7Part B – Land Use Based Controls

Chapter B1: Residential Development

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1 INTRODUCTION

This chapter contains residential development controls for dwelling-house, secondary dwelling, semi-detached dwelling, dual occupancy, attached dwelling, multi-dwelling housing (villas and townhouses), residential flat building developments in standard residential zones.

This chapter of the DCP applies to all residential zoned land within the City of Wollongong Local Government Area (LGA) including E4 Environmental Living.

Section 4 provides general development controls which apply to the erection of all dwelling-house, dual occupancy, secondary dwelling, ancillary structures and semi detached dwellings within urban areas.

Section 5 provides controls for Attached dwellings and Multi-dwelling housing.

Section 6 provides controls for Residential Flat Buildings.

This chapter of the DCP should be read in conjunction with the relevant LEP and Part A, any relevant Part D and Part E chapter including E7 Waste Management, E14 Stormwater Management, E15 Water Sensitive Urban Design, E13 Floodplain Management, E19 Earthworks (Land Re-Shaping Works), E22 Soil and Sediment Control.

2 OBJECTIVES

The key objectives of Chapter B1 of the DCP are:

(a) To ensure a high standard of residential development within the City of Wollongong LGA.

(b) To encourage new residential development that is sympathetic to the existing streetscape and neighbourhood character of a particular locality.

(c) To encourage residential development that reflects the desired future character of individual suburbs within the Wollongong City LGA.

(d) To manage residential development in order to maximise the retention of significant remnant trees and other natural features in particular localities.

(e) To encourage innovative housing design and energy efficient housing which embraces the highest possible architectural, environmental and amenity standards.

(f) To promote residential development that achieves the principles of ecologically sustainable development.

(g) To encourage a mix of housing forms within the city to assist in achieving urban consolidation initiatives particularly in localities close to business centres and railway stations and to assist in providing housing affordability.

(h) To ensure that Crime Prevention through Environmental Design (CPTED) principles are holistically embraced in the design of any residential development.

3 DEFINITIONS

For the definitions of the following terms as applied in the DCP refer to the relevant LEP.

a) Attached dwelling
b) Dual occupancy
c) Dwelling
d) Dwelling-house
e) Multi dwelling housing

f) Residential flat building
g) Secondary dwelling (also refer to the Affordable Housing SEPP)
h) Semi-detached dwelling.

4 GENERAL RESIDENTIAL CONTROLS

4.1 Number of Storeys

The maximum building height is set by the Local Environmental Plans generally

a) R2 Low Density Residential Zones permit a maximum height of 9m – a maximum of 2 storeys

b) R3 Medium Density Residential Zones permit a maximum of height of 13m a maximum 3 storeys.

The number of storeys acceptable will be dependant on the surrounding development, the future desired character of the area, the impacts that the proposed development has on solar access, privacy, visual amenity and overshadowing.

4.1.1 Objectives

a) To encourage buildings which integrate within the streetscape and the natural setting whilst maintaining the visual amenity of the area.

b) To minimise the potential for overlooking on adjacent dwellings and open space aeas.

c) To ensure that development is sympathetic to and addresses site constraints.

d) To encourage split level stepped building solutions on steeply sloping sites.

e) To encourage a built form of dwellings that does not have negative impact on the visual amenity of the adjoining residences.

f) To ensure ancillary structures have appropriate scale and are not visually dominant compared to the dwelling.

g) To ensure appropriate correlation between the height and setbacks of ancillary structures.

h) To encourage positive solar access outcomes for dwellings and the associated private open spaces.

4.1.2 Development Controls

1. Dwelling houses on battleaxe allotments are restricted to 1 storey unless it can be demonstrates that the proposed development achieves the objectives in Clause 4.1.1 and complies with the maximum height maps in the LEP.

2. Ancillary structures are restricted to 1 storey unless it can be demonstrates that the proposed development achieves the objectives in Clause 4.1.1 and complies with the maximum height maps in the LEP.

3. Habitable roof space may provide additional habitable area only when the height of the building does not exceed the maximum building heights specified in the relevant LEP.

4. In R2 Low Density Residential zones, where development occurs within the 8m rear setback the development is limited to single storey, so as to not adversely impact on the amenity of the adjoining property.

5. Landscaping may be required within the side and read setbacks to mitigate the visual impact of the building form from adjoining properties.

4.2 Front Setbacks

4.2.1 Objectives

(a) To reinforce the existing character of the street and locality by acknowledging building setbacks.

(b) To ensure that buildings are appropriately sited, having regard to site constraints.

(c) To ensure building setbacks are representative of the character of the area.

(d) To provide for compatibility in front setbacks to provide unity in the building line.

(e) To ensure that setbacks do not have a detrimental effect on streetscape or view corridors.

(f) To ensure that hard stand areas can be provided in front of garage without imposing on movement corridors (pathways, cycle ways and road reserves).

4.2.2 Development Controls

1. The following setback requirements apply from the primary street frontage to the front facade of the building:

   a) Infill development sites require a minimum setback of 6m from the front property boundary, or

   b) Less than 6 metres where the prevailing street character permits and the future desired character of the area is not prejudiced. Reduced setbacks must be demonstrated through a Site and Context Analysis (Chapter A.1 cl.11.1).

   c) Garages and carports must be setback a minimum of 5.5 metres to enable a vehicle to park or stand in front of the garage or carport.

   d) Greenfield sites require a minimum setback of 4m (excluding garages and carports which must be setback at least 5.5 metres).

2. Corner allotments

   (a) Infill development sites require a minimum setback of 6m, or

   (b) Less than 6 metres where the prevailing street character permits and the future desired character of the area is not prejudiced. Reduced setbacks must be demonstrated through a Site and Context Analysis (Chapter A.1 cl.11.1).

   (c) Secondary building line must be setback a minimum of 3 metres, except for garages which must be setback at least 5.5 metres from the property boundary on the secondary road.

3. Any secondary dwelling shall be setback behind the front building alignment of the principal dwelling.

4.3 Side and Rear Setbacks

4.3.1 Objectives

(a) To create a consistent pattern of building separation along streets.

(b) To provide adequate setbacks from boundaries to retain privacy levels and minimise overlooking/overshadowing.

(c) To ensure that buildings are appropriately sited having regard to site constraints.

(d) To control overshadowing of adjacent properties and private or shared open space.

(e) To ensure improved visual amenity outcomes for adjoining residences.

4.3.2 Development Controls

1. Walls must be setback at least 900mm from any side or rear property boundary and eaves/gutters must be setback at least 450mm from the side and rear property boundaries.

2. Walls (including gable ends and parapets) that exceed 7 metres overall height must be setback at least 3 metres from the side and rear boundaries.

3. Freestanding garages or outbuildings with habitable roof spaces or second storey must be setback at least 900mm from a side or rear property boundary.

Detached single storey garages/outbuildings must be setback at least 500mm from a side or rear boundary, unless constructed of masonry, in which case a lesser setback may be considered in accordance with the criteria for variations stated below.

5. All balconies and windows of habitable rooms (excluding bedrooms) within a proposed dwelling-house or secondary dwelling must be designed to minimise any direct overlooking impact upon any adjoining property.

6. Walls in excess of 8m in length may not be considered for a variation to side setbacks.

7. The side and rear setback controls may only be varied where the following is demonstrated to Council's satisfaction:

    (a) The objectives of 4.4.1 are met.

    (b) The walls and footings are located wholly on the subject land.

    (c) There are no windows facing the adjoining property that enable overlooking.

    (d) Walls provide articulation so as to not impact the amenity of adjoining dwellings.

    (e) Landscaping is appropriately provided to screen development.

4.4 Site Coverage

4.4.1 Objectives

(a) To limit the building footprint and ensure adequate provision is made for landscaped areas, deep soil zones, permeability and private open space.

(b) To control site density.

(c) To minimise adverse impacts arising from large dwellings and ancillary structures on the amenity of adjoining and adjacent properties.

4.4.2 Development Controls

1. Site coverage is defined in accordance with Wollongong LEP 2009 and means the proportion of a site area covered by buildings. However, the following are not included for the purpose of calculating site coverage:

   a) any basement,

   b) any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary,

   c) any eaves,

   d) unenclosed balconies, decks, pergolas and the like.

2. The maximum site coverage for a dwelling, dual occupancy, and combined maximum coverage for a principle dwelling and secondary dwelling, is as follows:

   55% of the area of the lot, if the lot has an area less than 450m^2.

   50% of the area of the lot, if the lot has an area of at least 450m^2 but less than 900m^2.

   40% of the area of the lot, if the lot has an area of at least 900m^2.

3. For dual occupancy development, maximum site coverage for both dwellings combined must be less than or equal to that specified based on lot area above.

4. Where a two lot Torrens Title subdivision is proposed for dual occupancy development, the site coverage for each dwelling must be less than or equal to the maximum site coverage as specified above.

4.5 Landscaped Area

4.5.1 Objectives

(a) To preserve and retain existing native trees and vegetation and encourage the planting of additional native vegetation.

(b) To encourage the linkage of habitat corridors along the rear of sites.

(c) To allow for increased water infiltration and minimise urban run-off.

(d) To facilitate pleasant views from within dwellings and backyard settings.

(e) To reduce privacy and amenity impacts at the rear of residential properties.

4.5.2 Development Controls

1. Significant trees are to be maintained on the site.

2. The minimum landscaped area required is based on lot size as outlined below. 'Landscaped area' is a permeable area capable of growing trees, shrubs, groundcovers and / or lawn and does not include any building, structure or hard paved area.

   i) lot area less than 600m^2 - 20% landscaped area

   j) lot area from 600m2 to 900m^2 – 120m² + 30% of the site area > 600m² landscaped area

   k) lot area greater than 900m^2 - 210m² + 40% of the site area > 900m² landscaped area.

3. At least 50% of the landscaped area must be located behind the building line to the primary road boundary.

4. Landscaped areas must be integrated with the drainage design. The location of drainage lines, pits and detention areas should not conflict with landscaped areas including proposed and existing trees.

5. For development proposing a dwelling, a minimum of one (1) semi mature small to medium evergreen or deciduous tree (minimum pot size 45 litre) is to be provided within the landscape area. This tree is to be planted at least 3m from any existing or proposed dwelling or structure present onsite. No additional tree is required for a secondary dwelling.

6. Dual occupancy development requires:

   (a) a minimum of 1.5 metre wide landscape strip within the front setback for the majority of the site width (excluding the driveway). This area must be mulched and planted with appropriate trees, shrubs and/or groundcovers. A minimum of one (1) semi mature small to medium evergreen or deciduous tree (minimum pot size 45 litre) is to be provided within this landscape bed.

   (b) second semi mature small to medium tree (minimum pot size 45L) is to be provided onsite in the landscaped area or deep soil zone, planted at least 3m from any existing or proposed dwelling, building or structure on the lot.

4.6 Private Open Space

4.6.1 Objectives

(a) To ensure that private open spaces are large enough to accommodate a range of uses and are accessible and connected to indoor spaces.

(b) To ensure that private open space is suitability located taking into account existing and potential surrounding development.

(c) To minimise amenity impacts to neighbours.

(d) To ensure functionality of the private open space area by reducing overlooking, overshadowing and amenity impacts onto / from adjoining properties, through the provision of appropriate buffer screen planting around the perimeter of the open space area, where necessary.

(e) To protect existing trees and other vegetation in the immediate locality which contribute to the natural setting of the site.

4.6.2 Development Controls

1. Private open space must be provided in accordance with the following requirements:

    a) A 24m2 area of private open space must be directly accessible from the living areas of each proposed dwelling and have a minimum width of 4 metres and be no steeper than 1:50.

    b) Private open spaces and private courtyards should not be located on side boundaries or front yard. Variations may be permitted where the private open space is sufficiently setback as to ensure that the private open space will not be impacted upon by existing or future complying dwellings on adjoining lots.

    c) Private open space must be defined through the use of planting, fencing, or landscape features.

    d) Private open space shall be screened where necessary to ensure privacy between dwellings in a dual occupancy and secondary dwellings.

    e) Private open space areas including balconies and decks must not extend forward of the front building line by greater than 900mm.

    f) Space shall be provided for clothes lines and waste/recycling bins and rain water tanks behind the front building line but outside of the private open space area.

    g) Secondary dwellings will be required to provide private open space with a minimum area of 24m2.

4.7 Solar Access

4.7.1 Objective

(a) To minimise the extent of loss of sunlight to living areas of adjacent dwellings and private open space areas of adjoining properties.

(b) To maximise solar access into living rooms and private open space of dwellings in the subject development.

4.7.2 Development Controls

1. Windows to living rooms of adjoining dwellings must receive at least 3 hours continuous sunlight, between hours of 9.00am and 3.00pm on 21 June.

2. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of continuous sunlight, between hours of 9.00am and 3.00pm on June 21.

3. Shadow diagrams are required for 9.00am, 12:00pm and 3.00pm for the 21 June winter solstice period for two storey dwellings. In certain circumstances where the extent of solar impacts is uncertain hourly intervals may be required. Additional hourly interval shadow diagrams for the equinox period may be necessary to determine the full extent of overshadowing upon the dwelling and / or private open space area of an adjoining property.

4. Dwellings should be designed to maximise natural sunlight to main living areas and the private open space.

4.8 Building Character and Form

4.8.1 Objectives

(a) To ensure that development responds to both its natural and built context.

(b) To design residential development that responds to the existing character and the future character of the area.

(c) To ensure building design contributes in to the locality through a design that considers building scale, form, articulation and landscaping.

(d) To encourage colour schemes that are of similar hues and tones to that within the streetscape.

(e) To ensure buildings address the primary street frontage via entry doors and windows.

(f) To ensure that dwellings provide appropriate passive surveillance of public spaces and street frontage.

(g) To ensure that ancillary structures are not the dominate feature of built form.

4.8.2 Development Controls

1. The design, height and siting of a new development must respond to its site context taking into account both natural and built form features of that locality. The design of the development must have particular regard to the topography of the site to minimise the extent of cut and fill associated with dwelling construction.

2. Large bulky forms are to be avoided, particularly in visible locations. The use of extended terraces, balconies, sun shading devices and awnings will help reduce the apparent bulk of buildings.

3. New dwelling-houses within established residential areas should be sympathetic with the existing character of the immediate locality. New innovative contemporary building designs may also be permitted, where, in the opinion of Council, the development will not result in an adverse impact upon the streetscape or residential amenity of that locality, as compared to a more traditional design.

4. All residential buildings must be designed with building frontages and entries clearly addressing the street frontage. On corner allotments, the development should address the street on both frontages.

5. The appearance of blank walls or walls with only utility windows on the front elevation will not be permitted. Note: Utility windows include windows for toilets, bathrooms, laundries etc which are small and / or translucent and hence, are not permitted within the front elevation of a dwelling.

6. Where garages are proposed on the front elevation they must be articulated from the front façade.

7. Additions to an existing dwelling-house must be compatible in terms of design, roof configuration and materials with the existing dwelling, unless the existing part of the dwelling is also upgraded to be sympathetic with the design, roof configuration and materials of the new addition.

8. Any secondary dwelling shall be designed and constructed of external building materials and colour finishes which are sympathetic to the principal dwelling.

9. Existing garages and outbuildings must not be used as a secondary dwelling, except where the required Development Application is supported with appropriate evidence which proves that the structure complies with the relevant provisions of the Building Code of Australia.

10. Fences in the front building line should be predominately constructed in transparent fence materials, allowing for visual connection between the dwelling and the street.

11. Where the garage door addresses the street they must be a maximum of 50% of the width of the dwelling.

4.9 Fences

4.9.1 Objectives

(a) To allow for the physical separation of properties for resident privacy.

(b) To define the boundaries between public and private land.

(c) To enhance the usability of private open space areas / courtyards.

(d) To ensure that the design, heights and materials of fencing are appropriately selected.

(e) To ensure that fencing design and location complements the building design, enhance the streetscape and complement the objectives of passive surveillance

(f) To ensure that the design allows for casual surveillance of the lot.

(g) To ensure that clear lines of sight are maintained for motorists and pedestrians to and from the lot.

(h) To provide suitable fencing to improve the acoustic and visual privacy for residential properties fronting major (busy) roads, where appropriate slight line distances can be maintained.

4.9.2 Development Controls

1. All fences are to be constructed to allow the natural flow of stormwater drainage or runoff. Fences must not significantly obstruct the free flow of floodwaters and must be constructed so as to remain safe during floods and not obstruct moving debris. Fences must not be constructed of second hand materials without the consent of Council.

2. Fences within the front and secondary building lines should be predominantly constructed in transparent fence materials, allowing visual connection between the dwelling and the street.

3. Any fence and associated retaining wall within the front setback area from the primary road frontage must be a maximum 1.2 metres in height, above existing ground level. Where the front fence is located on the front property boundary line, the height of the fence is to be measured above the existing ground level of the adjacent footpath or verge.

4. Front fences must be open for at least 50% of the upper 2/3 of the area of the fence. Any brick or other solid portion of the fence above 600mm must not be more than 250mm wide.

5. All front fences must be designed to ensure the safety of all pedestrians using any adjacent public footpath, including children and people with a visual disability. Metal spike picket infill pickets or sharply shaped timber pickets will not be permitted.

6. Front and return fences should reflect the design of the residential building, wherever practicable.

7. Front and return fences should be designed of materials which are compatible with other fences within the immediate streetscape, wherever practicable.

8. Side fences on corner blocks shall be a maximum of 1.2 metres in height within the front setback area (ie up to the front alignment of the dwelling) from the primary road frontage and shall be a maximum of 1.8m in height for the remainder of the secondary road frontage (ie behind the front building alignment).

9. Dividing fences between the front building line and the rear property boundary must be a maximum of 1.8 metres in height.

10. A fence or a fence and an associated retaining wall on a sloping site may be stepped, provided the height of each step is not more than:

    (a) 1.6 metres above the existing ground level, if it is located within a setback area from a primary road, or

    (b) 2.2 metres above the existing ground level for side or rear fences, behind the front building line.

11. The height and design of any proposed fence on top of a retaining wall must be included in the consideration of the overall height of the fence and retaining wall.

12. Fences which exceed the maximum fence heights above will only be considered in exceptional circumstances where Council is of the opinion that the variation is reasonable in the circumstances. For example, the erection of a higher front fence for a property fronting a major arterial road, in order to improve the privacy or amenity of the property. In such cases, any fence will be required to be well articulated and landscaped with appropriate planting, to help soften the visual impact and improve the streetscape appearance of the fence.

13. Fences must be constructed of timber, metal, lightweight materials or masonry. Fences in bush fire prone areas shall be of a metal or masonry construction only.

14. Front and return fences are not to be of a timber paling, Colorbond, or chain wire mesh design.

15. When the trunk of a significant tree exists within the location of a proposed fence, then the fence must be designed around the tree or an application made to Council for the proposed removal of the tree (ie in which case Council will assess whether or not the tree removal is appropriate based upon the assessment criteria contained in Chapter E17: Preservation and Management of Trees and Vegetation).

16. Fences within a floodway or high-risk flood precinct are not permitted except for security/ permeable / open style safety fences of a design approved by Council.

17. All fences are to be at or upslope of the foreshore building line and shall be of an open, permeable steel style to maintain views to / from the water body.

18. Any gates associated with the front fence should open inwards so as to not obstruct the road reserve.

19. Fencing must be in keeping with the streetscape.

4.10 Car parking and Access

4.10.1 Objectives

(a) To provide car parking for residents.

(b) To ensure that there is adequate provision for vehicular access and manoeuvring.

(c) To minimise the impact of garages upon the streetscape.

4.10.2 Development Controls

1. The provision of car parking shall be as follows:

    (a) 1 space per dwelling with a gross floor area of less than 125m^2

    (b) 2 spaces per dwelling with a gross floor area of 125m^2 or greater

2. Carports must be setback behind the front building line of the dwelling. Council may consider a variation to this control for carports that are compatible with the design of the dwelling in instances where an existing streetscape includes carports within the front setback or a site is too steep for driveway access to the front building line.

3. Garages must be setback a minimum of 5.5m from the front property boundary.

4. Where garage door openings face a road they shall:

    (a) Be a maximum of 50% of the width of the dwelling.

5. The car parking spaces may be an open hard stand space, driveway, carport or a garage, whether attached to or detached from the dwelling.

6. The minimum dimension for a single car parking space shall be 5.5 metres x 2.6 metres where unenclosed. The minimum dimension for double car parking space shall be 6 metres x 6 metres, unenclosed.

7. The minimum internal dimensions for a single garage shall be 6 metres (depth) x 3 metres (width).The minimum internal dimensions for a double garage shall be 6 metres (depth) x 6 metres (width).

8. The siting of ancillary buildings, extensions and swimming pools associated with a dwelling-house shall not reduce the number of on site parking spaces behind the building line to less than one.

9. Driveways shall be separated from side boundaries by a minimum of 1 metre.

10. Driveways shall have a maximum cross-over width of 3 metres.

11. Dual Occupancy - Access for a rear dwelling must be provided by a dedicated access corridor attached to the same ownership of the rear property. A right of carriageway over the front public road frontage lot in favour of the rear lot will generally not be supported, except where, in the opinion of Council, this

access arrangement would provide a more functional arrangement and not pose any adverse impact upon the amenity or streetscape character of the locality.

4.11 Storage Facilities

4.11.1 Objective

(a) To provide accessible storage for larger household items that cannot be readily accommodated within dwellings.

4.11.2 Development Controls

1. Storage must be provided in accordance with the following minimum requirements:

Dwelling	Storage Volume	Storage Area
Studio/1 bedroom	$6m^3$	$3m^2$
Two bedroom	$8m^3$	$4m^2$
Three or more bedrooms	$10m^3$	$5m^2$

4.12 Site Facilities

4.12.1 Objectives

(a) To ensure that site facilities (such as clothes drying, mail boxes, recycling and garbage disposal units/areas, screens, lighting, storage areas, air conditioning units, rainwater tanks and communication structures) are effectively integrated into the development and are unobtrusive.

4.12.2 Development Controls

1. Provide letterboxes for all residential dwellings in a location, which is accessible. Where a development involves two or more dwellings letterboxes should be grouped in one location adjacent to the main entrance to the development. Letterboxes must be secure and large enough to accommodate articles such as newspapers. In developments involving two or more dwellings they should be integrated into a wall where possible and be constructed of materials that are aligned with the appearance of the building.

2. Locate satellite dish telecommunication antennae, air conditioning units and any ancillary structures:

    (a) Away from the street frontage;

    (b) In a position where such facilities will not become a skyline feature at the top of any building; and

    (c) Adequately setback from the perimeter wall or roof edge of buildings.

3. All dwellings must be provided with open air clothes drying facilities that are easily accessible and which are screened from the public domain and communal open spaces. Clothes drying areas must have a

high degree of solar access. Clothes drying areas must not be located between the building line and a public road or accessway, unless adequately screened.

4. Air conditioning units shall be located so that they are not visible from the street or other public places.

4.13 Fire Brigade Servicing

4.13.1 Objective

(a) To ensure that all dwellings can be serviced by fire fighting vehicles.

4.13.2 Development Controls

1. All dwellings, particularly dual occupancy and dwellings on battle axe allotment must be located within 60m of a fire hydrant, or the required distance as required by Australian Standard AS2419.1. Provision must be made so that Fire and Rescue NSW vehicles can enter and leave the site in a forward direction where:

    a) Fire and Rescue NSW cannot park their vehicles within the road reserve due to the distance of hydrants from dwellings and/or restricted vehicular access to hydrants; and

    b) The site has an access driveway longer than 15m.

2. For developments where a fire brigade vehicle is required to access the site, vehicular access, egress and manoeuvring must be provided on the site in accordance with the Fire and Rescue NSW *Code of Practice – Building Construction - NSWFB Vehicle Requirements*.

4.14 Services

4.14.1 Objective

(a) To encourage early consideration of servicing requirements, to ensure that all residential development can be appropriately serviced.

4.14.2 Development Controls

1. Applicants shall contact service authorities early in the planning stage to determine their requirements regarding conduits, contributions, layout plans, substations and other relevant details.

2. Consideration shall be given to the siting of any proposed substation during the design stage, to minimise its visual impact on the streetscape. Any required substation must not be located in a prominent position at the front of the property.

3. Water, sewerage, gas, underground electricity and telephone are to be provided to the proposed development by the developer in accordance with Council and servicing authority requirements.

4. Developments must be connected to a reticulated sewerage scheme.

5. Where a reticulated scheme is not available, an on-site sewage management system will be required in accordance with the On-site Sewage Management System chapter in Part E of the DCP. The full details of the proposed on-site sewage management system must be provided with the Development Application. A section 68 approval will also be required under the *Local Government Act 1993* in these instances.

4.15 Development near the Coastline

4.15.1 Objectives

(a) To minimise built intrusions into the coastal landscape.

(b) To protect property from the threat of coastal hazards and land instability.

(c) To retain views to the ocean from roads and public spaces.

(d) To facilitate buildings that are consistent with a coastal character.

4.15.2 Development Controls

1. All development must be setback at least 10m from a beach or cliff top to reduce the potential risk of instability and long term coastal erosion. In some instances, restricted building zones indicated on the Deposited Plan for an allotment of land will also need to be considered when situating buildings on the site.

2. Any development near coastal foreshore areas is to be sited and designed so to be protected from long term coastal erosion.

3. (Note: A Geotechnical Report will be required which confirms that the structural adequacy of the development near a coastal foreshore area from any long term coastal erosion effects. The Geotechnical Report must be prepared in accordance with the requirements contained in the Geotechnical chapter in Part E of the DCP).

4. Development on land with frontage to natural features including the ocean, a clifftop, beach or public open space fronting the ocean is to be sited so as to provide a minimum side boundary setback from any building(s) or structures of 3 metres or 25% of the total width of the site, whichever is the lesser. This setback is required in order to provide a public view corridor and is to be unencumbered with any structures or significant vegetation that restricts public views through the site to the relevant coastal feature.

5. In the circumstances where there is an existing public view corridor specifically provided on immediately adjoining land, then development may be provided with a reduced setback, subject to the combined corridor on the immediately adjoining sites be no less than 4 metres in width and unencumbered with any structures and significant vegetation.

6. Buildings within the coastal zone are to incorporate the following design features:

    (a) Development should generally be designed in a contemporary Australian coastal style which incorporates elements such as varied roof lines, a modest scale, light weight materials where appropriate, wide eaves and covered outdoor living areas, and consistent with the desired future character outlined for the relevant suburb or locality as contained in Character Statements in Part A of the DCP.

    (b) Consideration is to be given to the appearance of buildings from all public areas. Buildings are to be well articulated by the use of such features as indentations, off-set wall alignments, shading devices, balconies, window openings, awnings, and a mix of external materials and/or colours.

(c) Skillion and/or peaked roof forms with overhangs, which bring the roof line down towards the earth and therefore blend with the landscape, are preferred on sites adjacent to coastal foreshores.

(d) Buildings must not incorporate an unbroken horizontal elevation of more than 16 metres in length. Elevations are to be broken up by building articulation and/or variation in external colours and materials.

(e) Buildings shall be designed to utilise a composite of construction materials (such as a combination of masonry, glass, timber, weatherboard cladding and powder coated metal). The preferred roofing material is corrugated metal sheeting similar to “Colorbond®”.

(f) In most instances the use of low-reflective materials will be required although this may vary in circumstances where a building seeks to echo the existing character of part of a neighbourhood (as reflected in the desired future character statement contained in Part A of the DCP). The use of curtain wall glazing and large expanses of framed glass will not be permitted in the vicinity of main roads in order to minimise reflectivity impacts.

(g) Colour schemes are to incorporate a mix of finishes drawn from colours found in the natural environment of the coastline. This does not however preclude the use of colour highlights on façade elements. Colour schemes in visually exposed areas must be recessive (i.e. backdrop colour or darker) to allow the development to blend with the coastal landscape.

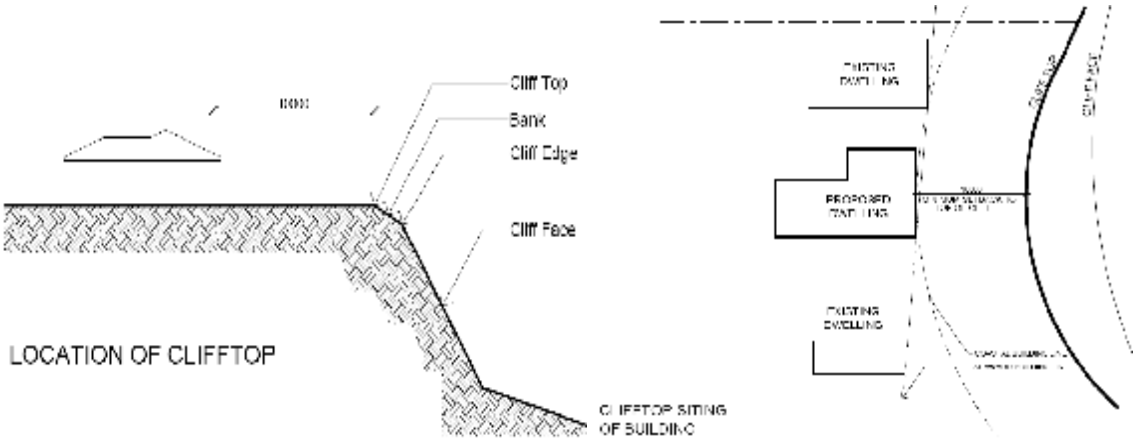


Figure 1: Cliff top sitting of building

4.16 View Sharing

4.16.1 Objectives

(a) To encourage view sharing from adjoining or nearby properties, public places, and new development.

(b) To protect and enhance significant view corridors from public places.

(c) To encourage the siting and design of new buildings which open up significant views from public areas.

4.16.2 Development Controls

1. Visual impact assessment should include an:

(a) Assessment of views likely to be affected.

(b) Assessment of what part of the property the views are obtained from.

(c) Assessment as to the extent of the potential view loss impact.

(d) Assessment as to the reasonableness of the proposal causing the potential view loss impact.

2. A range of view sharing measures shall be considered for incorporation into the design of a building including:

(a) Appropriate siting of the building on the land so as to provide a strip of land, unencumbered with structures, down one side of the dwelling. This strip of land must be a minimum width of 3m or 25% of the lot width whichever is the greater.

(b) A reduced view corridor width may be accepted, where it is located adjacent to a view corridor on the adjacent site, subject to the combined width having a minimum of 4m.

(c) Appropriate placement of the bulk of the building on a site.

(d) Provision of greater separation between buildings, where necessary to retain view corridors.

(e) Articulation within the buildings design.

(f) Careful selection of roof forms and slope.

(g) Placement of vents, air conditioning units, solar panels and similar structures in locations which will not restrict views.

4.17 Retaining Walls

4.17.1 General

The provisions of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 identify certain retaining walls which do not require the formal lodgement of a Development Application and may be approved through a Complying Development Certificate.

However, if the proposed retaining wall does not comply with the maximum height or minimum setback dimensions off side or rear property boundaries, as set out in SEPP (Exempt and Complying Development Codes) 2008, then the lodgement of a Development Application with Council is necessary and must be in compliance with the requirements mentioned below.

4.17.2 Objectives

(a) To ensure that retaining walls are structurally sound and are located to minimise any adverse stormwater drainage, visual, amenity or overlooking impacts upon adjoining properties.

(b) To guide the design and construction of low height aesthetically pleasing retaining walls.

(c) To ensure any retaining wall is well designed, in order to achieve long term structural integrity of the wall.

(d) To ensure slope stabilisation techniques are implemented to preserve and enhance the natural features and characteristics of the site and to maintain the long term structural integrity of any retaining wall.

4.17.3 Development Controls

1. A retaining wall or embankment should be restricted to a maximum height above or depth below natural ground level of no more than:

   (a) 600mm at any distance up to 900mm setback from any side or rear boundary; or

   (b) 1 metre, if the toe of the retaining wall or embankment is setback greater than 900mm from any side or rear boundary.

   Note: Council may consider a variation to the abovementioned maximum height / depth of a retaining wall, in cases where the subject site is steeply sloping and the proposed retaining wall is setback more than 1 metre from any side or rear common property boundary. Additionally, appropriate structural design details will be required and in some cases appropriate landscape buffer screen planting may be required, where necessary.

2. Any retaining wall over a meter in height must be designed by an Engineer.

3. Within areas of suspected slope instability or subject to known slope instability, Council may also require a report prepared by a suitably qualified geotechnical and structural engineer relating to the proposed retaining wall. Council will assess the suitability of any retaining within these areas, based upon the findings and recommendations contained in the report.

4. To limit the overall height impact, terracing of retaining walls is required, limiting the maximum vertical rise of a retaining wall to 1 metre, with a minimum horizontal setback of 1 metre.

5. Any retaining wall with a vertical height exceeding 1 metre in any one vertical rise must be supported by appropriate justification demonstrating how the proposal meets the objectives above.

6. Balustrading will be required in accordance with the *Building Code of Australia*, to ensure the safety of the public, where the retaining wall adjoins a public place and where there is a change in level greater than 1 metre to the surface beneath.

7. Open window face type retaining walls must not be permitted within 1.5 metres of an adjoining property boundary. These include crib block and similar type walls that permit the free flow of solid material through the wall.

8. A fence and any associated retaining wall located within the setback area from a primary road shall be restricted to:

   (a) A maximum 1.2 metre height above existing ground level, and

   (b) An open style for at least 50 per cent of the upper 2/3 of the area of the fence, and

   (c) Any brick or other solid portion of the fence above 600mm being not more than 250mm wide.

9. The fence or the fence and associated retaining wall on a sloping site may be stepped, provided the height of each step is not more than:

   (a) 1.6 metres above existing ground level if it is located within a setback area from a primary road, or

   (b) 2.2 metres above existing ground level for side or rear boundaries (where it is behind the front building line).

10. Adequate provision must be made for the proper disposal of surface and subsurface drainage associated with the erection of the walls. The method of disposal must be approved by Council and could include:

    (a) The connection of sub-surface drainage from the retaining wall to the street gutter.

    (b) Disposal via properly constructed absorption trench/es on the property containing the retaining wall designed and located in accordance with Council's Fact Sheet on Domestic Stormwater Drainage Systems.

    (c) Disposal via piped or channelled drainage easement/s.

    (d) Other means as determined by Council.

11. All surface and sub-surface drainage must not discharge directly onto other adjoining properties unless a drainage easement has been created. Council's Fact Sheet on Retaining Walls provides further information regarding the construction of retaining walls.

4.18 Swimming Pools and Spas

4.18.1 Objective

(a) To ensure that swimming pools meet relevant safety standards and meet user needs.

(b) To ensure swimming pools and spas are sited and designed to maintain the amenity of the surrounding residential neighbourhood.

4.18.2 Development Controls

1. Ancillary development comprising a swimming pool and / or spa for private use must be located on land:

    a) That contains an existing dwelling or a dwelling is constructed on the land at the same time the swimming pool and / or spa is constructed.

    b) Behind the building line of a primary road setback.

2. For corner sites or where a property has two road frontages, the location of the swimming pool or spa is not to be in the primary frontage.

3. Where a swimming pool or spa is proposed between the building façade and the secondary road frontage, appropriate landscape buffer screen planting will be required within the pool enclosure, behind the child resistant barrier, (i.e. so as not to affect the performance of the child resistant barrier) surrounding the pool enclosure.

4. Where a boundary fence is proposed to form part of the pool fence and it adjoins a public road the fence must be 1.8m high.

5. A swimming pool or spa must not be located:

    a) Over an easement or restricted building zone.

    b) Within a zone of influence of a public sewer main.

    c) Within a zone of influence of a public drainage pipe.

d) Within a riparian buffer zone:

e) Without appropriate approval by the relevant authority or person benefiting from the easement of covenant.

6. The swimming pool water line or spa water line must have a setback of at least 900mm from any side or rear boundary.

7. Any decking around a swimming pool or spa must not be more than 600mm above ground level (existing).

8. Coping around a swimming pool must not be more than:

   a) 1.4m above ground level (existing), and

   b) 300mm wide if the coping is more than 600mm above ground level (existing).

9. Any in-ground swimming pool or spa should be constructed so that the top edge of the swimming pool / spa is as close as possible to the existing ground level. On sloping sites, this may require excavation on the high side of the site, in order to ensure miminal out of ground exposure of the swimming pool at the low side.

10. Water from paved areas must not be discharged to any watercourse.

11. Overflow paths must be provided to allow for surface flows of water in paving areas around the pool and shall not be directed or connected at any point onto the adjoining property.

12. Discharge and/or overflow pipe(s) from the swimming pool and filtration unit are:

   a) To be discharged in accordance with an approval under the Local Government Act 1993 if the lot is not connected to a sewer main.

   b) In the case of land within Rural / non-urban or Environmental Protection zones having an area greater than 1000m2, to incorporate disposal pits located a minimum of 3m from any property boundary except where on-site disposal is not recommended in a geotechnical report prepared for the land or for the development.

   c) Not to discharge water to any watercourse.

13. Pool excavations are not to conflict with the position of any stormwater drainage trench or line (including any inter-allotment drainage line), the position of which must be ascertained and shown on the site plan before pool excavation commences.

14. A swimming pool must be surrounded by a child resistant barrier complying with the requirements of the *Swimming Pools Act 1992* (and Regulations) and the appropriate Australian Standard as referenced by the *Building Code of Australia*.

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

16. A minimum of 50% of the perimeter of a pool must be accessible for rescue purposes.

17. A spa pool is not required to be surrounded by a child resistant barrier provided that the spa pool is covered or secured by way of a child-safe structure (eg door, lid, grill or mesh) that is fastened to the spa pool by a child-resistant device, at all times, when the spa pool is not in actual use.

18. Structures such as tool sheds garages, barbeques, clotheslines or other like structures not appurtenant to a swimming pool must be located outside the fenced pool enclosure.

19. The pool pump / filter must be located as far away as practicable from any adjoining dwelling and should be enclosed in an acoustic enclosure / structure.

4.19 Development Near Railway Corridors and Major Road

4.19.1 Objectives

1. To ensure that development near rail corridors and major roads are protected from noise and vibration.

2. To ensure development does not affect the operation or rail corridors or their safety.

3. To ensure compliance with the SEPP Infrastructure.

4.19.2 Development Controls

1. Development immediately adjacent to rail corridors needs to take into consideration the provisions of the SEPP Infrastructure under clause 85. Council may required to refer the development application to the Rail Authority.

2. Council must consider the provisions of the NSW Department of Planning's *"Development near Rail Corridors and Busy Roads – Interim Guideline dated December 2008* for any development on land in or immediately adjacent to a rail corridor where it:

   a) Is likely to have an adverse effect on rail safety, or

   b) Involves the placing of a metal finish on a structure and the rail corridor concerned is used by electric trains, or

   c) Involves the use of a crane in air space above any rail corridor.

   d) Any excavation within 25m of the rail corridor.

3. Excavation in, above or adjacent to rail corridors may also be referred to the Rail Authority and must be in accordance with clause 86 and the NSW Department of Planning's *"Development near Rail Corridors and Busy Roads – Interim Guideline dated December 2008*

4. Impacts of rail and road noise or vibration on non-rail development must also be considered under clause 87 of the SEPP Infrastructure.

4.20 Additional controls for semi-detached dwellings – alterations and additions

4.20.1 Objectives

(a) To recognise that each semi-detached dwelling represents only one of a pair of dwellings and hence any external alterations and additions to one dwelling must be sympathetic with the other dwelling to which it is attached.

(b) To ensure any alteration or addition to an individual semi-detached dwelling is responsive to the style, character, form and external appearance of the other dwelling to which it is attached.

4.20.2 Development Controls

1. Alterations and additions to one existing semi-detached dwelling must be compatible in terms of building form and design, roof configuration and external building materials with the other existing dwelling to which it is attached, unless the other existing dwelling is also upgraded to be sympathetic with the design, roof configuration and materials in line with the other dwelling. In this regard, it is preferable that alterations and additions be carried out at the same time for both semi-detached dwellings.

2. Where symmetry is the dominant character it should be respected. Conversely, where asymmetry is the dominant and leads to an appearance of a single building, the design should attempt to maintain that character.

3. Any first floor addition to a semi-detached dwelling should be setback from the principal street frontage to maintain the existing prevailing roof form at the front of the dwelling and to locate the bulk of the new additions to the rear of the dwelling.

4. New additions to semi-detached dwellings should be located behind the main gable or hipped roof feature of the building on the principal street frontage.

5. The use of dormer windows, balconies and skylights on the first floor of the dwelling should be located at the rear of the dwelling, rather than the principal street frontage.

6. The style and pitch of the proposed roof of the dwelling should match and complement the existing roof form of the other semi-detached dwelling to which it is attached.

7. Any special elements of the existing roof should be incorporated in the proposed roof form.

4.21 Additional Controls for Dual Occupancy's - Minimum Site Width

4.21.1 Objectives

(a) To permit dual occupancy developments upon sites which are of sufficient size to accommodate the required building envelope, car parking, private open space, landscaping and other requirements, whist maintaining the amenity of surrounding residential development and the streetscape character of the locality.

(b) To allow for development of sites only where the land is not significantly constrained by flood, geotechnical or other environmental hazards.

4.21.2 Development Controls

1. A minimum site width of 15 metres is required for a dual occupancy development. Site width shall be measured for the full width of the site, perpendicular to the side property boundaries. Variations may be granted for irregular shaped blocks or where development can demonstrate compliance with privacy, solar access, private open space, visual amenity, built form, car parking and landscaping requirements.

2. For corner allotments, a minimum 15 metre site width must be achieved for at least one (1) of the street frontages and a minimum 12 metre site width must be achieved for the other street frontage.

4.22 Additional Controls for Dual Occupancy's - Building Character and Form

4.22.1 Development Controls

1. On corner allotments, the dual occupancy development must address the street on both frontages. The garage and / or carport for each dwelling must be placed on each street frontage, at the furthest point of the site, from the intersection.

2. Where garages are proposed on the front elevation they must be articulated from the front façade of the dual occupancy dwelling(s).

3. Any external alterations and additions to a dual occupancy dwelling must be compatible in design, roof configuration and building materials with the other adjoining dwelling in the original dual occupancy development.

4. Existing garages and outbuildings can not be used as a dual occupancy - second dwelling unless it can be demonstrated that the structure complies with the relevant provisions of the Building Code of Australia.

4.23 Additional Controls for Dual Occupancy's – Deep Soil Zones

4.23.1 Objectives

(a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation.

(b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife.

(c) To allow for increased water infiltration.

(d) To contribute to biodiversity.

4.23.2 Controls

1. A minimum of half of the landscaped area must be provided as a deep soil zone. The deep soil zone may be located in any position on the site, subject to this area having a minimum dimension of 3m. The deep soil zone must be located outside the minimum private open space required.

2. The siting of the deep soil zone shall be determined following a Site and Context Analysis to investigate whether this area should be located:
   (a) At the rear of the site to allow for separation from adjacent dwellings and to provide a corridor of vegetation; or
   (b) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.
3. No structures, basement carparks, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone.

4. The deep soil zone shall be densely planted with trees and shrubs. Where the development is to be strata titled, the deep soil zone may be retained within the common property or allocated to an individual unit entitlement, where such dwelling is directly adjacent.

5 ATTACHED DWELLINGS AND MULTI - DWELLING HOUSING

This section provides additional controls to those in Section 4 (excluding 4.1 to 4.11 and 4.19 to 4.22) of this chapter that must also be taken into consideration when preparing a development application for attached dwellings and multi-dwelling housing.

5.1 Minimum Site Width Requirement

5.1.1 Objectives

(a) To allow for development of sites which are of sufficient size to accommodate the required building envelope, car parking and landscaping requirements.

(b) To encourage amalgamation of allotments to provide for improved design outcomes.

5.1.2 Development Controls

1. The Wollongong LEP requires a minimum site width of 18 metres for multi-dwelling development. Site width is measured for the full width of the site, perpendicular to the property side boundaries.

2. A minimum site width of 18m is required for attached dwelling development. Site width is measured for the full width of the site, perpendicular to the property side boundaries. This control may be varied for irregular shaped lots or where the development meets the requirements of setbacks, private open space, visual amenity, solar access, built form and landscaping.

3. Sites should be amalgamated, where required, to achieve the minimum site width requirement.

4. Within the R1 General Residential and R3 Medium Density Residential zones, development for the purpose of an attached dwelling development must not result in the creation of an “isolated lot”. An “isolated lot” is a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise existing development other than a single dwelling house and redevelopment of such adjoining properties is unlikely. This includes cases where there is high separation of ownership of dwellings ownership in the adjoining developments. Amalgamation of allotments will be required in the circumstance where an isolated allotment would otherwise be created.

5. Council will only allow development which would result in the creation of an “isolated lot”, where it is satisfactorily demonstrated that:

(a) The "isolated lot" achieves a site width of 18 metres or more and is capable of accommodating an attached dwelling or multi-dwelling development.

(b) The following planning principles as outlined in the NSW Land and Environment Court judgment in *Melissa Grech v Auburn Council*[2004] NSWLEC 40 are met:

(i) Where a property will be "isolated" by a proposed development and that property cannot satisfy the minimum lot width requirements then negotiations between the owners of the properties should commence at an early stage and prior to the lodgement of the Development Application.

(ii) Where no satisfactory result is achieved from the negotiations, the Development Application should include details of the negotiations between the owners of the properties. These details should include offers to the owner of the isolated lot. A reasonable offer for the purposes of determining the Development Application and addressing the planning implications of an "isolated lot", is to be based at least on one recent independent valuation report and may include other reasonable expenses likely to be incurred by the owner of the "isolated lot" in the sale of that property.

(iii) The level of negotiation and any offers made for the "isolated lot" are matters that will be given weight in the consideration of the Development Application. The amount of weight will depend on the level of negotiation, whether any offers are deemed reasonable or unreasonable, any relevant planning requirements and the "matters for consideration" under Section 79C of the Environmental Planning & Assessment Act 1979.

6. In cases where the subject site is an existing "isolated lot", Council may consider a variation to the minimum site width requirement provided, in the opinion of Council, the proposed development will not cause any significant adverse overshadowing, privacy or amenity impact upon any adjoining development.

7. In certain existing "isolated lot" cases, a proposed development may not achieve its maximum development potential (eg maximum floor space ratio and height) where side and rear setbacks are varied and the development does not, in the opinion of Council, achieve:

(a) Adequate separation between buildings to maintain reasonable levels of solar access, privacy and amenity to neighbouring dwellings;

(b) Adequate landscaping screening of the development to maintain the amenity of adjoining dwellings; and

(c) Maintain the streetscape amenity of the locality.

5.2 Number of Storeys

5.2.1 Objectives

(a) To encourage buildings which integrate within the existing streetscape and the desired future character for the area.

(b) To minimise the potential impacts of overshadowing and overlooking on adjacent dwellings and open space areas.

5.2.2 Development Controls

1. The maximum number of storeys for attached and multi dwelling housing is set out in the table below.

Zone	No. Storeys
R1 General Residential zone	Three (3) storeys
R2 Low Density Residential zone	Two (2) storeys
R3 Medium Density Residential zone	Three (3) storeys
R4 High Density Residential zone (***for Multi-Dwelling Housing Only***)	Three (3) storeys

2. Habitable roof space may provide additional habitable area only when the height of the building does not exceed the overall ridge heights specified in the maximum building height tables (above) and the maximum building heights specified in the LEP.

3. Where the roof space is used as habitable area in accordance with the above requirements, it is not classified as an additional storey.

5.3 Front Setbacks

5.3.1 Objectives

(a) To reinforce the existing character of the street by acknowledging building setbacks.

(b) To promote compatibility in front setbacks to provide for unity in the building line.

5.3.2 Development Controls

1. A 6m setback requirements applies from the front property boundary to the front façade of the building.

2. On corner allotments a minimum setback of 3m to the secondary street frontage from the dwelling façade must be provided.

3. Balconies, front courtyard fences and other building extrusions may be set back up to 900mm closer than the required front or secondary setback.

4. An increase in setbacks may be required to retain existing trees or respect adjacent heritage items.

5.4 Side and Rear Setbacks

5.4.1 Objectives

(a) To provide adequate setbacks from boundaries and adjoining dwellings to retain privacy levels, views, sunlight and daylight access and to minimise overlooking.

(b) To provide appropriate separation between buildings to achieve the desired urban form.

(c) To optimise the use of land at the rear of the property and surveillance of the street at the front of the property.

(d) To minimise overshadowing of adjacent properties and private or shared open space.

5.4.2 Development Controls

1. For an attached and multi-dwelling housing, the rear boundary setbacks are measured from the wall of the building or the outer edge of a balcony/deck, to the adjacent property boundary. The minimum rear boundary setbacks are as follows:

Side and Rear Boundary Setbacks Attached and Multi-Dwelling Development		
Zone	**Minimum side and rear setback**	**Minimum side and rear setbacks where balconies or windows of living areas face the rear boundary at first floor level or above**
All zones	1.5m	1.5m
R2 Low Density Residential Zone	0.8 x ceiling height	1.0 x ceiling height
R3 Medium Density Residential Zone	0.8 x ceiling height	1.0 x ceiling height
R4 High Density Residential Zone	0.4 x ceiling height	0.6 x ceiling height

2. Where a basement parking area is provided for an attached dwelling development, the controls relative to basement parking areas for residential flat buildings will apply.

3. For attached dwelling developments containing three storeys and 4 or more dwellings, the additional separation/side setback requirements for residential flat buildings will apply.

4. Council may only consider granting a variation to the setback requirements where the following can be demonstrated to Council's satisfaction:

   (a) The siting of the building satisfies the setback objectives; and

   (b) Windows which are located on the side or rear boundary are primarily provided for natural light or ventilation purposes. This would include highlight windows with a minimum 1.7m sill, fixed obscure glass windows, glass bricks or windows with fixed louvres; and

   (c) The amenity of the adjoining property is not unreasonably affected; and

(d) The design will result in a significant improvement in amenity for residents who will occupy the proposed dwelling.

5.5 Building Character and Form

5.5.1 Objectives

(a) To design residential development to respond to the streetscape character. The Site and Context Analysis must inform the development proposal.

(b) To complement and enhance the visual character of the street and neighbourhood through appropriate building scale, form and detail.

(c) To reduce the visual dominance of garages as viewed from the street.

(d) To promote high quality architectural design that is contemporary and innovative.

(e) To ensure corner sites are developed as visually significant elements to promote a strong and legible character.

(f) To provide an identifiable and desirable street address to each building and dwelling.

(g) To define the street edge by creating a clear transition between private and public spaces along the street frontage.

(h) To allow for outlook and surveillance towards the street and the public domain.

5.5.2 Development Controls

1. The following elements must be incorporated in the building design of attached and multi-dwelling development:

   (a) Articulate and fragment building walls that address the street and add visual interest. The appearance of blank walls or walls with only utility windows on the front elevation is not permitted.

   (b) Avoid expanses of any single material.

   (c) Utilise high quality and durable materials and finishes.

   (d) Entrances must be visible at eye level from the street and well lit.

   (e) For those dwellings adjacent to the street frontage, the habitable rooms must face the street.

   (f) Ensure entrances can accommodate the movement of furniture.

   (g) Air conditioning units must not be visible from the street. Space shall be allocated and shown on plans for air conditioning units in order to demonstrate that this can be achieved.

   (h) All residential buildings must be designed with building frontages and entries clearly addressing the street frontage. Dwellings adjacent to the street boundary must have individual entries from the street.

(i) For attached dwellings on corner sites, each frontage of the development must present as the primary street frontage.

(j) Where garages are proposed on the front elevation they must be articulated, unless it can be demonstrated that the garages will not visually dominate the streetscape appearance of the building.

5.6 Access / Driveway Requirements

5.6.1 Objectives

(a) To provide adequate and safe vehicular access to all dwellings.

(b) To encourage driveways to be provided from lanes or secondary streets instead of major roads or primary street frontages, where such alternate access is available.

5.6.2 Development Controls

1. The development proposal must provide access to the site in accordance with the following controls:

   (a) Paving colour, texture and material should be sympathetic with the character of the precinct and reflect a pleasant visual appearance.

   (b) Provide driveways to parking areas from lanes and secondary streets rather than the primary road or street, wherever practicable.

   (c) The number of access points to a development must be kept to a minimum.

   (d) Locate driveways taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.

   (e) Long straight driveways should be avoided because these adversely dominate the streetscape and landscape. Curved driveways are more desirable. Landscaping between the buildings and the driveways is encouraged to soften the appearance of the hard surface.

   (f) All driveways must be located a minimum of 6 metres from the perpendicular of any intersection of any two roads.

   (g) Any driveway servicing a residential development is to be setback a minimum of 1.5m from any side property boundary.

   (h) Driveways are to be a maximum of 6m in width.

   (i) The design of driveway and crossovers must be in accordance with council's standard vehicle entrance designs.

2. All vehicles within a multi dwelling development must provide vehicular manoeuvring areas to all parking spaces so vehicles do not need to make more than a single point turn to leave the site in a forward direction. Direct reversing onto the street will only be considered where the garage fronts a secondary road, carrying reduced traffic volume and all other requirements of the policy are met.

3. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, being AS 2890.1.

4. Crossover and driveway widths relating must comply with the following:

Table 1: Crossover and driveway widths

No. Dwellings	Crossover Width	Driveway Width
1 to 2	Minimum 2.75m	Minimum 2.75m
3 to 5	3 –4m combined	Minimum 3m
6 to 20	4 – 6m combined to within 6m internally of the front property boundary	Minimum 3m
21 to 50	6 –8m combined	6m
> 50	3-4m each, separated	Minimum 3m each or 6m when combined

5. A minimum 6 metre wide driveway reserve/carriageway width is required for a battle-axe access handle upon a battle-axe lot.

5.7 Car Parking Requirements

5.7.1 Objectives

(a) To provide an adequate level of on site car parking based upon anticipated occupancy rates and proximity to public transport.

(b) To ensure that there is adequate provision for access to and manoeuvring within the development.

(c) To ensure that residential developments are designed to be accessible for pedestrians, cyclists and motorists.

(d) To ensure that integrated design of car parking facilities to minimise visual impacts.

(e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

5.7.2 Development Controls

1. On site car parking must be positioned to minimise impacts on the streetscape. Car parking must be located behind the building setback and be screened from view with well designed structures and vegetation. Car parking may also be located within a basement.

2. Car parking areas should be designed to conveniently, efficiently and appropriately serve residents and visitors of the site. This can be achieved in the following ways:

   (a) Ensuring that car parking areas are located close to entrances and access ways.

   (b) Car parking areas to be secure yet easily accessible for all residents.

   (c) Have clearly defined areas for visitor parking and disabled parking.

3. Parking for cars, motorcycles and bicycles must be provided and designed in accordance with the requirements contained in Traffic, Access, Parking and Servicing Chapter contained in Part E of this DCP.

5.8 Landscaping Requirements

5.8.1 Objectives

(a) To preserve and retain existing native trees and vegetation and encourage the planting of additional native vegetation.

(b) To enhance the appearance of housing through integrated landscape design.

(b) To improve the visual amenity by increasing the volume of substantial vegetation in urban areas.

(c) To reduce impervious areas on sites and increase soft landscape screening between side orientations of residential developments.

5.8.2 Development Controls

1. A minimum of 30% of the total site area must be provided as landscaped area. Landscaped area is defined in the Wollongong LEP 2009 as part of a site used for growing plants, grasses and trees, but does not include any building, structure or hard paved area. The landscaped area may also include landscaping on a podium, where that section of the podium is less or equal to than 1.2 metres in height and the minimum soil standards of this DCP (clause 6.11.2) are achieved. Any landscaped area on the site which is less than 1.5 metres in width is not included within the landscaped area calculations.

2. A minimum of two semi mature medium – large trees (minimum pot size 45L) are to be provided onsite in the landscaped area or deep soil zone and at least 3m from any existing or proposed dwelling, building or structure on the lot. In the instance where there is an existing mature tree/s onsite and these will be retained post development, only one additional semi mature medium – large tree is required.

3. Any landscaped or grassed areas within the front setback area will be included in the landscaped area calculations. Landscaping in this area must be in context with the scale and height of the multi dwelling housing development.

4. The required landscaped area must include a minimum 1.5 metre wide landscaping bed, which is provided along the side and rear boundaries of the site.

5. The following matters must be addressed within the submitted landscape plan:

    (a) Site landscaping must be integrated with the stormwater management controls. In particular, the location and nature of the on site stormwater detention basins should not conflict with landscaping areas and objectives.

    (b) Select appropriate species that are likely to survive in the specific environmental conditions of the site, orientation and microclimate.

    (c) Identify and retain where possible existing mature trees.

(d) Garden beds to be mulched and be separated from driveways or open space areas by an appropriate border or edge.

(e) The width of the landscape bed does not include kerbs or other hard borders or edges.

(f) Where driveways are located parallel to a property boundary, a minimum 1.5m landscape strip is required adjacent to the driveway.

(g) Landscaping to separate driveways from dwellings is also required to minimise the expanse of hardstand surfaces, define dwellings from common driveway areas and to promote variation in the alignment of driveway areas.

(h) Manoeuvring areas immediately adjacent to the living/dining rooms of dwellings is not permitted.

6. Street trees are required to be planted in accordance with the requirements contained in the Landscaping Chapter in Part E of this DCP.

5.9 Deep Soil Planting

5.9.1 Objectives

(a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation.

(b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife.

(c) To allow for increased water infiltration.

(d) To contribute to biodiversity.

5.9.2 Development Controls

1. The siting of the deep soil zone shall be determined following a Site and Context Analysis to investigate whether this area should be located:

   (a) Centrally within the site to allow for overlooking from dwellings within a development;

   (b) At the rear of the site to allow for separation from adjacent dwellings and to provide a continuous corridor of vegetation of native fauna; or

   (c) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.

2. A minimum of half of the landscaped area (i.e. 15% of the site) must be provided as a deep soil zone, where the deep soil zone is not located at the rear of the site. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 6m. Alternatively, the deep soil may extend along the full length of the rear of the site, with a minimum width of 6m. The area of deep soil planting must be continuous to ensure that the deep soil planting area is a singular uniform area and is not fragmented.

3. No structures, basement carparks, driveways, hardpaving, decks, balconies or drying areas are permitted within the deep soil zone.

4. The deep soil zone shall be densely planted with trees and shrubs. Where a multi dwelling housing development is to be strata titled, the deep soil zone may be retained within the common property or allocated to an individual unit entitlement, where such dwelling is directly adjacent.

5.10 Communal Open Space

5.10.1 Objectives

(a) To ensure that communal open spaces are of adequate size to be functional.

(b) To provide communal open space, which is accessible by all residents.

5.10.2 Development Controls

1. Developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at $5m^2$ per dwelling. Any area to be included in the communal open space calculations must have a minimum dimension of 5 metres. The communal open space must be easily accessible and within a reasonable distance from each dwelling be integrated with site landscaping, allow for casual social interaction, and be capable of accommodating recreational activities.

2. Where a minimum of 15% of the site is provided as a deep soil zone, combined use of part of the deep soil zone as communal open space may occur. The combined communal open space/deep soil area may be grassed but must contain significant shade trees. A maximum of 1/3 of the required communal open space area may be combined with the deep soil zone.

3. Areas of the communal open space should contain paving, children's playground equipment, barbeques, shade structures, swimming pools or the like, however these cannot be located within the deep soil zone.

4. At least 50% of the communal open space area must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.

5.11 Private Open Space

5.11.1 Objectives

(a) To ensure that private open spaces are of sufficient size to accommodate a range of uses and are accessible and connected to indoor spaces where appropriate

(b) To ensure functionality of private open space by reducing overlooking and overshadowing of such spaces

5.11.2 Development Standards

1. Private open space must be provided for each dwelling within an attached dwelling development in the form of a balcony, courtyard, terrace and/or roof garden.

2. Private open space for each dwelling within an attached dwelling housing development must comply with the following:

   (a) Private open space must be provided at the ground level or podium level. The courtyard or terrace must have a minimum dimension of 4 metres x 5 metres. This area must be separated from boundaries by at least 1.5 metres with a vegetated landscaping bed and must not encroach upon deep soil zone landscaping areas. Where a level courtyard is not possible, a deck or split level courtyard must have a minimum depth of 3 metres.

   (b) The primary private open area of at least 70% of the dwellings within a multi dwelling housing development must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

   (c) Private open space areas (courtyards) must not extend forward of the front building setback by greater than 900mm.

   (d) Private open space should be sited in a location, which provides privacy, solar access, and pleasing outlook and has a limited impact upon adjoining neighbours.

   (e) Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.

   (f) Clearly define private open space through use of planting, fencing or landscaping features.

   (g) Screen private open space where appropriate to ensure privacy.

3. Where part of the private open space is also provided in the form of a balcony, the following requirements must also be met:

   (a) The primary balconies must not address side setbacks.

   (b) The balcony must have a minimum area of $8m^2$ open space and a minimum width of 2 metres.

   (c) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.

   (d) The total combined area of all balconies in a building must not exceed 25% of the building floor space.

   (e) Individual balcony enclosures are not supported. Balcony enclosures must form part of an overall building façade design treatment and should not compromise the functionality of a balcony as a private open space area

5.12 Solar Access Requirements

5.12.1 Objectives

(a) To minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.

(b) To maximise solar access into living rooms and private open space of dwellings in the subject development.

(c) To use a consistent sunlight access assessment approach for the assessment of solar access issues.

5.12.2 Development Controls

1. Windows to living rooms of adjoining dwellings must receive 3 hours of sunlight between 9.00am and 3.00pm on 21 June.

2. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.

3 The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

4. Windows to north facing living rooms for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June.

5. At least 50% of the private open space area for each of the subject dwellings in the development must receive at least 3 hours of sunlight between 9.00am and 3.00pm on 21 June.

6. Shadow diagrams will be required for hourly intervals between 9.00 am and 3.00 pm for the 21 June winter solstice period which show the extent of overshadowing upon dwellings and rear private open space areas of adjoining dwellings. In certain cases, Council may require additional hourly interval shadow diagrams for the equinox period where it is necessary to determine the full extent of overshadowing upon the dwelling and / or private open space area of an adjoining property.

5.13 Additional Control for Multi Dwelling Housing - Dwelling Mix and Layout

5.13.1 Objectives

(a) To provide variety in dwelling sizes and layouts to cater for a range of household types and to assist housing affordability initiatives.

(b) To ensure that the internal arrangement of dwellings is functional and satisfies occupant's needs.

(c) To design dwellings to promote resident amenity and adaptability of use.

5.13.2 Development Controls

1. Provide a mix of dwelling sizes and layouts within larger multi-dwelling developments having ten (10) or more dwellings. This could include both variation in the number of bedrooms and gross floor areas of apartments, variety in the internal design or incorporating one, two and three bedroom dwellings to accommodate various resident requirements.

2. The selection of the number of bedrooms within developments shall be determined having regard to the sites context, geographic location and anticipated demographic characteristics.

3. Dwellings should be designed with internal spaces, which are flexible and adaptable to resident's requirements. This should involve the efficient utilisation of available floor space to maximise useable room areas. Apartment layouts should also respond to the sites opportunities, including views and aspect.

5.14 Additional Control for Multi Dwelling Housing - Adaptable Housing

5.14.1 Objectives

(a) To ensure that dwelling layout is sufficiently flexible for residents changing needs over time.

(b) To ensure that building design is sufficiently robust to accommodate mixed use and potential changes in use such as accommodating an office.

(c) To ensure a sufficient proportion of dwellings include accessible layouts and features to accommodate changing requirements of residents.

(d) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

5.14.2 Development Controls

1. Within a multi dwelling development incorporating more than six (6) dwellings, 10% of all dwellings (or at least 1 dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.

2. Where an adaptable dwelling is provided in the form of a villa and a double garage is required to be provided, Council will accept a single garage, which complies with the minimum adaptable car parking dimensions contained in the Traffic, Access, Parking and Servicing Chapter in Part E of this DCP. The single garage will be counted as two car parking spaces for the purpose of car parking calculations.

4. The Development Application must be accompanied by certification from a suitably qualified and experienced Access Consultant which confirms that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).

5.15 Additional Control for Multi Dwelling Housing - Crime Prevention through Environmental Design

1. Compliance with the requirements of Chapter E2 Crime Prevention through Environmental Design (CPTED) in this DCP.

6 RESIDENTIAL FLAT BUILDINGS

6.1 General

1. For development required to comply with SEPP 65 and the Apartment Design Guide 2015, the objectives, design criteria and design guidance relating to:
   (a) visual privacy,
   (b) solar and daylight access,
   (c) natural ventilation,
   (d) ceiling heights,
   (e) apartment size and layout,
   (f) private open space and balconies,
   (g) common circulation and spaces, and
   (h) storage,

   as detailed in Part 3 and Part 4 of the Apartment Design Guide, prevail over any inconsistent objective or control in this DCP.

2. In addition to the controls in this Section the controls within Section 4 (excluding 4.1 to 4.12 and 4.20 to 4.23) of this chapter that must also be taken into consideration when preparing a development application for Residential Flat Buildings.

3. This chapter should be read in conjunction with other relevant chapters of the DCP including but not limited to E2 CPTED, E3 Car Parking Access Servicing/Loading Facilities and Traffic Management; E6 Landscaping.

6.2 Minimum Site Width Requirement

6.2.1 Objectives

(a) To allow for development of sites, which are of sufficient width to accommodate the required building envelope, car parking and landscaping requirements.

(b) To promote the efficient utilisation of land.

(c) To encourage amalgamation of allotments to provide for improved design outcomes including greater solar access and amenity.

Ensure site is of sufficient width (24m) to accommodate setback and landscaping requirements

(Ref: Residential Flat Design Code)

6.2.2 Development Controls

1. The Wollongong LEP 2009 requires a minimum site width of 24 metres is required for residential apartment buildings. The width must be measured for the full length of the building envelope and perpendicular to the side boundary. Exceptions will only be considered for social housing developments.

2. Within the R1 General Residential, R3 Medium Density Residential and R4 High Density Residential zones, development for the purpose of a residential flat building must not result in the creation of an "isolated lot". ". An "isolated lot" is a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise existing development other than a single dwelling house and redevelopment of such adjoining properties is unlikely. This includes cases where there is high separation of ownership of dwelling ownership in the adjoining developments. Amalgamation of allotments will be required in the circumstance where an isolated allotment would otherwise be created.

3. Council will only allow development which would result in the creation of an "isolated lot", where it is demonstrated that:

   (a) The "isolated lot" achieves a site width of 24 metres or more and is capable of accommodating the proposed residential flat building, taking into account other relevant development controls..

   (b) The following planning principles as outlined in the NSW Land and Environment Court judgment in *Melissa Grech v Auburn Council*[2004] NSWLEC 40 are met:

      (i) Where a property will be "isolated" by a proposed development and that property cannot satisfy the minimum lot width requirements then negotiations between the owners of the properties should commence at an early stage and prior to the lodgement of the Development Application.

      (ii) Where no satisfactory result is achieved from the negotiations, the Development Application should include details of the negotiations between the owners of the properties. These details should include offers to the owner of the isolated lot. A reasonable offer for the purposes of determining the Development Application and addressing the planning implications of an "isolated lot", is to be based at least on one recent independent valuation report and may include other reasonable expenses likely to be incurred by the owner of the "isolated lot" in the sale of that property.

      (iii) The level of negotiation and any offers made for the "isolated lot" are matters that will be given weight in the consideration of the Development Application. The amount of weight will depend on the level of negotiation, whether any offers are deemed reasonable or unreasonable, any relevant planning requirements and the "matters for consideration" under Section 79C of the Environmental Planning & Assessment Act 1979.

4. In cases where the subject site is an existing "isolated lot", Council may consider a variation to the minimum site width requirement provided, in the opinion of Council, the proposed development will not cause any significant adverse overshadowing, privacy or amenity impact upon any adjoining development.

5. In certain existing "isolated lot" cases, a proposed development may not achieve its maximum development potential (eg maximum floor space ratio and height) where side and rear setbacks are varied and the development does not, in the opinion of Council, achieve:

   (a) Adequate separation between buildings to maintain reasonable levels of solar access, privacy and amenity to neighbouring dwellings;

(b) Adequate landscaping screening of the development to maintain the amenity of adjoining dwellings; and

(c) Maintain the streetscape amenity of the locality.

6.3 Front Setbacks

6.3.1 Objectives

(a) To reinforce the existing character of the street by acknowledging building setbacks.

(b) To define the spatial proportions of the street and define the street edge.

(c) To provide a transition between the public and private domain.

(d) To promote compatibility in front setbacks to provide unity in the building line.

6.3.2 Development Controls

1. For residential flat buildings the following setback requirements apply from the front property boundary to the front façade of the building:

   (a) The same distance as one or other of the adjoining buildings, provided the difference between the setbacks of the two adjoining dwellings is less than 2.0m.

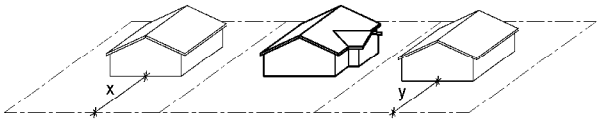
   (b) The average of the setbacks of the two adjoining buildings, if the difference between the setbacks of the buildings is greater than 2.0m.

   (c) A minimum front setback of 6m applies to residential apartment buildings where calculations of a) or b) result in a front setback of less than 6m.

2. On corner allotments, a minimum setback of 3m to the secondary street frontage from the dwelling façade must be provided.

3. Balconies, front courtyard fences and other building extrusions may be setback up to 900mm closer than the required front or secondary setback.

4. An increase in setbacks may be required to retain existing trees or respect adjacent heritage items.



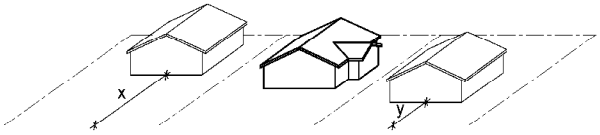


Figure 2: (Top) Where y- x is less than or equal to 2 metres, the setback equals x or y

Figure 3: (Bottom) Where y-x is greater than 2 metres, the setback equals the average of x and y

6.4 Side and Rear Setbacks / Building Separation

6.4.1 Objectives

(a) To provide adequate setbacks from boundaries and adjoining dwellings to retain privacy levels, views, sunlight and daylight access and to minimise overlooking.

(b) To optimise the use of land at the rear of the property and surviellance of the street at the front of the property.

(c) To control overshadowing of adjacent properties and private or shared open space.

(d) To encourage setbacks which reflect the rhythm of building siting and the separation between.

(e) To ensure that new development is scaled to support the desired area character with appropriate massing and space between buildings.

6.4.2 Development Controls

1. For residential flat buildings the following minimum setbacks shall be provided.

Side and Rear Setbacks Residential Apartment Buildings	
Building Height	**Minimum Side and Rear Setback**
Buildings up to 4 storeys (12 metres)	6 metres where a habitable room/balcony on development site 3.5 metres where a non-habitable room/blank wall
Buildings of 5 to 8 storeys (up to 25 metres)	9 metres where a habitable room/balcony faces an adjacent property 4.5 metres where a non-habitable room/blank wall faces an adjacent property

Note: The setback is measured from the side or rear wall of the building or balcony to the adjacent boundary.

2. Where Council proposes to provide a laneway adjacent to the rear or side boundary of a property, an additional setback, equal to the identified width of the laneway, must be provided.

6.5 Built Form

6.5.1 Objectives

(a) To promote high quality architectural design that is responsive and innovative.

(b) To ensure that new developments have well articulated and harmonious facades which define the public domain.

(c) To ensure corner sites are developed as visually significant elements to promote a strong and legible character.

(d) To provide an identifiable and desirable street address to each building and dwelling.

(e) To define the street edge by creating a clear transition between private and public spaces along the street frontage.

(f) To allow for outlook and surveillance towards the street and the public domain.

Examples of built form controls

6.5.2 Development Controls

1. All residential flat buildings must be designed by a qualified designer in accordance with *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development*. A Design Verification Statement must accompany the Development Application.

2. The design, height and siting of the development must respond to its context, being both the natural and built features of an area. The Site and Context Analysis must be utilised as the process by which the opportunities and constraints of the site are identified and the character of a local area defined.

3. The appearance of new development must be in harmony with the buildings around it and the character of the street. New development must contain or respond to the essential elements that make up the character of the surrounding urban environment. This character is created by elements such as building height, setbacks, architectural style, window treatment and placement, materials and landscaping.

4. The following elements must be incorporated into the building design:

(a) Define a base, middle and top related to the overall proportion of the building.

(b) Articulate all building elevations in both plan and section to reduce monotonous flat facades.

(c) Highly reflective finishes and curtain wall glazing are not permitted above ground level.

(d) Avoid expanses of any single material.

(e) Utilise high quality and durable materials and finishes.

(f) Avoid blank or solid walls and the use of dark or obscured glass on street frontages.

(g) Air conditioning units must be screened and not be visible from the street.

(h) For those dwellings adjacent to the street frontage, the habitable rooms must face the street.

(i) The main pedestrian entrance or a foyer must be 1.2m or less above natural ground level.

(j) Entrances must be visible at eye level from the street and well lit. Ensure entrances can accommodate the movement of furniture.

5. The design of roof forms must address the following:

(a) Lift over runs and service plants must be concealed within the roof of the building or relate to adjacent roof top rooms or open space.

(b) Where flat roofs are proposed, lift overruns and rooftop plant and machinery are to be obscured from view by parapets or designed to be incorporated with rooftop activities/features. Details of any rooftop overruns or equipment must accompany the development application for the residential apartment building.

(c) The siting of ventilation stacks within the landscaped areas will not be permitted.

(d) Landscaped and shaded areas on the roof of residential apartment buildings for private use by residents will be considered where residential amenity is not unreasonably affected.

6. Residential flat buildings which are located on corner sites must address the following:

(a) Emphasise verticality at corners, where possible, by concentrating the tallest portion of the building on the corner itself. Utilise design devices such as increased wall heights, splayed corner details, increased heights, expression of junction of building planes and other architectural features to reinforce the way finding attributes of street corners.

(b) Design corners to add variety and interest to the street and clarify the street hierarchy.

(c) Present each frontage of a corner building as a main street frontage.

Figure 4: Examples of Residential Flat Building design

6.6 Visual privacy

6.6.1 General

Visual privacy measures are designed to protect the privacy and amenity of occupants within a residential apartment or serviced apartment. Visual privacy measures allow occupants to carry out private functions within all rooms in the apartment as well as private balconies or open space courtyards, through limiting direct views or overlooking issues from adjoining buildings.

6.6.2 Objectives

(a) To provide reasonable levels of visual privacy externally and internally, during the day and at night-time.

(b) To maximise outlook and views from principal rooms and private open space without compromising visual privacy.

6.6.3 Development controls

1. New buildings should be sited and oriented to maximise visual privacy between buildings through compliance with minimum front, side and rear setback / building separation requirements.

2. The internal layout of buildings should be designed to minimise any direct overlooking impacts occurring upon habitable rooms and private balcony / open space courtyards, wherever possible by separating communal open space and public domain areas from windows of rooms, particularly sleeping room and living room areas.

3. Buildings are to be designed to increase privacy without compromising access to sunlight and natural ventilation through the following measures:

   (a) Off-setting of windows in new buildings from windows in existing adjoining building(s).

   (b) Living room windows, balconies and outdoor living areas are not to allow direct views into neighbouring dwellings or neighbouring private open space.

   (c) Recessed balconies and / or vertical fin elements between adjoining balconies to improve visual privacy.

   (d) Provision of solid, semi-solid or dark tinted glazed balustrading to balconies.

   (e) Orientate balconies and outdoor living areas to either the front or rear of the building and not side boundaries where potential overlooking or amenity impacts may occur upon directly adjoining dwellings or private open space areas of side adjoining development.

   (f) Provision of louvers or screen panels to windows and / or balconies.

   (g) Provision of perimeter landscaped screen / deep soil planting.

   (h) Incorporating planter boxes onto apartment balconies to improve visual separation between apartments within the development and adjoining buildings.

   (i) Provision of pergolas or shading devices to limit overlooking of lower apartments or private open space courtyards / balconies.

4. Habitable room windows in the subject building with a direct sightline to habitable room windows in an adjacent dwelling within 12 metres must be:

   (a) Off-set from the edge of one window to the edge of the other by a distance sufficient to limit views into the windows of the adjacent building; or

   (b) Sill heights at least 1.7 metres above floor level; or

   (c) Fixed obscure glazing in any part of the window below 1.7 metres above floor level.

5. Windows, balconies, stairs, terraces, decks, verandahs or other private areas which provide direct overlooking opportunities from the development into the private open space courtyard of an adjoining property must be obscured or screened. However, no screening is required where such windows have sill heights of at least 1.7 metres above the floor level or the windows are obscured glazing.

6.7 Acoustic privacy

6.7.1 General

1. This clause applies to proposals involving the erection of new residential flat buildings upon land directly adjoining or opposite a business or industrial zone or in cases where there is an existing nearby land use which generates external noise from either the land use activity itself or from patrons attending or leave the nearby premises.

2. Acoustic privacy is a measure of sound insulation between residential apartments and between external and internal spaces.

6.7.2 Objective

(a) To ensure a high level of amenity by protecting the privacy of occupants both within apartments and in private open space areas / balconies in the building.

6.7.3 Development Control

1. Residential apartments and / or serviced apartments should be arranged in a building, to minimise noise transition between apartments by:

   (a) Locating busy, noisy areas next to each other and quieter areas, next to other quieter areas (eg living rooms with living rooms and bedrooms with bedrooms);

   (b) Using storage or circulation zones within an apartment to buffer noise from adjacent apartments, mechanical services or corridors and lobby areas; and

   (c) Minimising the amount of party (shared) walls with other apartments.

2. All residential apartments and / or serviced apartments within a building should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as appropriate insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).

3. Appropriate sound attenuation measures should be considered between each floor in the development, to minimise potential sound transmission into any residential apartment below.

4. Any residential apartment which faces towards a major (busy) road must be designed in accordance with the requirements contained in Chapter E4: Development near Railway Corridors and Major (Busy) Roads in this DCP.

5. The Statement of Environmental Effects (SEE) accompanying the development must demonstrate what acoustic measures will be provided to windows of sleeping areas and living areas for each residential apartment or serviced apartment in the development. The proposed acoustic measures must also be shown on the required architectural floor layout and elevation plans for the development.

   Alternatively, the Statement of Environmental Effects (SEE) may include an acoustical impact assessment study which outlines alternative acoustic treatment measures for residential apartment(s) and / or serviced apartment(s) in the development. The acoustic impact assessment study must be carried out by a suitably qualified and experienced acoustic consultant (ie a person who is a Member

of the Australian Acoustical Society, the Institution of Engineers or the Association of Australian Acoustical Consultants).

6.8 Car Parking Requirements

6.8.1 Objectives

(a) To provide an adequate level of on site car parking based upon anticipated occupancy rates.

(b) To ensure that residential developments are designed to be accessible for pedestrians, cyclists and motorists.

(c) To ensure integrated design of car parking facilities to minimise visual impacts.

(d) To provide underground parking, wherever feasible.

(e) To ensure the provision of facilities such as bike racks, which encourage the use of alternative methods of transport.

6.8.2 Development Controls

Refer to E3 Car Parking, Access, Servicing/Loading Facilities and Traffic Management.

6.9 Basement Car Parking

6.9.1 Objective

(a) To integrate the siting, scale and design of basement parking into the site and building design.

6.9.2 Development Controls

1. Where parking is provided within a basement level(s), the scale and siting of the basement car park must not impact upon the ability of the development to satisfy minimum landscaping and deep soil zone requirements.

2. The roof of any basement podium, measured to the top of any solid wall located on the podium must not be greater than 1.2m above natural or finished ground level, when measured at any point on the outside walls of the building. On sites with a greater slope, a change in level in the basement must be provided to achieve this maximum 1.2m height.

   Generally variation to this 1.2m podium height limit will not be supported, however Council recognises that there may be occasions where this standard cannot be achieved. Should such a circumstance arise, the additional portion of the basement podium above 1.2m height must be included in the total gross floor area calculation for the development.

3. In addition, the following must be satisfied:

   (a) Landscaped terraces are provided in front of the basement podium to reduce the overall visual impact;

   (b) The height of the basement does not result in the building having a bulk and scale which dominates the streetscape; and

(c) The main pedestrian entry to the building is identifiable and readily accessible from the street frontage, including access by disabled persons.

4. The following setbacks from side and rear boundaries apply to basement podiums:

(a) Where the height of the basement podium (measured to the top of any solid wall located on the podium) is less than 1.2m above natural or finished ground level (whichever distance is greater), the basement podium may extend to the property boundary. A minimum 1.5m wide landscaped planter must be provided on the perimeter of any section of the basement podium which is located on a side or rear property boundary. Such planter must prevent direct access to the outer edge of the podium, to minimise direct overlooking of adjacent dwellings and open space areas.

(b) Any portion of the basement (measured to the top of any solid wall located on the podium) which exceeds 1.2m above natural or finished ground level (whichever distance is greater) must be setback from the property boundaries by a ratio of 1:1 (height:setback). A minimum setback of 1.5m applies in this instance, with this area to be landscaped.

5. Where parking is provided in a basement, ventilation structures/openings/exhausts for basement parking and air-conditioning units must be orientated away from windows of habitable rooms and private open space areas on the subject land as well as adjoining sites. Ventilation grills must be integrated into the design of the façade of the building to minimise their visual impact.

6. The visual impact of all basement walls must be minimised through the use of various design techniques including well proportioned ground level articulation and relief, mixed finishes and materials, terracing and/or dense landscaping.

7. Basements must be protected from inundation from 100-year ARI flood levels (or greater).

8. Basement car park areas must be located to optimise deep soil planting around the building and allow for natural ventilation to be achieved. Integrating the podium design into the overall design of the development and limiting the extent to which the podium extends beyond the building footprint will minimise the impact of the basement parking areas on the streetscape.

6.10 Access Requirements

6.10.1 Objectives

(a) To provide adequate and safe vehicular access to basement car parking areas.

(b) To ensure that all car parking areas have satisfactory manoeuvring areas to enable vehicles to leave the site in a forward direction.

6.10.2 Development Controls

1. The development proposal must provide access to the site which is compliant with the following controls:

(a) Provide driveways to parking areas from lanes and secondary streets rather than the primary street, wherever practical.

(b) Locate driveways taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.

(c) All driveways must be located a minimum of 6 metres from the perpendicular of any intersection of any two roads.

(d) Any driveway servicing a residential development is to be setback a minimum of 1.5m from any side property boundary.

(e) Driveways are to be a maximum of 6m in width.

(f) The design of driveway crossovers must be in accordance with council's standard vehicle entrance designs.

2. All vehicles within a residential apartment building must provide vehicular manoeuvring areas to all parking spaces so vehicles do not need to make more than a single point turn to leave the site in a forward direction.

3. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard, being AS 2890.1. Crossover and driveway widths relating must comply with the following:

No. Dwellings	Crossover Width	Driveway Width
3 to 5	3 –4m combined	Minimum 3m
6 to 20	4 –6m combined to within 6m internally of the front property boundary	Minimum 3m
21 to 50	6 –8m combined	6m
> 50	3-4m each, separated	Minimum 3m each or 6m when combined

4. Minimum 6 metre wide driveway reserve/carriageway width required for battleaxe lots – battle-axe handles.

6.11 Landscaping Requirements

6.11.1 Objectives

(a) To preserve and retain existing native trees and vegetation and encourage the planting of additional significant vegetation,

(b) To ensure landscape design responds to the existing site conditions including changes in levels, views, and significant landscape features including trees and rock outcrops.

(c) To enhance the appearance of housing through integrated landscape design.

(d) To improve the visual amenity of the City by increasing the volume of substantial vegetation in urban areas.

(e) To reduce impervious areas on sites and increase soft landscape screening between side orientations of residential developments.

(f) To encourage the use of green walls and roofs in communal open space and to enhance the environmental performance of the development.

6.11.2 Development Controls

1. A minimum of 30% of the total site area must be provided as landscaped area. Landscaped area is defined in the Wollongong LEP 2009 as part of a site used for growing plants, grasses and trees, but does not include any building, structure or hard paved area. The landscaped area may also include landscaping on a podium, where that section of the podium is less or equal to than 1.2 metres in height and the minimum soil standards below are achieved. Any landscaped area on the site which is less than 1.5 metres in width is not included within the landscaped area calculations.

Minimum soil standards for planting on structures or podiums

Plant type	Definition	Soil Volume	Soil Depth	Soil Area
Large trees	12-18m high, up to 16m crown spread at maturity	150m^3	1,200mm	10m x 10m or equivalent
Medium trees	8-12m high, up to 16m crown spread at maturity	36m^3	1,000mm	6 x 6m or equivalent
Small trees	6-8m high, up to 16m crown spread at maturity	16m^3	800mm	4 x 4m or equivalent
Shrubs			500-600mm	
Ground cover			300-450mm	
Turf			300 mm	

*Sub-surface drainage requirements are in addition to the above minimum soil depths.

Source: adapted from Apartment Design Guide (July 2015)

2. Any landscaped or grassed areas within the front setback area will be included in the landscaped area calculations. Landscaping in this area must be in context with the scale and height of the residential flat building.

3. Landscaped planters located on the podium level over any basement carparking will also be included within the landscaped area requirements, where such landscaping provides minimum soil depths for growth of vegetation.

4. The required landscaped area must include a minimum 1.5 metre wide landscaping bed, which is provided along the side and rear boundaries of the site.

5. Where private or communal open space is located on the rooftop provide 1.5 metre wide landscaped beds or screening devices, setback 1.5 metre from the edge of the building façade, to avoid overlooking into neighbouring properties.

6. The minimum number of trees to be planted onsite is as specified in the table below [or a minimum of 1 medium tree (minimum pot size 45L), whichever is greater]. Trees are to be planted in the deep soil zone or landscaped area on the site and at least 3m from any existing or proposed dwelling, building or structure.

Site area	**Tree planting**
Up to 1,500m2	1 large tree or 2 medium trees per 90m2 of deep soil zone. For sites with less than 90m2 of deep soil zone, 1 medium tree is required.
Greater than 1,500m2	1 large tree or 2 medium trees per 80m2 of deep soil zone

Source: Apartment Design Guideline, July 2015

7. The following matters must be addressed within the submitted landscape plan:

   (a) Site landscaping must be integrated with the stormwater management controls. In particular, the location and nature of the on site stormwater detention basins should not conflict with landscaping areas and objectives.

   (b) Select appropriate species that are likely to survive in the specific environmental conditions of the site, orientation and microclimate.

   (c) Identify and retain where possible existing mature trees.

   (d) Garden beds to be mulched and be separated from driveways or open space areas by an appropriate border or edge.

   (e) The width of the landscape bed does not include kerbs or other hard borders or edges.

   (f) Where driveways are located parallel to a property boundary, a minimum 1.5m landscape strip is required adjacent to the driveway.

8. Street trees are required to be planted in accordance with the requirements contained in the Landscaping Chapter in Part E of this DCP.

6.12 Deep Soil Zone

6.12.1 Objectives

(a) To protect existing mature trees on a site and encourage the planting of additional significant vegetation.

(b) To encourage the linkage of adjacent deep soil zones on development sites, to provide habitat for native indigenous plants and birdlife and provide privacy and amenity for existing and future residents.

(c) To allow for increased water infiltration.

(d) To contribute to urban biodiversity.

6.12.2 Development Controls

1. The siting of the deep soil zone must be determined following a site analysis to investigate whether this area should be located:

   (a) Centrally within the site to allow for overlooking from dwellings within a development;

   (b) At the rear of the site to allow for separation from adjacent dwellings and to provide a continuous corridor of vegetation of native fauna; or

   (c) Elsewhere within a site to allow for retention of significant trees and attain maximum access to sunlight.

2. A minimum of half of the landscaped area (i.e. 15% of the site) must be provided as a deep soil zone, where the deep soil zone is not located at the rear of the site. The deep soil zone may be located in any position on the site, other than forward of the building line, subject to this area having a minimum dimension of 6m. Alternatively, the deep soil may extend along the full length of the rear of the site, with a minimum width of 6m. The area of deep soil planting must be contiguous.

3. No structures, basement car parks, driveways, hard paving, decks, balconies or drying areas are permitted within the deep soil zone.

4. The deep soil zone must be densely planted with trees and shrubs. Where a residential apartment building is to be strata titled, the deep soil zone must be retained in the common property and be managed by the body corporate.

6.13 Communal Open Space

6.13.1 Objectives

(a) To ensure that communal open spaces are of adequate size to be functional.

(b) To provide communal open space which is accessible by all residents.

6.13.2 Development Controls

1. Developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at $5m^2$ per dwelling. Any area to be included in the communal open space calculations must have a minimum dimension of 5 metres.

2. The communal open space must be easily accessible and within a reasonable distance from apartments, be integrated with site landscaping, allow for casual social interaction and be capable of accommodating recreational activities.

3. Where a minimum of 15% of the site is provided as a deep soil zone, combined use of part of the deep soil zone as communal open space may occur. The combined communal open space/deep soil area may be grassed but must contain significant shade trees. A maximum of 1/3 of the required communal open space area may be combined with the deep soil zone.

4. Areas of the communal open space which are to be paved or which will contain shade structures, swimming pools or the like cannot be located within the deep soil zone.

5. The communal open space area must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.

6.14 Private Open Space

6.14.1 Objectives

(a) To ensure that private open spaces are of sufficient size to accommodate a range of uses and are accessible and connected to indoor spaces where appropriate.

(b) To ensure functionality of private open space by reducing overlooking and overshadowing of such spaces.

(c) To ensure that balconies are integrated into the overall architectural form and detail of residential flat buildings.

(d) To ensure balconies are functional and responsive to local context and climate thereby promoting the enjoyment of outdoor living for residents.

6.14.2 Development Controls

1. Private open space must be provided for each dwelling within a residential apartment building in the form of a balcony, courtyard, terrace and/or roof garden.

2. Private open space for each dwelling within a residential apartment building must comply with the following:

   (a) The courtyard/terrace for the ground level dwellings must have a minimum area of 25m^2 and width of 2 metres. This area must be separated from boundaries by at least 1.5m with a vegetated landscaping bed and must not encroach upon deep soil zone landscaping areas.

   (b) The primary private open area of at least 70% of the dwellings within a residential apartment building must receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

   (c) Private open space areas (courtyards) must not extend forward of the front building setback by greater than 900mm.

   (d) Private open space should be sited in a location which provides privacy, solar access, and pleasing outlook and has a limited impact upon adjoining neighbours.

   (e) Design private open spaces so that they act as direct extensions of the living areas of the dwellings they serve.

   (f) Clearly define private open space through use of planting, fencing or landscaping features.

   (g) Screen private open space where appropriate to ensure privacy.

3. Where private open space is provided in the form of a balcony, the following requirements must also be met:

   (a) Avoid locating the primary balconies where they address side setbacks.

(b) The balcony must have a minimum area of $12m^2$ open space and a minimum depth of 2.4 metres.

(c) The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.

(d) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.

4. The enclosure of balconies on existing residential flat buildings will generally not be permitted due to their negative impact on maximum floor space controls, fire rating, building aesthetics and form, and the availability and functionality of private open space.

5. Balcony screening and climate control elements shall be provided in the initial design of new residential flat buildings. Operable screens, pergolas, shutters, operable walls or similar shall be provided in locations where noise or high winds prohibit reasonable outdoor use (i.e. next to rail corridors, busy roads and tall towers).

6. Balcony screening and climate control will only be permitted by Council for existing residential flat buildings if the following requirements are met:

(a) A proposal is submitted for an overall building façade design treatment. This need not include the installation of building elements to all balconies but shall exhibit an appropriate pattern and proportion within the overall façade composition (i.e. treatments may vary depending upon the type and location of balconies at the base, middle or top of facades).

(b) The proposal involves the written agreement of all of the owners of unit facades that will be affected (e.g. if screening is proposed to four out of six balconies located on the north façade, the agreement of all owners of units on the north façade is required even if all units are not directly affected by the works).

(c) The proposal does not compromise the functionality of a balcony as a private open space area nor reduce the aesthetic quality or articulation of the building.

(d) The proposal improves the functionality of the balcony and thereby promotes the enjoyment of the outdoor living area

(e) The use of curtain wall glazing or an expanse of glazing is not permitted. Any glazing used to screen balconies shall be broken up by framing (e.g. louvers) which also casts shadows on the glass in order to reduce reflectivity and building bulk.

(f) The design integrates with existing balustrades and/or involves the removal of balustrades to ensure the additions do not appear as a ‘retrofit’.

(g) The design integrates with the existing façade composition and increases the variety in façade design particularly for existing facades that exhibit little variation in materials, finishes and form. This may necessitate other modifications to façades such as the installation of awnings, pergolas and/or blade walls, a new colour scheme, and/or cornice treatment.

(h) Coloured elevations and a photomontage shall be submitted with a Development Application.

(i) If staged installation is proposed then the approved design shall be included as a by-law attached to the strata plan of the residential flat building prior to issue of an Occupation

Certificate for the first stage in order to ensure that the installation of screening/climate control elements accord with an overall building façade design treatment and can be undertaken by various owners when it suits them.

Figure 5: Examples of balcony screening and climate control elements. Reference: Residential Flat Design Code

6.15 Adaptable and Universally Designed Housing

6.15.1 Objectives

(a) To ensure that dwelling layout is sufficiently flexible for residents' changing needs over time.

(b) To ensure a sufficient proportion of dwellings include accessible layouts and features, and universally designed features to accommodate changing requirements of residents.

(c) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

6.15.2 Development Controls

1. Within a residential apartment building, 10% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.

2. Where possible, adaptable dwellings shall be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.

3. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).

4. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the Traffic, Access, Parking and Servicing Chapter in Part E of this DCP.

5. Within a residential apartment building incorporating more than six (6) dwellings, 10% of all dwellings (or at least 1 dwelling) must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015). All proposed livable dwellings must be clearly identified on the submitted DA plans.

6.16 Access for People with a Disability

6.16.1 General

1. The provision of continuous path of travel is required to the development to ensure equitable access for all people including people with a disability. Refer to Access for People with a Disability in Part E of this DCP.

6.17 Apartment Size and Layout Mix for Larger Residential Flat Building Developments

6.17.1 Objectives

(a) To provide variety in apartment sizes and layouts to cater for a range of household types.

(b) To ensure that the internal arrangement of apartments is functional and satisfies occupant's needs.

(c) To design apartments to promote resident amenity and adaptability of use.

6.17.2 Development Controls

1. A mix of apartment sizes and layouts is required for larger residential apartment buildings involving ten (10) or more dwellings. This could include both variation in the number of bedrooms and gross floor areas of apartments, variety in the internal design or incorporating single and two level apartments to accommodate various resident requirements.

2. The selection of the number of bedrooms within developments shall be determined having regard to the site's context, geographic location and anticipated market demands. For residential apartment buildings having ten (10) or more dwellings, a minimum of 10% of the apartments must be one bedroom and/or studio apartments, to provide for housing choice.

3. Consideration should be given to the design of apartments to encourage future flexibility. This may include opportunities to combine smaller apartments with adjacent dwellings should residents' lifestyle change or may include the ability to accommodate home office opportunities. Consideration should also be given to the location of one and three bedroom apartments on the ground level where accessibility is more easily achieved for disabled, elderly people or families with children.

4. Apartments must be designed with internal spaces which are flexible and adaptable to resident's requirements. This should involve the efficient utilisation of available floor space to maximise useable room areas. Apartment layouts must respond to the site's opportunities, including views and aspect.

5. Ceiling heights of apartments must be selected to encourage the penetration of natural sunlight into all areas of the building. Provide the following minimum floor to ceiling heights, for residential flat buildings:

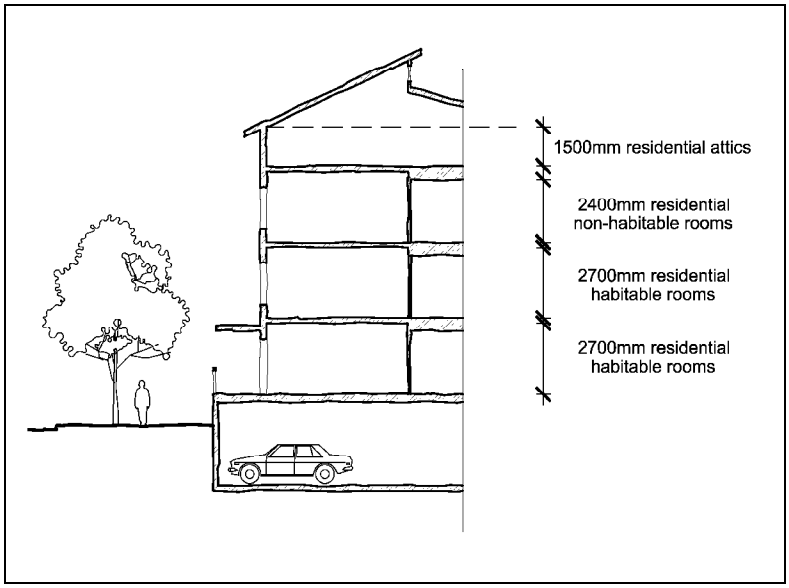
(a) 2.7m minimum for all habitable rooms on all floors;

(b) 2.25 to 2.4m minimum for non habitable rooms on all floors;

(c) For two storey apartments, 2.4m minimum for the second storey if 50% or more of the apartment has 2.7m minimum ceiling heights;

(d) For 2 storey units with a two storey void space, 2.4m minimum ceiling heights;

(e) Attic spaces, 1.5m minimum wall height at edge of room with a 30 degree minimum ceiling slope.



6.18 Solar Access

6.18.1 Objectives

(a) To minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.

(b) To maximise solar access into living rooms and private open space of dwellings in the subject development.

(c) To provide an appropriate level of natural sunlight to living spaces to improve residential amenity and minimise the use of artificial light.

(d) To use a consistent sunlight access assessment approach for the assessment of solar access issues.

6.18.2 Development Controls

Solar Access into Residential Apartment Buildings

1. Residential apartment buildings must aim to maximise their level of northern exposure to optimise the number of dwellings having a northern aspect. Where a northern aspect is available, the living spaces and balconies of such apartments must typically be orientated towards the north.

2. The development must maximise the number of apartments with a dual orientation. Single aspect, single storey apartments should preferably have a northerly or easterly aspect and a reduced depth to allow for access of natural light to all habitable spaces.

3. Shading devices should be utilised where necessary, particularly where windows of habitable rooms are located on the western elevation.

4. The living rooms and private open space of at least 70% of apartments should receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm.

5. The number of single aspect apartments with a southerly aspect (south-westerly to south-easterly) is limited to a maximum of 10% of the total number of apartments proposed.

6. Provide vertical shading to eastern and western windows. Shading can take the form of eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.

Solar Access into Living Areas and Private Open Space Area of Adjoining Properties

1. The design of the development must have regard to the existing and proposed level of sunlight which is received by living areas and private open space areas of adjacent dwellings. Sensitive design must aim to retain the maximum amount of sunlight for adjacent residents. Council will place greatest emphasis on the retention of sunlight within the lower density residential areas.
2. Windows to living rooms and private space areas in adjacent residential buildings must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.
3. In determining access to sunlight, overshadowing by fences, roof overhangs and changes in level must be taken into consideration. Overshadowing by vegetation should also be considered, where dense vegetation appears as a solid fence.
4. In areas undergoing change, the impact of overshadowing on development likely to be built on adjoining sites must be considered, in addition to the impacts on existing development.
5. At least 50% of the private open areas of adjoining residential properties must receive at least 3 hours of sunlight between 9.00am and 3.00pm on June 21.
6. Shadow diagrams will be required for hourly intervals between 9.00 am and 3.00 pm for the 21 June winter solstice period which show the extent of overshadowing upon dwellings and rear private open space areas of adjoining dwellings. Additional hourly interval shadow diagrams for the equinox period where it is necessary to determine the full extent of overshadowing upon the dwelling and / or private open space area of an adjoining property.

6.19 Natural Ventilation

6.19.1 Objectives

(a) To encourage apartment design which allows for natural ventilation of habitable rooms.

(b) To provide natural ventilation in non –habitable rooms, where possible.

(c) To reduce energy consumption by minimising the use of mechanical ventilation.

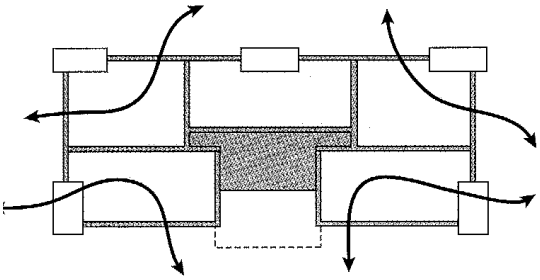


Figure 6: Natural Ventilation, Corner apartments encourage natural ventilation flows. (Ref: Residential Flat Design Code)

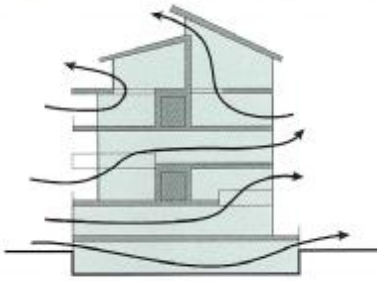


Figure 7: This optimal layout allows air flow directly from one side of the apartment to the other
(Ref: Residential Flat Design Code)

6.19.2 Development Controls

1. All residential apartment buildings shall have a building depth of between 10 and 18 metres. The depth is measured across the shortest dimension of the building. Dwellings should be a maximum depth of 21 metres, measured from the outside of the balcony.

   Variation to this standard will only be considered where it can be demonstrated that apartments will achieve the minimum requirements with regard to natural ventilation. This may be achieved where apartments have a wider frontage, or increased ceiling and window height to allow for greater penetration of natural light. The building depth is measured across the shortest access, excluding the depth of any unenclosed balconies.

2. A minimum of sixty percent (60%) of all residential apartments shall be naturally cross ventilated.

3. Twenty five (25%) of kitchens within a development must have access to natural ventilation. Where kitchens do not have direct access to a window, the back of the kitchen must be no more than 8 metres from a window.

4. Single aspect apartments must be limited in depth to 8 metres from a window.