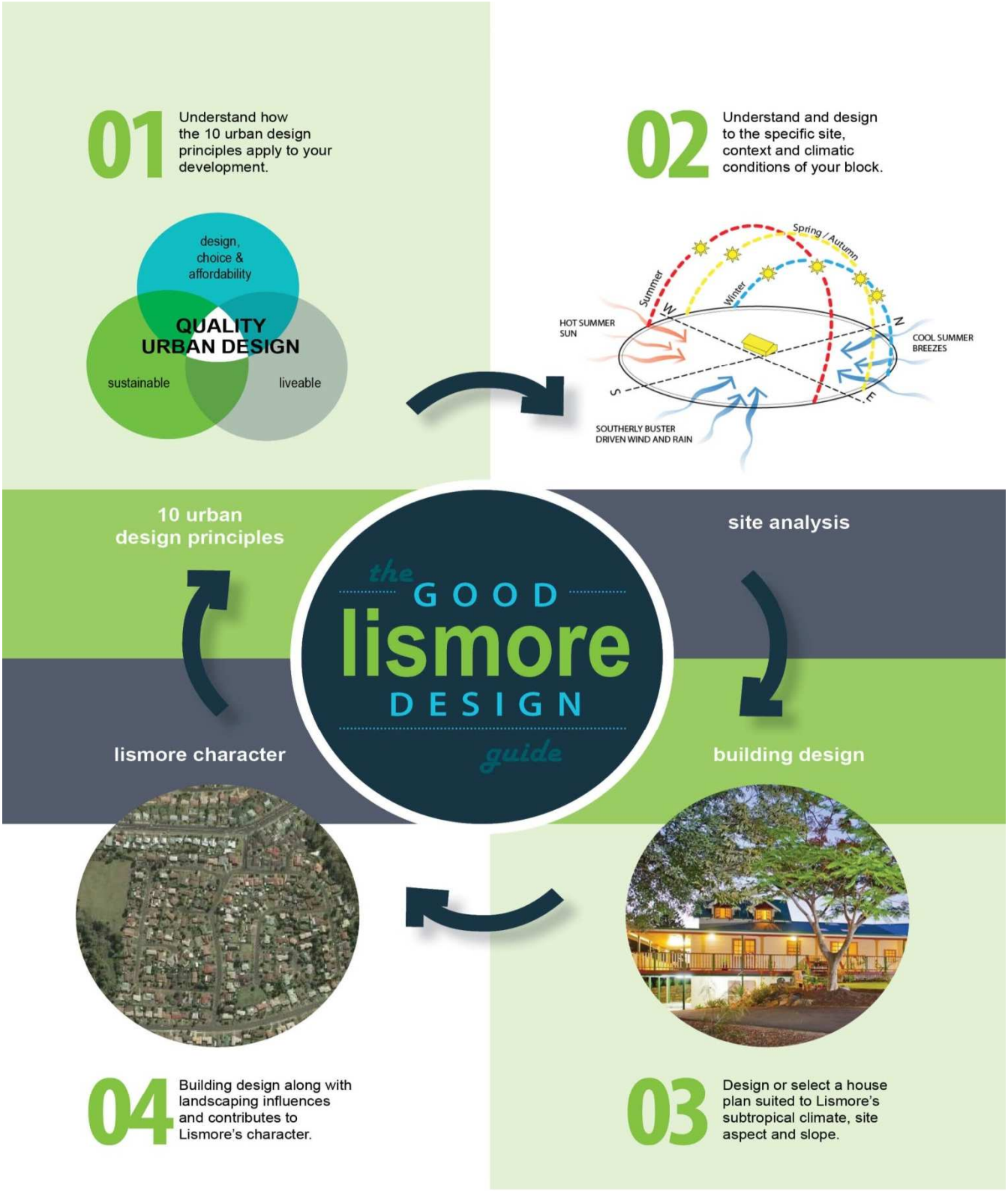
Principle 9 **Diversity of Residential Development**

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 **Safety**

Good 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 – Design, Height and Siting

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. Therefore it is imperative that building height is appropriate for the area.

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>Siting and Design
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>A1.1 Buildings are setback an equal or greater distance from the street as buildings on adjoining lots. Where there is no adjoining development the setback shall be 6 metres.

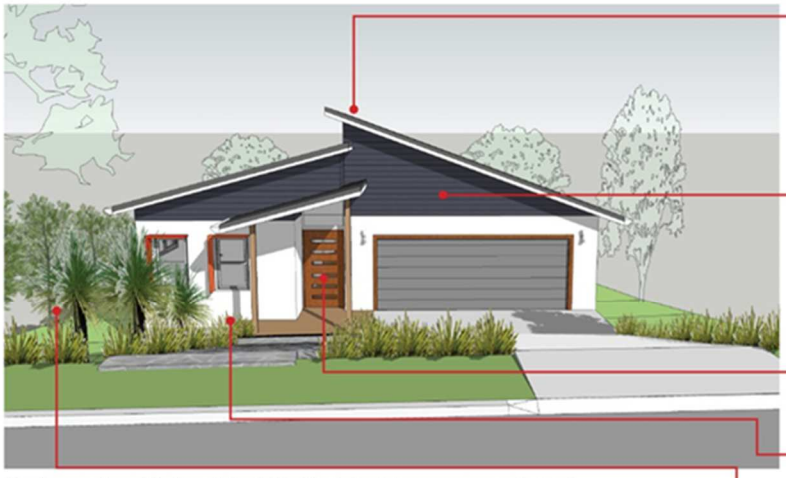
A1.2 For a corner allotment the setback is 6m from the primary street and 4m from the secondary road where there is no adjoining development.

A1.3 The building footprint allows for landscaping between dwellings.

A1.3 The building form, including the front steps and porch with garage is located on the lower downslope consistent with the neighbouring building.

A1.4 Building materials complement the materials of the neighbouring building and compatible with the subtropical climate.</td></tr>
<tr><td>P2 Dwelling density and site coverage are consistent with the character and amenity of the residential area.</td><td>A2 Provided the development satisfies other criteria in section 4, the dwelling density per site area for multi dwelling housing and residential flat buildings 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.

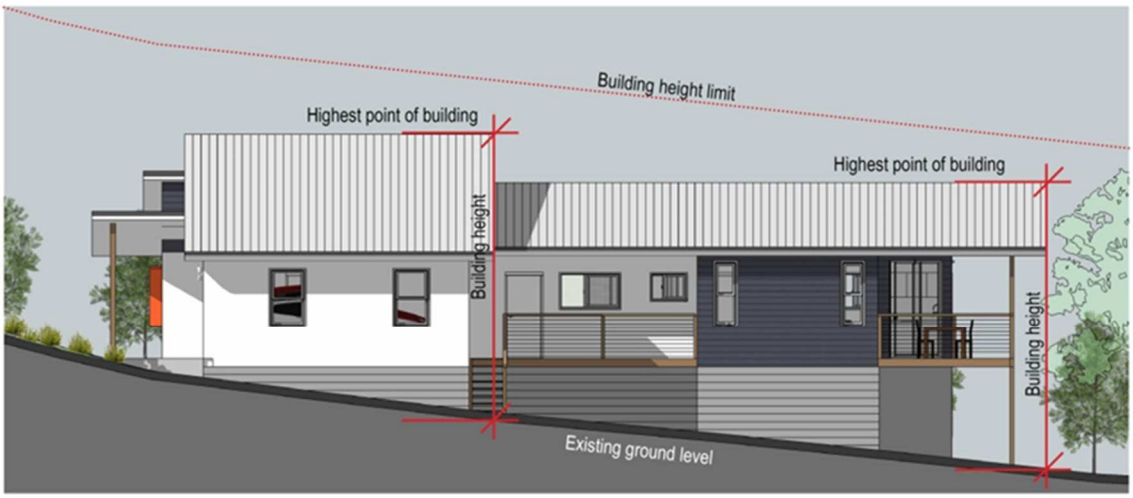
Generous sized windows overlooking the street.

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

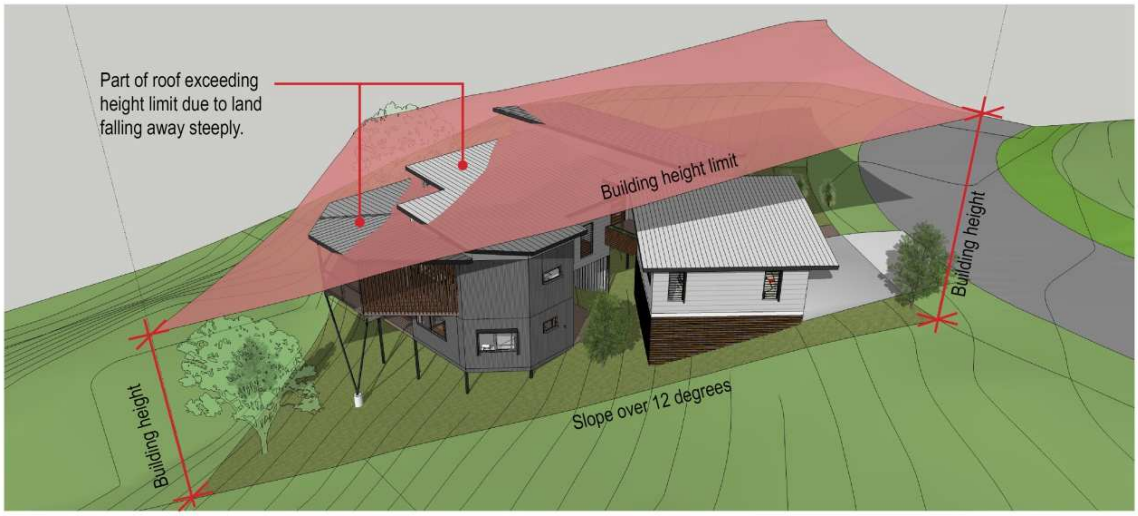
Building Height, Bulk and Scale **P3** The development is of a height that will ensure: • Consistency with the prevailing height of other buildings in the vicinity; • Adequate daylight for habitable rooms and open space areas; • Minimal overshadowing and overlooking of adjoining premises; • Compatibility 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.*	**A3.1** Buildings comply with the building height controls specified in the Lismore Local Environmental Plan 2012. Variations to the development standard in the LEP shall satisfy the Performance Criteria. **A3.2** 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.

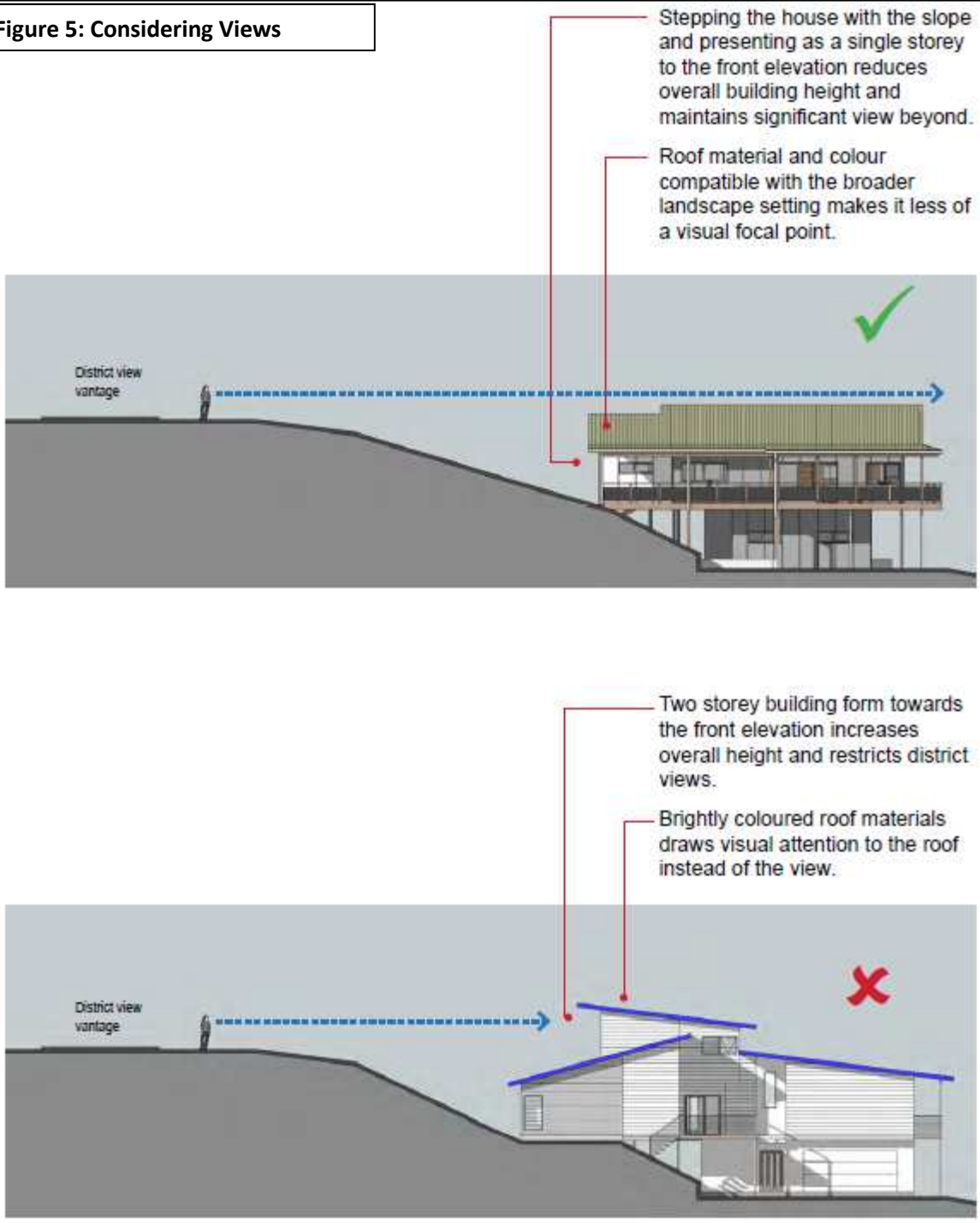


Building Height on Sloping Blocks - On sloping sites, sites with irregular slope or where earthworks have taken place, building height measurement is based on the same definition as being the vertical distance between the existing ground level and the highest point of the building. The building height limit is a parallel offset from the existing ground level. Refer to LEP height map for height limits.



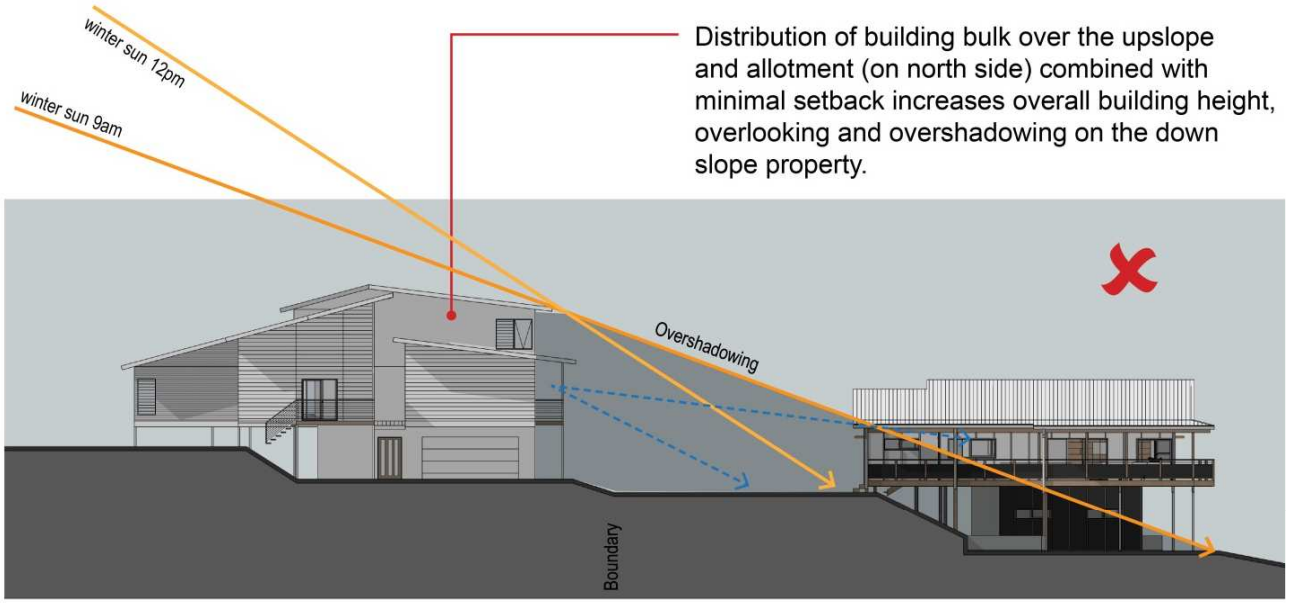
Variations to height on steeply sloping allotments (12 degrees an over) to achieve an appropriate roof form will be considered where there will be negligible amenity impacts on neighbouring properties.

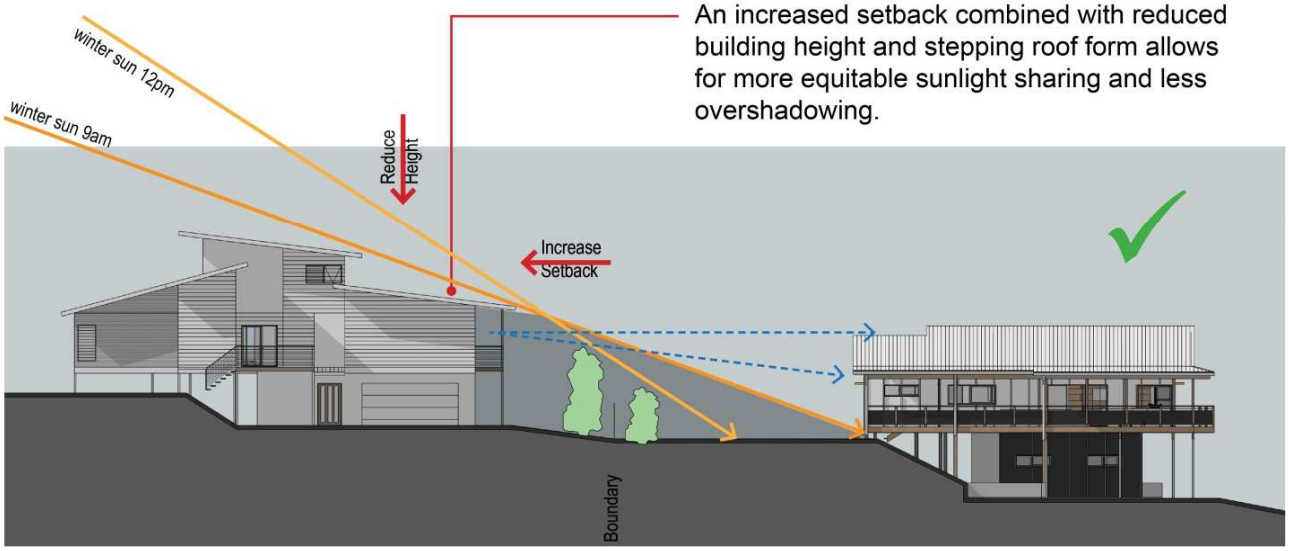
Figure 5: Considering Views



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.

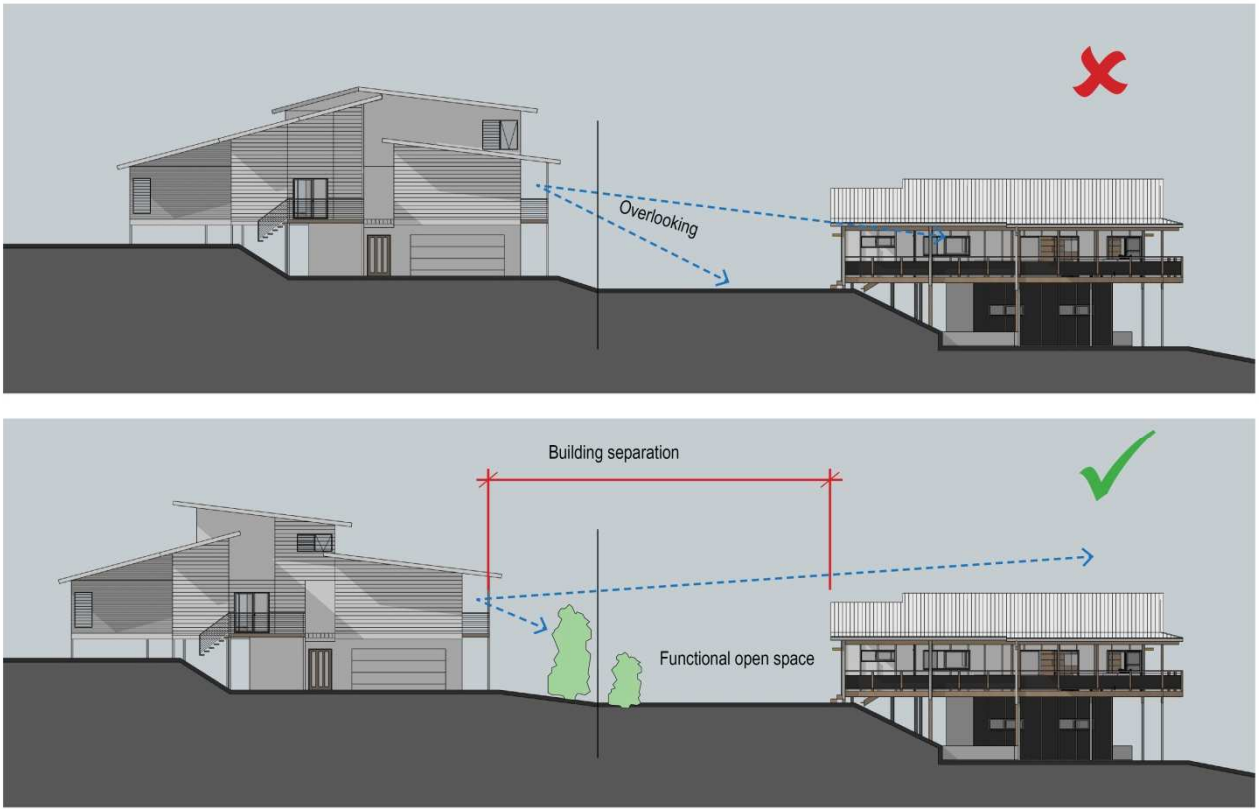
4.2 Element – Visual Privacy

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 and within development properties through building design and landscaping.

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

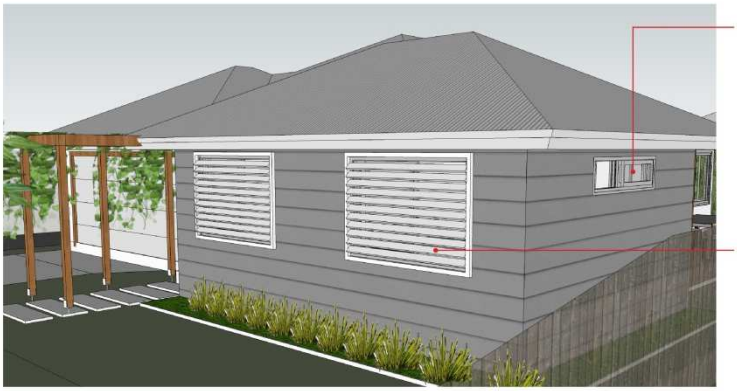
Performance Criteria	Acceptable Solution
P1 Overlooking of the internal living areas of adjacent dwellings is to be minimised by: • careful building layout; • spatial separation of buildings; • location and design of windows and balconies; and • the use of screen walls, fences and landscaping.	**A1.1** 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 20 and 21 illustrate how this can be achieved. **A1.2** A courtyard with a depth of at least 10 metres is maintained between dwellings in multi dwelling housing developments where courtyards face each other. **A1.3** 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) existing dense vegetation or new planting that can achieve a 75% screening within 3 years of planting; and/or (e) if at ground level, screen fencing to a minimum height of 1.8 metres.
Figures 7 and 8 demonstrate how this can be achieved.	**A1.4** Decks, verandahs, terraces, balconies and other external living areas within 4 metres from a side or rear boundary are screened.

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.

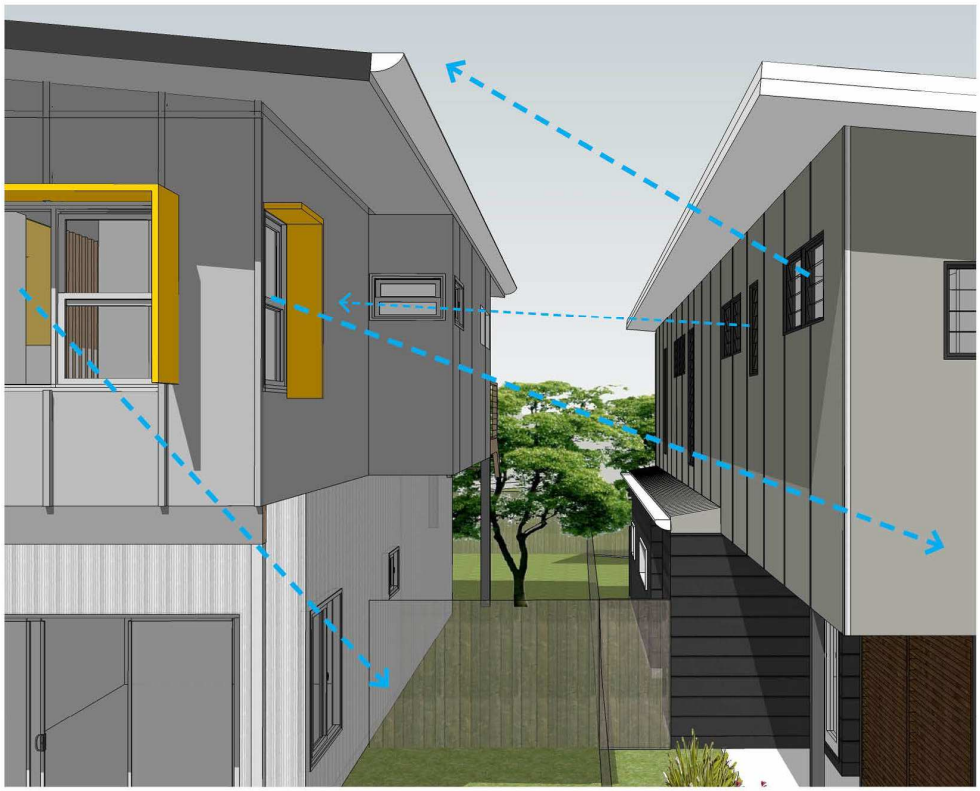
External screens - The use of vertical and horizontal screens, particularly between decks and private open space provides a level of privacy by obscuring a direct line of sight. A privacy screen may be required where decks (particularly elevated) are within 4.0m from a side or rear boundary.



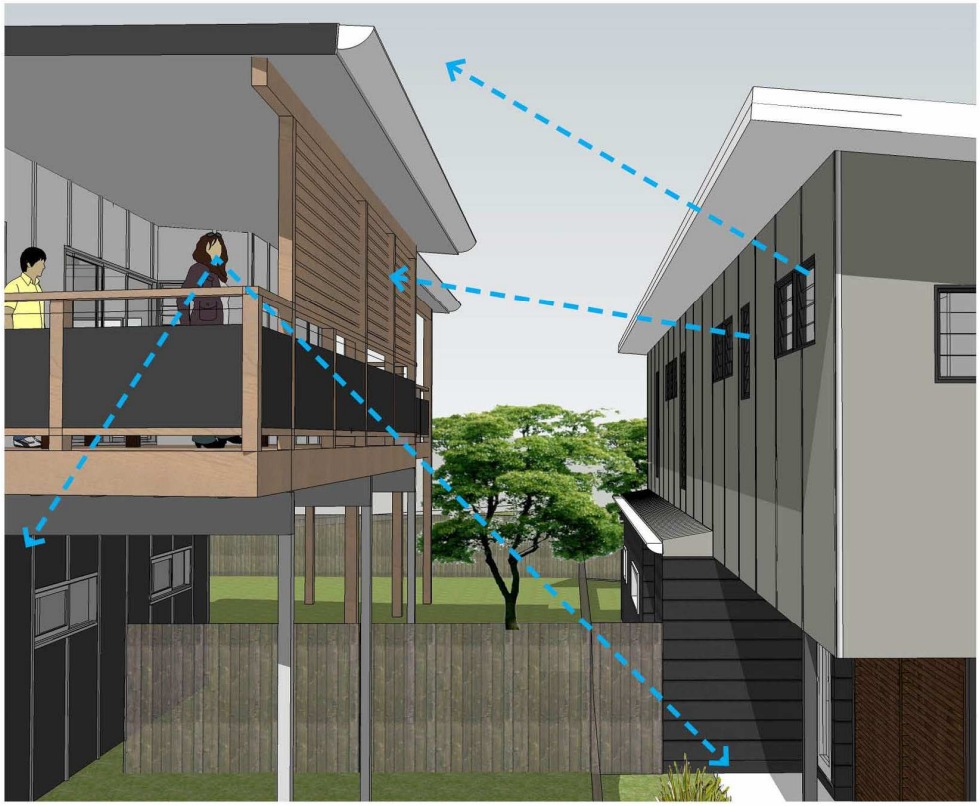
Offset and high level windows - Along side boundaries, try and offset windows with neighbouring windows to avoid direct line of sight into neighbouring internal spaces. Also include windows at different heights and obscure glass.

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.

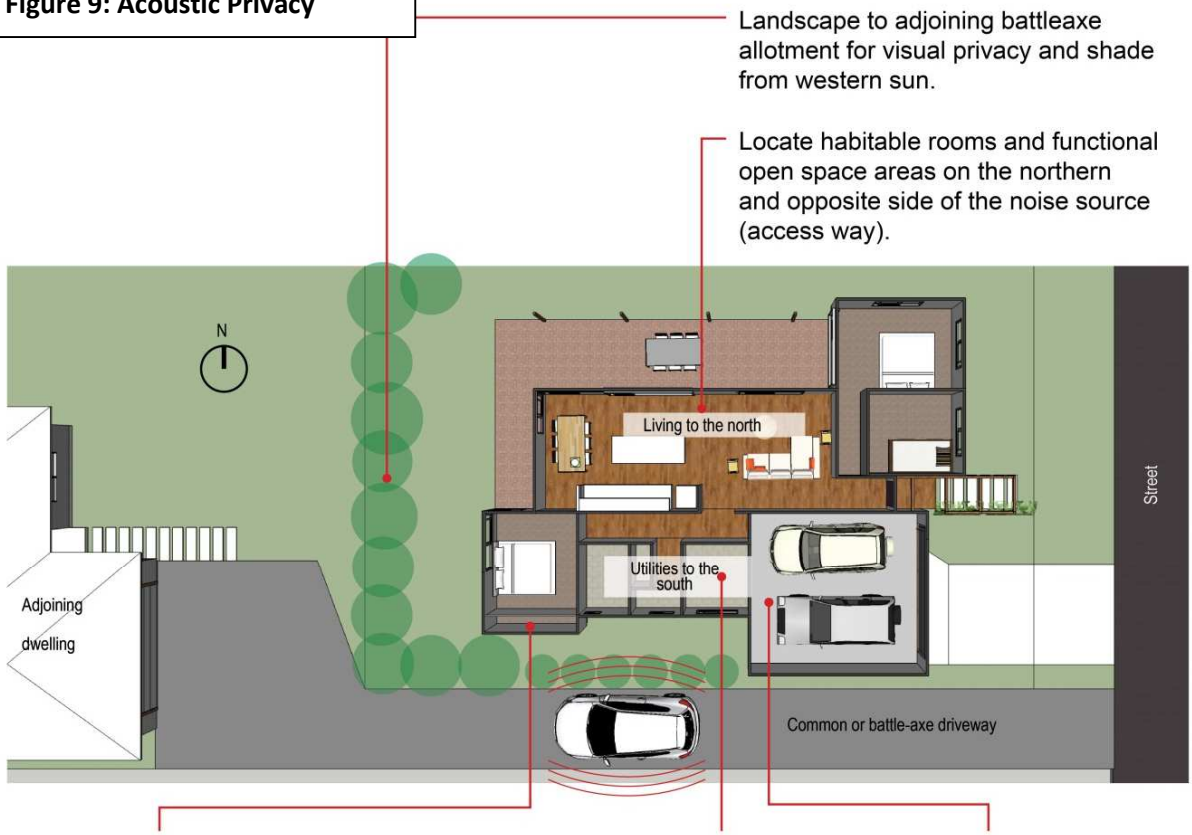
4.3 Element - Acoustic Privacy

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

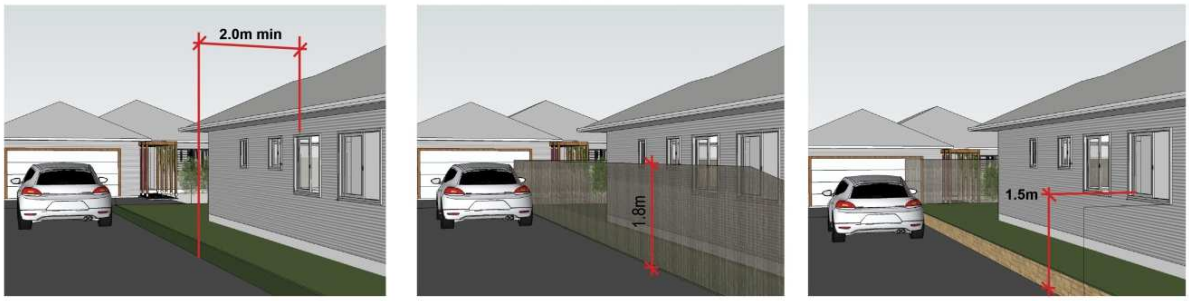
Relevant Design Principle: 1, 2, 3, 4, 5, 6, 10

Performance Criteria	Acceptable Solutions
P1 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.	**A1.1** Garages and driveways are located away from bedrooms of adjacent dwellings. **A1.2** 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. **A1.3** Walls and floors in attached dwellings, including dual occupancy, multi dwelling housing and residential flat buildings are constructed with materials that minimise noise transmission.

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 that meets the requirements of the dwelling occupants needs to be provided, with landscaping being integrated with the dwelling design and easily maintained.

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

<table>
<tr><th>Performance Criteria</th><th>Acceptable Solutions</th></tr>
<tr><td>P1 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>A1.1 Landscaping and open space shall comprise 40% of the site. 70% of the landscaping and open space area is to be permeable.

A1.2 Any area of less than 1 m^2 or 1 m in width, and any kerbing, is not counted in the required landscaped and open space area.</td></tr>
<tr><td>Open Space
P2 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>A1.1 The following minimum areas of total and functional open space are provided.

<table>
<tr><th rowspan="2">Development Type</th><th colspan="2">Total Open Space*</th><th colspan="2">Functional Open Space</th></tr>
<tr><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></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.*

A1.2 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.

P2 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.

A2.1 Functional open space shall be landscaped, fenced or screened where necessary to maintain privacy and ensure amenity.

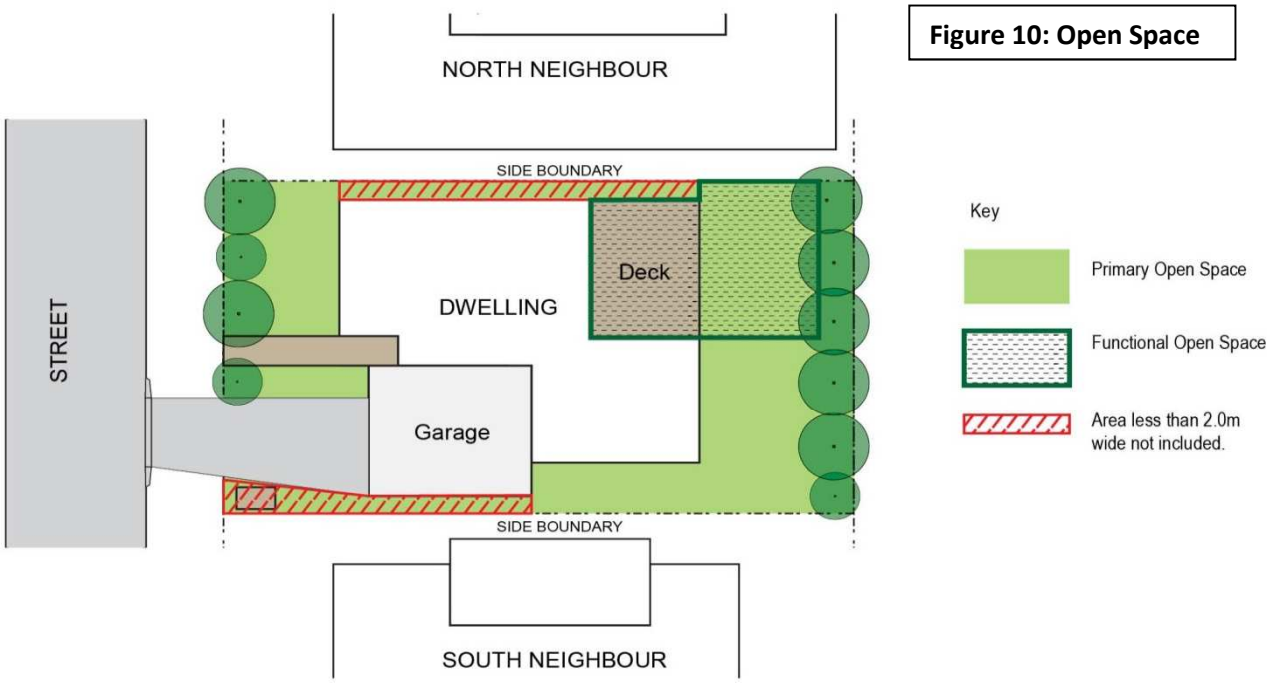
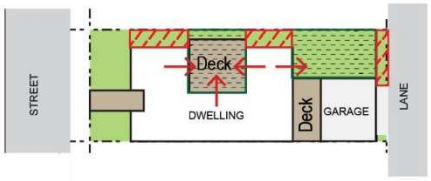


Figure 10: Open Space

Open Space

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

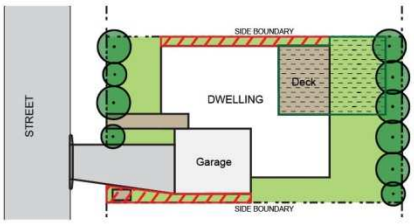
Figure 11: Open Space – Housing Typologies Note: total and primary have the same meaning



Primary open space
Functional open space
<2.0m
Integrate indoor & outdoor

Small lot house (<400m²)

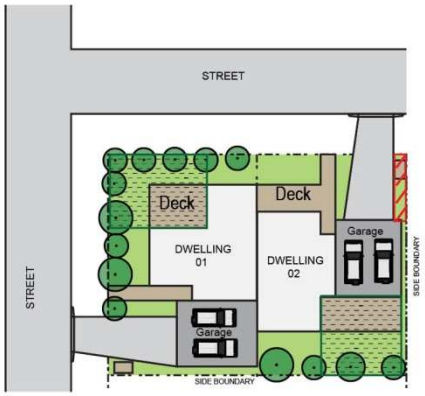
- Aim to integrate internal living spaces with open space areas.
- Best orientate open space to benefit from solar path.
- Shade planting to reduce heat gain within the dwelling and increase privacy from neighbours.



80m²
25m²
<2.0m

Detached house (>400m²)

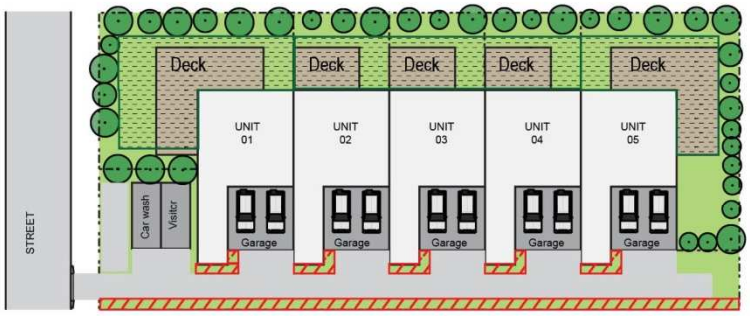
- Detached dwelling is to have 80m² of primary open space of which 25m² is to be functional open space.
- Aim to integrate internal living spaces with open space areas.
- Locate open space areas to benefit from solar path.
- Shade planning to reduce heat gain within the dwelling and increase privacy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



35m²
16m²
<2.0m

Dual Occupancy

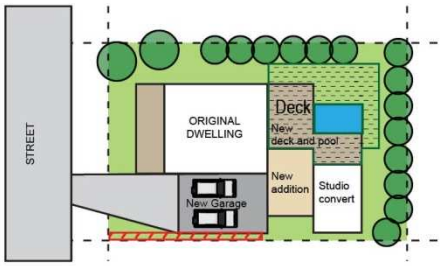
- Each dual occupancy dwelling is to provide 35m² of which 16m² is to be functional open space.
- Provide outdoor open space areas to supplement internal living areas.
- Adjoin open space areas to increase building separation between dwellings.
- Shade planting to reduce heat gain within the dwelling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



35m²
16m²
<2.0m

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.



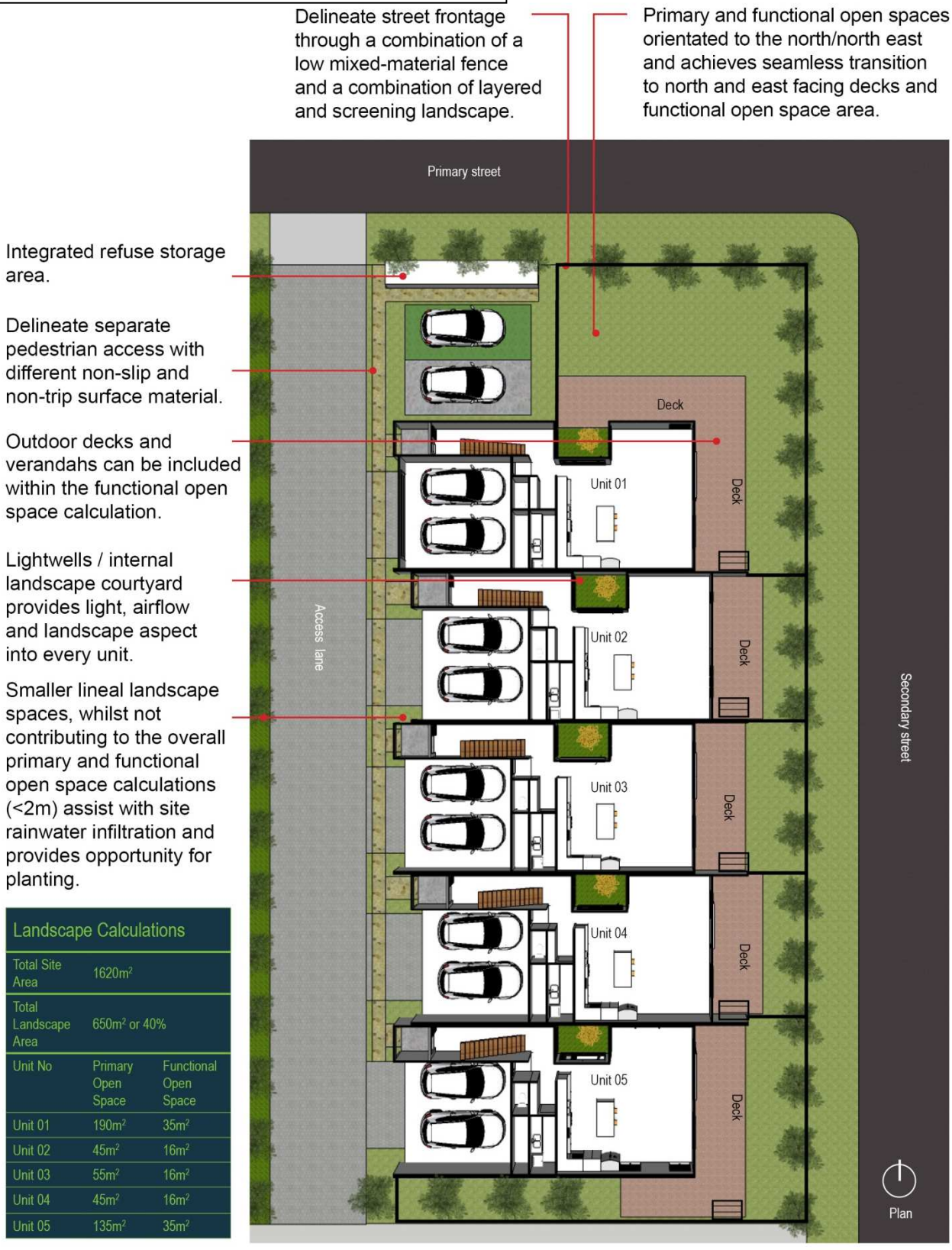
80m²
25m²
<2.0m

Flexible housing

- Ensure adequate provision of open space when adding to or extending an existing dwelling.
- Provide level transition or appropriate access between living spaces and functional open space areas.
- Provide opportunities for raised garden beds, circulation paths and ease of access across open space areas.

Open Space for housing typologies - Each dwelling is to have a well defined, functional and usable open space.

Figure 12: How to meet the Landscaping



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.

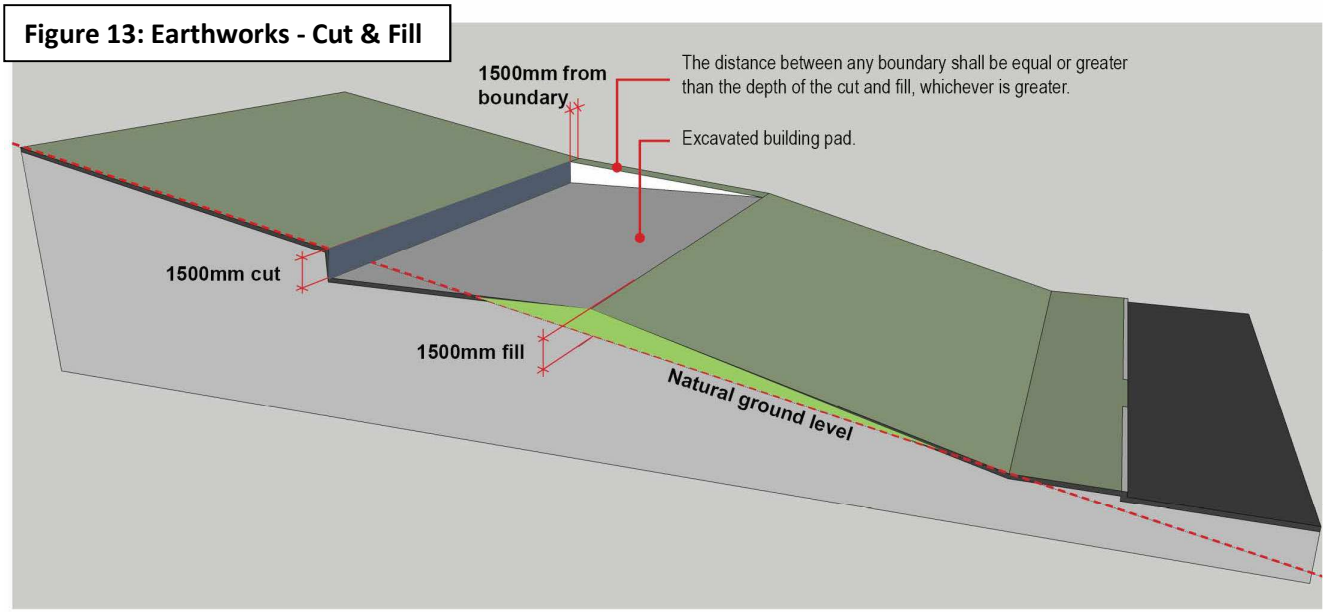
Soil erosion represents a major environmental problem leading to loss of top soil, sedimentation of natural and built drainage systems, reduced water quality and damage to the aquatic environment. Soil erosion from development sites needs to be prevented both during and after construction.

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.

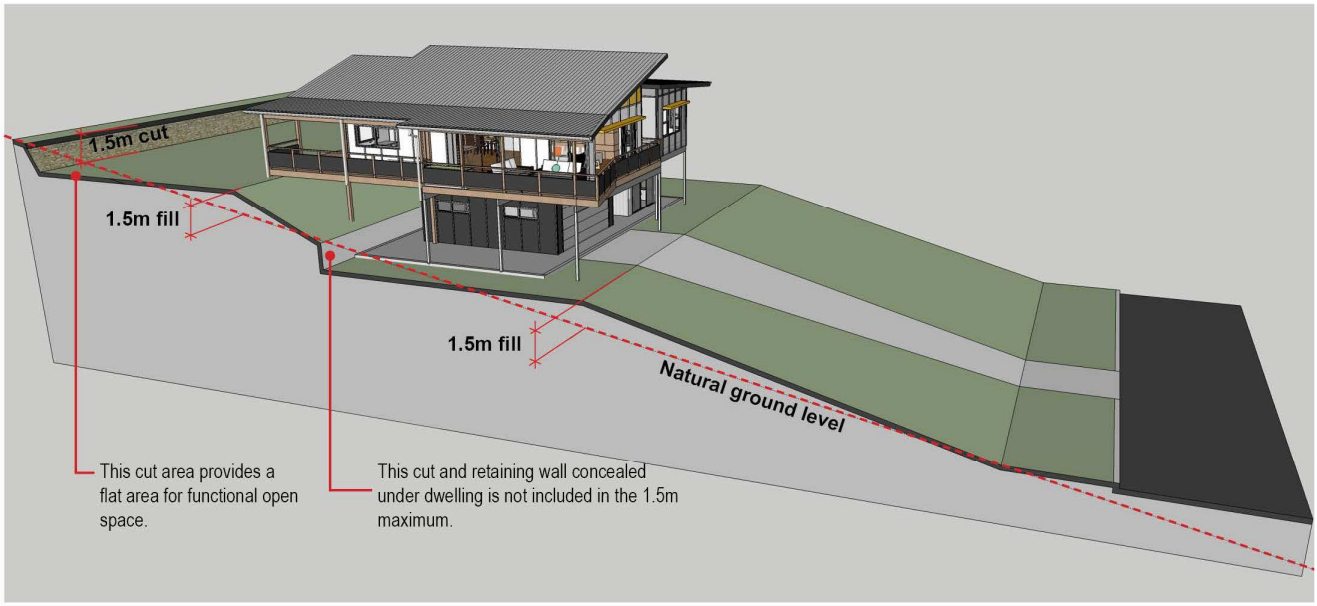
Relevant Design Principle: 2, 3, 4

Performance Criteria	Acceptable Solutions
Earthworks **P1** 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 to 16 illustrate how this criteria can be satisfied.	**A1.1** The maximum height for cut and fill is 1.5 metres above or below natural ground level except where it is incorporated into the dwelling structure. **A1.2 T**he height of retaining walls is limited to 1.2 metres above natural ground level and constructed of materials that complement the streetscape and site landscaping. **A1.3** All areas containing cut or fill are to be drained, stabilised and landscaped to prevent surface erosion. **A1.4** Areas of cut or fill are not closer to a property boundary than the depth of cut or fill. **A1.5** 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. **A1.6** 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. **A1.7** Earthworks and retaining walls do not encroach into any registered easement.

Figure 13: Earthworks - Cut & Fill



Site cut and fill - The maximum height of cut and fill is 1.5m. Areas of cut should be offset 1.5m from any property boundary.



Building cut and fill - The maximum cut and fill restriction is not applicable where the cut and fill is incorporated into the dwelling structure.

Figure 14: 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

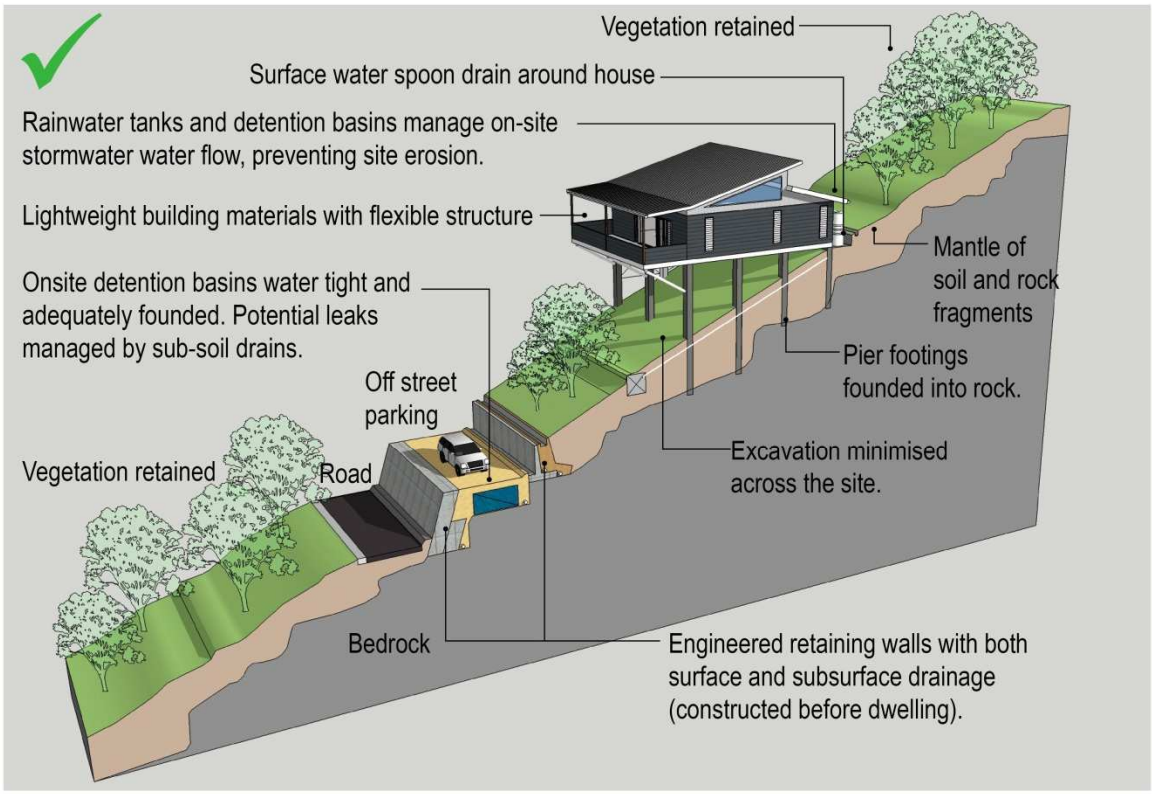
- Site falls from the rear boundary to the street.
- Often presents as two storey building to the street and single storey to the rear yard.
- Elevate living space to upper level for light, air and view.
- Structure could include slab on ground to lower level and post and beam to the rear (single storey)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

Down slope

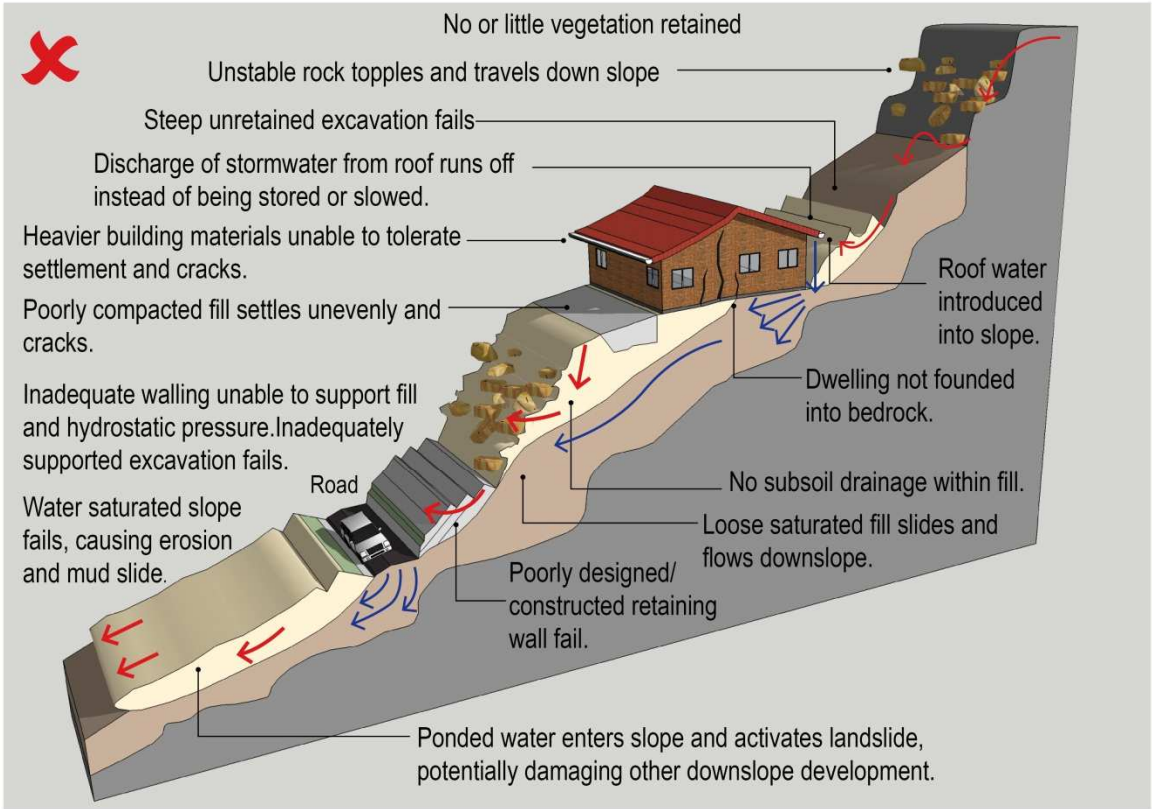
- Site falls from the rear boundary to the street.
- Often presents as single storey building to the street and two storey to the rear yard.
- Living space to upper (street) level for light, air and view.
- Structure could include slab on ground to lower level and post and beam to the rear (single storey)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

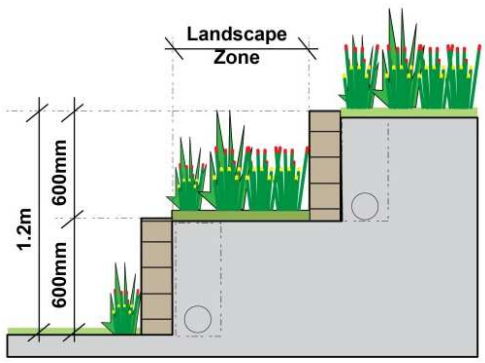


Example of good hillside construction practice - Lightweight building with post and beam structural system piered into rock. All cuttings are reinforced with engineer designed retaining walls. An integrated drainage, water and storage system reduces possibility to undermine sub-surface soil structure.

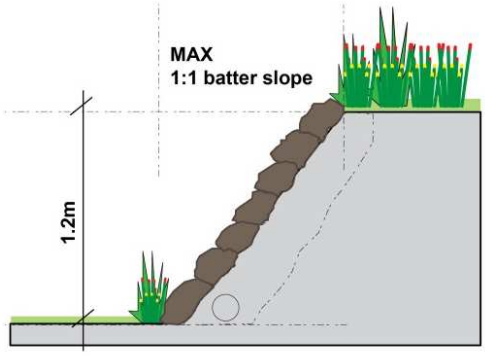


Example of poor hillside construction practice - Site excavation to facilitate slab on ground construction which is not founded to sub-surface rock. Poorly compacted site fill combined with poor retaining walls and poor integration of site drainage leads to a higher risk of undermining and erosion of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

Figure 16: Retaining Walls



BLOCK WALL SECTION

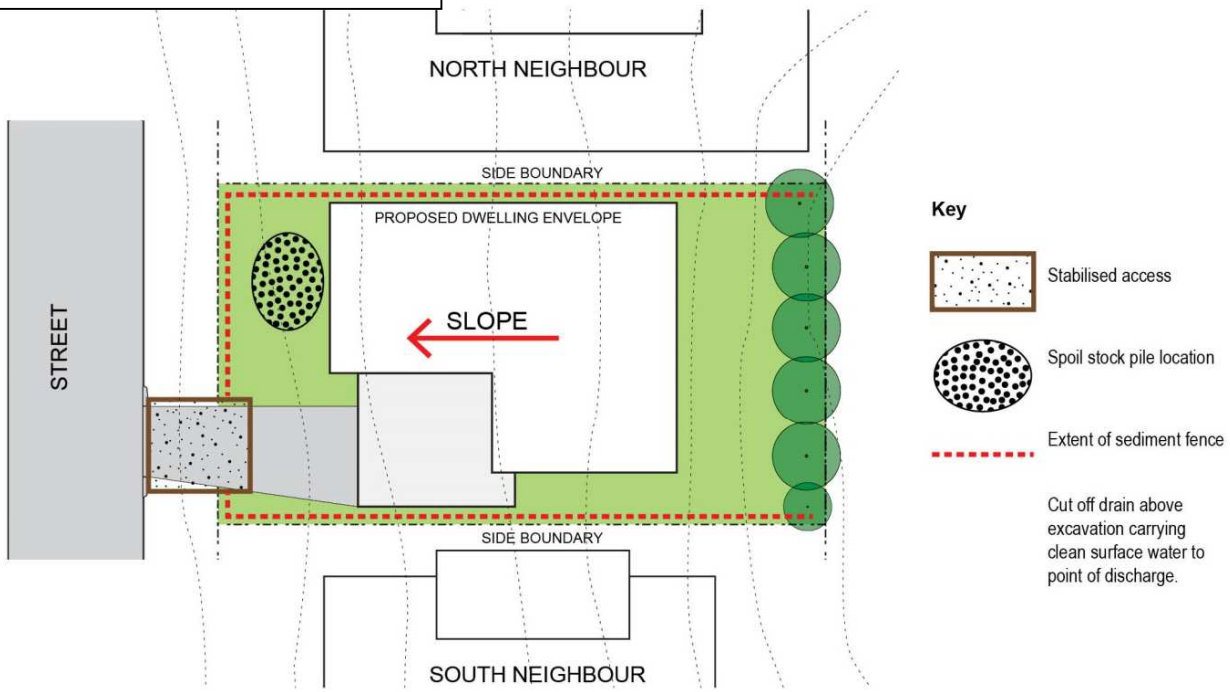


ROCK WALL SECTION

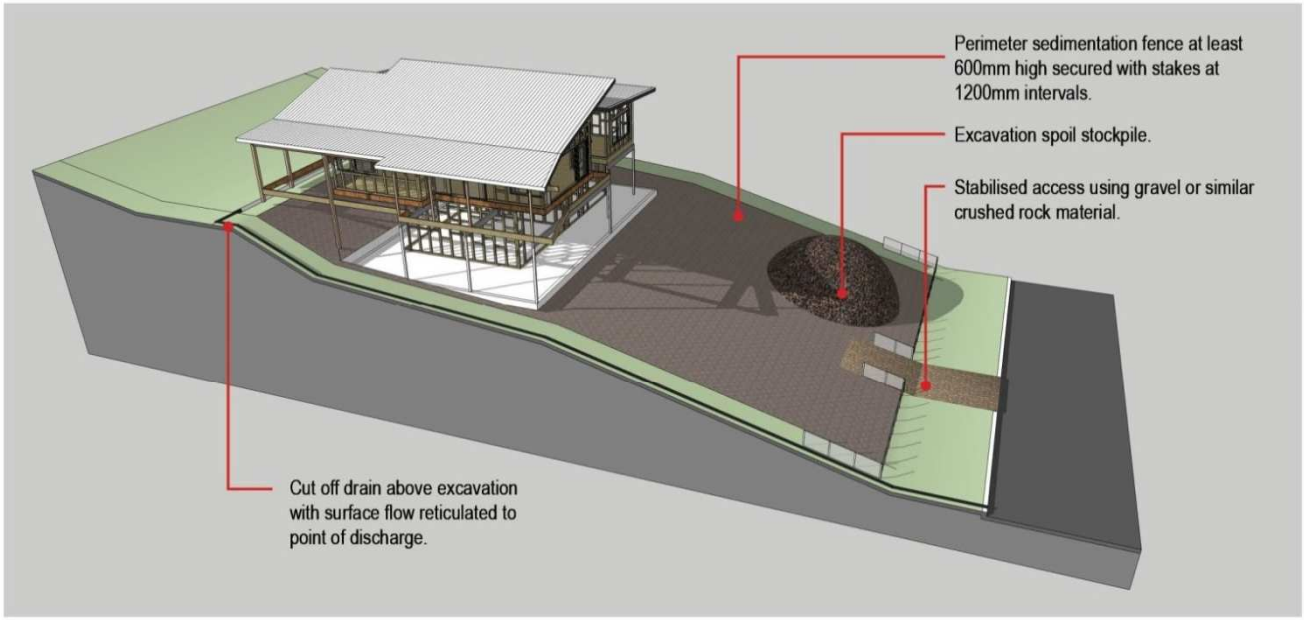
Retaining walls - The maximum height of retaining wall is 1.2m and are to be made of materials which complement the streetscape and site landscaping. Integrate landscaping to soften the retaining wall, especially to public and street interfaces.

Erosion Controls **P1** 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 17 provides examples of this is achieved.	**A1** 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 17: 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 - On-Site Car Parking, Carports, Garages, Outbuildings and Driveways

Sufficient on-site 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>P1 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 18 provides examples of how to achieve on-site car parking provisions for single dwellings, dual occupancies and multi dwellings.</td><td>A1.1 For single dwellings and dual occupancies two (2) on-site car parking spaces are provided at least 5.5 metres behind the Building Line. At least one of the parking spaces shall be under cover.

A1.2 For attached and detached dual occupancies of up to 125m² floor space one (1) on-site car parking space is provided behind the building line. Where the floor area exceeds 125m², two (2) on-site car parking spaces per unit are provided.

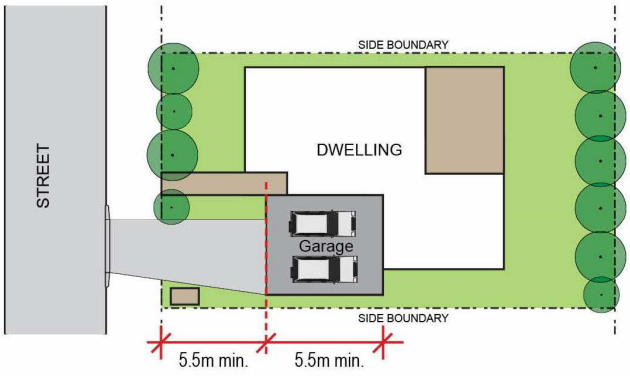
A1.3 The number of on-site parking spaces for multi-dwelling housing shall be:

<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>P2 On-site 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>A2.1 Each dwelling unit is to have one covered parking space, located as close as practicable to the dwelling unit.
A2.2 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>P3 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.

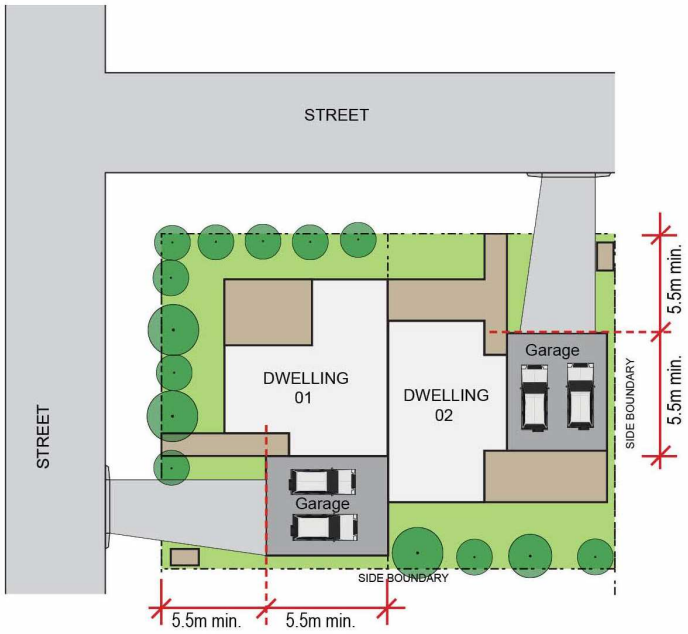
Figure 19 demonstrate how to locate and design garages, carports and outbuildings to minimise impacts on streetscape amenity.</td><td>A3 Detached carports, garages and outbuildings that are not setback behind the dwelling in Residential R1 and R2 zones, do not have a floor area greater than 60m² and an external wall height of 3.3 metres above natural ground.

Note: This allows for three standard size motor vehicles to be parked within the structure.</td></tr>
<tr><td>P4 The design, surface and slope of car parking and manoeuvring areas facilitates on-site stormwater infiltration.</td><td>A4 No acceptable solution.</td></tr>
</table>

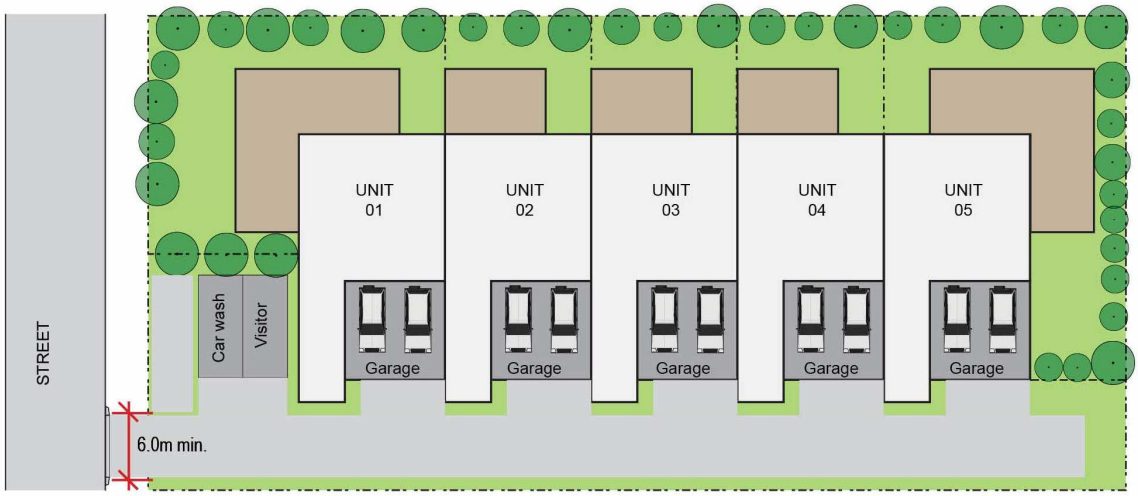
Figure 18: Off Street Parking



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.

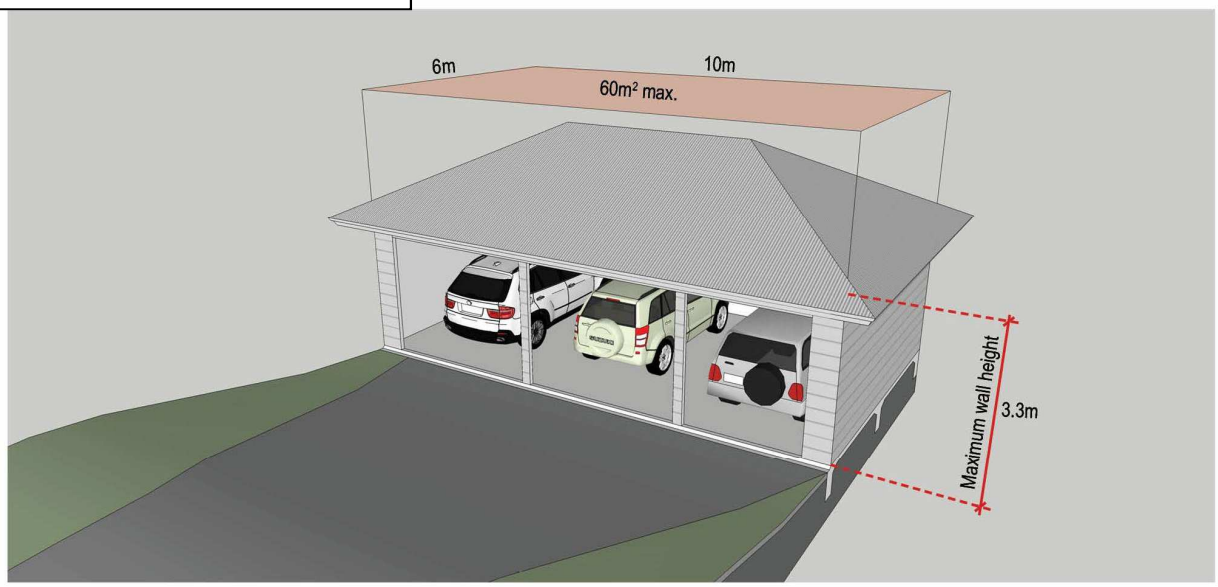


Off street parking for dual occupancies - Where the floor area exceeds 125m^2, two off street car spaces are required. On corner sites, despite the secondary frontage having a building line setback of only 4m, the garage door still needs to be setback 5.5m.



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 19: Carports & Garages



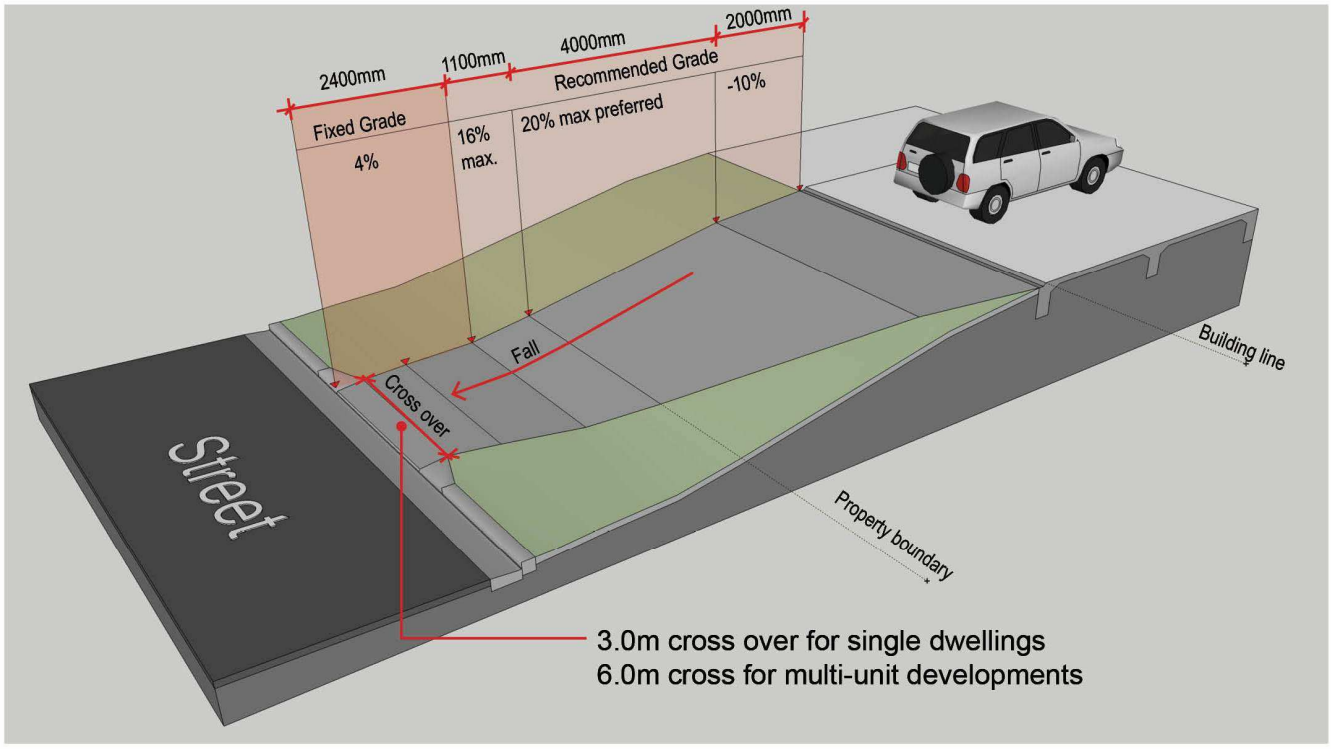
Detached carports and garage envelope - Detached carports, garages and outbuildings are limited to 60m^2 with a maximum wall height level of 3.3m which will allow for three vehicles. Building materials, colour and roof forms should be consistent with the main building.

Driveways **P1** 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 20 and 21 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.	**A1.1** Vehicles can safely enter and reverse from a lot in a single movement. **A1.2** Where a street carries more than 5000 vehicles per day all vehicles can move in a forward direction when entering or leaving the site. **A1.3** The maximum gradient for driveways is 20% with a maximum change in grade of 12.5%. **A1.4** 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. **A1.5** Driveways are integrated with the site using landscaping and appropriate drainage and erosion control measures, particularly on steep slopes. **A1.6** 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 Australian Standard.

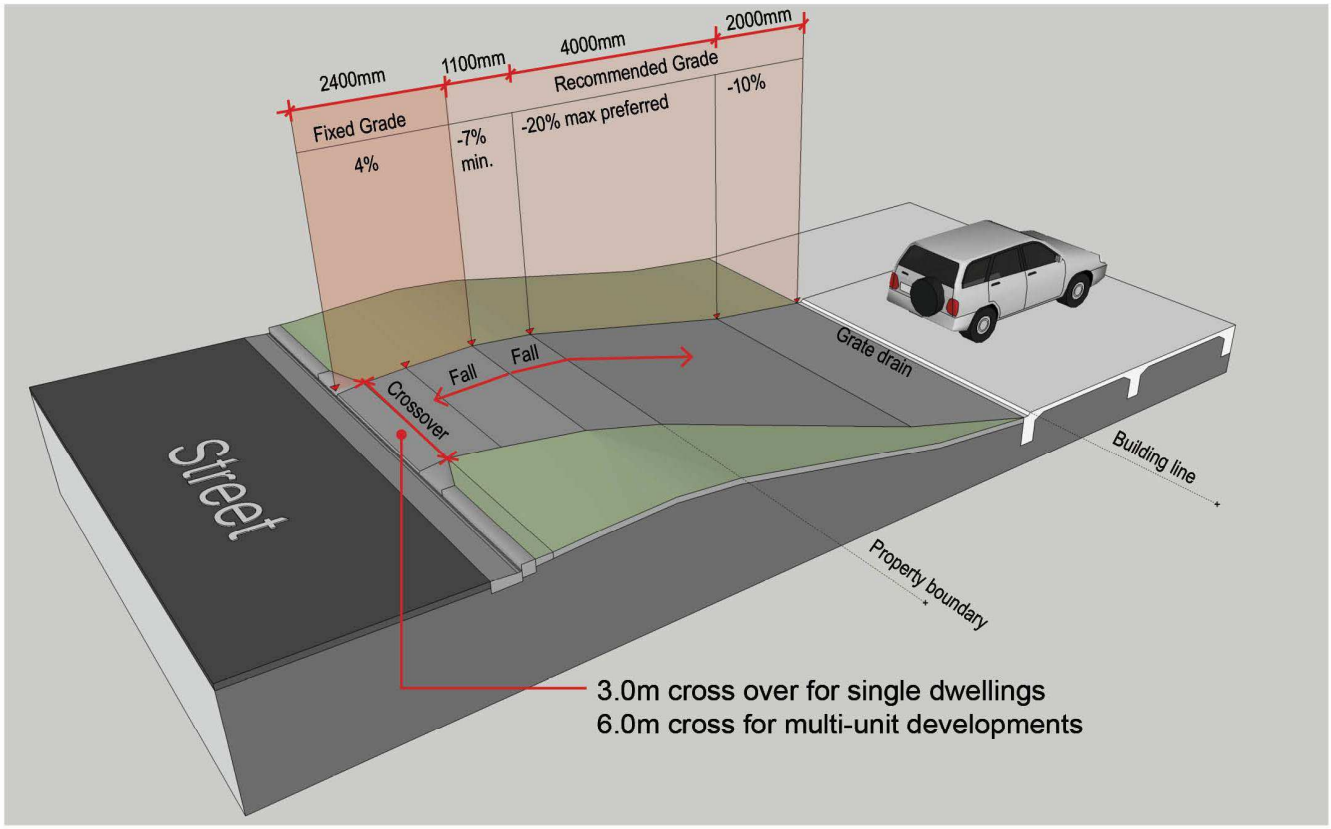
Detached carports and garages on sloping sites - On steeply sloping sites (over 20%), it may be better to provide a detached garage or carport to reduce the length of steep drive and reduce the amount of cut and fill required. Where garages and carports are required to be located in front of the building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

Figure 20: Carports & Garages on Steep sites

Figure 21: 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 and Walls

Appropriately designed, located and constructed fences and walls provide for privacy, reduce noise and encance security.

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

Performance Criteria	Acceptable Solutions
P1 Fences and walls do not: - • dominate the streetscape in terms of design, materials, scale or colours, but still maintain visual and acoustic privacy and security; • obscure site distances for vehicles entering or exiting properties or at intersections **Figures 22 and 23** illustrate how this can be achieved.	**A1.1** Front fencing: • where not located adjacent to a busy main road, has a maximum height of 1.2 metres and is 50% transparent; • is located at least 500mm inside the front boundary of the property to allow for landscaping in front of the fence; • is articulated with recessed sections of 0.4 metre x 1.5 metre at a maximum interval of 5 metres; • where located adjacent to a busy main road, has a maximum height of 1.8m. **A1.2** Front and side fences located within the building line to have a maximum height of 1.2 metres but not higher than 1.8 metres above existing ground level. **A1.3** For a sloping site the height above existing ground level may be 1.5m and 2.2m respectively at each step. Figures 16 and 17 demonstrate how to design and locate front fences and walls.

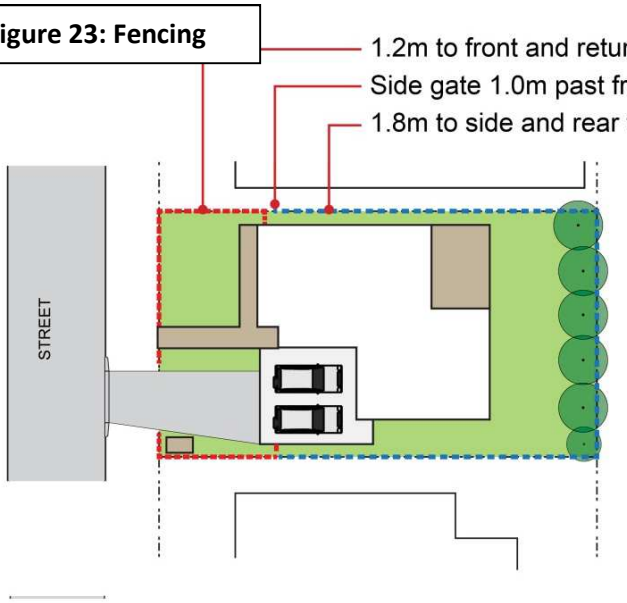
Figure 22: Front Fences & Walls

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.

Good retaining wall - This well built and smaller scale front retaining wall steps with the sites side slope. The retaining wall has been well landscaped with both smaller shrubs and larger bushes to provide a strong streetscape visual amenity.

Front fences and retaining walls - Front fences and retaining walls have a significant impact on the visual amenity of a street. In designing front fences and retaining walls think about what a compatible scale would be with surrounding development and the slope of the land. Rather than one large retaining wall, use a series of smaller walls with landscaping between to soften. Front fences should be a maximum of 1.2m high and be visually permeable to allow the front landscaping areas and front entrance to be seen from the street.

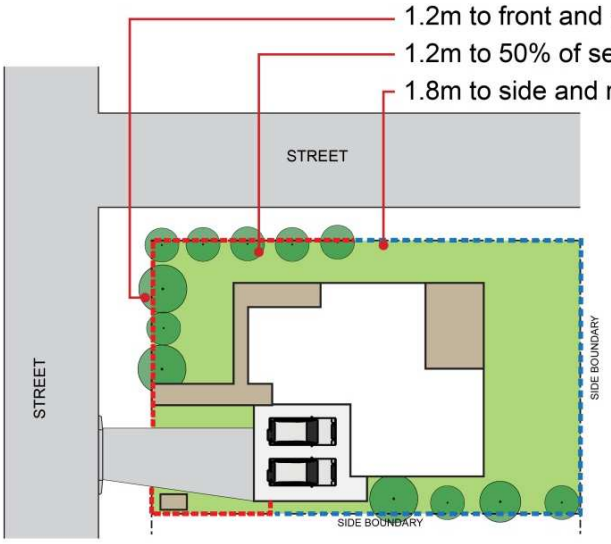
Figure 23: Fencing



Typical Lot Fences

1.2m high and 50% transparency required for front fences. To be a mix of materials and integrate landscaping. No colorbond fence to front and return fences.

1.8m high fences to side fence (1.0m past front building line) and rear fences.



Corner Lot Fences

1.2m high and 50% transparency required for front fences. To be a mix of materials and integrate landscaping. No colorbond fence to front and return fences.

1.2m high fence and 50% transparency to 50% of the secondary frontage.

1.8m high fences to side fence (1.0m past front building line) and rear fences.

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

Adequate on site facilities, including mail boxes, garbage collection areas and clothes drying areas need to be provided for the residents. The design and location of these service areas need to be integrated with the overall design.

Relevant Design Principles: 4

Performance Criteria	Acceptable Solutions
P1 Site facilities such as garbage bin enclosures, storage areas and clothes drying areas are conveniently accessible, yet visually unobtrusive. **Figure 24** illustrates how this can be achieved	**A1.1** At least three (3) m^2 is provided for each 'waste service' to a property. The storage area is in a location readily accessible to the waste collection point. **A1.2** Collective storage areas for garbage bins are screened by landscaping or fencing. **A1.3** A paved and screened drying area of at least $7m^2$ is provided for each dwelling unit in a multi dwelling housing development or residential flat building. **A1.4** A single master television antenna be provided for each multi dwelling housing building or residential flat building to service each dwelling.

Figure 24: 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

Given Lismore's sub-tropical climate it is imperative that good use is made of passive solar energy to reduce energy consumption as well as maintaining comfortable indoor and outdoor living environment. To achieve this make best use of the winter sun and summer shade, maintain solar access to adjoining properties and locating and design windows to optimise solar access.

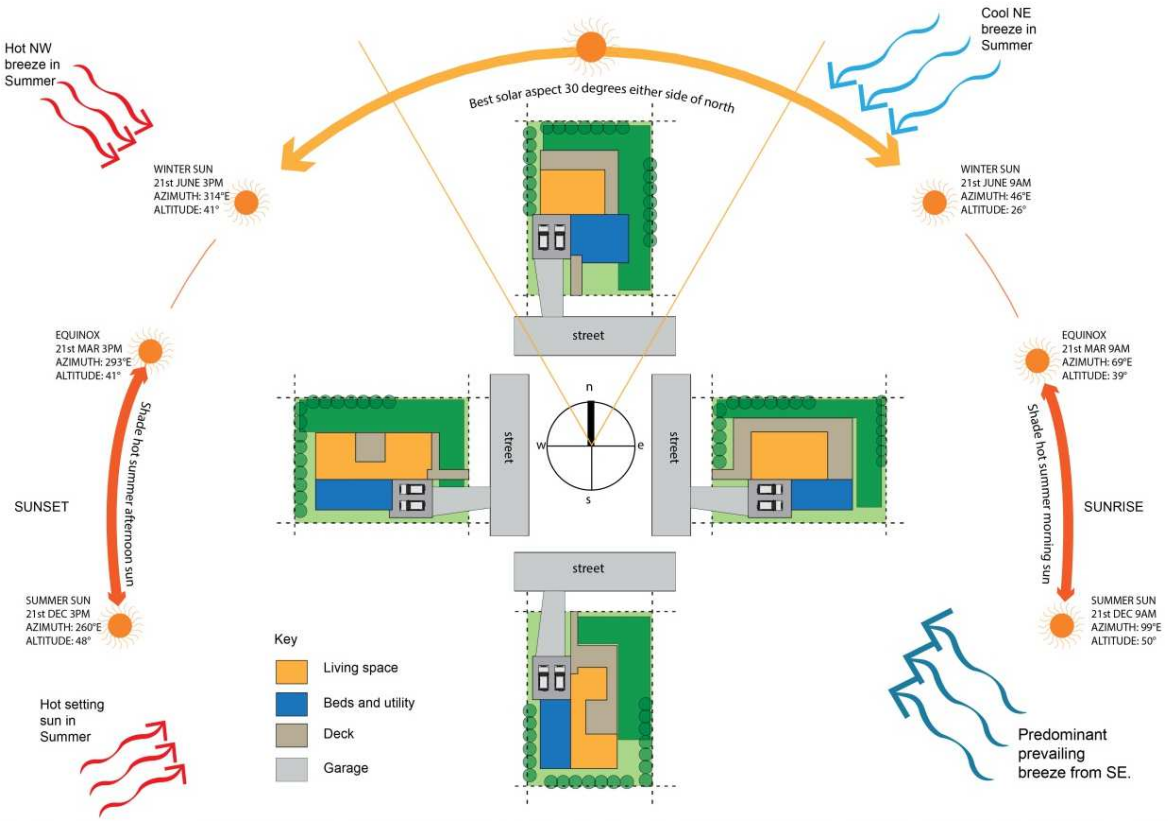
Relevant Design Principle: 2, 5, 8

Performance Criteria	Acceptable Solutions
P1 Development is designed to incorporate passive solar design to maximise winter sun and summer shade. **Figures 25 and 26** demonstrate how this is achieved	**A1.1 O**rientation of the building is rotated between 30o east of north and 15o west of north, so there is no significant loss of summer or winter performance. Outside of this range winter and heat decreases and careful sun control is necessary to prevent overheating in summer. **A1.2** 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. **A1.3** Locate living rooms, dining rooms and kitchens on the northern side of the dwelling. Rooms such as bedrooms, bathrooms, toilets and laundries are located on the southern side to provide buffers to summer heat and/or winter wind. **A1.4 E**aves, awnings, pergolas or deciduous vines and trees are used to provide shade.
P2 Windows are located to maximise winter sun penetration and to provide shading from summer sun. **Figure 26** demonstrates how this can be achieved.	**A2.1** Windows are located to maximise opportunities for cross ventilation. **A2.1** 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

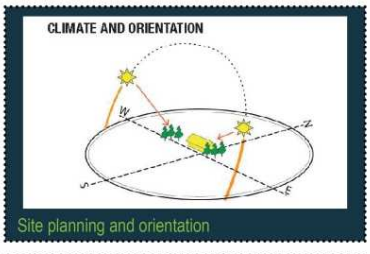
The NSW Building Sustainability Index (BASIX), measures the potential performance of all dwelling types against sustainability indices, with the specific aim of reducing water and energy consumption. A BASIX assessment looks at three important components of sustainable building design, namely water, energy and thermal comfort. For further information refer to the NSW Government: Planning and Environment web page www.basix.nsw.gov.au.

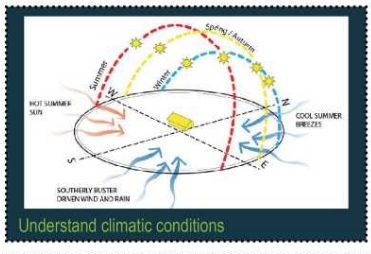
Figure 25: Orientation & Passive Design

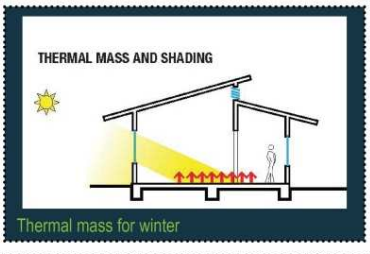


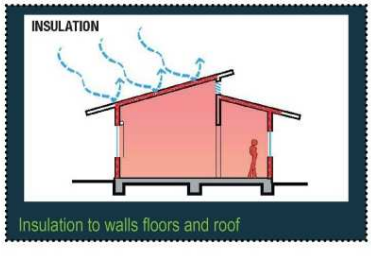
Passive design principles:

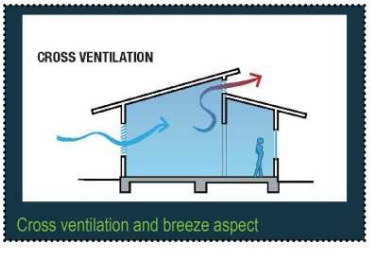
- Generally plan your living spaces including lounge room, kitchen, dining areas to have access to northern sun.
- Maximise your north facing backyard or garden space.
- Located garages and utilities to the western or southern corners.
- Provide deck spaces which flow directly from living spaces.
- Use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





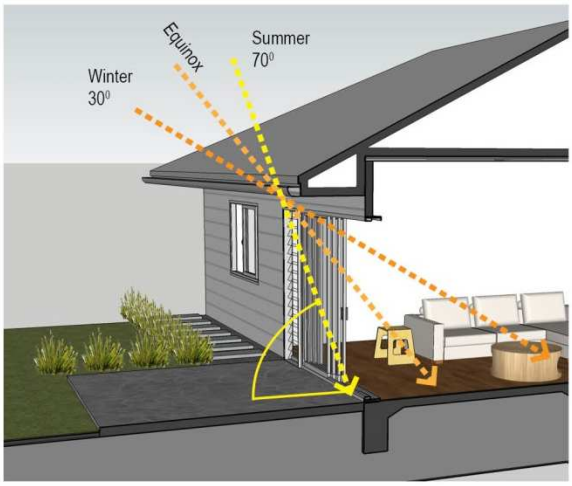




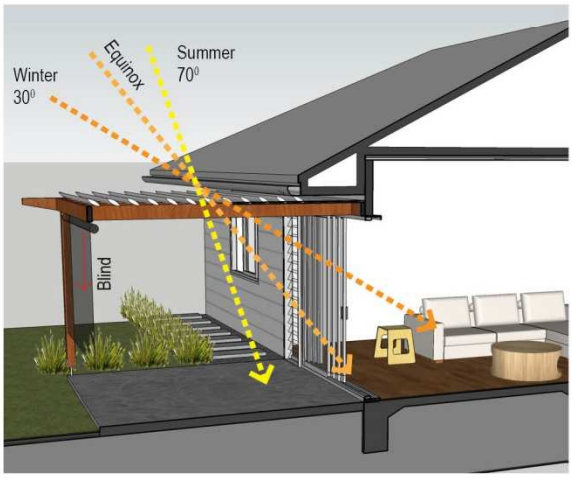


Orientation and passive design - Every dwelling or site orientation can be planned and designed to take advantage of solar path and prevailing breezes. By embedding passive design principles in dwelling design can reduce energy costs and facilitate more comfortable indoor and outdoor spaces. It is important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

Figure 26: 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 30-50^0 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.

Using plants and landscape - 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 System

This element applies to dwellings that are not connected to Council's reticulated sewerage system. These dwellings are in rural, large lot residential and village zoned areas, apart from Caniaba, Nimbin and North Woodburn.

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

Relevant Design Principle: 8

Performance Criteria	Acceptable Solutions
P1 On-site sewage and waste water generated from the dwelling is treated so that:- a) Land, soil, groundwater and surface waters are protected from untreated sewage and waste water; b) Community amenity is protected from bad odours; & c) Wastewater is reused as an effective resource.	**A1 I**n 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

Expanded dwelling houses provide for flexible living arrangements for the occupants of the main house. An expanded dwelling comprises of a number of separate building components.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solutions
P1 The size, location and design of buildings ensures that each building is used by the residents of the main dwelling.	**A1.1** A maximum of three (3) outbuildings are provided and are connected to the main building by paths with an all-weather surface. **A1.2** All buildings are contained within a radius no greater than 20 metres from the perimeter of the main building. **A1.3** One outbuilding must not have a gross floor area greater than 45m^2 and the other two are each limited to a maximum of 30m^2. **A1.4** Each separate outbuilding may consist of a maximum of two (2) bedrooms (including rooms with an ensuite or bathroom). **A1.5** No more than one laundry is provided in an expanded dwelling, which may be contained in either one of the outbuildings or the main building.

6 SMALL LOT HOUSING

Small lot housing refers to individual dwelling houses on smaller lots, with reduced frontages and houses being quite close to each other. This form of 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 can be more affordable and meet a community need, whilst creating more compact and sustainable residential areas.

Small lot housing has the potential to be complying development if it meets State Environmental Planning Policy (Exempt and Complying Development) 2008.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solutions
P1 Small lot housing is of an appearance, scale, height and bulk in keeping with the local residential character and amenity of the area.	**A1.1** The materials and building form complements the materials and building form of adjoining dwellings. **A1.2** Building height is no higher than 8.5 metres as provided in the Lismore Local Environmental Plan 2012. **A1.3** The minimum distance between exterior cladding and the side boundary is 0.9 metres.
P2 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 27 provides examples of how to meet this criterion for a range of lot sizes.	**A2.1** The design of small lot housing demonstrates:- • Adequate privacy within and between dwellings, including adjoining dwellings;& • Adequate access to natural light and natural ventilation. **A2.1** 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.

Figure 27: 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

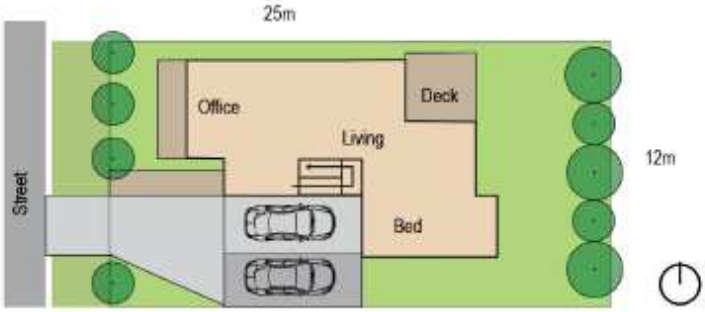
Rear access with home office over garage

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. Allotments with a frontage of less than 12m should either have a single car space, double space under a cantilevering upper level, or access from a rear lane to avoid dominating the street elevation with garage doors. 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 main dwelling (principal). An increased supply of secondary dwellings will provide greater housing diversity, as well as augmenting the overall housing stock. The benefits of secondary dwellings include affordability, sustainability and accessibility.

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

The ASEPP and LEP set the maximum 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 principle dwelling

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

The ASEPP 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 ASEPP in certain circumstances. Clause 23 and Schedule 1 of the ASEPP detail the requirements for complying development.

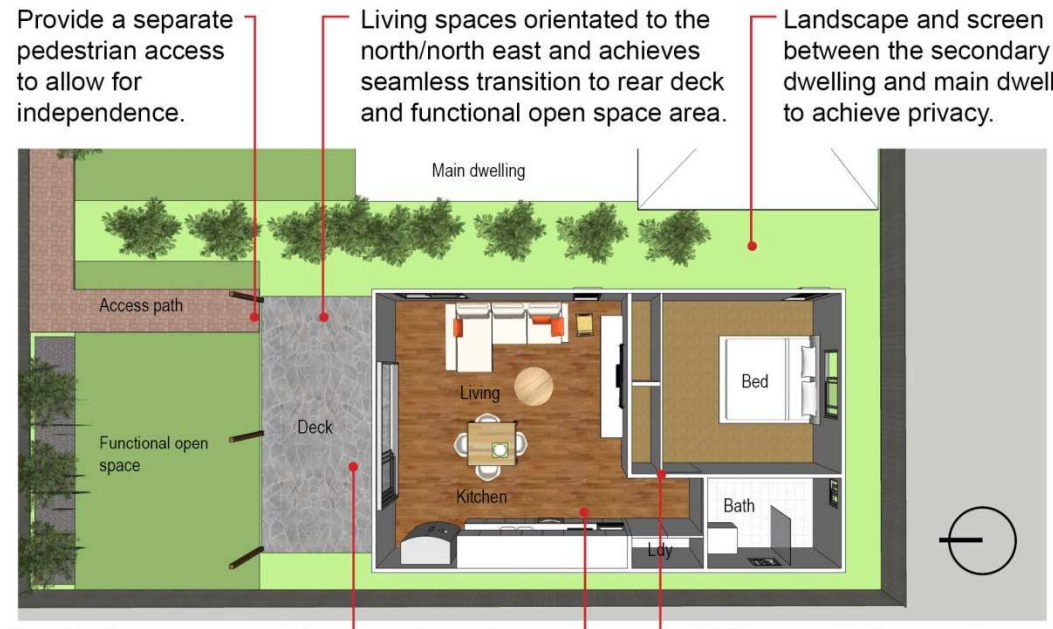
Consistent with the hierarchy of environmental planning instruments if the proposed development of a secondary dwelling complies with the ASEPP and LEP requirements, then the application for a secondary dwelling should be lodged pursuant to those provisions.

This section of the DCP provides additional requirements to support the ASEPP and LEP for the development of secondary dwellings. Provisions of this DCP, other than those listed below, also apply to secondary dwellings

Relevant Design Principle: 1 – 10

Performance Criteria	Acceptable Solution
P1 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) Provide optimum solar orientation to maximise natural light and thermal comfort. Figure 28 illustrates how to achieve compatibility with the principal dwelling, visual and acoustic privacy with the principal dwelling and how to maximise access to natural light.	**A1** No acceptable solution.
P2 The development of a secondary dwelling does not compromise the car parking requirements of the principal dwelling. Figure 28 demonstrates how this can be achieved.	**A2** No acceptable solution. **Note**: Consistent with the ASEPP, there is no requirement for separate car parking.

Figure 28: 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, or dwellings located above business premises, contributes towards revitalising centres and increasing housing supply close to existing services and facilities. In Lismore, more people in the CBD at night will improve surveillance and create a sense of safety. More shop top housing will make better use of the space above shops.

Relevant Design Principles: 1 – 10

Performance Criteria	Acceptable Solution
P1 The dwelling has direct residential access from a street or laneway.	**P1** Each dwelling shall have direct unrestricted access that is separate from the retail or business premises.
P2 In a new building each dwelling has access to private open space for the residents.	**A2.1** 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. **A2.2** Balconies that provide private open space shall be completely enclosed.
P3 External lighting, privacy and potential noise impacts on the occupants of the dwelling (s) are minimised.	**A3.1** The impact of external noise is minimised by locating bedrooms away from noise sources. **A3.2** The dwelling contains sound attenuation measures.
P4 Amenities and services for residents are located and provided to ensure convenient and safe access.	**A4.1** Each dwelling shall have its own amenities, separate from the commercial or retail use. **A4.2** Dwellings with access to ground level private open space shall be provided a screened clothes drying area. **A4.3** Internal laundry facilities shall be provided where dwellings do not have access to ground level private open space. **A4.4** Each dwelling shall have convenient access to a mail box and a lockable storage facility.

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
P1 Dwellings are designed to readily accommodate modifications, with access for residents and visitors with disabilities.	**A1.1** One adaptable dwelling per five dwellings is provided for developments with more than five dwellings. **A1.2** Adaptable housing is to be consistent with *Australian Standard 4299-1995 – Adaptable Housing.*

10 FLEXIBLE HOUSING

Flexible housing allows additions or extensions to a dwelling over time as the needs of households change. This promotes sustainability and affordability, while maintaining living standards and providing residents access to local services and facilities. Creating innovative design has the potential for alterations and additions and for the creation of a dual occupancy.

Note: These flexible housing provisions are advisory only and as such consistency with these controls is not compulsory.

Performance Criteria	Acceptable Solution
P1 Dwellings are designed and sited to facilitate staged development (eg to a dual occupancy) to accommodate expanding households.	**No acceptable solution.** **Figure 29 illustrates how flexible housing can be achieved.**

Figure 29 Flexible Housing Example

Stage 01
Small Household
2 bedrooms
1 bathroom
1 garage
1 car port

Stage 02
Expanded Household
4 bedrooms
2 bathroom
2 garage

Stage 03
Dual Occupancy
2 bedrooms
2 bathroom
1 garage

NB: One car space per unit is acceptable if each dwelling unit is <125m^2.

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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 2015, 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.

Pre-lodgement Consultation

The Lismore Health Precinct is the key urban redevelopment area in Lismore. Applicants are strongly encouraged to contact Council early in the design process, so that development plans may be prepared which are consistent with Council's vision for the Health Precinct. It is Council's experience that early engagement assists in minimising conflicts through the development application process and reduces Council's assessment timeframes.

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

Design Outcomes Taller Residential Development (3 Storeys or More)

Performance Criteria	Acceptable Solution
P1 Taller buildings are designed having regard to best architectural best practice	**A1** 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'*.
P2 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.	**A2** The site has an area of at least 1200m^2.

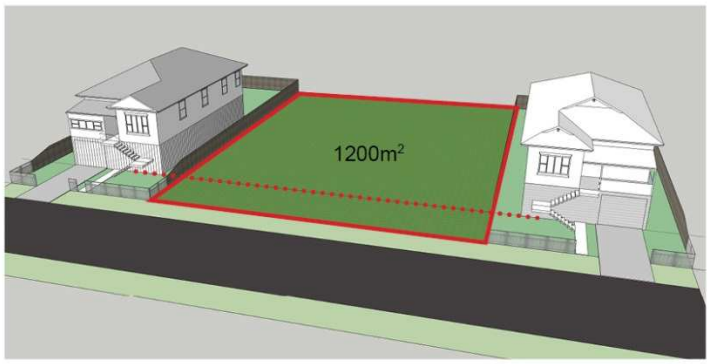
<table>
<tr><td>P3 Development is sited and designed taking into account the relationship to adjoining premises and the street.</td><td>A3.1 Buildings are setback an equal or greater distance from the street as buildings on adjoining lots. Where there is no adjoining development the setback shall be 6 metres.

A3.2 For a corner allotment the setback is 6m from the primary street and 4m from the secondary road where there is no adjoining development.</td></tr>
<tr><td>P4 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>A4 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</td></tr>
<tr><td>P5 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>A5 – 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>P6 Taller buildings are designed and sited to reduce the visual scale of the development and amenity impacts on adjoining properties.</td><td>A6.1 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
A6.2 The development is provided as a series of buildings, rather than one large building.</td></tr>
<tr><td>P7 Taller buildings include design references to the existing architectural character of existing residential dwellings in the locality</td><td>A7.1 Roof structures form part of the building elevation when viewed from the street and include pitched, hipped and gabled elements.
A7.2 A variety of building materials are incorporated into the design, including masonry brick and lightweight cladding materials such as weatherboard.
A7.3 Buildings address the public street, with ground floor units provided with direct pedestrian access from the street.
A7.4 Vehicle and pedestrian points of entry are separated.
A7.5 Windows and deep balconies and / or decks are provided facing the public street.
A7.6 The front building setback is landscaped with soft landscaping and includes trees for shade and screening.</td></tr>
</table>

P8 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.	A8 No Acceptable Solution.
P9 On-site car parking does not dominate the front setback.	**A9.1** Carparking areas are provided either at the rear of the site or integrated into the building form via under croft parking. **A9.2** Car parking access is provided via integrated access points. **A9.3** No car parking is provided within the front building setback.

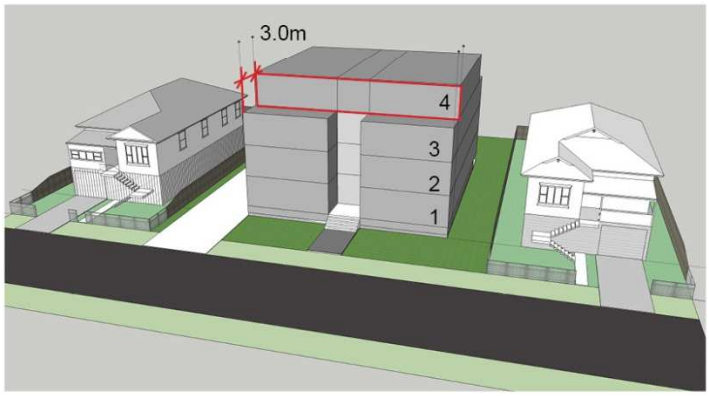


Lot size and setback

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 31 - 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 31 - 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 medical practices 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	
P1 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.	**A1.1** Roof structures form part of the building elevation when viewed from the street and include pitched, hipped and gabled elements. **A1.2** A variety of building materials are incorporated into the design, including masonry brick and lightweight cladding materials such as weatherboard. **A1.3** Buildings address the public street, with any ground floor commercial units provided with direct pedestrian access from the street. **A1.4** Vehicle and pedestrian points of entry are separated. **A1.5** Windows and deep balconies and / or decks are provided facing the public street. **A1.6** The front building setback is landscaped with soft landscaping and includes trees for shade and screening. **A1.7** Fencing in the front setback is residential in scale and form and includes at least 50% visually permeable elements.
P2 Development is sited and designed taking into account the relationship to adjoining premises and the street.	**A2.1** Buildings are setback an equal or greater distance from the street as buildings on adjoining lots. Where there is no adjoining development the setback shall be 6 metres. **A2.2** For a corner allotment the setback is 6m from the primary street and 4m from the secondary road where there is no adjoining development.
P3 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.	**A3 –** Refer to Chapter 1, Part 4.2 – Element, Visual Privacy, Acceptable Solutions
P4 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.	**A4** – Refer to Chapter 1, Part 4.5 – Element, Earthworks, Retaining Walls and Erosion controls
P5 Site facilities such as garbage bin enclosures and storage areas are conveniently accessible, yet visually unobtrusive.	**A5.1** At least three (3) m^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. **A5.2** Collective storage areas for garbage bins are screened by landscaping or fencing.
P6 Adequate provision is made for onsite car parking and loading facilities in locations which do not dominate the front setbacks.	**A6.1** Carparking is provided on site in accordance with the rates and design requirements of Chapter 7 Off Street Carparking.

<table>
<tr><td></td><td>A6.2 Carparking areas are provided either at the rear of the site or integrated into the building form via under croft parking.
A6.3 No car parking is provided within the front building setback.
A6.4 Loading docks and the like are located at the rear or side of the premises.
A6.5 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 will conveniently be able access will be available to these spaces.</td></tr>
<tr><td>P7 Signage does not dominate facades and is included as an integral part of the building design.</td><td>A7 Advertising and signage should be in accordance with Chapter 9 - Outdoor Advertising Structures of the Lismore Development Control Plan.</td></tr>
<tr><td colspan="2">Taller Buildings (3 levels or more)</td></tr>
<tr><td>P8 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>A8 The site has an area of at least 1200m^2.</td></tr>
<tr><td>P9 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>A9.1 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
A9.2 Deep soil zones are provided in locations which assist in buffering the development from adjoining residential uses.</td></tr>
</table>

<table>
<tr>
<td>P10 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>A10 – 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>P11 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>A11.1 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.
A11.2 The development is provided as a series of buildings, rather than one large building.</td>
</tr>
<tr>
<td>P12 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>A12 No Acceptable Solution.</td>
</tr>
</table>

Figure 32 - Non-Residential Development - A range of land uses are permissible within the Lismore Health precinct including certain non-residential forms including medical practices and community facilities. Non-residential development should include active uses to street frontage including cafes or health service facilities as well as a clear and legible foyer entrance to building(s) and passage to car park which is preferably located to 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*