

PART B - TOWN HOUSES AND ROW HOUSES

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CHAPTER 1 – BUILDING TYPES

Town Houses (villas)

Town Housing is the development of 3 or more dwellings on an allotment. Town Housing occurs throughout the Shire within residential areas on larger lots. Town Housing provides for larger lots to have a commensurate development capacity whilst being consistent with the scale and character of low density residential areas.

The configuration of Town Houses may feature a mix of attached and detached housing forms.

Villas are the same as Town Houses except they are one storey only. Therefore for the purposes of this Part the term 'villa' is replaced with the term 'Town Housing'.

Suitable Locations for Town Houses

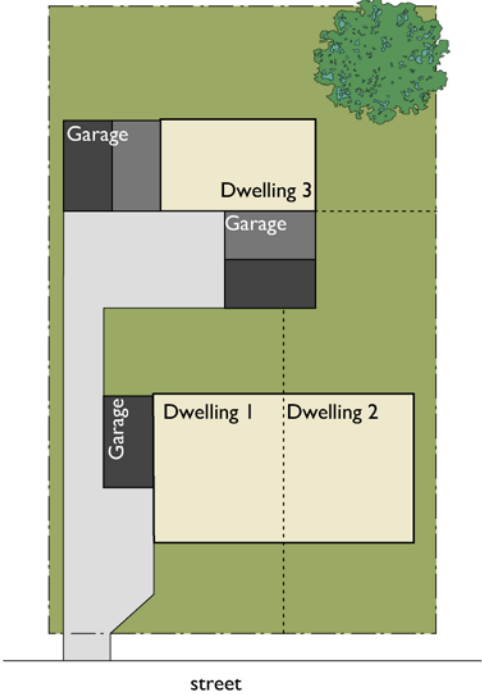
Town Housing is suitable for all areas where the context is low density residential. Town Housing is generally not preferable in areas with a more urban context such as in areas that have or will have residential flat buildings or shop-top as the predominant building type.

Objectives

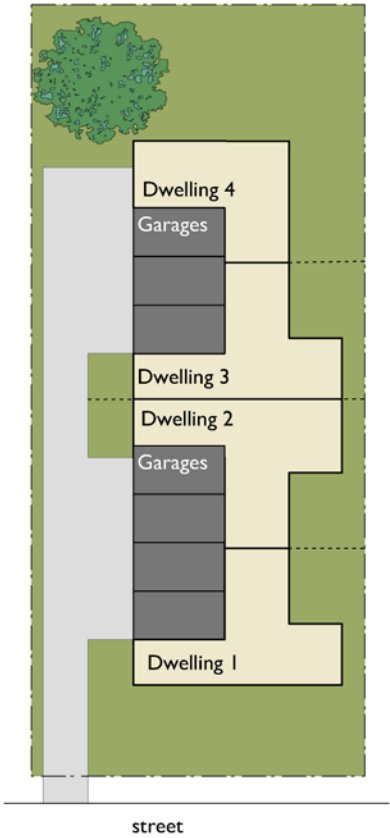
- To provide development capacity on larger lots within residential areas.
- To retain the residential character in streets and suburbs.
- To create or retain quality residential and pedestrian friendly streetscapes.
- To provide an alternative form of medium density housing.

Controls

- a. Town housing is permissible in 2(a),(b), (c), (d), (e) and (f) zones.
- b. In 2(a) zone lot size minimum of 1350m²:
 - i. With dwellings at a density of no greater than 1 dwelling per 450m² with a development lot area of 220m² each.
 - ii. If the site is within 300m of a business zone then a density of 1 dwelling per 250m² with a development lot area of 220m² each.
- c. In 2(b), (c), (e) and (f) zones min. 1000m².
- d. In 2(d) zones min. 1500m², depth min. 40m and development lot area of 220m² each.
- e. Each dwelling must provide a ground level with at least one habitable room, which must have an adjacent external living area located on ground (carparking is not considered as a ground level). A ground level comprising solely carparking is not acceptable.
- f. Each dwelling must have an external living area.
- g. Each dwelling that has a street frontage is to be designed so that access to the front door is clearly identifiable and visible from the public street.
- h. Town housing is to be compatible with the existing or desired future streetscape character.
- i. Town housing is to provide a mix of dwelling sizes and diversity in the number of bedrooms per dwelling.



Illustrative site layout of Town Housing, on a small lot with three dwellings.



Illustrative site layout of Town Housing, on a small lot with four dwellings.



Illustrative site layout of Town Housing with eight and five dwellings.

Row Houses (terraces)

Row Housing is the development of three or more dwellings to a parent lot. Row Housing results in each dwelling having a ground level and its own entry from the street. Row Housing is characterized by a consistent alignment along the street and zero side setbacks.

Row Housing has carparking to the rear of lots and is oriented to the street and the rear of the lot, not the side boundaries.

Row Houses are directly adjacent to commercial buildings in a commercial Main Street where the existing or desired character is located:

- to reinforce a built edge along a street or open space,
- to provide residential buildings with a consistent alignment to the street to complement buildings in a Main Street, and
- to create a transition from commercial to residential buildings.

This is a flexible building type in terms of use and can easily incorporate changing uses from residential to retail or commercial on ground level to accommodate the growth of a Main Street centre or to add additional mixed use commercial floor space along the Main Street.

Row Housing is suitable for residential, commercial or home/office uses on the ground level.

For the purposes of defining building types Row Houses are the same as Terraces. Therefore this Part uses the term 'Row House' rather than 'Terrace'.

Suitable Locations for Row Housing

Row housing is suitably located adjacent to a commercial building in a main street and forms the transition from commercial to residential. This building type is not appropriate for sites within residential and suburban areas.

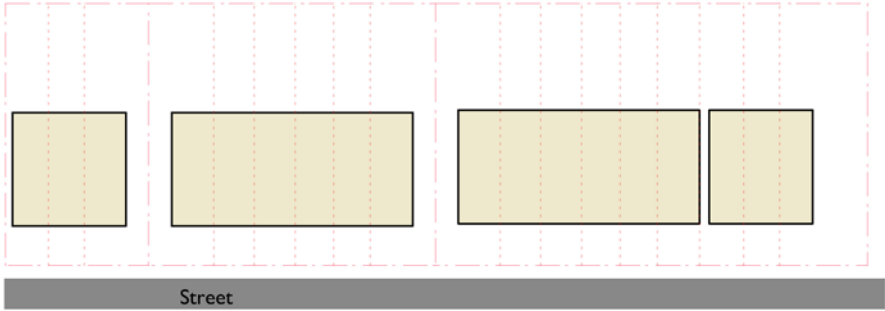
Objectives

- *To create an urban building form and strong built edge along the street.*
- *To define the street space.*
- *To provide a building form that makes a transition from commercial to residential.*
- *To provide flexible living and working buildings.*
- *To extend and complement the commercial uses along the Main Street.*
- *To provide more compact housing in proximity to centres.*

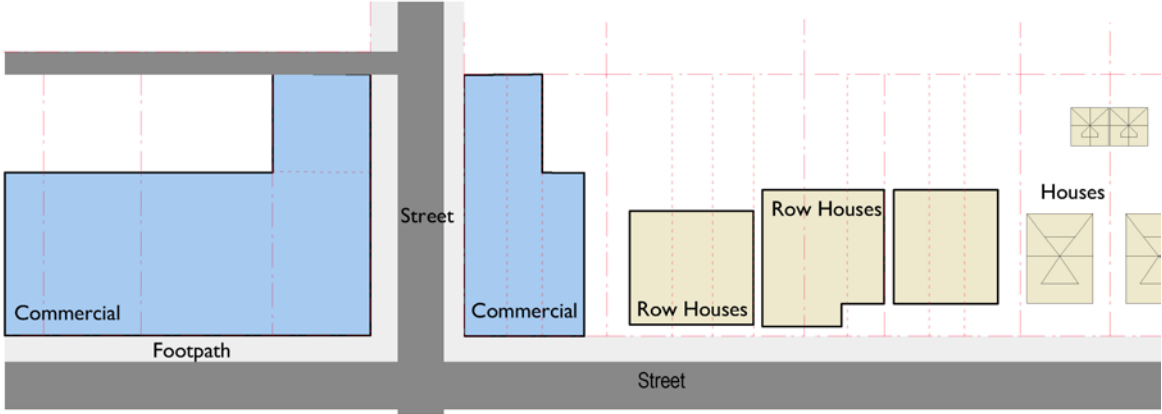
Controls

- a. Row Housing is not permitted on any lot that is not adjacent to a commercial main street.
- b. Row Housing is only permitted on a lot within one block on either side of a commercial area.
- c. Maximum of 6 buildings in a row with party walls before a 3m separation is to occur.
- d. The minimum internal width of a dwelling is 5m. The maximum internal depth of a room with only one orientation is 10m from the window.
- e. The street elevations of Row Housing are to reflect the existing or desired future character of other buildings in the Main Street including: height, vertical and horizontal proportions, height, materials and roof form.
- f. The street setbacks for Row Houses are to create a transition between commercial and residential buildings.
- g. Each dwelling is to have a ground level building area (carparking is not considered as a ground level). A ground level comprising solely carparking is not acceptable. Each dwelling must provide a ground

- level with at least one habitable room, which must have an adjacent external living area located on ground.
- h. Each dwelling must have an external living area.
- i. Each dwelling that has a street frontage is to be designed so that access to the front door is clearly identifiable and visible from the public street.
- j. Row House developments are to provide a mix of dwelling sizes and diversity in the number of bedrooms per dwelling.

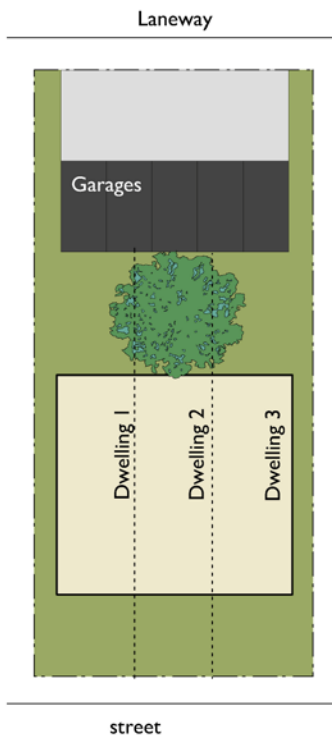


Block plan - Town Housing with 3, 6 and 9 modules

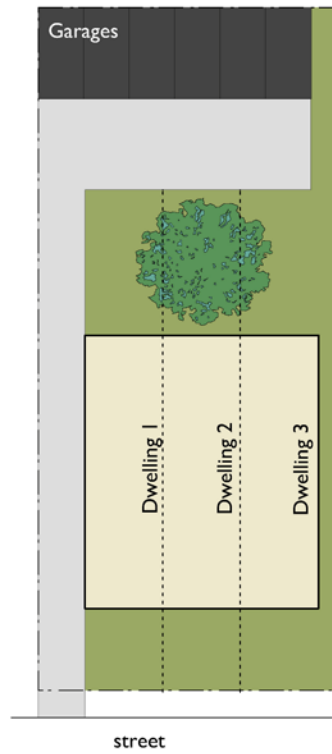


Block plan - Row Housing transition from commercial to residential

Illustrative block plan show row housing between commercial and residential buildings.



Site with a laneway



Site without a laneway

Illustrative site layout Row Housing. Sites with a laneway (left image) and with no laneway (right image)

CHAPTER 2 – SITE AND BUILDING DESIGN CONTROLS

Introduction

This section of the document provides an explanation of the key controls used to define aspects of development to be achieved when preparing a Development Application for a Townhouse or a Row House development.

The explanations associated with each Site and Building Design Control are to assist the designer to understand the intent of each control and to ensure there is consistency in the application of the controls across all sites in the Tweed Shire.

The Site and Building Design Controls are:

Design Control 1	Public Domain Amenity
Design Control 2	Site Configuration
Design Control 3	Setbacks
Design Control 4	Carparking and Access
Design Control 5	Building Footprint and Attics, Orientation and Separation
Design Control 6	Height
Design Control 7	Building Amenity
Design Control 8	External Building Elements
Design Control 9	Building Performance
Design Control 10	Floor Space Ratio (FSR)

DESIGN CONTROL 1- Public Domain Amenity

Public domain relates to those aspects of the urban environment which are either owned publicly or accessible to and enjoyed by the public. For the purposes of this DCP this includes streetscape, and public views and vistas.

New developments can help to enhance amenity within the public domain. In established residential areas it is important to recognise and respect the existing qualities and unique characteristics of the place. In locations where the character is either not well established or needs improvement new development can contribute to strengthening and creating character.

Streetscape

Streetscape refers to the spatial arrangement, extent and appearance of elements within a street, which includes some elements on private properties adjoining the street. Streetscape design is concerned with ensuring there is consistency in built and landscape form along streets on private sites.

Streetscape controls seek to ensure that dwellings and gardens relate well to each other and to the landscape setting along the street. The primary elements that create streetscape character are:

- the relationship of street to the topography of the land on either side of the street,
- the width, layout, landscaping and materials of the street, footpaths and front gardens,
- buildings, building setbacks, building height,
- relationship of buildings to the topography and to other buildings in the streetscape.

The aspects of a development that help to create quality streetscapes, when well considered and designed include;

- front and side boundary landscaping including boundary fences and walls,
- access and driveway design; widths, materials and location,
- the building's size and shape as seen from the street, front elevation and roof form.

Objectives

- *To ensure the existing landform and topographic setting along the street is respected.*
- *To ensure new development is compatible with the positive characteristics of the existing streetscape.*
- *To ensure new development enhances the character of the existing streetscape.*
- *To encourage dwellings to be well designed.*
- *To ensure streets provide a high level of pedestrian amenity, access and safety.*
- *To ensure garages do not dominate the street.*

Controls

- a. Site design, building setbacks and the location and height of level changes are to consider the existing topographic setting of other buildings and sites along the street, particularly those that are older and more established.
 - b. The design of the front deep soil zone and boundary interface to the public domain is to complement or enhance streetscape character by:
 - providing for landscaping; lawn, trees or shrubs characteristic with existing properties or of such design as to enhance the quality and appearance of the dwelling and surrounding area,
 - reflecting the character and height of fences and walls along the street, or of such design as to enhance the quality and appearance of the dwelling and surrounding area,
 - reflecting the character and layout of established front gardens of other allotments in the street, particularly older and well established garden landscapes,
 - retaining, protecting or replacing existing vegetation and mature trees.
 - c. Carports and garages visible from the public street are to;
 - be compatible with the building design, including roofs,
-

- be setback behind the dwellings front elevation.
- a. Minimise driveways and hardstand areas to increase the area for deep soil zones and landscaping and to reduce the visual impact of driveways and hard surfaces from the street.
- e. Facades visible from the public domain are to be well designed by:
 - having important elements such as front doors and building entry areas prominent in the building facade and clearly identifiable from the street,
 - coordinating and integrating building services, such as drainage pipes, with overall facade design,
 - integrating the design of architectural features, including stairs and ramps, and garage/carport entries with the overall facade design, and by locating car parking structures on secondary streets where possible,
 - ensuring corner buildings have attractive facades which address both streets frontages, including the careful placement and sizing of windows,
 - ensuring entrance porticos are single storey or of a scale relative to the building.

Public Views and Vistas

Public views and vistas are enjoyed from public places such as foreshores, parks and along streets. Views are generally contained by buildings in the streetscape, such as view corridors down a residential street. Vistas are long wide views, generally across a locality. Vistas are generally defined by ridgelines and valleys.

Objectives

- *To ensure existing public views and vistas particularly those of important natural features such as ridgelines, water or bushland are retained, in so far as it is practical to do so.*
- *To ensure public view corridors, particularly those down street and between buildings, are not unnecessarily reduced or obliterated.*
- *To ensure public views of important public places or buildings are protected.*

Controls

- a. The location and height of new development is not to significantly diminish the public views to heritage items, dominant landmarks or public buildings from public places.
- b. The location and height of new development is to be designed so that it does not unnecessarily or unreasonably obscure public district views of major natural features such as the water, ridgelines or bushland.
- c. The location and height of new development is to be designed so that it does not unnecessarily or unreasonably obscure public view corridors, for example, down a street.
- d. The location and height of new development is to be designed to minimise the impact on public views or view corridors between buildings.

DESIGN CONTROL 2 – Site Configuration

Site configuration deals with the way in which the intended uses are accommodated to suit the particular site and local context.

Site configuration includes:

- Development Lots,
- Deep Soil Zones,
- Impermeable Site Area,
- External Living Areas,
- Communal Open Space,
- Landscaping,
- Planting on Structures and,
- Topography, Cut and Fill.

Development Lots

Development lots are created by the subdivision of the original lot.

Objectives

- *To enable the concurrent application of building and subdivision development.*
- *To promote appropriate subdivision design for medium density developments.*

Controls

- a. If subdivision other than Strata subdivision is proposed, the application must include:
 - Have a subdivision layout plan with the site and building layout overlaid,
 - Torrens Title subdivision designed in accordance with Tweed DCP S.A5 – Subdivision Manual,
 - Prescribe each lot size per dwelling.
 - Refer to each building type for the minimum lot sizes.

Deep Soil Zones

Deep soil zones are areas of soil suitable for the growth of vegetation and mature trees. Deep soil zones may be landscaped but are not covered with hard impervious surfaces such as concrete, asphalt or pavers, nor are they contained within or located over a carpark. Most sites have two deep soil zones, one located to the rear and one to the front of the lot. The rear deep soil zone is designed to accommodate at least one mature tree and vegetation. The planting of endemic species is encouraged.

Deep soil zones have significant environmental benefits including:

- promoting healthy growth of large trees and protecting existing mature trees,
- to retain the natural hydrological structure of the area,
- assisting with management of water quality and mitigate global warming,
- improving the amenity of developments through landscaping that improves microclimatic conditions,
- assisting in the creation of vegetation corridors within and through the locality.

Calculation rules:

Two dimensions are used to measure deep soil zones; depth and width.

Depth: Depth is measured perpendicular to the boundary (front or rear) towards the centre of the site to the edge of the building footprint.

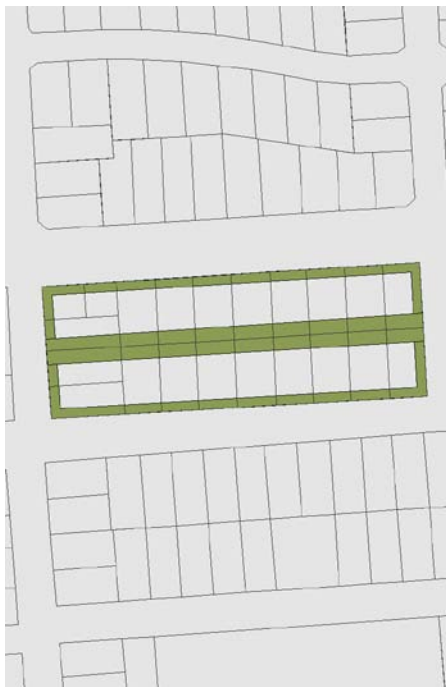
Width: width is measured as a percentage of the length of the boundary (front or rear).

Objectives

- To ensure that land retains its ability to permeate water.
- To ensure that each building lot has a deep soil zone of adequate area and dimension.
- To retain and enhance fauna and flora corridors throughout suburban areas.
- To provide space for mature tree growth and vegetation.
- To retain existing mature vegetation.

Controls

- a. Deep Soil Zones must be provided for all new developments and existing development, except on large lot rural or agriculturally zoned land.
- b. All sites are to provide two Deep Soil Zones, one to the rear and one to the front of the property.
- c. Rear Deep Soil Zones are to have minimum width of 8m or 30% of the average width of the site whichever is the greater and a minimum depth of 18% of the length of the site up to 8m but not less than 5.5m. Greater than 8m may be provided if desirable.
- d. Rear Deep Soil Zones are to have soft landscaping; refer to Landscaping Section.
- e. Front Deep Soil Zones are to be the width of the site boundary minus the driveway width and the pathway width by the front setback depth.
- f. Front Deep Soil Zone areas are to have soft landscaping, vegetation and at least one tree.
- g. Deep Soil Zones cannot be covered by impervious surfaces such as concrete, terraces, outbuildings or other structures.
- h. Deep Soil Zones cannot be located on structures such as car parks or in planter boxes.
- i. The Deep Soil Zone is to be included in the total permeable area for the allotment.



At a suburban scale Deep Soil Zones provide connected flora + fauna corridors



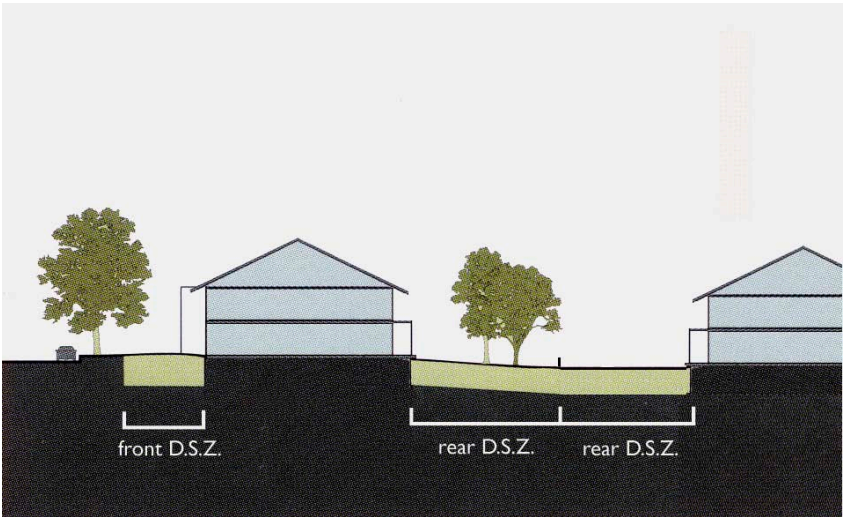
At the block scale contiguous green space is consolidated to the rear and front of lots.

Design Guidelines:

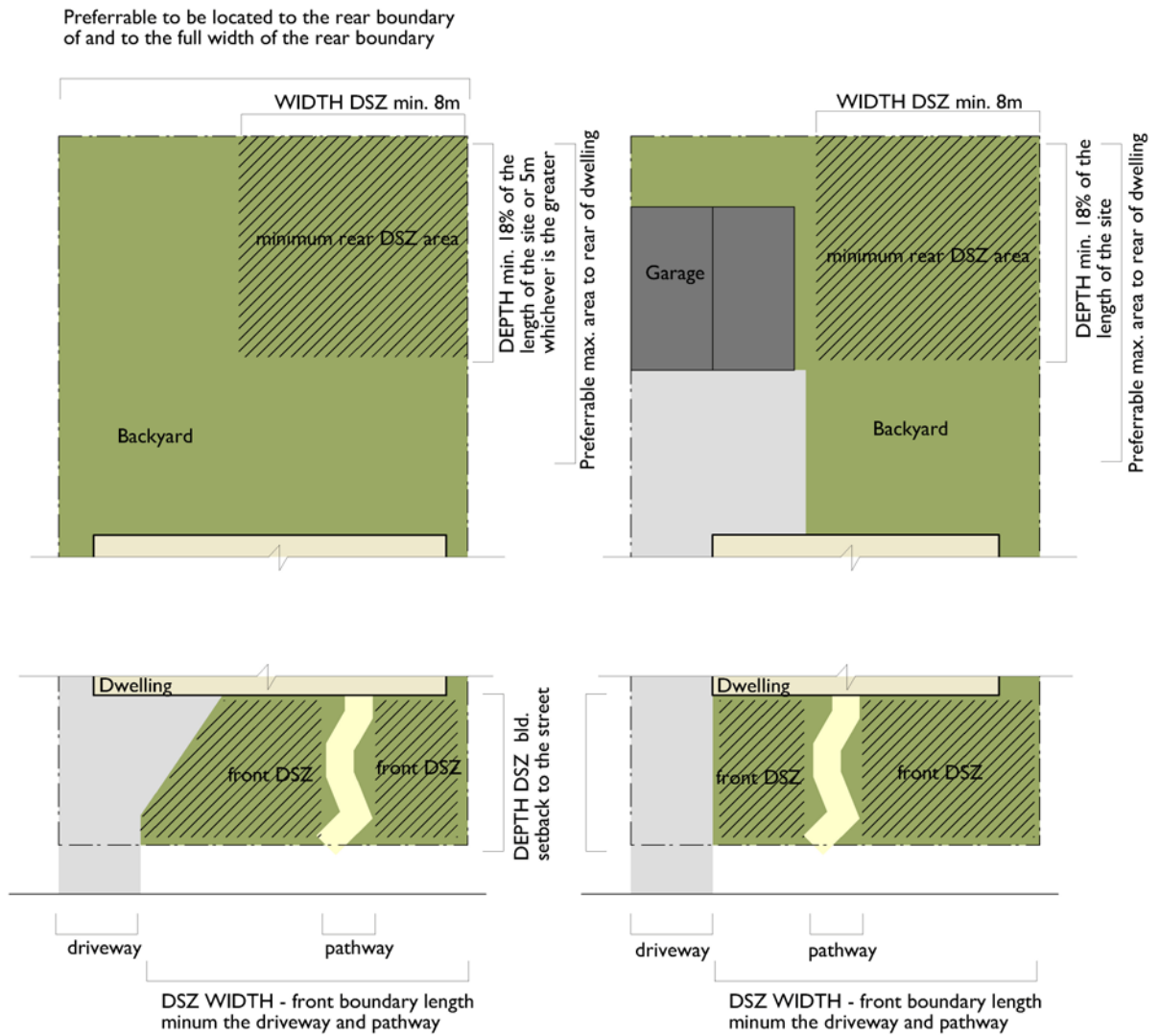
It is preferable that deep soil zones on the rear boundary extend along the full length of the boundary as this is generally where the opportunity exists to create or expand on a vegetation corridor between properties and is often an area where established trees and vegetation exists already.



Existing mature trees are generally located to the rear of lots, by locating the Deep Soil Zone here it is possible to retain mature trees.



Deep Soils Zones fit neatly around the building without obstruction either above or below by built elements such as carpark ramps, impervious surfaces or terraces.



Front and rear deep soil zone diagram showing a site with parking to the front of the lot (left image) and to the rear of the site (right image).

Impermeable Site Area

The impermeable site area is the total area of impervious surfaces within an allotment following completion of the development. Excessive impermeable areas on a lot can increase the volume of stormwater discharged off the site as it reduces the lands capability to infiltrate water in storm events.

Objectives

- To promote residential development that is sympathetic with the existing topography, water cycle and amenity of the site and neighbourhood.
- To retain the lands ability to infiltrate stormwater.

Controls

- An allotment's runoff shall be dispersed onto grassed, landscaped or infiltration areas, of the allotment, unless this is inconsistent with the geotechnical stability of the site or adjacent/downstream land.
- The concentration, collection and piping of runoff to the street gutter or underground stormwater system shall be minimised unless this is inconsistent with the geotechnical stability of the site or adjacent/downstream land.
- Rain water shall be collected in tanks and reused.
- Site surface depressions in landscaping are to be utilized for on-site detention and infiltration unless this is inconsistent with the geotechnical stability of the site or adjacent/downstream land.
- Runoff is to be minimised, delayed in its passage and where possible accommodated within the landscape of the development site unless this is inconsistent with the geotechnical stability of the site or adjacent/downstream land.
- A schedule of the breakdown/calculation of impermeable site area must be submitted with the development application.
- The maximum areas for impervious surfaces are:
 - 70% of the allotment - On lot sizes less than 500m².
 - 65% of the allotment - On lot sizes between 500m² and 750m² inclusive.
 - 60% of the allotment - On lot sizes greater than 750m².

Table 1 – Impermeable Surface Factors

Surface type	Material	Impermeable factor
Roof surfaces	Metal, Tile, slate and other impermeable materials	1.0
	"Green roofs"/roof gardens	0.5
Ground surfaces	Concrete/ paving (non-porous)	1.00
	Gravel	0.75
	Porous paving	0.50
	Grid pavers	0.20
	Seep Soil Zones	0.0
	Landscaping/vegetation	0.0
	Planting on structures	1.0
Decks	Concrete/ paving (non-porous)	1.00
	Timber (over natural soil)	0.50
Swimming pools	All types	0.50

Calculation Rules

The impermeable site area is calculated by adding up the area (in square metres) for each different type of ground surface that does not allow natural infiltration of rainwater. As some types of surfaces are only partially impermeable, it is necessary to multiply the area of the surface with an appropriate 'impermeability factor' as indicated.

External Living Areas

External living area refers to an external space that extends the living and recreation space of a dwelling to form provide private outdoor recreational and relaxation space. These spaces generally take the form of courtyards, decks, terraces and balconies, they can be paved or decked and may be covered. External living areas may be located either on ground or above ground. Small balconies and similar structures from bedrooms are not considered as external living areas.

External living areas should not adversely impact on the amenity of neighbours. The location of the external living area needs to be carefully considered with regard to maintaining privacy. The location of external living areas can assist in controlling sun access by promoting daylight access in winter and shade in summer.

Elevated external living areas should be designed to avoid facing the side boundaries, as this can easily lead to privacy problems with neighbouring properties.

Objectives

- To enhance the amenity of internal living spaces.
- To provide an external relaxation and recreation space.

Controls

- External living areas are best located adjacent to the internal living (dining rooms, living room, or lounge room) areas so as to extend the overall living space.
- External living areas should be suitably screened to achieve visual privacy if located less than 4m from a side boundary.
- External living areas are to be no closer to the side boundaries than 900mm.
- External living areas are to be designed to ensure water does not enter the dwelling.
- External living areas should be oriented to north where possible.

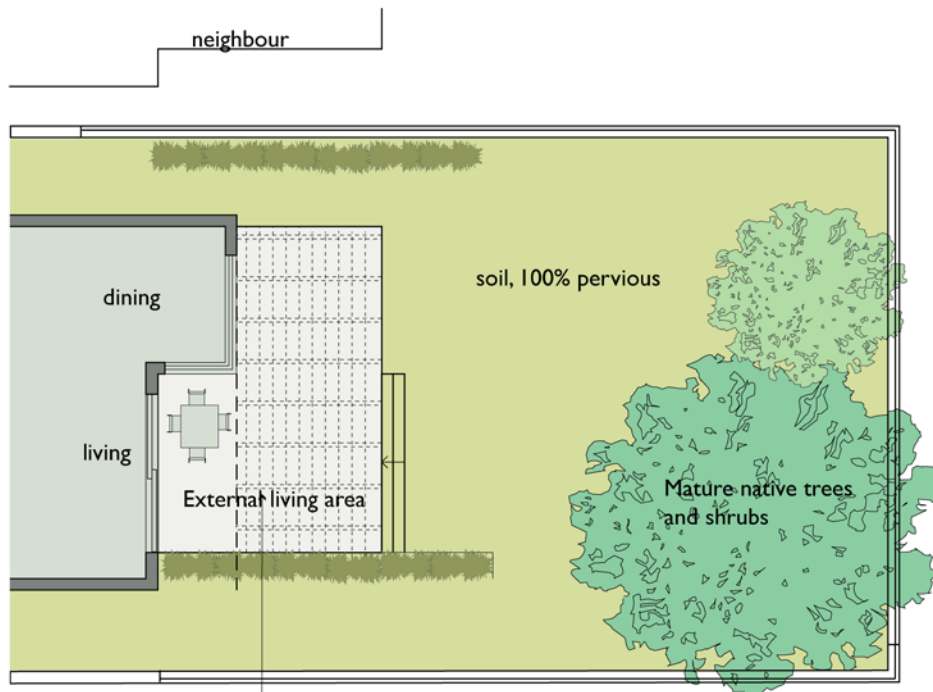


Diagram of an External Living Area to the rear of the site provides direct connection between the internal space of the dwelling and the garden or Deep Soil Area. Privacy screening may be required to the sides of the space. Ground level external living areas are to be located so as to retain mature trees, mature vegetation and significant landscape features.

Above Ground External Living Spaces, Balconies and Terraces

Balconies and terraces enhance the dwelling's amenity. They provide private open space, extend the living spaces of the dwelling and capitalise on the temperate climate. Balconies and terraces are also important architectural elements, contributing to the form and articulation of buildings. Small balconies and terraces located off minor rooms such as bedrooms or studies can help open the room to the outside.

Objectives

- *To provide outdoor living spaces.*
- *To improve the architectural form and detail of buildings.*
- *To contribute to the safety and liveliness of the street by allowing for casual surveillance.*

Controls

- a. Above ground external living areas are to have a minimum depth of 2.5m and a minimum area of 10 sq.m.
- b. Balconies and terraces off minor rooms have no minimum depth or width.
- c. Above ground external living areas are to be;
 - located adjacent to the main living areas, such as living room, dining room, kitchen to extend the dwelling living space,
 - sufficiently large and well proportioned to be functional and promote indoor/outdoor living to fit a dining table and four chairs.

Design Guidelines

Detail and design balconies or terraces in response to the local climate and context, thereby increasing their usefulness. This may be achieved by;

- *utilising sun screens, shutters and operable walls to control light and wind,*
- *providing balconies or terraces with operable screens, Juliet balconies or operable walls/sliding doors with a balustrade may be preferable in special locations where noise or high winds prohibit other solutions,*
- *choosing cantilevered balconies, partially cantilevered balconies and/or recessed balconies in response to daylight, wind, acoustic & visual privacy,*
- *design balustrades to allow views and casual surveillance of the street while providing for safety and visual privacy. Design considerations may include;*
- *detailing balustrades using a proportion of solid to transparent materials to address site lines from the street, public domain or adjacent development (full glass balustrades do not provide privacy for the balcony or the dwelling interior),*
- *detailing balustrades and providing screening from the public, for example, for a person seated looking at a view, for clothes drying areas, bicycle storage and air conditioning units.*

Coordinate and integrate building services, such as drainage pipes, within the overall façade and balcony design.

Secondary balconies (including Juliet balconies or operable walls with balustrades) may be provided to increase residential amenity and dwelling choices, in larger dwellings, adjacent to bedrooms.

Screen balconies or terraces off laundries or bathrooms from the public domain.

Communal Open Space

Communal open space is an area within the development for the use of all residents. This can include swimming pools, barbeque areas, landscaped relaxation areas, clothes drying areas or a gym. Generally only larger development with more than 6 dwellings will have communal open space. Communal open space is not to be made up of unusable spaces left over from building siting but rather to be designed to provide a useable and attractive space.

Analysis of the usability and appropriateness of the communal open space, its design, location and size relative to the number of people is required for any development application.

Objectives

- *To provide a space where residents can participate in shared activities.*
- *To enhance the lifestyle of residents.*
- *To be functional and attractive.*

Controls

- a. Communal open space must be provided for any developments of more than 10 dwellings to provide recreational or relaxation uses for residents.
- b. Communal open space is not to be located such that solar access, privacy and outlook to dwellings are reduced.
- c. The design of communal open space must demonstrate how it achieves specific functions that enhance the livability and residential amenity of the development and how it will serve the needs and number of people within the development.
- d. The location and design of communal open space must not compromise achieving the minimum separation distances and minimum areas for external living areas.
- e. Communal open space is to be designed such that its size and dimensions allow for particular uses.

Landscaping

Landscaping is concerned with the planning, design, construction and maintenance of all deep soil zones, external living areas, garden, surface vehicle access and parking areas and utility areas including both soft and hard landscape areas.

Quality landscaping retains significant landscape natural features and mature trees. It also ensures that landscaping and buildings are considered together to result in greater aesthetic quality and amenity for occupants. As such landscape areas should not be generated by left-over spaces resulting from building siting.

Landscape design builds on the site's natural and cultural features to contribute to a development's positive relationship to its context and site. Landscape design should optimise usability, privacy and social opportunity and respect for neighbours' amenity.

Landscape design should consider usability, privacy and opportunities for social and recreation activities. Neighbours' amenity should also be respected. Landscaping also has an important role to play in improving environmental conditions such as storm water and rainwater absorption, habitat for native animals and plants, reducing bushfire risk, and helping to regulate the amenity of a development through such things as sunshading using pergolas and tree plantings.

Objectives

- *To enhance the appearance and amenity of development.*
- *To enhance the character of the locality and the streetscape.*
- *To retain existing important landscape features.*
- *To provide privacy between adjoining dwellings and private open space.*
- *To assist in the percolation of rainwater and reduction in stormwater runoff.*
- *To improve microclimatic conditions on sites and the solar performance of dwellings.*
- *To contribute to improving urban air quality.*
- *To provide fauna and flora habitat.*
- *To assist in the protection of urban bushland.*

Controls

- a. Retain existing landscape elements on sites such as natural rock outcrops, watercourses, dune vegetation, indigenous vegetation and mature trees.
- b. On lots adjoining bushland, protect and retain indigenous native vegetation and use native indigenous plant species for a distance of 10m from any lot boundaries adjoining bushland.
- c. Provide useful outdoor spaces for livability by coordinating the design of external living areas, driveways, parking areas, communal drying areas, swimming pools, utility areas, deep soil areas and other landscaped areas with the design of the dwelling.
- d. Where the ground floor level of a dwelling is above the finished external ground level reached through a door or doorways, there is to be a physical connection made between these levels. Examples of a physical connection include stairs, terraces, and the like.
- e. Provide a landscaped front garden.
- f. A pathway with a minimum width of 900mm is to be provided along one side of the dwelling so as to provide pedestrian access from the front garden to the rear yard. This access is not to be blocked by such things as landscaping features, rainwater tanks, hot water heaters and retaining walls. The pathway does not need to be provided on allotments which have rear lane access.
- g. Landscape elements in front gardens such as plantings are to be compatible with the scale of development.
- h. The front garden is to have at least 1 canopy tree with a minimum mature height of 10 metres.
- i. Where the backyard does not have a mature tree at least 15m high, plant a minimum of one large canopy tree in the back yard. The tree is to be capable of a mature height of at least 15m and is to have a spreading canopy.
- j. Locate and design landscaping to increase privacy between neighbouring dwellings.

Design Guidelines

Provide useful outdoor spaces for livability by coordinating the design of driveways, parking areas, drying areas, swimming pools, utility areas and other private open spaces with the design of the dwelling.

Improve the energy and solar efficiency of dwellings and the microclimate of private open spaces. Design solutions include:

- *providing deciduous trees for shading low-angle sun on the east and western sides of a dwelling,*
- *providing trees that do not cast a shadow over solar collectors at any time of the year,*
- *providing deciduous trees for shading of windows and open space areas in summer,*
- *locating evergreen trees away from the building to allow winter sun access,*
- *varying heights and species of trees or shrubs to shade walls and windows,*
- *locating pergolas on balconies and courtyards to create shaded areas in summer and private areas for outdoor living,*
- *locating plants appropriately in relation to their size at maturity.*

Design landscapes to contribute to water and stormwater efficiency by;

- *using plants with low water demand to reduce mains consumption,*
- *using plants with low fertilizer requirements, utilising permeable surface.*

Topography, Cut and Fill

Tweed Shire has significant and varied topography both along the coastal edge and further inland. The topography gives places their character. It provides for a variety of views and vistas, both local and distant, from public and private domains but also makes developments more prominent, particularly when viewed from the low side.

The retention of the existing topography means that buildings in the streetscape retain a consistent relationship to the natural topography. This relationship provides an important visual link between buildings in a streetscape, as well as reducing the impacts of new development on neighbouring lots.

Deep excavations can substantially alter the pattern of subsoil water flow and soil stability which may adversely affect neighbouring properties and the natural environment.

Alternatives to slab on ground construction are to be encouraged where it is obvious that due to the gradient and characteristics of the site, major excavation or filling as a result of raft slab construction would be inappropriate.

Objectives

- *To retain the existing landform.*
- *To limit the extent of excavation.*
- *To moderate the effects of building height and bulk on sloping land.*
- *To minimise the extent of earth works on residential land and earthworks associated with residential development.*
- *To ensure that the building design is appropriate for site topographical conditions.*

Controls

- a. Building siting is to relate to the original form of the land.
- b. Alternatives to slab on ground construction are to be encouraged where it is obvious that due to the gradient and characteristics of the site, major excavation or filling as a result of raft slab, construction would be inappropriate. Example of alternative construction includes: Bearer and joist construction; Deepened edge beam; Split level design; Suspended slab design.
- c. On sloping sites step buildings or utilise site excavation and suspended floors to accommodate changes in level rather than leveling the site via cut and fill.
- d. Dwellings must not be designed to be on a contiguous slab on ground type if the building site has a slope of greater than 10%. Development on such land is to be of pole or pier construction or multiple slabs or the like that minimise the extent of cut and fill.

- e. Site excavation / land reforming is to be kept to a minimum required for an appropriately designed site responsive development.
- f. The maximum level of cut is 1m and fill is 1m except for areas under control j.
- g. Retaining walls maximum 1.2m.
- h. Cut areas are to be set back from the boundaries at least 900mm; fill areas are to be setback from the boundary a minimum of 1.5m.
- i. Cut and fill batters shall not exceed a slope of 1:2 (v:h) unless geotechnical reports result in Council being satisfied with the site stability. All batters are to be provided with both short term and long term stabilisation to prevent soil erosion.
- j. Excavations in excess of one metre within the confines of the building and on driveways may be permitted, to allow for basement garages providing the excavations are adequately retained and drained, in accordance with engineering details.
- k. Filled areas are to be located where they will not impact on the privacy of neighbours.
- l. Stormwater or surface water runoff shall not be redirected or concentrated onto adjoining properties so as to cause a nuisance and adequate drainage is to be provided to divert water away from batters.
- m. The top of any battered cut (or retaining wall) and the toe of any battered fill (or retaining wall) is not to be closer than 900mm for cut and 1.5m for fill to any property boundary, where the overall height at any point exceeds 500mm.

Variations to Cut and Fill Design

- m. Variations to the requirements above will be permitted to create a flat yard space not exceeding 15% of the area of the lot for the purposes of outdoor living, recreation, clothes drying, swimming pool and the like.
- n. Proposed variations to the controls must demonstrate that the excavation or filling of the site is in harmony with the natural landform/environment and will not adversely affect the adjoining properties.
- o. Where a property is burdened by stormwater or water and sewerage mains then Council will generally preclude any excavation or filling within that easement.

Design Guidelines

On sloping sites building will generally need to step down the site in order to remain under the height limit and in order to avoid excessive cut and fill.

Suggested design solutions to use when dealing with topography in streets and on lots includes:

- *a series of small terraces or stepped retaining walls,*
- *incorporating the retaining wall into the building elevation,*
- *incorporating the retaining wall into the boundary fence along the street.*

DESIGN CONTROL 3 – Setbacks

Setbacks are important as they set the buildings location in relationship to the lot boundaries, the street and neighbouring buildings. Setbacks allow space for landscaping and to achieve privacy between dwellings in residential areas.

Calculation rules:

A setback is the distance between a building and a lot boundary. It is the measurement of the horizontal distance between the property boundary (or other stated boundary) measured at 90 degrees from the boundary and:

- *a building wall or load bearing columns used instead of a wall*
- *the outside face of any balcony, deck or the like or*
- *the supporting posts of a structure or*
- *the outer edge of an eaves gutter,*

If either the boundary or the structure is irregular then the shortest distance is the setback distance.

Setbacks are measured at 90 degrees to the lot boundary and include any articulation to the buildings elevation as well as including roofed or enclosed external living areas.

This setback is not a minimum or maximum distance from the street but rather the building is to be built along the alignment of the front boundary setback.

Front Setbacks (Building lines)

The setback from the front boundary establishes the location and alignment of the buildings front elevation.

Front setbacks help create the proportions of the street and contribute to the public domain by unifying streetscape character and the continuity of street elevations. Street setbacks enhance the setting for the building as they provide for landscape areas, entries to the dwelling and deep soil areas.

The front setback is measured from the front boundary of the allotment to the outer most edge of the wall of the building elevation.

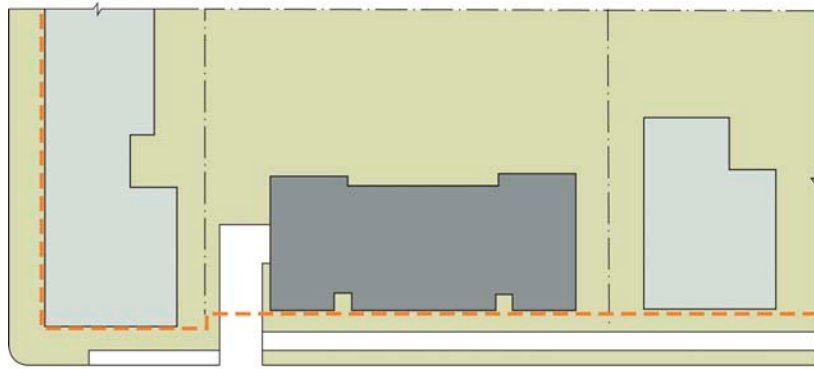
Multi-dwelling development located on site with more than one street frontage, the dwellings must ensure that they address all streets.

Objectives

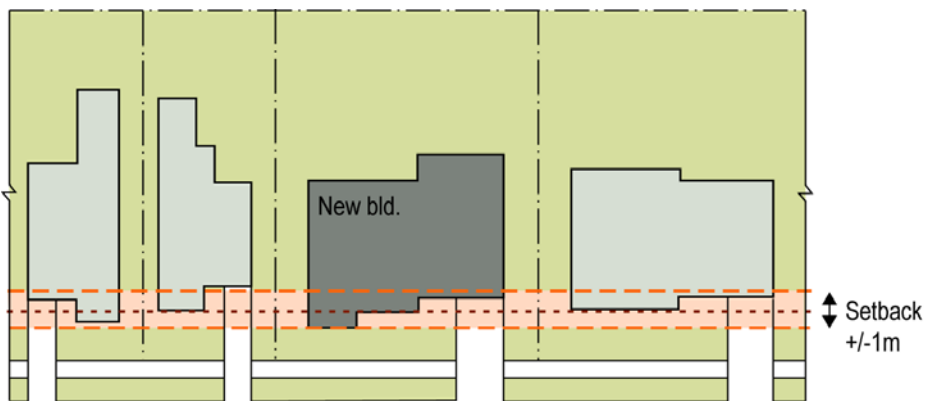
- *To establish the desired spatial proportions of the street and define the street edge.*
- *To enable a transition between public and private space.*
- *To create a landscape setting for residential buildings.*
- *To ensure compatibility with other buildings in the street.*
- *To allow for landscaping.*

Controls

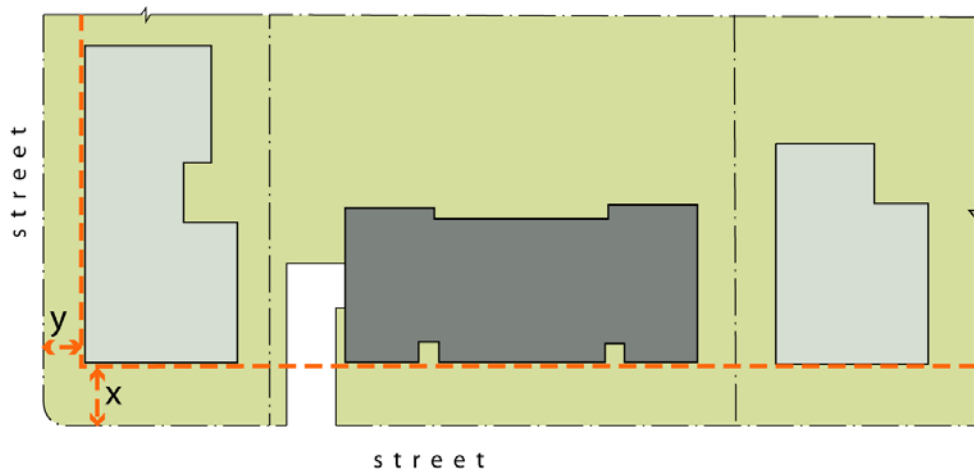
- a. In new areas Town Housing is to be setback from the street boundary by 6m. On corner sites the setback along the secondary street (the street to which the dwelling has its secondary frontage) is 3m.
- b. Where a site has dwellings with frontages to two or more streets, the street setbacks for these frontages are to be considered as front setbacks and there be 6m.
- c. In established areas and on infill sites Town Housing is to be consistent with the setback distance of neighbouring buildings and are to be the average of the setbacks of neighbouring dwellings on either side. This setback can be varied up to plus or minus 1m.
- d. In new and established areas Row Housing is to be setback from the street boundary by 3m.



Setbacks are designed to provide a consistent alignment along the street.



In situation where there is not a predominant setback line new buildings are to be an average of the setback distances on neighbouring sites with a variation of up to 1m.



Corner buildings may have different setback distances to define the primary and secondary street.

Side Setbacks

Side setbacks are designed to allow buildings to have the minimal distances between the building and the side boundary.

Minimising side boundary setbacks allows the building to have a wider street and rear building frontage. This gives a greater elevation length for habitable room windows to be oriented to the front and the rear of the lot.

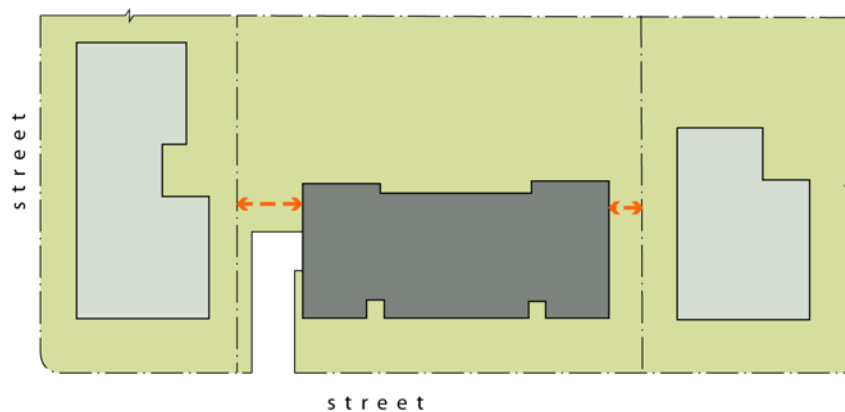
By orienting habitable rooms along the front and rear elevations rather than the side boundaries separation distances for privacy, light and air can more easily be achieved between neighbouring dwellings.

Objectives

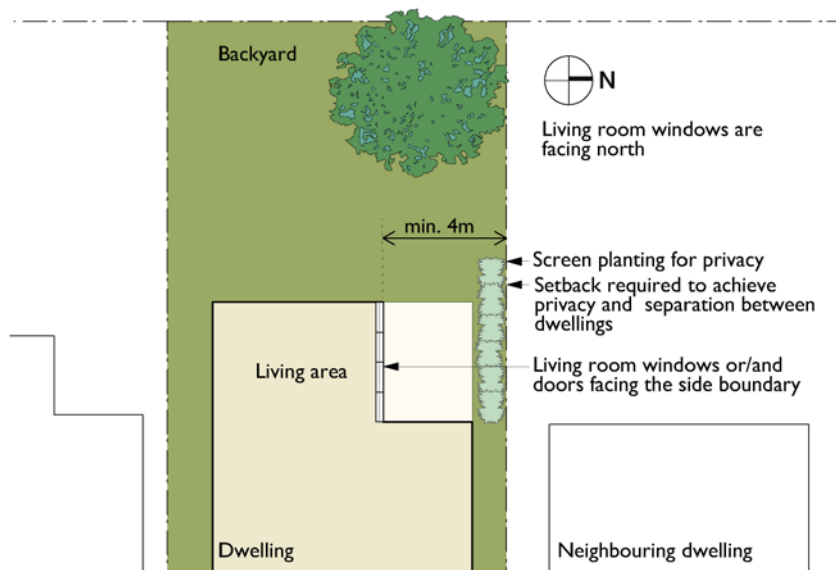
- To provide an orientation for windows of ancillary rooms.
- To provide access to the rear of the lot.
- To provide a location for rainwater tanks.
- To facilitate visual and acoustic privacy between neighbouring lots.

Calculation rules

Side setbacks are measured from the allotments side boundary to the outside edge of a building element. Setbacks are measured at 90 degrees to the allotment boundary and include any articulation to the buildings elevation but do not include external living areas.



Side setbacks are measured between the building and the lot boundary.



On Town Housing lots with north to the side boundary living room windows can face the side boundary if set back.

Controls

- a. Single storey Town Housing is to be set back a minimum of 900mm from the boundary line. Guttering, eaves, hoods and other similar structures may be constructed within the 900mm but not closer than 600mm from the boundary.
- b. 2 storey Town Housing is to be set back a minimum of 1.5m from the boundary line to the wall of the building. Guttering, eaves, hoods and other similar structures may be constructed within the 1.5m but not closer than 900mm from the boundary.
- c. Row Housing can have a maximum of 6 attached dwellings after which a 1.5m side setback is required for each building 3m separation between neighbouring buildings.

Primary windows of living rooms facing the side boundaries

- d. Walls containing the primary windows of living rooms that face the side boundaries are to be setback a minimum of 4m from the boundary and be screened and meet the distances as set out in the Separation Controls.

Garages and basement parking

- e. Garages if not proposed within the 6 metre building line may be located within 450mm to a side boundary.
- f. Carports may be located adjacent to a side boundary and must comply with the requirements of the Building Code of Australia.
- g. Basement garages are to be in line with the building above.
- h. Driveways may be located adjacent to the side boundaries only where front fences above 600mm has a 60% openness ratio for the first 2m along the boundary adjacent to the driveway to achieve sight lines as set out in section A2 of this DCP.

Note: see also Design Control 7 b.

Rear Setbacks

Rear setbacks are important for achieving open space to the rear of the lot for deep soil zones, water percolation areas as well as private areas for recreation and relaxation.

Rear setbacks allow separation distances between neighbouring dwellings to ensure visual and acoustic privacy for dwellings.

Calculation rules

Rear setbacks are measured from the rear boundary to the outside edge of the wall of the building. Setbacks are measured at 90 degrees to the lot boundary and include any articulation to the buildings elevation but do not include external living areas.

The rear setback will include the rear Deep Soil Zone and can include external living areas and any additional landscape areas.

Objectives

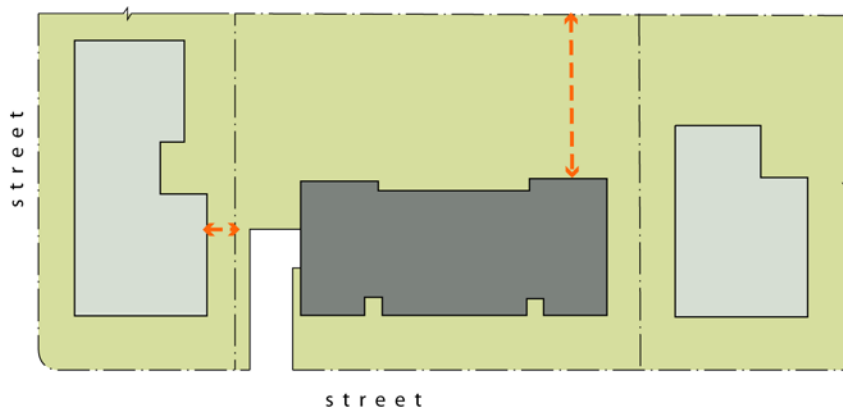
- To provide an area for private outdoor recreation and relaxation.
- To allow space for vegetation and mature trees.
- To separate dwellings to achieve privacy.

Controls

- Garages and outbuildings may be located within 450mm of the rear boundary.
- Carports may be located adjacent to the rear boundary.
- The minimum rear boundary setback is 5m or the deep soil zone whichever is the greater. The minimum building separation distances must be met.

Canal Frontages

- The setback from a canal frontage is:
 - 5.5m where the boundary is on the canal side of a revetment wall, or
 - 3.4m from the revetment wall where the wall is on the boundary.
- No structures are to be built in the setback area other than fences to 1.2 metres high, swimming pools, retaining walls, suspended decks that do not exceed the level of the allotment at the top of the batter and boat ramps except:
 - For those allotments with canal frontages and facing Gollan Drive and Jacaranda Avenue, Tweed Heads West where the setback line to the canal frontage shall be 2.5m
 - Lots 1, 2 3 and 4 Crystal Waters Drive, Tweed Heads West where normal building setbacks shall apply along the canal frontage.
- The underside of any suspended deck fronting a canal is to be suitably screened, except in cases where giving effect to this control would result in adverse impact to flood waters.



Rear setbacks are measured from the lot boundary to the rear elevation of the building.

DESIGN CONTROL 4 - Carparking and access

The location and design of car access and parking areas is to ensure that the site is not dominated by car related uses. Vehicle access and movement areas must not dominate the streetscape nor compromise the privacy and amenity of the site or neighbouring dwellings.

Carparking is to be convenient and is to be designed to meet the needs of residents. The design of carparking is to integrate with the overall site design to minimise visual and environmental impacts.

Objectives

- To provide on site car access, parking and manoeuvring areas.
- To minimise the physical and visual dominance of vehicles on sites.
- To minimise footpath and street reserve crossings. .

Carparking Generally

Controls

- a. Carparking is to be in accordance with Section A2 of the Tweed Shire Development Control Plan.
- b. Car park entries are to be located off secondary streets and laneways where these occur.
- c. The driveway width from the street to the property boundary is to be minimised.
- d. Vehicular movement and parking areas are to be designed to minimum dimensions, to reduce hard surfaces on the lot, and increase the area available for landscaping.
- e. A garage or carport may be located in front of an existing dwelling if:
 - there is no other suitable position on the allotment; and
 - the carport or garage accommodates a single car space; and
 - there is no vehicular access to the rear or side of the allotment.
- f. Driveways cannot be roofed.

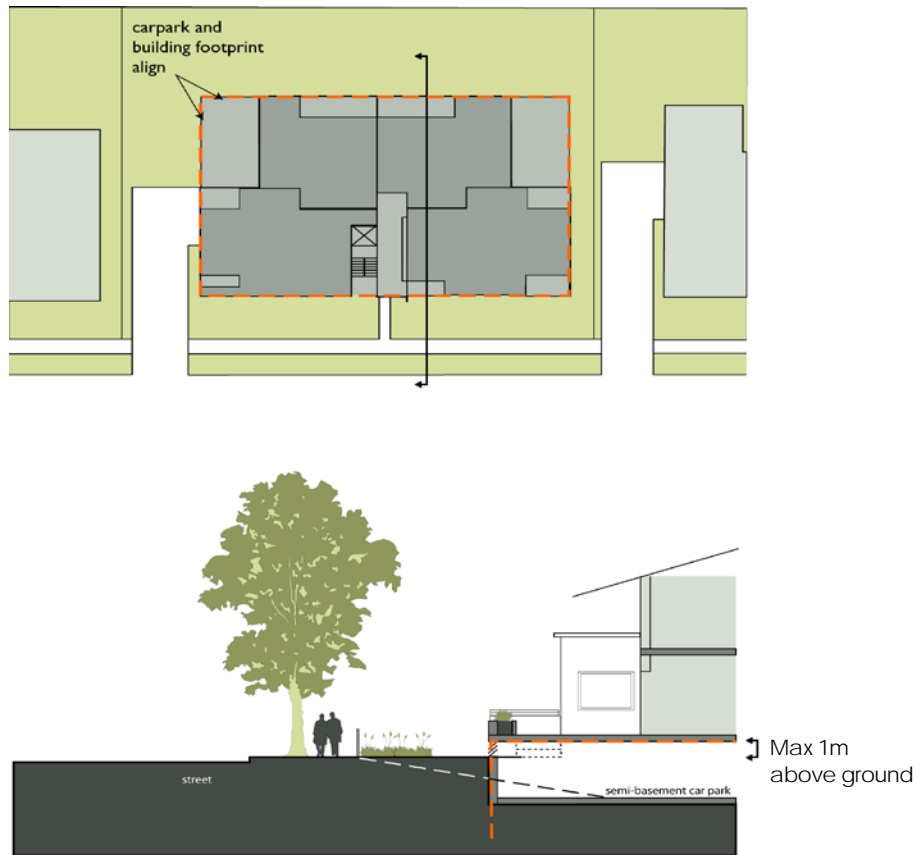
Basement Carparking

Basement parking needs to be carefully designed to ensure the building is not raised unnecessarily high above ground level and that the building has direct physical connection between the dwelling and the ground. The location and size of ramps requires special consideration to ensure the streetscape is not impacted upon. Landscaping and the selection of materials can help to soften the impact of ramps and basement walls.

Car park ramps are best located within the building footprint and/or behind the buildings front elevation to avoid retaining walls within the front garden.

Controls

- a. Basement carparking cannot extend more than 1m above ground where it faces a public street or public space. 1.5m above ground level can be achieved to the side and the rear of the lot where it does not face a public street or public space.
- b. A ramp entering off a public street must start behind the boundary. Ramps cannot be located on public land.
- c. The width of ramps is to be minimized.
- d. The walls of basement carparks are best located in line with the buildings footprint. Basement carparking is not to extend outside the external line of terraces, balconies and porches.



The maximum extent of basement car parking is the outermost edge of the building footprint.



The impact of ramps and garage doors to this basement carpark has been reduced by making the garage doors in line with the buildings elevation and making the doors solid so as to read as the base and wall of the building, Ideally it would only have one entry.

Garages

Controls

- a. Garages and carports are to be set back at least 1m from the buildings street elevation.
- b. Limit the width of garage doors along the street to a maximum of 50% of the building elevation. Laneways may have up to 75% of their frontage as garage doors.
- c. A pedestrian access way from the laneway is encouraged.
- d. The design and materials used for garages must be in keeping with the main dwelling.
- e. Town Housing on-grade carparking cannot be located closer than 6m from the street boundary.

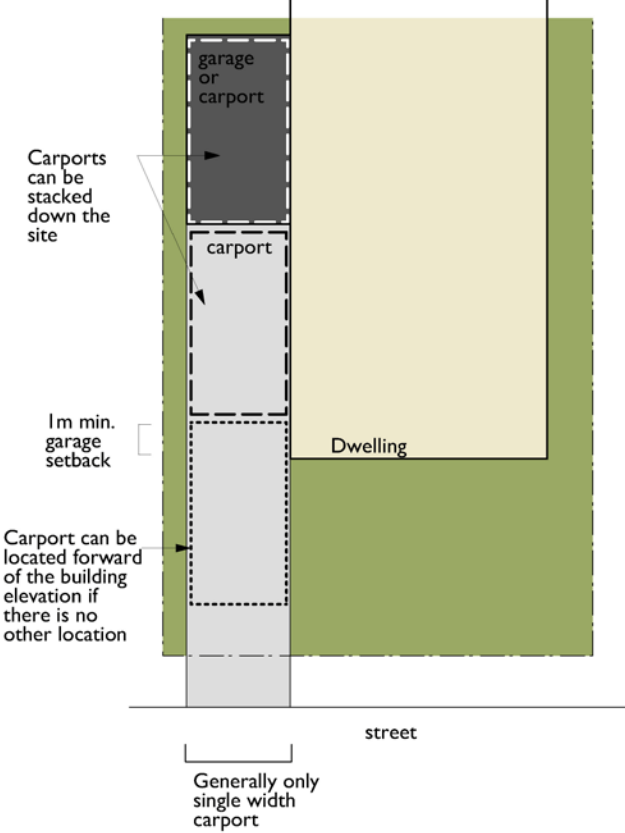


Garages and car parking areas should be visually recessive to the buildings elevation, fencing and landscaping along the streetscape

Carports

Controls

- a. Carports cannot be wider than one car space width or 4m where other means of undercover parking is provided on-site.
- b. A maximum of two carport spaces can be stacked down the site.
- c. Double carports can only occur, on very steep sites or where there is no other solution possible for car parking on the site.
- d. Carports must not necessitate an extra driveway additional to the driveway for a garage or other parking structure.
- e. The design and materials used for carports must be in keeping with the main dwelling.
- f. The carport must not be enclosed on any of its sides.
- g. Carports cannot have rooms within the roof.
- h. For new dwelling carports cannot be erected between the street alignment and the front building alignment of the dwelling. The minimum setback behind the front building alignment is 1 metre.



Carports can be stacked down the site.

DESIGN CONTROL 5 – Building Footprint and Attics, Orientation and Separation

Building Footprint and Attics

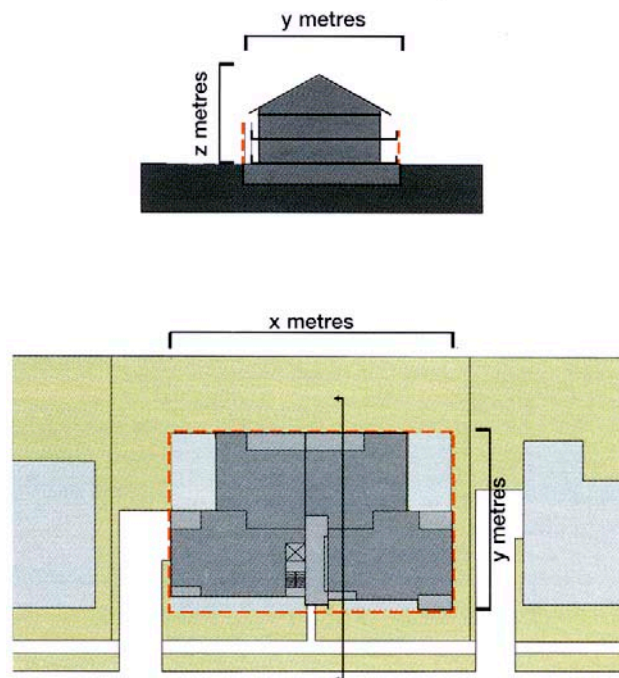
A building footprint is a two dimensional area that sets the extent of a building in relation to the site boundaries. It defines the width and depth of the overall buildable area within which a future building can be located.

The building footprint sets the appropriate location and alignment of future development in relation to the street layout, block and lot size in a particular location. Building footprint is used to control residential amenity in terms of light, ventilation, privacy, outlook, security and consolidated landscaped areas across the lot. It also provides a setting for the building on the street consistent with the streetscape.

Attics can provide additional floor space whilst helping to reduce the overall height of buildings. An attic is a space that is contained within a pitched roof of a building. Attic rooms require either skylights or dormer windows for light and air.

Objectives

- To ensure that the bulk of the development is in scale with the existing or desired future context.
- To provide adequate amenity for building occupants in terms of sun access and natural ventilation.



Building footprint y measurement is the building depth. Building footprint x measurement is the buildings width.

Calculation rules

Building footprint depth refers to the dimension measured from the buildings front or street elevation to the back elevation (rear of the site). Building depth includes the internal plan depth of the dwelling; it does not include external living areas.

Building footprint width is measured from side building elevation to side elevation. Building width is set by the width of the site minus the required side setback (including driveways)

Building footprint does not include external living areas.

Controls

- a. For buildings that only have daylight access to two and opposite sides of the building the back wall of a room cannot be greater than 10 metres from a window.
- b. Attic spaces cannot be more than 50% of the building footprint.
- c. The majority of the volume of an attic is to be contained within the roof space.

Building Orientation

Building orientation is a term used to describe the primary aspect of the building or the walls containing the windows of the living areas of a dwelling and external living areas. The buildings orientation is defined in relation to the site boundaries.

Building orientation is important in ensuring privacy and outlook for new dwellings and to protect the amenity of neighbouring dwellings. In existing residential areas the established orientation of dwellings is to the front and the rear of lots. It is important that new development respect and replicate this pattern so as to fit within the established context.

Orientation is a key aspect in ensuring that new development respects and responds to the streetscape. By locating the primary windows of living areas facing the street boundary and/or the rear boundary this allows the side boundaries to have mainly the windows to ancillary rooms. This allows the building to be located closer to the side boundaries where separation distances for ancillary rooms are not as stringent. This gives a great length or frontage to the front and rear elevations where privacy and outlook are more easily achieved given the separation distances created by the front garden and street to the front of the lot and rear gardens to the rear of lots.

Where it is not desirable to have living spaces facing the street boundary, bedrooms can be located to the front instead. Where this occurs the main entry must still be facing the street and must remain clearly visible.

Objectives

- *To easily achieving setback distances for privacy and outlook.*
- *To provide a level of surveillance over the street.*
- *To provide a frontage and clear entry facing the street.*
- *To avoid overlooking neighbouring dwellings.*
- *To prevent development from relaying on neighbouring lots for privacy, sunlight access or outlook.*

Controls

- a. All dwellings with a street frontage(s) are to be oriented to and address the street(s).
- b. Ensure that the pedestrian entry to the development is clearly visible and accessible from the street.
- c. Where possible orientate bathroom, laundry and other ancillary room windows to the side boundaries.
- d. Where possible orient the primary windows of living rooms to the front or the rear of lots.
- e. Orient living areas to employ passive solar design principles.

Calculation rules

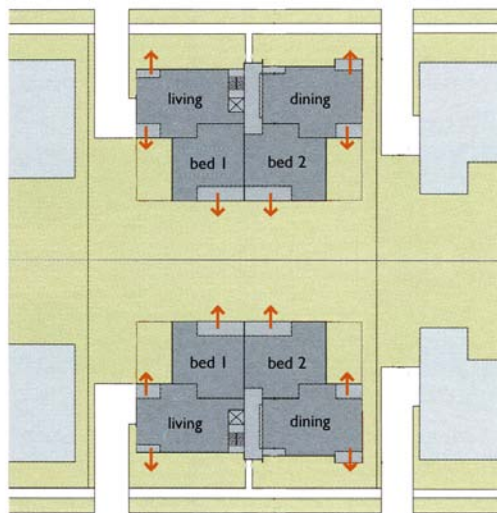
Address refers to the dwelling presenting an attractive elevation to the public domain; this generally includes windows of habitable rooms and the front door to the dwelling.

Primary windows and doors are those that give the rooms its outlook, light and air.

Secondary windows and doors can also provide outlook, light and air to the room but in the case that greater privacy is required for either dwelling or neighbouring dwellings these windows/doors can be of opaque material, fixed, shaded or small in size and are not the primary source of outlook, light and air.



In established residential areas many buildings are oriented to the front and rear of lots so that privacy and outlook are coordinated across the block, the street and between neighbouring buildings.



Living rooms and external living areas can be oriented to the front and rear of the site.



This row house development addresses the street by having pedestrian entries for all dwellings from the street.



These Row Houses have been designed to orient to and address the street by having habitable rooms facing the street.

Building Separation

Achieving adequate separation between buildings and shared driveways is an important consideration when increasing densities in existing and established residential areas. It ensures that both existing and new residents can enjoy privacy both to internal and external spaces.

Ensuring the orientation of primary windows to habitable rooms is to the front and the rear of sites is fundamental to achieving an efficient site layout and achieving or exceeding minimum separation distances. Separation distances are to enhance the livability of the dwelling by providing useable outdoor space generally associated to living space with the dwelling.

Objectives

- *To maintain privacy between dwellings.*

Controls

- a. 8m minimum separation between the wall containing primary windows/doors of living rooms (on any level of the building) to the wall of an adjacent building containing primary window/doors of living rooms.
- b. 6m minimum separation distance between primary windows/doors (on any level of the building) of living rooms to windows other than the primary windows of living rooms.
- c. 4m min separation between walls containing primary windows/doors of living rooms (on any level of the building) the side boundaries.
- d. 4m minimum separation between the primary windows of living rooms (on any level of the building) and walls containing no windows.
- e. 4m minimum separation between walls containing primary windows/doors of living rooms (on any level of the building) to shared driveways.
- f. 4m minimum separations between walls containing primary windows/doors of living (on any level of the building) to carports and garages.

- g. 3m minimum separation between walls containing primary windows/doors sleeping rooms (on the ground level only) to shared driveways, carports and garages.
- h. 2m min separation distance between the windows/doors of non-habitable rooms (on any level of the building). This distance can be measured diagonally.

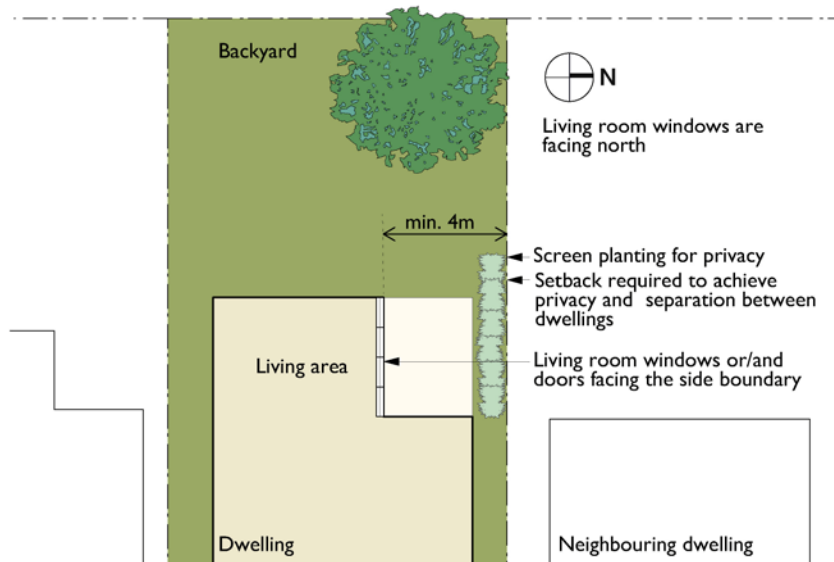
Calculation rules

Separation distances are measured between buildings that can either be on the same lot or on neighbouring lots.

Separation distance is measured at 90 degrees to the wall.

Primary windows and doors are those that give the rooms its outlook, light and air.

Secondary windows and doors can also provide outlook, light and air to the room but in the case that greater privacy is required for either dwelling or neighbouring dwellings these windows/doors can be of opaque material, fixed, shaded or small in size and are not the primary source of outlook, light and air.



Lots with North to the side boundary can be oriented to the side boundary. A courtyard and setbacks to the boundary are required to ensure privacy on neighbouring lots.

DESIGN CONTROL 6 – Height

Building Height

Height is an important control to ensure that future development responds to the desired scale and character of the street and local area and to allow reasonable daylight access to existing developments.

The height controls are intended to work with existing buildings in the street. Height controls on individual sites are to be further refined by decisions about daylight access, roofs, residential amenity, setting and topography of particular locations and streets.

Objectives

- To design new development appropriate to the existing building scale in the street and the local area.
- To ensure new development maintains an appropriate residential character.

Controls

- a. 9m is the maximum overall building height.
- b. 8.5m is the maximum wall plate height.
- f. Carports maximum height 3.5m for a flat roof and 4.5m for a pitched roof.
- g. Detached garages are to have an eave height of no more than 2.7m and a maximum overall building height of 3.5m for a flat roof and 4.5m for a pitched roof.

Calculation rules

Height is measured in an overall building height, wall plate height.

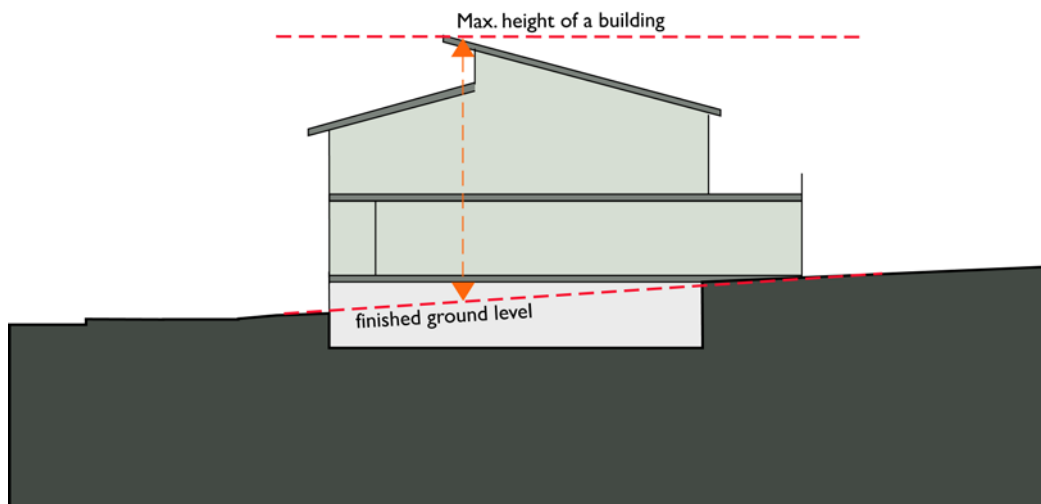
Overall building height is the vertical distance between finished ground level at any point to the highest point of the building, including plant and lift overruns, but excluding communications devices, antennae, satellite dishes, masts, flagpoles, chimneys flues and the like. The measurement of overall building height includes all roofs and all roof elements. The height as specified is the maximum allowable.

Wall plate height is the vertical distance between finished ground level to the highest point where the wall joins the roof.

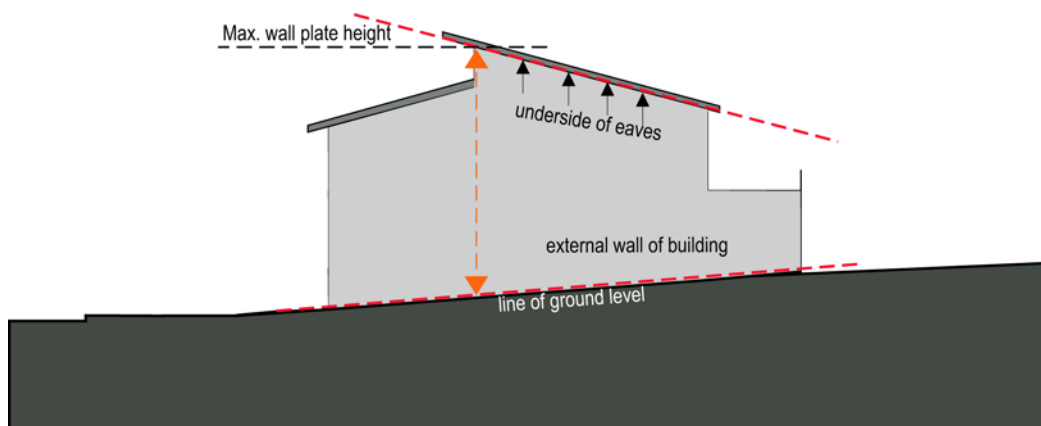
The definition of storey is found in the Tweed LEP

Ground level (existing): means the existing level of a site at any point.

Ground level (finished): means, for any point on a site, the ground surface after completion of any earthworks (excluding any excavation for a basement, footings or the like) for which consent has been granted or which is exempt development.



Overall building height is measured from the finished ground line, shown dotted.



The wall plate height is measured to the underside of the eaves.

Ceiling Height

Higher ceilings can create better proportioned internal spaces. Generous ceiling heights are particularly important in buildings with small, deep rooms or in rooms that have little sun penetration such as those facing south.

Objectives

- To increase the sense of space in dwellings.
- To contribute to well proportioned rooms.
- To promote the penetration of daylight into dwellings.

Controls

- a. Minimum finished floor to ceiling dimensions are set out in the Building Code of Australia.
- b. It is encouraged to provide minimum ceiling heights of 2.7m min. finished floor level to finished ceiling level for habitable rooms. For habitable rooms with a raking ceiling it is preferable to have at least 30% of the ceiling at 2.7m high.



Double height ceiling spaces can significantly increase light penetration into narrow or one-sided apartments as well as add to the quality of the internal space.

DESIGN CONTROL 7 – Building Amenity

Building amenity is the way in which the building provides a high quality of life for residents. This is concerned with the ability of spaces to adequately provide for their intended function and level of activity. The key aspects of building amenity include; sunlight access, visual privacy, acoustic privacy, view sharing, and natural ventilation.

Sunlight Access

The use of passive solar design in dwellings is encouraged. Tweed has a temperate sub-tropical climate and well designed houses in Tweed should only require a limited amount of heating and cooling. The heat load resulting from direct solar penetration into buildings during the hotter months can be a major problem, and so it is important that dwellings are designed to optimise the benefits of sunlight, whilst minimising its negative effects.

The orientation of the allotment, the immediate subdivision pattern and the local topography, have a significant impact on the ability to provide solar access. Sites on the southern side of a hill, for example, may not receive the same level of sunlight access as other sites. On allotments where the side boundary has a northerly aspect, consideration should be given to increasing the side setback to improve sunlight access and to prevent overshadowing by future development on neighbouring allotments.

It is also important when designing new buildings to consider the impact of the new development on the solar access of the neighbour. In some instances, overshadowing may be unavoidable; however unreasonable overshadowing of neighbours as a result of poor design is not acceptable.

Ideally, solar access should be maximised in winter and minimised in summer. A northerly aspect is most desirable as it provides the most solar access in winter and is relatively easy to shade in summer. A westerly aspect is least desirable, particularly in summer. Protection for a westerly aspect can be achieved by using such elements as vertical sun shading devices, blinds and deciduous trees.

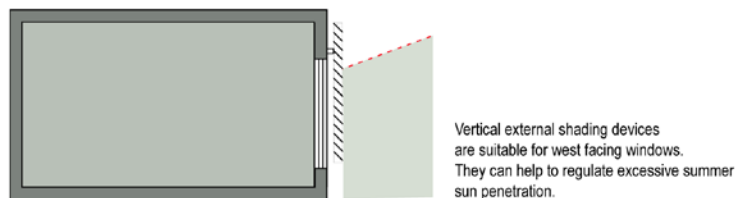
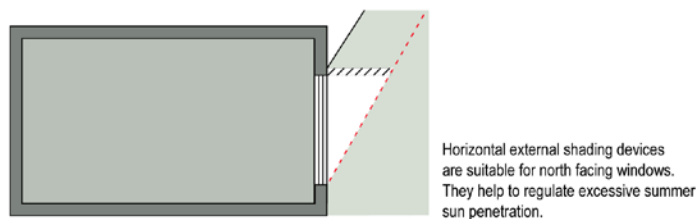
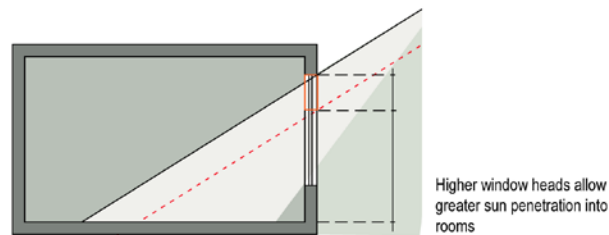
Daylight consists of both diffuse light and direct light. Good levels of daylight in a dwelling improve amenity and reduce the need for artificial lighting. Good levels of daylight can be achieved through the careful consideration of window size, location and proportion.

Objectives

- *To maximise sunlight and daylight access.*
- *To ensure that sunlight access of neighbouring dwellings and neighbouring private open space is minimised.*
- *To encourage the use of passive solar design.*

Controls

- a. Living spaces are to be located predominantly to the north where the orientation of the allotment makes this possible.
- b. Dwellings on allotments which have a side boundary with a northerly aspect are to be designed to maximise sunlight access to internal living areas by increasing the setback of these areas. In these cases a minimum side setback of 4 metres is required.
- c. Private open space of the subject dwelling is to receive at least two hours sunlight between 9am and 3pm on June 21.
- d. Windows to north-facing habitable rooms of the subject dwelling are to receive at least 3 hours of sunlight between 9am and 3pm on 21 June over a portion of their surface.
- e. For neighbouring properties ensure:
 - sunlight to at least 50% of the principal area of private open space of adjacent properties is not reduced to less than 2 hours between 9am and 3pm on June 21, and
 - windows to living areas must receive at least 3 hours of sunlight between 9am and 3pm on 21 June.
- f. Where existing overshadowing by buildings is greater than this, sunlight is not to be further reduced by more than 20%.



Visual Privacy

Visual privacy allows residents to carry out private activities within all rooms and private open spaces without compromising the functioning of internal and external spaces. Visual privacy is determined by the nature of adjacent developments, site configuration, topography, the scale of the development, and the layout of individual dwellings.

Living rooms should be located to the front and rear elevations where privacy and outlook are more easily achieved. Locating the majority of windows facing towards the street and the rear boundaries means that the windows of ancillary rooms will face the side boundaries. This allows the building to be located closer to the side boundaries as there are fewer privacy impacts.

It is not necessary to provide the same degree of privacy protection to all parts of a neighbouring site. Higher levels of privacy are to be provided to both internal living areas and to the external living area. Overlooking from bedroom windows is less of a concern than overlooking from the windows of other habitable rooms.

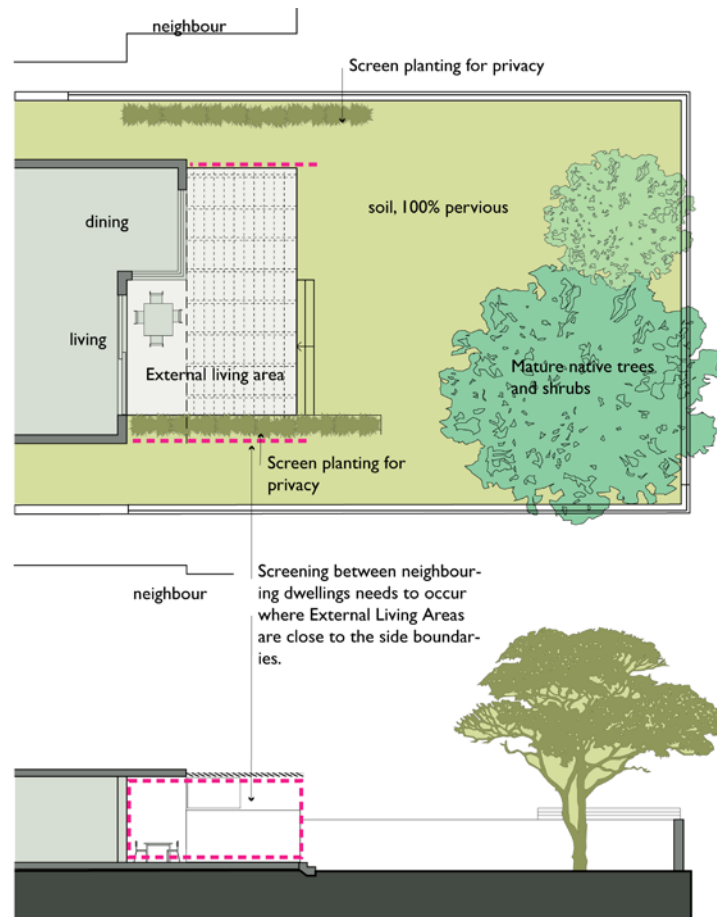
Terraces and balconies from living rooms located above ground level can have a significant impact on the amenity of neighbours with regard to loss of visual privacy and increase in noise levels.

Objectives

- To provide visual privacy for internal and external spaces.
- To facilitate outlook and views from principal rooms in dwellings and private open spaces without compromising visual privacy.
- To provide a level of surveillance over the street.
- To minimise overlooking of neighbouring dwellings.

Controls

- Terraces and balconies off living areas are generally not to be located above ground floor if they overlook neighbours.
- Living room and kitchen windows, terraces and balconies are avoid a direct view into neighbouring dwellings or neighbouring private open space.
- Side windows are to be offset by distances sufficient to avoid visual connection between windows of the subject dwelling and those of the neighbouring dwelling.



External Living areas requiring screening for privacy when located close to a side boundary.

Acoustic Privacy

Acoustic privacy is a measure of sound insulation between individual dwellings, and between external and internal spaces. Designing for acoustic privacy relates to the location and separation of buildings and the location of living areas and above ground external areas such as terraces.

The proximity of the building to major external noise sources such as busy roads is also a major consideration.

Setbacks, separation between dwellings, and the appropriate location of external living areas, provide the primary method of ensuring acoustic privacy.

Objectives

- *To provide a high level of acoustic privacy.*
- *To minimise the impacts of noise generating uses such as traffic, air conditioners, pumps, and other mechanical equipment.*

Controls

- a. The noise of an air conditioner, pump, or other mechanical equipment must not exceed the background noise level by more than 5dB(A) when measured in or on any premises in the vicinity of the item. This may require the item to have a sound proofed enclosure.
- b. Dwellings located on arterial roads are to have double glazed windows where these windows face the road and provide light to living rooms or bedrooms. This is the case whether or not the dwelling has a solid masonry wall to the arterial road.
- c. Dwellings located on designated or classified roads are to have an acoustic seal on the front door to reduce noise transmission.

View Sharing

View sharing is where new dwellings are designed so as to retain the private views enjoyed from existing dwellings on neighbouring sites.

Objectives

- *To ensure new dwellings endeavour to respect important views from living areas and rooms within existing dwellings.*

Controls

- a. Building siting is, as far as it is practical, to be designed to minimise the impact on view sharing between properties.

Natural Ventilation

Natural ventilation is the circulation of sufficient volumes of fresh air through dwellings to create a comfortable indoor environment. Designing for natural ventilation exercises sustainable practice by responding to the local climate and by reducing or eliminating the need for mechanical ventilation.

Objectives

- *To ensure that residential and other buildings are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants.*
- *To encourage natural ventilation in non-habitable rooms.*
- *To reduce energy consumption by minimising the use of mechanical ventilation.*

Controls

- a. All dwellings are to have operable windows to habitable rooms.
- b. Non habitable rooms including kitchen, bathroom & laundry are encouraged to have operable windows.
- c. The plan layout, including the placement of openings, is to be designed to optimise access to prevailing breezes and to provide for cross-ventilation.

DESIGN CONTROL 8 - External Building Elements

External building design elements include;

- fences and walls,
- roofs, dormer windows and skylights
- elevations visible from the public domain,
- awnings, canopies, pergolas, storm blinds, sails and signage,
- minor elements.

These external building elements are highly visible from the street and as such contribute to the character of the streetscape and the local area.

The design of external building elements is to make a positive contribution to the attractiveness of the streetscape and the local area and contribute to a consistent built character along the street.

Fences and Walls; Front, Side and Rear

Fences and walls include all built vertical landscaping elements designed to define boundaries between one space and the next or to accommodate a change in level.

The design of fences and walls has an impact on the real and perceived safety and security of residents as well as on the amenity of the public domain and the streetscape character. The visual impact, scale and design of fences all need to be carefully considered.

Front boundary fencing should also be designed in a manner that facilitates access to the water metre servicing the property at all times, except where an alternative meter reading facility is accommodated on site, that is, an electronic reader or bar scanning system.

Objectives

- *To define the boundaries between public and private land.*
- *To define the boundaries between neighbouring properties.*
- *To contribute to the streetscape appearance.*
- *To enhance the usability of private open space.*
- *To offer acoustic and visual privacy on busy roads.*

Controls

- a. Front and return fences are to reflect the design of the dwelling.
- b. Front and return fences and walls are to be constructed of materials compatible with the house and with other fences and walls within the streetscape.
- c. Return fences are to be the same height and design as front fences.
- d. Front and return fences can be up to maximum height of 1.5m high with a maximum solid fence height of 600mm, above the solid wall the fence is to have a min. openness ratio of 60%.
- e. Front and return fences may be solid up to 1.5m if located on an arterial road.
- f. No Colorbond or timber paling for front or return fences, except were integrated into a design theme that is consistent with the character of the dwelling and streetscape and incorporates appropriate articulation to allow for landscaping.
- g. Fences and walls are not to impede the natural flow of stormwater runoff.
- h. If located in a bushfire prone area fences and walls are to comply with AS3959 and Planning for Bush Fire Protection 2006, as amended from time to time.
- i. A solid front wall may be higher than 0.9m where the topography means a retaining wall is necessary. The height of the retaining wall is to be minimised and is to be compatible with the positive characteristics of the existing streetscape.
- j. Fencing is not to obstruct water meter reading.

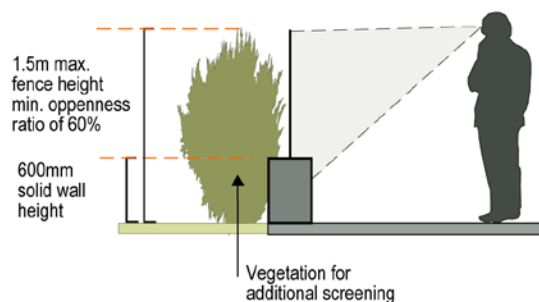
Side and Rear Fences

Controls

- a. Side fences are measured from behind the building line to the rear boundary. Maximum fence height of 2.0 metres.
- b. No chain wire fences are to exceed 1.2m in height.
- c. May include timber paling, metal or Colorbond material.
- d. For tennis courts or other similar areas, chain wire fences shall be black or dark green plastic coated mesh. Solid fences enclosing these facilities shall not be permitted over 3.6m and shall be offset by 600mm of the side and rear boundaries and 1m from front boundaries.
- e. Fences and walls are not to impede the natural flow of stormwater runoff.
- f. Controls for front fences and walls also apply to secondary street frontages on corner lots measured for the length of the dwelling.

Fences and walls for Greenbank Island

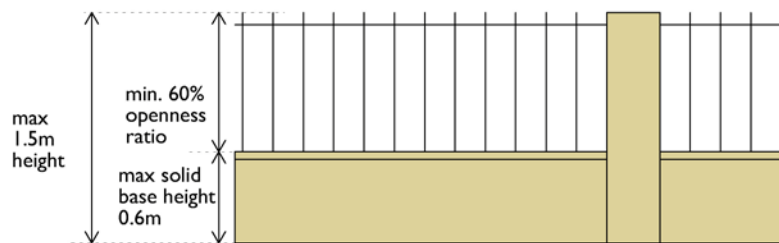
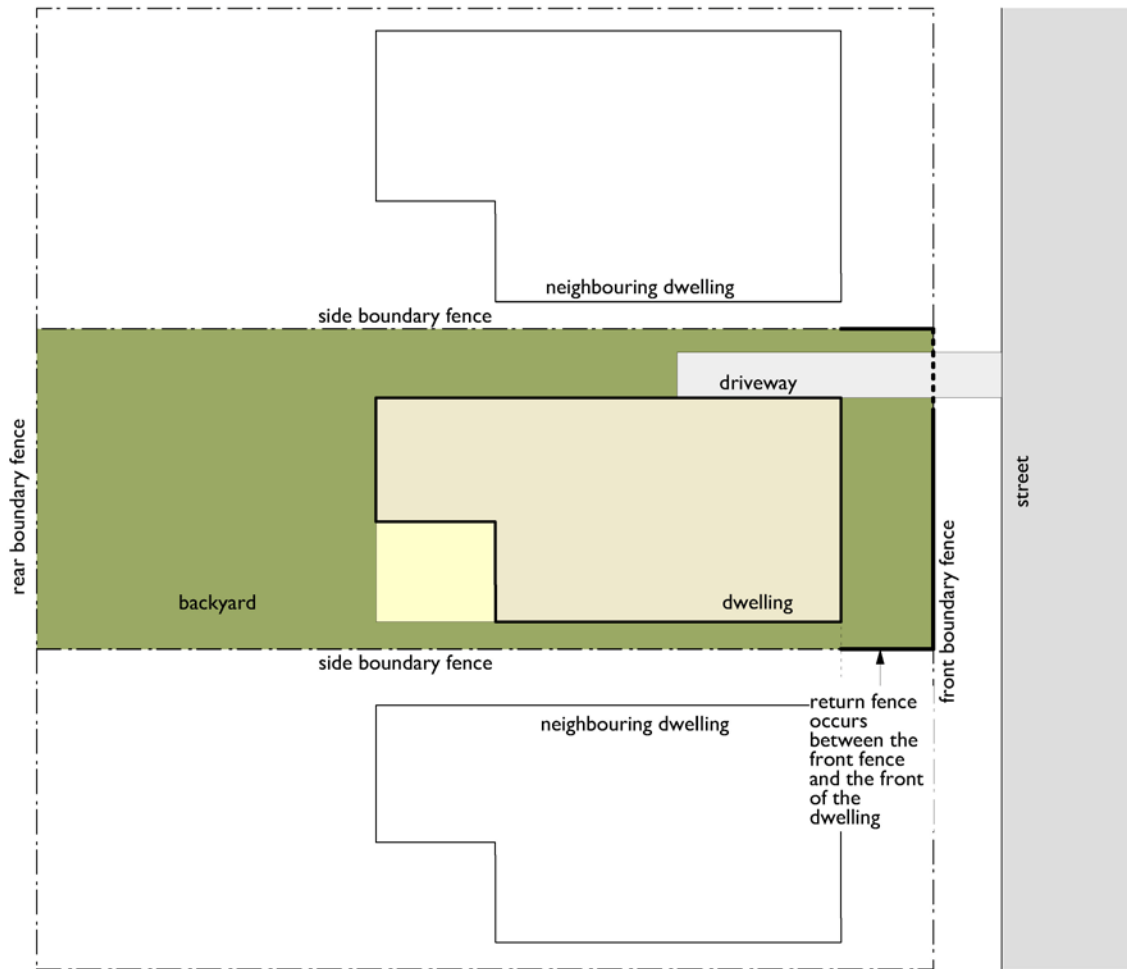
- g. Approval is to be obtained from Council prior to the erection of any fencing on Greenbank Island.
- h. Fencing behind the six (6) metre building line shall not exceed 2000mm in height.
- i. The fencing is to be constructed of brick, stone, masonry block or such other material as is approved by Council.



Indicative front fence design with a low wall, open fencing above and landscaping.



Low fences and informal coastal landscaping in this example contribute to a distinctive residential streetscape.





This fence returns down the side boundary, combines landscaping, open fencing and low walls to create a fence that enhances the pedestrian scale and residential qualities of the street.

Roofs, Dormers and Skylights

The roof is an important architectural element for the overall composition and expression of a building. The shape and form of a roof and its associated elements responds to the environment and the context. Quality roof design responds to various viewpoints within the local context, such as the roofscape observed from higher locations and the silhouette viewed from the street. In some areas the roof forms part of a distant view and sits within a larger skyline vista.

Objectives

- *To contribute to the design and performance of buildings.*
- *To integrate the design of the roof into the overall elevation and building composition.*
- *To contribute to a consistent and attractive streetscape.*
- *To provide shading and weather protection.*

Controls

- a. Relate roof design to the desired built form by:
 - articulating the roof,
 - providing eaves,
 - using a compatible roof form, slope, material and colour to adjacent buildings; and
 - ensuring the roof height is in proportion to the wall height of the building.
- b. The main roof is not to be a trafficable terrace.
- c. Skylights are:
 - not to reduce the structural integrity of the building or involve structural alterations,
 - to be adequately weatherproofed,
 - to be installed to the manufacturer's instructions.

Elevations Visible from the Public Domain

The architectural quality of buildings frontages and partially the side elevations contribute to the character and design of the streetscape. High architectural quality requires the appropriate composition of building elements, textures, materials and colours and reflects the use and internal layout of buildings.

The composition and detailing of the building's elevations has an impact on its apparent scale as well as its appearance. The pattern or rhythm established by the proportions of the elevation, the modulation of the external walls, the design of elevation elements, their materials and their detailing are all important considerations.

In addition to the controls for building elevations ensure that the corner buildings, which are by their location often highly visible, are well designed and respond to the different characteristics of the streets they address.

Objectives

- *To define and enhance the public domain and street character.*
- *To ensure that ancillary building elements are integrated into the overall building form and elevation design.*

Controls

- a. Design important elements such as front doors and building entry areas to have prominence in the building elevation and to be clearly identifiable from the street.
- c. Use proportions, materials, windows and doors types that are residential in type and scale.
- d. Design elevations to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls.
- e. Coordinate and integrate building services, such as drainage pipes, with overall elevation and balcony design.
- a. Coordinate grills/screens, ventilation louvres, carpark entry doors with the elevation.
- b. Integrate the design of garage entries with the building elevation design.
- c. Building elevations on corner sites are to be oriented to both streets by having windows and doors addressing both streets.
- d. Landscaping, fence and wall treatments on the secondary street frontage are to be the same as the primary street frontage for the length of the building.



This building addresses its corner location by designing both street elevations with equal importance.

Awnings, Canopies, Pergolas, Storm Blinds, Sails and Signage

In multi-unit developments operable blinds such as louvers can greatly improve the privacy and thermal efficiency of both external and internal spaces.

Pergolas are generally located on the ground level and offer opportunities for providing privacy from upper level dwellings that may look down onto ground level dwellings.

Objectives

- *To provide shelter from sun, wind and rain for private external spaces.*

Controls

- a. Awnings, canopies and storm blinds are to be wholly within the lot boundaries at least 900mm from the site boundaries.
- b. Must observe and maintain existing building line setbacks.
- c. If erected in a bushfire prone area, they are to comply with the requirements of AS3959 and Planning for Bushfire Protection 2006.
- d. Pergolas must not be located closer to a boundary than 900mm.
- e. Ensure that signage provides clear and legible way-finding for residents and visitors.

Minor Elements

Minor structures include those building elements that are associated with the use of the dwelling for residential purposes. Minor structures include; air Conditioning units, aerials, antennae, microwave antennae and satellite dishes, barbeque areas, aviaries, clothes hoists/lines, flagpoles, letter boxes and outdoor security lighting.

Controls

- a. Air Conditioning Units
 - Noise levels from air conditioning units are not to exceed 5dB(A) above ambient background noise levels measured at the property boundary.
 - Air conditioning unit installation must not reduce the structural integrity of the building.
 - Openings created by the installation of air conditioning units must be adequately weatherproofed.
 - Air conditioning units are not to be visible from streets.
- b. Aerials, antennae, microwave antennae are to be:
 - for domestic use only,
 - a maximum of one per single dwelling house,
- c. Ground mounted satellite dishes are to be:
 - a maximum height of 2.4 metres,
 - limit of one per dwelling house on lots less than 5,000 square metres,
 - located so as not to be visible from a public place,
 - a minimum of 900mm from a property boundary.
- d. Roof Mounted satellite dishes are to be:
 - suitably coloured to blend in with the building,
 - structurally stable,
 - one per dwelling house on lots less than 5,000 square metres,
 - No higher than the ridge line

e. Barbeque areas are to be:

- used for domestic purposes only,
- no closer than 900mm to a property boundary,
- located in the rear yard or no closer to the front of the property than 900mm behind the buildings front elevation,
- located with consideration to the impact upon adjoining properties.

f. Aviaries are to be:

- used for domestic purposes only,
- located no closer than 10 metres from a dwelling house on any adjoining property,
- located in the rear yard and not closer than 900mm to an adjoining property boundary measured to any part of the building,
- structurally sound.

f. Clothes hoists/lines are to be:

- located in the rear yard or no closer to the street than the front elevation of the building,
- if located on the side of the dwelling they are to be screened from view from all dwellings and the street.

g. Flagpoles are to be:

- structurally sound,
- wholly within the property boundary.

h. Letterboxes:

- are to be a maximum height of 1.2m above the ground,
- are to have street numbering corresponding with that allocated to the dwelling,
- are to be structurally sound,
- are to be designed as part of the building and its landscaping using similar materials and finishes,
- in multi-dwelling developments letterboxes must be located on common property; be contained in one structure, contain sufficient boxes, one for each dwelling, including one for the body corporate.

i. Outdoor security lighting is to be located and designed:

- so as to avoid light spill into the living and sleeping areas of the dwelling,
- to confine light spill to the source property.

DESIGN CONTROL 9 – Building Performance

Energy Efficiency

The ability of the development to optimise thermal performance, thermal comfort and day lighting will contribute to the energy efficiency of buildings, providing increased amenity to occupants and reduce greenhouse emissions and, with them, the cost of supplying energy.

Objectives

- *To reduce the necessity for mechanical heating and cooling.*
- *To reduce reliance on fossil fuels.*
- *To minimise greenhouse gas emissions.*
- *To support and promote renewable energy initiatives.*

Controls

- a. Developments are to obtain BASIX certification where required.

Waste Management

The minimisation and management of waste from development can contribute to the visual and physical amenity of the building as well as limiting potentially harmful impacts on the environment. Minimising waste is relevant to all stages of the building's life cycle, from construction to demolition. It also includes the way in which waste is stored and collected.

Objectives

- *To plan for the types, amount and disposal of waste to be generated during demolition, excavation and construction of the development.*
- *To encourage waste minimisation, including source separation, reuse and recycling.*
- *To ensure efficient storage and collection of waste and quality design of facilities.*

Controls

- a. Any application for development that involves the demolition of existing structures is to provide a Demolition work plan in accordance with the provisions of AS2601 and Councils work plan requirements.
- b. Excavation that will result in waste material having to be transported off-site must be minimised through the use of site response building design. Where practical excavated material should be reused on-site.

Design Guidelines

- *Incorporate existing built elements into new work, where possible.*
 - *Recycle and reuse demolished materials, where possible.*
 - *Specify building materials that can be reused and recycled at the end of their life.*
 - *Integrate waste management during the design stage by:*
 - *reducing waste by utilising the standard product/component sizes of the materials to be used,*
 - *incorporating durability, adaptability and ease of future services upgrades.*
 - *Prepare a waste management plan for green and putrescent waste, garbage, glass, containers and paper.*
 - *Locate storage areas for rubbish bins away from the front of the building so as to minimise negative impacts on the streetscape. Provide every dwelling with a waste cupboard or temporary storage area of sufficient size to hold a single day's waste and to enable source separation.*
- Incorporate on-site composting*

Water Conservation

Dwelling design can contribute to environmental sustainability by integrating measures for improved water efficiency. Water can be conserved in two ways; by reducing water demand from the mains and by re-using water which would otherwise be lost as run off or waste water.

Objectives

- *To reduce main consumption of potable water.*
- *To reduce the quantity of urban stormwater run off.*

Controls

- a. All developments are to obtain BASIX certification where required and comply with the relevant requirements of the Building Code of Australia.

Design Guidelines

Use AAA rated appliances to minimise water use.

Encourage the use of rainwater tanks.

Collect, store and use rainwater on site. This may be used for car washing, watering the garden, toilet flushing, laundry and clothes washing. Once treated, rainwater can also be used for potable supply.

Incorporate local indigenous native vegetation in landscape design.

Consider grey water recycling.

Some building sites may be suitable for reuse of treated effluent.

Maintenance

Detailed design and material selection support long-term maintenance of developments. This is particularly important in relation to corrosion issues in coastal areas. On-going maintenance ensures the longevity of quality architectural and landscape design, sustains and increases the value of property and minimises the life-cycle cost of a development to owners.

Objectives

- *To ensure long life and ease of maintenance for the development.*

Design Guidelines

Design windows to enable cleaning from inside the building, where possible.

Select manually operated systems, such as blinds, sunshades, pergolas and curtains in preference to mechanical systems.

Incorporate and integrate building maintenance systems into the design of the building form, roof and facade.

Select durable materials, which are easily cleaned.

Select appropriate landscape elements and vegetation and provide appropriate irrigation systems.

Some building sites may be suitable for reuse of treated effluent.

DESIGN CONTROL 10 – Floor Space Ratio

Floor space ratio (FSR) control provides a guide as to the allowable densities for an area.

FSR is not to be the sole determinant of future built form, rather all the other Design Controls in this Part must be achieved.

FSR is an absolute maximum, which may not be wholly achievable on all sites due to other design considerations.

Objectives

- To match building scale with the capacity of the site and the local area.
- To define the allowable development density for sites.

Controls

- a. The maximum FSR for Town Housing is 0.8:1
- b. The maximum FSR for Row Housing is 0.8:1.

Calculation rules

The maximum FSR will not always be achievable on all sites. It is the generic way of defining the density of the site and is to be measured once all the other Design Controls have been achieved.

Floor space ratio is the ratio of the gross floor area of all buildings on a site to the site area.

Gross floor area: means the sum of the floor area of each storey of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:

- *the area of a mezzanine within the storey,*
- *habitable rooms in a basement,*
- *any shop, auditorium, cinema, and the like, in a basement or attic,*

but excludes:

- *basements projecting less than 1m above finished ground level,*
- *storage areas,*
- *vehicular access, , garbage and services,*
- *areas used exclusively for mechanical services or ducting,*
- *car parking to meet any requirements of the consent authority (including access to that car parking),*
- *external living areas, terraces and balconies with outer walls less than 1.4 metres high,*
- *voids above a floor at the level of a storey or storey above.*