

Tweed Development Control Plan
SECTION A1 – Residential and Tourist Development Code

SCHEDULE OF AMENDMENTS

Version	Date of Council Adoption	Effective Date	Description
1.0		22.04.2008	Initial adoption by Council.
1.1		25.11.2008	Amendment to Area Specific Site Controls to include height and density provisions for Hastings Point – south of Cudgera Creek Bridge.
1.2		21.04.2009	Extension of the Area Specific Site Controls relating to Hastings Point (south of the Cudgera Creek Bridge) to the whole of Hastings Point.
1.3		28.04.2009	Repeal of an Area Specific Interim Site Control (density ratio of 1 dwelling per 250m ² of site area) and the inclusion of a new density controls of no more than 2 dwellings (dual occupancy) per site relating to Hastings Point.
1.4	draft	25.10.2012	Best practice five year review of Part A for public exhibition.
1.5	18.04.2013	-	Final draft following public exhibition.
1.6	18.04.2013	21.05.2013	Adopted by Council.
1.7	draft	5.11.2015	Inclusion of additional Shop-Top Housing controls, inclusion of Part D Additional Site Specific Provisions - Chapter A - Seaside City
2.0	3.03.2016	16.03.2016	Adopted by Council

PRELIMINARY INFORMATION

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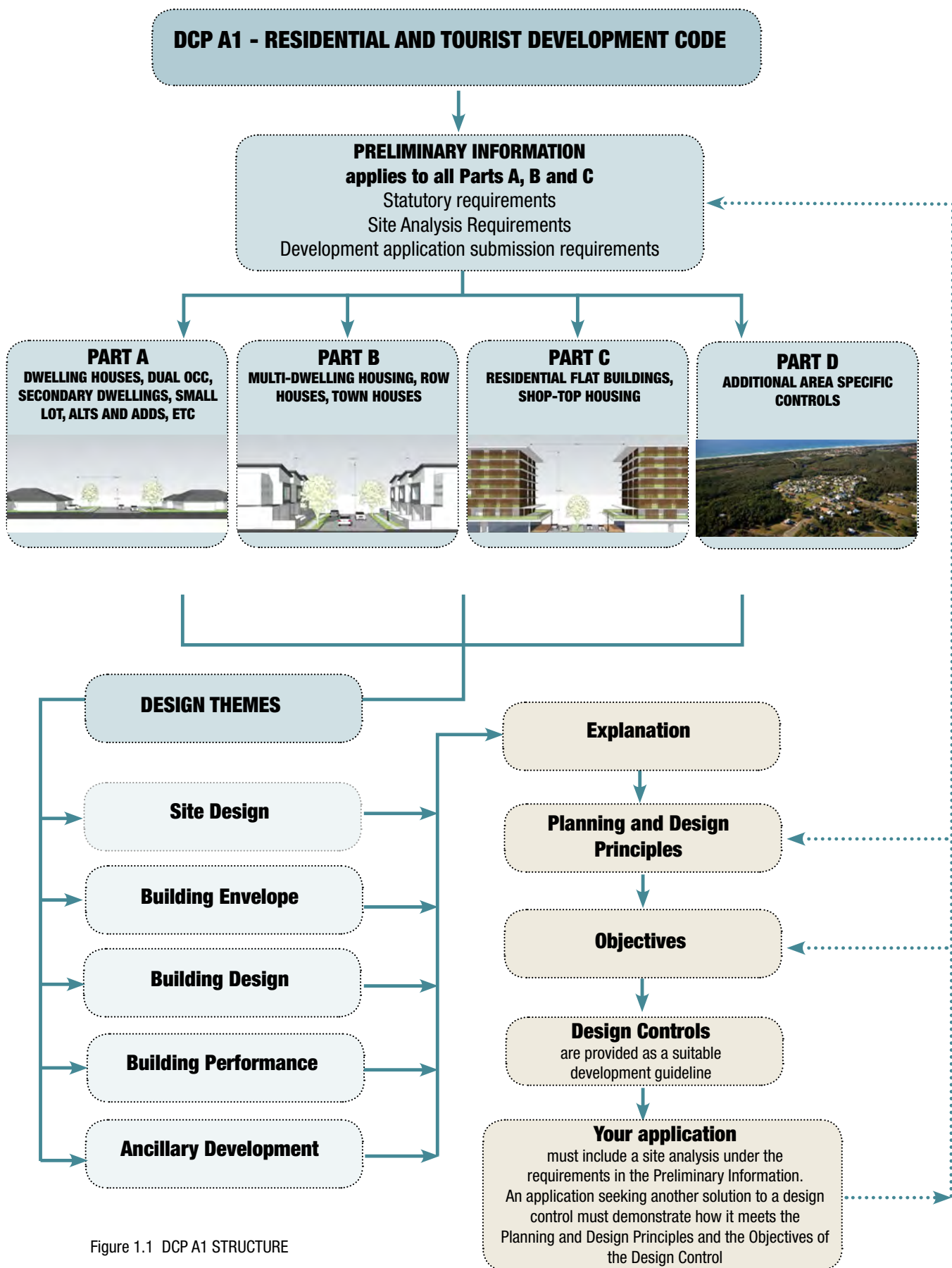


Figure 1.1 DCP A1 STRUCTURE

1. Introduction

1.1. Purpose of this Section

The purpose of this Section is to guide the planning and design of residential and tourist development and development ancillary to residential and tourist development within Tweed Shire.

1.2. Land to which this Section applies

This Section applies to all residential and tourist development within the Tweed Shire, except to the extent of inconsistency with a development provision contained in the Tweed LEP or area specific locality development control plan in Section B.

1.3. Development covered by this Section

This Section is in several Parts and applies to all development associated with the following building types:

PART A applies to dwelling houses, alterations and additions to dwelling houses, dual occupancy, secondary dwellings, garages, carports, outbuildings, swimming pools and tennis courts.

PART B applies to multi-dwelling housing and includes: town houses (including villas), and row housing (including terraces).

PART C applies to residential flat buildings and includes: shop-top housing, shop-top residential flat buildings, and residential flat buildings.

PART D applies to residential, tourist and visitor accommodation within specific areas

1.4. Objectives of this section

The over arching objectives of this section are:

1. Provide for a diversity of types and sizes of residential and tourist related development throughout localities;
2. Ensure that development is compatible with the local natural and built character, scale and amenity;
3. Ensure quality residential and tourist development which responds to the features of the site and the Tweed's subtropical climate; and
4. Encourage development that incorporates the principles of sustainability in design, materials and lifecycle.

1.5. How to use this Section

The Residential and Tourism Development Code ('the Code') is divided into a number of **Design Themes** relating to the site context, the site, the building envelope controls, building design, building performance and ancillary development.

Each **Design Theme** is structured to include:

- an **explanation** of the design criteria and why it is important the design criteria is considered and addressed;
- where relevant, over-arching **planning and design principles**;
- a range of **objectives** to achieve desired outcomes; and
- the **design controls**.

Note: Addressing these criteria is not a mechanism for an automatic variation but rather a process for enabling an assessment of an alternate solution on its merit.

Note: The "Development Application Guide" and a range of development application checklists are available on the Tweed Shire Council website at: <http://www.tweed.nsw.gov.au/Forms>

Council encourages the electronic submission of information as outlined in the Development Application (DA) Checklist on Council's website.

The State Government's State Environmental Planning Policy Exempt and Complying Development Codes (Housing Code SEPP) provides for a range of housing and ancillary development which may be carried out without a development application.

Applicants are advised to consult the Housing Code SEPP to determine whether development requires a DA or can be undertaken as Complying development through a Complying development Certificate (CDC).

This DCP Part does not apply to development undertaken as a CDC. CDC development is to comply with the Housing Code SEPP requirements.

The **design controls** are a development guideline and represent a possible acceptable solution to meet the design theme **objectives** and **planning and design principles**. It is acknowledged that there may be other acceptable solutions. Where a development application seeks an alternative solution to a design control this must be documented within the Statement of Environmental Effects (SEE), and include:

- Identification of the design control being varied; and
- Justification, supported by a detailed site analysis:
 - detailing why the design control cannot be met; and
 - demonstrating how the alternate proposal achieves the design theme objectives and planning and design principles.

1.6. Relationship to other Sections

All proposals must be designed to meet the requirements of all other relevant Sections contained within this DCP.

1.7. Use of diagrams within this Section

Illustrations provided in this section are indicative only and are provided to illustrate certain aspects of the plan. The diagrams must not be interpreted, used, or referred to as any form of either prescriptive or performance based control.

1.8. Non urban zoned land

Development on non urban land shall not, for the purpose of this Section, be restricted to the deep soil zone, setback and carport, garages and outbuildings controls where it is demonstrated that compliance with a particular control would be unreasonable in the circumstances. A variation under this circumstance will not be required to comply with the requirements of the variation provision of this Plan.

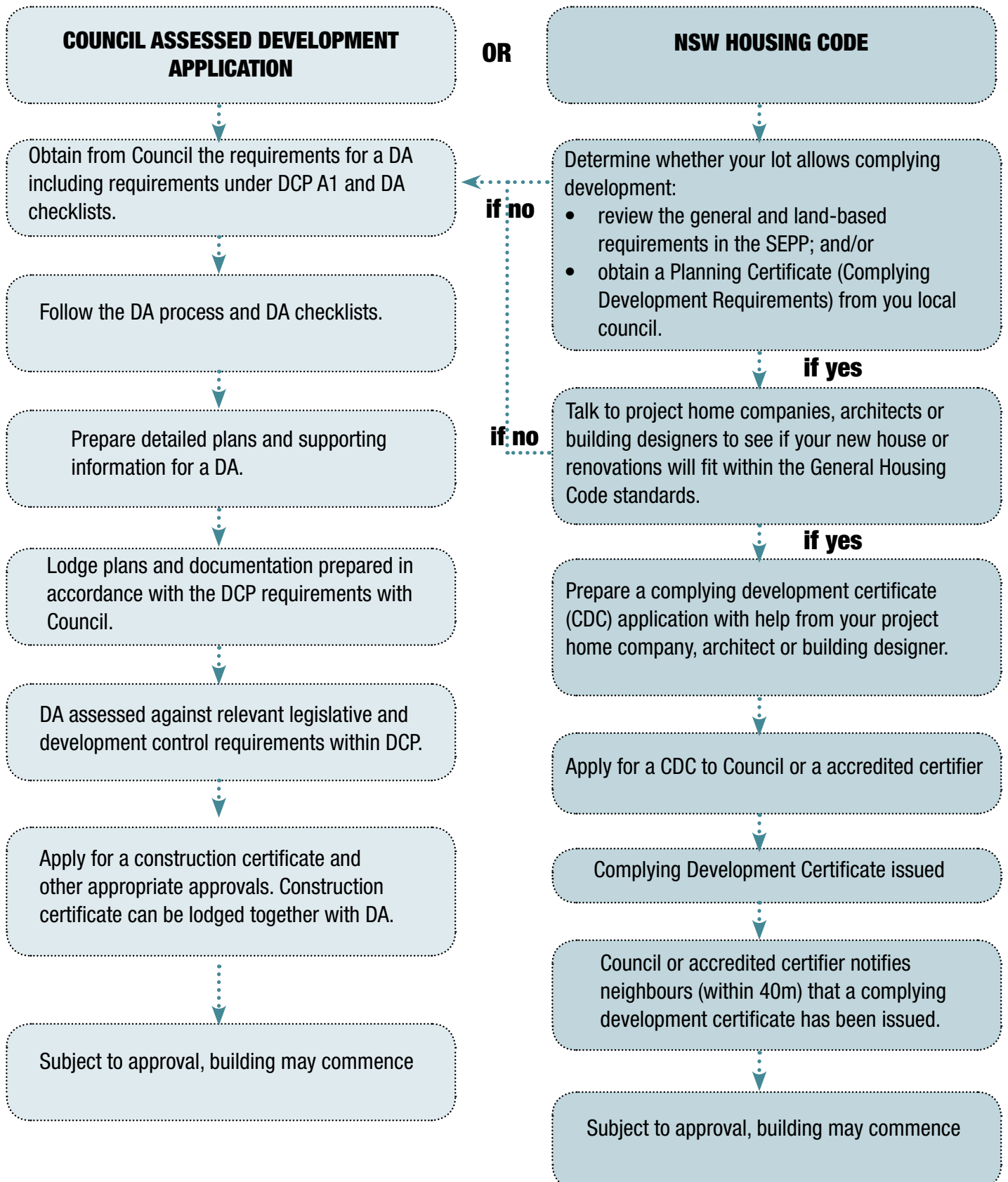
1.9. Pre-development application lodgement meeting

Applications for any development the subject of Part B or C of this Plan, comprising Residential Flat Buildings, Shop-top Housing, Town Housing, Row Housing or any one of these building types for tourist accommodation, that either includes a variation to a control or where the proponent perceives that a design issue may arise, is strongly recommended to arrange and attend a pre-development application lodgement meeting with Council's Development Assessment Panel (DAP), prior to the lodgement of a development application.

The recommended requirements for a pre-development application and development application submission are provided in Appendix 7.1 - Development application submission requirements.

The matters arising from a DAP Meeting must be addressed in the development application statement of environmental effects under the heading "DAP – Matters Arising" .

STEP BY STEP PROCESS FOR A NEW DWELLING UNDER THE NSW HOUSING CODE OR A DEVELOPMENT APPLICATION



2. Building types

Note: It is noted that the LEP provides a range of maximum development standards, including building height and floor space ratio.

This DCP section does not seek to restrict development which may be permitted under the LEP.

This DCP section does provide additional guidelines for various building types which may be permitted.

The Tweed Local Environmental Plan (LEP) defines the permissible uses within a zone.

This DCP Section further refines the applicable development controls which may apply to those permitted residential and/or tourist development building types.

A building type is used to describe building forms and site layouts with common characteristics.

Building types are useful for coordinating the desired character of an area and to ensure buildings achieve dwelling, site and streetscape amenity.

Building type is a tool used to ensure building and site design controls are coordinated to suit a range of common site and development types.

Building types are important as they guide development to be more specific to the following conditions:

- the site size and allotment proportions;
- the relationship to existing built form, subdivision and block context;
- the relationship to the existing streetscape; and
- the site characteristics such as topography and vegetation.

The residential dwelling types identified in this Section are:

- Dwelling Houses (Including ancillary structures) (Part A)
- Dual Occupancy, Secondary dwellings (Part A)
- Town Housing (including villas) (Part B)
- Row Housing (including terraces) (Part B)
- Residential flat buildings (Part C)
- Shop-top Housing (Part C)

2.1. Hybrid development

This plan encourages developments to be comprised of any combination of building types, where the zoning allows.

This can occur on larger sites where a range of building types will be proposed or where the design of a building takes on the characteristics of two building types such as a residential flat building layout that is two storeys ie. a town house.

In such cases and where it is unclear as to what controls to apply the development, the proponent must automatically work to the most stringent control. In the example above, the residential flat building controls, notwithstanding its two storey design, would apply.

It may be at the discretion of Council's Development Assessment Panel to advise when to use the less stringent controls; exercising its judgement based on the site and its particular circumstances.

Note: Where a term is not defined, the DCP relies on the definitions within the applicable Tweed LEP.

3. Dictionary applying to this Section

Access handle: a strip of land forming part of a site whether in fee-simple or right of way, which has the principle function of providing a property access.

Amenity: the livability or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is gained from elements such as sunlight, views, privacy, ambiance and the like.

ANEF contour: Has the same meaning as it has within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Reference is also made to *Australian Standard AS2021 Acoustics - Aircraft noise intrusion – Building Siting and Design*.

Articulation Zone: Has the same meaning as it has within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Attached dual occupancy: means two dwelling-houses that are physically attached by way of a common or shared wall (between internal living areas) or garage but does not include carport, breezeway or the like, open or detachable structure.

Balcony: an outdoor, open or partially enclosed area that is either partially integrated into or protrudes entirely from the outer enclosing walls of a building as a means of providing private open space.

BASIX: introduced as part of the NSW planning system, BASIX (the Building Sustainability Index), is a web-based planning tool that measures the potential performance of new residential dwellings against sustainability indices.

Battleaxe: Has the same meaning as within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Building envelope: a three dimensional zone determined by height, width, depth and setbacks that defines the buildable area on a site.

Building elevation: the external wall of a building.

Building footprint: is area of the building to the extent of the edge of the roof line.

Circulation core: common areas within a development that provide pedestrian movement within the building.

Climate: in the context of this Plan refers to the climatic zones attributed to the Tweed Shire LGA by the Bureau of Meteorology, comprising subtropical (warm humid) and temperate zones.

Communal open space: a designated shared open space area available to the occupants of more than one residential / tourist dwelling and which is under the control of a body corporate or equivalent.

Colonnade: a semi enclosed sidewalk (the pedestrian part of a public street) enclosing on the top and one side by buildings. The colonnade generally has columns that support the building over the sidewalk located between the sidewalk and the carriageway (the vehicular part of the street).

DCP: refers to a Development Control Plan prepared in accordance with the Environmental Planning and Assessment Act 1979.

Deck: refers to an external platform, usually elevated, located alongside and accessible from an interior space.

Deep Soil Zone: means that area of a site with no above ground level or subterranean development, including driveways, paved surfaces, pathways, or like surface, that serves principally for larger tree and landscape plantings.

Demolition: refers to the damaging, defacing destruction, deconstruction, pulling-down, removal or the like of a building in whole or in part.

Development: has the same meaning as it has in the Environmental Planning and Assessment Act 1979.

Double loaded corridor: is a corridor in a Residential Flat Building with apartments on both sides. These buildings have most apartments with one orientation only.

External living areas: External living area refers to an external space that extends the living and recreation space of a dwelling to 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.

Floor Area: Has the same meaning as it has within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Front fences and walls: refers to fences and walls situated forward of the building façade or within the nominated front building line (setback), whichever is the greater, that are located on the site.

Frontage or primary frontage: refers to the area of abutment between a boundary line between a site and a public street, and in the case of a multi-frontage site the boundary at which the property is addressed.

Habitable room: Has the same meaning as the Building Code of Australia.

Impervious area: means a surface area that does not allow rainwater to penetrate through into the underlying ground.

Indigenous species: refers to a plant or animal species that occurs at a place within its historically known natural range and that forms part of the natural biological diversity of a place.

Infill: Infill development is any allotment that is neighboured or adjoins a property that supports a building, including sites within new subdivisions, where that development has already occurred.

Operable screening device: refers to sliding, folding or retractable elements on a building designed to provide shade, privacy and protection from natural elements.

Outbuilding: Has the same meaning as it has within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Passive solar design: refers to a design or modification to a building to minimise energy consumption by taking advantage of natural heating and cooling methods.

Roof terrace: refers to the flat roof of a building (or part thereof), which is designed to be used or adapted for open space or recreation purposes for one or more of the occupants of the building, and which is open to the sky.

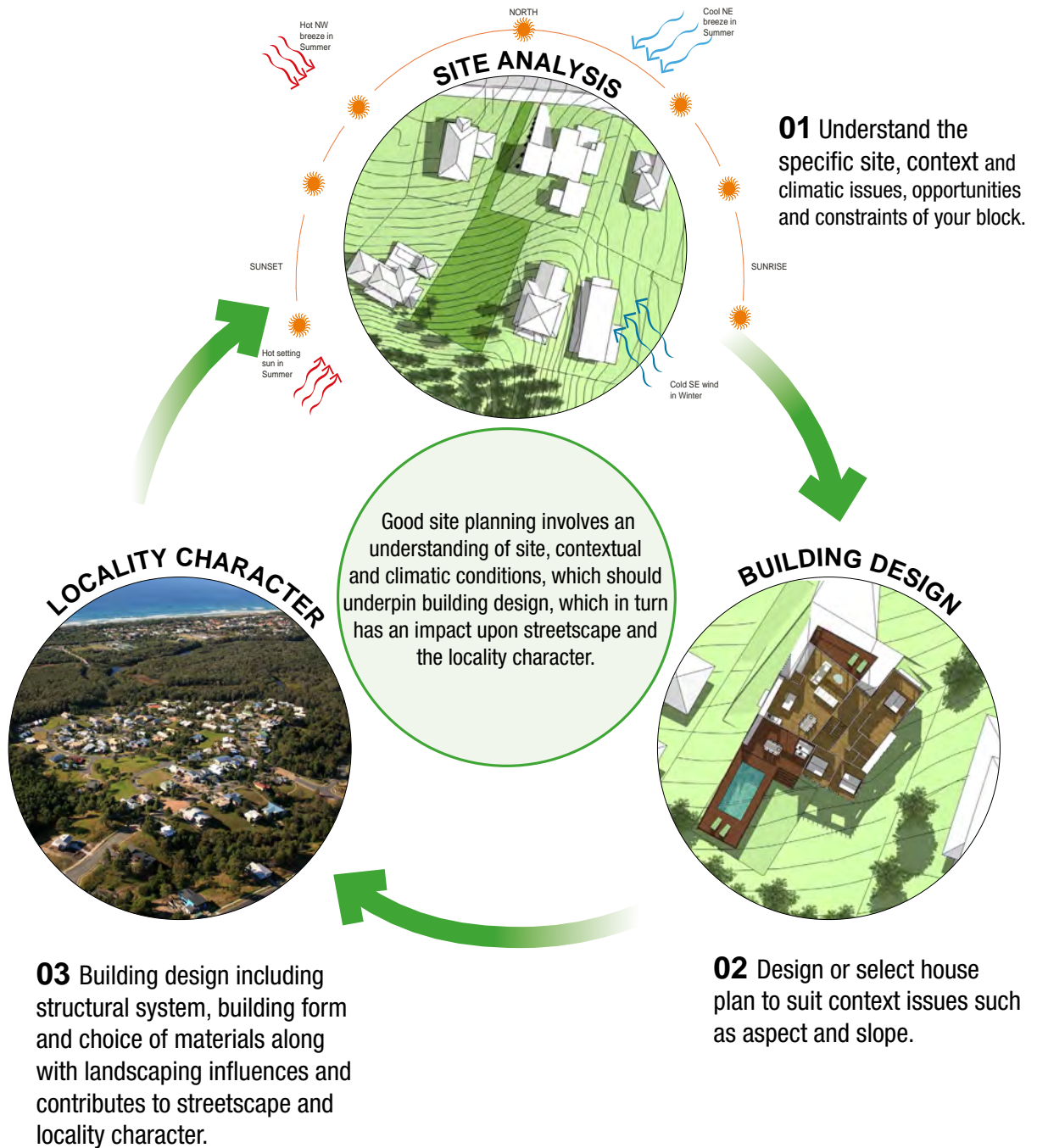
Secondary (road) street frontage: Has the same meaning as it has within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

SEPP: refers to a State Environmental Planning Policy.

Shadow diagram: refers to a plan illustrating the extent of shadow cast by a specified object or building at predetermined times of the day and year, and that are based on a longitude and Latitude for that site.

Standard Instrument: means the standard local environmental planning instrument prescribed by the Standard Instrument (Local Environment Plans) Order 2006.

Tweed LEP or TLEP: refers to the Tweed Local Environmental Plan.



Site Analysis - An integrated site analysis understands the relationship of a particular site within a given context. It looks at opportunities and constraints to ensure this information is used to inform a design outcome. Buildings designed to specifically address topographic and climatic considerations are generally more comfortable to live in.

3. Context and site analysis

The first step in good design is to understand the character and attributes of the site and the locality.

Site analysis and design comprises two parts:

1. assessment of the site and locality and then,
2. developing or selecting a dwelling design that responds to the characteristics of the site and the locality, the opportunities, constraints, unique features or hazards of the site.

Examples of site analysis showing these two parts is provided in Appendix 7.2.

Note: Development that is designed to the site conditions greatly enhances the dwellings amenity, livability and general comfort.

On a broader level understanding and responding to the site enhances the sense of place, reinforces the role and character of the Tweed localities, improves the quality of the environment for the community and ensures that the proposed development is the best possible solution and makes the best contribution to its surroundings.

Development designed within this context is also cheaper to operate and maintain, reducing reliance on artificial lighting and mechanical heating and cooling.

Note: A site analysis template is available on Council's website to assist in preparing the site analysis documentation.

It is noted the degree of detail required will vary according to the nature, type and scale of the proposed development, its surroundings and potential amenity impacts.

Planning and design principles

Buildings designed to respond to a site and context demonstrate the following key principles:

- P1. Demonstrates that the site analysis has been used in preparing or selecting the design for the site and that due consideration has been given to the opportunities and constraints of the site and its context.
- P2. The design is climate appropriate and responsive.
- P3. Respects the topography and landforms of the site and locality.
- P4. Understands that each dwelling built within a street builds up the "character of the Tweed".
- P5. Values, protects and shares views and landscape vistas.
- P6. Minimises issues relating to noise transfer, overshadowing and overlooking, safety, access, views and privacy.

Objectives

- O1. Ensure the opportunities and constraints of a site and its surroundings are comprehensively considered and inform the proposed dwelling design or selection.
- O2. Ensure that development embodies best practice site planning principles and makes a positive and harmonious contribution to its surroundings.
- O3. Ensure the proposal results in a dwelling that is sensitive to its built and natural environment context, the unique features and hazards of the site and is of high design quality.
- O4. Ensure that the dwelling is designed and sited appropriately for the Tweed's temperate sub-tropical climate.

Controls

- C1. A site analysis, including details as relevant but not limited to the criteria in the Site Analysis Checklist (Appendix 7.2) is required for all dwelling development applications involving external building work, and is to demonstrate how the proposed development responds to the site analysis. Minor development (such as extensions, minor renovations) may only require a partial site analysis for the affected area of the site.

3.1. Streetscape

Designing and constructing a dwelling should not be considered in isolation of understanding the character of its locality. The context relates to those aspects of the urban environment which are enjoyed by the public and include neighbourhood character, streetscape character, public views and vistas.

New developments, alterations and additions can contribute positively to the neighbourhood and streetscape character. 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.

Building orientation is also a key aspect in ensuring that development responds to the streetscape, seeks to ensure privacy and outlook for dwellings and to protect the amenity of neighbouring dwellings.

Planning and design principles

Dwellings which create and contribute positively to streetscape character demonstrate the following key principles:

- P1. Dwellings 'sit' comfortably within the streetscape by way of integrating design with topography and establishing a strong and engaging address to the street.
- P2. Understand and address the relationship between street width and streetscape scale with an appropriate dwelling form and scale.
- P3. Understand and respond to the characteristics of existing dwellings within the street including built form rhythm, setbacks, roof forms, materials, point of access, driveway design and prominence of garaging.
- P4. In existing residential areas the established orientation of dwellings is to the front and the rear of lots. It is important that new or infill development respects and integrates within this pattern so as to fit within the established context.
- P5. Consider the form and impact of the new dwellings size and shape, elevations, setbacks, height, and roof within the streetscape and on the adjoining properties.
- P6. Consider the internal and planning to promote spaces and decks that overlook and are orientated towards the street providing a strong street address and passive surveillance opportunity.
- P7. Consider the relationship of the dwelling and its yard spaces within the streetscape to ensure a positive contribution of dwelling house and garden materials, front and side fencing and landscaping to the street.

Note: 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 seeks to ensure there is consistency in the built and landscape form along streets on private sites, ensure that dwellings and their gardens relate well to each other and to the landscape setting along the street and that residential development integrates with and contributes to the streetscape character.

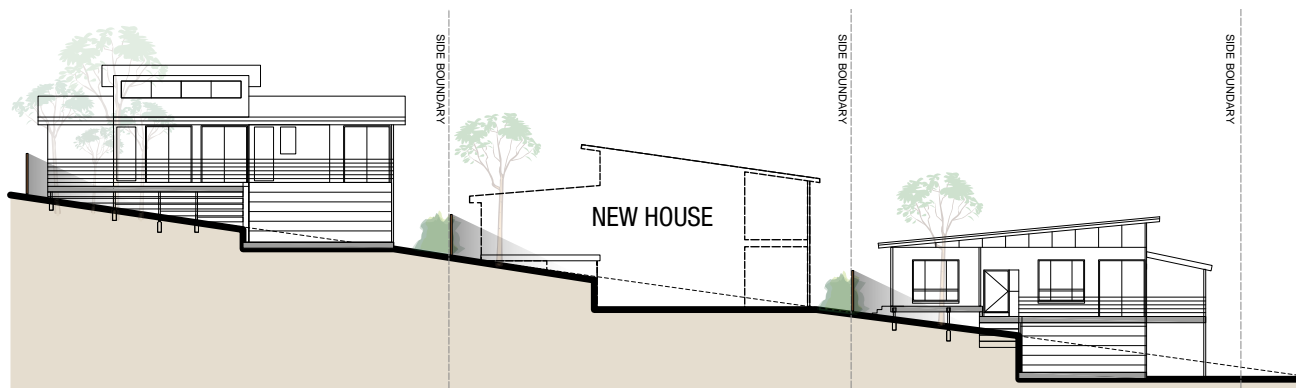
Objectives

01. To ensure new development is compatible with, and complements the positive characteristics of the existing built, landscape and topographic elements of the streetscape.
02. To ensure residential development encourages a high level of pedestrian amenity, access, safety and passive surveillance to and along the street.

Controls

- C1. All dwellings should address and offer passive surveillance over the street by ensuring important elements such as front doors, building entry areas and windows are prominent in the building facade (including secondary dwellings) with the entrance clearly identifiable from the street.
- C2. Site design, building setbacks and the location and height of level changes are to consider and be compatible with other buildings and sites along the street, particularly those that are older and more established.
- C3. Corner buildings are to address both street frontages.
- C4. Building design is to consider the contribution of facade elements on the streetscape, including:
 - i. Coordinating and integrating building services, such as drainage pipes, with the overall facade design;
 - ii. 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;
 - iii. Ensuring entrance porticos and other articulation zone features are single storey or of a scale relative to the building; and
 - iv. Include screening to exposed undercroft areas particularly those visible from the street.

Note: Also refer to streetscape controls in the context of landscape controls (Section 2.2) and garage and carport design (Section 4.7).



Streetscape - The design of new development should take reference from the existing and desired future streetscape character in terms of existing topographic condition, building and landscape design.

3.2. Views and vistas

The wide mountain and river panoramas of Tweed are an integral part of the Tweed character and highly valued by the community. The Tweed Green Cauldron (the Mt Warning Caldera) is recognised by the Australian Government as a 'National Iconic Landscape'. It is essential that these iconic views and vistas are protected.

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.

View sharing is achieved where new dwellings, alterations and additions are designed so as to achieve views whilst retaining the private views enjoyed from existing dwellings on neighbouring sites.

Objectives

01. 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.
02. To ensure public view corridors, particularly those down streets and between buildings, are not unnecessarily reduced or obliterated.
03. To ensure public views of important public places or buildings are protected.
04. To protect the iconic scenic landscapes of the Tweed.
05. To have regard to the "Tweed Scenic Landscape Evaluation".
06. To ensure dwellings respect important views from living areas and rooms within existing neighbouring dwellings and employs the principles of view sharing.

Note:

The "Tweed Scenic Landscape Evaluation" is available on Council's website

Note:

*A scenic impact assessment may be required where development intrudes within scenic landscape vistas.

Also refer to Planning Principles relating to view sharing and assessment of view impact which can be accessed at:

http://www.lawlink.nsw.gov.au/lawlink/lec/ll_lec.nsf/pages/LEC_planningprinciples

Controls

- C1. Building siting and height is, as far as it is practical, to be designed to minimise the impact on views from surrounding properties, and follow the Planning Principles (refer note) of view sharing between properties.
- C2. The location and height of new development is not to significantly diminish the public views to heritage items, dominant landmarks, public buildings from public places or unreasonably obscure public district views of major natural features such as the water, ridgelines or bushland.*

PART A - DWELLINGS HOUSES, DUAL OCCUPANCY, SECONDARY DWELLINGS, ALTERATIONS AND ADDITIONS AND ANCILLARY DEVELOPMENT

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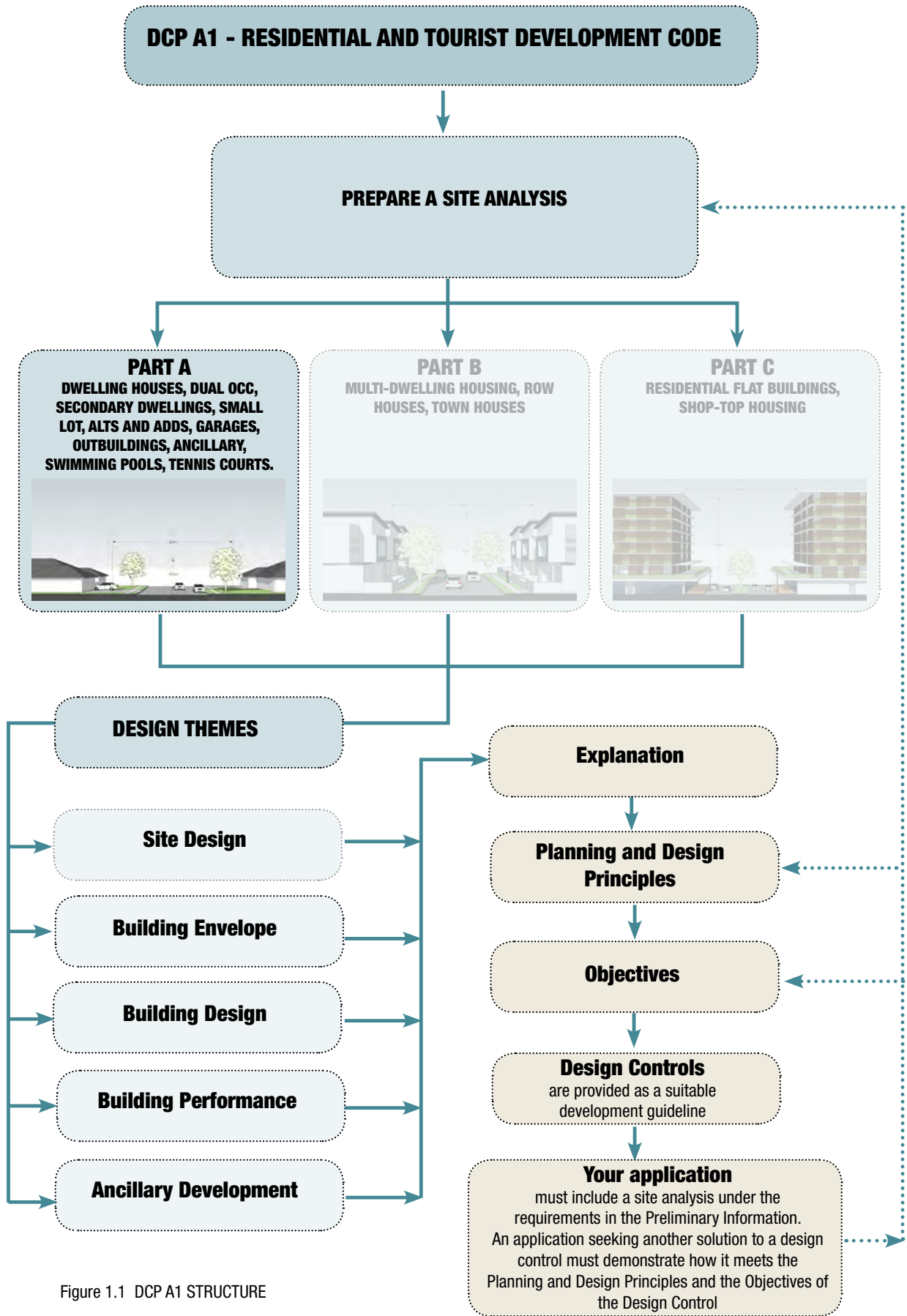


Figure 1.1 DCP A1 STRUCTURE

1. Introduction

1.1. Purpose of this Part

The purpose of this Part is to guide the planning and design of dwelling houses, secondary dwellings, dual occupancy, alterations and additions to these forms of housing and development ancillary to these forms of housing within Tweed Shire.

1.2. Development to which this Part applies

This Part applies to all single dwelling, secondary dwellings and dual occupancy residential and tourist development within the Tweed Shire, except to the extent of inconsistency with a site specific development provision contained in the Tweed LEP or adopted area specific locality development control plan in Part B.

1.3. Structure of this Part

This Part is broadly divided into the following design controls:

- Site Design;
- Building envelope controls;
- Building Design;
- Building Performance; and
- Ancillary Development.

Each of the design themes contain a range of design principles, informing the objectives which underpin the design controls.

1.4. Building types

Part A of DCP A1 relates to:

- Dwelling houses;
- Dual occupancies;
- Secondary dwellings;
- Small lot housing;
- Alterations and additions; and
- Ancillary development.

Part A Planning and design principles

- P1. Liveable dwellings provide a high level of residential amenity for residents and contribute to the character of the street and the surrounding suburb, whilst not unduly affecting the amenity of neighbouring dwellings or allotments.
- P2. Liveable dwellings are those that have been designed to suit the specific conditions of a given site through a process of site analysis and site planning, building orientation, structure and material selection and integration of landscape.
- P3. Dwellings within the Tweed respond to the sub-tropical climate, high scenic value and sloping topography.
- P4. Small lot housing is best located within or directly adjoining centres, ensuring a balance between density and accessibility.
- P5. Small lot housing has a strong relationship with the street. Rear garages and vehicular access is encouraged for small lot housing which typically has narrower street frontages.

Part A Objectives

01. To ensure development responds to the characteristics of the site and the qualities of the surrounding built and natural contextual environment.
02. To achieve environmentally, economically and socially sustainable development.
03. To encourage innovative design for all forms of residential development which is of a high standard of architectural design and merit.
04. To provide a diversity of housing types and sizes within residential areas that meet the needs of the wide range of family and household types and encourages greater availability of varied and affordable housing.
05. To provide opportunity for small lot housing which is sensitively designed to mitigate amenity impacts on the subject block and adjoining development.

Part A Controls

General

- C1. Dwellings and development must be consistent with the scale and character of surrounding dwellings or as envisaged through an adopted concept plan, locality plan, design statement / covenant or the like.

Dual Occupancies

Note:

During the transition period and for the purposes of understanding development types the Tweed LEP 2000 2(b) Medium Density Residential zone translates to the R3 Medium Density Residential zone in the draft Tweed LEP 2012 under the Standard LEP Template.

A condition requiring the creation of a restriction as to user on the land's title, in accordance with the Conveyancing Act 1919, for the purposes of prohibiting subdivision of the development will be imposed on any secondary dwelling development consent.

Secondary dwellings are exempt from payment of contributions in accordance with Section 94 of the Environmental Planning and Assessment Act, 1979 and Section 64 of the Water Supply Authorities Act, 2000.

For maximum floor area of a secondary dwelling, refer to the LEP.

A secondary dwelling of similar size to the primary dwelling will be considered and assessed as a dual occupancy.

The creation of small lots may require a planning proposal to amend the minimum lot size development standard for a given land zone.

- C2. Dual occupancies are considered as two separate dwellings, each of which are required to meet the requirements setout in Part A.
- C3. Dual occupancy developments on R1, R2 and RU5 zoned land must be located:
 - on sites with a minimum area of 900m², or
 - on a minimum area of 500m² if the land is within the low density residential zone and within 300m of a business zone.
- C4. Dual occupancy developments on R3 zoned land must be located on a minimum area of 450m².
- C5. Dual occupancy developments must not be located on battle-axe lots.
- C6. In all dual occupancy developments, applicants are to nominate front, rear and side boundaries and apply setback and landscape area requirements accordingly. The nomination of these boundaries, setbacks and configuration of the development is to be justified through a site analysis.
- C7. Mirror image dual occupancy or replication of identical facades is generally discouraged unless it forms part of an overall architectural composition.
- C8. Dual occupancy on non-urban zoned land is not restricted by landscape area, setback, carport, garages and outbuildings controls.

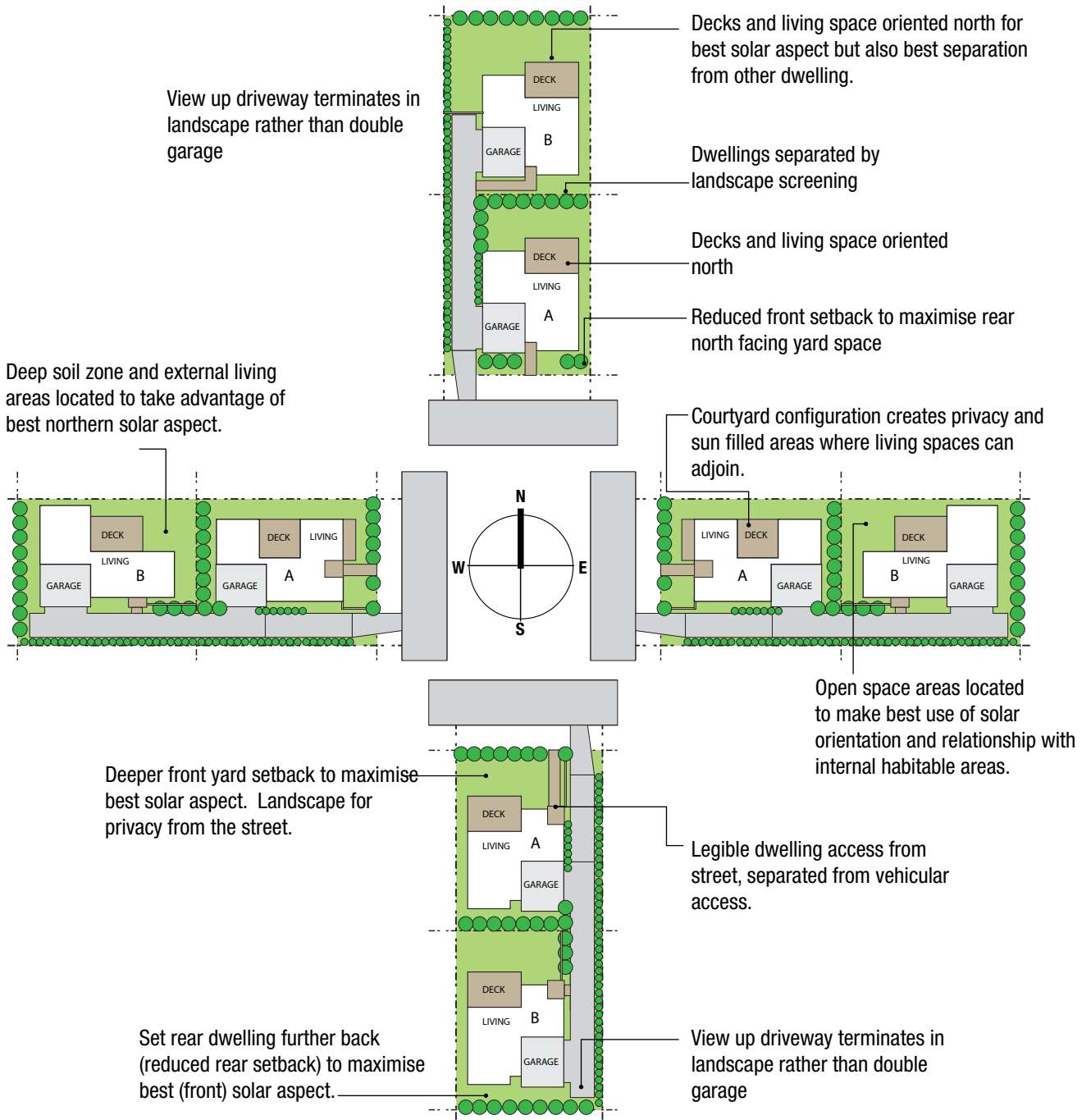
Secondary dwellings

- C9. Secondary dwellings are ancillary to the primary dwelling and are only permitted on allotments which have a site area of more than 450sqm.
- C10. Subdivision of a secondary dwelling development is not permitted. This includes strata, torrens and community title forms of subdivision.
- C11. For the purposes of calculating car parking, landscape (including deep soil zones) and site coverage the secondary dwelling shall be considered collectively as part of the main dwelling.

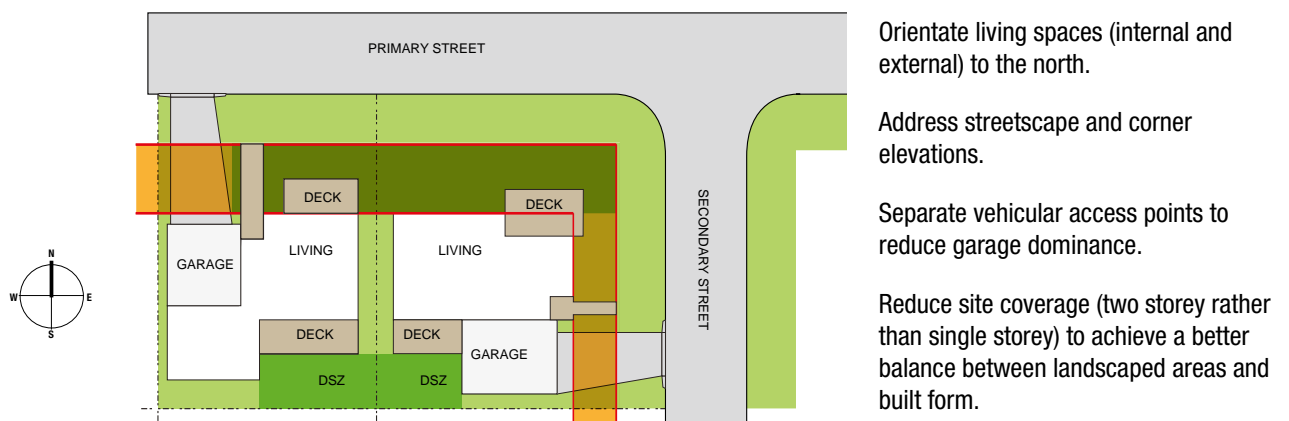
Small Lot Housing

- C12. Small lot housing must have a minimum lot size of 200m².
- C13. Small lot housing development must demonstrate walkable proximity to a range of services, facilities, public transport and recreational areas through a site analysis.
- C14. Small lot dwelling design should contribute positively to the streetscape by maximising verandahs or balconies at the front activating the dwelling frontage and interaction with the street.
- C15. Garaging to small lot housing is encouraged to be provided from a rear laneway.
- C16. Small lot housing development must demonstrate how it integrates with the adjoining lots and surrounding locality.

INDICATIVE SITE CONFIGURATION - STACKED DUAL OCCUPANCIES

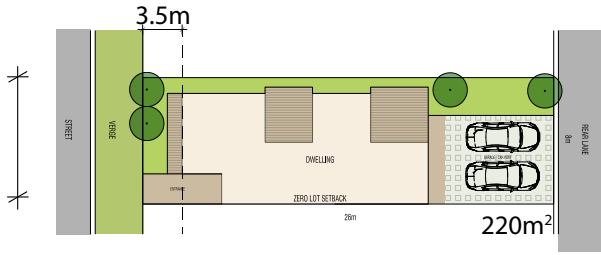


INDICATIVE SITE CONFIGURATION - CORNER DUAL OCCUPANCIES



INDICATIVE CONFIGURATION - SMALL LOT HOUSING

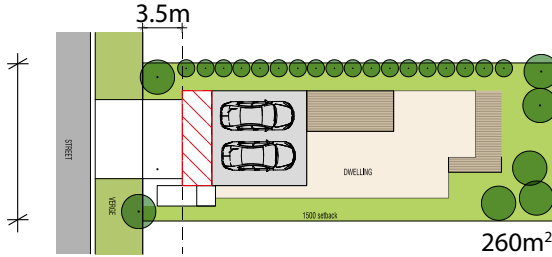
8.0m



Single storey Detached House

2 bed plus home office to street
Rear loaded car park doubles as courtyard
Zero setback to south
3.5m front setback
North facing decks and nooks

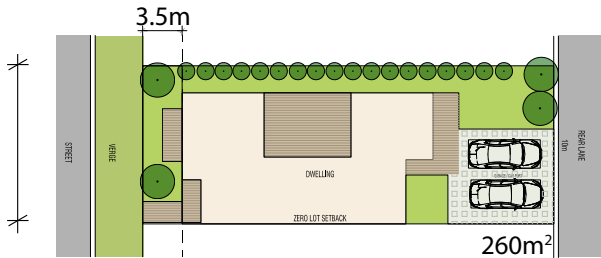
10.0m



2 storey Detached House

Street car access under projecting upper level deck
1.5m side setback to north and south
3.5m front setback (deck in articulation zone)
North facing decks and nooks

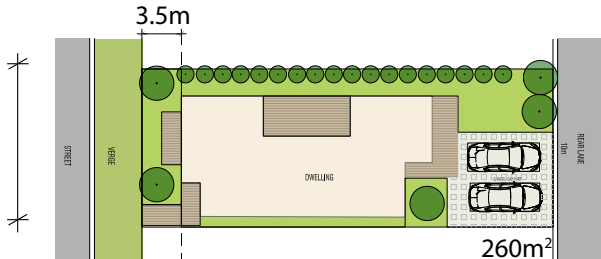
10.0m



2 storey Courtyard House

Rear loaded car park doubles as extension of outdoor amenity space
Zero side setback to south (part of integrated housing development) allows deeper internal courtyard
3.5m front setback (deck in articulation zone)
North facing decks and nooks

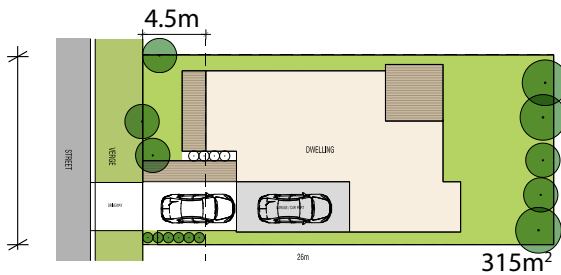
10.0m



2 storey Courtyard House

Rear loaded car park doubles as extension of outdoor amenity space
1.5m side setback to north and south
3.5m front setback (deck in articulation zone)
North facing decks and nooks

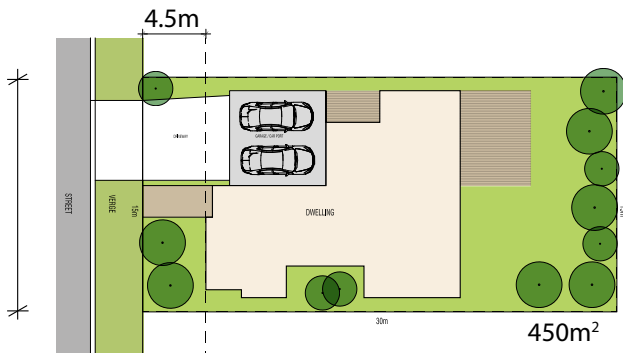
12.0m



Single storey House

Front tandem or stacked parking (5.5m setback)
900m side setback to north and south
4.5m front setback (deck in articulation zone)
North facing decks and nooks

15.0m



2 storey Detached House

Front car access setback
Deck over recessed garage
1.5m side setbacks
4.5m front setback
North facing decks and nooks



2. Site design

Site design provides a range of criteria to be considered when planning a dwelling, alterations or additions. Site design criteria includes:

- Topography, cut and fill; and
- Landscaping

2.1. Topography, cut and fill

Tweed Shire has significant and varied topography which forms an integral part of the Tweed character. It provides a variety of views and vistas, both local and distant, from public and private domains, which should be an integral consideration of the design or choice of new dwellings.

Development on the steeper and higher topographical areas is often more prominent, particularly when viewed from the low side. Well considered design ensures dwellings integrate with the streetscape and 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, cut and fill or benching can substantially alter the landscape character of the Tweed. This may also 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, due to the gradient and characteristics of the site, major excavation or filling as a result of single raft slab construction would be inappropriate.

Planning and design principles

In order to ensure the protection of the integrity of the Tweed topography and scenic landscapes, buildings incorporate the following key principles:

- P1. The building is designed to 'suit the site' rather than the site 'modified to suit a building'.
- P2. Construction of buildings and construction /structural system maintain the integrity and rhythm of the natural topography.
- P3. Changes in level are incorporated within the footprint of the building rather than at the site boundaries.
- P4. Changes in level outside of the building footprint are landscaped to mitigate visual impacts.
- P5. Development is designed incorporating alternatives to full width and/or depth site benching.
- P6. Buildings generally step with the natural topography in order to remain under the height limit and in order to avoid excessive cut and fill.

Note:


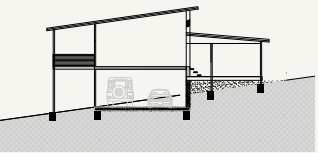
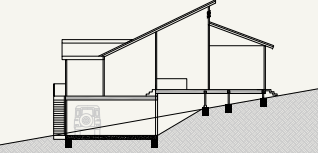
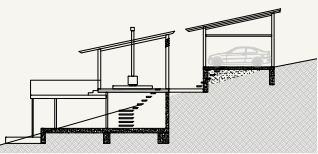
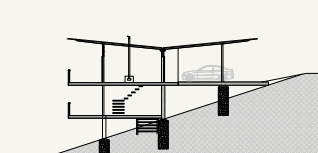
In this context 'rhythm' means the pattern and flow of buildings and topography within the locality and/or streetscape.

Objectives

01. To maintain the integrity of the topographic and scenic landscapes of the Tweed by limiting the extent of excavation, cut, fill and site benching.
02. To moderate the effects of building height, bulk and mass on sloping land.
03. To ensure that the building siting, design and construction method is appropriate for site slope.
04. To mitigate the issues of overlooking, overshadowing and drainage arising from level changes particularly at lot boundary interface.

Controls

- C1. Where earthworks are proposed within the building footprint, construction shall be generally consistent with following requirements:

Slope, construction and cut and fill controls					
Slope		Cut allowance	Fill allowance	Appropriate Structure	Indicative Diagram
0-6°	0-10%	1.0m	1.0m	<ul style="list-style-type: none"> • Single slab on ground • Split slab • Post and beam • Hybrid slab post and beam 	
6-8°	10-14%	2.0m within the footprint of the building*	1.0m	<ul style="list-style-type: none"> • No single slab on ground • Split slab • Post and beam • Hybrid slab post and beam 	
8-12°	14-21.5%	2.0m within the footprint of the building*	1.0m	<ul style="list-style-type: none"> • No single slab on ground • Split slab • Post and beam • Hybrid slab post and beam 	
12-18°	21.5-32.5%	3.0m within the footprint of the building*	1.0m	<ul style="list-style-type: none"> • No single slab on ground • Split slab • Post and beam • Hybrid slab post and beam 	
>18°	>32.5%	1.0m	1.0m	<ul style="list-style-type: none"> • No single slab on ground • Downslope construct only • Split slab • Post and beam • Hybrid slab post and beam 	

*Building footprint is defined as the most outer edge of the roof (including fascia and gutter).

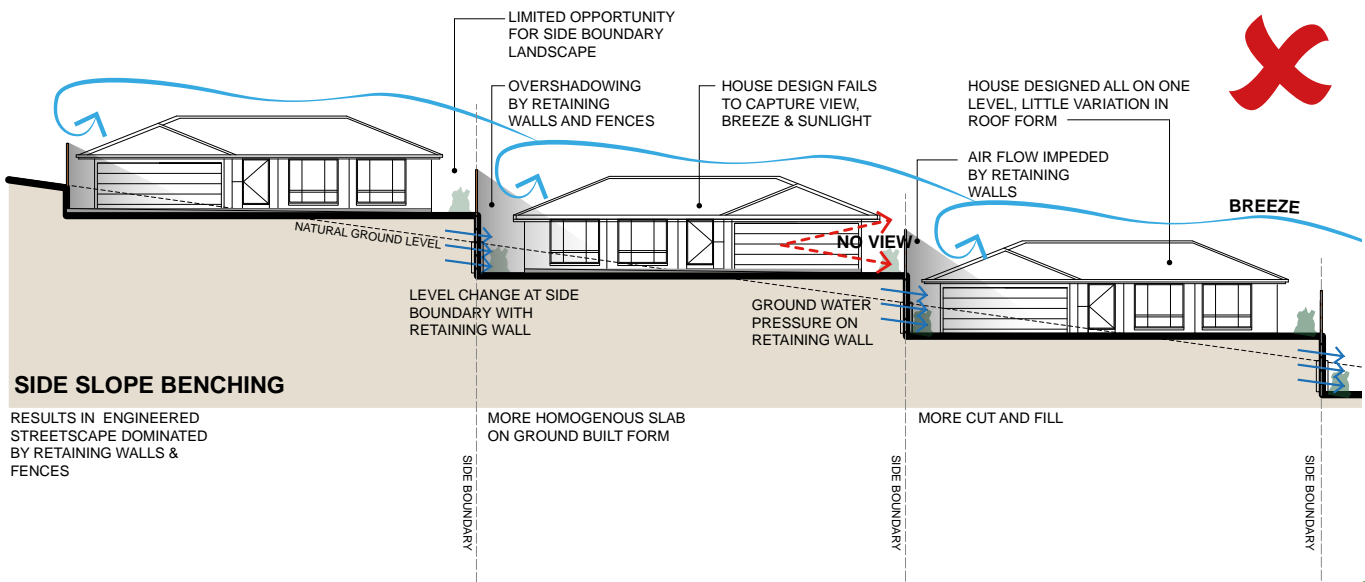
Table 1 - Cut and Fill Requirements

Note:

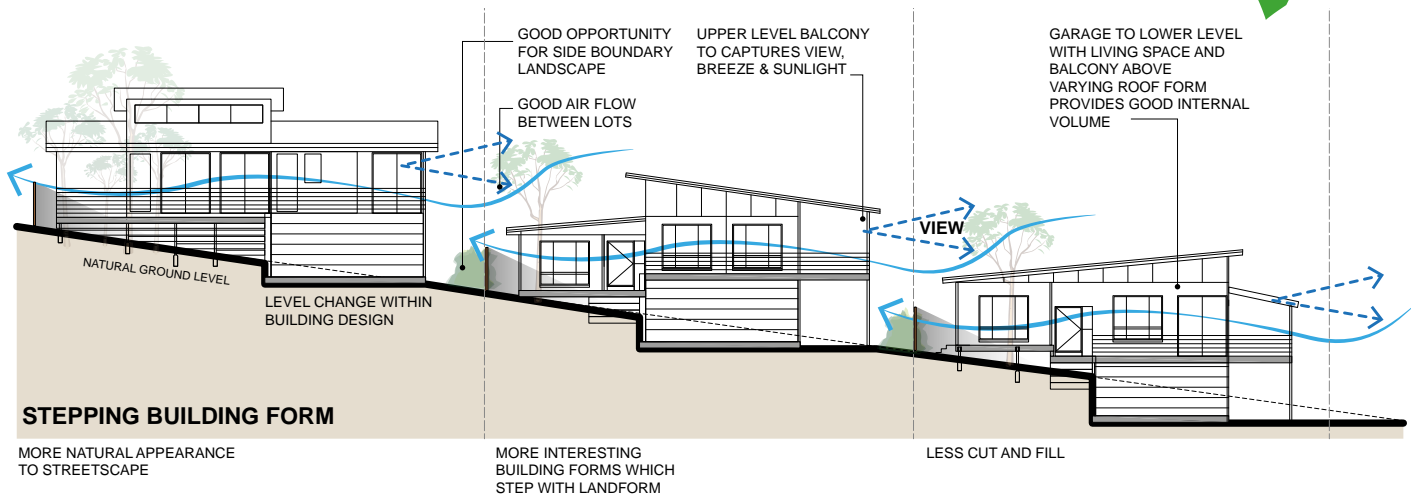
Some steeply sloping allotments won't be able to achieve the rate of +/-1.0m over 10% of the site to a maximum of 100sqm. In this situation outdoor amenity areas may need to be supplemented by decks and other forms of constructed outdoor living space.

- C2. Outside of the building footprint cut and fill to 1.0m for up to 10% of the site or a maximum of 100sqm is permissible to achieve flatter backyards, outdoor living areas, bbq areas, clothes drying areas and the like. On steeply sloping sites (12 degrees and over) consideration may be given to greater cut and fill thresholds subject to:
- i. Justification and satisfaction of the proposal against planning and design principles and objectives of this section;
 - ii. Justification of the proposal and design intent through a site analysis including consideration of the likely streetscape impacts and compatibility with existing streetscape character;
 - iii. Demonstration of a structural system of the house appropriate to the site and slope;
 - iv. Justification and documentation of full site sections showing all existing and proposed levels and proposed retaining walls and batters;
 - v. Consideration of the likely amenity impacts including overlooking, overshadowing, drainage and structural issues;
 - vi. Limiting multiple retaining walls to 1.0m encouraging terracing rather than one large wall;
 - vii. Landscaping to mitigate visual impacts of retaining walls and batters;
 - viii. Suitable stormwater and drainage management.
- C3. Excavations and fill in excess of 1 metre may be permitted to allow for compliant driveways and basement garages providing the excavations are adequately retained and drained in accordance with engineering requirements.
- C4. The interface of the proposed building cut and fill and the natural slope is to be documented on all development plans and sections including the existing and proposed slope of the site levels, all proposed batter and retaining works and where appropriate the interface with adjoining properties. All levels are to be depicted in Australian Height Datum (AHD).
- C5. Cut and fill batters and retaining walls outside of the building footprint are to be landscaped to mitigate visual impacts.
- C6. Cut and fill batters shall not:
- i. 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 stabilization to prevent soil erosion.
 - ii. be located where the toe of any battered fill (or retaining wall) is closer than 900mm for cut and 1.5m for fill to any property boundary, where the overall height at any point exceeds 500mm.
 - iii. be located where they will impact on the privacy of neighbours.
 - iv. shall not extend onto Council's road reserve.

- C7. Retaining walls, unless constructed for the sole purpose of landscaping, should be constructed of a material such as concrete, masonry, rock or other permanent type material. Timber retaining walls are not acceptable for walls that support side boundaries or structures.
- C8. Where more than one retaining wall is required, this should be in the form of terracing with landscaped areas between level changes to soften the visual impact of the retaining wall.
- C9. On side sloping allotments where there are existing inter allotment retaining walls, further retaining walls within the side setback will be limited to 600mm.
- C10. Where a property is burdened by stormwater or water and sewerage mains then Council will generally preclude any excavation or filling within that easement.



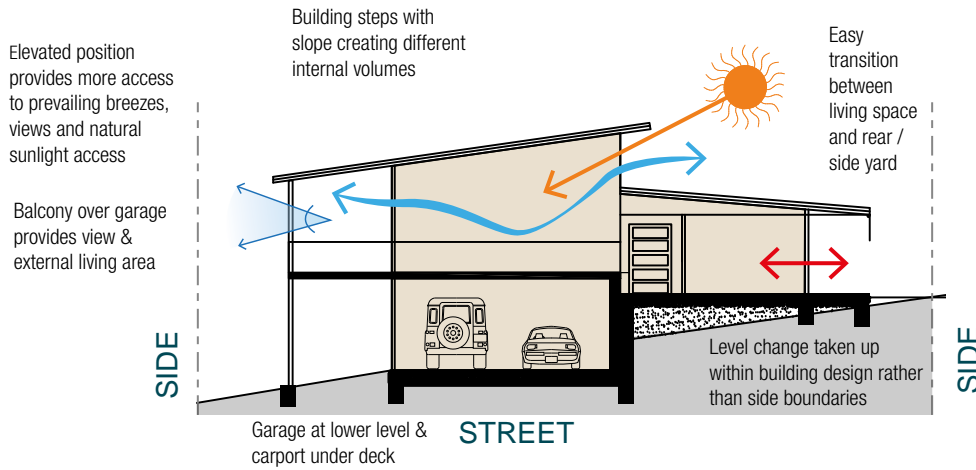
Cut and fill resulting in full width site benching is not desirable as this is altering the topographical character of the Tweed.



Housing design that responds to the sloping topography and rhythm by incorporating level changes within the building footprint is the preferred solution as it retains the topographical character of the Tweed.

INDICATIVE SLOPING SITE CHARACTERISTICS AND DESIGN PRINCIPLES

SIDE SLOPING BLOCKS



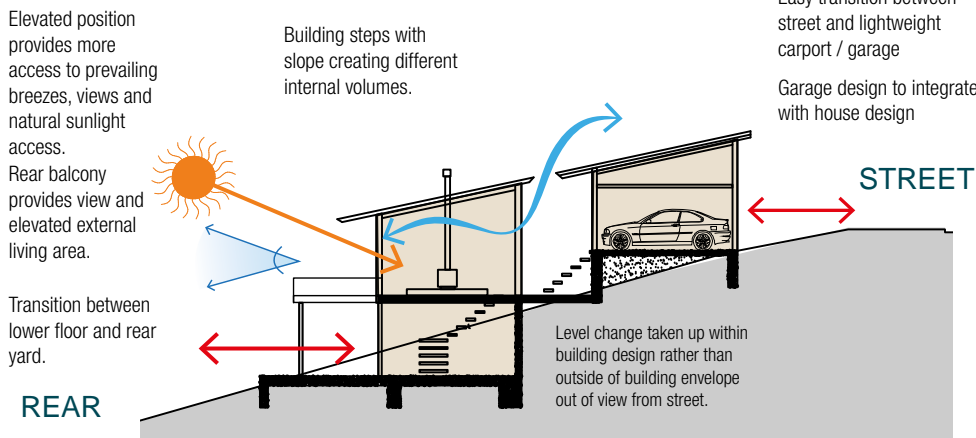
Characteristics

- Site falls across site from side boundary to side boundary.
- Garage doors and driveways generally positioned on lower side of the site.
- Likely to require excavation/fill to accommodate lower level garage.

Design Principles

- Appropriate structural systems includes either split slab with drop edge beam or hybrid lower slab upper level suspended platform.
- Take up level change within the building rather than at the boundary edges.
- Design entrance and living spaces at same level as the street for ease of transition and good universal design reducing pedestrian/vehicle conflict.
- Position garage at lower end with elevated living space of deck over.
- Consider impacts of overlooking and overshadowing on allotments down slope.

DOWN SLOPING BLOCKS



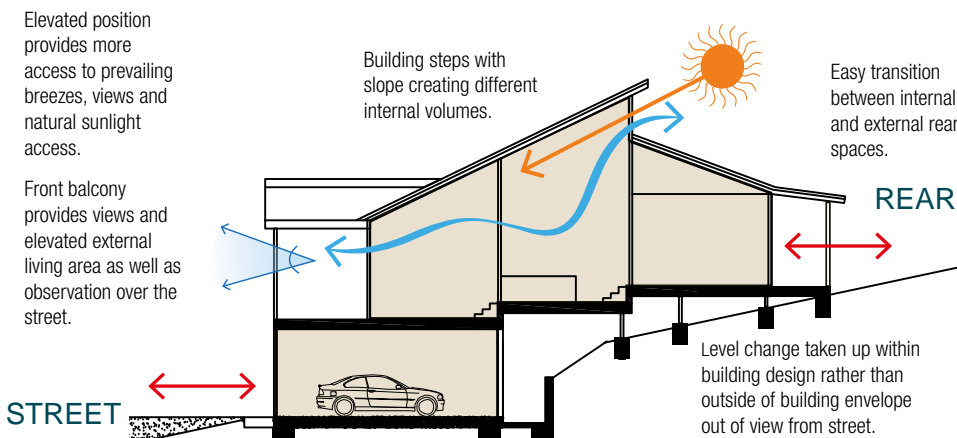
Characteristics

- Site falls from street boundary to rear boundary.
- Garage doors and driveways generally positioned closer to the road edge to avoid steep driveways.
- Likely to have elevated rear deck to take advantage of height, but is disconnected from rear yard.

Design Principles

- Appropriate structural systems includes either split slab with drop edge beam or hybrid lower slab upper level suspended platform.
- Take up level change within the building envelope.
- Design entrance and living spaces at same level as the street for ease of transition and good universal design.
- Detached garages and carports are often appropriate. The overall form and material should be consistent with the house.

UP SLOPING BLOCKS



Characteristics

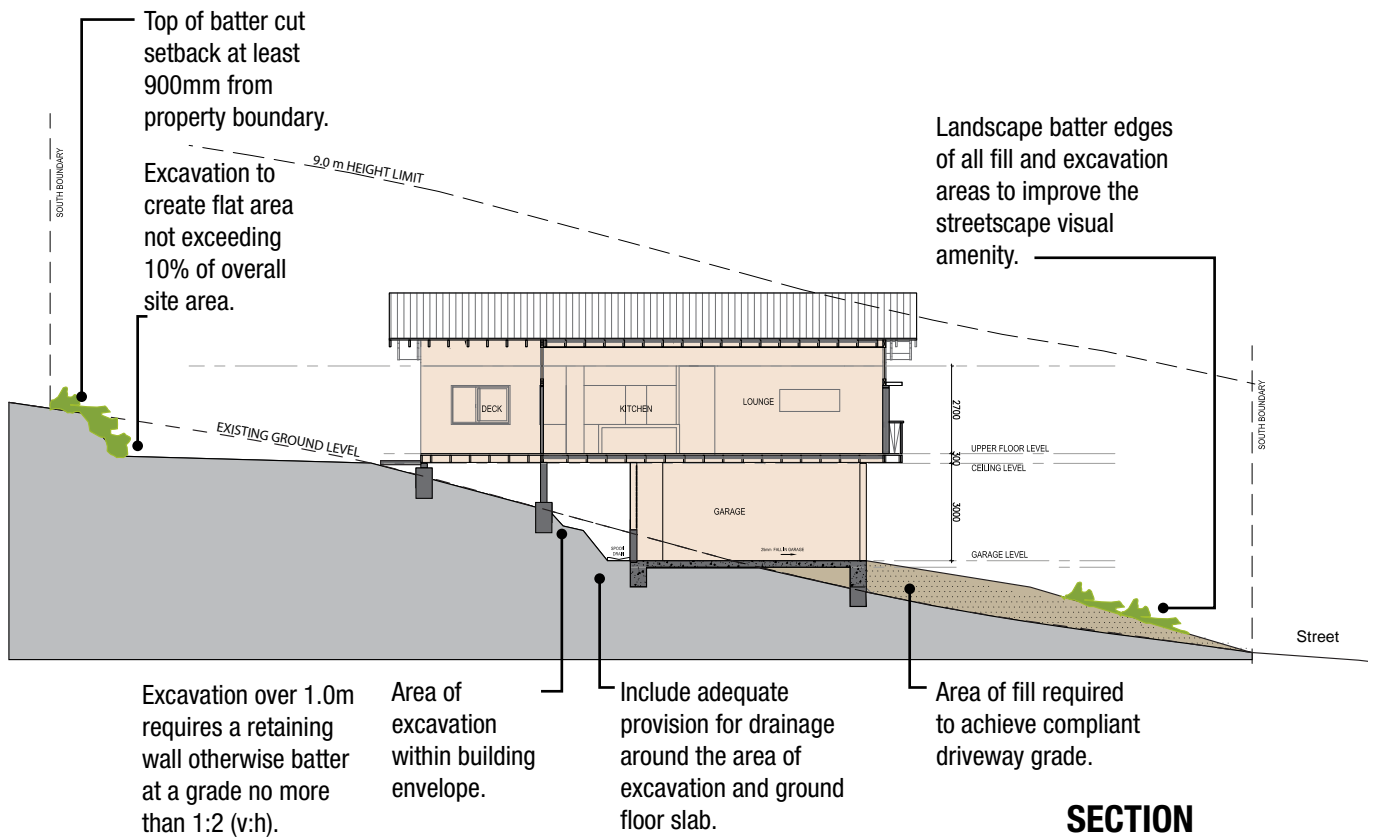
- Site falls from rear boundary to street boundary.
- Generally requires more cut and fill to allow lower level and compliant driveway.
- Garage doors more visually prominent from the street.

Design Principles

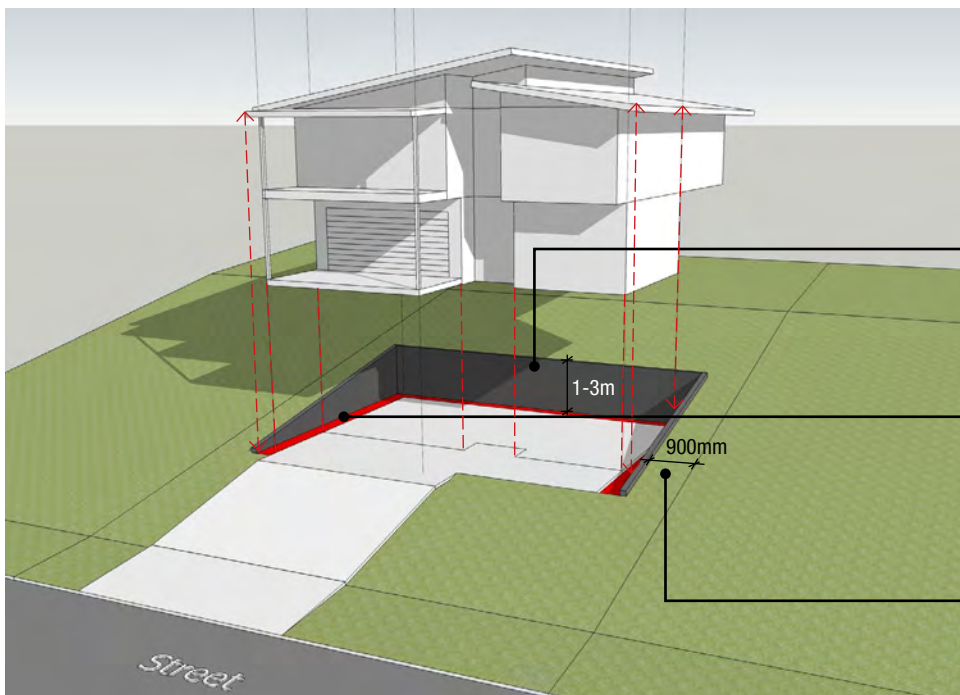
- Appropriate structural systems includes either split slab with drop edge beam or hybrid lower slab upper level suspended platform.
- Take up level change within the building envelope.
- Design a balcony to project over garage to reduce visual impact and provide external living space off living areas.
- Consider the design of the undercroft areas which will be visible from the street.
- Avoid full lot width site benching.
- Design levels to achieve easy transition between living spaces and rear yard.

SAMPLE CUT AND FILL DIAGRAMS

Cut and fill on sloping sites is unavoidable. The visual, structural and drainage impacts however can be mitigated by designing the house to step with the landscape and minimise the need for extensive excavation. It is also important to reduce the height of excavation and fill areas which should then be retained where exceeding 1.0m and landscaped to improve the overall visual amenity.



SITE DESIGN



BUILDING FOOTPRINT 3D VIEW

Retaining wall and excavation increases with slope and 'depth of cut' into the site. This amount is controlled within Table 1 Cut and fill Requirements.

Red area denotes the space between the retaining wall and the building wall which is within building footprint defined by outer extent of roofline (gutter). This allows for retaining structure and drainage around the building.

900mm minimum setback to top of batter/retaining wall from property boundary.

2.2. Landscaping, deep soil zones and external living areas

Quality landscaping retains, where possible, significant natural landscape features and mature trees. Greater aesthetic quality and amenity for occupants is achieved when landscaping and buildings are integrated and designed together. As such, landscaping should not be generated by 'left-over spaces' resulting from building siting.

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

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 and enhance the amenity of a development through such things as sun shading using pergolas and tree plantings.

Deep Soil Zones

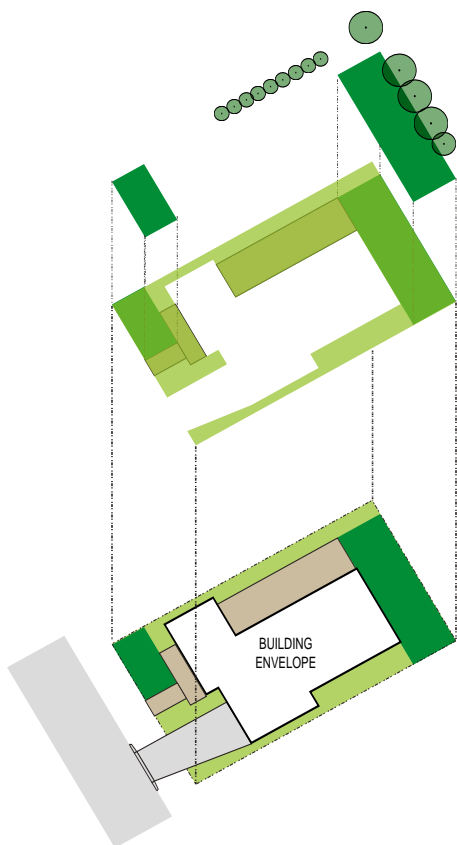
Deep soil zones are areas of natural ground which have a natural soil profile. They are areas free of structures (including underground structures) and hard surfaces. They are suitable for the growth of vegetation, in particular, mature trees, and importantly, they allow water to be absorbed by the soil.

The landscape area has significant environmental benefits including:

- Promoting healthy growth of trees and protecting existing mature trees;
- Retaining the natural hydrological structure of the area;
- Assisting with management of water quality and carbon sequestration;
- Improving the amenity of developments through landscaping that improves micro climatic conditions; and
- Assisting in the creation of vegetation corridors through the locality and wider region.

External Living Areas

External living area refers to a space that extends the internal living and recreation space of a dwelling house to form part of the private outdoor recreational and relaxation space. These spaces generally take the form of courtyards, decks, terraces and balconies, can be paved or decked, and may be covered. External living areas play an increasing role in the provision of private open space. External living areas may be located either on ground or above ground. Small balconies and similar structures from bedrooms are not considered external living areas. External living areas are particularly important on steeply sloping sites which don't have ready access to usable backyards.



LANDSCAPE AREA comprises the deep soil zone and the balance of other permeable surfaces.

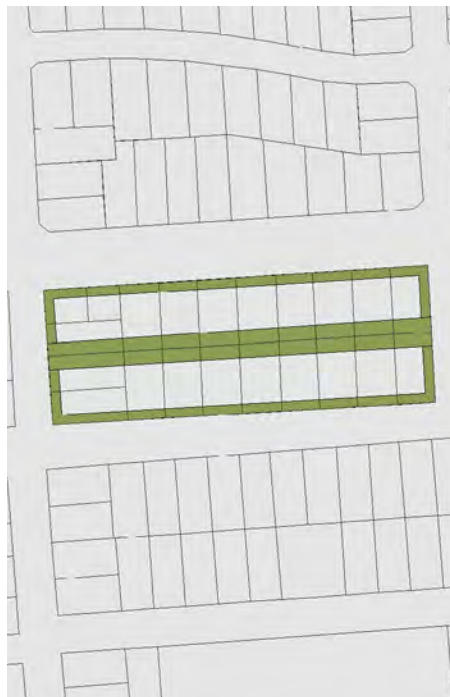
Planning and design principles

Landscaping incorporates the following principles:

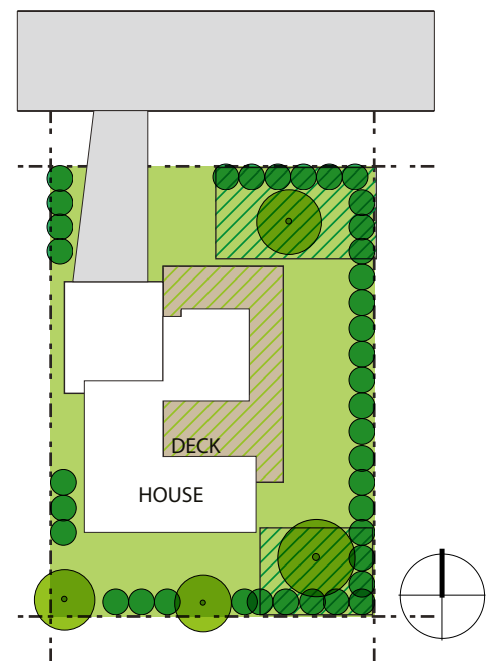
- P1. Useful and liveable outdoor spaces are provided by coordinating the design of internal and external living areas, driveways, parking areas, drying and utility areas, swimming pools, landscaped and deep soil areas with the overall site planning and design of the dwelling.
- P2. External living areas are carefully located having regard to achieving and maintaining privacy for the site and neighbours.
- P3. The dwelling and landscaping design is integrated ensuring landscaping and external living spaces optimise the best solar orientation providing shade in summer and solar access in winter.
- P4. Existing important landscape features and mature trees are retained where possible and buildings are not to be sited under the drip line of existing trees.
- P5. A balance of soft landscaping and deep soil areas (for trees plants and water filtration) and lifestyle landscaping (generally hard surface areas such as patios, decks, pools) for leisure activities is achieved.
- P6. Deep soil zones are provided to the rear and to the front of the lot where possible.
- P7. The contribution of landscaping elements to the streetscape is well considered.
- P8. The planting of endemic species integrates residential development with the local environmental context.



SUBURBAN SCALE - Landscaping provides connected flora and fauna corridors through and around blocks.



BLOCK SCALE - Contiguous landscaping is traditionally consolidated to the rear and front of lots creating visual buffers



SITE SCALE - Landscape area is the combination of deep soil zone and the balance of other permeable surfaces.

Objectives

01. To enhance the appearance and amenity of development, integrate with the character of the locality and the streetscape and soften the visual impact of urban development.
02. To retain and enhance flora and fauna habitat throughout suburban areas and contribute to flora and fauna corridors.
03. To retain existing important landscape features and mature trees.
04. To provide private outdoor relaxation and recreation space.
05. To enable natural infiltration of rainwater and reduction in stormwater runoff and promote water sensitive urban design.
06. To provide privacy between adjoining dwellings and private open space.
07. To limit heat transfer impacts from hard surface areas, improve micro climatic conditions of sites and the solar performance of dwellings.
08. To contribute to improving urban air quality.

Controls

Landscape

- C1. A lot must include a total landscaped area comprising of the following:

Notes:

Deep soil zone areas are part of the total landscaped area.

Deep soil zone areas can be comprised of one large area or more than one area as long as each meets the minimum dimension requirement.

Landscaping controls	
Lot size	Landscaped area and deep soil zone (Areas less than 1.0m wide can not be included in the calculation)
at least 200m ² but less than 300m ²	15% of the site including at least two deep soil zones measuring a minimum of 2m in any direction
at least 300m ² but less than 450m ²	20% of the site including at least two deep soil zones measuring a minimum of 2.4m in any direction
at least 450m ² but less than 600m ²	30% of the site including at least two deep soil zones measuring a minimum of 3m in any direction
at least 600m ² but less than 900m ²	35% of the site including at least two deep soil zones measuring a minimum of 4m in any direction
at least 900m ² but less than 1500m ²	40% of the site including at least two deep soil zones measuring a minimum of 5m in any direction
more than 1500m ²	45% of the site including at least two deep soil zones measuring a minimum of 6m in any direction
all urban lot sizes	at least 50% of the landscaped area is to be behind the building line of the primary road frontage.
Non-urban (rural land) >1500m ²	No specific requirement

Table 2 - Landscape Requirements

Notes:

Improve the energy and solar efficiency of dwellings and the microclimate of private open spaces through:

- *providing deciduous trees for shading low angle sun on the eastern 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 and shrubs to shade walls and windows as appropriate;*
- *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.*
- *Designing 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 surfaces.*

- C2. All new dwelling applications must provide a plan, which may be part of site analysis or on a site plan, identifying landscape area and deep soil locations and a schedule of the landscape area and site coverage calculations.
- C3. A landscape Plan is required for dual occupancy development. A landscape plan may also be requested for dwelling houses where significant earthworks are proposed within the front yard or where a potential streetscape impact has been identified by the assessing officer. The landscaping plan is to include:
- i. Calculations of the landscaped area, deep soil zones and site coverage;
 - ii. Demonstrate how the landscaping complements and integrates with the amenity of the dwelling, the streetscape and any topographical features;
 - iii. Demonstrate how each dwelling achieves integration of the dwelling, landscaped areas, private open space and external living areas;
 - iv. Demonstrate suitable privacy and solar access for each dwelling and its outdoor and landscaped spaces; and
 - v. Detail of plant species to be used and their locations. Species are to comprise no less than 80% native species.
- C4. Existing landscape elements on sites such as natural rock outcrops, watercourses, dune vegetation, indigenous vegetation and mature trees should be retained and integrated with the design of the buildings.
- C5. On lots adjoining indigenous/native vegetation, protect and retain indigenous native vegetation and use native indigenous plant species for a distance of 10m from any lot boundaries adjoining bushland.
- C6. Locate and design landscaping to increase privacy between neighbouring dwellings without excessive shadowing or blocking primary views or existing solar panels.

Deep Soil Zones

- C7. Deep soil zones are to have soft landscaping and cannot be covered by impervious surfaces such as concrete, terraces, outbuildings, swimming pools, tennis courts or other structures or located on structures such as basement car parks or in planter boxes.

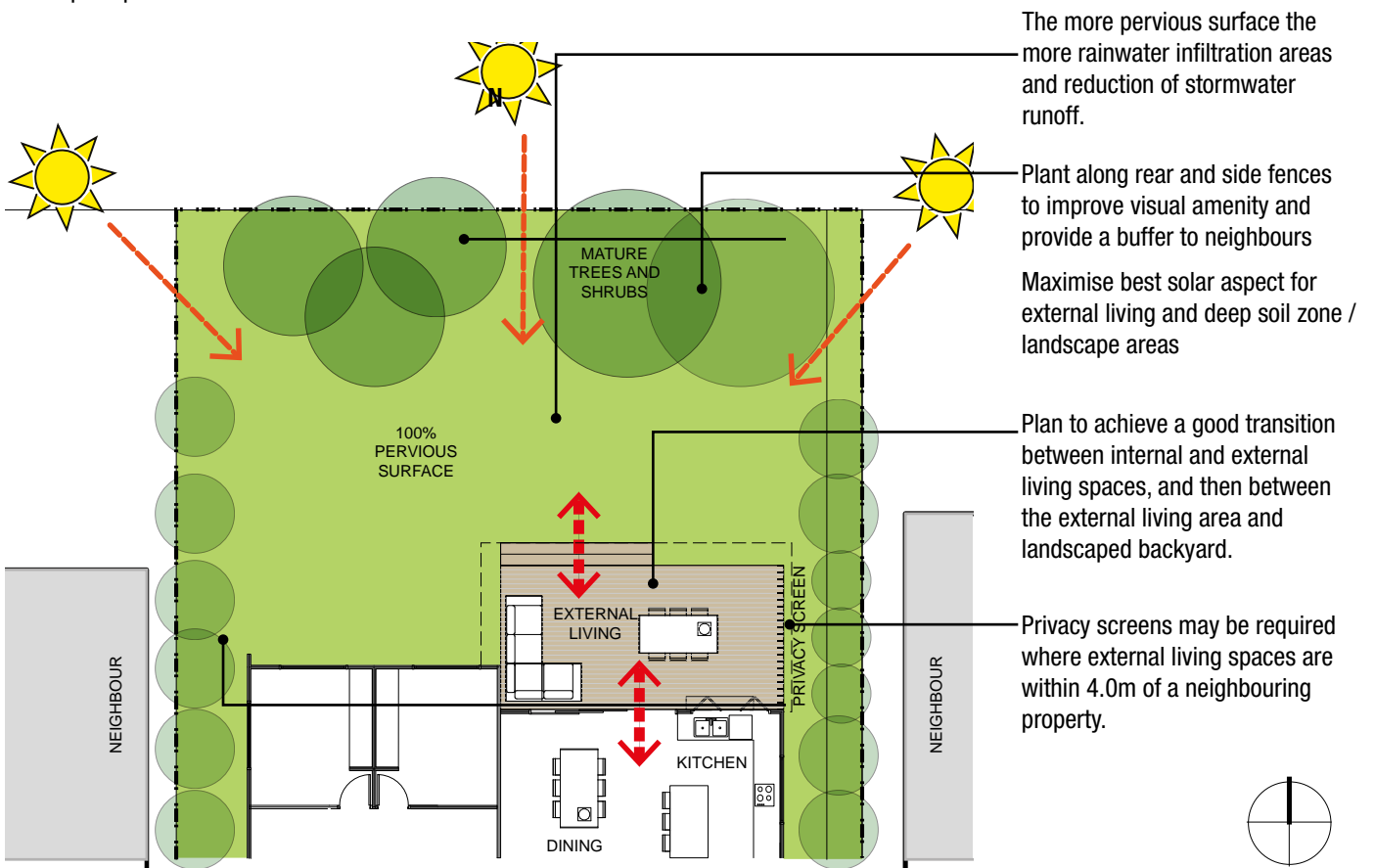
Rainwater and Runoff

- C8. Runoff is to be minimised, delayed in its passage and where possible accommodated within the landscape or site surface depressions of the development site unless this is inconsistent with the geotechnical stability of the site or adjacent/downstream land.
- C9. 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.

INDICATIVE LANDSCAPE AND EXTERNAL LIVING LOCATION AND SIZE PLANS



Landscape Plan Whilst a formal landscape plan is not required for most single dwelling development applications, a simplified plan, as required in C2, that shows general landscaping size and location rather than individual species placement will help determine the best positioning of landscape areas in terms relationship to internal rooms, external living areas and for providing shade, privacy and outdoor open space areas.



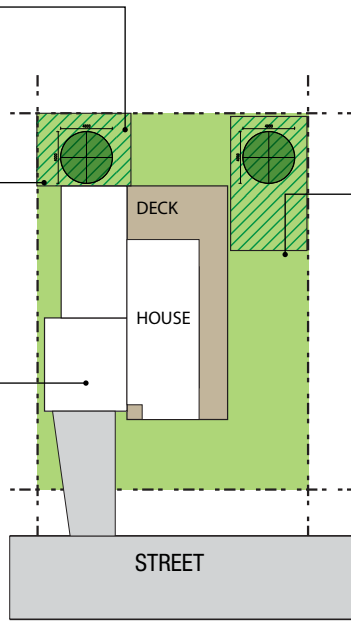
External living areas to the rear of the site provides direct connection between the internal space of the dwelling and the garden or deep soil zone area. Privacy screens may be required to the sides of the space. Ground level external living areas are to be located so as to retain mature trees, mature vegetation and significant landscape features.

INDICATIVE LANDSCAPE ORIENTATION DIAGRAMS

Rear deep soil zone achieves a strong green buffer to rear and side neighbours.

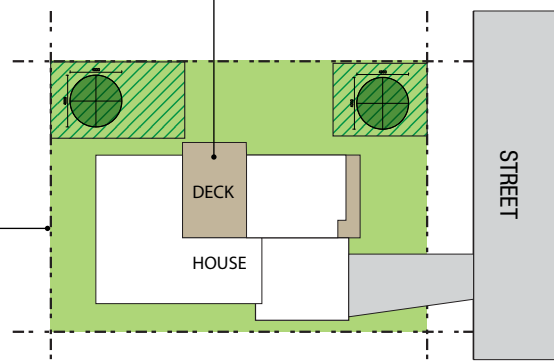
Shade planting to western elevation

Garage and services to western elevation

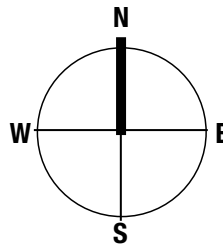


Achieve level transition with deck and backyard integrating internal with external spaces.

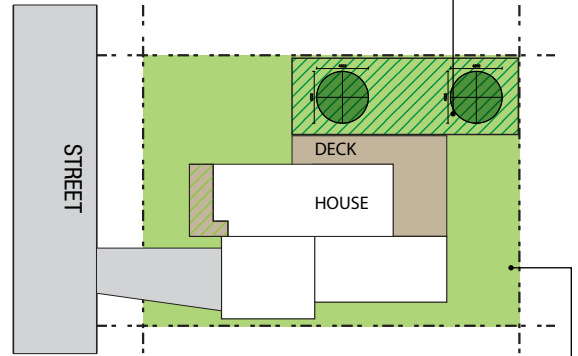
Deep soil zone and external living areas located to take advantage of best northern solar aspect.



Shade planting to western boundary.







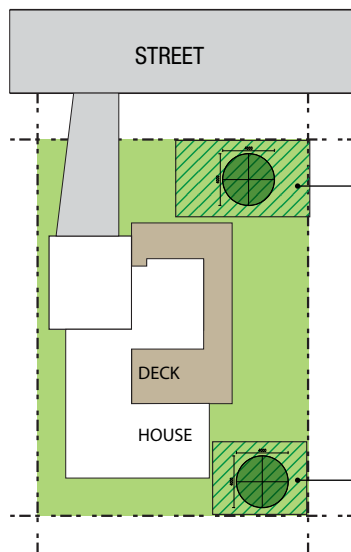
Deep soil zone and outdoor living located to take advantage of best northern solar aspect. Required deep soil areas can be joined to optimise an aspect.



Additional landscaping along rear boundary still achieves landscape buffer to rear neighbour.

KEY

-  MINIMUM DEEP SOIL ZONE DIMENSION
-  LANDSCAPE AREA
-  BEST DEEP SOIL ZONE ORIENTATION
-  EXTERNAL LIVING AREAS

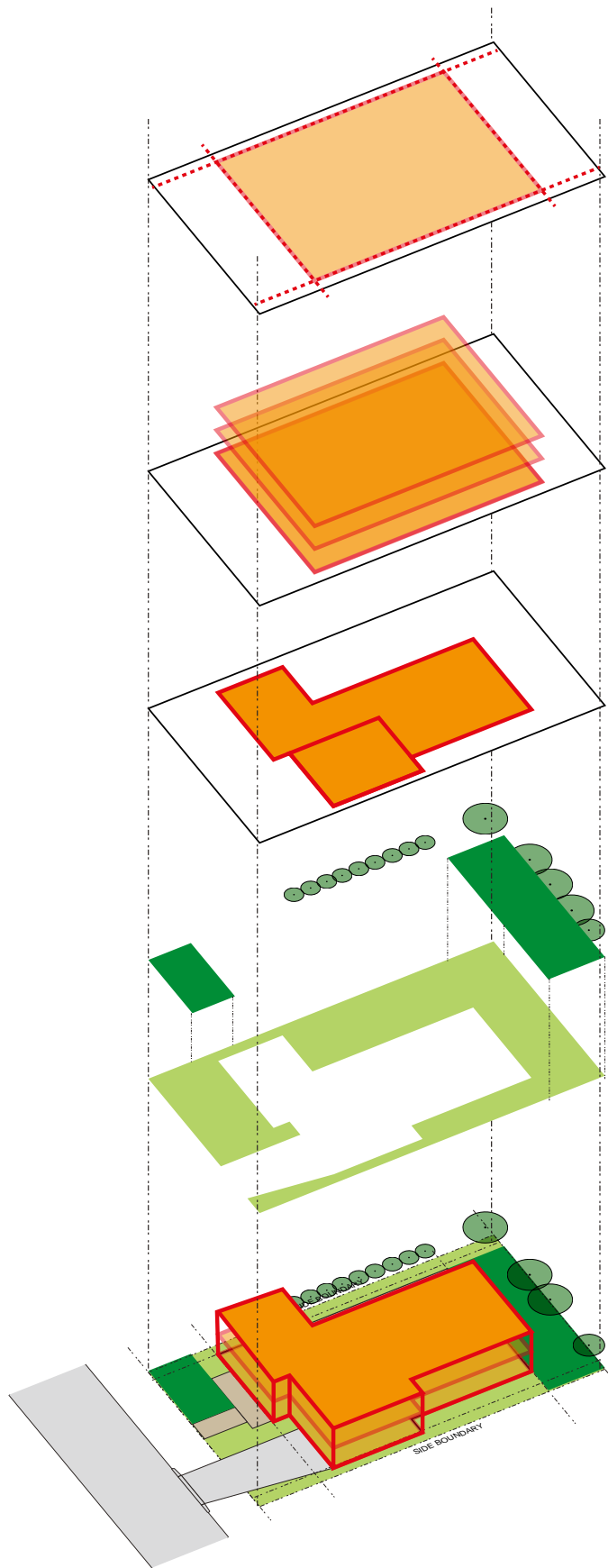


Deep soil zone and outdoor living located to take advantage of best northern solar aspect to the front of the site.

Distribute deepsoil zones across the site to achieve a balanced built form and landscaped outcome.

Inter-allotment planting for shade and landscape buffer.

LANDSCAPE, SITE PLANNING AND ORIENTATION - Examples of integrating the dwelling and open space to enable the best orientation of outdoor living and deep soil zones



SETBACKS - Front, rear and side setbacks determined by lot size and building height.

BUILDING HEIGHT - Allowable building height measured from existing ground level.

SITE COVERAGE - Total area of the site that can be covered by the building and ancillary development as a percentage of the lot size.

LANDSCAPE AREA - Total area of the site consisting of permeable surfaces and deep soil zones.

SITE PLANNING AND BUILDING FORM - A response to site opportunities and constraints and building envelope requirements.

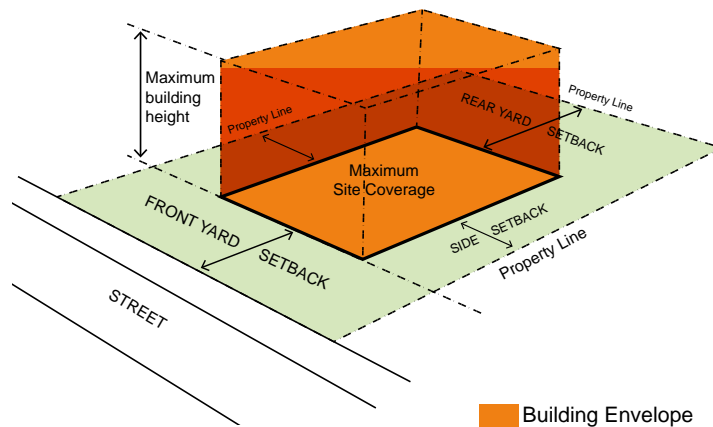
Building envelope and landscape controls - Building envelope and landscape controls work together towards achieving a balanced site outcome. As such building envelope and landscape controls should be read and applied in conjunction rather than in isolation of each other.

3. Building envelope controls

A building envelope is not a building, but a three dimensional space within which the building may be constructed. The building envelope defines the maximum boundaries or space of the development, however, this does not imply that a building may 'fill' the entire envelope.

The key criteria that help define the building envelope include:

- Setbacks;
- Height; and
- Site coverage.



3.1. Setbacks

Setbacks are important as they establish the buildings location in relationship to the lot boundaries, the street and neighbouring buildings. Setbacks allow space for landscaping, retention of views, access to breezes, solar access and facilitate privacy and adequate separation between dwellings in residential areas.

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 and entry to the dwelling.

Rear setbacks are important for achieving open space to the rear of the lot to allow for landscaping and deep soil areas, water infiltration as well as providing private areas for external living, recreation and relaxation.

Side setbacks are important for achieving building separation enabling sunlight access whilst avoiding overlooking and overshadowing.

In some areas the residential character may be of smaller lots in a more urban form. These areas may use zero-lot boundaries to create a particular style and allow the dwelling to respond to the best orientation.

Canal frontages are considered as the rear boundary to the allotment.

Planning and design principles

Setbacks incorporate the following key principles:

- P1. Front setbacks respond to topographic or sloping conditions, frame the street and include articulation to a buildings front elevation.
- P2. Rear setbacks incorporated as an area of private open space contribute to the rear lot landscape pattern.
- P3. Side setbacks respond to site orientation, sunlight sharing with neighbours, potential overlooking and privacy impact.

Objectives

- O1. To establish the desired spatial framing of the street, define the street edge and enable a transition between public and private space.
- O2. To provide flexibility for steeply sloping and corner allotments to best address streetscape, solar orientation and location for outdoor amenity areas and access points.
- O3. To provide appropriate separation between dwellings for sunlight access, ventilation, visual and acoustic privacy and access to the rear of the allotment.
- O4. To minimise overlooking and overshadowing to the site and of adjoining allotments.
- O5. To facilitate a landscape setting for residential buildings and retention of the rear yard landscape zone.
- O6. To maintain views and vistas along canal foreshores.

Controls

Front and rear setbacks

- C1. The minimum setback from the street and rear boundary for a dwelling is:

Lot size	Minimum front setback - New Areas (for established and existing areas refer C2 below)	Minimum front setback to secondary street frontage on corner allotments	Minimum rear setback where the building is up to 4.5 metres in height	Minimum rear setback where the building is 4.5 metres in height or greater
less than 300m ²	3.5 metres	2 metres	3 metres	4.5 metres
at least 300m ² and less than 600m ²	4.5 metres	2 metres	4.5 metres	6 metres
at least 600m ² and less than 900m ²	6.0 metres	3 metres	4.5 metres	8 metres
at least 900m ² and less than 1500m ²	6.0 metres	3 metres	5 metres	12 metres
at least 1500m ²	8.0 metres	5 metres	10 metres	15 metres

Table 3 - Front and Rear Setbacks

Setback calculations

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

Rear setbacks are measured from the rear boundary to the outside edge of the building wall.

Setbacks are measured at 90 degrees to the allotment boundary and include any articulation to the building elevation but do not include external living.

Side setbacks are measured from the allotment's side boundary to the outside edge of a building wall.

- C2. In established areas and on infill sites dwelling houses are to be consistent with the front setback distance of neighbouring buildings and are to be the average of the setbacks of neighbouring dwellings within 40 metres or a variation justified under a streetscape analysis. This setback may be varied up to 1 metre where justified through a streetscape analysis.
- C3. An articulation zone may permit some elements of a buildings front facade to intrude within the front setback to a maximum of 1.5 metres and not exceeding 25% of the frontage width. The following building elements may be permitted in an articulation zone:
 - i. an entry feature or portico;
 - ii. a balcony, deck, patio, pergola, terrace or verandah;
 - iii. an upper level overhang or cantilever;
 - iv. a window box treatment;
 - v. a bay window or similar feature;
 - vi. an awning or other feature over a window; and
 - vii. a sun shading feature.
- C4. The minimum front setback for a garage perpendicular to a primary or secondary street frontage is 5.5 metres to allow off-street parking that does not impede the footpath.
- C5. Garages and carports, including semi-basement garages and attached garages, are to be set back a minimum of 1 metre from the dwelling's front façade, unless it can be demonstrated how the design mitigates the dominance of the garage door to the street elevation (refer to indicative diagrams on page 47).
- C6. Council may approve the erection of a garage which does not comply with the required front building line setback where exceptional circumstances, such as the depth and shape of the allotment, slope or grade, make it necessary and as supported by a site analysis that demonstrates:
 - i. no other suitable location is available behind the building line;
 - ii. there is no vehicular access to the rear or side of the allotment;
 - iii. the proposal will not affect the amenity of adjoining properties;
 - iv. the design of the garage is complimentary to the design, materials and roof form of the dwelling;
 - v. the proposal will not create an unwanted precedent to the vicinity;
 - vi. the proposal does not result in the creation of additional driveway access;

- vii. the proposal will not impede on the required pedestrian and traffic sight lines;
- viii. there are no valid objections are received from adjoining property owners;
- ix. the structure is located a minimum of 900mm from the side boundary of the property.

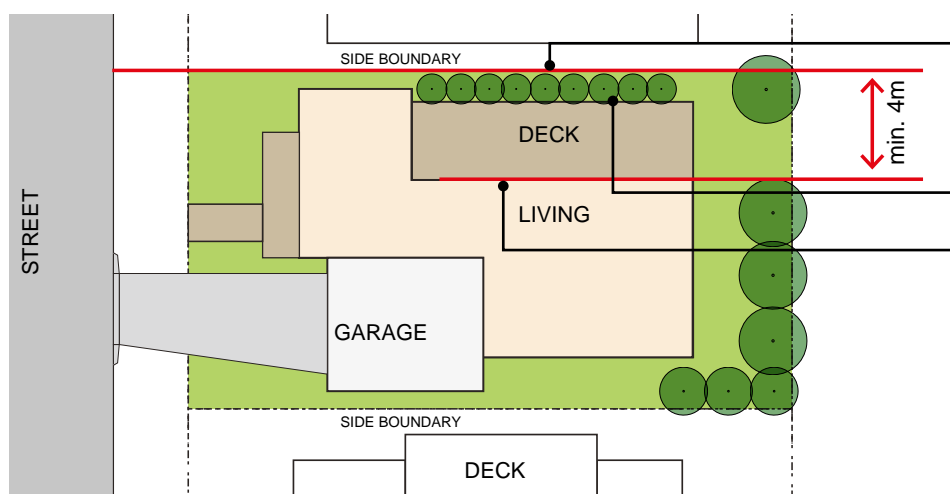
C7. A carport may be permitted to encroach within the front setback subject to the following criteria:

- i. No other suitable location is available behind the building line;
- ii. It is located a minimum of 900mm from the side boundary;
- iii. Does not exceed 33% of the width of the allotment frontage or 6 metres measured between supporting posts whichever is the lesser;
- iv. It is of an open design with two or more sides fully open;
- v. Frontage facing the street is to remain open and shall not be fitted with a door or enclosing device of any kind;
- vi. Posts or columns do not obstruct vehicle manoeuvrability or visibility;
- vii. The roof design is to complement the roofline of the existing house and not significantly impact the streetscape; and
- viii. The roof is not trafficable.

C8. Garages, outbuildings and carports may be located a minimum of 450mm from the rear boundary where no greater than 4.5 metres in height.

C9. Garages and carports accessed by a rear laneway are to be setback a minimum of 1.0m from the laneway.

C10. Secondary dwellings require a minimum setback from the rear boundary of 1.5m where single storey and 3 metres where two storey.



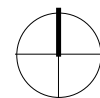
Design high level glazing (obscured glass) to north neighbours southern elevation to reduce overlooking impacts.

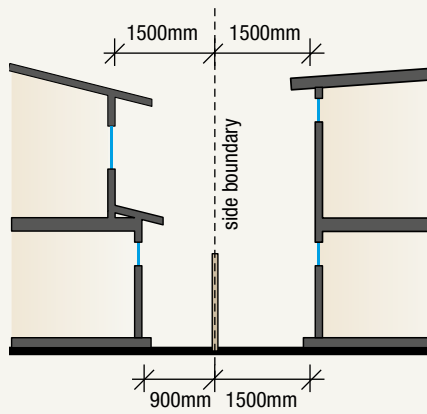
Screen planting for privacy and visual amenity.

4.0m setback to internal principle living spaces to enable northern sunlight access, increase building separation and privacy.

Living room doors facing side boundary setback 4.0m to ensure adequate natural light access and privacy from neighbouring dwellings.

Living Area Setback 4.0m - On east-west allotments, the long side boundary is orientated to the north. The setbacks and external living areas are required to ensure sunlight sharing and mitigation of overlooking and privacy impacts.





Indicative side setback diagram.

Note:

Refer to Garage Configuration diagrams on page 45 which identifies some design mitigation measures to reduce the garage door dominance to street elevations.

Design Control 4.7 - Garages, Driveways and Car Parking also contains provisions relating to setback to garages and carports and should be read in conjunction with these controls.

Design Control 6.2 - Outbuildings also contains provisions relating to setbacks and should be read in conjunction with these controls.

C11. Roofed external living areas are to be setback a minimum of 3.0m from the rear boundary.

Side setbacks

- C12. A single storey dwelling, or that part of a building containing only single storey, is to be setback a minimum of 900mm from the side boundary line to the wall of the building. Guttering, eaves, hoods and other similar structures may be constructed within the side setback but not closer than 450mm from the boundary.
- C13. A two storey dwelling, or the second storey component of building, is to be setback a minimum of 1.5m from the side boundary line to the wall of the building. Guttering, eaves, hoods and other similar structures may be constructed within the side setback but not closer than 900mm from the boundary.
- C14. On corner allotments primary and secondary streets are to be clearly nominated and comply with the appropriate primary and secondary street setbacks.
- C15. On corner allotments are to nominate location of side and rear setbacks and comply with the appropriate setbacks.
- C16. Garages, whether attached or detached, may be located a minimum of 450mm from a side boundary except where located within the front building setback.
- C17. Carports may be located adjacent to a side boundary, except where located within the front building setback, subject to:
 - i. the boundary wall remaining open;
 - ii. the carport support is not attached to a fence; and
 - iii. the proposed carport complies with the Building Code of Australia.
- C18. Where opening doors of living rooms face the side boundaries the living room is to be setback a minimum of 4m from the side boundary. This setback may be required to be appropriately screened to minimise overlooking and privacy impacts.
- C19. External living areas adjoining side boundaries are to be setback a minimum of 900mm from the side boundary. This external living area may be required to be appropriately screened and/or the setback increased where there may be overlooking and/or privacy impacts.
- C20. Where rainwater tanks, water heaters, air conditioning units, retaining walls and the like are located within a side passage, walkable access to and around these items is to be maintained.

Canal frontages

C21. The setback from a canal frontage is:

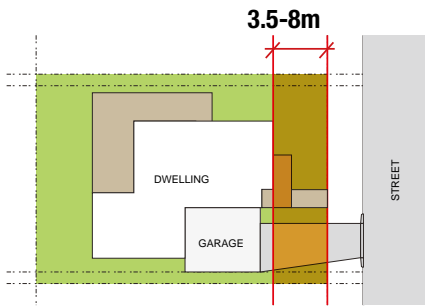
- i. 5.5m where the boundary is on the canal side of a revetment wall, or
- ii. 3.4m from the revetment wall where the wall is on the boundary, except:
 - for those lots with canal frontages and facing Gollan Drive and Jacaranda Avenue, Tweed Heads West where the setback line to the canal frontage shall be 2.5m; and
 - Lots 1, 2, 3 and 4 Crystal Waters Drive, Tweed Heads West where normal building setbacks shall apply along the canal frontage.

C22. No structures are to be built within 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:

- i. 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; and
- ii. Lots 1, 2 3 and 4 Crystal Waters Drive, Tweed Heads West where normal building setbacks shall apply along the canal frontage.

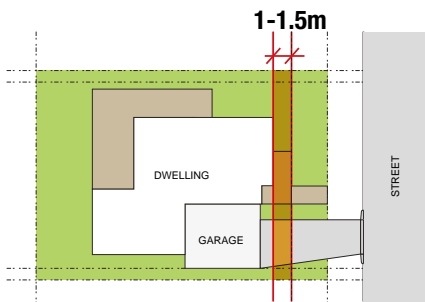
C23. The underside of any suspended deck fronting a canal is to be suitably screened, except in cases where giving effect to this control would result in adverse impact to flood waters.

INDICATIVE SETBACK DIAGRAMS - SINGLE DWELLINGS



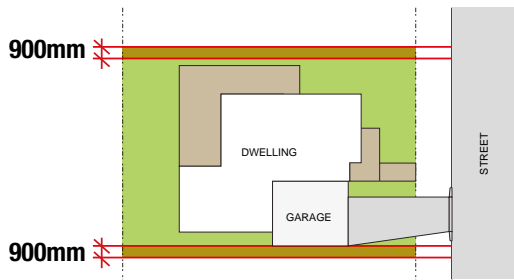
Front building setback 3.5-8.0m

Refer Control 1, Table 3.



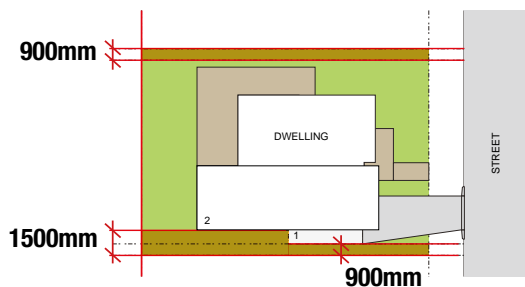
Articulation Zone 1-1.5m

Allowed within the front setback of new dwelling where the intrusion does not exceed 25% of the frontage width. Refer Control C3.



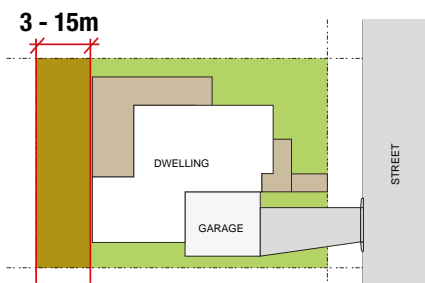
Side setback single storey 900mm.

Refer Controls C12.



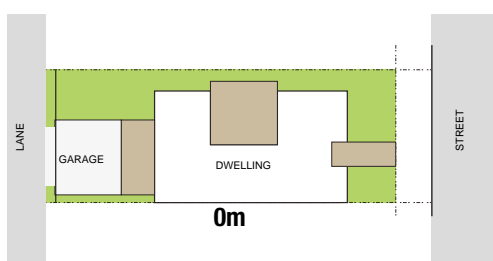
Side setback double storey 1500mm

900mm for single storey component. Refer Controls C13.



Rear setback 3-15m

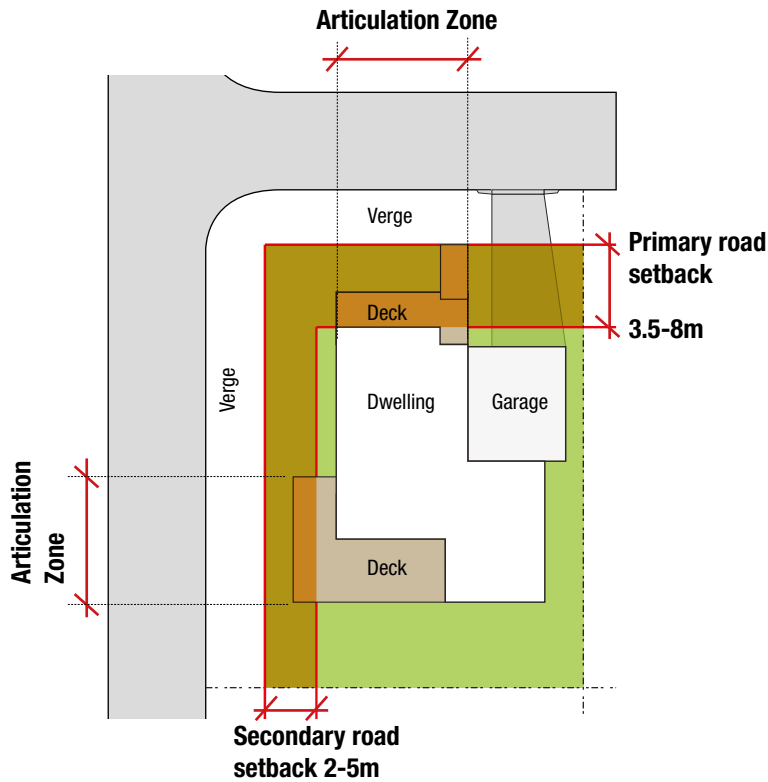
Depending on building height and lot size. Refer Control 1, Table 3



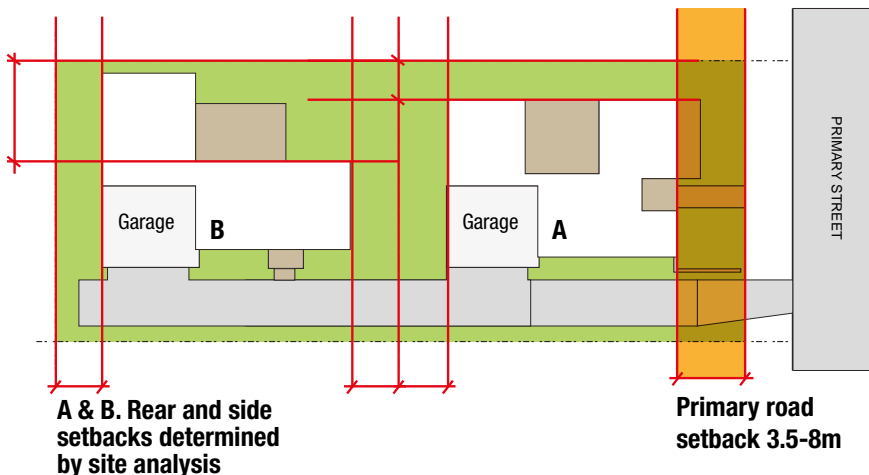
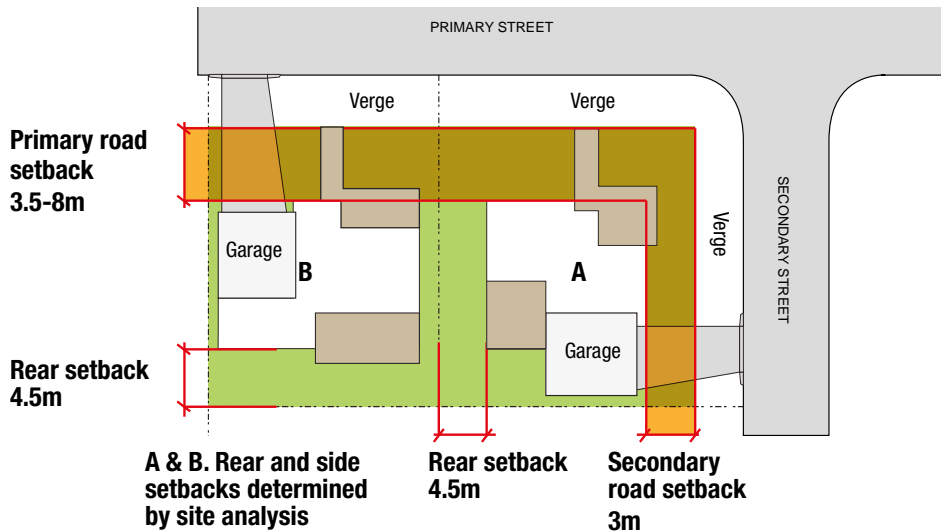
Zero setback

Along one boundary where the allotments form part of a zero lot / terrace / row / courtyard integrated housing development.

SAMPLE CORNER SITE SETBACKS



SAMPLE DUAL OCCUPANCY SETBACKS



Corner Allotments Setbacks

A corner lot has a minimum setback to both road frontages. The setback distance varies dependent on the lot area and nominated primary and secondary street frontages. Consider the following principles:

- site analysis to determine best site configuration;
- nominate primary and secondary frontage based on site analysis outcomes;
- nominate side and rear boundaries for the purposes of allocating setbacks;
- design dwelling(s) to address both frontages;
- provide 'rear setback' to at least one nominated boundary,
- consider safety and site lines for locating driveway car parking access.
- sensitive integrated fence design and landscape to improve streetscape.

Corner Dual Occupancy Setbacks

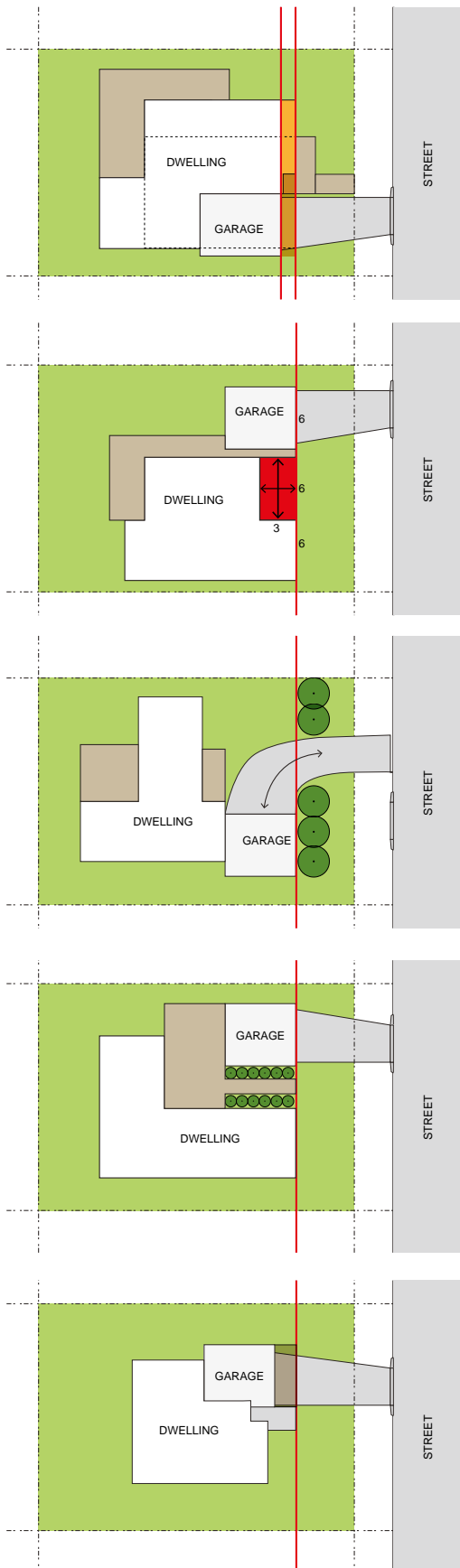
As per detached dwellings on corner allotments applicants are to nominate primary and secondary street frontages based on a site analysis to determine front and secondary street setbacks.

Similarly applicants are to nominate side and rear setbacks based on a site analysis that considers best solar orientation, deep soil location and relationship to habitable internal spaces.

Stacked Dual Occupancy Setbacks

A stacked dual occupancy has one street frontage which can be applied to dwelling A, however the 'front', rear and side setbacks as they would apply to dwelling B need to be determined by a site analysis to determine best site configuration. This is largely influenced by whether the dwellings are attached or detached and solar orientation.

SAMPLE OPTIONS FOR MINIMISING THE DOMINANCE OF GARAGES



1. Garage Setback 1.0m behind front building line - This allows the principle building and lightweight structures within articulation zone to be forward and therefore more visually dominant to the street.

2. Stepping Building Line - An alignment of garage and principle can be achieved where there is a demonstrated step of depth to a building's elevation. This also allows an area of more substantial front yard landscaping. The step needs to be proportional to the width of the garage.

3. Garage Rotated 90 degrees - By rotating the garage and articulating the garage street elevation with windows behind a landscape setback reduces the dominance of the double garage door. Garage elevation to the street can then be appropriately articulated and landscaped.

4. Strong architectural element - Often the design of the garage in alignment with the principle building is acceptable with a consistency of materials, and roof pitches that complement the overall architectural intent of the building.

5. Garage below projecting deck - Particularly on upslope sites, an upper level projecting deck with garage recessed below on the lower level significantly reduces the visual impact of the garage.

Garage Setback Options - The intent of garage design principles, objectives and controls is to reduce the visual dominance of the double garage door on the streetscape. The above diagrams illustrate some measures to reduce the garage door visual dominance.

3.2. Building height

Building height controls allow management of the bulk and scale of development and to assist in integrating new development into existing areas. This is important in scenically significant areas and in the context of the rapidly increasing residential development in both coastal and hinterland areas where the protection of existing levels of character and amenity is both important and difficult.

Planning and design principles

Building height will incorporate the following key principles:

- P1. Is compatible with the character of the surrounding residential development;
- P2. Establishes a relationship between site works (cut and fill), building design and outdoor area access;
- P3. Follows the rhythm of the existing topography;
- P4. Enables flexibility of height and roof design on steep sites;
- P5. Responds to potential overshadowing impacts on neighbouring properties;
- P6. Avoids large unbroken elevations and vary roof planes and roof pitches to reduce the overall building bulk; and
- P7. Enables design compatible with the Tweed climatic context.

Objectives

Note:

The definitions of 'building height' and 'storey' are included in the Local Environmental Plan (LEP).

- O1. To ensure the height of buildings is appropriate to the residential scale and character of the street and the local area.
- O2. To ensure dwellings are sensitively designed to minimise impacts on privacy, solar access and views to or from the dwelling or the adjoining dwellings.

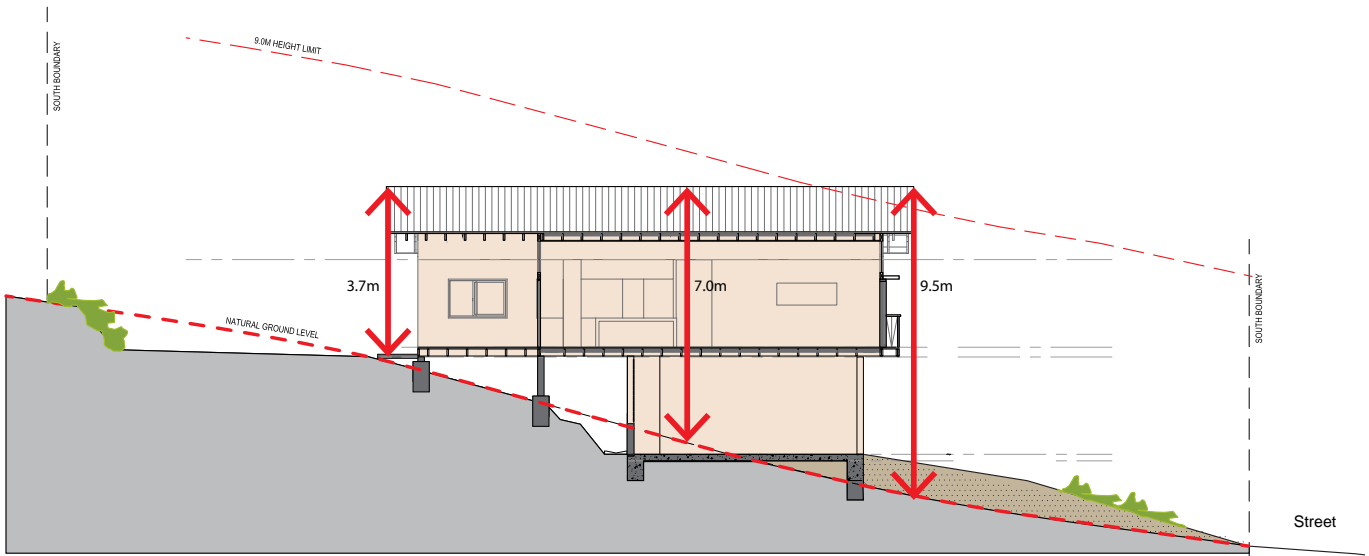
Note:

Design Control 4.7 - Garages, Driveways and Car Parking also contains provisions relating to heights and should be read in conjunction with these controls.

Building heights are a development standard within the LEP and variations must be accompanied by appropriate justification in accordance with the LEP - Section 4.6.

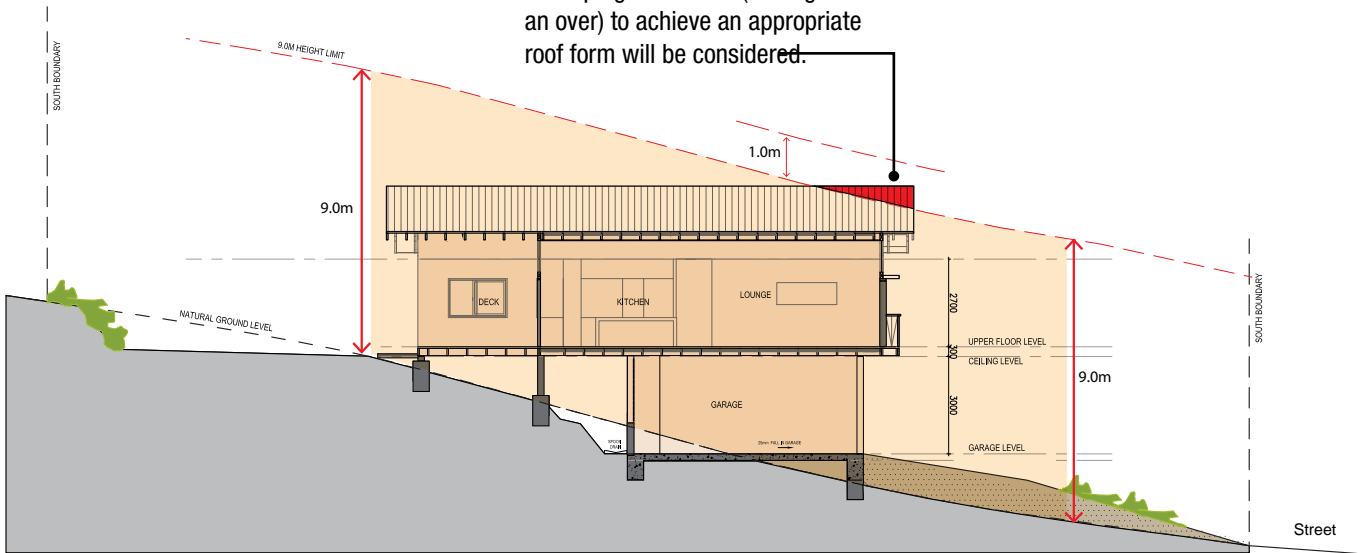
Controls

- C1. The overall building height is 9 metres, except on slopes of greater than 12 degrees (21.25%) where the building height may be a maximum of 10 metres.
- C2. The maximum height for a carport and detached garage is 3.5 metres where there is a flat roof or 4.8 metres where there is a pitched or skillion roof.



Building Height Measurement - Building height is the height of a building at any point of a building and is the vertical distance between the existing ground level and the highest point of the building.

Variations to height by up to +1.0m on sloping allotments (12 degrees an over) to achieve an appropriate roof form will be considered.



Building Height on Sloping Blocks - Provision of an additional 1.0m on allotments with slopes over 12 degrees recognises the challenges of achieving a 2 storey dwelling with an appropriate roof form on steeply sloping sites. The extent of the variation needs to be clearly identified as part of a submitted section/site analysis along with shadow diagrams to demonstrate adjoining amenity will not be significantly compromised in terms of overshadowing and overlooking. Height concessions for the express reason of achieving an additional storey will generally not be supported.

3.3. Site coverage

Site coverage is the two dimensional footprint a building may occupy. It is essentially a percentage of the site that may be built upon.

Site coverage may be further defined as impermeable and permeable. Excessive site coverage with hard surfaces can increase the volume of stormwater discharged off-site as it reduces the land's capability to infiltrate water in storm events.

Planning and design principles

- P1. Use the site analysis process to determine the appropriate balance of internal, external and landscape areas.
- P2. Promote on-site stormwater infiltration by encouraging pervious surfaces and landscaped areas.

Objectives

- O1. To ensure a balance of built form and landscaped area.
- O2. To ensure residential development is sympathetic with the existing topography, water cycle and amenity of the site and neighbourhood.

As a guide the calculation of site coverage generally does not include access ramps, awnings, eaves, unenclosed balconies, decks, pergolas, terraces, verandahs, driveways, paths, swimming pools and spas. Refer to site coverage definition within the LEP.

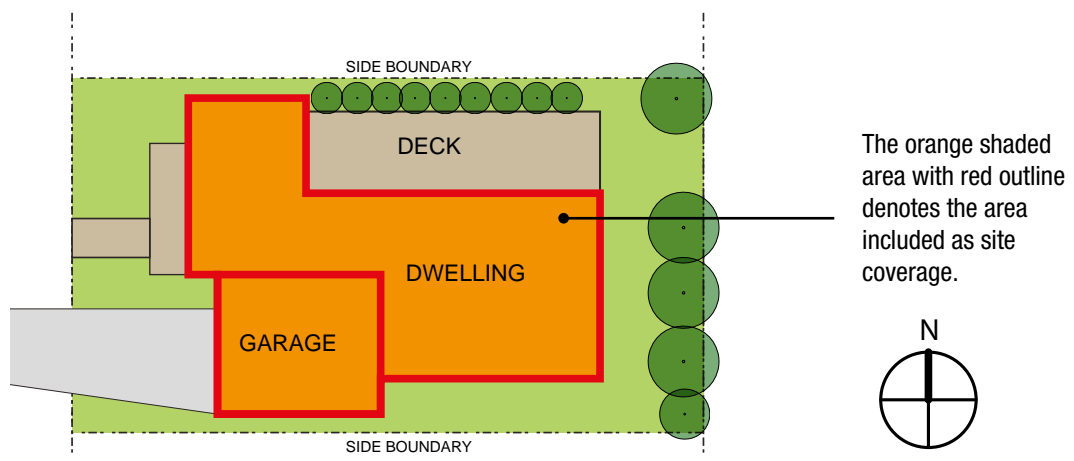
Secondary dwellings are considered as part of the main dwelling house for the purpose of site coverage calculations.

Controls

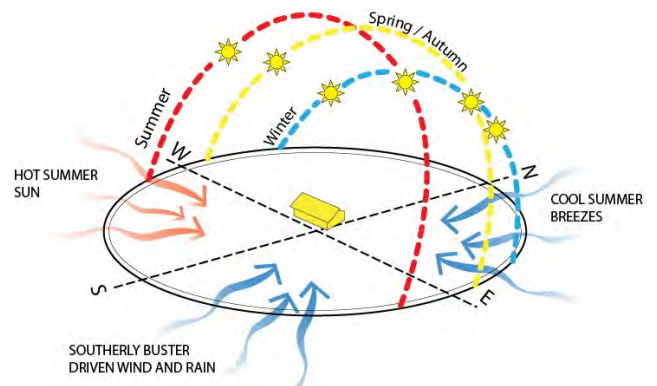
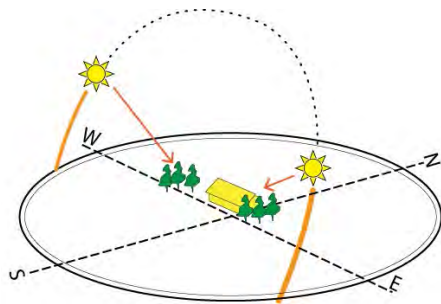
- C1. The maximum site coverage of a dwelling and all ancillary development on a lot must be consistent with the following:

Allotment size	Maximum site coverage
at least 200m ² but less than 250m ²	65%
at least 250m ² but less than 300m ²	60%
at least 300m ² but less than 450m ²	55%
at least 450m ² but less than 900m ²	50%
at least 900m ² but less than 1500m ²	40%
greater than 1500m ²	30%

Table 4 - Site Coverage

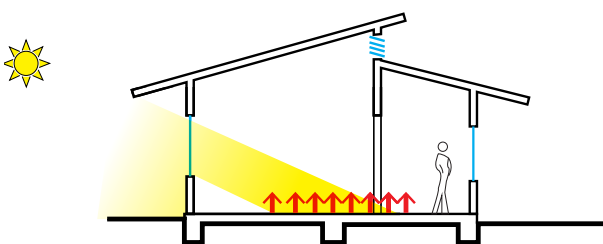


CLIMATE AND ORIENTATION

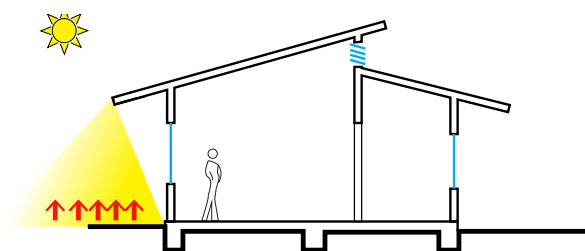


Solar Access and Orientation - Northern orientation is the best for the Tweeds climatic zone. From sunrise to 9am and from 3pm to sunset the sun is lower in the sky. House design should acknowledge potential high heat loads from the south east during summer mornings and south west during summer afternoons.

THERMAL MASS AND SHADING

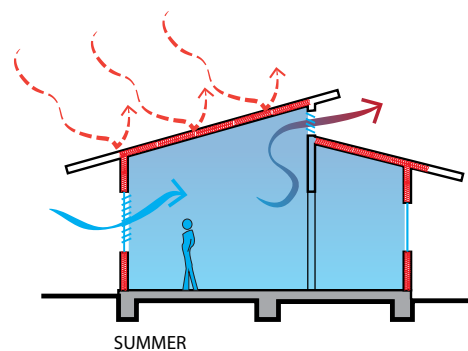
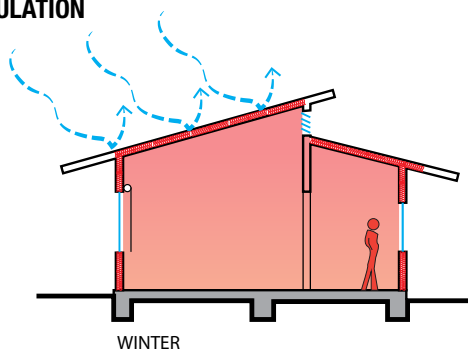


In winter - solar access should be maximised to improve heat gain from the lower northerly sun path. Floors and walls made of mass material will store heat during the day which will be released at night to warm the house.



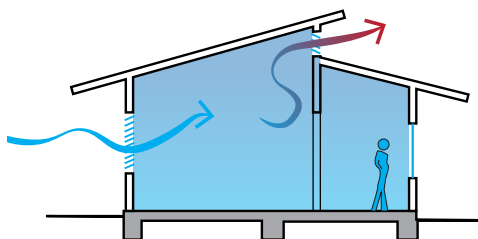
In summer - protect your home from heat gain from low angle sunlight on the eastern and western walls by designing deep eaves, vertical shading, screens or blinds and integrating landscape and shade trees.

INSULATION

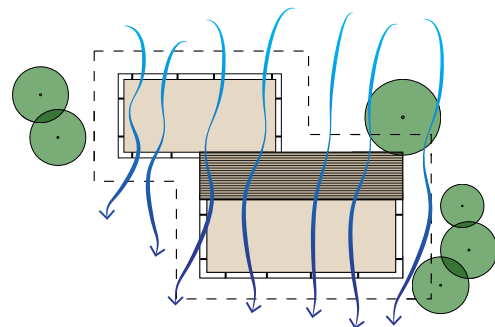


Insulation - Wall, floor and roof insulation enables a more stable internal temperature both during the summer (keeping heat out) and winter (keeping heat in).

CROSS VENTILATION



Ventilation - Higher level windows or ceiling cavity will create stack ventilation which allows hot air to continually escape and be replaced by cooler air.



Building Shape and Orientation - Narrow spaces promote better air circulation, maximise northern exposure and offer the best possibilities for moderating the homes internal climate.

4. Building design

Well considered building design in response to a site analysis has the potential to greatly enhance building amenity. Building amenity refers to the way in which the building provides a high quality of livability for residents. Amenity is derived through the ability of spaces to adequately provide for their intended function and level of activity. This is facilitated by rooms of suitable dimensions and flexible layouts. The key aspects of building design and amenity include; designing for climate, building orientation and separation, sunlight access, visual privacy, acoustic privacy, view sharing, and natural ventilation.

4.1. Designing for the Tweed climate

The Tweed is located within a sub-tropical climate zone. The main characteristics of a sub-tropical climate zone are:

- Highly humid with a degree of dry season;
- High temperatures year round;
- Minimal seasonal temperature variation; and
- The lowest diurnal (day/night) temperature range.

The use of passive solar design in dwellings is encouraged. With the Tweed's temperate sub-tropical climate, 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 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 appropriate solar access. Sites on the southern side of a hill, for example, may not receive the same level of sunlight access those on the northern side. On allotments where the side boundary has a northerly aspect, consideration should be given to increasing the side setback to improve sunlight access. Similarly, reducing the bulk and height on the southern boundary may reduce overshadowing of northern sun to adjoining properties.

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 south-westerly aspect is least desirable, particularly in summer where the lower angle of the setting sun can add significant heat load to a dwelling. Protection for a westerly aspect can be achieved by using such elements as deep eaves, vertical sun shading devices, window tinting, blinds and landscape.

Daylight consists of both diffused 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.

Natural ventilation is the circulation of sufficient volumes of fresh air through dwellings to create a comfortable indoor environment. Designing for natural ventilation incorporates sustainable design practice by responding to the local climate, captures cooling summer breezes, and reduces or eliminates the need for mechanical ventilation.

Dwellings which are designed appropriate to the subtropical climatic conditions are less expensive to run, generally reduce the household's 'carbon footprint' and have a greater level of living amenity.

4.2. Passive design

Passive design is a term used to describe design which takes advantage of the natural climate to maintain thermal comfort.

Incorporating the principles of passive design:

- significantly improves internal and external levels of comfort;
- reduces reliance and therefore cost of mechanical heating and cooling, and
- reduces greenhouse gas emissions associated with heating, cooling, mechanical ventilation and lighting.

Planning and design principles

To respond to the local features of a subtropical climate housing incorporates the following features:

Site planning

- P1. Undertakes a site analysis as the first step to determine the sites opportunities and constraints.
- P2. Optimises solar aspect on the site, and integrates indoor with external living spaces.
- P3. Elevated housing, spaced apart, captures cooling summer breezes.
- P4. Retains (or plants) vegetation, in particular trees, for shade.

Materials

- P5. Generally uses insulated lightweight building materials with plenty of opening windows enabling quick release of heat during summer months, but retention of internal heat source during winter months.
- P6. Low thermal mass construction due to the low diurnal range. Where incorporating an element of thermal mass (masonry), ensure that it is appropriately ventilated during summer months to quickly release the stored heat.
- P7. Uses light coloured walls and roofs to reflect more solar radiation and reduce heat gain.
- P8. Minimises solid masonry fencing and high retaining walls as this blocks cooling breezes to the ground floors and yard spaces.
- P9. Incorporates insulation to roofs, ceilings and walls.

Floor plan and building principles

- P10. Designed with living space to the north east, north or north west as the best solar aspects. All west and east facing walls and windows should be shaded year round.
- P11. Designed with narrower floor plans to assist with cross ventilation, alternatively designed with openings to capture prevailing breezes.

- P12. Designed with higher volumes with higher level openable windows in living spaces to assist with stack and cross ventilation.
- P13. Reduced house profile and windows facing west. Long western elevation extensively shaded with deep eaves, window hoods or a covered verandah to act as a buffer to hot summer sun.
- P14. Maximises the indoor and outdoor relationship with screened and shaded areas and rain protected outdoor areas, such as large and covered verandahs accessed directly off living spaces.
- P15. Multiple outdoor living rooms to take advantage of the sunny side (for winter) and the shady side (for summer) of the house.
- P16. Covered clothes drying areas are included.
- P17. Incorporates ceiling fans.

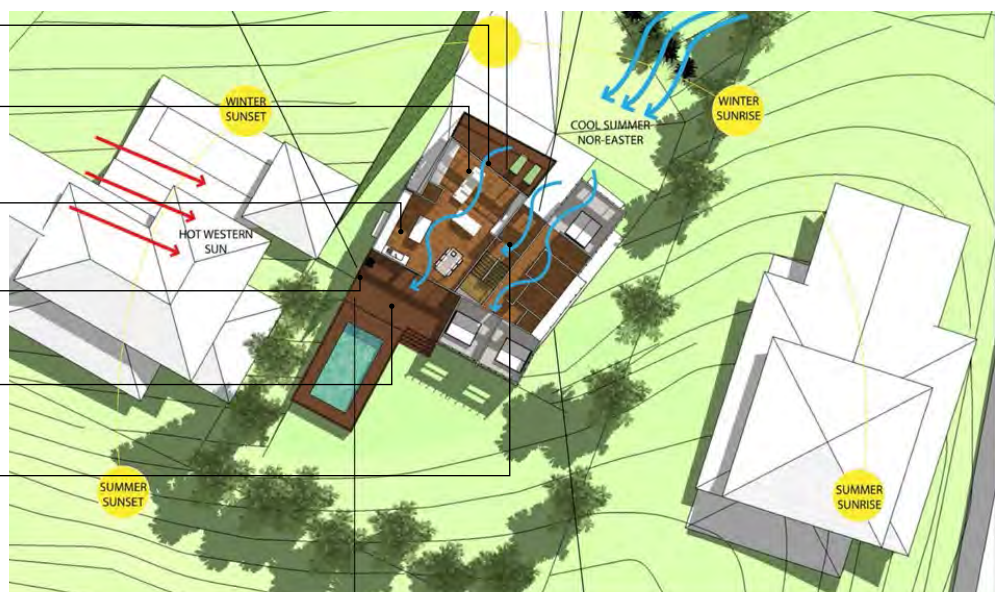
Objectives

- O1. To ensure the dwelling is designed and sited to provide all habitable rooms with direct access to fresh air, to assist in promoting thermal comfort for occupants and to maximise sunlight and daylight access to living spaces and external living areas.
- O2. To encourage the use of passive solar and climate appropriate design.
- O3. To encourage natural ventilation in non-habitable rooms.
- O4. To reduce energy consumption by minimising the use of mechanical ventilation.

Controls

- C1. The dwelling is to be sited to encourage a balance of solar access (during winter months) and shading (during summer months) to primary windows and doors of living space and external living areas. This is to be demonstrated on a site analysis.
- C2. The plan layout, including the placement of openings, is to be designed to optimise access to prevailing breezes and to provide for cross-ventilation, demonstrated on a site analysis.

- Living spaces and decks orientated north to take advantage of the northern aspect and views.
- Generous sliding door width and high level louvres capture prevailing breezes and assist in stack ventilation.
- Use of predominant lightweight materials suitable to the subtropical climate and generally have lower embodied energies.
- Timber vertical screens and landscaping to the western elevation assist with shading and reduction of heat loads during winter months.
- Generous rear deck provides transition between internal and external spaces as well as a refuge from the hot summer sun.
- Strategic location of window and door openings to capture and channel prevailing breezes.
- 5000 Ltr water tank harvests and stores rainwater for reuse in the toilets, washing machines, gardens and pool.
- Photovoltaic and solar hot water on roof.



Sample Passive Design - Illustrate and notate the principles of passive design as part of a site analysis.

4.3. Solar access and natural ventilation

It is important when designing buildings to consider access to sunlight and natural ventilation as well as the impact on the solar access of the adjoining properties. In some instances, overshadowing may be unavoidable however unreasonable overshadowing of neighbours as a result of poor design is not acceptable.

Planning and design principles

- P1. Maximises sunlight access and natural ventilation whilst minimising potential sunlight access and overshadowing issues for adjoining properties.
- P2. Small lot housing sites that are often constrained by narrow frontage, incorporate north facing courtyards, internal voids and double volume spaces combined with highlight windows to improve solar access and natural ventilation.

Objectives

- O1. To ensure the dwelling is sited and designed to maximise sunlight and daylight access and natural ventilation to living spaces and external living areas.
- O2. To minimise the potential impacts on solar access and natural ventilation to adjoining properties.

Controls

- C1. Two storey or greater development must prepare shadowing diagrams over the subject and adjoining sites for the summer solstice (21st December), winter solstice (21 June) at the times of 9am, 12pm and 3pm. Shadow cast by fences, roof overhangs and changes in level are to be considered and should be indicated on shadow diagrams submitted.
- C2. Private open space of the subject dwelling is to receive at least two hours sunlight between 9am and 3pm on June 21.
- C3. Windows to north-facing habitable rooms or external living spaces 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.
- C4. For neighbouring properties ensure:
 - i. Sunlight to at least 50% of the principle area of private open space of adjacent properties is not reduced to less than 2 hours between 9am and 3pm on June 21, and
 - ii. Windows to living areas must receive at least 3 hours of sunlight between 9am and 3pm on 21 June.
 - iii. Where existing overshadowing by buildings is greater than this, sunlight is not to be further reduced by more than 20%.
- C5. New dwelling design should minimise overshadowing on existing adjacent solar panels where other reasonable design alternatives are possible.

4.4. Building form

Building form combined with material and fenestration composition has the ability to significantly influence the resultant bulk, scale, mass and visual appearance of a building which can then influence streetscape character.

Planning and design principles

- P1. Bulk and mass of a building is broken up into a series of intersecting forms which relate to the site and internal configuration.
- P2. On sloping blocks the building form steps to take up the level change within the building envelope and the roof is designed as a series of planes with varying pitches to reduce the overall visual bulk.
- P3. Small lot housing sites, that are often constrained by narrow frontage, consider single room width layouts and small courtyard areas to improve internal amenity.
- P4. Large expanses of unarticulated wall planes are minimised. Articulation can be achieved by:
 - i. including architectural elements and detailing such as entrance portico's, window hoods.
 - ii. by stepping, recessing, cantilevering or projecting building form elements and roofs including verandas thereby avoiding long unbroken elevations;
 - iii. using a series of roof forms rather than one single roof form;
 - iv. using a range of building materials and cladding types, colour and textures to create architectural interest.

Note:

Building articulation is how each building element, such as three dimensional form, fenestration, structure or floor plate configuration is architecturally expressed. This can be done through building form including projections, cantilevers and recesses, the use of colour, change of material or texture. The idea is to make these elements read differently creating elevation interest while still retaining a coherent pleasing composition overall.

Objectives

01. To minimise the visual impact and bulk of development when viewed from adjoining properties, the street, waterways, and areas for public recreation purposes.

Controls

- C1. Building siting, height, scale, and roof form must relate to the surrounding development, topography and the existing site conditions.
- C2. Walls in excess of 15m in length and/or 4m in height must be articulated, landscaped, or otherwise treated in order to provide visual relief. Planning and design principle 4 above identifies various articulation techniques.
- C3. Buildings on corner sites are to be designed and articulated to address both streets frontages.

4.5. Visual and acoustic 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.

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

The acoustic privacy may also be impacted by the proximity of the building to major external noise sources such as busy roads and aircraft.

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

Planning and design principles

Dwelling design incorporates the following:

- P1. Identifies potential visual and acoustic privacy impacts through a site analysis. This includes identifying windows and external living spaces of adjoining dwellings/buildings and then designing to avoid direct line of sight into proposed windows, internal and external living spaces.
- P2. Locates habitable rooms and windows to the front and rear elevations where privacy and outlook are more easily achieved.
- P3. Terraces and balconies (especially if elevated) are designed to have a generous building separation and screens where required to avoid loss of amenity and visual privacy and minimise noise transfer.
- P4. Small lot housing includes internal voids and double volume spaces combined with highlight windows to maximise privacy and minimise overlooking impacts.

Objectives

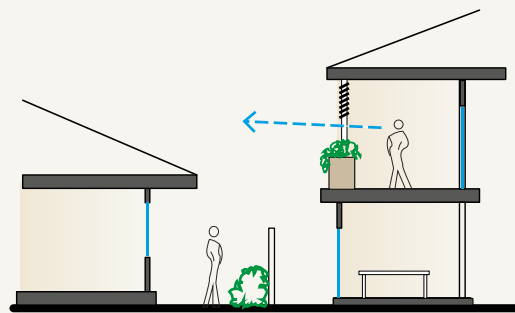
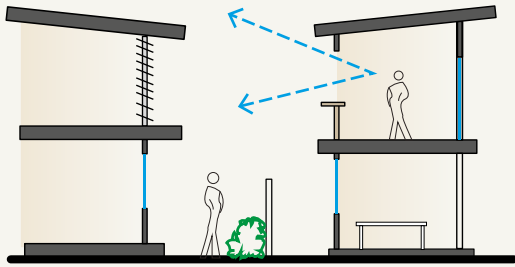
01. To enable visual privacy for internal and external spaces whilst allowing for a level of surveillance over the street.
02. To facilitate outlook and views from principle rooms in dwellings and private open spaces without compromising visual privacy.
03. To minimise overlooking of neighbouring dwellings and external living spaces.
04. To encourage a high level of acoustic privacy through minimising exposure to noise sources, such as traffic and aircraft noise, and minimising the impacts of noise generating uses such as air conditioners, pumps, and other mechanical equipment on the dwelling and the adjoining dwellings.

Note:

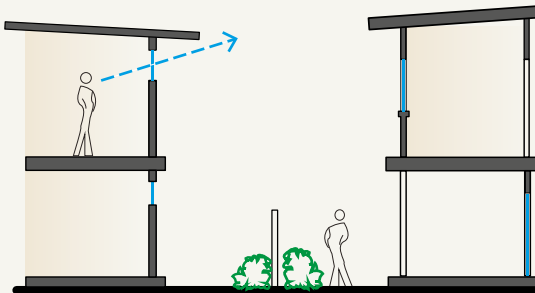
Design Control 3.1 - Setbacks also contains provisions relating to visual and acoustic privacy and should be read in conjunction with these controls.

Controls

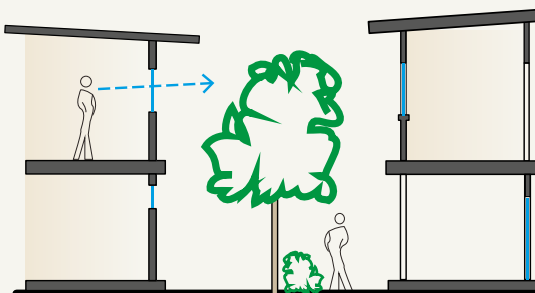
- C1. Terraces, balconies, living room and kitchen windows are to avoid a direct view into neighbouring dwellings or neighbouring private open space.
- C2. Decks, verandahs, terraces, balconies and other external living areas within 4 metres from a side or rear boundary may require a privacy screen unless it can be demonstrated that there will be negligible overlooking and/or privacy impacts, as demonstrated on a site analysis.
- C3. 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. Location of existing adjoining property windows are to be documented on a site analysis.
- C4. The location of external living areas, swimming pools, spas and other potential sources of noise transfer shall consider the proximity to and potential impacts on habitable rooms of adjoining allotments.
- C5. 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. These items must be positioned away from neighbouring dwellings, particularly bedrooms, habitable rooms and external living spaces. These items may require a sound proofed enclosure.
- C6. For new dwellings located on arterial roads, designated roads, classified roads or where exposed to aircraft noise, consideration is to be given to the need for acoustic treatment to mitigate noise impacts.



Use screening devices including planter boxes and screens to protect privacy while also providing sunlight access and an outlook.



Where other measures are not able to be used, provide high level window sill heights to address privacy and overlooking concerns.



Use landscaping to assist with visual screening and creating private outlooks.

4.6. Roofs, dormers, attics 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 should respond 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.

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.

Planning and design principles

Roof design is an integral part of the building design through:

- P1. Articulating the roof with a series of roof planes and pitches rather than a single homogenous roof line;
- P2. Eaves, or other shading devices, protect the dwelling from direct solar penetration;
- P3. The roof form, slope, material and colour is compatible with adjacent buildings;
- P4. The roof height is in proportion to the wall height of the building;

Objectives

01. To contribute to the design and performance of buildings.
02. To integrate the design of the roof into the overall elevation and building composition.
03. To contribute to a consistent and attractive streetscape.
04. To provide shading and weather protection.
05. To ensure that where attics are provided, the bulk and scale of the development is compatible with the surrounding residential context.

Controls

- C1. Roofs should incorporate at least 600mm deep eaves for shading of facades, particularly on west facing elevations. Alternate sunshading measures including external louvres, screens and window hoods are also acceptable solutions.
- C2. Roof materials and skylights should not cause excessive glare and reflection and roof colour should be consistent with the existing locality.
- C3. Attic spaces cannot be more than 50% of the floor below with the majority of the volume of an attic to be contained within the roof space.
- C4. Minimum ceiling heights of 2.7 metre are encouraged for habitable rooms. For habitable rooms with a raking ceiling it is preferable to have at least 30% of the ceiling with a minimum 2.7 metre height.

4.7. Garages, driveways and car parking

The controls relating to location and design of car access and parking areas are to ensure that the site and the streetscape are not dominated by car related uses and to ensure that access and car parking does not compromise the privacy and amenity of the site or adjoining dwellings.

Carparking should be convenient, designed to meet the needs of residents and integrated with the overall site design to minimise visual and environmental impacts.

Planning and design principles

Note:

Design Control 3.1 - Setbacks also contains provisions and diagrams relating to corner blocks and should be read in conjunction with these controls.

Note:

Design Criteria 3.1 - Setbacks of this Code also contains provisions relating to setbacks of carports and garages which should be read in conjunction with these controls.

Design Control 3.2 - Building heights also contains provisions relating to garages and carports and should be read in conjunction with these controls.

- P1. Separation between vehicular and pedestrian access points ensures good visibility between the two.
- P2. Site planning enables suitable car access and parking without dominating the streetscape.
- P3. In dual occupancy development co-joining double garages is to be avoided as this results in a long garage elevation to the street. Garages are separated with landscaping or screening walls to breakdown their visual impact.

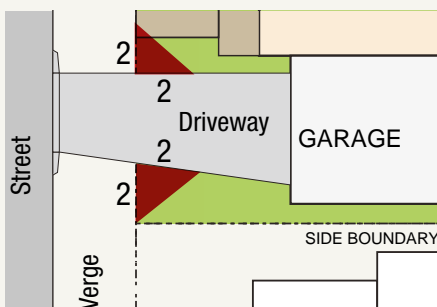
Objectives

- O1. To facilitate on site car access, parking and manoeuvring areas.
- O2. Minimise driveways and hardstand areas to maximise the area for landscaping and deep soil zones and to reduce the visual impact of driveways and hard surfaces from the street.
- O3. To minimise the physical and visual dominance of vehicles and garage doors on sites.
- O4. To minimise footpath and street reserve crossings.

Controls

- C1. Carparking and driveways are to be in accordance with Section A2 of the Tweed Shire Development Control Plan and Council's Driveway Design Specification.
- C2. Carports and garages visible from the public street are to:
 - i. Be compatible with the building design, including roofs; and
 - ii. Be treated with materials and colours and windows which ensure the garage or carport is less visibly intrusive to the streetscape.
- C3. Car parking entries are encouraged to be located off secondary streets and laneways where these occur.
- C4. Vehicular movement, driveways and parking areas are to be designed to minimise dimensions, to reduce hard surfaces on the lot, and increase the area available for landscaping. Permeable driveway surface treatments are encouraged.

Driveway configurations are to maintain appropriate sight lines and safe visibility in accordance with Council's Driveway Design Specification.



Red splay shaded areas denote visually clear zone.

- C5. Allotments less than 450 sqm and with a street frontage less than 10m are encouraged to provide rear laneway access to garages. Garages to the primary street frontage will only be considered where either a single garage is provided or a two storey building form with projecting first floor balcony mitigates the visual impact of the double garage.
- C6. Driveways may be located adjacent to the side boundaries only where front fences above 600mm have a 60% openness ratio for the first 2 metres along the boundary adjacent to the driveway to achieve pedestrian and traffic sight lines as set out in AS2890.
- C7. Where vehicles would otherwise have to reverse more than 50 metres, where the site is steep, fronts a busy road or is in a high pedestrian area, driveways should be designed so that the vehicles can enter and leave the site in a forward direction.
- C8. In stacked dual occupancy configurations, avoid double garages at the termination of the access handle for the rear allotment to minimise visual impact.

Garages

- C9. Garage doors to a street frontage cannot be more than 50% of the street frontage or 6 metres, whichever is the lesser.
- C10. Garage doors along a laneway may take up greater than 50% of the frontage. Providing a pedestrian access way directly from the laneway to the lot is provided.
- C11. Where a garage entry faces the side boundary, articulation, windows and landscaping are to be provided to the street elevation of the garage.

Carports

- C12. Carports cannot be wider than two car spaces width or 6 metres.
- C13. A maximum of two carport spaces can be stacked down the site.
- C14. Carports must not necessitate an extra driveway additional to the driveway for a garage or other parking structure.
- C15. The carport must have at least two sides open and cannot be fitted with a door, fence or gate.
- C16. Carports cannot have rooms within the roof.

Basement carparking

- C17. Basement carparking cannot extend more than 1 metre above natural ground level where it faces a public street or public space or 1.5 metre above natural ground level to the side and the rear of the lot where it does not face a public street or public space.
- C18. A ramp entering off a public street must start behind the boundary. Ramps cannot be located on public land and the width of ramps is to be minimized.
- C19. Basement car parking is not to extend outside the building footprint.

5. Operational requirements

5.1. 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.

Planning and design principles

- P1. Recycle and reuse demolished materials, where possible;
- P2. Specify building materials that can be reused and recycled at the end of their life;
- P3. Integrate waste management during the design stage by:
 - i. Reducing waste by utilising the standard product/component sizes of the materials to be used,
 - ii. Incorporating durability, adaptability and ease of future services upgrades;
- P4. 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; and
- P5. Incorporate on-site composting.

Note:

DCP Section A15 provides additional controls related to waste minimisation and management.

Objectives

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

Controls

- C1. 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.
- C2. Excavation that will result in waste material having to be transported off-site must be minimised through the use of site responsive building design. Where practical, excavated material should be reused on-site.

6. Ancillary development

Ancillary development comprises minor building works and may include, but is not limited to, carports, swimming pools, balconies, decks, shade structures and the like, associated with a dwelling. Whilst minor in nature and scale, these structures can impact on the amenity of neighbours and the streetscape when poorly located or designed.

6.1. Fences and walls

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.

Fences play an integral part in the development and contribution to the streetscape. Ideally front, and side fences to corner allotments, should integrate with the street allowing residents to use the 'street spaces' while retaining 'private spaces'. High front fences create 'walled streets' which turn dwellings in on themselves rather than contributing to the liveliness of the street, generally result in less pedestrian activity and are more prone to graffiti and vandalism. However, in some locations, such as on main roads, higher front fences provide much needed privacy and buffer to noise intrusion.

Planning and design principles

Front and side fences, especially to corner allotments, contribute to amenity of the streetscape through:

- P1. Consideration as an integral part of the house and site design;
- P2. Avoiding long expanses of solid masonry, timber paling or colourbond blank walls;
- P3. Using a mix of materials which integrate with the design and materials of the dwelling;
- P4. Incorporating transparent elements within the fence design to enable passive surveillance of the street, allow breezes to flow through and encourage interaction with neighbours;
- P5. Integrating landscaping which includes a variety of plant types, such as trees and lower shrubs, as appropriate; and
- P6. Providing elements of visual interest and shading from trees to contribute to pedestrian activity and walking amenity.

Note: A large percentage of ancillary development may now occur as exempt development under the provisions of the State Environmental Planning Policy (Exempt and Complying Development), the Code SEPP, and therefore do not require a development application (DA).

Applicants are advised to also refer to the Code SEPP for exempt or complying development provisions relating to types of ancillary development.

Objectives

01. To define the boundaries between public and private land and between neighbouring properties.
02. To integrate with the streetscape appearance.
03. To enhance the usability of private open space.
04. To offer acoustic and visual privacy on busy roads.

Controls

General

- C1. Fences and walls are not to impede the natural flow of stormwater runoff.
- C2. 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.
- C3. Fencing is not to obstruct water meter reading access.

Front and return

- C4. Front and return fences are to reflect the design character of the dwelling and be compatible with other fences and walls within the streetscape.
- C5. Return fences (the side fence between the front boundary and front elevation of the house) are to be the same height and design as front fences.
- C6. Front and return fences to a primary or secondary street frontage can be up to maximum height of 1.5 metres high with a maximum solid fence height of 600mm. Above the solid wall the fence is to have a minimum openness ratio of 60%. These height may be varied where topography necessitates a retaining wall as demonstrated on a site analysis.
- C7. Front or return fences must not be timber paling or colourbond, 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.
- C8. Front fences are not to obscure a 2.0m x 2.0m splay when adjacent to a driveway.
- C9. Front and return fences may be solid up to 1.8 metre if:
 - i. Located on an arterial road or opposite an intersection where head lights shine into a dwelling; or
 - ii. Where a swimming pool is located forward of the front building line; or

- iii. Where the allotment is oriented to the north, providing the most suitable location for private open space and external living areas; and
 - Are justified by a site analysis;
 - Include articulation and landscaping to the street(s);
 - Must not be a solid unbroken wall and the solid component cannot be more than 50% of the street frontage; and
 - Must not be colourbond or timber paling.

Side and rear

- C10. Side fences are measured from behind the required building line to the rear boundary. The maximum side or rear fence height is 2.0 metres.
- C11. May include timber paling, metal or Colourbond material. If metal must be of low reflective material.
- C12. Chain wire fences, except to tennis courts, are not to exceed 1.2 metres in height.
- C13. On corner allotments, fence and wall treatments on the secondary street frontage are to be of equal design quality and material as the primary street frontage for the length of the building.

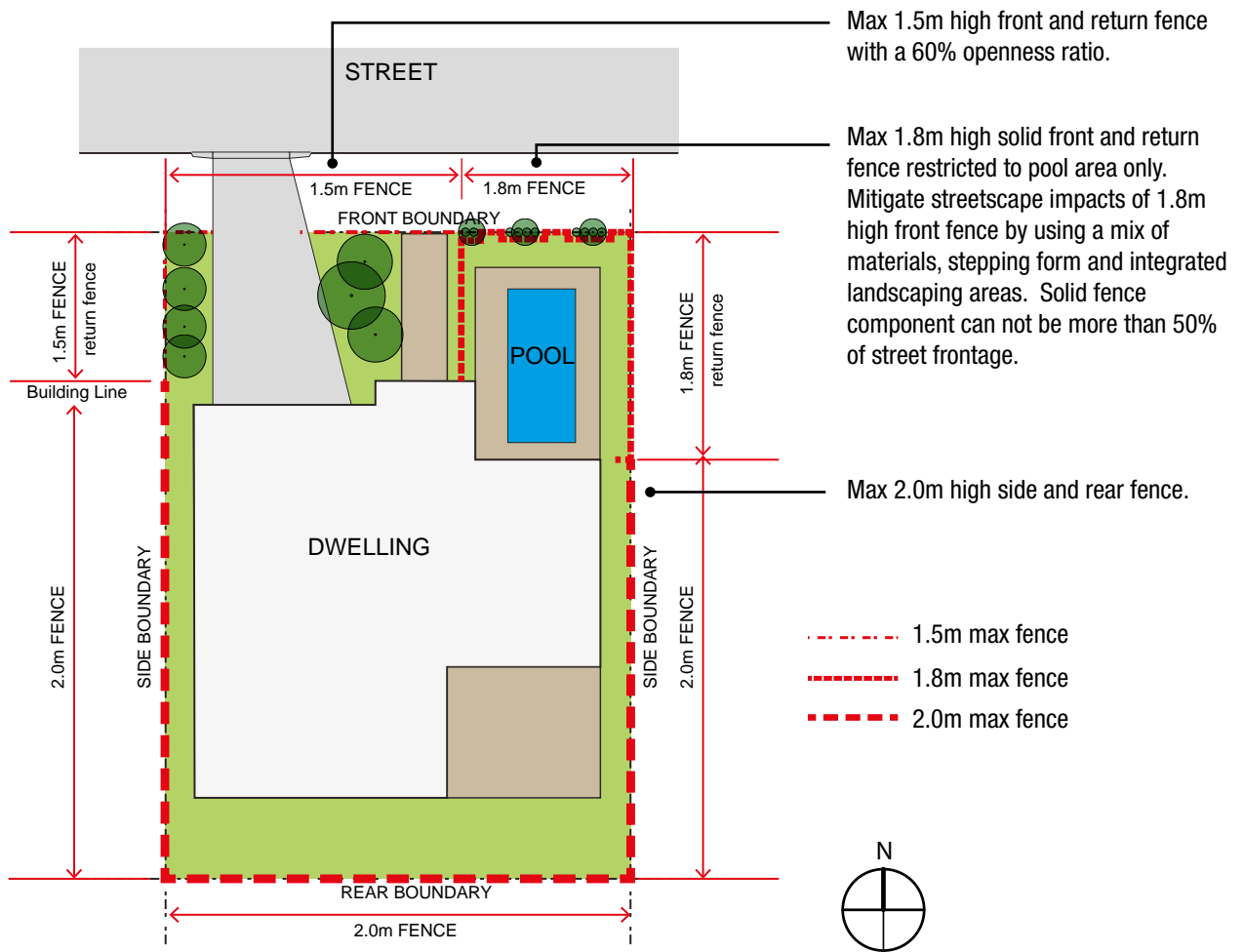
Note:

6.4 Tennis Courts also contains fencing controls

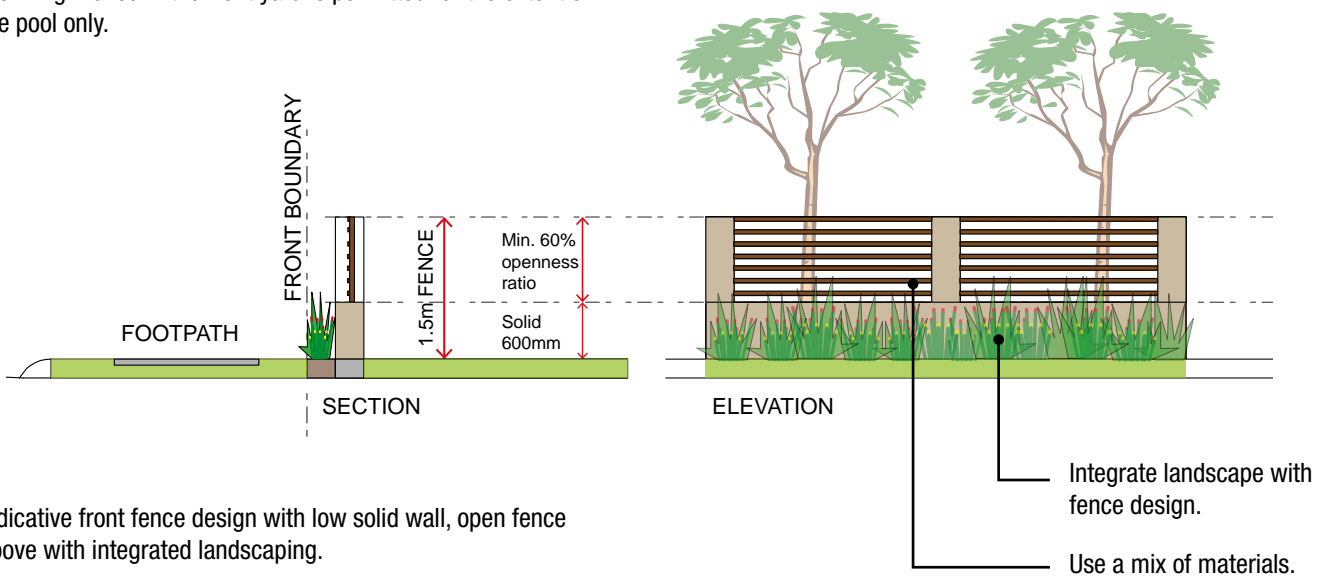
Fences and walls for Greenbank Island

- C14. Approval is to be obtained from Council prior to the erection of any fencing on Greenbank Island.
- C15. Fencing behind the six (6) metre building line shall not exceed 2000mm in height.
- C16. The fencing is to be constructed of brick, stone, masonry block or such other material as is approved by Council.

INDICATIVE FENCE CONTROL DIAGRAMS



Indicative front fence design with pool in the front yard. A 1.8m high fence in the front yard is permitted for the extent of the pool only.



Indicative front fence design with low solid wall, open fence above with integrated landscaping.

6.2. Outbuildings

Outbuildings are ancillary structures to the main dwelling. They are small scale detached buildings that are visually consistent with the design of the dwelling. Examples of outbuildings include boatsheds, workshops, storage sheds, garden sheds, greenhouses, cabanas and gazebos.

Objectives

Note:

Outbuildings are defined in the State Environmental Planning Policy (Exempt and Complying Development) Codes SEPP, and may be permitted under the Code SEPP exempt or complying development provisions. Applicants are advised to also refer to the Code SEPP for exempt or complying development provisions for outbuildings.

01. To provide for uses complementary to a dwelling house.
02. To ensure outbuildings are of an appropriate scale and compatible in design and materials with the existing dwelling house.
03. To maintain the existing or reinforce the desired future character and streetscape of the area and preserve the amenity of the existing dwelling house and any neighbouring properties.
04. To ensure that deep soil zones and significant trees or vegetation are not adversely impacted.
05. To make allowance for contemporary living designs that comprise free standing outbuildings for residential uses such as; studios, parent/kids retreat, study/home office, bedroom, living / entertainment space, but not including a dwelling.

For the purposes of this criteria, 'outbuildings' will have the same meaning as the State Environmental Planning Policy Housing Code.

Design Control 3.1 - Setbacks also contains provisions relating to outbuildings and should be read in conjunction with these controls.

Controls

- C1. Outbuildings are to be single storey, except when located on either rural or agricultural land.
- C2. Deep soil areas cannot be used for the siting of an outbuilding.
- C3. An outbuilding may include a toilet, wash basin and/or shower but may not be used as a dwelling and may not contain a kitchen.
- C4. The total area for outbuildings on a site (including carport) is:
 - i. 50m² for lots up to 450m²;
 - ii. 60m² for lots greater than 450m² and up to 900m²;
 - iii. 100m² for lots greater than 900m²; and
 - iv. These size restrictions do not apply on non-urban zoned land or rural living (large lot residential) land.
- C5. Outbuildings are to have a maximum overall building height of 3.5 metres for a flat roof and 4.8 metres for a pitched roof. This control does not apply to land with either a rural living (large lot residential) or agricultural zoning.
- C6. Outbuildings must be located a minimum of 1 metre behind the front building alignment.
- C7. The design and materials are to be compatible with those of the dwelling house. Reflective and high glare surface finishes are to be avoided.

Note:

Design Control 3.1 - Setbacks also contains provisions relating to swimming pools and should be read in conjunction with these controls.

Design Control 4.3 - Visual and acoustic privacy also contains provisions relating to swimming pools and should be read in conjunction with these controls.

Swimming pool fences must comply with the relevant requirements for pool fences set out in the Swimming Pool Act 1992 (or as updated) and with Australian Standards (such as Australian Standard 1926 (or as updated). Compliance with the Australian Standard will generally mean that a 1200mm high fence, or where the fence is located on a property boundary a 1800mm fence, with self-closing, self-latching gates will need to be provided.

6.3. Swimming pools and spas

Swimming pools and spas enhance the amenity and livability of dwellings. However, care must be taken to ensure a high level of safety for children and to ensure they do not detract from the amenity of neighbours. It is important that swimming pools and pool fencing are not only built in accordance the Tweed Shire Council planning controls, but also with the relevant NSW Government Acts and Regulations and with relevant Australian Standards.

Planning and design principles

Safety and the protection of the privacy and amenity of the pool owners and adjoining residents are important considerations. Pool design incorporates the following:

- P1. Safety for occupants, visitors and neighbours.
- P2. Considers the pool location and associated deck areas in relation to habitable rooms of adjoining properties;
- P3. Encloses and locates the pool filter away from property boundaries and habitable rooms;
- P4. Pools are located so that they will not damage mature trees, either on the subject site or those within neighbouring properties.

Objectives

- O1. To ensure maximum safety of pool areas.
- O2. To ensure maximum child safety.
- O3. To minimise the impact of swimming pools and spas on neighbours.

Controls

- C1. The outer edge of the pool concourse or coping shall set back a minimum of 1 metre from the side or rear boundaries.
- C2. Swimming pools and spas must be surrounded with a child resistant barrier in accordance with the provisions of the Swimming Pools Act and the requirements of Australia Standard 1926.
- C3. Swimming pools and spas are to have a suitable means for drainage and disposal of overflow water.
- C4. Filters and pumps are to be enclosed and located in a position so as not to cause a noise nuisance to adjoining properties and habitable rooms.
- C5. Adequate deep soil zone is to be retained.

Note:

The wall of a residential building may form part of the child resistant barrier so long as the wall contains no opening door, window or other opening through which access may at any time be gained to the swimming pool.

- C6. Pools may be located between the front building line and the street where it can be demonstrated through a site analysis plan that:
- i. This is the best solar orientation for the pool, and associated external living areas;
 - ii. That the impact on habitable rooms of the adjoining and opposite properties is minimised; and
 - iii. Fencing to the street is not timber paling or colourbond and incorporates a mix of materials, articulation and landscaping.

6.4. Tennis courts

Tennis courts are to be designed and sited to ensure that the potential impact on neighbours is minimised. Lighting where provided is to be designed to ensure that upward and outward light spillage is minimised or eliminated.

Objectives

01. To ensure tennis courts are designed and located to minimise excessive noise, loss of privacy or light spill of artificial lighting impacts on neighbouring properties.
02. To ensure that tennis courts do not adversely affect the amenity of their locality by their visual impact.
03. To retain, where possible, existing trees.

Controls

- C1. Tennis court lighting is to comply with the provisions of Australian Standard 2560.1 (or as updated) and is to be designed and shielded to eliminate upward and minimise outward spillage of light.
- C2. Tennis courts shall be designed to adequately accommodate drainage requirements within the site.
- C3. Tennis courts shall be located behind the building line of any primary frontage except where on rural land or non-urban land.
- C4. Tennis courts cannot be located within the deep soil zones.
- C5. For tennis courts or other similar areas, chain wire fences are to be of a dark colour and designed to reduce visual impact. Tennis court fencing is to be screened with landscaping.
- C6. Solid fences enclosing these facilities shall not be permitted over 3.6 metres, shall be offset from the side boundary by a minimum of 600m and offset any front boundary by 1 metre.

7. Appendix

7.1. Development application submission requirements

Council's submission requirements for all residential and tourist development types lodged as a development application are listed within the "Development Application Guide". Development Applications are to be lodged consistent with these requirements.

Material to be submitted by the applicant at DA stage	Part A Dwelling Houses, Dual Occupancy, Secondary Dwellings	Part B Multi-Dwelling Housing,	Part C Residential Flat Buildings, Shop top Housing
Pre DA Meeting		✓	✓
Concept Plan - Scale of 1:100 or 1:200			
Submission of a concept plan showing:			
Sufficient information for the Development Assessment Panel (DAP) to provide meaningful assessment and feedback		✓	✓
Completed DAP details form		✓	✓
Development Application			
Site Plan 1:100 or 1:200			
Consistent with the requirements within the document ' <i>Development Application Guide</i> '. Site plan to include but not be limited to: <ul style="list-style-type: none"> Title block, scale, north point Legal description Property boundaries with dimensions and bearings Key topographic and landscape features Contours and levels Service and easement locations Overall proposed works layout including existing and proposed building locations including fences and structures, points of access and egress 	✓	✓	✓
Site Analysis			
Consistent with the requirements of Preliminary Information Part 4 - Context and Site Analysis and the site analysis checklist - Appendix 7.2 . The site analysis is to be graphically illustrated, notated and tailored to suit the site, context and complexity of development. Site analysis to include but not be limited to: <ul style="list-style-type: none"> Overlay of proposed with above site plan demonstrating relationship of design to site and contextual conditions Overlay key climatic and sun path diagrams Overlay key view lines Details of adjoining buildings Clearly illustrate and notate areas of non-compliance 	✓	✓	✓

Material to be submitted by the applicant at DA stage	Part A Dwelling Houses, Dual Occupancy, Secondary Dwellings	Part B Multi-Dwelling Housing,	Part C Residential Flat Buildings, Shop top Housing
Site Analysis (Cont.)			
Streetscape elevations			✓
Photographs for at least 50 metres in both directions, or three adjacent properties in both directions, whichever is the lesser of represents a more complete contextual reference. (For site(s) with multiple street addresses, photographs are to be prepared for each separate address).			✓
Site works plan (this may form part of the site plan):			
The location of cut and fill earthworks with existing and finished levels	✓	✓	✓
Location of top and bottom cuttings, fill embankments and associated batter and/or retaining walls and proximity to allotment boundaries	✓	✓	✓
Pre and post development ground levels on the allotment. Where cut and fill is in excess of 1 metre in height, or where earthworks are within 1 metre of an allotment boundary, the levels shall extend at least 2 metres (horizontally) into adjoining land (so that the impact on adjoining land may be assessed)	✓	✓	✓
Details of associated retaining walls, safety railings, batter treatments, drainage and landscaping.	✓	✓	✓
Location and depth of service trenches in areas affected by cut and fill	✓	✓	✓
Erosion and sediment control plan	✓	✓	✓
Water management plans			✓
<p><i>Council may require an approved geotechnical and structural engineers report for earthworks in:</i></p> <ul style="list-style-type: none"> <i>Areas where there is a risk of landslip and excessively steep sites (>16 degrees)</i> <i>Lots that are supported by, or adjoin higher lots that are supported by existing retaining walls or cut/fill batters that exceed 1 metre in height and the new work may affect the integrity of the wall or batter</i> <i>Lots where proposed earthworks batter slope exceeds 1:2 (V:H)</i> <i>Proposals where the height of cut or fill will exceed 1 metre in height</i> <p><i>The geotechnical and structural engineers report shall include but not be limited to:</i></p> <ul style="list-style-type: none"> <i>An assessment of the stability of the proposal (for both the subject lot and adjoining land)</i> <i>Recommended design criteria for earthworks, retaining walls and associated drainage</i> <p><i>Council will assess the suitability of any cut or fill within these areas dependent upon the recommendations contained in the above reports.</i></p>			

Material to be submitted by the applicant at DA stage	Part A Dwelling Houses, Dual Occupancy, Secondary Dwellings	Part B Multi-Dwelling Housing,	Part C Residential Flat Buildings, Shop top Housing
Proposed development - scale 1:100 or 1:200			
Floor plans showing:			
All floor and roof plans with layouts and dimensions	✓	✓	✓
Finished floor levels and adjoining external levels	✓	✓	✓
Parking, vehicular and pedestrian access / entries	✓	✓	✓
Fenestration, balcony and outdoor areas	✓	✓	✓
Schedule of net and gross areas, site coverage and landscape areas	✓	✓	✓
Elevations showing:			
Height and key datum lines	✓	✓	✓
Building dimensions and articulation	✓	✓	✓
Facade composition, materials and colours	✓	✓	✓
Roof design	✓	✓	✓
Building entries (pedestrian, vehicular and service)	✓	✓	✓
Sections showing:			
Whole of site sections (boundary to boundary) accurately representing the grade of the land at different intervals and proposed finished ground line / levels.	✓	✓	✓
Existing and proposed ground level lines and maximum building height line	✓	✓	✓
Proposed building heights and adjoining buildings and structures	✓	✓	✓
Finished floor and Ceiling heights	✓	✓	✓
Location of and height of neighbouring buildings	✓	✓	✓
The relationship of the proposal to the ground plane, the street and open spaces	✓	✓	✓
the location and treatment of car parking	✓	✓	✓
indicative ground plane treatment and deep soil zones, locations and planting scheme		✓	✓
Shadow diagrams for any 2 storey development or greater showing:			
Illustrate footprint of the proposed building/works over the site and all adjoining buildings	✓	✓	✓
Shadow diagrams need to show solar access to the site and adjacent properties at summer solstice (December 21) and winter solstice (June 21) at 9:00am, 12:00 midday, 3:00pm.	✓	✓	✓
Shadows across key elevations (as required)	✓	✓	✓
Shadows cast by approved and/or existing development	✓	✓	✓

Material to be submitted by the applicant at DA stage	Part A Dwelling Houses, Dual Occupancy, Secondary Dwellings	Part B Multi-Dwelling Housing,	Part C Residential Flat Buildings, Shop top Housing
Shadows cast over existing solar panels to adjacent dwellings	✓	✓	✓
Models and Visualisations			
Submission of a series of photomontages visually depicting the proposed building within its context as required			✓
Use of 3D models to illustrate compliance with objectives			✓
Submission of a physical and/or digital model as required	✓	✓	✓
Landscape plans accurately showing:	Scale 1:100 or 1:200 for Dual occupancy		Scale 1:100 or 1:200
Building footprint of the proposal	✓	✓	✓
Any ramps, stairs and retaining wall levels	✓	✓	✓
Fencing, security and site entry/access points	✓	✓	✓
Built elements, such as pergolas, walls, planters, water features	✓	✓	✓
Trees to remain and proposed trees/planting scheme including species and size	✓	✓	✓
Trees to be removed shown dotted	✓	✓	✓
Open space and deep soil area calculations and locations	✓	✓	✓
Planting list including species, numbers and locations.		✓	✓
Stormwater management plan as required	✓	✓	✓
Submission of a Statement of Environmental Effects			
Consistent with the requirements of Development Application Guide	✓	✓	✓

7.2. Site analysis checklist

The site analysis is comprised of graphical and written information which should indicate the following range of considerations, where appropriate, and address the likely impacts of the proposed development. **The level of assessment detail will be dependent on the nature, type and scale and potential amenity impacts of the proposed development.** The development application should demonstrate how the development proposal has responded to the opportunities and constraints of the site. The site analysis is to include details, as relevant, of the following:

Site and drawing description:

- Location and clearly defined site boundaries, bearings, legal description and dimensions
- North point
- The scale and date of the plans and drawings

Site details:

- Topographic elements including contours and levels (0.5m intervals)
- Driveway and cross over locations
- Service locations (water, sewer, electrical, communications)
- Easements
- Setback overlay
- The geotechnical characteristics of the subsurface condition / soil type
- Drainage and overland flow paths
- Any acid sulfate soils, landfill or contamination affectation and, where affected, proposed remediation strategy and statement from a recognised expert that the site can be remediated

Site climatic details:

- The orientation of the site, solar path (summer, winter)
- Direction of prevailing winds and weather patterns
- Identified significant heat load directions
- Identified significant shading influences (topography, fences, houses, trees)

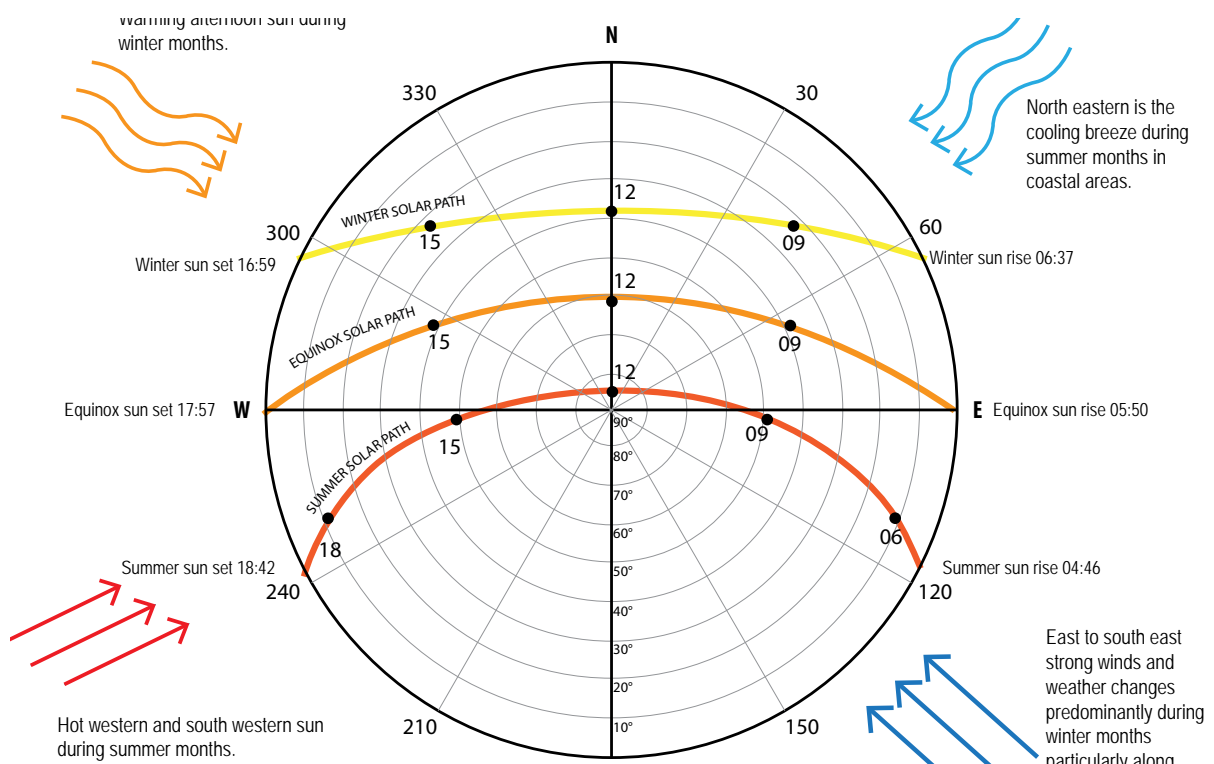
Site context:

- Understand the form and character of adjacent and opposite buildings in the streetscape and adjacent sites, architectural character, front fencing and garden styles
- The location height and use of adjacent and opposite buildings
- The location and distance to adjoining dwellings and their windows, doors, main living spaces, external living areas, pools, solar panels, retaining walls and the like
- The location, height and materials of fences and/or walls built to the site boundary
- Any difference in levels between the site and adjacent and opposite dwellings in plan and sections

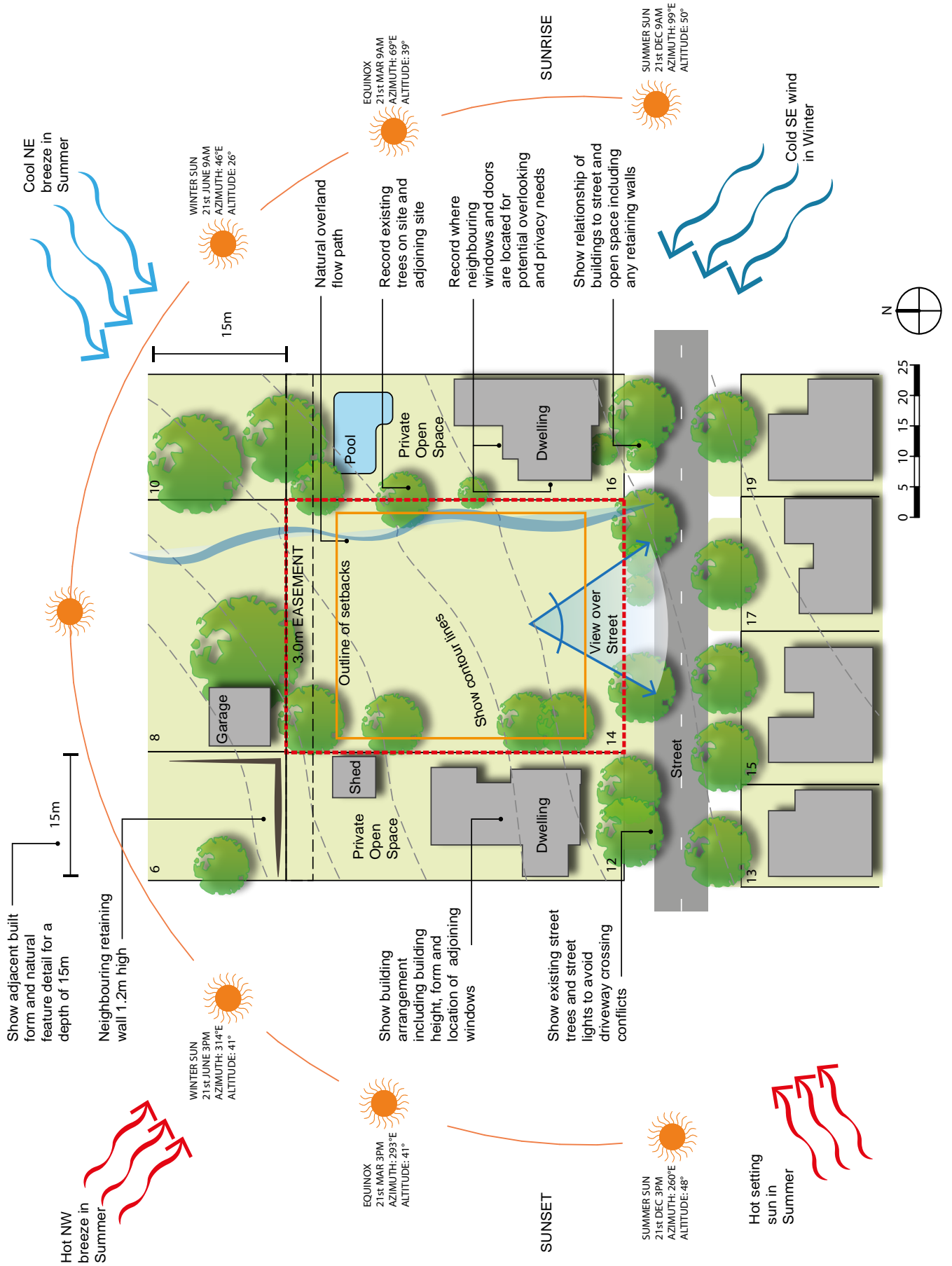
- Views to and from the site locally and regionally
- The species, location, height and canopy dimensions of any existing vegetation on the site, or within eight metres of the site, and identified as to be removed or retained
- Any heritage item or conservation area applying to or nearby to the site
- Any environmental attributes such as koala habitat, fauna corridors, bushfire hazards, fire source features, flooding, wetlands, endangered species or the like applying to, or nearby, the site
- Sources of noise nuisance such as flight paths, road noise or other noise pollution sources
- Any key natural features of the site and its surrounds such as rock outcrops, cliffs, embankments, foreshores or the like
- Direction and distance to local facilities, local shops, schools, public transport, recreation, open space and community opportunities for development within Parts B and C

Design response to site analysis in plan and section:

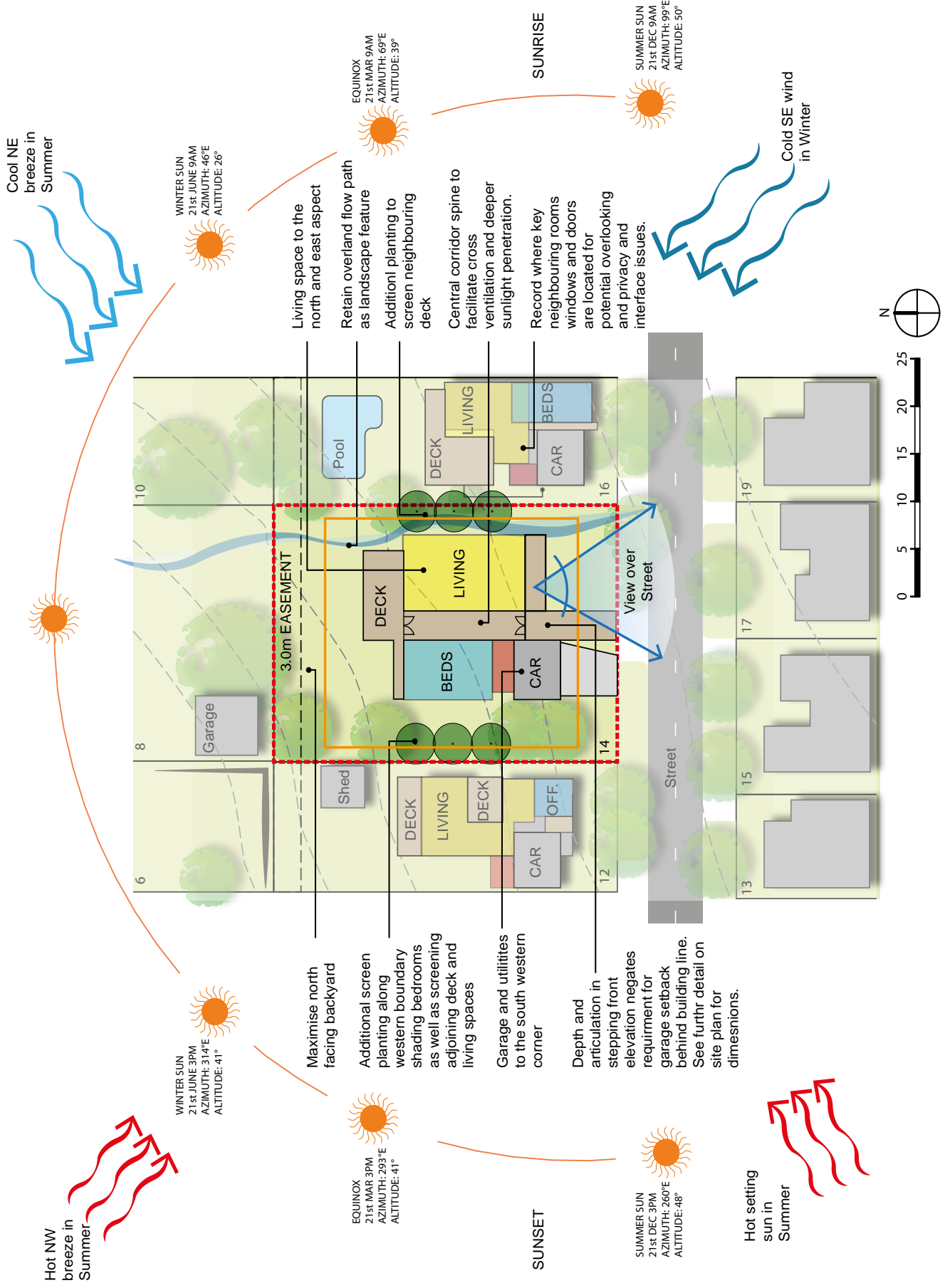
- Indicative footprint of the proposal over base site analysis information
- Demonstrate how internal living spaces relate to aspect and outdoor spaces
- Demonstrated cross ventilation and natural sunlight access
- Show the location of vehicular and pedestrian access points
- Nomination of where the proposal may overshadow or overlook or be overshadowed or overlooked by the adjoining dwellings their windows, doors, private open space, pools, solar panels, retaining walls and the like
- Nomination of the best location for landscaping, deep soil zones and outdoor living spaces
- Clearly identify areas where the site analysis indicates an suitable alternative solution to the controls



Tweed Solar Path Diagram - Solar path and prevalent climatic influences for the Tweed.



SITE ANALYSIS EXISTING CONDITION - A site plan forms the foundation of a good house design. This sample site plan provides an example of how simple graphical information is used to inform the house design response.



SITE ANALYSIS DESIGN RESPONSE - This sample site plan shows how the house siting, selection and design responds to the site analysis.

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

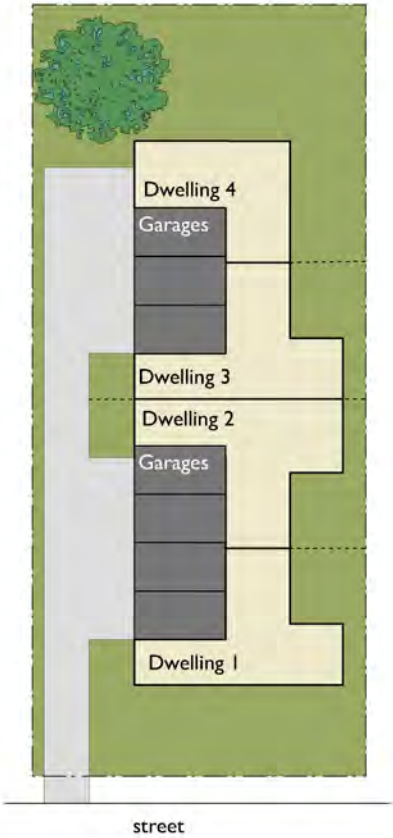
- To provide development capacity on larger lots within residential areas.
- To retain the residential character in streets and suburbs.
- To create or retain quality residential and pedestrian friendly streetscapes.
- To provide an alternative form of medium density housing.

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

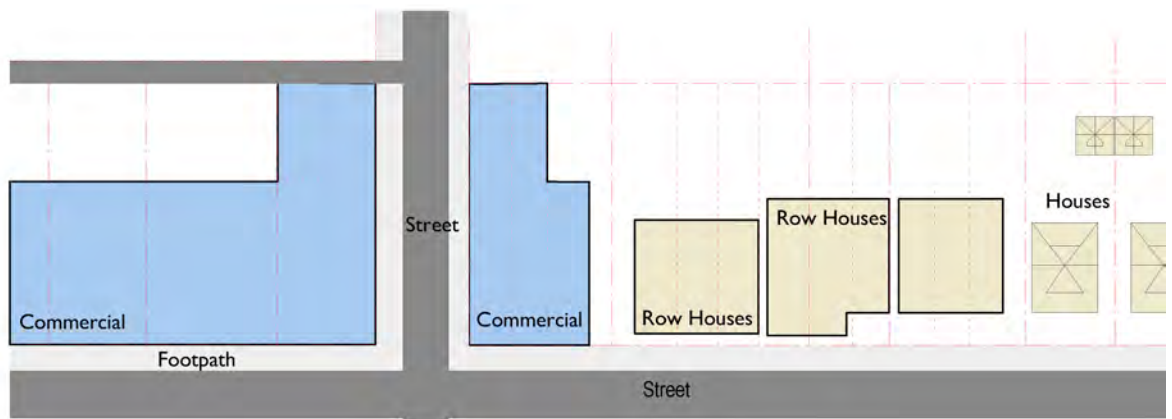
- a. Row Housing is not permitted on any lot that is not adjacent to a commercial main street.
- b. Row Housing is only permitted on a lot within one block on either side of a commercial area.
- c. Maximum of 6 buildings in a row with party walls before a 3m separation is to occur.
- d. The minimum internal 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.

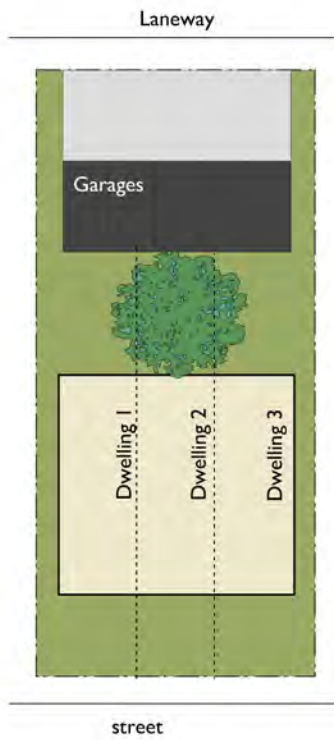


Block plan - Town Housing with 3, 6 and 9 modules

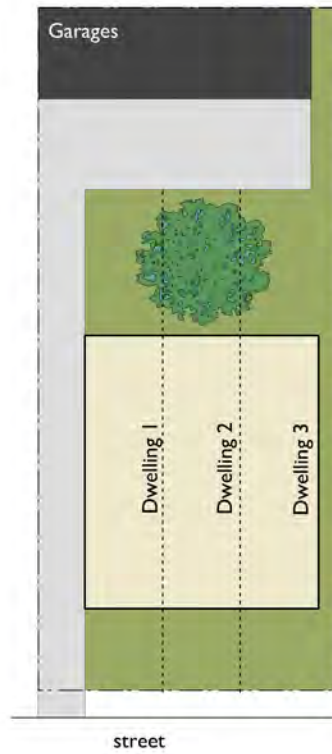


Block plan - Row Housing transition from commercial to residential

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.

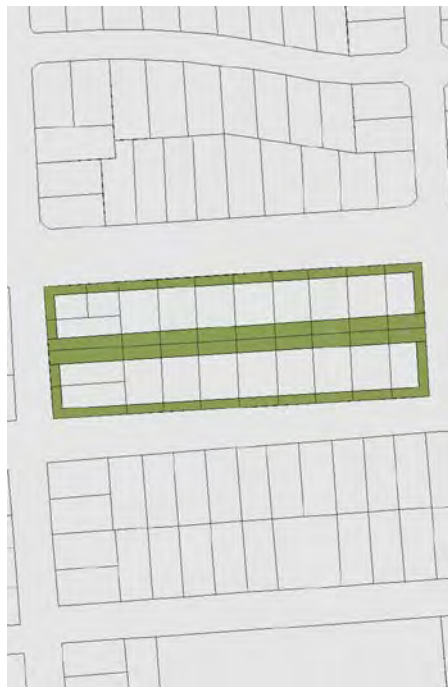
Width: width is measured as a percentage of the length of the boundary (front or rear).

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

- Deep Soil Zones must be provided for all new developments and existing development, except on large lot rural or agriculturally zoned land.
- All sites are to provide two Deep Soil Zones, one to the rear and one to the front of the property.
- 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.
- Rear Deep Soil Zones are to have soft landscaping; refer to Landscaping Section.
- 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.
- Front Deep Soil Zone areas are to have soft landscaping, vegetation and at least one tree.
- Deep Soil Zones cannot be covered by impervious surfaces such as concrete, terraces, outbuildings or other structures.
- Deep Soil Zones cannot be located on structures such as car parks or in planter boxes.
- 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



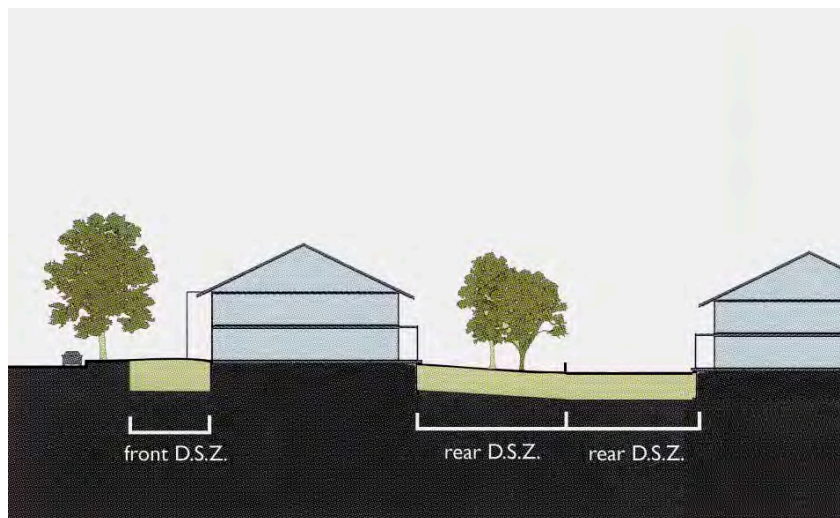
At the block scale contiguous green space is consolidated to the rear and front of lots.

Design Guidelines:

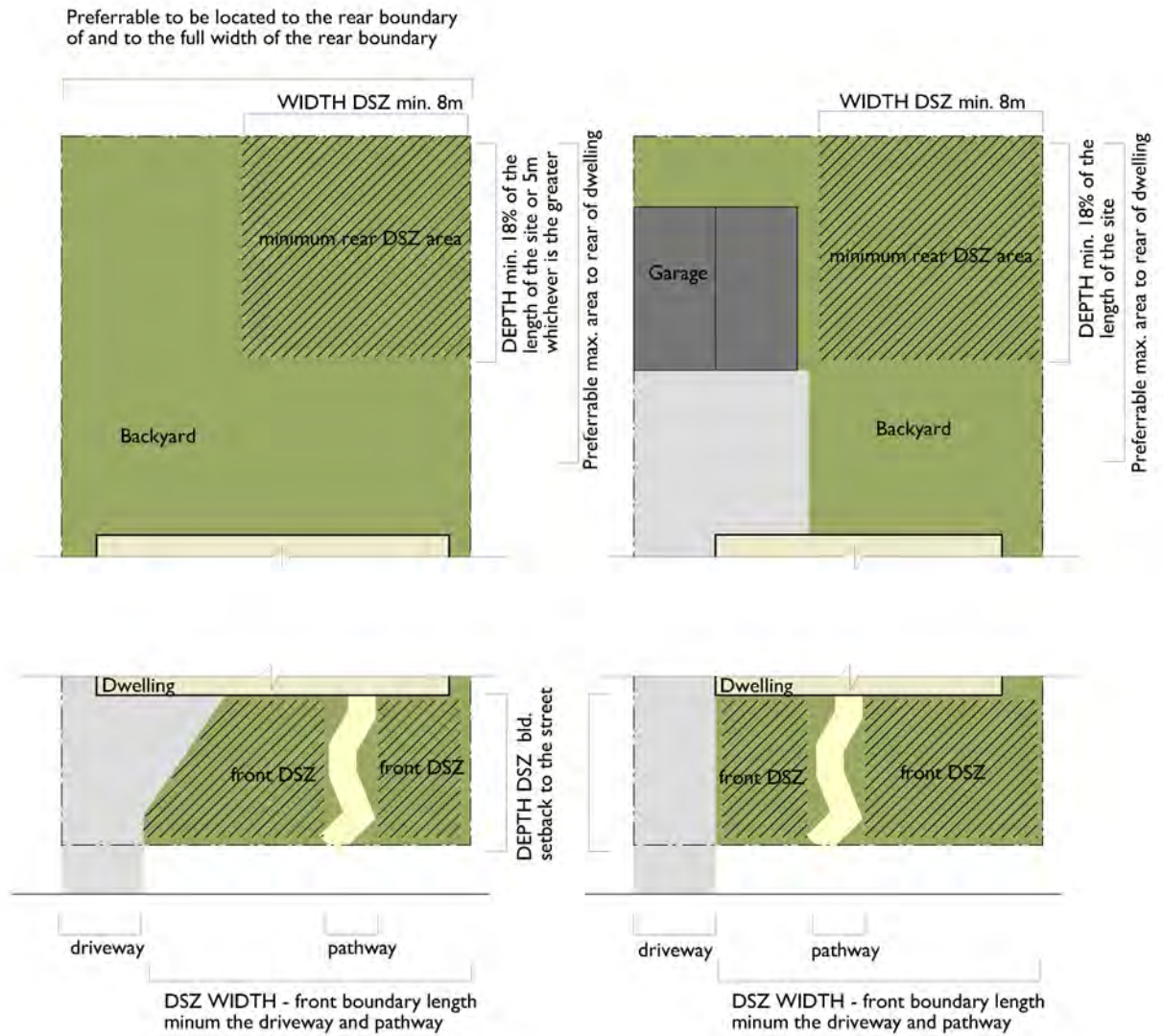
It is preferable that deep soil zones on the rear boundary extend along the full length of the boundary as this is generally where the opportunity exists to create or expand on a vegetation corridor between properties and is often an area where established trees and vegetation exists already.



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.

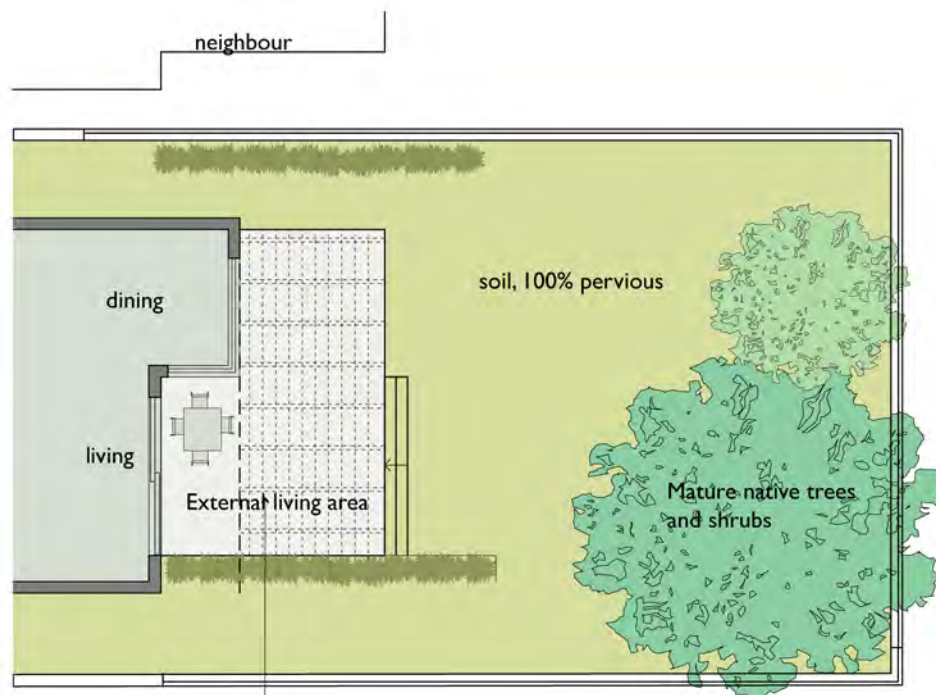


Diagram of an External Living Area to the rear of the site provides direct connection between the internal space of the dwelling and the garden or Deep Soil Area. Privacy screening may be required to the sides of the space. Ground level external living areas are to be located so as to retain mature trees,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

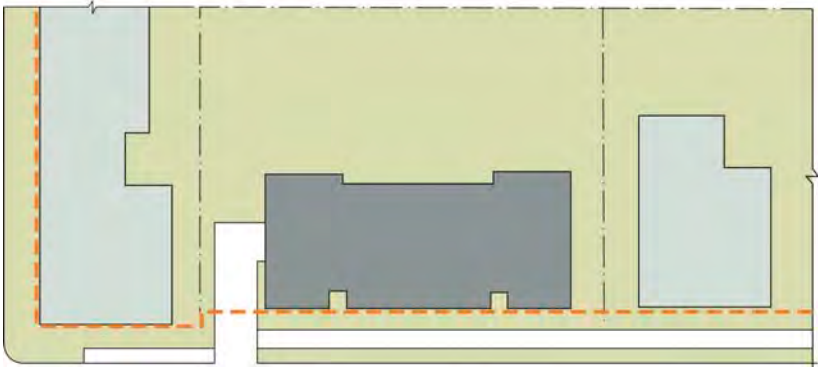
Multi-dwelling development located on site with more than one street frontage, the dwellings must ensure that they address all streets.

Objectives

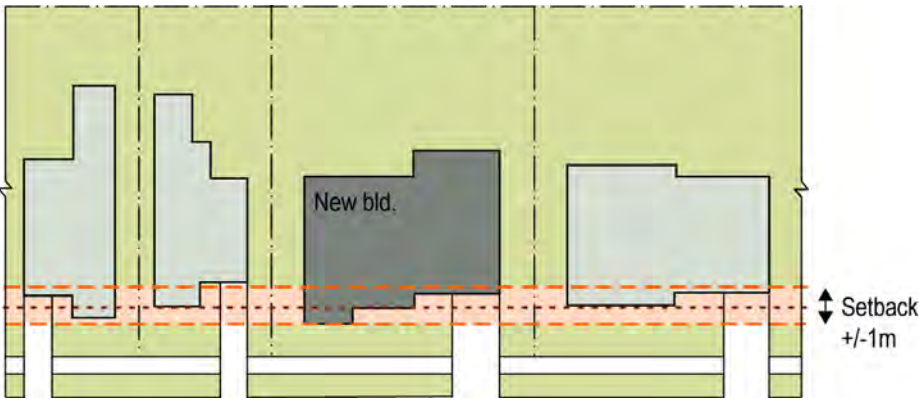
- *To establish the desired spatial proportions of the street and define the street edge.*
- *To enable a transition between public and private space.*
- *To create a landscape setting for residential buildings.*
- *To ensure compatibility with other buildings in the street.*
- *To allow for landscaping.*

Controls

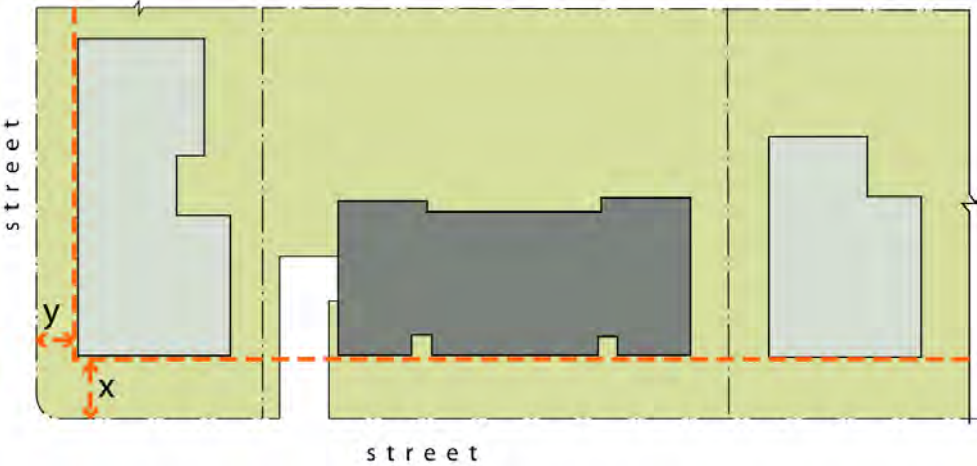
- a. In new areas Town Housing is to be setback from the street boundary by 6m. On corner sites the setback along the secondary street (the street to which the dwelling has its secondary frontage) is 3m.
- b. Where a site has dwellings with frontages to two or more streets, the street setbacks for these 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.

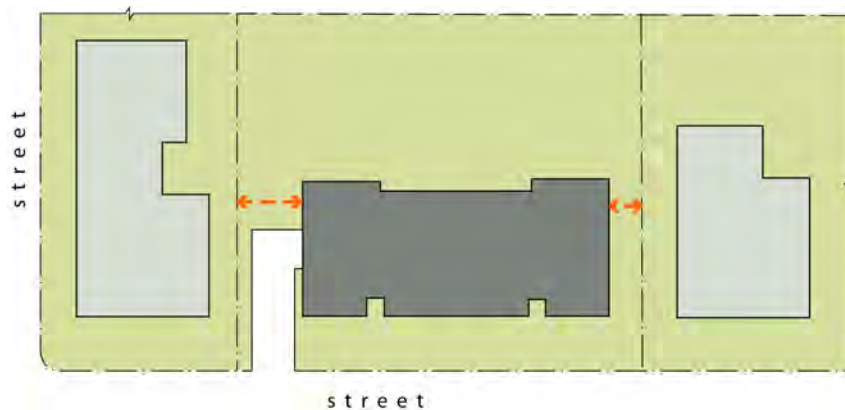
By orienting habitable rooms along the front and rear elevations rather than the side boundaries separation distances for privacy, light and air can more easily be achieved between neighbouring dwellings.

Objectives

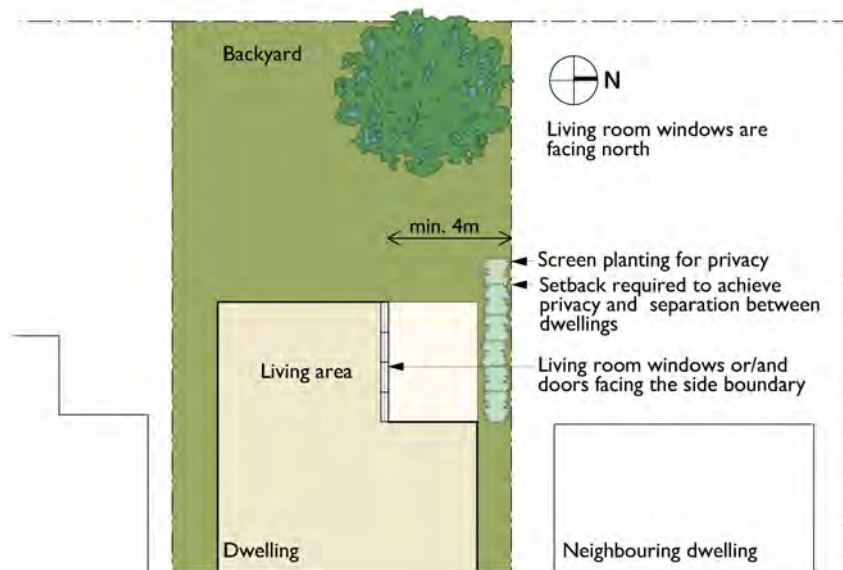
- To provide an orientation for windows of ancillary rooms.
- To provide access to the rear of the lot.
- To provide a location for rainwater tanks.
- To facilitate visual and acoustic privacy between neighbouring lots.

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

- 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.
- 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.
- 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

- 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

- Garages if not proposed within the 6 metre building line may be located within 450mm to a side boundary.
- Carports may be located adjacent to a side boundary and must comply with the requirements of the Building Code of Australia.
- Basement garages are to be in line with the building above.
- 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

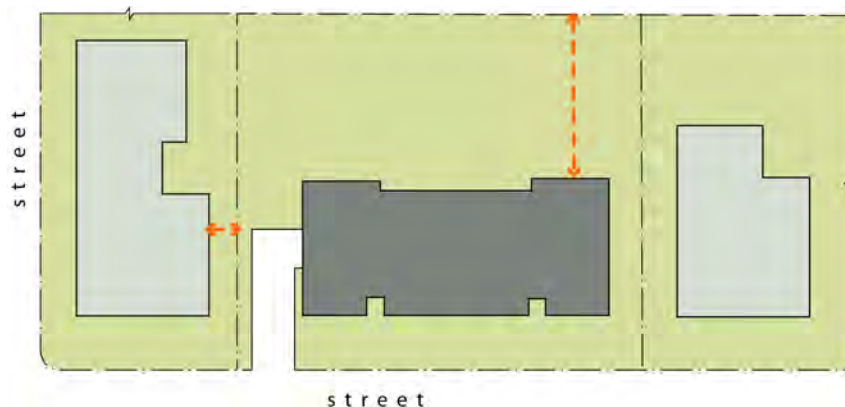
- To provide an area for private outdoor recreation and relaxation.
- To allow space for vegetation and mature trees.
- To separate dwellings to achieve privacy.

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.

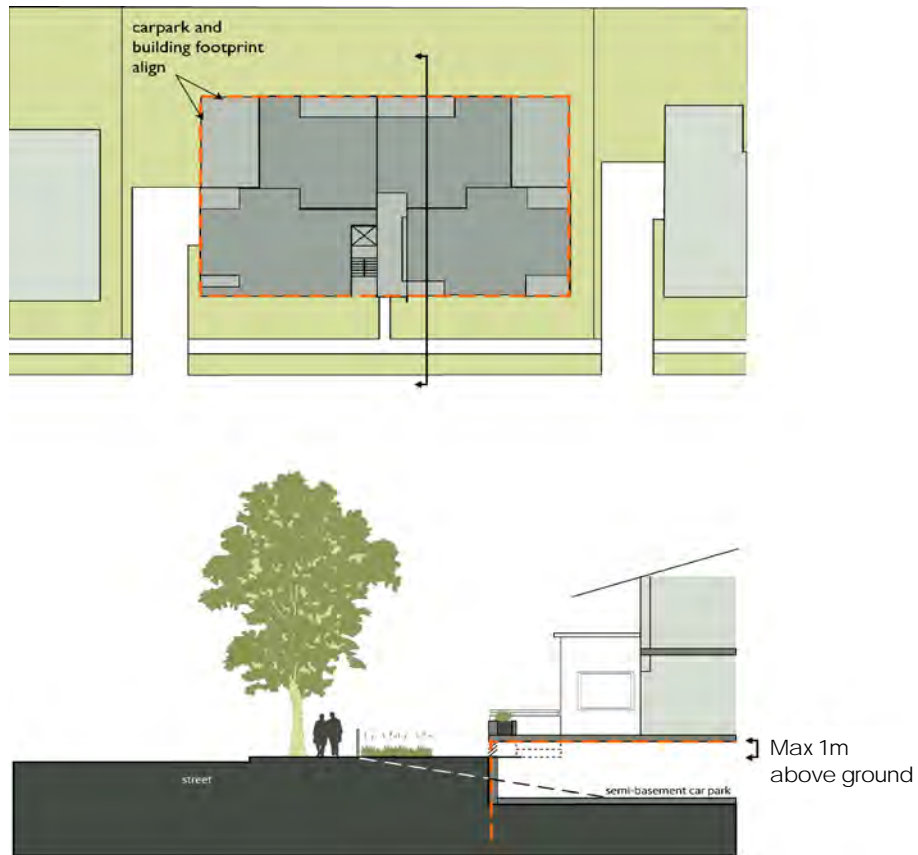
Basement Carparking

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.

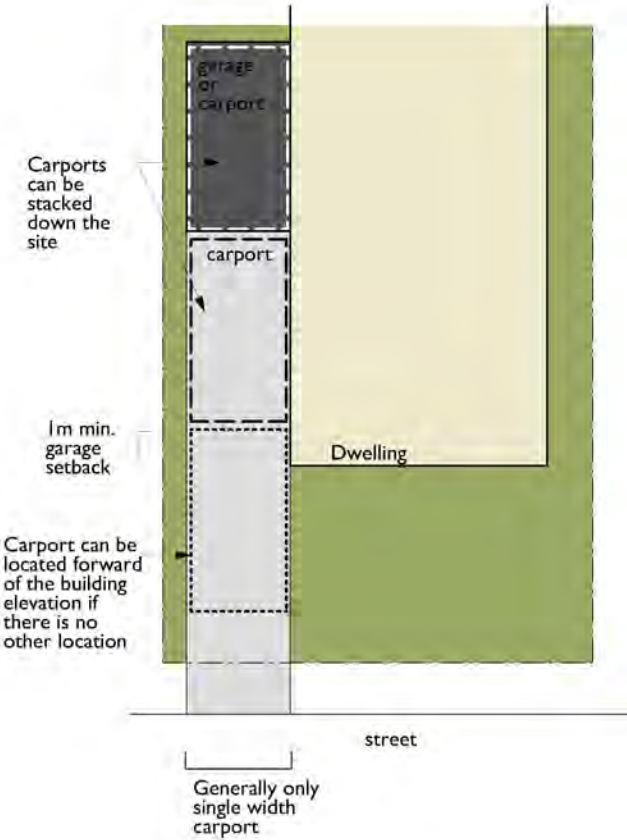


Garages and car parking areas should be visually recessive to the buildings elevation, fencing and landscaping along the streetscape

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

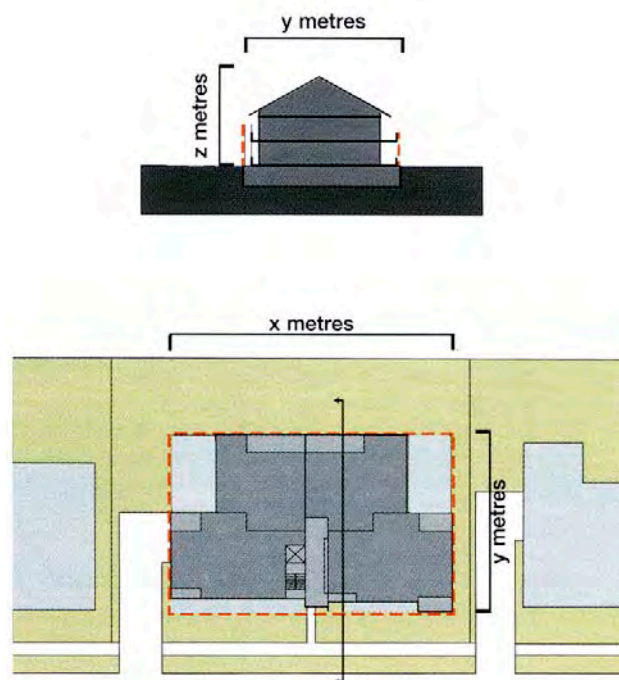
A building footprint is a two dimensional area that sets the extent of a building in relation to the site boundaries. It defines the width and depth of the overall buildable area within which a future building can be located.

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

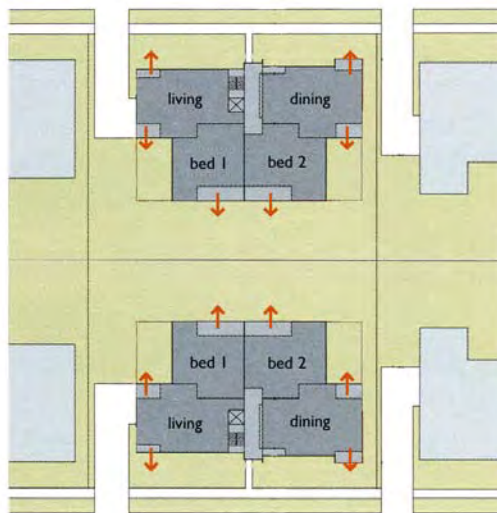
Address refers to the dwelling presenting an attractive elevation to the public domain; this generally includes windows of habitable rooms and the front door to the dwelling.

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.

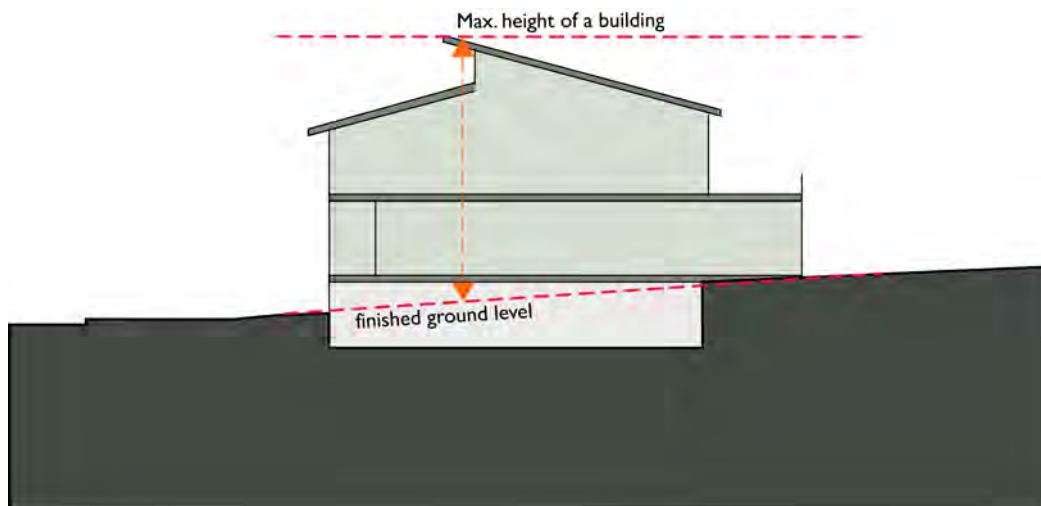
Overall building height is the vertical distance between finished ground level at any point to the highest point of the building, including plant and lift overruns, but excluding communications devices, antennae, satellite dishes, masts, flagpoles, chimneys flues and the like. The measurement of overall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

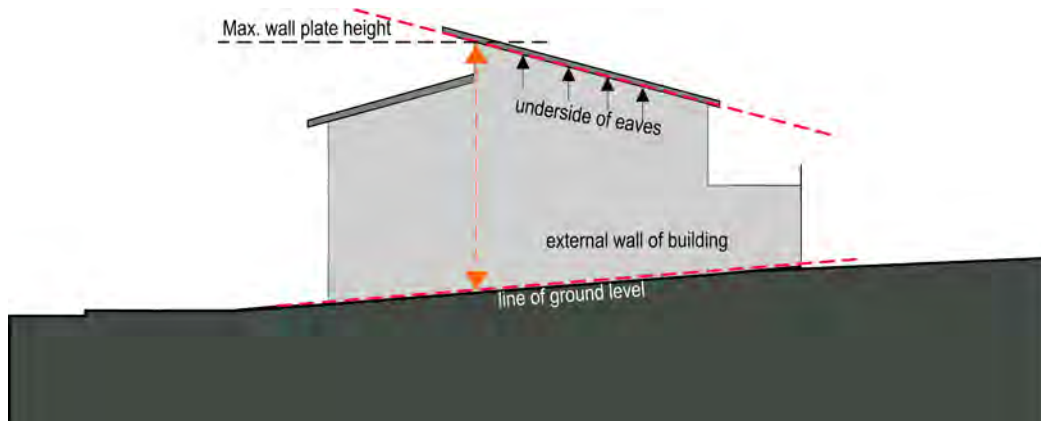
The definition of storey is found in the Tweed LEP

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.

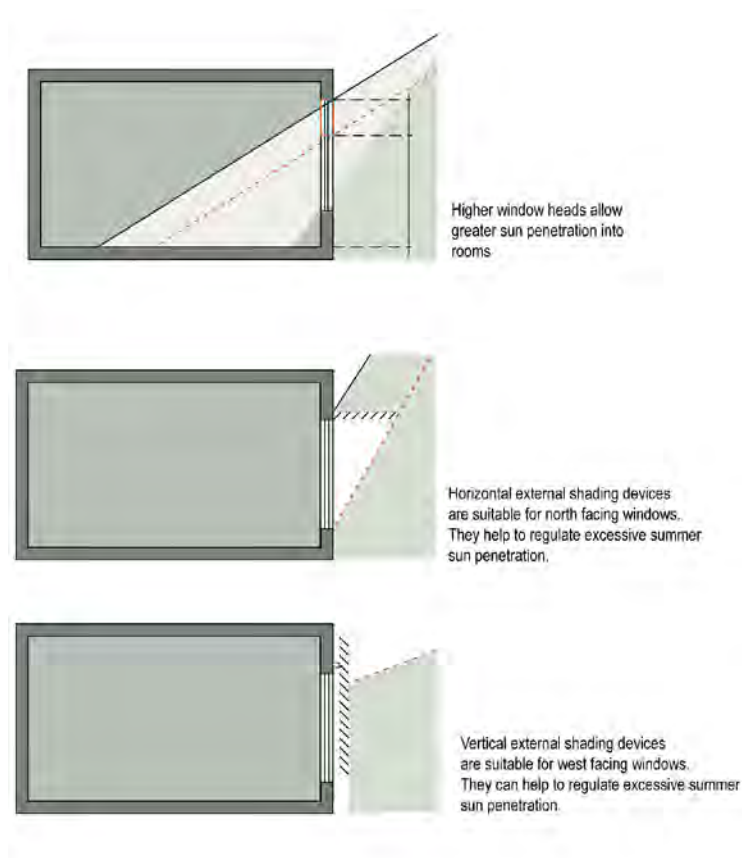
Daylight consists of both diffuse light and direct light. Good levels of daylight in a dwelling improve amenity and reduce the need for artificial lighting. Good levels of daylight can be achieved through the careful consideration of window size, location and proportion.

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.

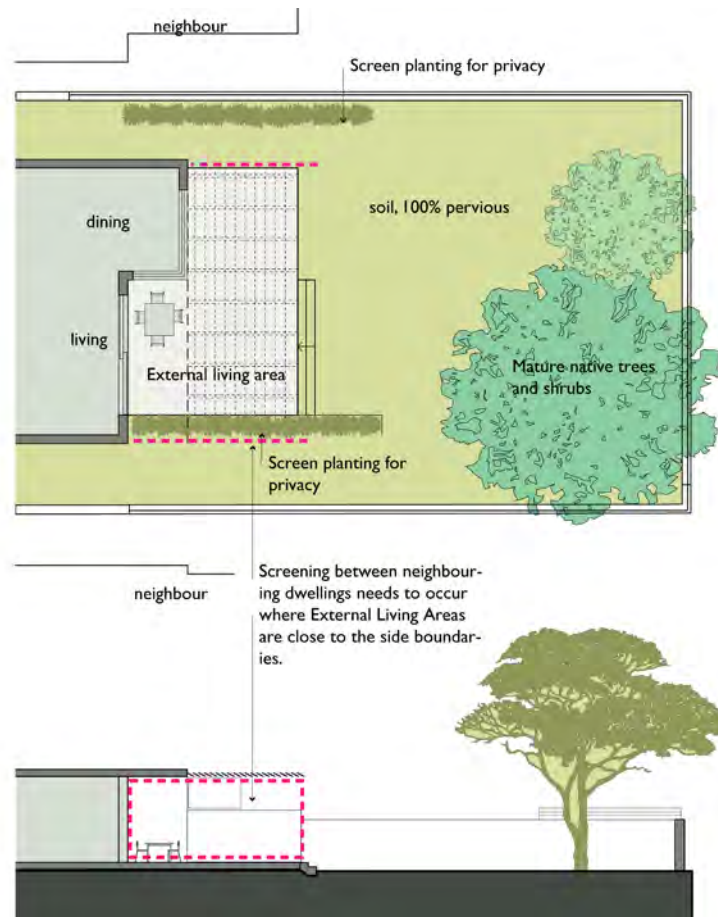
Terraces and balconies from living rooms located above ground level can have a significant impact on the amenity of neighbours with regard to loss of visual privacy and increase in noise levels.

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.

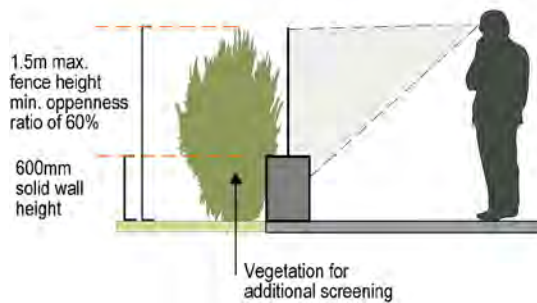
Side and Rear Fences

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

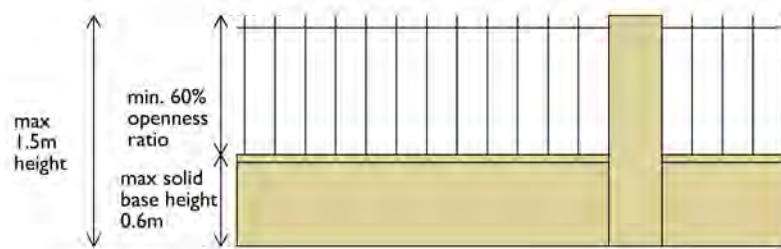
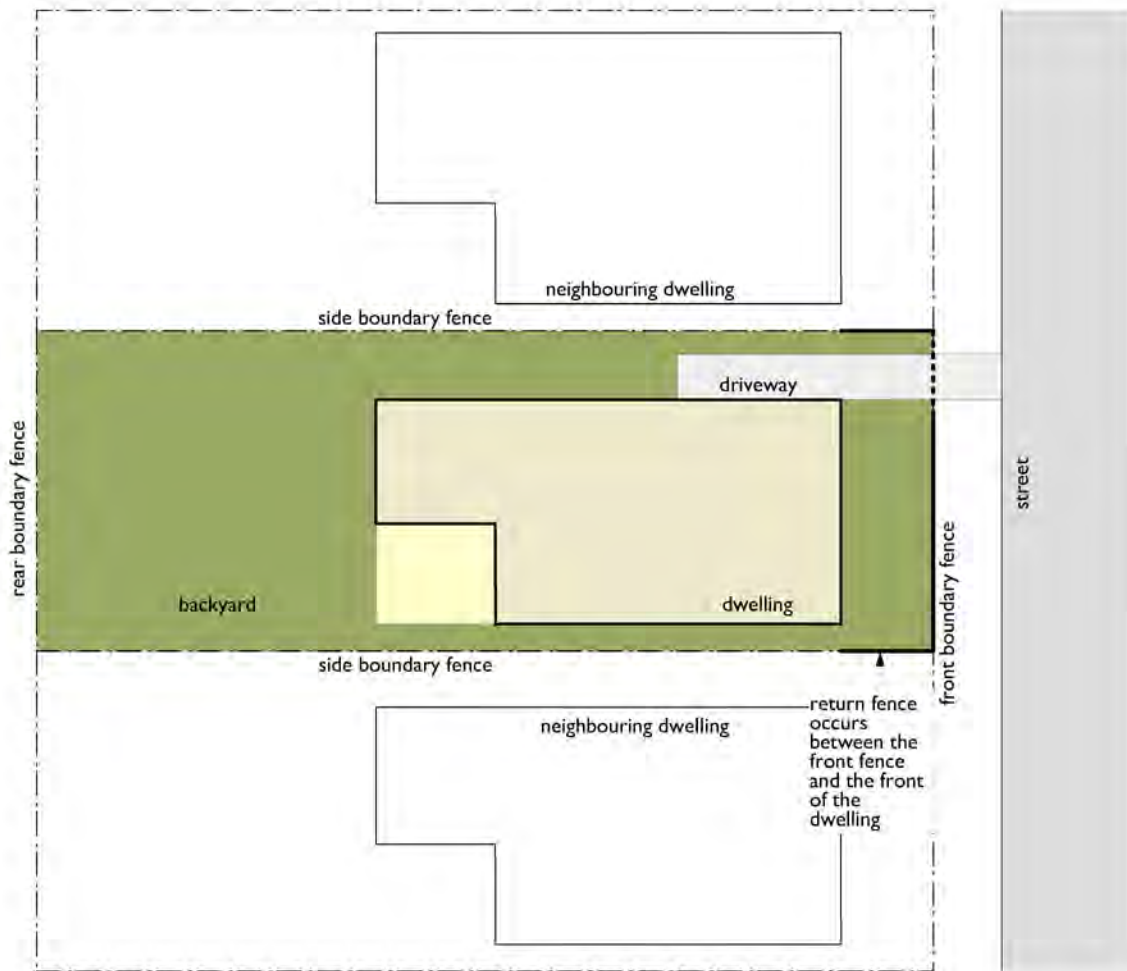
- g. Approval is to be obtained from Council prior to the erection of any fencing on Greenbank Island.
- h. Fencing behind the six (6) metre building line shall not exceed 2000mm in height.
- i. The fencing is to be constructed of brick, stone, masonry block or such other material as is approved by Council.



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.*

PART C - RESIDENTIAL FLAT BUILDINGS AND SHOP-TOP HOUSING

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CHAPTER 1 – BUILDING TYPES

Residential Flat Buildings

Residential Flat Buildings are buildings with three or more dwellings and 3 storeys. In exceptional circumstances such as where a site has extreme topography a greater number of storeys may be permissible.

The residential flat building types identified in this Part are designed to suit three scenarios; small sites, large sites and sites within commercial centres.

Residential Flat Buildings provide more compact forms of housing which:

- provide housing choice,
- provide for more people to live close to services and amenity,
- can enliven areas such as town and village centres,
- can support local services and commercial operations such as shops, entertainment facilities and public transport,
- can provide residential densities that support economic growth and employment.

Residential Flat Buildings are an important component in supporting vibrant and economically viable local centres and to help reduce car dependency. The location and type of Residential Flat Buildings needs to be carefully considered to ensure they support the physical vision for the future character of the area and that this is based on recognizing and protecting the present character and environmental context.

Given the larger scale and site coverage of Residential Flat Buildings, it is important that the design of the building supports the character of the area and the street. Residential flat buildings must be of a high quality design.

Small Residential Flat Building

Small Residential Flat buildings usually contain six dwellings; two per floor; however they may contain a variation to this configuration. Carparking is generally underground and the buildings circulation spaces are located centrally within the building providing all dwellings with three external sides.

This building type is designed for a local area where the dominant building type will eventually be Residential Flat Buildings. The controls are designed to ensure that each building works together across the block to ensure that sites have an equitable level of privacy, sunlight and outlook.

Each building should also contribute to creating a quality streetscape by ensuring landscaping, fencing, driveways, setbacks and the design of elevations have common urban design characteristics.

A small Residential Flat Building may have the proportion and scale of a large detached dwelling and be freestanding in a landscape setting. This building type can in some cases also be derived from an existing large house, internally subdivided into separate apartments.

Small Residential Flat Building developments have building and landscape design elements of a residential scale and character. They are suitable for steep changes in level as they have a small footprint and can more easily step down the site and maintain the first floor connection with the ground level.

Small Residential Flat Buildings have landscaped front and rear setbacks.

Objectives

- *To provide more compact housing types within a small scale building form.*
- *To provide more housing choices.*
- *To create an urban building form and strong built edge along the street.*
- *To more efficiently use land in proximity to services and centres.*
- *To provide a residential flat building type for steep sites.*

- *To provide greater residential densities.*

Suitable locations for Small Residential Flat Buildings

This building type is suitable for allotments originally designed for a single dwelling but only in areas identified by Council for higher density residential development.

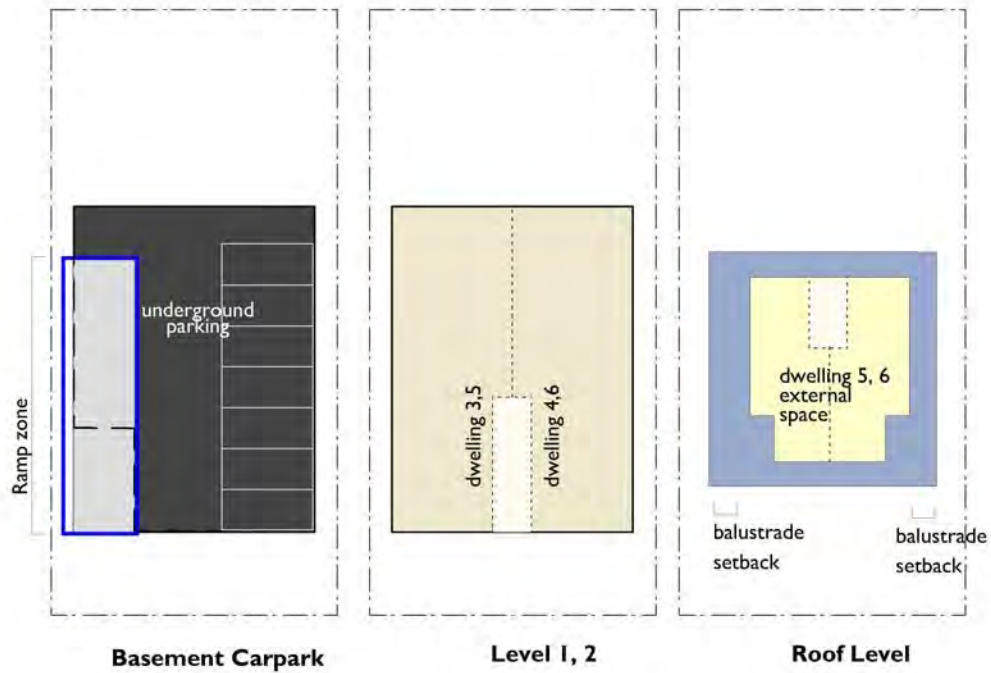
They can also be used on sloping sites where the building may need to be separated into two or more buildings in order to allow for a better relationship with the topography and to avoid the appearance of a 4, 5 or more storey building, when viewed from the low side of the site.

Controls

- a. The main pedestrian entry to the building is to be provided, facing the street, accessible directly from the street and clearly visible from the street.
- b. Ground level dwellings with a street frontage are to have a pedestrian access from the street.
- c. The internal space of the ground floor is to have pedestrian connection to ground level external spaces.
- d. Unusable ground level spaces are to be avoided by ensuring that all ground level external spaces are either part of a gardens or an external living area for ground level dwellings unless designed for a specific communal function such as; communal utility areas, communal circulation spaces or communal recreational spaces.
- e. Deep soil areas are to be provided at the rear and the front of sites in accordance with this Part.
- f. Small Residential Flat Buildings are to be designed in accordance with the Site and Building Design controls found in this Part.
- g. Front fencing and landscaping is to be provided within the front setback and is to enhance the residential character of the street and the building.



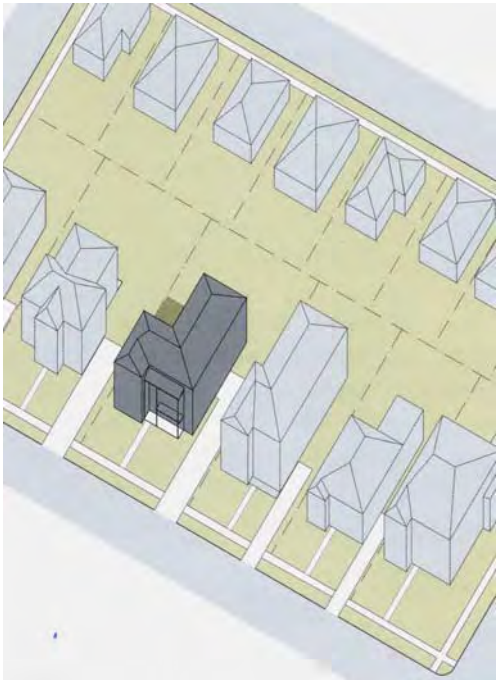
Illustrative block layout for the Small Residential Flat Building



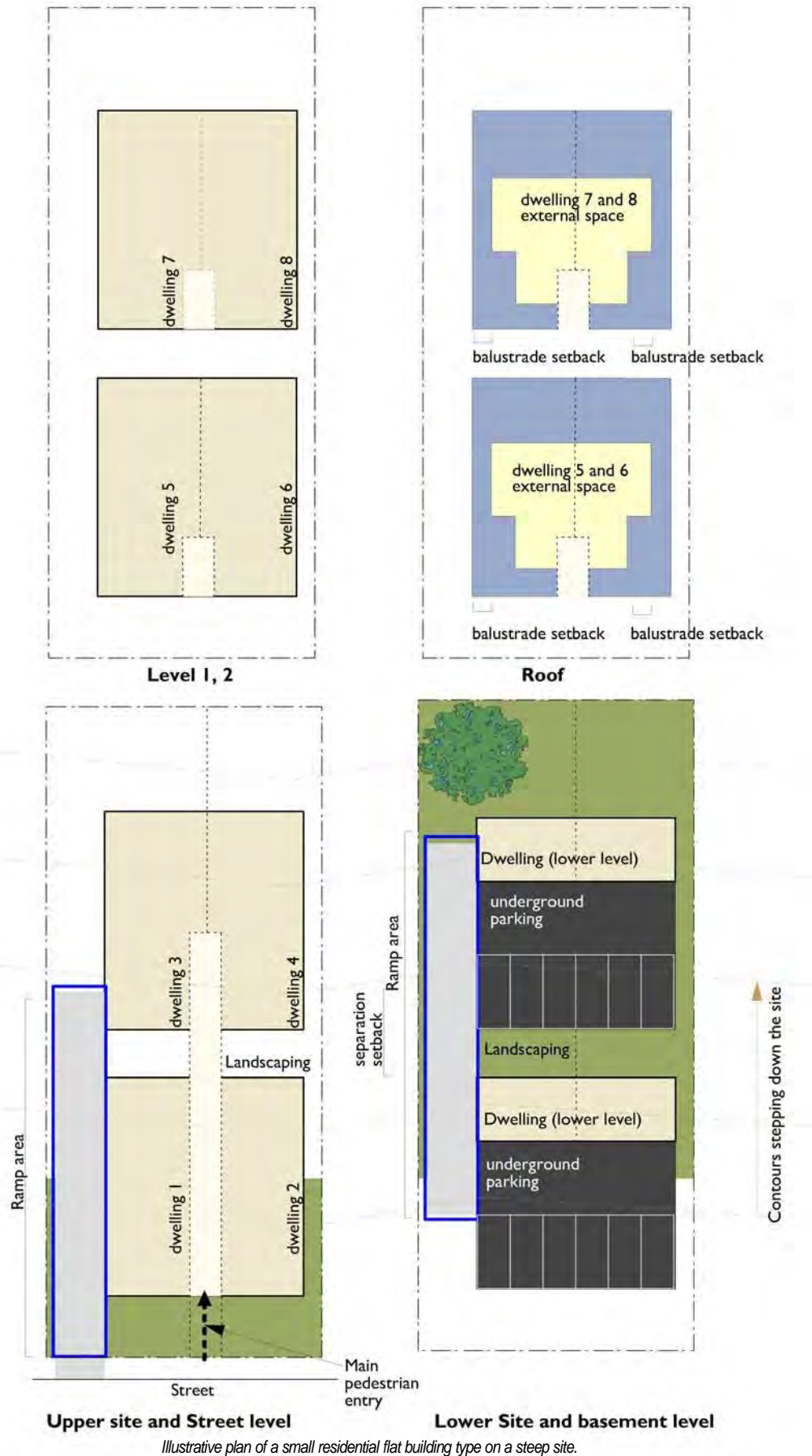
Indicative layouts for a Small Residential Flat Building with two dwellings per floor.



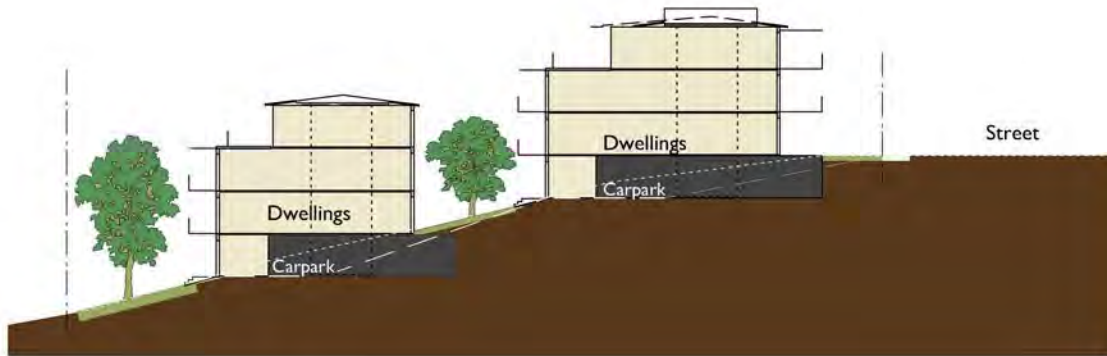
At the block and precinct scale the small apartment building type results in a high degree of landscaping and open space.



A small apartment building type can have the proportions and scale of a large house (Image from the Residential Flat Design Code).



Illustrative plan of a small residential flat building type on a steep site.



Section

An illustrative section of a small residential flat building type on a steep site.



Illustrative elevation and street plan of the small residential flat building type (Image from the Residential Flat Design Code).

Block Edge Residential Flat Building

These buildings are characterised by being large developments either as a result of amalgamating two or more lots or being located on larger scaled lots. These buildings are located in areas zoned for higher density residential development generally only within proximity to centres where the built form is relatively urban. This is a flexible building type and can easily incorporate a mix of uses within the same building, generally with retail or commercial on the ground floor.

Block edge apartments can be limited in height as a walk-up or have lifts. They can also be street-edge aligned or set back within a landscape setting.

These buildings types can have a variety of different layouts depending on the site size, topography and street character. The main issues for Block Edge Residential Flat Buildings are to ensure the building mass is broken down along the street to reduce the bulk and scale of the building to ensure that ground floor dwellings address the street and are able to be accessed by pedestrians from the street.

Suitable locations for Block Edge Residential Flat Buildings

Locations generally include:

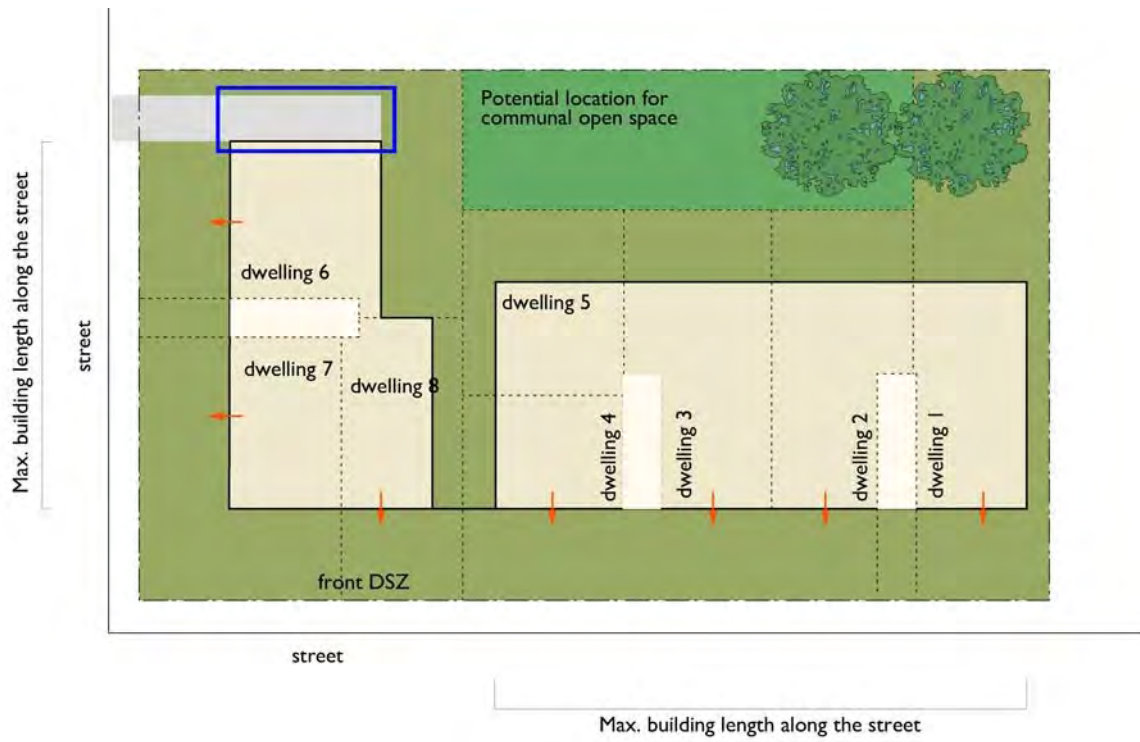
- on larger development site generally over 2000m²,
- where a perimeter block urban form is intended,
- where a vertical rhythm is desired to reinforce the street,
- in an urban precincts in walking proximity to centres.

Objectives

- *To ensure larger developments are well proportioned and scaled.*
- *To provide more compact housing in proximity to centres.*
- *To create an urban building form and strong built edge along the street.*
- *To define the street space.*

Controls

- a. Maximum building and elevation length along the street is 35m.
- b. Minimum lot size 2000m².
- c. The buildings street elevation is to be articulated to have a base, middle and top.
- d. Front doors, windows and entry areas are to face the street.
- e. Ground level dwellings with a street frontage are to have a pedestrian access from the street.
- f. Front fencing and landscaping is to be provided within the front setback and is to enhance the character of the street and the building.
- g. Car parking areas are located to the rear or the centre of lots away from the street front or underground.
- h. Block Edge Residential Flat Buildings must comply with the Controls found in this Part.



Ground level

Illustration of a block edge flat building with two street frontages.



Illustrative block layout showing how the larger block edge developments define the street edge and relate to one another and create vegetation corridors to the rear of sites.

Shop-top Residential Buildings

Shop-top describes a building type with residential dwellings above commercial, in most cases retail space. Generally this building type occurs on land zoned for commercial purposes. Shop-top accommodation can be either:

- Shop-top housing; 1 or more dwellings over two levels associated with a ground level commercial space or
- Shop-top Residential Flat Building; 4 or more dwellings and 3 or more storeys associated with a ground level commercial space.

Shop-top provides accommodation in proximity to the amenity, conveniences and activities offered by centres such as entertainment and dining and social benefits such as public transport and community services.

Shop-top comprises of either two or three storeys with the commercial component occupying the whole of the ground level of the building and in some cases the first level as well. Apartment layouts on the first level can be designed to allow for home/office or future commercial uses. These buildings are characterised by being built to the street alignment and the side boundaries and are oriented to the street front and the rear of the lot. Their elevations have a high level of urban design consistency between all buildings along the street and they strongly define a built edge to the street space.

The challenge for shop-top is to ensure that the residential component of the building does not preclude quality commercial space nor stifle the growth and development of the place as a commercial and civic centre. The primary and overriding purpose of land within centres is to provide for the current employment, commercial, entertainment and civic needs of the community therefore development is to safeguard the flexibility and growth opportunities of these uses. As such residential uses are of secondary importance to the commercial component of this building type and are to result in economically viable commercial spaces for the occupants and future owners in the immediate and longer term.

Objectives

- *To provide a building form that complements commercial uses.*
- *To provide more compact housing in proximity to centres.*
- *To create an urban building form and strong built edge along the street.*
- *To define the street space.*
- *To provide quality commercial buildings.*

Suitable Locations for Shop-top

Shop-top is to be located in centres, generally along main streets.

Shop-top may not be appropriate for locations in proximity to civic, entertainment or community uses that generate noise, light spill or a high degree of activity during the day or the night.

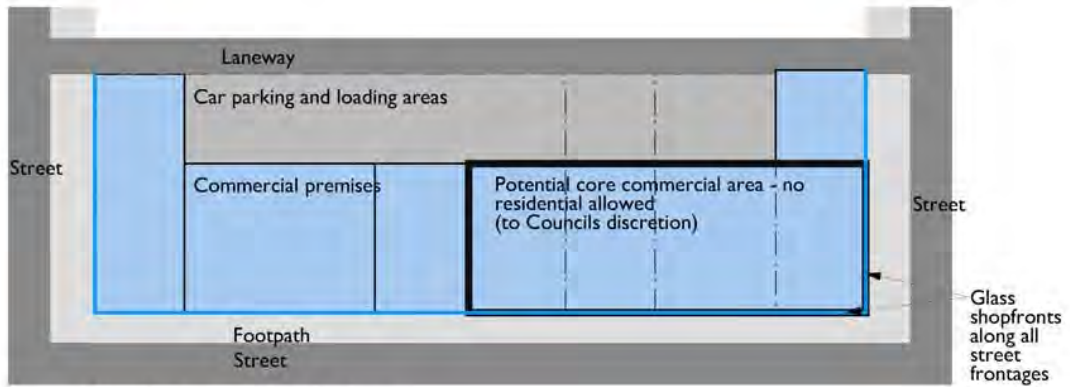
Controls

- a. Shop-top development is to have a street elevation consistent with other buildings in the street in terms of height and vertical and horizontal proportions. The buildings street elevation is to be designed to give emphasis to enclosing the street space along the street boundary.
- b. Colonnades are generally not acceptable along main streets unless there is a historic precedent of colonnades along the street.
- c. Uses on ground level are to be commercial (generally retail). Circulation spaces used to access upper level dwellings may occupy up to 15% of the lot frontage.
- d. Uses on the first floor can be either residential or commercial.
- e. The internal space of the ground floor of the development is to be at the ground level of the street.
- f. Basement car parking is to be fully underground.
- g. Footpath trading must comply with the procedures and guidelines contained in the Tweed Footpath Trading Policy.
- h. The design and layout of commercial spaces is to demonstrate:

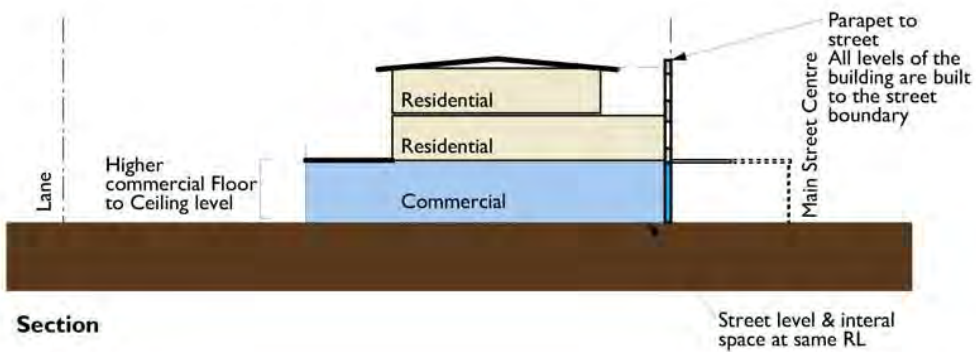
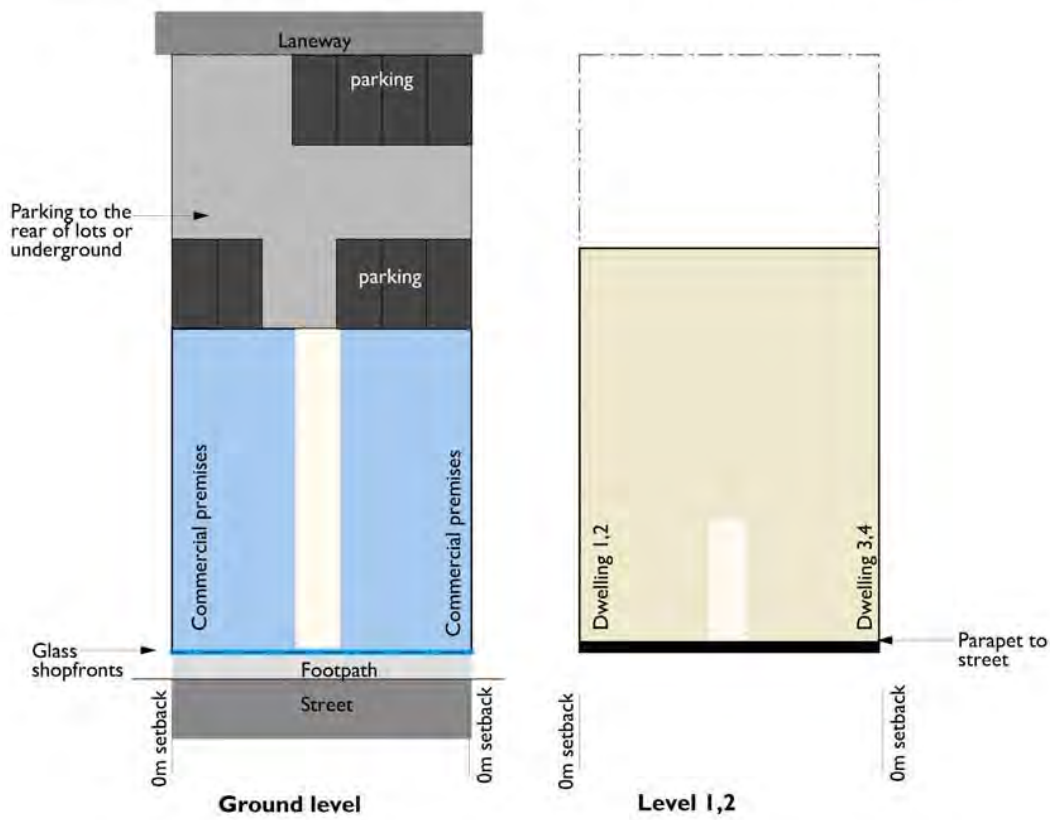
- the intended type of commercial uses proposed and the suitability of the building design to accommodate these uses,
- the immediate and long term economic feasibility of proposed commercial space,
- the way in which the proposed commercial space complements and extends the quality and attractiveness of the existing centre.



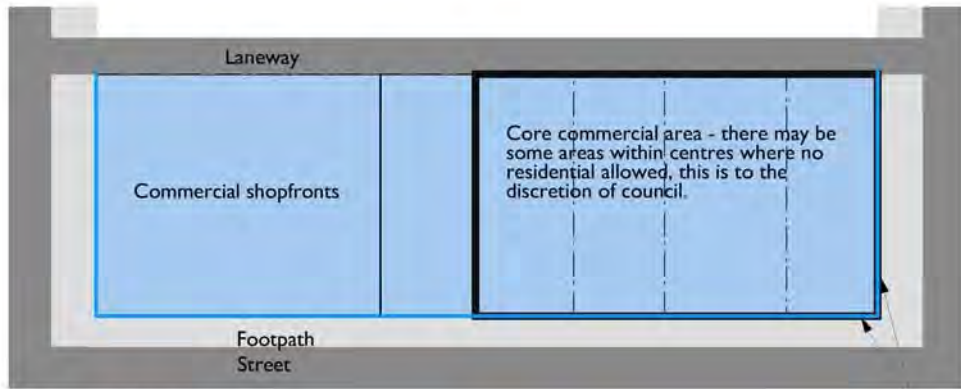
Two storey Shop-top housing and three storey Shop-top Residential Flat Buildings.



Ground level Indicative block plan

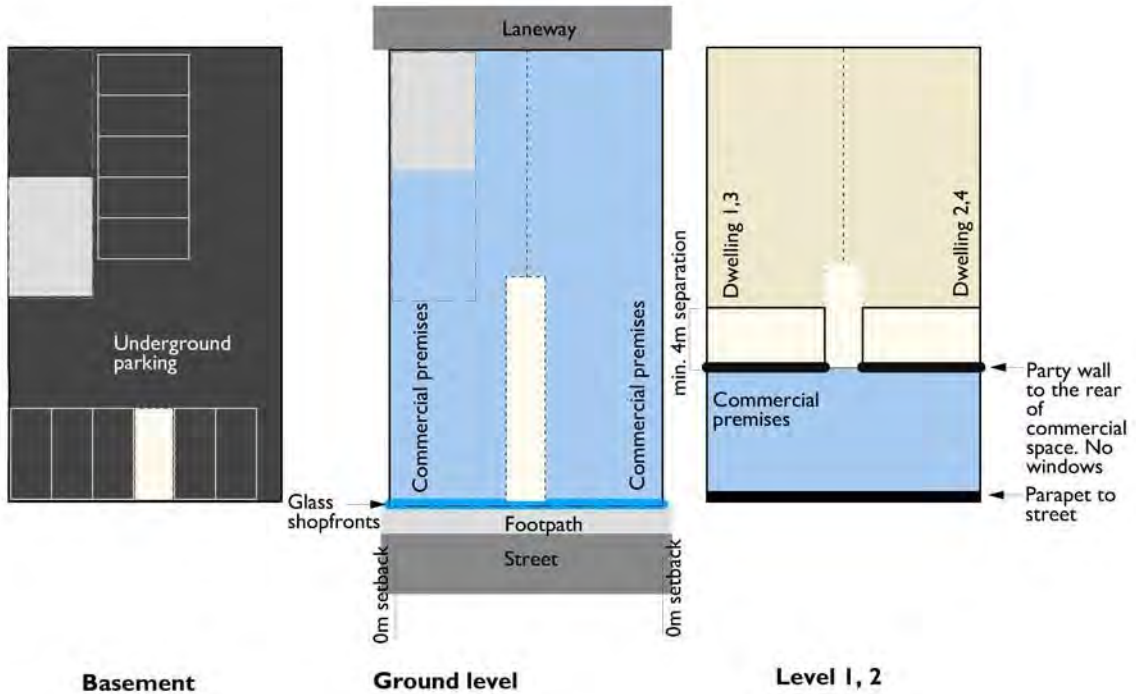


Illustrative site layout Shop-top Residential Flat Building with carparking on the ground level.



Indicative block layout

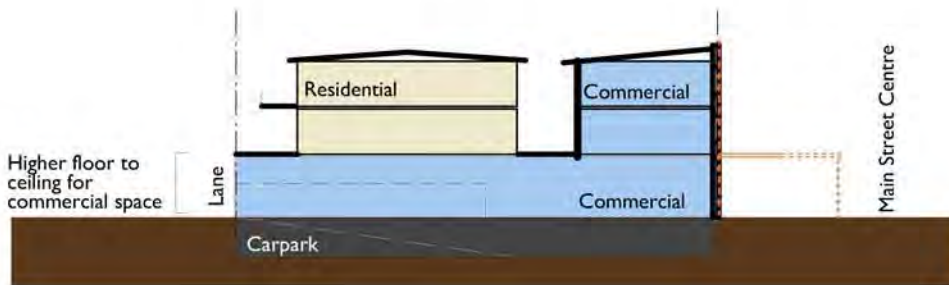
Glass shopfronts along all street frontages



Basement

Ground level

Level 1, 2



Section

Illustrative site layout shop-top housing with underground carparking. The residential component is set back to provide greater separation from noise and other environmental impacts.

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 Residential Flat Building or a Shop-top 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 Internal Building Configuration
- Design Control 9 External Building Elements
- Design Control 10 Building Performance
- Design Control 11 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.

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 developments 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.

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 non urban land with site areas greater than 5000m² and development with ground level commercial floor space.
- 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 4m. 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.



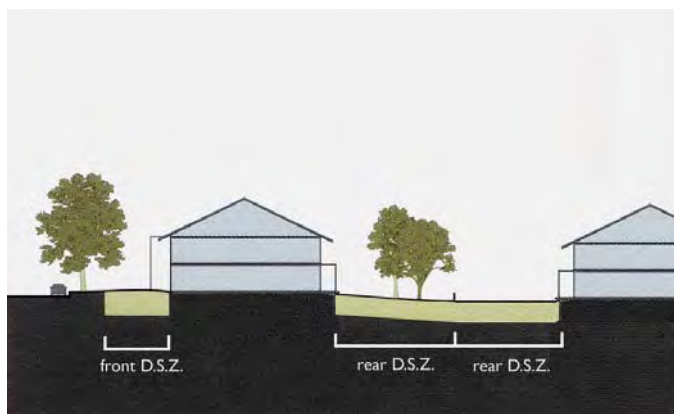
At a suburban scale Deep Soil Zones provide connected flora + fauna corridors



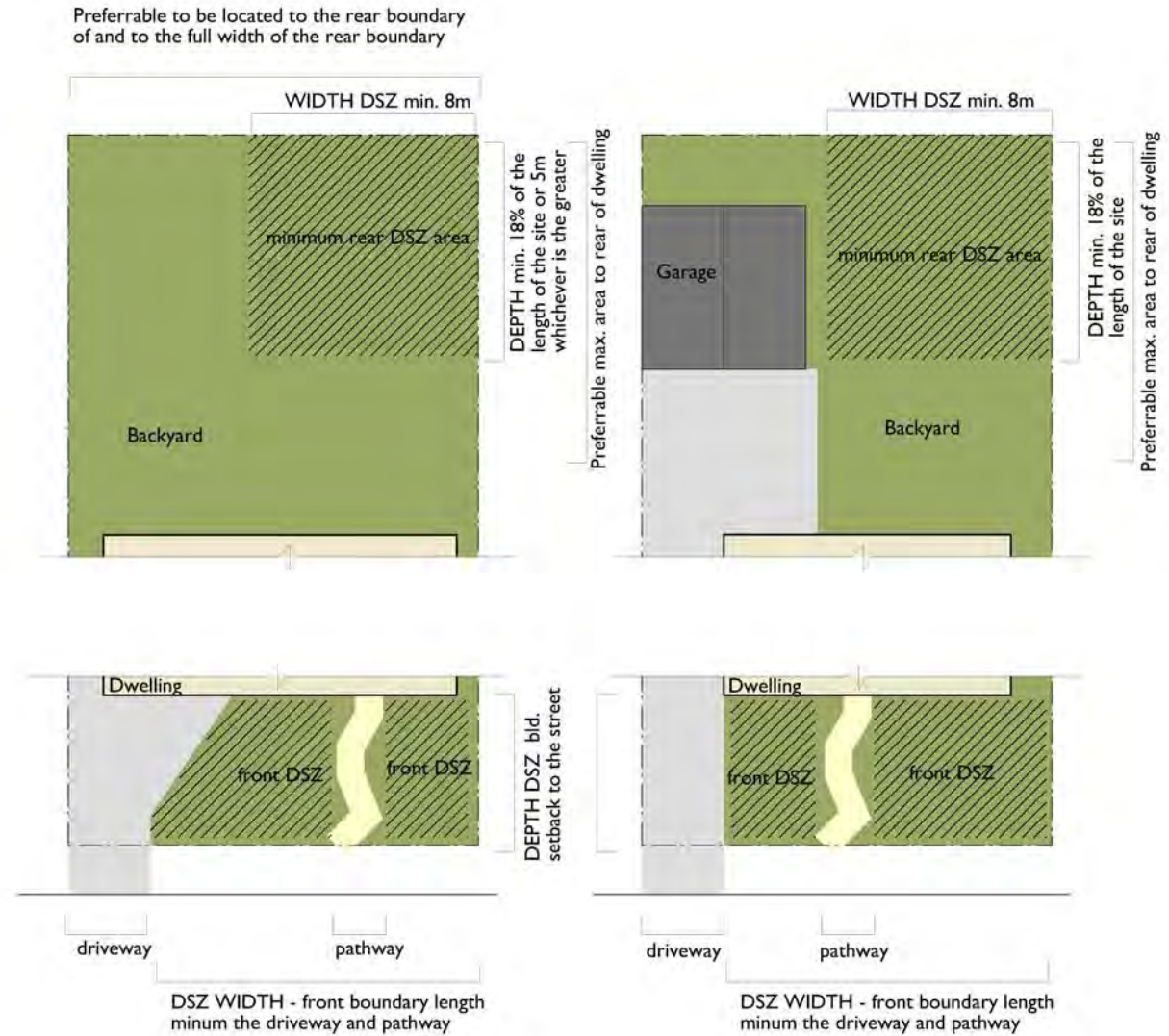
At the block scale contiguous green space is consolidated to the rear and front of lots.

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.



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 underground parking (left image) and on grade parking (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

- a. 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.
- b. 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.
- c. Rain water shall be collected in tanks and reused.
- d. Site surface depressions in landscaping are to be utilised for on-site detention and infiltration unless this is inconsistent with the geotechnical stability of the site or adjacent/downstream land.
- e. 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.
- f. A schedule of the breakdown/calculation of impermeable site area must be submitted with the development application.
- g. 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.

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
	Gridpavers	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

Table 1 – Impermeable surface factors

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 Area

External living area refers to an external space that extends the living and recreation space of a dwelling to 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

- a. 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.
- b. External living areas should be suitably screened to achieve visual privacy if located less than 4m from a side boundary.
- c. External living areas are to be no closer to the side boundaries than 900mm.
- d. External living areas are to be designed to ensure water does not enter the dwelling.
- e. External living areas should be oriented to north where possible.

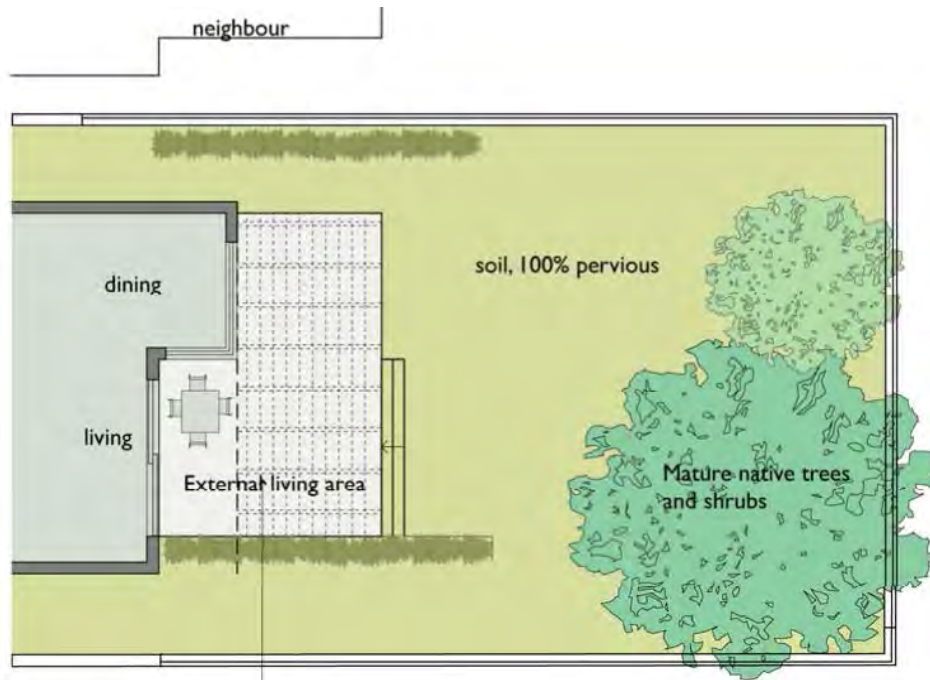
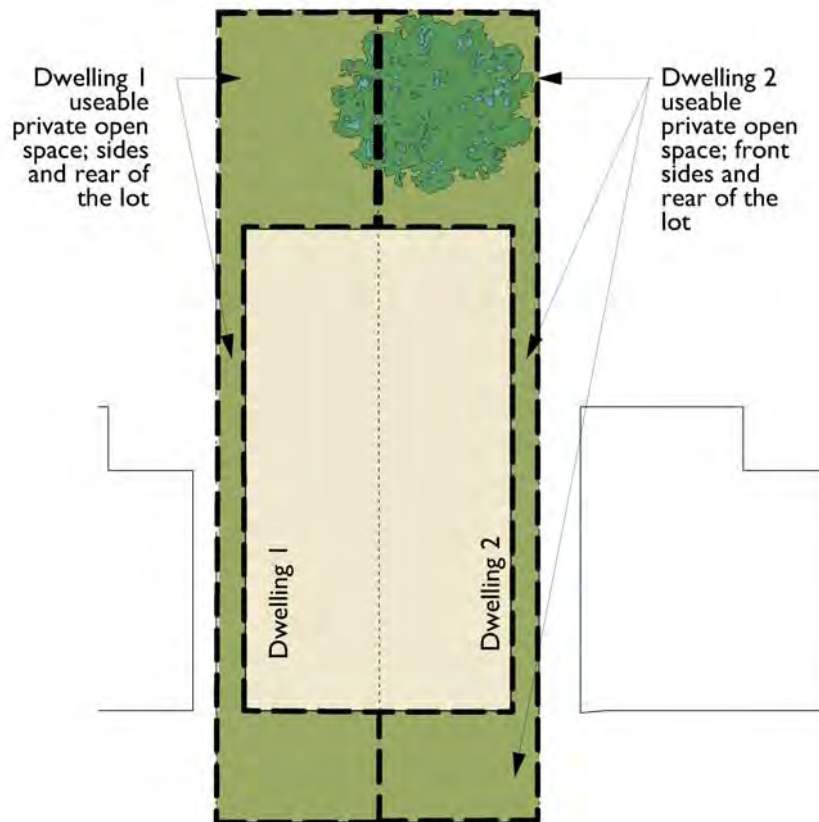


Diagram of an External Living Area to the rear of the site provides direct connection between the internal space of the dwelling and the garden or Deep Soil Area. Privacy screening may be required to the sides of the space. Ground level external living areas are to be located so as to retain mature trees,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



Illustrative plan of an RFB. Ground level spaces are to be designed to be useable and part of the private open space for ground level dwellings.



Illustrative plan and section of a Residential Flat Building. Landscaped private rear gardens and courtyards extend the liveable space of the dwelling and provide a variety of paved and soft landscaped areas. Utility functions such as clothes drying can be provided as well as deep soil zones.

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 10sq.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 our 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 design, location and size relative to the number of persons it services is a requirement 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 with 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.



Communal open space areas can provide a pleasant outlook for dwellings and shared facilities such as pools and gardens.

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

- Retain existing landscape elements on sites such as natural rock outcrops, watercourses, dune vegetation, indigenous vegetation and mature trees.
- 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.
- Locate and design the building footprint to enable the retention of existing trees.
- Buildings are not to be sited under the drip line of an existing tree.
- Provide useful outdoor spaces for liveability 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.
- 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.
- Provide a landscaped front garden.
- 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.
- Landscape elements in front gardens such as plantings are to be compatible with the scale of development.
- The front garden is to have at least 1 canopy tree with a minimum mature height of 10 metres.
- 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.
- Locate and design landscaping to increase privacy between neighbouring dwellings.

Design Guidelines

- *Provide useful outdoor spaces for liveability 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,*
 - *using plant species that are suitable when near drainage lines and infrastructure.*

Planting on Structures

Quality landscape design and open space amenity relies in part on the quality and health of plants. Plants grown on structures are grown in containment with artificial soils, drainage and irrigation. Plants grown in such situations are subject to a range of environmental stresses that affect the health and vigor of the plants, and ultimately their survival.

Planting on structures should be avoided in dwelling houses, dual occupancies, town houses and row housing. Carefully considered planting on structures can occur in larger developments where the ground level site area is restricted such as in Shop-top residential flat buildings.

Objectives

- To contribute to the quality and amenity of communal open space on roof tops, podiums and internal courtyards.
- To encourage the establishment and healthy growth of trees in urban areas.

Controls

- a. Planting on structures is not to occur in areas that cannot be easily accessed either from dwelling external living areas or communal areas.
- b. Optimise plant growth by:
 - providing soil depth, soil volume and soil area appropriate to the size of the plants to be established,
 - providing appropriate soil conditions and irrigation methods,
 - providing appropriate drainage.

Design Guidelines

- *Design planters to support the appropriate soil depth and plant selection by:*
 - *ensuring planter proportions accommodate the largest volume of soil possible. [minimum soil depths will vary depending on the size of the plant however, soil depths greater than 1.5 metres are unlikely to have any benefits for tree growth],*
 - *providing square or rectangular planting areas, rather than long narrow linear areas.*
- Increase minimum soil depths in accordance with:*
 - *the mix of plants in a planter for example where trees are planted in association with shrubs, groundcovers and grass*
 - *the level of landscape management, particularly the frequency of irrigation*
 - *anchorage requirements of large and medium tree soil type and quality.*
- *Provide minimum soil depths in accordance with the following:*
 - *large trees such as figs (16 metres canopy diameter at maturity); minimum soil volume 150 cubic metres, minimum soil depth 1.3 metre, minimum soil area 10 metre x 10 metre area or equivalent.*
 - *Medium trees (8 metre canopy diameter at maturity); minimum soil volume 35 cubic metres, minimum soil depth 1 metre.*
 - *Shrubs; minimum soil depth 500-600mm.*
 - *Ground cover; minimum soil depth 300-450mm.*
 - *Turf; minimum soil depth 100-300mm.*
 - *Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.*

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 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 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.

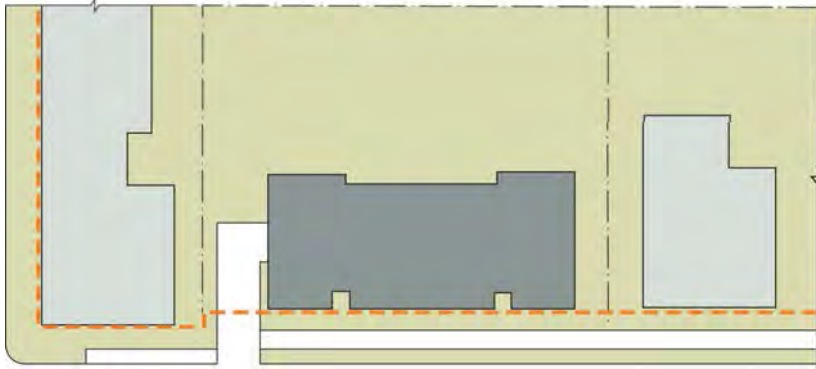
Front setbacks help create the proportions of the street and contribute to the public domain by unifying streetscape character and the continuity of street elevations. Street setbacks enhance the setting for the building as they provide for landscape areas, entries to the dwelling and deep soil areas.

Objectives

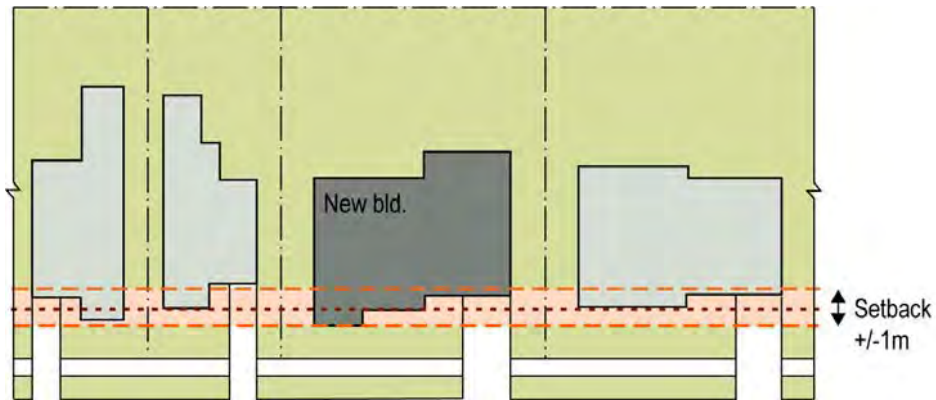
- *To establish the desired spatial proportions of the street and define the street edge.*
- *To enable a transition between public and private space.*
- *To create a landscape setting for residential buildings.*
- *To ensure compatibility with other buildings in the street.*

Controls

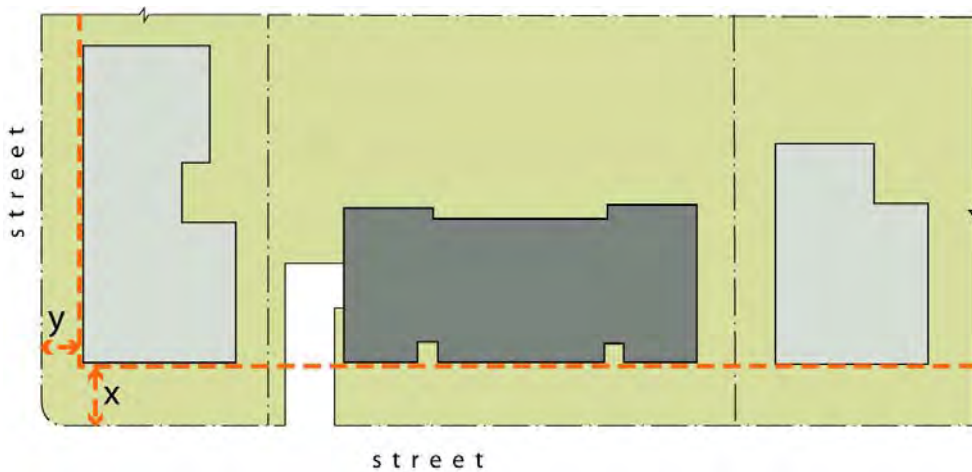
- a. In new areas Shop-top Housing and Shop-top Residential Flat Buildings are to be built to the street boundary.
- b. In new areas Residential Flat Buildings are to have a street setback of 6m.
- c. On corner sites in new and existing areas the setback along the secondary street (the street to which the dwelling has its secondary frontage) is 3m.
- d. 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.
- e. In established areas Shop-top Housing and Shop-top Residential Flat Buildings are to be built to the street boundary.
- f. In established areas Residential Flat Buildings are to be setback from the street boundary by 6m with a variance of up to plus or minus 1m (ie. between 5m to 7m).
- g. Basement garages cannot be located forward of the building footprint.
- h. On grade parking must be located a minimum of 6m setback from the buildings front elevation or to the rear of the site.



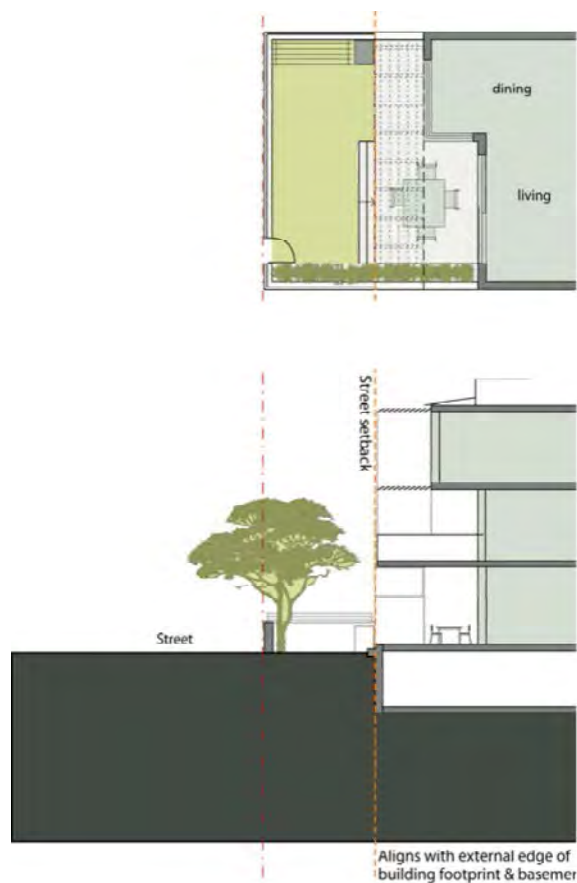
Setbacks are designed to provide a consistent alignment along the street.



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.



The front setback allows for landscaping, fencing to enhance the residential quality of the street and provide greater privacy for ground level dwellings.

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.

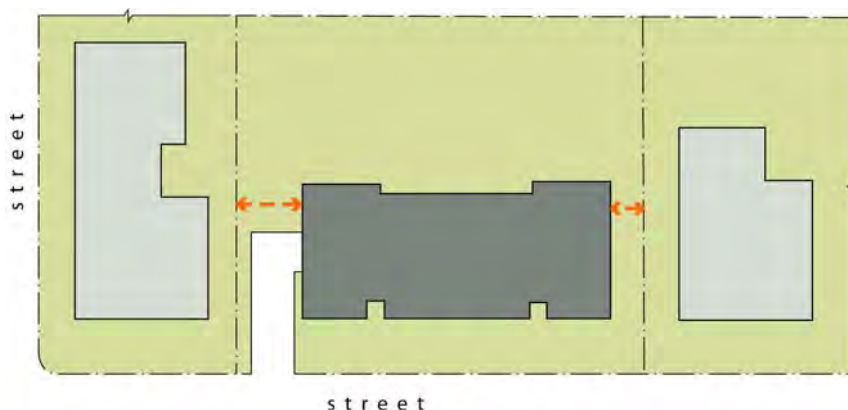
By orienting habitable rooms along the front and rear elevations rather than the side boundaries separation distances for privacy, light and air can more easily be achieved between neighbouring dwellings.

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

Controls

- Shop-top Housing and Shop-top Residential Flat Buildings must have zero side setbacks for at least 5m back from the street boundary.

- b. Residential Flat Buildings can have minimum of 1.5m setbacks.

Primary windows of living rooms facing the side boundaries

- c. Shop-Top Housing with walls containing the primary windows of living rooms facing the side boundaries are to be setback a minimum of 4m from the boundary and be screened.
- d. Shop top Residential Flat Buildings and Residential Flat buildings with the primary windows of living rooms facing the side boundaries are to be setback a minimum of 6m and meet the distances as set out in the Separation Controls.

Garages and basement parking

- e. Garages may be located within 450mm of a side boundary.
- f. Carports may be located adjacent to a side boundary.
- g. Basement garages are to be set back a minimum of 1.5m from the side boundaries but preferably in line with the building above.
- h. Driveways may be located adjacent to the side boundaries only where front fences have 60% openness ratio for the first 2m along the boundary adjacent to the driveway to achieve sight lines as set out in AS2890.

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 dwelling to ensure visual and acoustic privacy for dwellings.

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.

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.

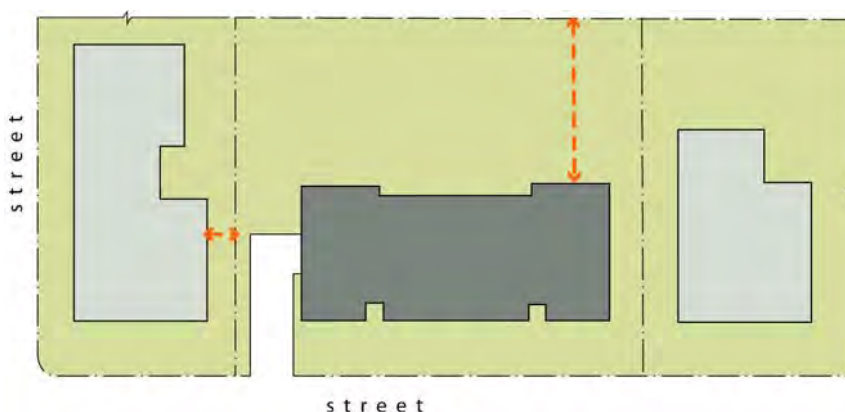
Controls

- a. The minimum rear boundary setback is 8m or the deep soil zone whichever is the greater. The minimum building separation distances must be met.
- b. For Shop-top Housing and Shop-top Residential Flat Buildings the rear setback can be a minimum of zero.
- c. For Residential Flat Buildings existing mature trees within 6m of the rear boundary are to be retained.
- d. Garages and carparking may be located adjacent to the rear setback.

Canal Frontages

- d. 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, except:
- (i) 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,
- (ii) Lots 1, 2 3 and 4 Crystal Waters Drive, Tweed Heads West where normal building setbacks shall apply along the canal frontage.

- e. 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:
 - (i) 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
 - (ii) Lots 1, 2 3 and 4 Crystal Waters Drive, Tweed Heads West where normal building setbacks shall apply along the canal frontage.
- f. 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.



Rear setbacks include deep soil zones and other landscape areas. The setback is to the buildings footprint so it does not include External Living areas, balconies, decks or bay windows.

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. Carparking number concessions may be given to small sites to allow carparking to be fully under the buildings footprint.
- c. Carparking can be either in an enclosed structure (a garage or basement) or an open roofed structure (a carport).
- d. Carparking cannot be located within the front setback.
- e. Car park entries are to be located off secondary streets and laneways where these occur.
- f. The driveway width from the street to the property boundary is to be minimised.
- g. Vehicular movement and parking areas are to be designed to minimum dimensions;
 - to reduce hard surfaces on the lot, and
 - to increase the area available for landscaping.
- h. On grade carparking cannot occur within 12m of the primary street boundary for flat buildings and 6m for Shop-top.

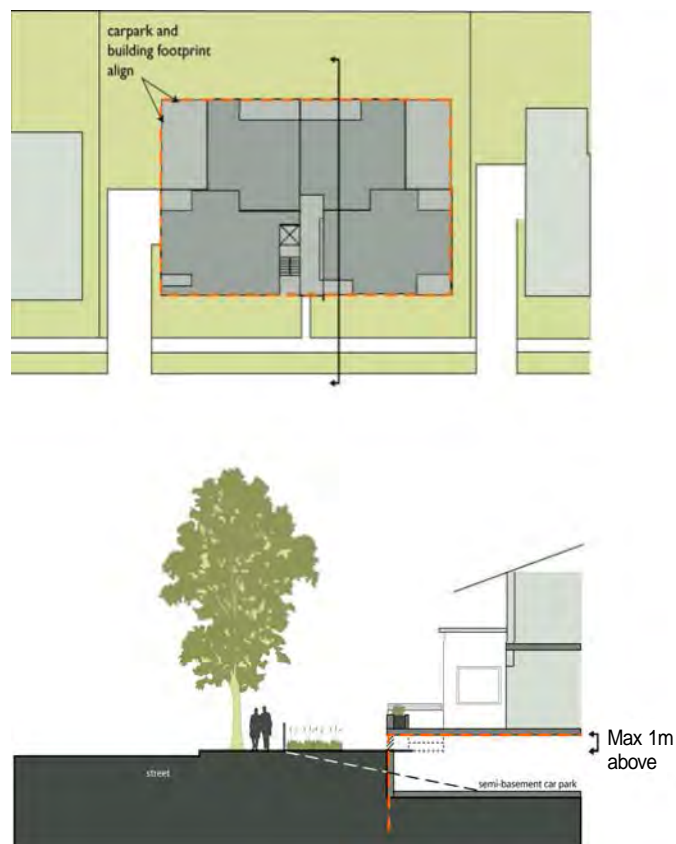
Basement Carparking

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. Ramps are to be minimised in width.
- 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.

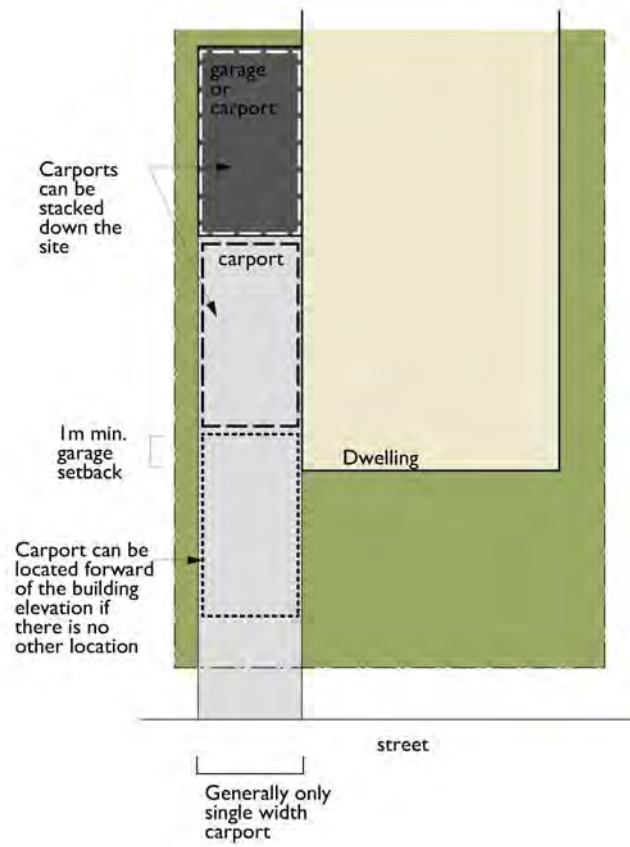


The maximum extent of basement car parking is the outermost edge of the building footprint.

Garages and Carports

Controls

- The design and materials used for garages must be in keeping with the main dwelling.
- Shop-top on-grade carparking cannot be located closer than 6m from the street boundary. On-grade carparking can be located on a laneway boundary.
- For Residential Flat buildings garage doors and entries to basement carparks along the street cannot be more than 7m wide or 50% of the lot width whichever is the lesser.
- Laneways may have up to 75% of their frontage as garage doors.
- For Shop-top housing and Shop-top Residential Flat buildings garage doors along the street are to be located either in line with the buildings street elevation or at least 1m behind the buildings street elevation.
- Where a development has a carport refer to the Carport Controls in Part B – Dual Occupancy Houses, Granny Flats, Town Houses and Row Houses.
- A pedestrian access way from the laneway is encouraged.



Carports can be stacked and are to be located adjacent to the side boundary.

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

Building Footprint and Attics

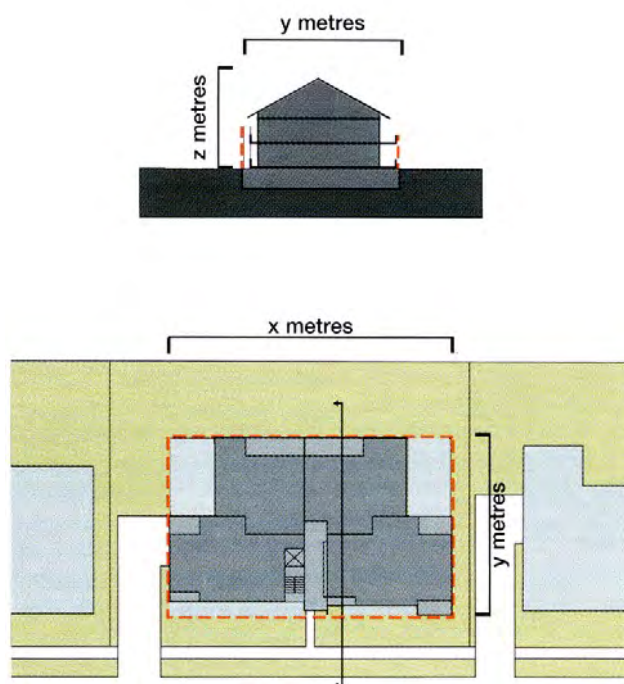
A building footprint is a two dimensional area that sets the extent of a building in relation to the site boundaries. It defines the width and depth of the overall buildable area within which a future building can be located.

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 relying 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.



These residential flat buildings all have their primary orientation to the street with external living areas, low height fences, entries, windows and doors.

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

- Three storey buildings require a 10m 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.
- Two storey buildings require an 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.
- 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.
- 4m min separation between walls containing primary windows/doors of living rooms (on any level of the building) the side boundaries.
- 4m minimum separation between the primary windows of living rooms (on any level of the building) and walls containing no windows.
- 4m minimum separation between walls containing primary windows/doors of living rooms (on any level of the building) to shared driveways.
- 4m minimum separations between walls containing primary windows/doors of living (on any level of the building) to carports and garages.
- 3m minimum separation between walls containing primary windows/doors sleeping rooms (on the ground level only) to shared driveways, carports and garages.
- 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.

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

- 13.6m is the maximum overall building height for Shop-top Housing and Shop-top Residential Flat Buildings.
- 11m is the maximum wall plate height for Shop-top Housing and Shop-top Residential Flat Buildings.
- 12.2m is the maximum overall height building height for Residential Flat Buildings.
- 9.6m is the maximum wall plate height for Residential Flat Buildings.
- 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.
- Carports maximum height 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.

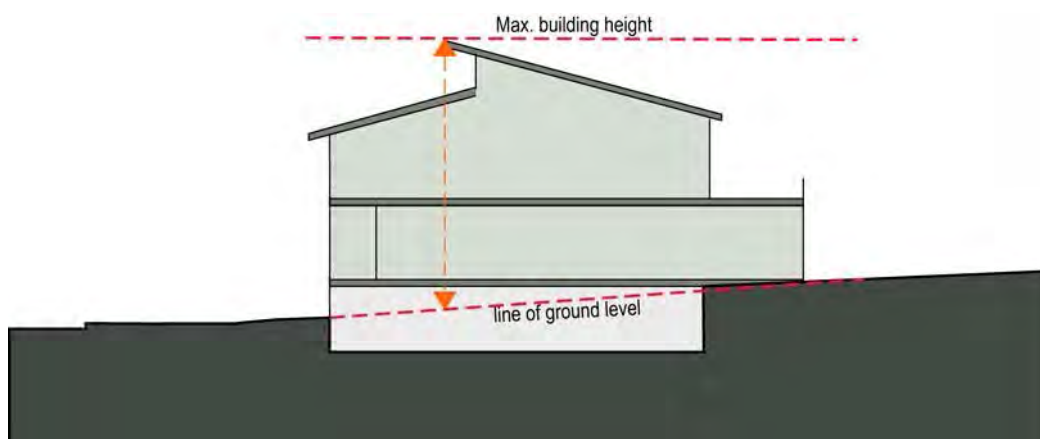
Overall building height is the vertical distance between finished ground level at any point to the highest point of the building, including plant and lift overruns, but excluding communications devices, antennae, satellite dishes, masts, flagpoles, chimneys flues and the like. The measurement of overall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

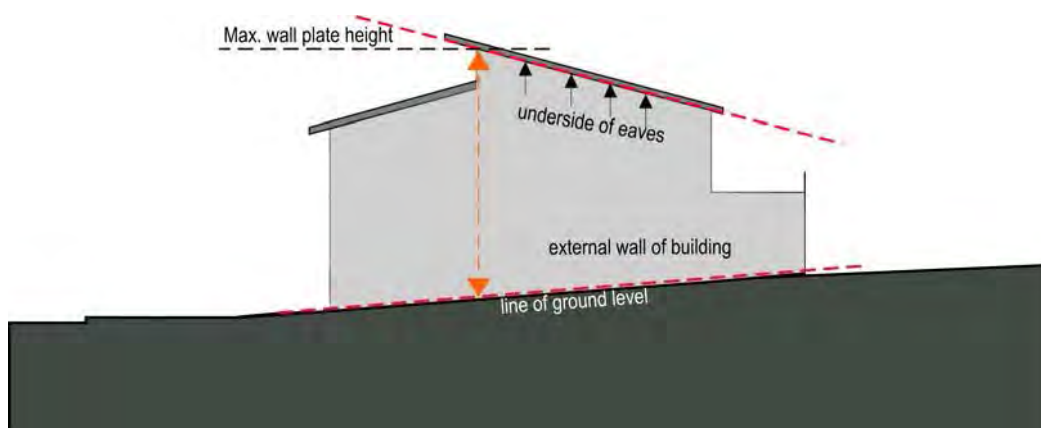
The definition of storey is found in the Tweed LEP

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. 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 at least 30% of the ceiling is to be 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.

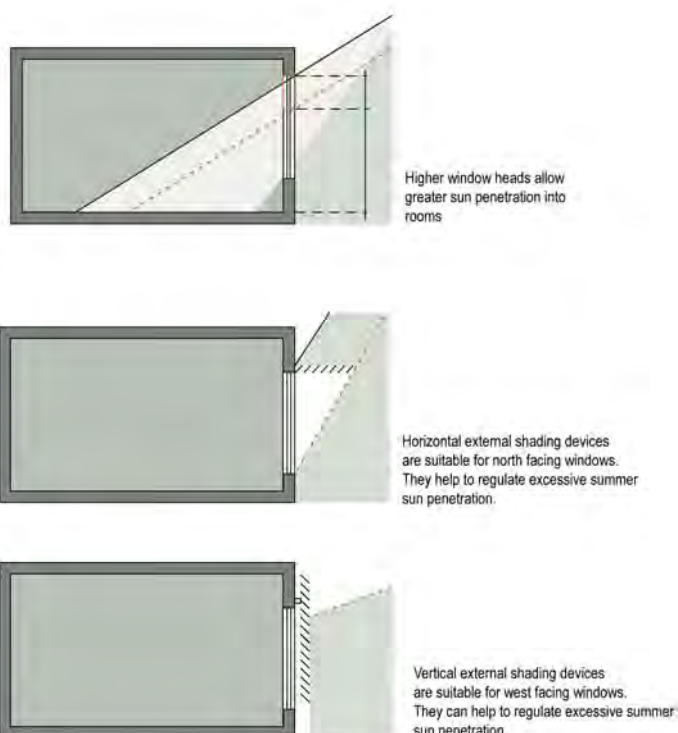
Daylight consists of both diffuse light and direct light. Good levels of daylight in a dwelling improve amenity and reduce the need for artificial lighting. Good levels of daylight can be achieved through the careful consideration of window size, location and proportion.

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 a 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.

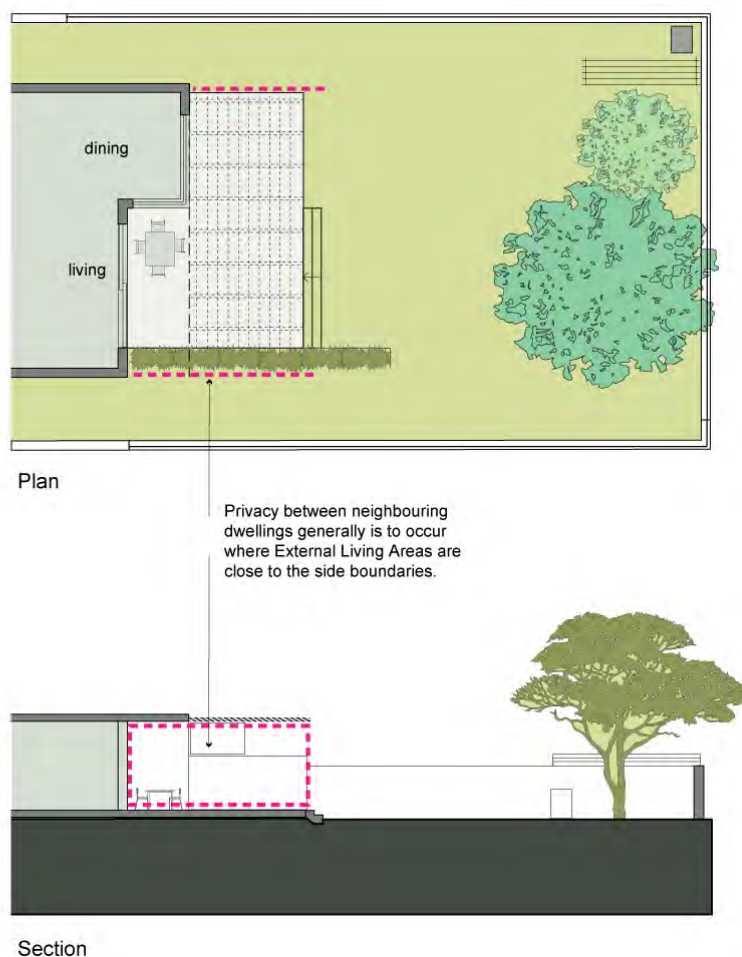
Objectives

- To provide visual privacy for internal and externally 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

- a. Terraces and balconies off living areas are generally not to be located above ground floor if they overlook neighbours.

- b. Living room and kitchen windows, terraces and balconies are avoid a direct view into neighbouring dwellings or neighbouring private open space.
- c. Side windows are to be offset by distances sufficient to avoid direct visual connection.
- d. windows of the subject dwelling and those of the neighbouring dwelling.



External Living areas requiring screening for privacy when located close to the side boundaries.

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 designated or classified 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 arterial 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 – Internal Building Configuration

Use

It is expected that the building types covered in this Part may at some time over the life of the dwelling be used to provide tourist or residential accommodation. In order to ensure quality medium density accommodation throughout the Tweed area, the design requirements are the same for short and long-term accommodation.

The types of tourist accommodation that can be regulated to ensure only short-term use occur includes hotels, motels and caravan parks. These building types are not covered by this Part.

For all the building types covered in this Part the site, building and dwelling design requirements are identical and interchangeable between residential and tourist accommodation uses.

Some of the tourist and visitor accommodation uses that can occur within any of the building types covered in this Part are temporary or short-term accommodation on a commercial basis including serviced apartments, bed and breakfast accommodation and backpackers' accommodation.

Objectives

- *To provide a high standard of accommodation for both short and long term residents.*

Controls

- a. Permanent and temporary accommodation uses are interchangeable throughout all building types covered in this Part.

Dwelling Layout and Design

The internal layout of a dwelling establishes the spatial arrangement of rooms, the circulation between rooms, and the degrees of privacy for each room. In addition, the layout directly impacts the quality of residential amenity, such as access to daylight and natural ventilation, and the assurance of acoustic and visual privacy. The dwelling layout also includes private open space. This is particularly important for apartments in flat buildings where densities are higher than for terraces and detached dwellings.

Objectives

- *To ensure that dwelling layouts are efficient and provide high standards of residential amenity.*
- *To maximise the environmental performance of dwellings.*

Controls

- a. Design the internal layout of dwellings to:
 - accommodating a variety of furniture arrangements,
 - providing for a range of activities and privacy levels between different spaces within the dwelling,
 - utilising flexible room sizes and proportions or open plans,
 - ensuring circulation by stairs, corridors and through rooms is planned as efficiently as possible thereby increasing the amount of floor space in rooms.
- a. The back of the kitchen should be no more than 10m from a window.



The design of the front setback and front of the building has created a distinctive entry area and landscaping, and creatively resolved service requirements to give the development a quality address to the street.

Storage

Providing storage space for items ancillary to people's living needs is particularly important in residential developments where the size of dwellings and their configuration are constrained. Storage is conventionally calculated in proportional to the size of the dwelling.

Objectives

- a. *To provide adequate storage for everyday household items within easy access of the dwelling.*
- b. *To provide storage for sporting, leisure, fitness and hobby equipment.*

Controls

- a. In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates:

- studio	3m ³
- one-bedroom	3m ³
- two-bedroom	4m ³
- three plus bedroom	5m ³
- b. The above minimum storage areas shall be excluded from dwelling size calculations.
- c. Locate storage conveniently for dwellings.

Internal Circulation

Lobbies, stairs, lifts and corridors make up the common circulation spaces within a building. Important design considerations include safety, amenity and durability. In addition, the number, location, and proportion of these elements have a direct relationship with the building's form, layout and articulation.

Designing buildings with multiple cores to:

- ensure the number of units off a circulation core on a single level is limited,
- assist in providing better apartment layouts,
- increase the number of entries along a street,
- increase the number of vertical circulation points,
- give more articulation to the facade.

Objectives

- To create safe and pleasant spaces for the circulation of people.
- To encourage interaction and recognition between residents to contribute to a sense of community and improve perceptions of safety.
- To facilitate quality apartment layouts, such as dual aspect apartments.
- To contribute positively to the form and articulation of the building façade and its relationship to the urban environment.

Controls

- a. Limit the number of units accessible from a single core/corridor to eight.
- b. Increase amenity and safety in circulation spaces by;
- c. providing generous corridor widths (preferred min. 2.5m) and ceiling heights (preferred min. 2.7m), particularly in lobbies, outside lifts and apartment entry doors,
- d. providing appropriate levels of lighting, including the use of natural daylight,
- e. minimising corridor lengths to give short clear sight lines.

DESIGN CONTROL 9 - 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.

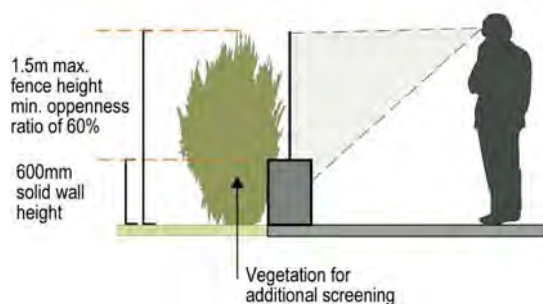
Side and Rear Fences

Controls

- a. Side fences are measured from behind the building line to the rear boundary. Maximum fence height of 2.0 metres.
- a. No chain wire fences are to exceed 1.2m in height.
- b. May include timber paling, metal or Colorbond material.
- c. 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 a min. off the side boundaries of 600m and off any front boundary by 1m.
- d. Fences and walls are not to impede the natural flow of stormwater runoff.
- e. 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

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

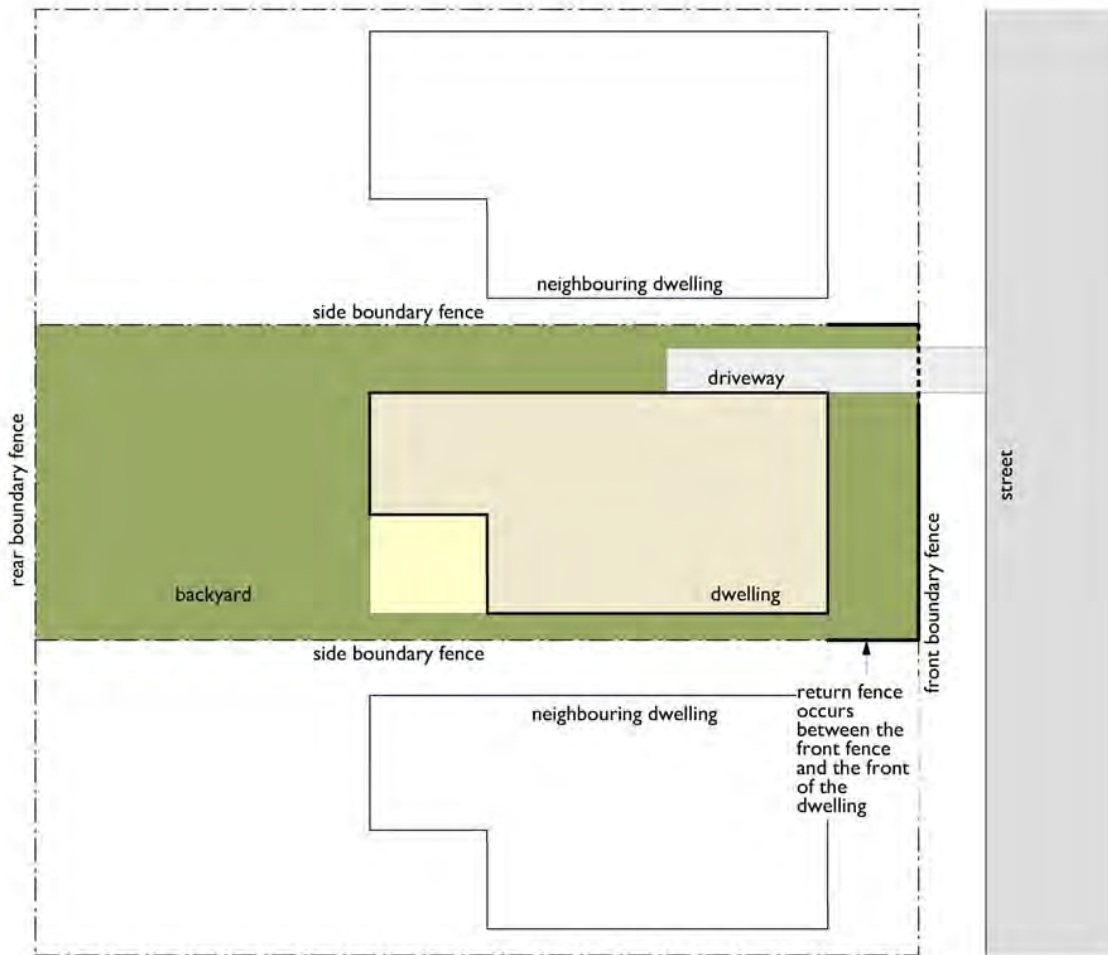
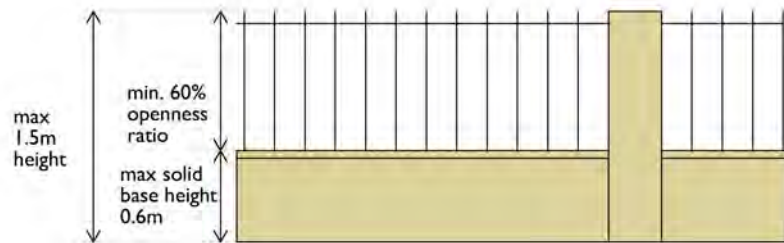


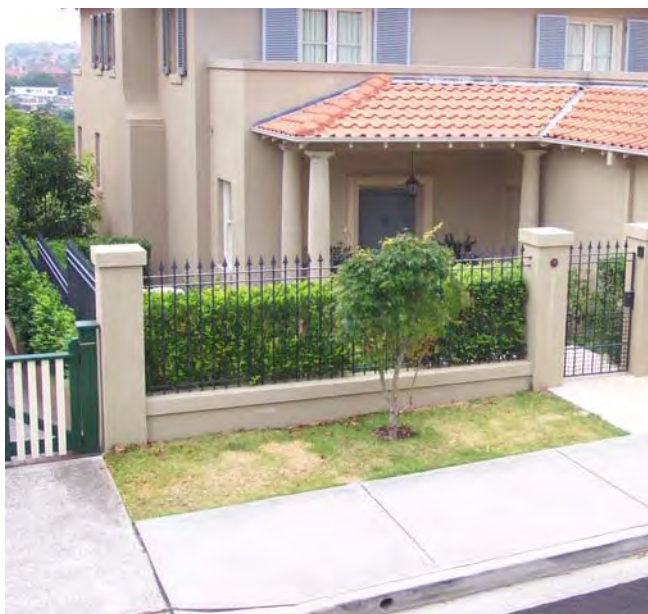
Council.

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.

Roofs on Residential Flat Buildings may have an unenclosed useable external area.

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.

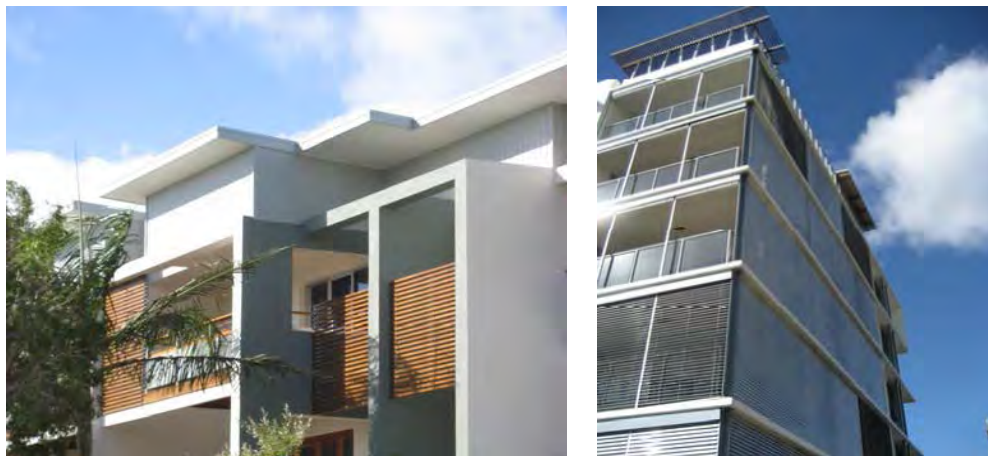
The composition and detailing of the building's elevations has an impact on its apparent scale as well as its appearance. The pattern or rhythm established by the proportions of the elevation, the modulation of the external walls, the design of elevation elements, their materials and their detailing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

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.
- b. Use proportions, materials, windows and doors types that are residential in type and scale.
- c. Design elevations to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls.
- d. Coordinate and integrate building services, such as drainage pipes, with overall elevation and balcony design.
- e. Coordinate grills/screens, ventilation louvres, carpark entry doors with the elevation.
- f. Integrate the design of garage entries with the building elevation design.



Operable and moveable louvers allow the amount of visual privacy, outlook and sun penetration to be controlled by the residents to suit different personal requirements and times of the day or night.

Corner Building Elevations

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

Controls

- a. Corner building (buildings with two street frontages) elevations are to reflect the architecture, hierarchy and characteristics of both streets.
- b. Building elevations on corner sites are to be oriented to both streets by having windows and doors addressing both streets.
- c. Landscaping, fence and wall treatments on the secondary street frontage are to be similar to the primary street frontage for the length of the building.



This mixed use building provides addresses the corner with an outdoor seating area and a shop.

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

In commercial main streets awnings increase the usability and amenity of public footpaths by protecting pedestrians from sun and rain. They encourage pedestrian activity along streets and, in conjunction with retail frontages; they support and enhance the vitality of commercial areas. Awnings, like building entries, provide a public presence and interface within the public domain thereby contributing to the identity of a development.

Signage is an important consideration in the design of buildings located in mixed-use areas such as commercial centres. Where signage is required for business identification its design should be compatible with the desired streetscape character, with the scale, and proportions of the development and without obscuring or dominating important views.

In residential buildings awnings, canopies, pergolas and blinds can significantly improve the livability of dwellings. 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 for public streets in mixed-use areas.

- To provide shelter from sun, wind and rain for private external spaces.
- To ensure signage is in keeping with desired streetscape character and with the development in scale, detail and overall design.
- To encourage pedestrian activity on streets by providing awnings to retail/commercial strips and in other highly trafficked areas.

Controls

Awning on commercial main streets

- a. For the commercial component of Shop-top Housing and Shop-top Residential Flat Buildings provide awnings along the commercial main street.
- b. Awnings are to provide adequate protection from sun and rain.

Residential components of the building

- c. Awnings are to follow the general alignment and pattern of existing awnings in the street and complement the height, depth and form of the desired character or existing pattern of awnings.
- d. Awnings are to enhance pedestrian safety by providing under-awning lighting.
- e. Awnings, canopies and storm blinds are to be wholly within the lot boundaries at least 900mm from the site boundaries.
- f. Must observe and maintain existing building line setbacks.
- g. If erected in a bushfire prone area, they are to comply with the requirements of AS3959 and Planning for Bushfire Protection 2006.
- h. Pergolas must not be located closer to a boundary than 900mm.
- i. Ensure that signage provides clear and legible way-finding for residents and visitors.



Awnings significantly improve the liveability and pedestrian scale of commercial streets and protect pedestrian from harsh environmental conditions rain, sun and wind.

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 10 – 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.

Design Guidelines

Refer to BASIX to supplement these guidelines

Incorporate passive solar design techniques to optimise heat storage in winter and heat transfer in summer by:

- *maximising thermal mass in floor and walls in northern rooms of dwellings,*
- *insulating roof/ceiling external walls and the floor.*

Improve the control of mechanical space heating and cooling by:

- *designing heating/cooling systems to target only those spaces which require heating and cooling, not the whole dwelling,*
- *allowing for adjustable awnings and blinds to be attached to the outside of windows to keep the heat out in summer,*
- *providing reversible ceiling fans for improving air movement in summer and for distributing heated air in winter.*

Consider planning for future installation of photovoltaic panels by:

- *designing the roof so that photovoltaic panels can be mounted parallel to the roof plane,*
- *locating trees where they will not shade existing or planned photovoltaic installations.*

Improve the efficiency of hot water systems by:

- *insulating hot water system,*
- *installing water-saving devices.*

Reduce reliance on artificial lighting by:

- *providing a mix of lighting fixtures, including dimmable lighting, to provide for a range of activities in different rooms,*
- *designing to allow for different possibilities for lighting,*
- *using separate switches for special purpose lighting,*
- *using high efficiency lighting,*
- *using motion detectors for common areas, lighting doorways and entrances, outdoor security lighting and car parks,*

Maximise the efficiency of household appliances by:

- *selecting an energy source with a minimum greenhouse emissions,*
- *installing high efficiency refrigerators/freezers, clothes washers and dishwashers,*
- *providing areas for clothes to be dried through natural ventilation.*

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 11 – Floor Space Ratio (FSR)

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; it needs to be linked with all other building envelope controls to support the desired building-massing outcome.

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. Shop-top housing and Shop-top Residential Flat Buildings 2:1 maximum FSR.
- b. Residential Flat Buildings is 1.2:1 maximum FSR.

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 more 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,*

PART D - ADDITIONAL SITE SPECIFIC CONTROLS

1. Seaside City

1.1. Purpose of this Part

1.2. Development to which this Part applies

1.3. Mixed Use Precinct

1.4. Building Design Outside of the Mixed Use Precinct

1.5. Coastal Housing

1.6. Cylinders Drive South-East - Specific Requirements

1.7. Coastal Medium Density Housing



Figure 1.1 The extents of Part D - 1. Seaside City

1. Seaside City

1.1. Purpose of this Part

The purpose of this Part is to provide additional guidance for the planning and design of development within Seaside City.

1.2. Development to which this Part applies

This Part applies to all development within Seaside City, as mapped within Figure 1.1. Where there is an inconsistency with the provisions of this Part and another Part of Section A1, this Part shall prevail.

1.3. Mixed Use Precinct

Planning Principles

- P1. Provide a legible, usable and attractive meeting place for the Seaside community and its visitors
- P2. Embody subtropical coastal architecture with diversity of built form, landscape amenity and high visual interest
- P3. The ensure floorspace is flexible and structurally capable to allow for easy change of use over time.
- P4. Car parking location and design is to be integrated within a pedestrian streetscape and the fine-grained surrounding visual environment.

Objectives

- O1. High quality architecture to clearly define the mixed use precinct and promote its use as an active and lively community hub.
- O2. Encourage commercial land uses provide for the needs of Seaside City residents, tourists and strengthen its coastal village atmosphere.
- O3. Enable to co-existence of business and residential uses in a mixed-use format through design, land use and operating requirements.
- O4. Encourage a diversity of building form and scale within individual urban blocks, which through elevation response and material use breakdown scale and provide strong streetscape articulation;
- O5. To provide visual interest, convey a human scale and enhance the quality of the pedestrian experience;
- O6. Ensure the building frontages in the mixed-use precinct exhibit a continuity of active frontages built to the street edge, while maintaining a diversity of façade elements and materials.

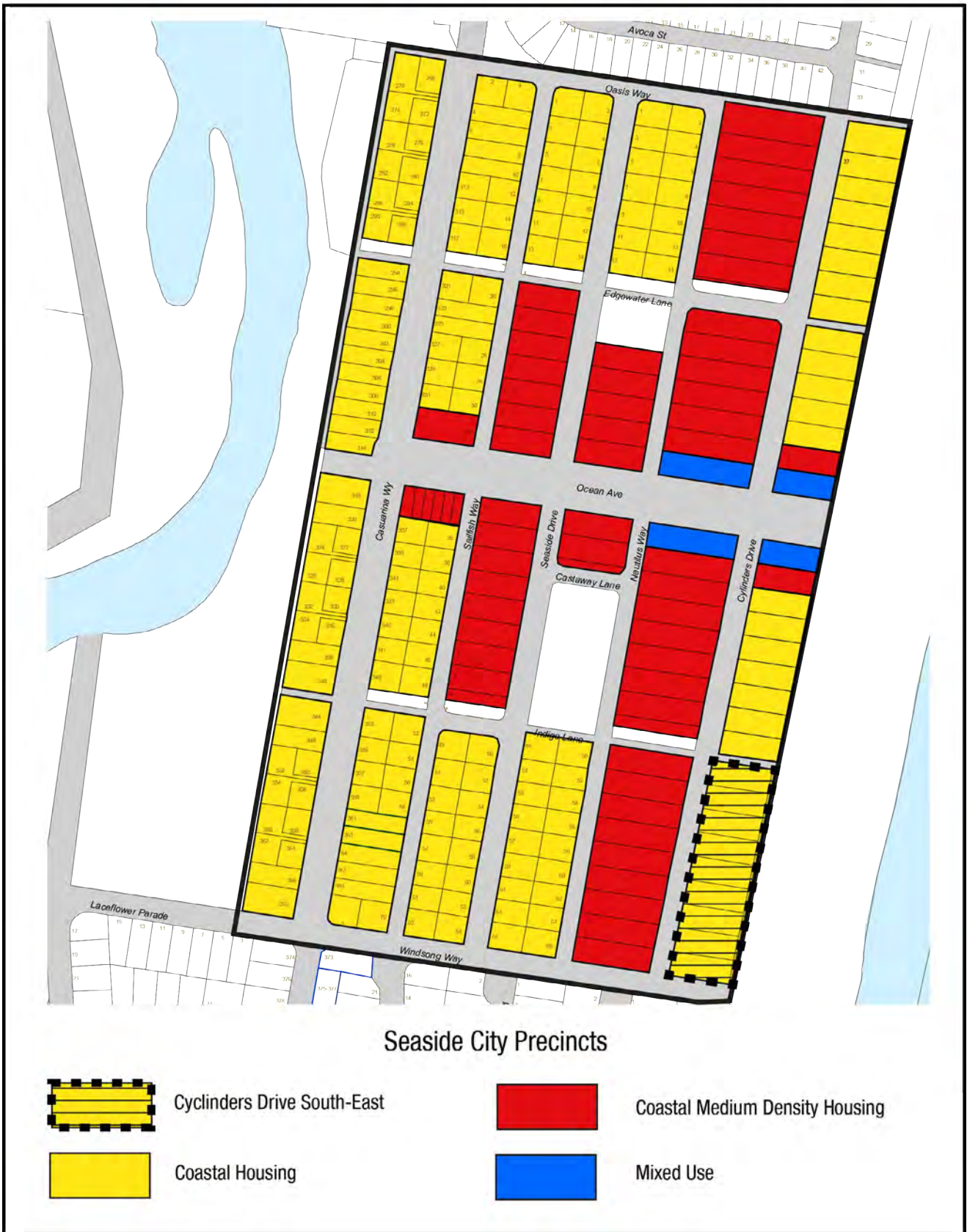


Figure 1.2 The precincts of Seaside City

07. Provide continuous street awning over footpaths for the full length of street frontages to provide shade and shelter for pedestrians.
08. Setbacks to the street are not be too deep so as to disrupt the continuity of the active street or activation of the public domain is lost
09. Upper floors are to be designed to allow for easy reconfiguration to either residential, commercial or tourist uses.
010. Carefully plan car parking placement and size as a series of smaller segmented parking lots to reduce their impact and not influence the activity and visual interest of street frontages.
011. Provide pedestrians with direct safe and sheltered access to car parking e.g. through arcades, with least possible distance to destination.

Controls

Notes:

Upper floors designated for tourist and/or permanent accommodation are to be constructed to meet the most stringent control, which will generally be tourist-related BCA provisions and residential car parking standards, to ensure that tourist and permanent uses are effectively interchangeable.

Management Plans are encouraged to be developed for new buildings containing tourist and/ permanent accommodation, identifying intended uses and addressing issues associated with the potential conflicts between residents and short-term tourist use.

External claddings are to be of durable materials appropriate for high salt, coastal environment.

- C1. The building facade is to include a rich layering of articulation, materials selection and detail.
- C2. Buildings are to be designed with a maximum frontage/module length of 10m and are to include diversity in style and design
- C3. Maximise the number of windows, doors & balconies to give richness and variety to the street.
- C4. Shopfronts are to be designed to have a minimum of 75% of frontage to be directly related & accessible to the street.
- C5. Any frontage to a second street shall not be a blank wall. Both street frontages shall incorporate active pedestrian frontages including the design elements (such as awnings, verandahs, balustrades and the line of windows) present within the primary frontage elevation.
- C6. The use bi-fold doors is strongly encouraged to enable integration with the public domain and take advantage of the climatic influences.
- C7. All buildings in the Village Centre west of Cylinders Drive are to be greater than 10m in height
- C8. Provide awnings and sun and shade structures with a minimum width of 3m over all footpaths in the mixed-use precinct.
- C9. Provide strong street address primarily built to the primary lot boundary to ensure an active pedestrian frontage and continuity in the streetscape.

Façade colours shall be subtle, in keeping with the context and building design, unless specific colour scheme proposed for streetscaping in character.

Reflective or mirror glass is not allowed.

Refer also to the NSW Coastal Design Guidelines.

C10. Exceptions to Control C9 can:

- Be considered in order to form an outdoor space such as a plaza, courtyard, patio or garden between a building and the footpath. Such a larger front yard area shall have landscaping, low walls, fencing or railings, a tree canopy and/or other similar site improvements along the footpath designed for pedestrian interest, comfort and visual continuity. It must be also be demonstrated as to how this space will be activated;
- Be considered if the applicant can clearly and objectively demonstrate that the site conditions dictate otherwise and that a practical alternative meets the intent of a pedestrian-oriented, urban design;
- Not be used to provide car parking to the front of building that will result in disruption to the continuity of the building frontage or pedestrian access;
- Not result in the alienation of pedestrian access and the building frontage; and/or impede the continuous public access through or within the centre.

C11. Development east of Cylinders Drive shall:

- Include an active edge to the park and Cylinders Drive
- Be designed with the capacity to be opened onto when necessary into the street for use as a community event location or as a market square;
- The ability to respond to climate and changing community needs.

C12. The minimum floor to ceiling height for ground and first floor floorplates is 3.3 metres.

C13. A minimum of 1,000m² GFA for commercial premises is to be provided within the Mixed Use Precinct.

C14. Long stay parking is to be located behind buildings and of a design that is sensitive to the surrounding visual environment, and ensuring that their design has considered the impact on surrounding land use.

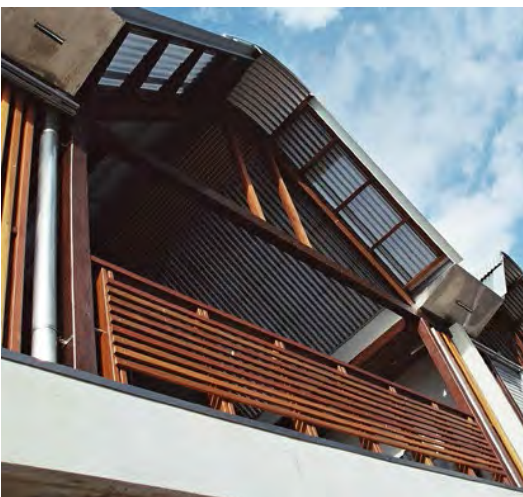
C15. Pedestrian access to and through parking lots are to be articulated with design features to improve pedestrian amenity and legibility through surface treatment, lighting and landscaping.

- C16. Loading/service areas including rubbish/recycling enclosures to be located out of public view whenever feasible and must not front shopping streets.
- C17. Electrical, air-conditioning and communications units shall be provided to not obstruct pedestrian movement or reduce the quality of the visual environment. Where located on the roof, must be screen and integrated into the overall roof design.
- C18. Areas for storing, loading, transferring and compacting rubbish shall be incorporated into the overall building design and landscaping
- C19. Council will consider car parking concessions for non-residential accommodation uses in light of the formal public parking available within the vicinity.

Material and Detail Guide

The photo's below and right graphically display a number of desirable built form and public domain outcomes, including:

- Layering of the façade e.g. balustrade/sun shade screens/opportunity for landscaping
- Opportunity for more expressive roof form including eave overhang
- Mix of materials which may include a combination of heavier structural concrete and masonry elements with lighter weight elements / timber detailing
- Contemporary coastal colour palette
- Strong public domain gesture at ground level which could see the retail units setback opening up a greater outdoor/undercroft area
- Specific articulation of the public thoroughfare (different pavement, lining/cladding, projecting awning, lighting etc)
- Integration of signage as part of the elevational composition



1.4. Building Design Outside of the Mixed Use Precinct

Seaside City architecture should be designed to respond to a subtropical coastal climate and reflect vernacular designs of the northern NSW. This can be achieved through embedding solar passive site design principles, the use of a variety of climatically appropriate materials and integrating generous landscape areas with the building design.

Building Design

- C1. Building should have well-articulated facades to improve the quality of the streetscape. Themed architecture from other contexts such as “Mediterranean”, “French Provincial”, “Tuscan”, “Santa Fe” and traditional “Brick Veneer Project Homes” are inappropriate styles for this location.

Roof

- C1. Roofs should be clad in one of the following materials:
 - Matt finished profiled metal deck (e.g. copper, zinc or ‘colourbond’); or
 - Steel roof sheeting.
- C2. All gutter and downpipe treatments must complement the dwelling in terms of location and material finish.
- C3. A minimum eave overhang of 600mm is required.
- C4. Curved and undulating parapets are not desirable.

Walls

- C1. The external walls of a building should be finished with a mix of climatically appropriate materials with a higher percentage of light weight (low mass) than heavy (high mass) materials, with a focus on the thermal performance of the building. A mix of the following materials is appropriate:
 - Limited masonry finished in a rendered or bagged, and painted texture finish;
 - Fibre-cement wall sheeting;
 - Matt finish corrugated colourbond (or similar) metal cladding
 - Timber cladding; or
 - Weatherboard.
- C2. Plain, rendered or painted brickwork is allowable for a maximum of 10% of wall surfaces.

1.5. Coastal Housing

The Coastal Housing Precinct is to be characterised by expansive roof designs with deep overhangs including skillion and steep hip and gable roof forms, the predominant use of lightweight cladding materials (e.g. fibre cement, corrugated steel and timber), generous verandahs, outdoor living spaces and landscaping.

A choice of setback options is available within the Coastal Housing Precinct, namely reduced front and rear setbacks will be considered, but only where additional north-side setbacks are provided. The following table and sketches outline the setback options that will be permitted across the site.

Table 1 – Setback Options

	Option 1	Option 2	Option 3
Front	Minimum 6m	Minimum 4.5m	Minimum 3m
Side	Both sides - minimum 900mm for single storey, minimum 1500mm for two storey and above	Northern boundary - minimum 3m Southern boundary - minimum 900mm for single storey, minimum 1500mm for two storey and above	Northern boundary - minimum 3m Southern boundary - minimum 900mm for single storey, minimum 1500mm for two storey and above A minimum 4m x 4m area of open space to be provided along the northern boundary
Rear	Minimum 6m	Minimum 4.5m	Minimum 3m

Notes:

Option 1 - Special design elements, such as verandas, balconies, sun structures, entrances and the like, constructed of open design and occupying no greater than 50% of the width of the main building façade, may be setback a minimum of 3m from the front street boundary.

Options 2 & 3 - Special design elements, such as verandas, balconies, sun structures, entrances and the like, constructed of open design and occupying no greater than 50% of the width of the main building façade, may be setback a minimum of 2m from the front street boundary.

- C1. Achieve the front, side and rear setbacks specified within Option 1, 2 or 3 of Table 1 - Setback Options.
- C2. Option 3 is not applicable to lots with a north-south width of less than 18m.
- C3. For beachfront lots, the rear building line is the boundary line between the residential, environmental zones.



Figure 1.3 Diagram of the Coastal Housing Setback Options

1.6. Cylinders Drive South-East - Specific Requirements

- C1. The front building line setback for the Cylinders Drive South-East Precinct is to be a minimum of 3 metres.
- C2. Enclosed spaces are permitted to have a minimum front building line setback of 1.5m for a maximum of 50% of the frontage width.
- C3. Design elements such as verandas, balconies, sun structures, entrances and the like, constructed of open design and occupying no greater than 50% of the frontage may be built up to and adjoining the front boundary.
- C4. No side setbacks are prescribed for development within 3m of the front boundary, however no visual obstruction is to be located within a 3m by 3m triangle of all lot corners on street frontages.
- C5. Building within the 3m setback is to be well articulated to ensure a high quality of streetscape.
- C6. Through design means other than fencing, clearly delineate the extents of public and private domain.
- C7. A cantilevered first floor within the environmental zone will be considered to a maximum of 4m as measured perpendicular to the urban/environmental zoning interface.

1.7. Coastal Medium Density Housing

This multi-unit residential development area provides a transition between the coastal housing on the periphery of Seaside City and the denser coastal apartments within the Mixed Use Precinct. These developments are to be of medium density accommodation with a built form, proportions, scale, fenestration and symmetry of that of large coastal houses.

Amalgamation of lots is encouraged where it will provide improved urban design solutions, particularly where it will allow contemporary building types that address the street frontage or address mid-lot landscaped areas, minimise the number of private driveways and allow for garages at the rear of buildings. Courtyard building types are encouraged, to provide private, useable mid-lot open space for occupants.

- C1. The desired density of residential accommodation within the Coastal Medium Density Housing Precinct is greater than 1 dwelling per 200m² site area.
- C2. Residential accommodation on land within the Coastal Medium Density Housing Precinct must achieve a minimum density of 1 per 360m² site area unless significant site constraints (other than land tenure) direct otherwise.
- C3. The minimum 450m² site area provisions for Dual Occupancy and Secondary Dwellings do not apply to land within the Coastal Medium Density Housing Precinct.



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