CHAPTER 2.4 MULTIPLE DWELLING RESIDENTIAL DEVELOPMENT

1.0 INTRODUCTION

1.1 Objectives of this Chapter

This Chapter applies to multiple dwelling residential developments in Wyong Shire, including residential flat development and dwellings associated with commercial premises. The Chapter aims to protect and enhance the amenity of new and existing residential areas by:

- encouraging the provision of a variety of dwelling types and allowing for innovation in individual design;
- promoting standards of design which achieve functional and aesthetic quality in development;
- encouraging designs of high architectural quality;
- encouraging residential development appropriate to the local area context;
- promoting sustainable development which is energy and water efficient and offers sufficient protection for the environment.

1.2 Land to which this Chapter Applies

All land within Wyong Shire to which WLEP 2013 applies.

1.3 Relationship to other Chapters and Policies

This Chapter should be read in conjunction with other relevant Chapters of this Development Control Plan and other Policy Documents of Council, including but not limited to:

- Chapter 2.11– Parking and Access
- Chapter 3.1 – Site Waste Management
- Chapter 3.3 – Floodplain Management
- Chapter 3.6 – Tree and Vegetation Management
- Chapter 3.10 – Wetlands Management
- Part 4 – Subdivision
- Part 6 – Location Specific Development Controls (where relevant)
- Council's Civil Works – Design Guideline and Construction Specification

1.4 Glossary

Note: Generally, the terms used in this Chapter have the same meaning as those terms are defined within the WLEP 2013. Where a term is defined within the WLEP 2013, it is not repeated here. The following additional terms are relevant to this Chapter:

ABSA means the Association of Building Sustainability Assessors, whose role is to oversee the accreditation of assessors for the issue of ABSA and BASIX certificates for energy efficiency.

attached dwelling means a building containing 3 or more dwellings, where:

- each dwelling is attached to another dwelling by a common wall, and
- each of the dwellings is on its own lot of land, and
- none of the dwellings is located above any part of another dwelling.

Note: Often referred to as row or terrace housing. Is the land use created by the Torrens Title Subdivision of Multi-Dwelling Housing.

basement car park means an enclosed, underground car parking area which does not protrude greater than 1.0 metres above ground level at any point.

bedroom includes any room that can be adapted (in compliance with the BCA) for use as a bedroom, whether or not building alterations are involved.

Category A Roads include roads that are classified as proclaimed by the Roads Act 1993, and are roads that predominantly carry, or are planned to carry, through traffic from one region to another, or carry traffic directly from one part of a region to another. They are projected to carry more than 10,000 vehicles per day (vpd). For example the Pacific Highway.

Category B Roads are distributor and collector roads that connect "Category A" roads to "Category C" (access streets and access places). They are projected to carry between 2,000 vpd and 10,000 vehicles per day (vpd).

Category C Roads are streets which are projected to carry less than 2,000 vehicles per day (vpd).

Note: Wyong Shire Council should be consulted to confirm the status of a road for the purposes of the provisions in this Plan, as projected usage (e.g. bus or tourist route), may determine that an alternative classification is warranted.

ceiling height means the vertical distance from natural ground level at any point within a building to the top-most ceiling of the building directly above that point.

communal open space is usable open space at ground level which preferably contains deep soil zones, used for recreation and relaxation of the residents of a residential flat development and which is under the control of an owner's corporation.

deep soil zones are areas of natural ground with relatively natural soil profiles retained within a development. Deep soil zones have important environmental benefits, including the promotion of healthy growth of large trees; the protection of existing mature trees, infiltration of rain water to the water table and reduction of stormwater runoff.

dwelling means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied or used as a separate domicile.

hardstand area is the area of a site through which water cannot infiltrate, and includes the area of the dwelling(s) footprint, garages, water tanks, outbuildings; and non porous driveways, paths and courts, but excludes the water surface area of swimming pools.

living area means any room or rooms within a dwelling which are generally available for day-to-day use by residents and visitors, and include such rooms as family, dining and rumpus.

multi dwelling housing means 3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building.

Note: This includes what is often referred to as villa development, town house development and cluster housing.

private open space means an external area of the site available for private use by the residents of a dwelling, and may be provided in the form of a courtyard or garden at ground level, or a balcony above ground level.

residential flat building means a building containing 3 or more dwellings, but does not include an attached dwelling or multi dwelling housing.

Note: Residential flat buildings that consist of:

- *3 or more storeys (not including levels below ground level provided for car parking or storage, or both, that protrude less than 1.2 metres above ground level); and*
- *contain 4 or more self-contained dwellings (whether or not the building includes uses for other purposes, such as shops), but does not include a Class 1a building or a Class 1b building under the Building Code of Australia*

are subject to the controls detailed in SEPP 65 and the Residential Flat Design Code, as well as the provisions detailed within this plan.

retaining wall means a landscaping feature external to the building which is used to retain cut or fill and incorporates adequate provision for drainage.

site area means the total area of the development site, excluding the area of any access handle in the case of an existing (or future potential) battle-axe allotment.

site coverage means the percentage of site area covered by the footprint of buildings, structures and hardstand areas to be erected on the land.

2.0 CONTEXT

2.1 Site and Local Context Analysis

OBJECTIVE

- To encourage design that results from a genuine analysis of the site character and capacity, and its suitability for the proposed development

REQUIREMENTS

2.1.1 Site Analysis

a It is highly desirable that contact with neighbours be established at the site analysis stage. Talk to them about how the proposal will affect them and review the location of outdoor living areas, fencing, pools, living rooms and other specific features that may influence the design of the development.

b A Site Analysis shall be carried out as the first step in the design process and the outcomes of that analysis must be reflected in the design of the development. The character of the site must determine the design of the development, rather than the design of the development dominating the character of the site.

c The Site Analysis Plan identifies existing conditions relating to the development site and existing design constraints on adjacent sites, which are likely to influence design choices. The design should demonstrate that these issues have been taken into account. The site analysis plan shall be submitted in A3 size. The detail of the plan should be tailored to the size and complexity of the proposed development.

d A Site Analysis Plan shall be submitted with any Development Application. The following is an indicative checklist of issues to be addressed by the Site Analysis Plan:

i **orientation:** north point and aspect, consider the movement of the sun, particularly at winter solstice;

ii **topography:** slope of the land at 0.2m intervals where cut and fill or benching of the site is proposed, (otherwise 1.0m intervals) and direction of fall;

iii **streetscape:** setback patterns, position and form of existing houses and developments on adjacent and opposite lands; overall height and shadows from adjacent buildings;

iv **context:** location of the site in relation to transport, nearby schools, community facilities or shops. (Special consideration for prominent sites including elevated or rural land, corner sites, heritage and cultural issues);

v **vegetation:** existing trees and vegetation on the land, on adjoining land and in the street / locality and their true canopy spread within or onto the site;

vi **privacy:** any windows or private areas of neighbouring developments facing the land;

vii **noise and light:** location and extent of nearby sources of noise or light impacts (e.g. major roads, intersections, sports fields or commercial areas);

viii **views:** consideration of view corridors to and from the site and neighbours' views;

ix **prevailing winds:** these can vary for a particular site, eg. coastal areas. Orientation to take advantage of prevailing breezes for natural ventilation can add greatly to comfort levels within the dwelling;

x **services:** location of utility services (including stormwater drainage lines, electricity poles and kerb crossings);

xi **vehicle access:** best position for a driveway;

xii **survey constraints:** surveyed location of any easements, rights of way or other relevant restrictions;

xiii **security:** any natural surveillance opportunities to and from the site;

xiv **existing structures:** including details of existing fences, retaining walls and buildings on site.

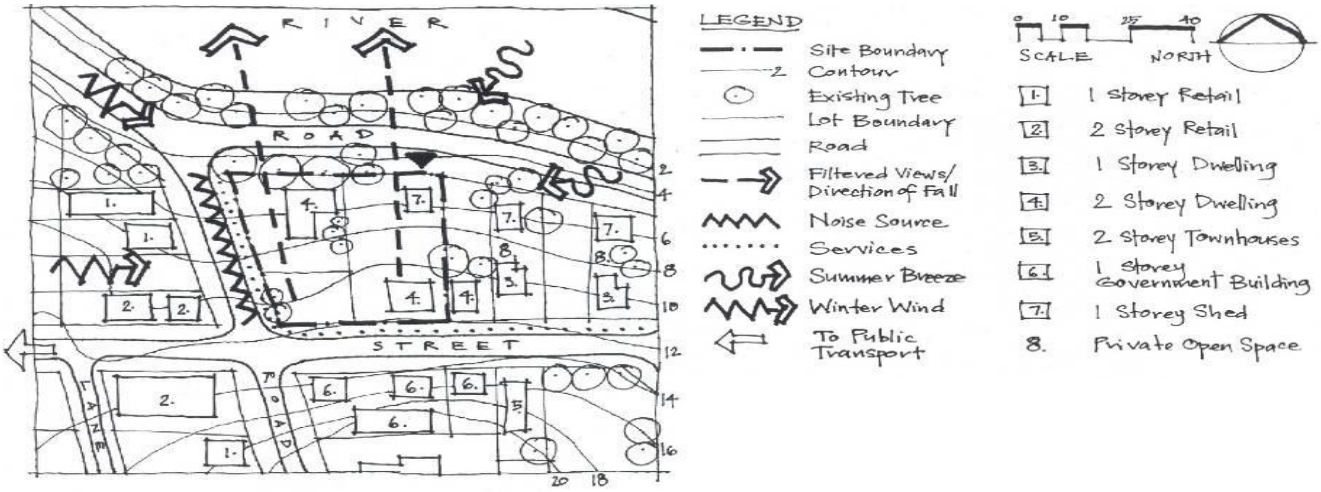

Figure 1 Sample site analysis plan

2.1.2 Contextual Analysis

a The aim of contextual analysis is to recognise why a place is as it is and to reflect that analysis in the design of the proposed development. Contextual analysis will highlight the elements that reinforce the locality's desired identity as well as the inconsistencies that could detract from it.

b A contextual analysis shall be submitted with applications, addressing the following:

i the social context;

ii the economic context;

iii the environmental context;

iv the urban design context, including consideration of existing built form and predominant streetscape pattern.

3.0 SCALE

Good design provides an appropriate scale in terms of the bulk and height that is compatible with the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area, whilst maintaining the amenity of existing and future residents.

3.1 Height

3.1.1 Overall Building Height

In accordance with WLEP 2013, building height is defined as the vertical distance between ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

WLEP 2013 contains a Height of Building Map for certain areas within the Shire. In accordance with Clause 4.3(2) of WLEP 2013, the height of a building is not to exceed the maximum height indicated on this map.

In determining appropriate building heights Council shall have regard to the WLEP 2013, for the scale of future development for which provision is made in the locality and where appropriate, the Warnervale Aerodrome Obstacle Limitation Surfaces Map and the New South Wales Government Coastal Policy.

3.1.2 Natural Ground Level to Ceiling Height (Ceiling Height)

For the purposes of this Chapter, ceiling height means the vertical distance from natural ground level at any point within a building to the top-most ceiling of the building directly above that point (see Figures 2 and 3 below).

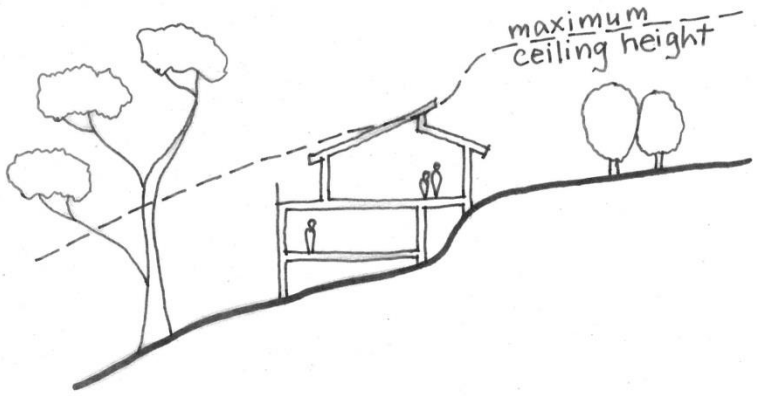

Figure 2 Ceiling height – raked or cathedral ceilings

OBJECTIVES

- To control bulk and scale
- To encourage development which:
  - is consistent with the objectives of the zone;
  - is not visually obtrusive;
  - relates to the topography of the site;

- enhances privacy and amenity for neighbouring residents; and
- maintains solar access

REQUIREMENTS

Ceiling Heights within R1 zones shall not exceed two storeys and 7 metres in height.

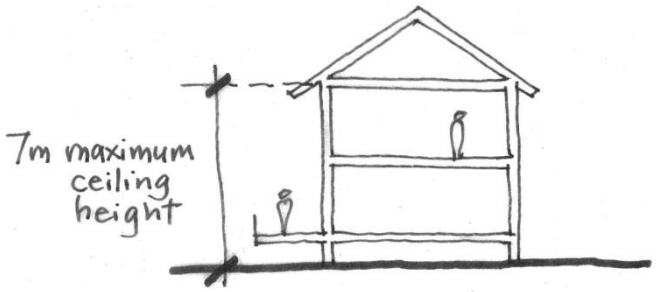

Figure 3 Ceiling height in the R1 zone

3.2 Site Coverage

OBJECTIVES

- To provide an area on site that enables soft landscaping and deep soil planting
- To provide a pleasant outlook
- To provide appropriate separation between buildings in the local context
- To provide areas on site that permit stormwater infiltration

REQUIREMENT

A minimum 25% of site area at ground level shall be 'soft' landscaping, excluding all hardstand areas. Open space areas and setback areas may be included in this calculation only where these do not include hardstand surfaces. See Figure 4.

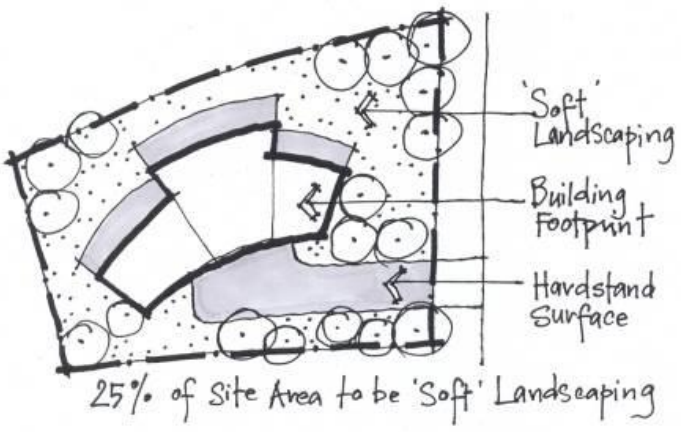

Figure 4 Site coverage

4.0 BUILT FORM

Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. Appropriate built form defines and contributes to the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

4.1 Construction and Appearance of Development

OBJECTIVES

- To promote high architectural quality in residential flat or multi dwelling housing development
- To ensure that new developments have facades which define and enhance the public domain and desired street character
- To ensure design of development is:
  - of a high quality which contributes positively to the streetscape;
  - compatible with the desired character of the area; and
  - visually interesting, offering variety to the observer whilst presenting an integrated design outcome
- To ensure that building elements are integrated into the overall building form and façade design

REQUIREMENTS

4.1.1 Building Design

a Developments proposed within Wyong Shire will need to respond sensitively to their context in term of their scale, functionality and sustainability. The development needs to relate well to the public domain and contribute to the local community. Ways of measuring appropriate design quality include:

i integration of the built form and public domain, for example in relation to ground floor activity, address, building materials, detail or scale;

ii environmental efficiency in relation to materials, energy, and water. This requires appropriate response to the local context and environmental conditions and may relate to solar access, building materials etc;

iii amenity for adjoining development, and for residents or workers in the locality. This may include for example preserving sunlight access to public open space.

Note: The Design Quality Principles in the Residential Flat Design Code (PlanningNSW 2002) and SEPP 65 – 'Design Quality of Residential Flat Development', provide a guide to achieving good design and the means of evaluating the merit of proposed solutions. These are published on the Department of Planning and Infrastructure website: www.planning.nsw.gov.au/index1.html.

b Council requires facades to be articulated in length and height. Monotonous and unbroken lengths of wall exceeding 10 metres in length and 3 metres in height shall not be permitted for multi dwelling housing and residential flat buildings that are less than 3 storeys in height. In development of two or more storeys, physical design elements shall be used to provide visual interest to the building. These elements may include roof, wall and eave projections and indentations (min. 0.45m x 1.5m run), roofed decks, pergolas, awnings and other permanent shading structures, etc. A mixture of building materials including masonry, timber and glass is encouraged. See Figure 5.

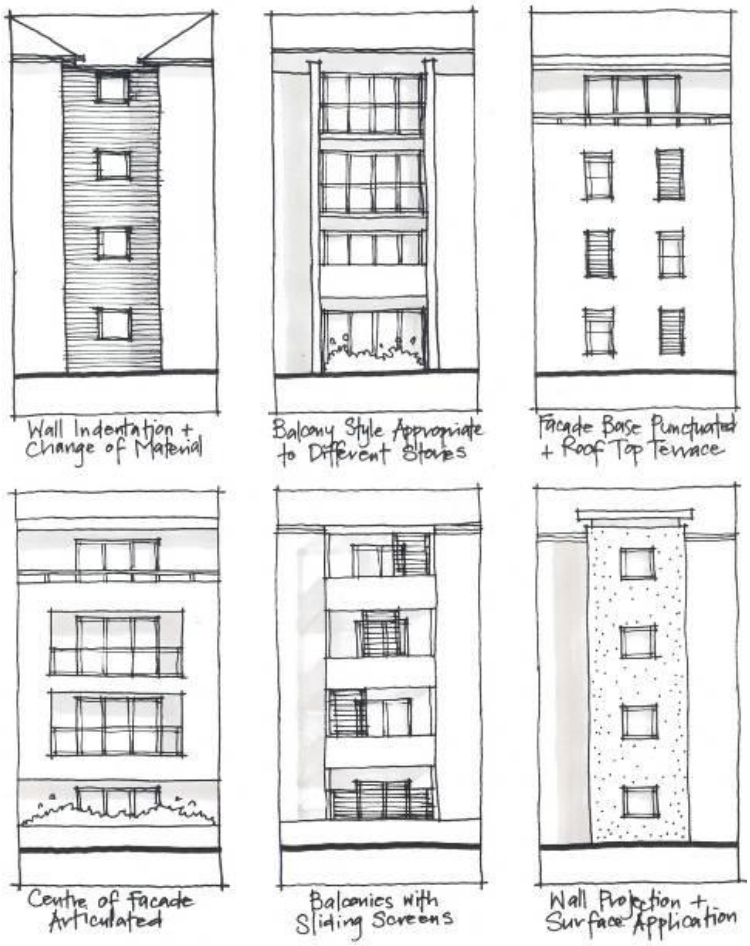

Figure 5 Examples of possible multi-storey articulated façades

c Garages shall not dominate the street elevation(s) or presentation of the development. See Figures 6a and 6b and Section 4.5.2 for specific requirements.

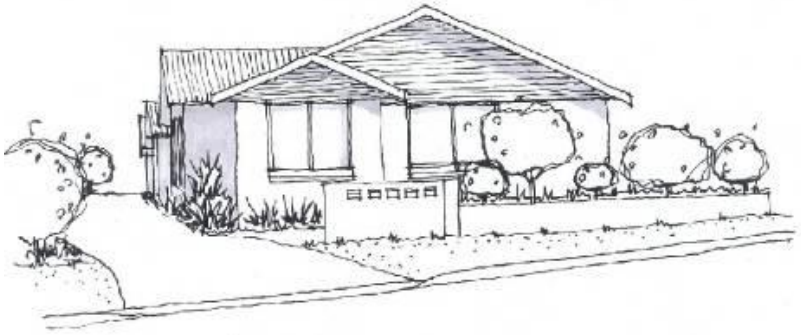

Figure 6a Example of garages located behind building façade to avoid visual dominance of the streetscape

Figure 6b Examples of garages located behind building façade to avoid visual dominance of the streetscape

d Street number(s) shall be clearly identifiable for the development.

4.1.2 Roof Design

a Design roofs to respond to the orientation of the site. For example by using eaves and skillion roofs to respond to solar access.

b Minimise the visual intrusiveness of service elements by integrating them into the design of the roof. These elements include lift over-runs, service plants, chimneys, vent stacks, gutters, downpipes and signage. See Figure 7.

c Roof top structures shall not detract from the architectural merit of the building.

d Roof top gardens, terraces, decks and enclosures shall be suitably set back from the building edge to maintain the privacy of adjoining sites. See Sections 6.2 and 6.4.

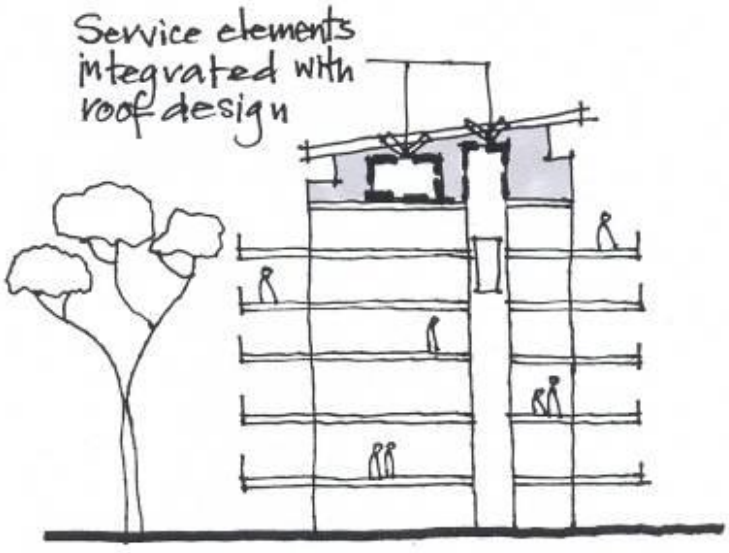

Figure 7 Integrated roof design

4.1.3 Design Integration

a Where existing buildings are to be retained as part of an overall proposal, they shall be sufficiently upgraded to integrate with the new development. The integration of old and new shall be carefully considered in terms of:

i architectural features and form;

ii roof form;

iii external building materials colours and finishes;

iv Location and orientation; and

v Dwelling curtilage.

Details of how the proposed development responds to these items are to be included in the Statement of Environmental Effects.

b Existing dwellings must be updated in terms of internal finishings, bathroom and kitchen facilities, etc. Full details are required with the development application.

c Wherever an existing dwelling contains asbestos, the asbestos must be removed or appropriately stabilised in accordance with Australian Standard AS2601 – 2001, the Department of Local Government Guidelines and Work Cover.

d Development proposals which incorporate existing buildings shall be accompanied by a floor plan and elevations of the existing building, as well as a schedule of externals colours and materials for the development.

4.2 Cut and Fill

OBJECTIVES

- To accommodate the proposed development on site, without the need for excessive cutting and filling of the site or construction of high retaining walls
- To respect the natural topography of a site
- To control surface water and / or stormwater on the subject land with any changes to water flows, as a result of cut or fill, not impacting upon any adjoining properties
- To ensure that the design of the development is appropriate for site conditions with consideration given to slope, stability of the land and the privacy of adjoining properties
- To ensure all boundary fencing is erected at natural ground level, permitting light and ventilation to ensure reasonable amenity to adjacent developments

REQUIREMENTS

4.2.1 General Requirements

a For all forms of development, the amount of cut and / or fill required on a site shall be minimised. This may be achieved by stepping buildings down a site, and by locating the finished ground floor level as close to natural ground level as practicable.

b Details of any proposed retaining walls, including construction details, height and location on the site shall be provided with the development application.

4.2.2 Development to Two Storeys in Height

a No building, cut, fill, or retaining works shall be permitted which may affect sewer or drainage lines or inter-allotment easements over the property.

b Retaining walls where viewed from the street or public places shall be of a decorative masonry product complementing the landscape design and integrating with the development.

c Each of the above elements is to be wholly contained within the subject allotment.

d The construction of any retaining wall or associated drainage work adjacent to a common boundary shall not impede the structural integrity of any existing retaining walls or structures.

Note: It is the legal responsibility of the property owner cutting into the land to retain other land / structures.

e All dividing fencing shall be erected on ground level.

f Specific restrictions on cut:

i no boundary retaining wall for cut shall exceed 900mm in height;

ii where any adjacent wall of the dwelling is setback less than 1300mm from the side boundary the height of cut at that boundary is restricted to a maximum of 600mm and the area between the wall of the building and the boundary retaining wall shall be provided as a generally level surface; and

iii where any adjacent wall of the dwelling is setback 1300mm or greater from the side boundary, the height of cut at the boundary is restricted to a maximum of 900mm and the area between the wall of the building and the boundary retaining wall shall be provided as a generally level surface.

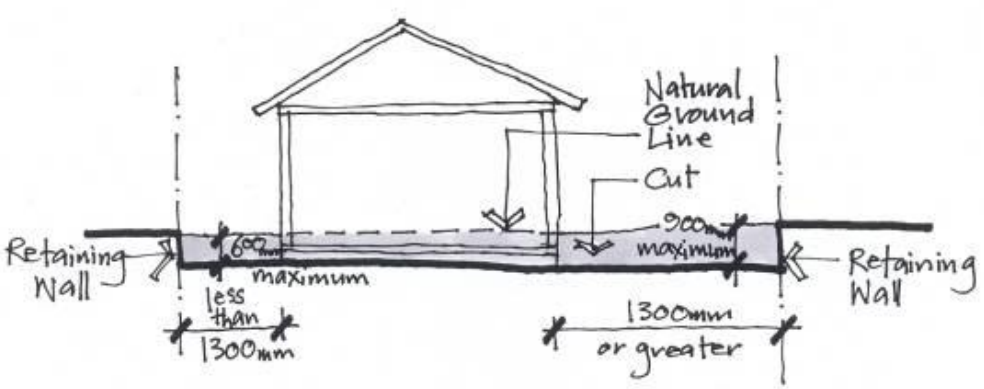

Figure 8 Restrictions on cut

g Specific restrictions on fill:

i all filling for slabs shall be contained within the footprint of the building by the use of drop-edge beams to natural ground level, such that a generally level area is created between the wall of the building and the boundary;

ii battered fill or retaining walls within areas such as front or rear yards and courtyard areas external to the dwelling footprint shall not exceed 600mm in height;

iii all proposed fill (eg. to support courtyard areas) is to be graded at a batter not exceeding 1:4, or retained to a maximum height of 600mm, such that natural ground level is achieved at a distance of 900mm from the side boundary;

iv the grading of fill, at a batter not exceeding 1:4, within the rear yard or front setback area to existing ground level at these boundaries is acceptable.

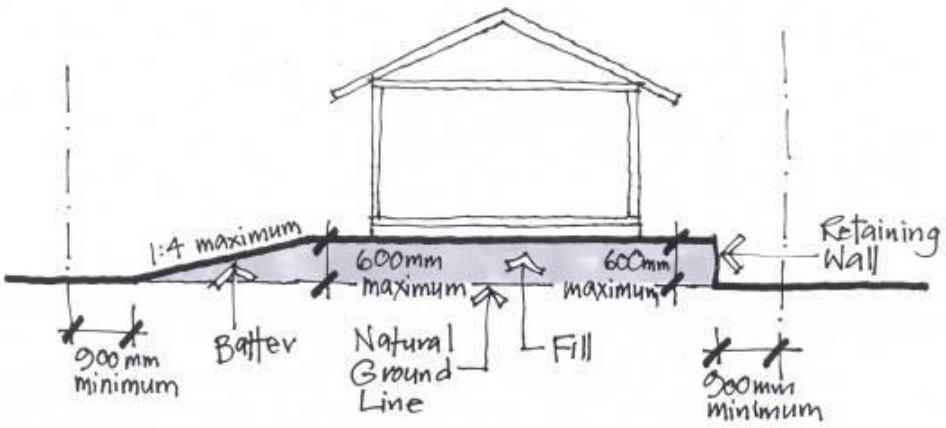

Figure 9 Restrictions on fill

4.3 Building Lines

OBJECTIVES

- To maintain existing streetscapes
- To protect the privacy and solar access of adjacent properties
- To ensure the visual focus of a development is the dwelling, not the garage
- To maximise building separation to provide visual and acoustic privacy

REQUIREMENTS

4.3.1 General Requirements

a Where absolute water frontage exists, buildings must be setback 20 metres from the high water mark.

b Where a property is affected by coastal hazards additional setbacks may apply.

c Where the rear boundary of a property adjoins a public reserve, a minimum rear setback of 4.5 metres is required.

d Setback areas shall be suitably landscaped to enhance the appearance of the development and soften hardstand areas of the site (See Section 9.0 - Landscape).

e Special setback and access location requirements may apply in relation to sites adjacent to roundabouts, relating to the roundabout geometry and the design speeds of the adjacent roads. Enquiries should be made with Council prior to preparing design plans for development on sites adjacent to roundabouts or other traffic calming devices.

f On corner allotments the side street is generally taken to be the boundary with the greater frontage.

g No building is to be erected within the triangle from the intersection of the two street boundary lines formed by a sight line 12m along the primary road frontage and 6m along the terminating road frontage, as illustrated in Figure 10.

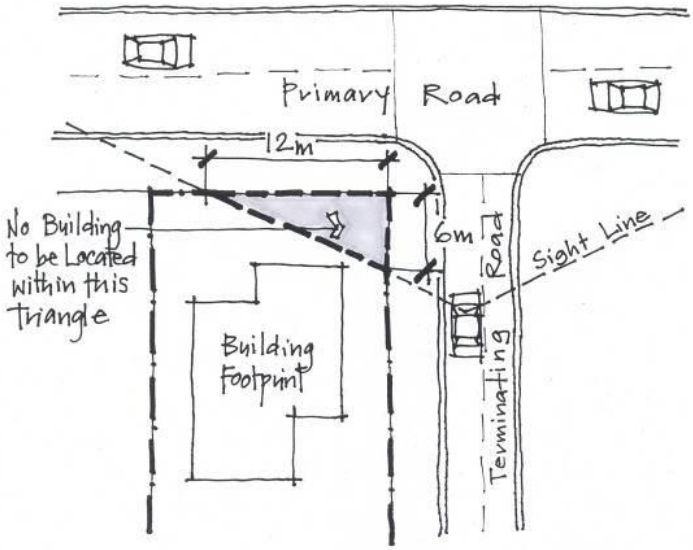

Figure 10 Sight preservation lines

4.3.2 Setbacks – Multi Dwelling Housing and Residential Flat Development – No Greater than 2 Storeys in Height

Aspect	Minimum Setback Required
Front	"Category A" roads: 7.5 metres; "Category B" roads: 6.0 metres; "Category C" roads: 4.5 metres. *Note: For "Category C" roads where the road reserve is < 12 metres and development is proposed on both sides of the road, the minimum setback is 6.0 metres.*
Side (to adjoining land)	0.9 metres
Rear (to adjoining land)	4.5 metres
Garages	A minimum setback of 6.0 metres applies to garages where they are accessed directly from the road system, except Category A roads, where 7.5 metres applies.
Corner Allotments	The minimum building setback is 3.0 metres to the side street, plus compliance with the sight preservation lines.

Table 1 Setbacks – multi dwelling housing and residential flat buildings no greater than 2 storeys in height

4.3.3 Residential Flat Buildings – 3 or More Storeys in Height

Aspect	Minimum Setback Required
Front setbacks	7.5 metres applies to all aspects of the development, with the exception of a portico, or structure required for a waste collection area.
Side & rear setbacks	First Storey: 6.0 metres Second Storey: 6.0 metres Third Storey: 6.0 metres Fourth Storey: 6.0 metres Fifth Storey: 9.0 metres Sixth storey: 9.0 metres Seventh storey: 9.0 metres Eighth storey: 9.0 metres Ninth storey and above: 12.0 metres *Note: No more than 4 consecutive storeys of the building shall be at the same setback.*
Garages	A minimum setback of 6.0 metres applies to garages where they are accessed directly from the road system, except Category A roads, where 7.5 metres applies.
Corner Allotments	Same as side and rear setbacks, plus comply with the sight preservation lines.

Table 2 Setbacks – residential flat buildings 3 or more storeys in height

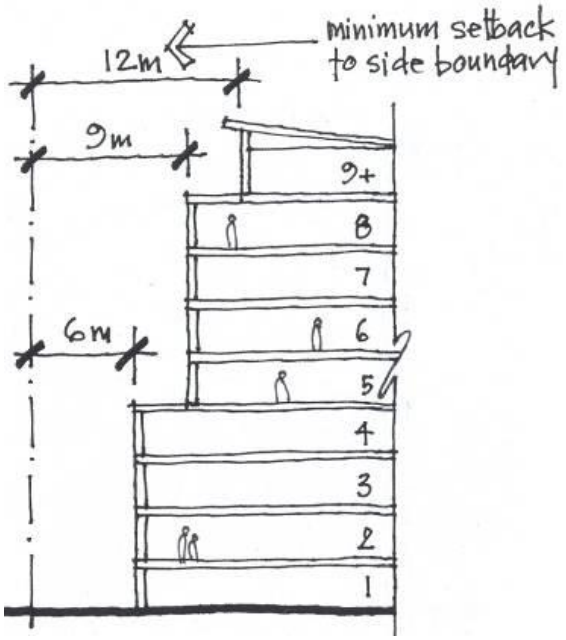

Figure 11 Side and rear setbacks for residential flat buildings 3 or more storeys in height

4.4 Transport Needs

This Section is to be read in conjunction with Chapter 2.11 – Parking and Access.

OBJECTIVES

- To have garages designed in sympathy with the development without becoming the dominant feature on the site
- To provide adequate on-site parking that relates to the environmental and physical constraints of the site
- To have car parking areas that minimise the potential for pedestrian and vehicle conflict
- To design connections to alternative transport modes such as walking, cycling and public transport

REQUIREMENTS

4.4.1 General Requirements

a Car parking within setbacks to Category A roads shall not be permitted. See Section 4.4.3 for provisions relating to Category B and C roads. Contact Council for confirmation of road categories.

b Where car parking areas are visible from the street, the surface shall be treated with decorative finish and the space is to be screened by landscape treatments such as mounding, planting and fencing. Details are to be submitted to Council with the development application, demonstrating that a satisfactory appearance to the street will be presented.

c Where parking is proposed within a side or rear building setback and is exposed to adjoining properties, suitable landscaping shall be provided along the boundary to soften the visual impact of the parking and to provide for stormwater infiltration.

d One of the required resident car parking spaces shall be provided in the form of an enclosed space for each dwelling with minimum dimensions of 3 metres width by 5.5 metres length and a minimum opening of 2.7 metres width.

e All car parking spaces shall be designed so that vehicles can enter and leave the site in a forward direction. Applications should include turning templates on the plans to demonstrate compliance.

f Consideration may be given to separate accesses on corner allotments.

g All car parking calculations are to be rounded up to the next whole number.

4.4.2 Resident Parking

a Resident parking shall be provided in accordance with Table 3.

b Only 1 space per dwelling is to be allocated as resident parking. The remaining spaces are to be provided as separate visitor parking and be available for common use at all times.

Dwelling Type	No. of Spaces Required
1 bedroom unit	1
2 bedroom unit	1.2
3 bedroom (or greater) unit	1.5

Table 3 Resident parking

Note: The above requirements may be reduced to 1 space per dwelling if the development is within the Regional Centre or a District Centre, subject to submission of a Transport Management Plan and approval by Council (Refer Chapter 2.11 – Parking and Access).

4.4.3 Visitor Parking

a Visitor parking shall be provided at the rate of 1 space per 5 units, with a minimum of 1 visitor space per development.

b Visitor parking must be clearly identifiable, delineated by stencilling "VISITOR" on the space(s) and is to remain available for use at all times.

c 1 visitor space is to be available for car washing and have appropriate tap and drainage facilities provided for that purpose.

d Visitor car parking is generally not encouraged within the front setback. Where this is considered to be the only feasible alternative, the space(s) shall be setback a minimum of 3.0 metres from the frontage with Category B and C roads, and only where suitably screened by landscaping.

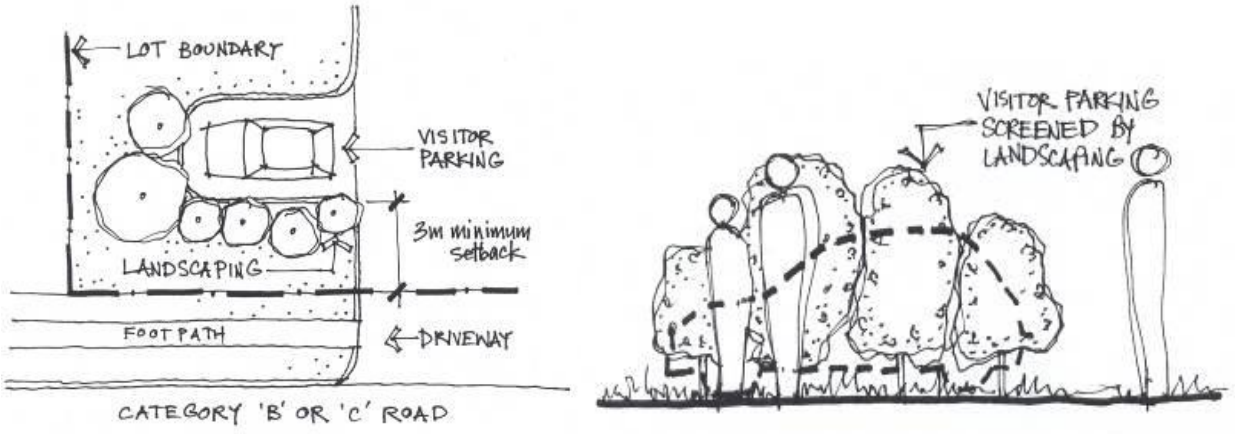

Figure 12 Visitors parking within the front setback

4.4.4 Bicycle Facilities

a For development where resident car parking for the development is provided in a common car park area, bicycle parking facilities shall be provided at a rate of 1 per 3 dwellings.

b Required bicycle facilities shall:

i enable the wheels and frame to be locked to the device without damaging the bicycle;

ii be placed in public view; or alternative arrangements for their storage be made;

iii be located outside pedestrian movement paths;

iv be easily accessible from the road;

v be arranged so that parking and un-parking manoeuvres will not damage adjacent vehicles or bicycles;

vi be protected from manoeuvring motor vehicles and opening car doors;

vii be as close as possible to the cyclist's ultimate destination;

viii be well lit by appropriate existing or new lighting;

ix preferably be protected from the weather; and

x be designed to fit in harmony with the surrounding environment.

4.5 Vehicular Access Design

OBJECTIVES

- To position street vehicular crossings and driveways to minimise adverse visual impact
- To use existing rear lanes for vehicular access
- To ensure safe entry and exit from the site

REQUIREMENTS

4.5.1 General Requirements

a Ensure adequate separation distances between vehicular entries and street intersections.

b Optimise the opportunities for active street frontages and streetscape design by:

i making vehicle access points as narrow as possible;

ii minimise the number of vehicle access ways;

iii locating car park entry and access from secondary streets and lanes where possible.

c Improve the appearance of car parking and service vehicle entries, for example by:

i screening garbage collection, loading and servicing areas visually away from the street;

ii setback or recess car park entries from the main façade line;

iii avoid 'black holes' in the façade by providing security doors to car park entries;

iv where doors are not provided, ensure that the visible interior of the car park is incorporated into the façade design and material selection and that building services, pipes and ducts are concealed;

v return the façade material into the car park entry recess for the extent visible from the street as a minimum.

d Use of plain concrete for driveways and open car parking areas is not supported by Council. Details of the proposed treatment shall be provided in the development application.

4.5.2 Ground Level Parking

a Where above ground enclosed parking cannot be avoided, ensure the design of the development mitigates any negative impact on streetscape and street amenity.

b Minimum driveway pavement widths are as follows:

i 3.0 metres for developments of 1 to 4 dwellings;

ii 3.5 metres for developments of 5 or more dwellings;

iii 5.5 metres for the first 6 metres of the driveway where access is to a Category A road;

iv Passing opportunities shall be provided as per the requirements of Australian Standard AS/NZS 2890.1.

c Driveways shall not be continuous straight lines and must be off set by landscaped sections.

d Driveways shall be offset from any side boundary by 2 metres at the front boundary, and may taper back to 0.5 metres at the front building line, as illustrated in Figure 13. This offset area, and a minimum 0.5 metre side setback for the full length of driveways shall be suitably landscaped to soften the hardstand areas and to provide visual appeal to the streetscape.

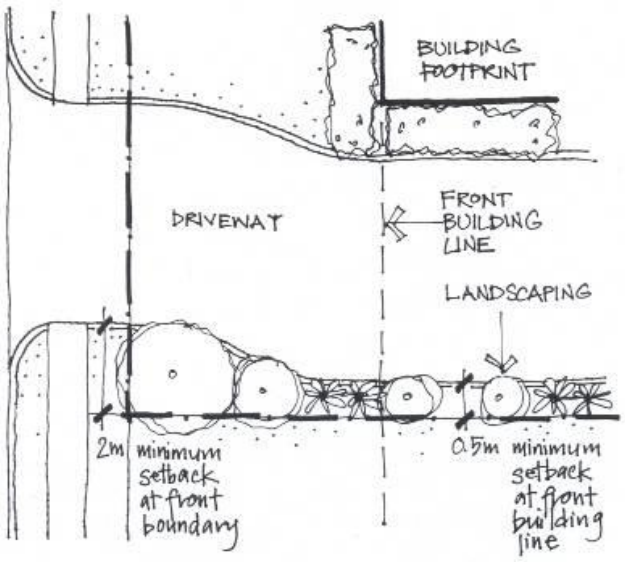

Figure 13 Driveway offset

e The impact of ground level car parking shall be minimised by:

i screening cars from view of streets and buildings;

ii allowing for safe and direct access to building entry points;

iii incorporating car parking into the landscape design of the site. Considerations include:

- vegetation between parking bays and to ameliorate views;
- canopy / shade planting;
- selection of pavement material;
- screening from communal and private open space areas.

f Garages should be located behind the façade of the building so as not to visually dominate the streetscape.

g Garages which are visible from the street shall not exceed 50% of the lineal frontage of the building; and must respect the architectural qualities of the building and integrate with the overall presentation of the development.

Figure 14 Example of garages located behind the building façade

4.5.3 Basement Parking

a Give preference to underground parking wherever possible. Design considerations include:

i retaining and optimising consolidated areas and deep soil zones on the site;

ii facilitating natural ventilation to basement and sub-basement car parking areas where possible;

iii integrating ventilation grills or screening devices of car park openings into the façade design and landscape design;

iv providing safe and secure access for building users.

b Driveways shall be designed to minimise adverse visual impacts on the streetscape, and shall be complemented by the landscape design for the site.

c Basement car parking is to be suitably set back from site boundaries so as not to interfere with the provision of deep soil planting zones at ground level. See Section 9.1.2.

d Basement access driveways shall be designed in accordance with AS/NZS 2890.1.

4.6 Pedestrian Access Design

OBJECTIVES

- To create development that activates the street by creating the entry to the building from the primary street frontage
- To promote development which is well connected to the street and contributes to the accessibility of the public domain
- To ensure that residents, including users of strollers and wheelchairs and people with bicycles, are able to reach and enter their dwelling and use communal areas via minimum grade ramps, paths, access ways or lifts

REQUIREMENTS

a Utilise the site and its planning to optimise accessibility to the development.

b Provide high quality accessible routes to public and semi-public areas of the building and the site, including major entries, lobbies, communal open space, site facilities, parking areas, public streets and internal roads.

c Clearly delineate the main pedestrian access to the development.

d Promote equity by:

i ensuring the main building entrance is accessible for all from the street and from car parking areas;

ii integrating ramps into the overall building and landscape design.

e Separate and clearly distinguish between pedestrian access ways and vehicle access ways.

f Consider the provision of public through-site pedestrian access ways in large development sites.

5.0 DENSITY

Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents). Appropriate densities are sustainable and compatible with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

5.1 Floor Space Ratios

OBJECTIVES

- To have development sites and densities that are appropriate in the zone and compatible with the local context
- To ensure building bulk and site coverage provisions are compatible with neighbouring development
- To assist with preliminary dwelling yield calculations

REQUIREMENTS

a The maximum floor space ratio is provided in Table 4 below.

b Other issues detailed within this Chapter, such as setbacks, amenity, open space, deep soil zones, soft landscaping, water and energy efficiency, ground level car parking, courtyard provision, and other statutory requirements must also be considered, and may limit the potential for development of a site.

Zone	Maximum Floor Space Ratio
R1	As specified under WLEP 2013 Mapping. In areas not mapped under WLEP 2013, the maximum floor space ratio is 0.6:1
R3	As specified under WLEP 2013 Mapping.

Table 4 Floor space ratios

5.2 Development Bonuses

OBJECTIVE

- To ensure that development exhibits design excellence and is in keeping with the optimum quality, amenity and capacity of the site and the local area
- Where appropriate provide incentive to address the issue of housing affordability

REQUIREMENT

a Development Bonuses are listed under WLEP 2013 – Clauses 4.3 and 4.4.

b With regard to applications under Clause 4.4 (2D) of WLEP 2013, it must be clearly demonstrated that the proposal relates to addressing housing affordability and not just result in an increase in density of luxury housing in prime locations.

6.0 AMENITY

Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.

6.1 Private Open Space

OBJECTIVES

- To provide dwellings with individual private open space areas
- To ensure private open space areas are functional and responsive to the environment, thereby promoting the enjoyment of outdoor living for residents
- To ensure private open space areas (in particular balconies) integrate with the overall architectural form and detail of the development.

REQUIREMENTS

6.1.1 General Requirements

a Required private courtyards shall not exceed a maximum grade of 1:14 to optimise useability for residents.

b Wherever a dimension is less than the required minimum (i.e. 2 metres for balconies or 4.5 metres for courtyards) it shall not be counted as part of the calculation for private open space areas.

c Required ground level private open space may be provided in up to two locations for each dwelling, subject to compliance with the minimum dimension.

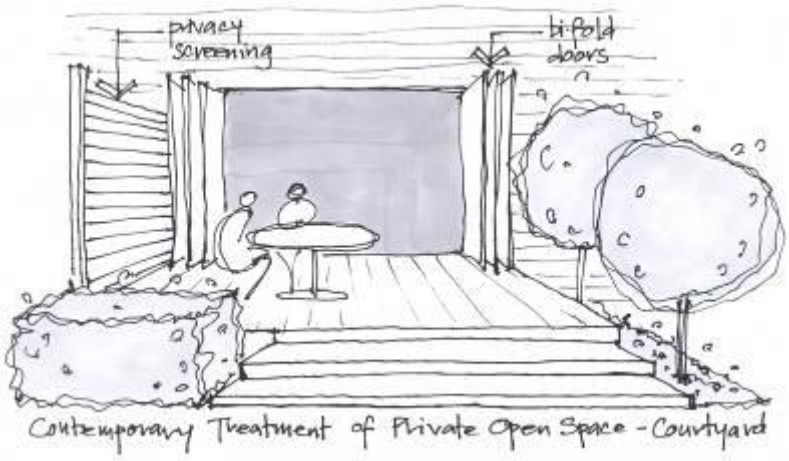

Figure 15 Example of contemporary private open space area

6.1.2 Multi Dwelling Housing

a Multi Dwelling Housing shall incorporate private open space for each dwelling with a minimum area of 45 square metres and a minimum dimension of 4.5 metres. These areas are required to be generally located at ground level, directly accessible from a living area within the dwelling and will not be exclusively located within front setback areas (including side street frontages).

b Patios, decks, balconies and the like at or near ground level may only be counted as courtyard area when they are not enclosed by the line of the roof of the building (not including the eaves projection).

c Ground level courtyards may be located within the front building setback area on Category A roads.

d Ground level courtyards may be located within the front building setback area on Category B roads only where solar access is optimised.

e Ground level courtyards are not permitted within the front building setback area on Category C roads.

6.1.4 Residential Flat Buildings

a Each dwelling in a residential flat building requires a private balcony, terrace or ground level courtyard comprising at least 10 square metres in area and with a minimum dimension of 2 metres, directly accessible from a living area within the dwelling.

b Communal open space shall be provided in accordance with 6.2.3 below.

6.1.5 Single Dwellings above Shops or Commercial Premises

Private open space for a single dwelling above commercial premises shall be provided as a private terrace or balcony having minimum area of 30 square metres and a minimum dimension of 4.5 metres, directly accessible from a living area within the dwelling.

6.1.6 Developments other than single dwellings above Shops or Commercial Premises

For a development above commercial premises, other than single dwellings, each dwelling shall have a private balcony, terrace or ground level courtyard comprising at least 10 square metres in area and with a minimum dimension of 2 metres, directly accessible from a living area within the dwelling. Additionally, communal open space is to be incorporated on site in up to two locations at a minimum rate of 20 square metres per dwelling and with a minimum width of 5 metres.

6.2 Communal Open Space

OBJECTIVES

- To provide residents with both active and passive recreational opportunities
- To allocate an area on site that enables soft landscaping as well as deep soil planting
- To ensure that communal open space is consolidated, configured and designed to be useable and attractive
- To provide a pleasant outlook

REQUIREMENTS

6.2.1 General Requirements

a Minimum 25% of the site area at ground level shall be soft landscaping (planted areas).

b Where communal open space is provided, it shall be landscaped and include the provision of facilities such as barbecues, outdoor seating, tennis court, playground equipment or a swimming pool, as appropriate to the scale of the development. Details are to be included in the development application.

c Consideration should also be given to the provision of a separate locker for the storage of garden tools.

d The required communal open space area shall not be provided within the front building setback area, unless there is a demonstrated need. Front setback areas are generally reserved for landscaping works and plantings.

e Roof-top communal open space may be considered for residential flat developments only where proposed in addition to the required communal open space at ground level. The implications of rooftop open space areas on the overall design of the development, and on privacy and view sharing shall be addressed in the development application. Refer to Section 4.1 – Construction and Appearance of Development.

f A building for communal use should be provided.

g Open space shall be located to increase the potential for residential amenity by designing buildings which:

i are sited to allow for landscape design;

ii are sited to optimise daylight access in winter and shade in summer;

iii have a pleasant outlook;

iv have increased visual privacy between apartments.

6.2.3 Residential Flat Buildings

Incorporate communal open space in up to two locations at a minimum rate of 10 square metres per dwelling and with a minimum width of 5 metres.

6.2.4 Residential Flat Development above Commercial Premises

Refer to Section 6.1.6 above.

6.3 Solar Access

OBJECTIVES

- To provide adequate natural lighting and minimise the need for artificial lighting during daylight hours
- To ensure that a minimum standard of solar access is available to private open space areas and internal living areas during the winter solstice to provide for a reasonable standard of residential amenity

REQUIREMENTS

6.3.1 General Requirements for Solar Access and Weather Protection

a New development shall have due regard for maintaining solar access to adjoining properties and not cause overshadowing. At least 75% of **required** private open space areas on adjoining lands shall receive at least three hours unobstructed sunlight between the hours of 9 am and 3 pm on June 21 (winter solstice).

b Dwellings should be orientated to allow optimum solar access for internal living areas.

c Buildings shall be designed to minimise adverse impact by wind velocities, intensities and directions on the amenity of the development and surrounding areas.

d A weather protected entrance shall be provided to each dwelling.

e Consideration should be given to the provision of natural light and ventilation for excavated carparking areas

6.3.2 Multi Dwelling Housing

For Multi Dwelling Housing at least 75% of each **required** private and communal open space area, courtyard, balcony, terrace or the like shall receive at least three hours unobstructed sunlight between the hours of 9 am and 3 pm on June 21 (winter solstice).

6.3.3 Residential Flat Buildings

a Residential flat buildings, that utilise the provisions of SEPP Affordable Rental Housing, 2009, and SEPP Housing for Seniors or People with a Disability, 2004, shall provide living rooms and private open spaces where a minimum of 70% of dwellings shall receive a minimum of 3 hours unobstructed sunlight between 9 am and 3 pm on June 21 (winter solstice).

b The number of units within the development with a southerly aspect (SW-SE) is to be a maximum of 10% of the dwellings proposed.

c Developments proposed on lots with an E-W aspect shall have a minimum width of 24m at the building line and a minimum site area of 1500 m^2, in order to minimise shadow impacts on adjacent lands.

6.3.4 Shadow Diagrams

a Developments that are 2 storeys in height or greater shall provide shadow diagrams based on a survey of the site and adjoining development, showing shadow casting at 9 am, 12 noon and 3 pm on

June 21 (winter solstice). The shadow diagrams must show the impact of shadowing from the proposed development, fencing, cut and fill as well as existing development, on the proposed development and adjoining properties.

b In assessing the impact of shadow on an adjoining property, Council shall have regard for the standards stated above in Section 6.3.1.

c Where a development does not comply with the required solar access requirements under 6.3.1, additional information in the form of elevational shadow diagrams shall be submitted to show the impact of the shadowing on affected properties.

Note: The results of a shadow study should inform the design of residential flat development.

6.4 Privacy

OBJECTIVES

- To provide and maintain reasonable levels of visual privacy both internally and externally, during day and night
- To maximise outlook and views from living rooms and private open space without compromising visual privacy
- To ensure a high level of amenity by protecting the privacy of residents both within the apartments and in private open space areas

REQUIREMENTS

6.4.1 Visual Privacy

a Direct overlooking of internal living areas and private open space to surrounding dwellings shall be minimised by building layout, location and design of windows and balconies and screening devices.

b Where living area windows or balconies of dwellings are proposed within close proximity of living area windows or balconies of adjacent dwellings, they shall be offset by a minimum of 1 metre from the edge of the opposite window and balconies be screened or oriented to ensure visual privacy. Window openings at first floor level and above should be orientated or designed to minimise the potential for overlooking of adjacent properties and this consequent loss of privacy. Windows which are orientated towards adjoining properties and do not adequately restrict overlooking will be required to be opaque finish or located at appropriate heights above floor level to minimise overlooking of adjoining properties.

c **The recommended building separation distances are identified within Table 5 below:**

Building Height	Between Habitable Rooms	Between Habitable Room and Non-Habitable Room	Between Non-Habitable Rooms
Up to 4 storeys	12 metres	9 metres	6 metres
5 to 8 storeys	18 metres	13 metres	9 metres
9 storeys +	24 metres	18 metres	12 metres

Table 5 Recommended building separation distances

6.4.2 Acoustic Privacy

a Site layout should separate active recreational areas, parking areas, vehicle accessways and service equipment areas from bedroom areas of dwellings.

b Development adjacent to high levels of uncontrollable external noise shall minimise the entry of that noise through building design and external wall treatment.

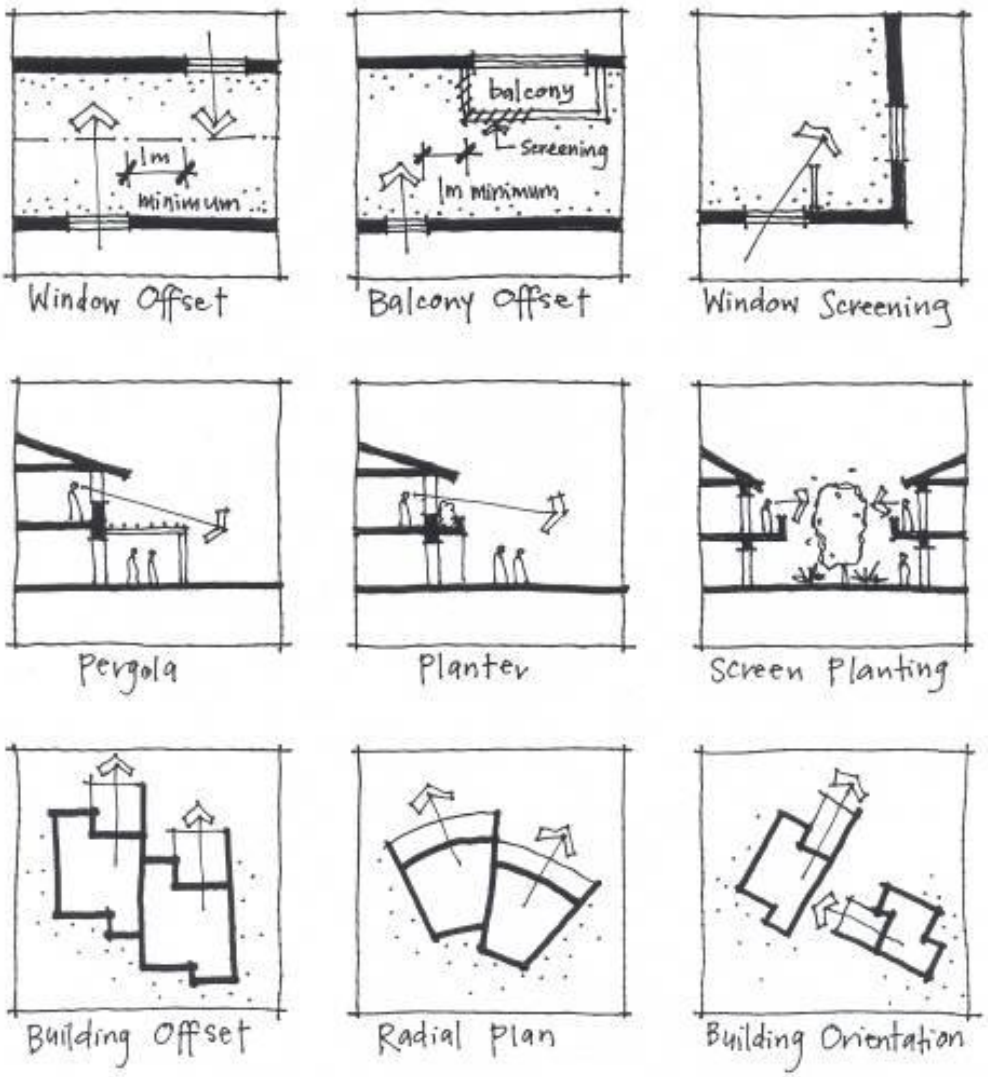

Figure 16 Examples of potential solutions for maintaining privacy

6.5 Views

OBJECTIVES

- To facilitate view sharing whilst not restricting the reasonable development potential of a site
- To have opportunities for public vistas and public views from streets and public places protected and enhanced through building design, location and landscape design
- To protect views by permitting development which minimises obstruction of such views where enjoyed from internal and external living areas

REQUIREMENTS

a New development shall be designed to minimise loss of views from adjoining and adjacent properties identified in the site analysis process, while still providing opportunities for views from the development itself. This approach is called view sharing.

b Views available from other areas within neighbouring residential buildings generally will not be protected, particularly if views available from living areas in the building concerned are protected by the development.

c Design solutions must respond graphically to the site analysis outcomes through the issue of plans, elevations, photographs and photomontages to demonstrate how view sharing is to be achieved. In some cases, reasonable development may result in the loss of some views, but development shall not significantly obstruct views.

d A visual analysis illustrating the impacts of the proposed development upon views may be required for developments which have the potential to obstruct views. This analysis will be required to outline the impact of the development on the views of all affected properties.

e Measures to be used to maintain views include building setbacks, gaps between buildings, minimal floor to ceiling heights, raked ceilings to upper floors, gabled or hipped roofs, splay corners, and use of transparent materials for balustrades.

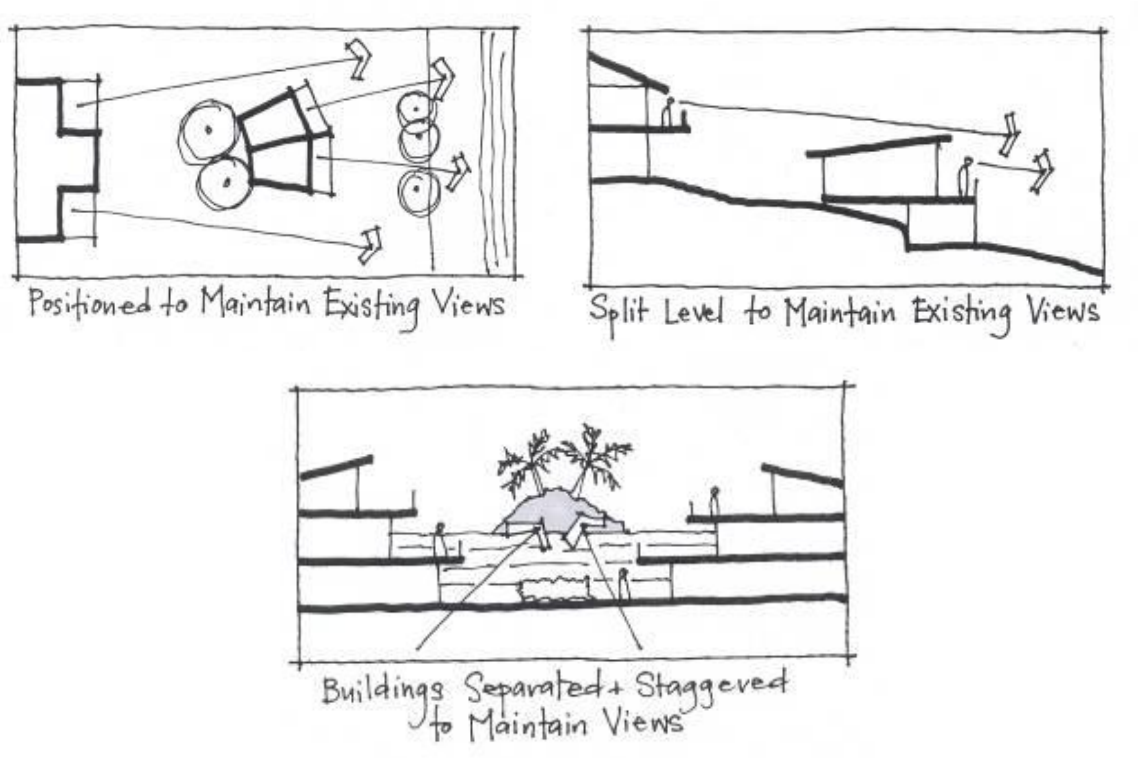

Figure 17 Examples of potential solutions to maintain views beyond the site

f Important public views and vistas beyond the site shall be protected and maintained where possible, through responsive building form and treatment including roof design.

7.0 SERVICES

OBJECTIVE

- To ensure that all development sites have adequate services to cater for future occupants

REQUIREMENTS

7.1 Services

a All applications shall provide details of the proposed method of sewerage disposal from the site. For all forms of residential development the preferred method is gravity-fed connection to the reticulated sewer system.

b All sites shall be provided with adequate water and sewer services, as well as telephone and power. Connection to gas is encouraged where a reticulated gas supply is available.

c All applications shall provide details of potential impacts on existing services, for example nearby drainage, water or sewer lines.

d All external attachments should be fully integrated with the façade design eg: stormwater downpipes, meter boxes and other services.

7.2 Civil Works

a To preserve and enhance the existing high quality landscape of street frontages, the construction of kerb and guttering, associated street drainage, pavement construction and foot paving across the street frontages is a standard requirement for all residential flat and multi dwelling housing development in Wyong Shire, where these do not currently exist. The only exceptions to this requirement are where, in Council's opinion:

   i it is technically impractical to construct kerb and guttering due to uncertainty as to the appropriate levels to be adopted or an isolated section will present a hazard to road traffic safety; or

   ii the street drainage necessary to provide kerb and guttering is an unreasonable impost on the development; or

   iii kerb and guttering is not the most suitable streetscape treatment for the area on the basis of existing and anticipated development.

b In the event that the development is determined to be within the above categories of exception, an alternative treatment to kerb and gutter such as mountable kerb, concrete dish drain, cemented paving stones or other treatment will be required with the exact type based upon the characteristics of the site

8.0 STORMWATER MANAGEMENT

OBJECTIVE

- To ensure that land can be adequately drained for the health and convenience of residents, and that the development does not contribute to drainage or flooding problems elsewhere

REQUIREMENTS

a All proposed development is to comply with Council's Civil Works – Design Guideline and Construction Specification

b A stormwater management plan is to be submitted with the development application, incorporating one of the following:

i the provision of on-site stormwater detention with delayed release into the stormwater system; or

ii site design to minimise impervious areas and maximise on-site infiltration so increased run-off does not reach the stormwater system; or

iii a combination of both. Due consideration will be given to the location of the development and the impacts a detention system will have on the catchment drainage.

c Site works are not to obstruct or divert overland flows from upstream properties.

d All excess stormwater runoff from roof and paved areas shall be directed via gravity fed systems into inter-allotment or street stormwater drainage system. Charged systems will not be accepted.

e Where easements over downstream properties are required, evidence of agreement with the relevant property owners is to be submitted with the development application.

f For developments incorporating basement car parking in the Long Jetty/The Entrance area, a groundwater study is to be submitted, addressing the following:

i draw down effects;

ii potential for water mounding;

iii Acid Sulphate Soils;

iv water quality;

v impacts on the proposed development and on adjoining properties;

vi construction methodology.

9.0 LANDSCAPE

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by co-ordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character.

Landscape design should optimise useability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.

9.1 Landscape Design

OBJECTIVES

- To provide habitat for native indigenous flora and fauna
- To provide for softening of building forms and enhancement of the urban environment
- To assist in the reduction of stormwater runoff from a site
- To improve urban air quality
- To contribute to biodiversity
- To relate landscape design and fencing to the desired proportions and character of the streetscape
- To retain existing significant native vegetation on site

REQUIREMENTS

9.1.1 General Requirements

The engagement of a suitably qualified landscape professional to undertake the design and construction of landscaping for the development. In consideration of landscape design for residential development, the following practices should be considered:

a Improve the amenity of open space areas with a landscape design which:

  i provides appropriate shade from trees or structures;

  ii provides accessible routes within the site and between buildings;

  iii screens cars, communal drying areas, swimming pools and courtyards on ground level.

b Contribute to streetscape character and the amenity of the locality by:

  i using planting, fencing (Refer 13.1) and other landscape elements appropriate to the scale of the development;

  ii visually softening the bulk of large development for the person on the street;

iii incorporating suitable deep soil zones;

iv visually softening hardstand areas associated with carparking, including paving design / unit paving and shade tree planting.

c Design landscape which contributes to the site's particular and positive characteristics, for example:

i by enhancing habitat and ecology;

ii by incorporating trees, shrubs and ground covers endemic to the area;

iii by retaining and incorporating changes of level, visual markers, views and any significant site elements;

iv by retaining existing vegetation on site.

9.1.2 Deep Soil Zones

a A minimum 50% of the required soft landscaped area of the site at ground level shall be a deep soil zone. This may be achieved by optimising the retention provision of consolidated deep soil zones within a site by:

i the design of basement and sub-basement car parking, so as not to fully cover the site;

ii the use of front and side setbacks for deep soil planting.

b Optimise the extent of deep soil zones beyond the site boundaries by locating them contiguous with the deep soil zones of adjoining properties.

c Promote landscape health by supporting a rich variety of vegetation types and sizes.

d Increase the permeability of paved areas by limiting the amount of hardstand surfaces on the site or using pervious materials.

e Incorporation of existing vegetation into these zones.

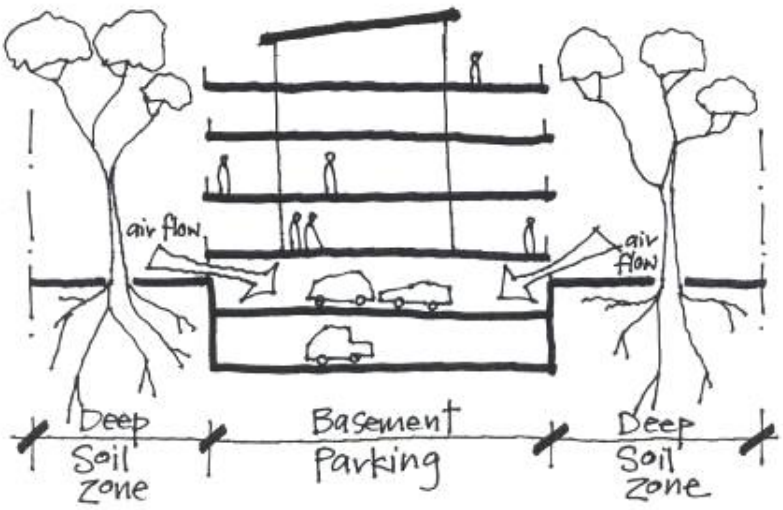

Figure 18 Example of the relationship between basement car park and deep soil zones on a site

9.1.3 Planting on Structures

A common scenario in urban areas is the establishment of landscape areas using planter boxes, green walls and green roofs on top of basement car parks, podiums or on the roofs of development. High quality landscape design and open space amenity relies in part on the quality and health of plants. The plants in these areas are grown in total 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 survival of the plants.

a Design for optimum conditions for plant growth by:

i providing soil depth, volume and area appropriate to the mature size of proposed plantings;

ii providing appropriate soil conditions and irrigation methods;

iii providing appropriate drainage.

b Design planters to support the appropriate soil depth and plant selection by:

i 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 less than 1.5 metres are unlikely to have any benefits for tree growth;

ii providing square or circular planting areas rather than long, narrow linear areas to promote balanced root development and robust plant structure.

c Increase minimum soil depths in accordance with:

i the mix of plants;

ii the level of landscape management, particularly the frequency of irrigation;

iii anchorage requirements of large and medium trees;

iv soil type and quality.

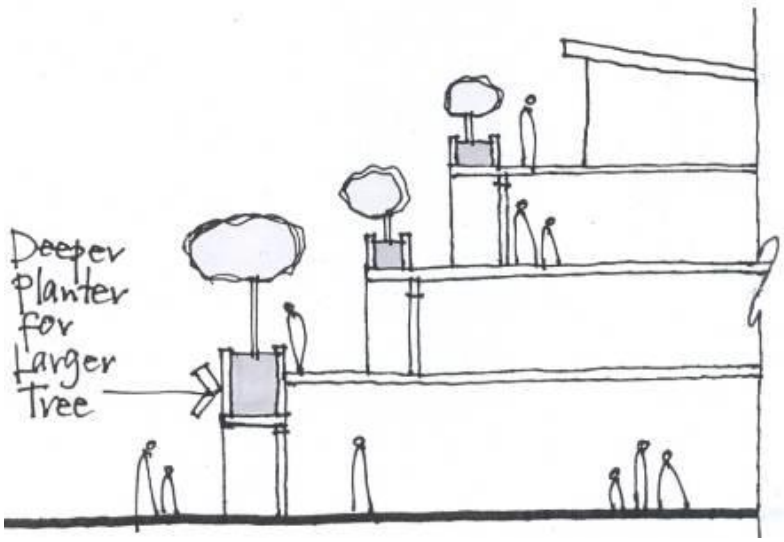

Figure 19 Example of suitable planting on structures

9.1.4 Street Trees

a All development shall incorporate street tree plantings at a rate of at least two semi-advanced trees per 15 metres of frontage. Details of the proposed street tree planting including species and locations shall be submitted with the development application and included as part of the landscape plan. Street trees are to be maintained and nurtured until established.

b A street tree planting plan shall be included as part of the landscape design report.

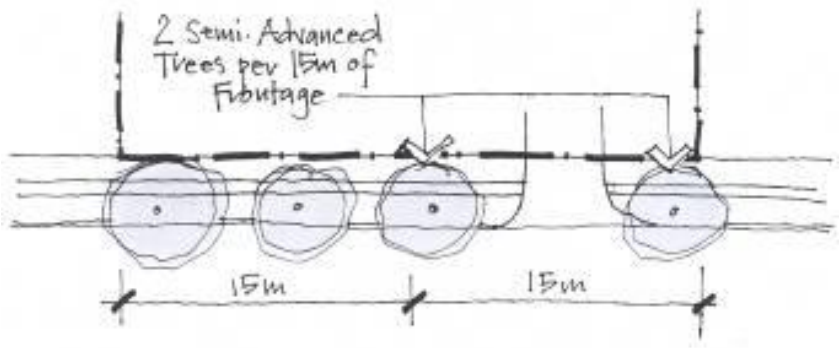

Figure 20 Example of street tree planting

10.0 SUSTAINABILITY

Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and management and reuse of stormwater.

Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction.

10.1 Waste Management

OBJECTIVES

- To avoid the generation of waste through design, material selection and building practices
- To plan for the types, amount and disposal of waste to be generated during demolition, excavation and construction of development
- To encourage waste minimisation, including material separation, reuse and recycling
- To ensure efficient storage and collection of waste and quality design of facilities

REQUIREMENTS

10.1.1 General Requirements

a All proposed development is to comply with Chapter 3.1 – Site Waste Management.

b Waste management systems for residential development are to be provided in accordance with Council's Waste Control Guidelines. Details of waste recycling arrangements must also be included in the Waste Management Plan.

c Developments are to include the design and construction of a suitably screened bin storage area that integrates with the overall development and landscape plan. Where bins need to be wheeled or conveyed from the storage point to the collection point, consideration should be given to the slope and it's impact on manual handling or motorised handling requirements.

d Where waste bins are to be collected from a point within the site, adequate space shall be provided within the site to accommodate a rear-loading collection vehicle. Turning circles must comply with the turning circle for garbage trucks in Wyong Shire. A copy of this turning template is provided in Council's Waste Control Guidelines. Applicants should include turning circle templates on the plans to demonstrate compliance. Pedestrian and traffic safety must be considered in the design of the storage and collection points for bins. It is essential that bulk bins be stored on a level area, as close to the entry of the development as practical to avoid service trucks having to enter or traverse the site to collect the waste. Wherever possible waste collection vehicle movement should be in a forward direction.

e Separate bin rooms shall be required for mixed commercial/residential development.

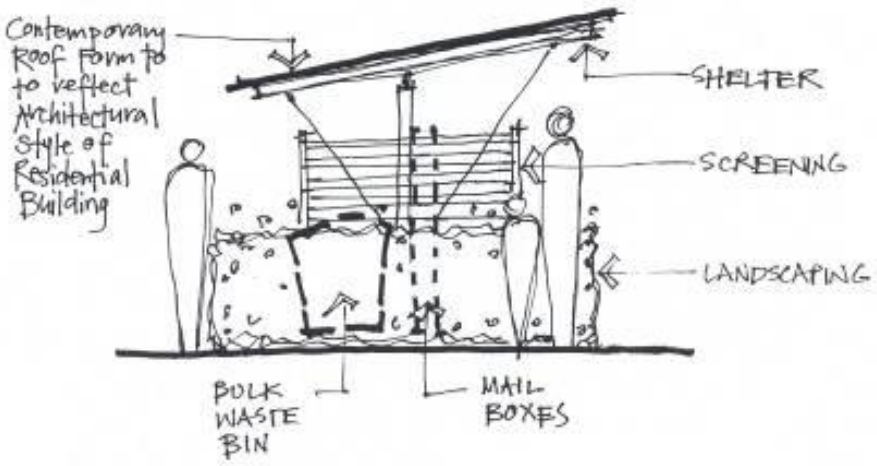

Figure 21 Example of screening the waste storage area

10.1.2 Residential Flat Buildings 3 or More Storeys in Height

a Garbage chute systems are required for developments exceeding three storeys or containing a passenger lift.

b Developments which include a garbage chute system must contain recycling rooms on each floor to accommodate one day's volume of recyclables, which are then to be transported to the bin storage room(s).

c Bins shall be stored in a central room located within the basement of the building.

d Collection options:

i bulk bin(s) shall be collected from the basement storage area by the garbage truck; or

ii bulk bin(s) shall be transported from the basement storage room to the kerb for collection; or

iii bulk bin(s) shall be stored in a screened enclosure located in the front setback of the site.

10.1.3 Ongoing Management

a Regardless of which waste management system is proposed, it is important to establish and assign responsibility for the following ongoing management tasks:

i transporting bins between the storage area and collection point on collection day and returning bins promptly to the storage area following collection;

ii washing the bins and the storage area regularly;

iii monitoring and maintaining the chute system, where proposed;

iv maintaining the development free of litter and dumped rubbish; and

v ensuring communication of waste management issues to residents.

b Ongoing management must be addressed in the Waste Management Plan submitted with the development application.

11.0 SAFETY AND SECURITY

Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

11.1 Crime Prevention

OBJECTIVES

- To ensure developments are safe and secure for residents and visitors
- To intensify the perception of risk to persons engaged in crime, by increasing the possibility of detection, challenge and capture
- To contribute to the safety of the public domain
- To intensify the effort required to commit crime, by increasing the time, energy or resources which need to be expended

REQUIREMENTS

a Pedestrian access shall be clearly defined, appropriately lit, visible to others and provide direct access to dwellings from areas likely to be used at night.

b Crime Prevention Through Environmental Design (CPTED) is a situational crime prevention strategy that focuses on planning, design and place management. It seeks to influence the design of buildings and places to reduce the opportunities for crime. Development shall be designed in accordance with the CPTED principles (surveillance, access control, territorial reinforcement and space management), as provided in Appendix B.

c A formal Crime Risk Assessment (Safer by Design evaluation) involving the NSW Police may be required for larger developments (i.e. over 20 dwellings), which in Council's opinion could create a crime risk. Proponents of development which may create a crime risk are advised to refer to the NSW Government's publication *'Crime Prevention and the Assessment of Development Applications – Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979'*.

12.0 SOCIAL DIMENSIONS

Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community.

12.1 Housing Choice

OBJECTIVES

- To provide a diversity of apartment types, which cater for different household requirements now and in the future
- To maintain equitable access to new housing by cultural and socio-economic groups
- To encourage housing designs which meet the broadest range of occupants' needs
- To encourage adaptive re-use

REQUIREMENTS

a A variety of dwelling types is encouraged between one, two, three and four bedroom apartments; particularly in large residential flat developments and on the ground floor.

b 10% of units in residential flat developments shall be designed as suitable for adaptation for occupation by disabled / aged persons, as outlined in AS 4299: Adaptable Housing. A higher rate of adaptable housing of 15% is encouraged.

c 12.2 Facilities and Amenities

OBJECTIVES

- To have adequate provision made for site facilities
- To have facilities that are functional and accessible to all residents and easy to maintain
- To have site facilities carefully and sensitively integrated into development so as not to be obtrusive, noisy or unsightly

REQUIREMENTS

12.2.1 Meeting Places

a A meeting place for residents is encouraged in all developments to avoid social isolation. In smaller developments this could simply be a seat and small shelter within the common open space. Other examples could include within an enlarged entry area, or adjacent to the letterbox area, etc.,

b Larger developments should include a reasonably sized common/meeting room.

12.2.2 Laundries

An individual laundry shall be provided within each dwelling which may be separate or included as part of another room.

12.2.3 Drying Areas

Drying areas shall be provided in common open space areas, in accordance with the requirements of the Building Code of Australia.

12.2.4 Car Washing Facility

Within each development, provision shall be made for a car washing facility. This may be:

a In the case of development with basement car parking, a covered visitor car parking space, which is bunded and connected with Council's sewerage system. This will necessitate locating a tap, bunding and drain in a position that will not interfere with traffic movement, and requires a trade waste application.

b In the case of development without basement car parking, a paved area having minimum dimensions of 5m x 2.7m, directly accessible from the driveway, upon which car washing should be encouraged by way of an appropriate sign. The car washing area is to be located and designed to drain to a grassed or landscaped area located within a common area and sufficient in size to absorb wastewater from car washing. This may be provided in a visitor space.

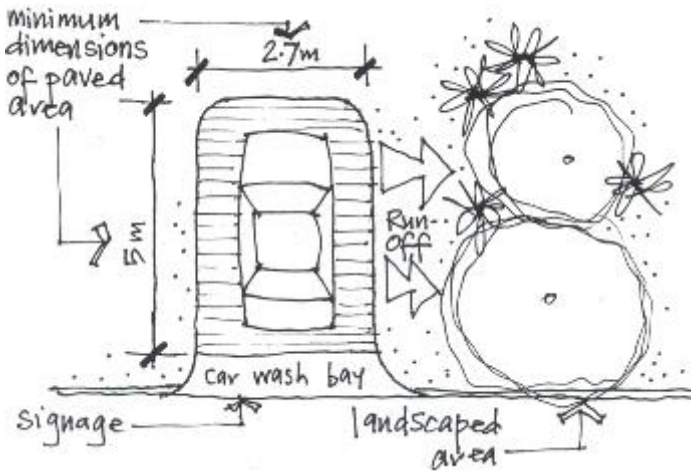

Figure 22 Example of a car wash facility at ground level

12.2.5 Mailboxes

Provide and design mailboxes to be convenient for residents and which do not clutter the appearance of the development from the street. Design solutions include:

a locating them adjacent to the major entrance and integrated into a wall, where possible;

b setting them at 90 degrees to the street, rather than along the front boundary;

c provide in accordance with Australia Post requirements.

12.2.6 Storage

Internal design of dwellings shall incorporate adequate storage space relative to the number of bedrooms within the dwelling, to cater for the needs of occupants. This may be provided in the form of an internal cupboard, or alternatively as a designated area within the garage (refer Table 6):

Dwelling Type	Required Storage Space
1 – 2 bedrooms	$3m^2$ floor area
3 or more bedrooms	$6m^2$ floor area

Table 6 Storage areas

13.0 AESTHETICS

Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

13.1 Fencing

OBJECTIVES

- To ensure fencing meets the requirements of residents in terms of privacy and security, as well as contributing positively to the streetscape
- To carefully select fencing to integrate with the overall development and to ensure that a site is not divorced from its surrounds by high front walls

REQUIREMENTS

13.1.1 General Requirements

a Fencing is an integral part of the landscape design. Details of the material, height, type and extent of all proposed fencing shall be shown on the development application plans. Design considerations may include:

i materials selection, including percentage of solid to transparent materials;

ii height;

iii vertical or horizontal rhythms along the street, such as vertical entry elements, boundary markers or fence post frequency;

iv location and frequency of entry openings or gates;

v location from site boundary.

b Clearly delineate the private and public domain without compromising safety and security by:

i designing fences and walls which provide privacy and security while not eliminating views, outlook, light and air;

ii limiting the length and height of retaining walls.

c Contribute to the amenity, beauty and useability of private and communal open spaces by incorporating some of the following in the design of fences and walls:

i benches and seats;

ii planter boxes;

iii pergolas and trellises;

iv barbecues;

v water features.

d Retain and enhance the amenity of the of the public domain by:

i avoiding the use of continuous lengths of blank walls at street level;

ii using planting to soften the edges of any raised terraces to the street, such as over sub-basement car parks, and reduce their apparent scale.

e Select durable materials which can be easily cleaned and are graffiti resistant.

f Dividing fencing shall not adversely affect flow of surface water or create flooding problems to adjoining properties.

g Where a courtyard is proposed, the enclosing fence shall be of a decorative nature and 1.8 metres in height.

h Courtyard fencing may only be permitted within the front setback area for allotments with frontage to Category A roads to provide noise attenuation; and to Category B roads to optimise solar access. The fence shall be erected no closer than a minimum of 1.5 metres from the front boundary alignment and this 1.5 metre setback shall be properly landscaped. Fences staggered with planting over the 1.5 metre setback may also be considered.

i Decorative fencing of maximum 1.2 metres height is permitted along the front boundary.

j Any fencing which is visible from the street or public places shall be decorative in style, forming part of the architectural and landscaping design concept for the site. Fencing should not detract from the streetscape or character of the area. Plain colourbond and /or timber paling fences are unacceptable in this regard. A combination of materials and articulation of the fence plane is required in order to achieve better presentation to the public domain, as illustrated above.

k The cost of upgrading common boundary fences rests with the developer.

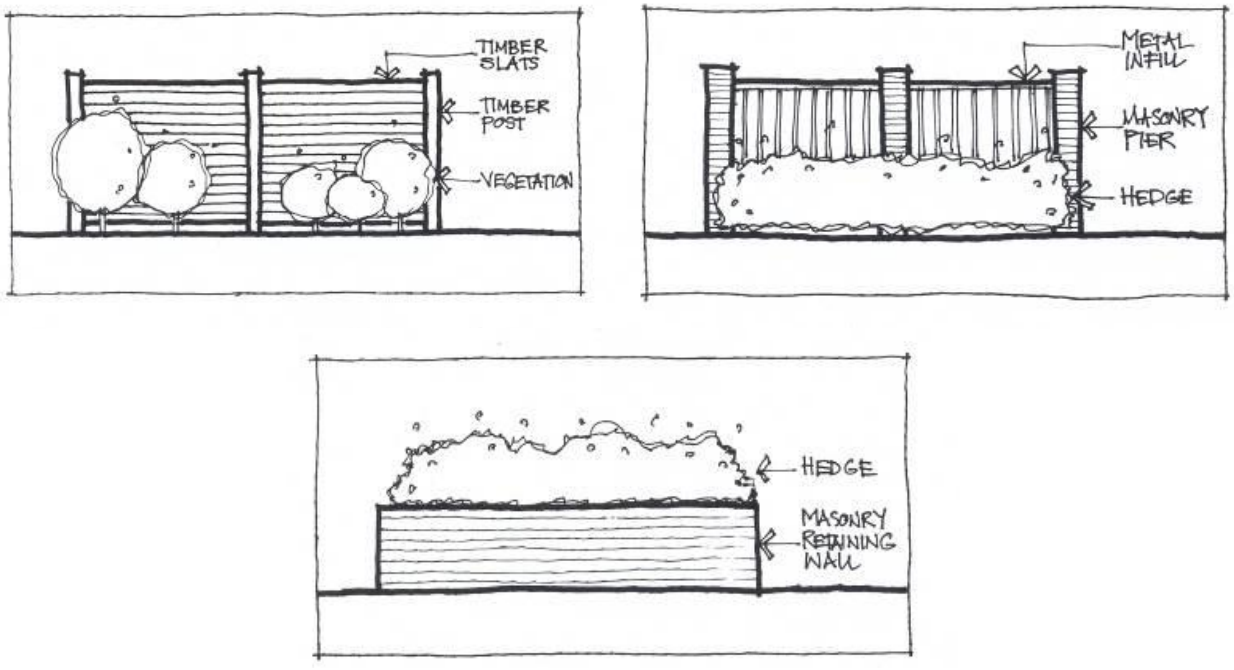

Figure 23 Examples of decorative fencing

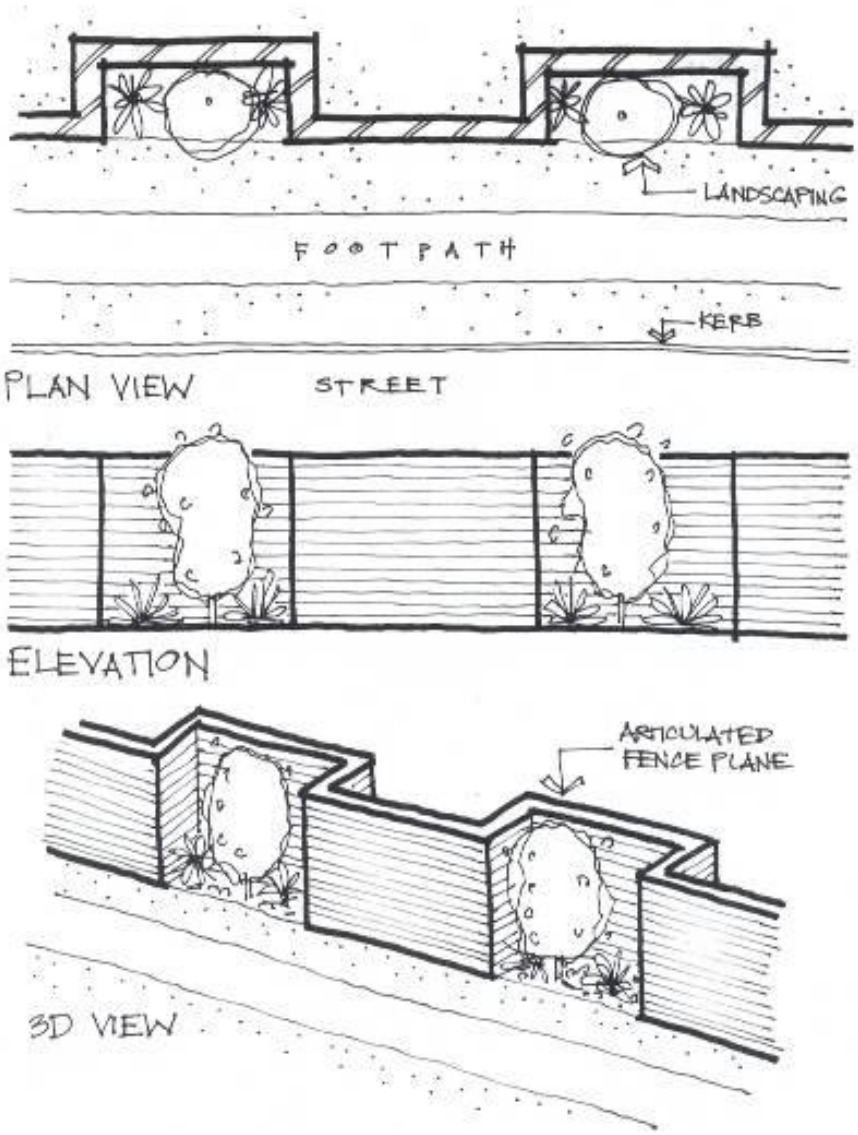

Figure 24 Example of an articulated fence

13.1.2 Corner Allotments

a Courtyard fences shall not be permitted within the setback area to the side street.

b No structures or landscaping exceeding 1 metre in height are to be located within the triangle formed by a sight line 12 metres x 6 metres from the intersection of the two street boundary lines (refer Figure 10). Any existing or proposed tree in this area is to be maintained with a clean trunk under a height of 2.0 metres.

APPENDIX A SUSTAINABILITY GUIDELINES

The following are design guidelines for the achievement of sustainable residential flat development and compliance with BASIX targets. They are not specific requirements under the provisions of this CHAPTER, yet are strongly advocated in achieving environmentally comfortable and sustainable developments.

Energy Efficiency

Energy efficient dwellings are homes that, through their design, construction and choice of materials and appliances, maximise use of renewable energy sources (such as sunshine) and use less energy more efficiently. They are 'smart' because they simultaneously help enhance scarce resources, reduce the level of greenhouse gas emissions and provide significant savings to the occupants.

Solar Orientation

a Each dwelling within the development should be designed with the bulk of its internal and external living areas on the northern side, unless there are major site constraints or desirable views that require a different orientation, in order to maximise passive solar design opportunities and consequent savings in dwelling running costs.

b Solar access for private open space and courtyards within the front building setback area is optimised in those lots between 30 degrees clockwise and 20 degrees counter clockwise of North, East and West facing street frontages, as shown shaded below.

Shading (Eaves, Awnings and Verandas)

a Use structural rather than mechanical means to control solar access, temperature and ventilation and to provide weather protection to openings. Roofed verandas, decks, awnings, pergolas and similar control devices should be used and integrated into the design of each dwelling within the development;

b For single and 2 storey developments eaves should be minimum 450mm width on all sides of the building(s).

Note: This does not apply to gables over garages or prevent the incorporation of "under eave" articulation of the building façade.

Clothes Drying

a An external clothes drying area of at least $3m^2$ should be provided for each unit within a single or 2 storey building. This area is to be located at ground level on the northern side of the development, receive adequate solar access and not be directly visible from the street.

b For developments of 3 storeys and above, a clothes dryer, which achieves a minimum Greenhouse Score of 3.5 Stars, should be installed for each dwelling within the development, and a communal external clothes drying area is to be provided within the communal open space area and adequately screened from public view.

Hot Water System

a Each dwelling should have a complying hot water system, which achieves a minimum Greenhouse Score of 3.5 Stars.

Note: Complying Hot Water Systems include gas, solar and heat pump systems. As conventional electric hot water systems account for approx. 40% of the electricity use of an average home, the greenhouse and operational cost savings to be gained from installing complying systems is significant. Further, significant purchase discounts are available to consumers installing complying systems, e.g., the Commonwealth Government Renewable Energy Certificates (RECS) are available for the replacement of existing electric hot water systems with complying hot water systems.

Also, the Sustainable Energy Development Authority (DEUS) offers discounts, additional to the value of the RECS, for the installation of electric boosted solar, heat pump systems and for gas boosted solar.

b Roof design should consider the option of a north facing solar hot water system.

Water Heater	Type	SEDA Greenhouse Score
Solar-Gas Boost*	Storage	5
Solar-Electric Boost*	Continuous	4
Solar-Electric Boost*	OP2	4
Electric-Storage	Heat Pump	4
Gas	Instantaneous	4
Gas-Storage	Storage	4
Electric	Instantaneous	2
Electric	Continuous	1
Electric-Storage	Storage (OP1, OP2)	1

* greater than 50% solar contribution

Table 7 Typical greenhouse scores for water heaters

Eliminate Draughts

a Eliminate heat loss and entry of cold air through gaps and cracks by installing:

i weather strips;

ii door gap jambs;

iii exhaust fans which close when not in use; and

iv vented skylights only in non-habitable rooms.

b It is also advisable to insulate pipework for greater energy efficiency and to ensure construction gaps are filled.

Windows

a Curtains can reduce heat loss through glass by 25 to 50 percent.

b The other way of reducing heat loss is to use double or thicker glazing. This can reduce heat loss by 50 to 60 percent.

c Pelmets on curtains increase their efficiency for relatively little cost.

d Use of covers, screens, louvers, etc, to the outside of windows to stop heat coming in.

Ventilation

a Windows should be placed to take advantage of prevailing breezes in summer with clear paths through the dwelling. Prevailing breeze direction in Wyong Shire during the hot summer months varies depending on distance from the coast and lakes.

b Louvers placed in internal walls can greatly assist ventilation.

Thermal Heat Banks

a Applicants should consider the many advantages of thermal heat banks. If properly designed, the dwelling can allow the sun to enter at the low winter sun angle to heat a dark surfaced heavy weight material like a concrete floor slab or internal masonry wall. (This may also include an in-situ water tank, formed as part of the floor slab or wall.) Heat is later released from the slab or wall throughout the colder evening, saving on heating costs. During the summer it can work in reverse using solar shading devices and shady trees to keep the sun off the thermal mass so it remains cooler.

Lighting

a Significant energy and cost savings can be achieved by:

i maximising the use of natural lighting in the design of each dwelling;

ii the incorporation of energy efficient lamps, fittings and switches (e.g., compact fluorescent lighting); and

iii the incorporation of dimmers, motion detectors, and automatic turnoff switches where appropriate.

Appliances

Applicants are encouraged to consider energy efficiency in the purchase of appliances. A minimum energy rating of 3.5 stars is highly desirable and will generate significant savings in operating costs over the life of an appliance.

Gas or solar appliances are preferable wherever possible.

*Energy ratings are displayed on all appliances and detailed information is available on the National Appliance Energy Rating web site at **www.energyrating.gov.au**.*

Air-conditioners should have a Greenhouse Score of 3.5 or greater and be located so as to not be adjacent to bedrooms of neighbours' dwellings or cause a noise nuisance.

Water Sensitive Design

a Water efficiency involves reducing the use of potable water as well as controlling and using rainwater and waste water from the site.

b There is a great deal that proposals can do to reduce water usage and minimise impacts of the dwellings on storm water runoff. These measures basically involve:

i Minimising – water use in the dwelling and garden/landscape areas

ii Retaining – rainwater to utilise within the dwelling, and storm water to improve groundwater infiltration, slow runoff and allow for natural treatment

iii Reusing – water wherever possible

Fixtures and Appliances

a The National Water Services Association applies water rating to all appliances that use water.

b Fixtures fitted to all new dwellings within the development should include:

i "AAA" (dual flush) rated toilet cisterns;

ii "AAA" rated aerators on bathroom and kitchen hand basins; and

iii "AAA" rated showerheads, with a maximum flow rating of 11 litres per minute. The shower is the major user of hot water in the home. The use of "AAA" fittings can halve the water used. This provides not only a saving in water but also results in significant energy, cost and greenhouse gas reductions.

c Washing machines that are front loading use an average one-quarter of the water of a comparable top loading machine and are therefore recommended. There are limited ranges of "sudsaver" washing machines available that save water and reduce the loading of detergent in the effluent disposal system. These require a minimum 130 litre tub in the laundry, but are recommended for the long term benefit provided.

Hardstand Areas

a Hardstand areas should be minimised.

b "Hardstand areas" on development sites, include the area of:

i the dwelling(s) footprint; plus

ii garages, water tanks and outbuildings; and

iii non porous driveways, paths and courtyards.

c Hardstand areas increase the volume and intensity of storm water runoff and prevent groundwater infiltration. It is therefore necessary to minimise paved areas so that infiltration into landscaped areas can occur, thus providing for the natural treatment of nutrients and pollutants carried by storm water prior to its discharge to the street drainage system, which ultimately discharges to our creek, river and Lakes system, thence into the Pacific Ocean.

d Hardstand areas within the front setback should not exceed 45% of the setback area.

e Porous concrete or plastic modular pavers placed on a sand base can be used to supplement non-porous areas and are recommended for car parks, car wash area, driveways, paths and courtyards. Such materials are not included in the above calculation of hardstand area for the lot.

Diversion / Retention Systems

a Developments should incorporate a system of rainwater capture / on site retention including re-use for:

i External fixtures and landscaping in the case of captured surface water runoff; and

ii Toilet flushing, washing machine use, landscaping and external washing of cars, etc. in the case of captured roof water.

b Applicants should consider the use of diversion and re-use systems on site, which can be designed to capture:

i surface runoff – particularly from driveways and other hardstand areas; and

ii grey water from showers, laundry and some sinks.

Such systems can provide water suitable for irrigation and toilets provided they are designed and maintained to meet relevant quality guidelines established by NSW Health and the performance standards of the Local Government (Approvals) Regulation 1999. They also need to be designed and installed by appropriately qualified plumbers to ensure they do not create a safety or health hazard.

On-Site Infiltration Systems

a Infiltration systems, involving trenches or "leaky wells" are recommended where their installation is not constrained by:

i heavy clays;

ii shallow hard rock (<2 metre);

iii steep terrain (>10%);

iv high water table (<1 metre);

v large trees;

vi proximity to structures;

vii proximity to services.

These should generally be devised in keeping with current industry best practice guidelines. Where infiltration systems are proposed a geotechnical report will be required to determine the appropriateness of underlying soils.

b Retention basins should be considered on larger sites and in rural areas. These should generally be constructed in keeping with "Australian Rainfall and Runoff" (Institution of Engineers Australia, 2001).

Rainwater Tanks

a Where rainwater tanks are proposed as part of the stormwater system for the development, they should comply with the AS/NZS 3500 and Council's Eco Info Sheet No. 50 – *Rainwater Tank Systems*.

b Rainwater tanks should be located and designed not to adversely impact upon the architectural merit of the building.

c The tank(s) must be fitted with a "first flush" diversion unit and a "filter bag" to remove surface contamination and a facility for periodic de-sludging.

d The tank(s) should have sufficient capacity and be connected so as to supplement water for the following services on the site, in order of priority:

i toilet flushing;

ii laundry;

iii garden irrigation; and

iv external washing (cars etc.).

e The tank(s) should be lined with food grade polyethylene and be installed in accordance with the National Plumbing and Drainage Code, AS/NZS3500. They should be connected to mains water to top them up during times of low rainfall, or alternatively, a Council approved rainwater cross-connection device including adequate mains water protection valves can be installed. For "top-up" systems, supplemental inflow from the mains supply should not take place until the tank is below 10% capacity. This permits the tank to buffer storm water flows to local drainage and provides rainwater storage capacity for the remaining 90% of tank volume.

f Pumps should deliver a minimum pressure of 300 Kpa (at the pump) and be provided with a warning lamp to alert residents to pump failure. Submersible pumps are recommended as the water within the tank(s) provides insulation to mask pump noise. Any pump external to the tank should be enclosed in a noise attenuating enclosure and not create a noise problem. The pump should not be audible at the nearest residential property boundary between the hours of 8.00 pm and 7.00 am Monday to Saturday and 8.00 pm to 8.00 am on Sundays. Further advice on the installation and maintenance of rainwater tanks is available by contacting Council's Customer Service Department on telephone (02) 4350 5555.

APPENDIX B CRIME PREVENTION PRINCIPLES

Crime Prevention Through Environmental Design (CPTED)

Surveillance

Development should be designed to provide or enhance effective surveillance, both natural and technical by providing:

- clear sightlines between public and private places. For example, no blind corners, habitable rooms that look onto the street and entrances to the building, and low or open-style fencing;
- effective lighting to public and private places. For example lighting of entrances to sites and service areas that does not produce glare or create a nuisance for neighbours;
- landscaping that makes places attractive, but does not provide offenders with a place to hide or entrap victims. For example, avoid medium height vegetation with top to bottom foliage.

Access Control

Development should be designed to incorporate physical and symbolic barriers to attract, channel or restrict the movement of people to clearly defined places. For example bollards, landscaping, fencing.

Territorial Reinforcement

Development should incorporate design elements that contribute to the creation of a sense of community ownership of public spaces by:

- encouraging people to gather in public spaces and feel some responsibility for its use and condition;
- clearly defining transitions and boundaries between public and private space. For example through fencing, gardens, varying textured surfaces, etc;
- clearly defining public spaces.

Space Management

Development should incorporate strategies to ensure site cleanliness, rapid repair of vandalism and graffiti, removal or refurbishment of decayed physical buildings and elements. Proposals should also incorporate measures into the development to reduce the potential for crime.

Target Hardening

Development should incorporate target hardening systems where appropriate. Target hardening means improving building security standards to keep intruders out by installing tougher doors, windows, locks, lighting and alarms. Target hardening also means designing objects which are commonly vandalised to make them harder to deface or smash.