

MIXED USE DEVELOPMENT

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INTRODUCTION

The objectives and controls in this Part guide development of retail, business and mixed use buildings in meeting the aims and objectives within the KLEP.

Mixed use buildings, as defined in the KLEP, are located within the E1 Local Centres, MU1 Mixed Use and B1 Neighbouhood Centres, and are composed of a mixture of two or more of the following uses:

- i) retail or business premises at ground and lower levels; and
- ii) residential apartments on upper levels; and/or
- iii) offices on upper levels.

Mixed use developments provide for a variety of uses and activities within a building. They encourage use of the locality, particularly at street level, outside the working day, adding vibrancy and life to the streets and increased levels of surveillance and safety. A mix of uses within the same building are best located when retail and business activity at ground level and lower levels to street frontages assist street activation, and residential uses requiring privacy and noise mitigation are located on upper levels.

Mixed Use developments are to consider the controls and objectives within Part 14 Urban Precincts and Sites. Where there is an inconsistency between the controls in this Part 8 and Part 14, then the latter prevails to the extent of the inconsistency.

Where a development in the E1 Local Centre, or MU1 Mixed Use, is proposed to only incorporate commercial uses with no residential component, the proposal is to comply with and will be assessed under the controls for Non-Residential and Office Buildings in Part 9 of this DCP.

Where a proposed development only incorporates residential purposes, it is considered as a Residential Flat Building and is to comply with and will be assessed under Part 7 of this DCP.

If a proposed mixed use development provides residential dwellings to any part of the ground floor street frontage, then it will be considered a Residential Flat Building and assessed under Part 7 of this DCP. To be considered as a Mixed Use building, the development has to provide commercial uses to the entire ground floor street frontage with associated active street frontage.

Single use developments are not to compromise the achievement of the projected land use and density envisaged by the KLEP for the medium term.

Where a development only involves refurbishment works or alterations/ additions to existing buildings, new elements are to meet the requirements of this Part.

INTRODUCTION (continued)

SEPP (Housing) 2021, stipulates nine design quality principles which are to be achieved by the residential component of mixed-use buildings. These are as follows:

- i) Principle 1: Context and neighbourhood character
- ii) Principle 2: Built form and scale
- iii) Principle 3: Density
- iv) Principle 4: Sustainability
- v) Principle 5: Landscape
- vi) Principle 6: Amenity
- vii) Principle 7: Safety
- viii) Principle 8: Housing diversity and social interaction
- ix) Principle 9: Aesthetics

In addition, the following aspects of residential flat building development are to be consistent under (*Housing*) 2021 and the associated *Apartment Design Guide*: visual privacy, solar and daylight access, natural ventilation, ceiling heights, apartment size and layout, private open space and balconies, common circulation and spaces, and storage.

The aims of this Part are to:

- Ensure that development is in keeping with the garden character and high quality built environment of Ku-ring-gai by making provision for quality landscaping, including tall trees to the streetscape.
- ii) Encourage development which harmonises with and contributes to the landscape and is sympathetic to the street and locality in which it is proposed.
- iii) Ensure that with each development the public domain aspect supports and contributes to the conservation and replenishment of the tree canopy of Ku-ring-gai, including locally occurring native tree species suited to the site.
- iv) Protect and minimise the impact of development on adjoining properties
- v) Protect and minimise the impact of development on the natural environment
- vi) Ensure development that minimises the depletion of raw materials and non-renewable resources
- vii) Ensure that development meets the needs of the present without compromising the ability of future generations to meet their own need.
- viii) Encourage development of the highest possible architectural, environmental and amenity standards.

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8A Site Design

- 8A.1 Local Character and Streetscape
- 8A.2 Site Layout
- 8A.3 Building Setbacks
- 8A.4 Building Separation
- 8A.5 Wind Impact
- 8A.6 Site Coverage
- 8A.7 Deep Soil Landscaping

READ WITH

SECTION A PART 2 - Site Analysis

SECTION B PART 14 - Urban Precinct and Sites PART 20 - Development Near Road or Rail Noise SECTION C PART 21 - General Site Design

REFER TO

LIVABLE HOUSING DESIGN GUIDELINES

REFER TO

SEPP (HOUSING) 2021

APARTMENT DESIGN GUIDE



8A.1 LOCAL CHARACTER AND STREETSCAPE

Further controls that may apply:		
SECTION A PART 2 – Site Analysis	SECTION C PART 21 – General Site Design	
Objectives	Controls	
 To ensure the development is sensitive to the landscape setting, environmental conditions and established character of the street and locality. To ensure the development conserves and enhances the visual character of the street with partitcular reference to integration of: architectural themes; building scale and setbacks; and landscape themes. To ensure development provides a positive contribution to the public domain and all areas shared by the community. To ensure that the visual, scenic and environmental qualities on visually prominent sites are maintained. 	 All mixed use developments are to be designed by an architect registered with the NSW Architects Registration Board. <i>Visual Character</i> Design components of new development are to be based on the existing predominant and high quality characteristics of the local neighbourhood. The appearance of the development is to maintain the local visual character by considering the following elements: visibility of on-site development when viewed from the street, public reserves and adjacent properties; and relationship to the scale, layout and character of the streetscape of Ku-ring-gai. The predominant and high quality characteristics of the local neighbourhood are to be identified and considered as part of the site analysis at Part 2 of the DCP. Note: Local character and streetscape is created by many features including, but not limited to: kerbs, setbacks, footpath treatment, building separation and spaces between buildings, access arrangements, street tree planting, tall tree canopy backdrop to the horizon, native vegetation and gardens, topography, site and street geometry, as well the architecture. <i>Public Domain and Communal Space</i> Development is to integrate with surrounding sites by: being of an appropriate scale retaining consistency with the surrounds when viewed from the street, public domain or adjoining development; minimising overshadowing; and integrating built form and soft landscaping (gardens and trees) within the tree canopy that links the public and private domain throughout Ku-ring-gai. 	

8A.1 LOCAL CHARACTER AND STREETSCAPE (continued)

Controls

Visually Prominent Sites

- 6 Development on visually prominent sites is to:
 - i) be of high architectural and aesthetic quality;
 - ii) be integrated into the existing landscape through the site planning process and avoid tall and bulky structures;
 - iii) have a selection of external colours and finishes that are sensitive to the site and locality;
 - iv) retain significant landscape and vegetation elements;
 - v) consider views to the site as well as those from the site; and
 - vi) soften visual impact by extensive landscaping including tall and medium sized trees and shrubs.

Note: Refer to Part 1B Dictionary for definiton of Visually Prominent Sites.

7 Colours of materials used in sites adjoining or in close proximity to bushland areas and Heritage Conservation Areas are to be in harmony with the built and natural landscape elements of the area.

8A.2 SITE LAYOUT

SECTION A	SECTION B SECTION C
PART 2 - Site Analysis	PART 20 - Development Near Rail Corridors and Busy Roads PART 21 - General Site Design PART 23.7 - General Acoustic Privacy
Objectives	Controls
1 To ensure fundamental design decisions are appropriate to the site.	1 The site layout is to demonstrate a clear and appropriate design strategy and arrangement of building mass in response to the Site Analysis in Part 2 Site Analysis of this DCP. Demonstration of design strategies based on Site Analysis is to include:
2 To ensure detailed design decisions are founded on an appropriate site strategy determined through site analysis	 building location and orientation on the site optimising the northern aspect, and relating to neighbouring developments, geographical aspect, views, access etc;
through site analysis. 3 To ensure that site planning for mixed use	 response of building development in maintaining site characteristics within the subject site, such as topography, vegetation, significant trees, any special features, etc.
buildings responds to site attributes such as	iii) internal layouts of buildings that respond to (i) above and be consistent with the requirements of the DCP
streetscape, character, existing vegetation and topography.	iv) limited apartments with no direct sunlight.2 A drawing and supporting written information is to demonstrate how
4 To ensure high impact elements such as noise	the building and its layout has applied and responded to the site analysis conducted in Part 2 of this DCP.
sources are considered early in the design stage	3 For requirements on development near noise sources refer to Section B Part 21 Development Near Rail Corridors and Busy Roa in this DCP
5 To achieve a high standard of amenity for future residents.	4 Any building with a frontage to the street is to address that street.
5 To minimise impacts on the amenity of	5 Where a site has two or more frontages, the buildings are to addres and provide entry points from all street frontages.
neighbouring sites. 7 To reduce the appearance	6 Onsite buildings and fences/courtyard walls are to be staggered an provide landscaping, including canopy trees, in between them.
of building mass and scale.	7 Hard landscaping is to be minimised and to maximise opportunities for landscape planting.
3 To ensure driveways blend into a landscped setting and are not a	8 Long straight driveways are not permitted. Driveways are to be designed to be of minimal visual impact and minimal heat emmission.
dominant feature of the development. 9 To ensure provision of a	9 Provide a single pedestrian entry point from the street. Other enteries may be permitted where several buildings address the street along an extended street or dual frontage sites.
clear and legible address into the development.	Note: Councils Standard Conditions are imposed on every development consent. Consideration early in the design process is to be given to
10To provide safe and continuous pathway from the street to the ground floor dwelling entry point	incorporating these into the development proposal

8A.2 SITE LAYOUT (continued)

Objectives

Controls

- 11 To ensure building facades address the public domain and give direct access from both primary and secondary streets.
- 12 To ensure mixed use developments contribute to the streetscapes through high quality and varied elevations.
- 13To ensure developments provide architectural merit and variation to the street elevation.

8A.3 BUILDING SETBACKS

Further controls that may apply			
SECTION A PART 2 - Site Analysis	SECTION B PART 14 - Urban Precincts and Sites		
Objectives	Controls		
 To reinforce the urban character of the commercial areas. To ensure a consistent streetscape character along the main commercial streets. To reduce the visual bulk of buildings from the street. To maintain the alignment and rhythm of the built form on the street. To ensure building setbacks at all levels respond to site conditions, the local topography and views through the site. 	 Street setbacks In E1 and MU1 zones, mixed use buildings are required to be built to the street alignment with a zero setback, except when variations are stated in Part 14 Urban Precincts and Sites. These variations facilitate building articulation, modulation, the provision of landscaped setbacks and the development of appropriate building forms. Setbacks within E1 zones warrant merit consideration. Mixed use buildings on sites in the R4 zone where commercial uses are permitted under Schedule 1 of the KLEP, are to provide street setbacks as specified in Part 14 Urban Precincts and Sites of this DCP. Side and rear setbacks In E1 and MU1 zones, mixed use buildings are generally not required to provide side and rear setbacks, except where variations are required as specified in Part 14 Urban Precincts and Sites of this DCP. These variations are designed to facilitate building articulation, modulation and the provision of new or widened streets and through-site pedestrian walkways. 		
6 To ensure that new development is of a scale that supports the desired area character with appropriate massing and spaces between buildings.	 Where building separation is provided for residential components, it is to meet building separation controls under Part 8A.4. Mixed Use buildings on sites in the R4 zone where commercial uses are permitted under Schedule 1 of the KLEP, are to provide minimum 6.0m side and rear setbacks and meet the building separation requirements of Part 8A.4 of this DCP 		



Figure 8A.3-1: Consistent building alignment at the street level in the commercial area.

8A.4 BUILDING SEPARATION

Objectives

- 1 To ensure that the new development scaling, massing and spacing between buildings support the desired local area character and the Ku-ringgai landscaped garden character.
- 2 To provide building form and layout that minimises overshadowing of adjacent properties and open space.
- 3 To provide building configuration that facilitates the provision of useable communal open space, private open space landscaping and view corridors.
- 4 To maximise view sharing.
- 5 To configure buildings to protect and enhance visual and acoustic privacy for occupants and adjacent residents.

Controls

1 The minimum separation between a residential component of the building and any neighbouring building on the development site is to comply with the following controls:

Buildings up to 4 storeys over the podium (see Figure 8A.4-2)

- i) 12m between habitable rooms/balconies;
- ii) 9m between habitable rooms/balconies and non-habitable rooms;
- iii) 6m between non-habitable rooms.

Buildings of 5 to 8 storeys over the podium (see figure 8A.4-2)

- iv) 18m between habitable rooms / balconies;
- v) 13.5m between habitable room / balcony and non habitable room;
- vi) 9m between non-habitable rooms.

Buildings 9 storeys or more over the podium

- vii) 24m between habitable rooms
- viii) 18m between habitable room / balcony and non habitable room;
- ix) 12m between non-habitable rooms.

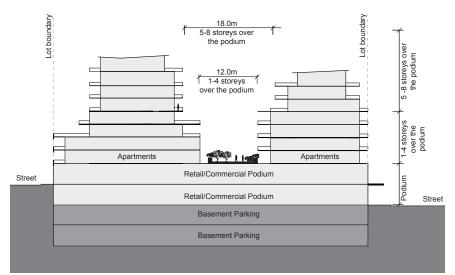


Figure 8A.4-1:

Minimum building separation controls for residential buildings of 1-4 storeys and 5-8 storeys (over commercial podium).

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8A.4 BUILDING SEPARATION (continued)

Controls

- 2 For all non-residential developments adjacent to residential developments:
 - i) the retail, office and commercial balconies are to be treated as habitable rooms and provide the same building separation required in 8A.4(1);
 - ii) the service and plant areas are to be treated as non-habitable rooms and provide the same building separation required in 8A.4(1);

Note: refer to section 8C.15 Acoustic Privacy.

3 Office developments adjacent to residential developments are to demonstrate that the adjoining residential development retains adequate visual and acoustic privacy, access to sunlight, outlooks and that the massing of the building is appropriate to the character of the locality.



Figure 8A.4-2: Adequate separation between buildings to ensure visual and acoustic privacy.

8A.5 WIND IMPACT



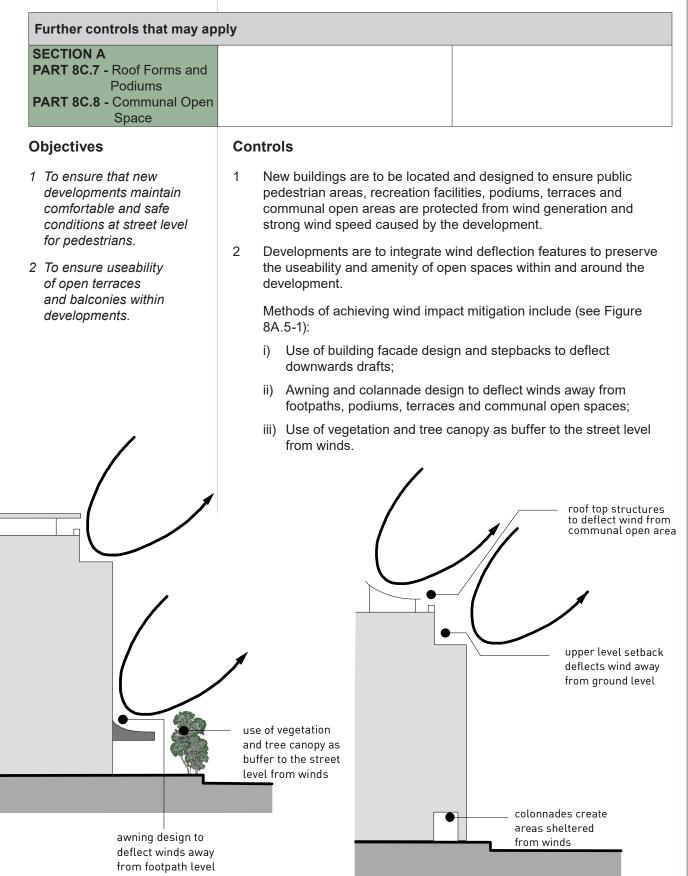


Figure 8A.5-1: Examples of wind mitigation measures.

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Ku-ring-gai Development Control Plan

8A.6 SITE COVERAGE

SECTION A PART 1B.1 - Dictionary	SECTION B PART 14 - Urban Precinct and Sites
Objectives	Controls
 To ensure a pattern of built form and landscaped areas that is consistent with the planned future character of the area. To protect and improve the tree canopy within Ku- ring-gai. To provide viable deep soil landscaping within developments and between residential developments on neighbouring sites. To minimise impervious surfaces that generate storm water runoff. To provide adequate spaces between buildings for common areas that support quality gardens around the building. 	 The following controls are applicable only to mixed use buildings in R4 High Density Residential zones: 1 The site coverage is to be up to a maximum of 30% of the site area provided that the deep soil landscaping requirements in Part 8A.7 can be met. Note: Site coverage is not the inverse of deep soil landscaping. Refer to Section A Part 1B Dictionary for clarification of site coverage. Note: Certain sites in E1 and MU1 zones have reduced maximum site coverage. Refer to Section B Part 14 Urban Precincts and Sites. 2 Where a site incorporates an access handle/s, the site coverage is not to exceed 30% of the total site area less 30% of the access handle/s (refer to Figure 8A.6-1). Note: The definition of 'site coverage' uses a calculation of the 'site area'. 'Site area in KLEP states in part: 'does not include the area of any land on which development is not permitted to be carried out under this Plan.'.
	Am ²

Maximum site coverage = [(A+B) x 30%]m² - (B x 30%)m² Note: This is equivalent to [A x 30%]m²

Figure 8A.6-1: Site coverage controls for Residential Flat Buildings

8A.7 DEEP SOIL LANDSCAPING

DESIGN

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Further controls that may ap	ply		
SECTION A PART 1B.1 - Dictionary	SECTION B PART 14 - Urban Precinct and Sites SECTION C PART 21.2 - Landscape Design		
Objectives	Controls		
 To ensure landscape areas contribute to the garden character and canopy of the Ku-ring-gai locality. To provide consolidated deep soil zones of adequate dimensions in all residential development sites through quality planning and building design. 	 Design 1 This section applies to all development that: i) does not provide commercial uses to the entire ground floor street frontage with associated active street frontages; ii) provides any residential dwelling on the ground floor street frontage; iii) is a mixed use building within the R4 High Density Residential zone. 2 The development is to have minimum deep soil landscaping area as follows: 		
3 To provide landscaped areas that are appropriate to the scale and context of the development.	Site AreaMinimum Deep Soil LandscapingLess than 1800 m²40% of the site1800 m² or more50% of the site		
4 To retain areas that provide habitat for native indigenous plants and animals and contributes to biodiversity in the area.	Note: For the purpose of this section, the site excludes any access handle. Note: Certain sites in the E1 and MU1 zones have a reduced maximum deep soil landscaping area. Refer to Section B Part 14 Urban Precinct and Sites.		
5 To create high quality landscaped areas through retention and/or planting of tall and medium sized trees particularly at the street frontage.	 3 Deep soil zones are to have a minimum dimension of 6m and be configured to retain healthy and significant trees on the site and adjoining sites. 4 Deep soil zones are to be configured to allow for required tree planting including tall tree planting and garden and screen planting at front side and rear boundaries. 		
6 To ensure that deep soil landscaping is within common areas.	5 Deep soil landscaping is to be provided in the common areas as a buffer between buildings that softens the bulk and scale of the buildings.		
7 To ensure spaces between buildings provide deep soil landscaping that can sustain large trees that contribute to Ku-ring- gai's garden character.	 6 Driveways are not to dominate the street setback area. Deep soil landscaping areas in the street setback are to be maximised. 7 Where the site has an access handle, deep soil calculation are to exclude that access handle. 		
8 To ensure that deep soil is provided to allow infiltration of rain water to the water table and to reduce stormwater runoff.	 Tree Replenishment and Planting 8 Lots with the following sizes are to support a minimum number of tall trees capable of attaining a mature height of at least 18m on shale, transitional soils and 15m on sandstone derived soils 		

8A.7 DEEP SOIL LANDSCAPING (continued)

Controls

Lot Size	Number of Tall Trees
1,200m ² or less	1 per 400m ² of site area or part thereof
1,201m ² - 1,800m ²	1 per 350m ² of site area or part thereof
1,801m ² +	1 per 300m ² of site area or part thereof

9 In addition to the tall trees, a range of medium trees, small trees and shrubs are to be selected to ensure that vegetation softens the building form and creates a garden setting. At least 50% of all tree plantings are to be locally occurring trees and spread around the site.

Note: Refer to Section A Part 1B Dictionary for definition of common area.

10 Trees are to be planted within all setback areas. At least 30% of tall trees are to be planted within the front setback.



8B Access and Parking

- 8B.1 Vehicle and Service Access and Loading Facilities
- 8B.2 Car Parking Provision
- 8B.3 Bicycle Parking and Support Facilities Provision

READ WITH

SECTION B PART 14 - Urban Precinct and Sites SECTION C PART 22 - General Access and Parking 22.2: General Vehicle Access 22.3: Basement Parking 22.4: Visitor Parking 22.5: Parking For People With A Disability 22.6: Pedestrian Movements within Car Parks 22.7: Bicycle Parking and Facilities 22.8: Car Parking Rates PART 23 - General Building Design and Sustainability PART 25 - Waste Management

REFER TO

LIVABLE HOUSING DESIGN GUIDELINES

REFER TO

SEPP (HOUSING) 2021

APARTMENT DESIGN GUIDE





8B.1 VEHICLE AND SERVICE ACCESS AND LOADING FACILITIES

Further controls that may apply			
	SECTION B PART 14 - Urban Precincts and Sites	SECTION C PART 22.2 - General Vehicle Access PART 25 - Waste Management	
Objectives	Controls		
 To ensure that vehicle access points are suitably designed and located. To ensure clear demarcation of parking areas for different uses within mixed use buildings. To provide adequate and accessible on-site service areas and loading facilities. To provide service areas and loading docks in a quantity and size appropriate to the scale and intensity of the proposed use. To ensure that loading 	 street frontages unless otherwall All developments are to providifferent uses (eg. retail, com Note: Any proposal seeking to pon large developments is to justicombined effect does not dominate and where retail, commercial and vehicle entry/exit, clear dema made. Residential parking is commercial parking. See <i>Figu</i> Note: Refer to Section C Part 22 controls. Basement car park areas are footprints. 	rovide separate vehicle entry/exit points fy this variation by demonstrating the ate the building facade or streetscape. I residential uses share the same rcation of parking areas is to be to be secure and separate from retail/ <i>ure 8B.1-1</i> . 2.2 of this DCP for vehicle access design to be consolidated under building	
 facilities do not detract from the amenity of nearby public spaces and residential areas. 6 To locate and design car	5 The use of single lane tunnels and single spiral ramps are not permitted in developments of more than 4 apartments, and can only link a maximum of 2 floor levels.		
parking which is integrated with the site and building design and which does not increase the bulk and scale of the building.	Reta Security door Residential Parking	ail/visitor parking	
 7 To provide a suitable level of safety and accessibility. 8 To provide suitable clearance for service vehicles. 	Figure 8B.1-1: Separate parking zones for differen	dock area	



8B.1 VEHICLE AND SERVICE ACCESS AND LOADING FACILITIES (continued)

Controls

Service access

- 6 On-site service vehicle access is to be provided and designed in accordance with the following:
 - i) a driveway is to be established that is of adequate strength, width and design for the intended service vehicle characteristics;
 - the driveway is to be designed such that service vehicle movement is in a forward direction, both when entering and exiting the site;
 - iii) entrance heights are to allow access for service vehicles;
 - iv) service ducts, pipes and other overhead obstructions are to be located to maintain minimum finished ceiling heights required for service vehicle access; and
 - v) on-site manoeuvrability is to be unimpeded for all site users.
- 7 Generally service vehicle access is to be combined with parking access. Separate access may be required in major non-residential retail/commercial developments.

Note: Refer to Part 14 of this DCP for relevant controls within each urban precinct.

8 Where a waste and recycling room is provided within the basement, the minimum finished ceiling height may be required to be 4.5m along the path of travel from the street to the commercial waste collection and manoeuvring area, and 2.6m to the residential waste collection room and manoeuvring area. This clearance is to be kept free of any overhead ducts, services or other obstructions.

Note: Refer to Part 3.4 of this DCP for waste requirements.

Loading facilities

- 9 On-site internal loading facilities are to be provided for all developments with loading and unloading requirements.
- 10 Loading docks are to be:
 - i) accessed via a rear lane or secondary streets where these are available, and accessible to heavy vehicles;
 - ii) conveniently located in such a way that minimises conflict with pedestrians and other traffic; and
 - iii) screened from the public street.

Note: Refer to RMS guidelines.

- 11 Service vehicles turning into or out of a road or driveway are to be able to complete their turning manoeuvres without crossing the centre line of the public road.
- 12 Gradients in service areas are to be kept to a minimum. The maximum gradient measured in any direction at any one point, is to be 1:6.5 (15.4%) where only forward movement is to take place or 1:8 (12.5%) where reverse manoeuvres will occur.

8B.1 VEHICLE AND SERVICE ACCESS AND LOADING FACILITIES (continued)

Controls

- 13 Circulation roadways and loading area dimensions are to comply with the provisions in *AS2890.2: Off-Street Parking (Part 2:Commercial Vehicle Facilities).*
- 14 The design of the apron area in front of the loading dock(s) is to take into account the type of vehicle to be used. Reference is to be made to *AS2890.2* for apron dimensions.
- 15 Turning provisions are to be made within the site for the manoeuvring of vehicles using the loading and unloading facilities in accordance with *AS2890.2* Turning Templates.

Further controls that may apply

SECTION C
PART 22 - General Access and
Parking
PART 22.3 - Basement Parking
PART 22.4 - Visitor Parking
PART 22.5 - Parking For People with a Disability
PART 22.6 - Pedestrian Movement within Car Parks
PART 22R.1 - Car Parking Rates

Objectives

- 1 To ensure the provision of unobstructed and accessible principal active street frontages.
- 2 To provide safe and convenient vertical circulation for building users.
- 3 To provide for future connections between adjacent basement car parks where required.
- 4 To ensure that streetscapes are active and attractive, and that above ground parking does not compromise the public domain.
- 5 To ensure that above ground car parking can be adapted for future use.
- 6 To provide adequate car parking for the building's users and visitors.
- 7 To ensure the location and design of car parking is integrated with the site and building design.
- 8 To encourage walking and public transport use.
- 9 To enable future connections between adjacent basement car parks.

Controls

Car parking design

- 1 All car parking areas are to be provided within the basement of a development.
- 2 The basement car park areas are not to project above finished ground level along the principal active street frontage. On supporting active street frontages the car park may project above existing ground level by a maximum of 1m to the floor level of the storey immediately above.
- 3 Separate and direct lift/stair access is to be provided from basement car parks to apartments, to commercial units and to retail facilities. Where this is not possible, it is to be demonstrated that there is no conflict or danger in the use of shared lifts/stairs.
- 4 Every Platinum Level unit requires an accessible car space designed to Australian Standard 2890.6.

Note: All common areas and paths of travel are to be accessible in line with the requirements of the National Construction Code.

- 5 For the non-residential component of the development, car parking spaces, circulation aisles, roadways and ramps are to comply with *AS2890.1 Parking Facilities Off street car parking*.
- 6 Knock-out panels are to be provided in perimeter walls of the basement car park where adjacent sites are narrow or isolated.
- 7 Car park design is to include the following:
 - i) the car park layout is to be adaptable to provide logical circulation within the car park, and between adjacent car parks, once connectivity is achieved.
 - ii) the connection between car parks is to remain open permanently and not closed by shutters/gates.
 - iii) the connection between car parks it to be made for the same user group, preferably connecting adjacent customer/public parking levels.

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8B.2 CAR PARKING PROVISION (continued)

Controls

8

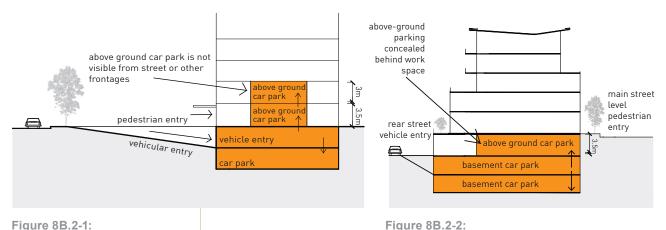


Figure 8B.2-1: Multi-storey above ground car park is housed within the building to facilitate active street frontages.



Figure 8B.2-3: Projection of basement car parking along the principal active street frontage is prohibited.

view. Above-ground car parking may be permitted where it is housed entirely within the building, leaving external walls for active uses (see *Figure 8B.2-1 and 8B.2-2*).

Above ground car parking is permitted

on steep sites where it is screened from

9 Above ground car parks are to have a minimum floor to ceiling height of 3.0m-3.5m to enable flexibility for a future change in use. Refer to *Figure 8B.2-2.*

Car parking rates

10 The following car parking ranges apply to office, business premises and shops, where the development is within 800m walking distance of a train station entry and within a commercial centre:

Premises	Parking Space Requirement
Office and business premises	1 space per 33m ² GFA to 1 space per 45m ² GFA Suggested split: 90% employee 10% visitors
Shops, including restaurants and cafes	1 space per 26m ² GFA to 1 space per 33m ² GFA

Car parking exceeding the requirements of the parking controls in the above table will not be excluded from the Gross Floor Area as defined in the KLEP.

11 For all other locations or uses, car parking is to be provided for retail and commercial uses as well as any recreational/tourist uses and health/community uses in accordance with the parking rates in *Part 22R of this DCP*.

Note: A Traffic Impact Assessment is to accompany development applications that seek to vary the parking rates. This includes commercial or strata funded car share schemes in lieu of parking spaces.

12 For retail/commercial parking, specific areas of the total parking quantum are to be set aside for employee/long term parking. As a

8B.2 CAR PARKING PROVISION (continued)

Controls

guide, 20% of retail parking and 90% of commercial parking could be set aside as employee/long term parking.

- 13 Visitor parking for each separate use is to be provided within the main parking area allocated for that use.
- 14 The following car parking requirements only apply to the residential component within 800m walking distance of a train station entry within mixed use developments.

Apartment Size	Minimum number of parking spaces per dwelling	Maximum number of parking spaces per dwelling
Studio	0 spaces	0.5 spaces
One bedroom	0.6 spaces	1 space
Two bedrooms	0.9 spaces	1.25 spaces
Three or more bedrooms	1 space	2 spaces

Car parking exceeding the requirements of the parking controls in the above table will not be excluded from the Gross Floor Area as defined in the KLEP.

- 15 Residential visitor parking is to be provided within the site at the rate of one space per 6 apartments or part thereof.
- 16 At least one visitor parking space is to comply with the dimensional and locational requirements of *AS2890.6*.
- 17 One visitor parking bay is to be provided with a tap, to make provision for on-site car washing.
- 18 At least one car share space is to be provided in the basement per 90 dwellings, or part thereof.

Note: any proposed reduction in car parking on the basis of providing car share space/s is to be justified by the proponent through supporting studies.

19 All parking bays are to be EV ready with design and construction (provision for conduits, switchboards, electrical capacity etc) to enable installation of electric vehicle charging points that are linked to each individual dwelling electricity meter.

10To provide for future transport and vehicle options including Electric Vehicle charging stations, e-bicycles and the like.

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8B.3 BICYCLE PARKING AND SUPPORT FACILITIES PROVISION

			ECTION C PART 22.7 - Bicycle Parking and Facilities
Objectives	Co	ntrols	
 To provide sufficient and accessible bicycle parking. To encourage the use of 	1	Onsite secure bicycle parking spa is to be provided at the following r component of the development:	
bicycles.		Staff	Visitors
		1 bicycle parking space per 600sqm of gross floor area for staff – in the form of an individual locker or secure room as per <i>AS2890.3</i> .	1 bicycle parking space per 2500sqm of gross floor area for visitors – in the form of a bicycle parking device or rack as per <i>AS2890.3.</i>
	2	Onsite secure bicycle parking spaces and storage within basements is to be provided at the following rates for the residential component of the development:	
		Staff	Visitors
		1 bicycle parking space per dwelling within the residential car park area – in the form of an individual locker or secure room as per <i>AS2890.3</i> .	1 bicycle parking space per 10 units within the visitor car park area – in the form of a bicycle parking device or rack as per <i>AS2890.3</i> .
	as per AS2890.3.AS2890.3.3Retail or commercial development is to provide employees with shower cubicle with ancillary change rooms per 10 bicycle spa- including a minimum of 1 shower each for both females and m Signs to showers are to be provided at bicycle parking location		



8C Building Design and Sustainability

- 8C.1 Solar Access and Daylight
- 8C.2 Natural Ventilation
- 8C.3 Room Sizes
- 8C.4 Apartment Mix and Accessibility
- 8C.5 Building Entries
- 8C.6 Internal Common Circulation Areas
- 8C.7 Roof Forms and Podiums
- 8C.8 Communal Open Space
- 8C.9 Building Facades and Articulation
- 8C.10 Ground Floor Commercial Uses
- 8C.11 Awnings
- 8C.12 Colonnades
- 8C.13 Internal Ceiling Heights
- 8C.14 Visual Privacy
- 8C.15 Acoustic Privacy
- 8C.16 Late Night Trading
- 8C.17 External Air Clothes Drying Facilities
- 8C.18 Services

READ WITH

SECTION A

PART 8 - Mixed Use Development 8A.2: Building Separation 8C.3: Room Sizes

SECTION B

PART 14 - Urban Precinct and Sites **PART 20 -** Development Near Road or Rail Noise

SECTION C

PART 22 - General Access and Parking 22.1: Equitable Access
PART 23 - General Building Design and Sustainability
23.5: Roof Terrace and Podiums
23.7: General Acoustic Privacy
23.8: General Visual Privacy

PART 25 - Waste Management

REFER TO

SEPP (HOUSING) 2021

APARTMENT DESIGN GUIDE

REFER TO

LIVABLE HOUSING DESIGN GUIDELINES

Objectives

- 1 To ensure a high level of internal amenity and comfort for all occupants:
- 2 To ensure building occupants have access to daylight within the building.
- 3 To minimise the negative impact of overshadowing on living areas and private and communal open space areas of residential neighbouring development.
- 4 To minimise the impact of development on existing solar collection devices.
- 5 To ensure that development controlled by SEPP (Housing) 2021, Apartment Design Guide is deferred to in these standards.

8C.1 SOLAR ACCESS AND DAYLIGHT

Controls

Non-residential component

- 1 Buildings are to be oriented to optimise the northern aspect.
- 2 All office workspaces are to be within 10m and in direct line of sight of a perimeter window.
- 3 Notches, slots or indentations in the perimeter of the building are to be at least as wide as they are deep to allow daylight that enables functional use of interior areas.
- 4 Overshadowing is not to compromise the development potential of adjoining yet to be developed sites.
- 5 Developments are to allow the retention of a minimum four hours direct sunlight between 9am and 3pm on 21st June to all existing solar collectors and solar hot water services on neighbouring buildings.
- 6 Three hours of direct sunlight between 9am and 3pm on 21st June is to be maintained to the living rooms, primary private open spaces and any communal open spaces within residential developments on adjoining sites.



Figure 8C.1-1: Internal atrium space provided to promote daylight access.



Figure 8C1-2: Retractable shading devices to the windows for solar access control.



Figure 8C.1-3: Photovoltaic cells integrated into the awning design.

8C.1 SOLAR ACCESS AND DAYLIGHT (continued)

Controls

Residential component

7 Developments are to be designed to optimise solar and daylight access into apartments and private open spaces within the mixed use development as stipulated in SEPP (Housing) 2021, Apartment Design Guide Part 4A - Solar and Daylight Access.

Residential component

8 Developments are to be designed to optimise solar and daylight access into apartments and private open spaces within the mixed use development as stipulated in SEPP (Hosuing) 2021, Apartment Design Guide Part 4A - Solar and Daylight Access.

Sun shading

- 9 All shading devices are to be integrated with building facade design (see Figure. 8C.1-2).
- 10 Consideration is to be given to the integration of solar shading with solar energy collection technology *(see Figure 8C.1-3).*
- 11 All developments are to utilise shading and glare control. Design solutions include:
 - providing external horizontal shading to north-facing windows, such as eaves, overhangs, pergolas, awnings, colonnades, upper floor balconies, and/or deciduous vegetation;
 - ii) providing vertical shading to east and west windows, such as sliding screens, adjustable louvres, blinds and/or shutters;
 - iii) providing shading to glazed and transparent roofs;-

8C.2 NATURAL VENTILATION

Further controls that may ap	ріу		
SECTION A PART 8 - Mixed Use Development PART 8C.3: Room Sizes			
Objectives	Controls		
 To ensure a high level of internal amenity for all building occupants. To ensure direct access to fresh air for building 	 Non-residential component At least 25% of window area to each external wall surface within office workspaces are to have operable windows or doors. Where possible, provide dual aspect floorspace to office workspaces 		
occupants. 3 To provide workspaces with opportunities for natural ventilation.	 to aid natural cross ventilation. The use of open plan office floor areas is encouraged to minimise interruptions in airflow by partitions and furniture. The use of courtyard/atrium/thermal chimneys is encouraged to 		
4 To minimise odour from commercial sources.	 allow warm air to be drawn up and escape through roof ventilation. Ground floor spaces are to be adaptable with provision for internalised exhaust stacks to the highest point of the building. Where commercial facilities are unable to provide natural ventilation, a mechanical system is to be incorporated to ensure air change and flow within internal areas. Notches, slots or indentions cannot be relied upon to achieve natural 		
5 To ensure that	cross ventilation unless they meet the minimum building separation requirements. Notches, slots or indentations in the perimeter of the building are to be at least as wide as they are deep to allow daylight and ventilation. Residential component		
development controlled by (Housing) 2021 Apartment Design Guide is deferred to in these standards.	 8 Buildings are to be designed to optimise natural ventilation within apartments, as stipulated in (<i>Housing</i>) 2021 Apartment Design Guide 4B - Natural Ventilation. 		
cross-through apartment cross-through apartment cross-through retail basement car park			

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air within living space and work environment.

8C.3 ROOM SIZES

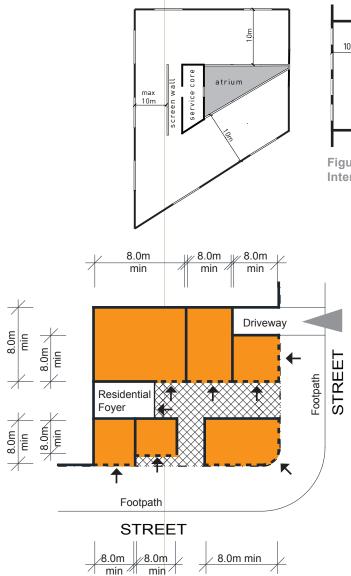
Objectives

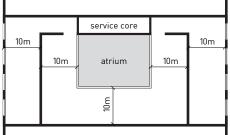
- 1 To provide workspaces that are naturally ventilated and maximise access to natural light.
- 2 To ensure adequate floor areas for non-residential use that enable flexibility of use.

Controls

Non-residential component

- 1 For the non-residential component within a mixed use development the following controls apply:
 - i) office floors are to be a maximum of 10m from glass line to an internal face of wall. Refer to *Figure 8C.3-1*.
 - ii) all non-residential uses are to have a minimum internal dimension of 8m within any tenancy unit.
- 2 Circulation, services and storage areas are to be located at the centre of the building to maximise opportunities for external openings for daylight access and views.
- 3 Where atriums and courtyards are utilised, they are to have a height to width ratio of no narrower than 3:1, with a minimum dimension of 6.0m.







Non-Residential Tenancy Units (minimum 8.0m internal dimension within each tenancy unit)

- Pedestrian Access
- Vehicular Access

Figure 8C.3-2:

Legend

Non-residential tenancy units with minimum 8m dimension to all tenancies.

3 To ensure that development controlled by SEPP (Housing) 2021 Apartment Design Guide is deferred to in these standards.

8C.3 ROOM SIZES (continued)

Controls

Residential component

- 4 Apartments are to have minimum internal areas and layouts as stipulated in *SEPP (Housing) 2021 Apartment Design Guide 4D Apartment Size and Layout.*
- 5 Apartments are to include private open space in the form of courtyards, balconies, terraces as stipulated by *SEPP (Housing)* 2021 Apartment Design Guide Part 4E Private Open Space.
- 6 Apartments are to provide storage space as stipulated in *SEPP* (Housing) 2021 Apartment Design Guide Part 4G Storage.

Ku-ring-gai Development Control Plan

8C.4 APARTMENT MIX AND ACCESSIBILITY

Further controls that may app	bly	
SECTION A		SECTION C
PART 1B.1 - Dictionary		PART 22.1 - Equitable access

Objectives

- 1 To increase housing diversity and choice within Ku-ring-gai through provision of a range of apartment sizes and types.
- 2 To increase the housing choice for seniors, people with disabilities and for families.
- 3 To promote flexible housing for all community members and for changing household requirements now and in the future as needs change due to ageing and disability.
- 4 To ensure all developments and dwellings incorporate Livable Housing Design Guide provisions and National Construction Code accessibility requirements, to and within dwellings, regardless of the steepness of a site.

Controls

1 A range of apartment sizes (one, two and three bedroom) and a mix of types are to be included within the development.



Figure 8C.4-1: A variety of apartment types, sizes and layouts within the same development.

Accessible Housing

2 All units in the mixed-use development are to be of Silver Level, and 15% of those are to be of Platinum Level as indicated in the *Livable Housing Design Guideline*.

Note: For details on the *Liveable Housing Design Guideline* refer to www. livablehousingaustralia.org.au.

3 All developments are required to meet the KDCP Livable Housing Design Guideline provisions and National Construction Code accessibility requirements regardless of steepness of site.

Note: This control applies to development on all sites including those that are steeper than 1:14.

- 4 All development is to provide an accessible path of travel:
 - i) from the street entry to the front door of each dwelling; and
 - ii) from the basement carparking to the dwelling entry; and
 - iii) from the dwelling to the primary communal open space and each type of room or space for use in common by the residents.

Note: Provision is to be made for wheelchair turning circles where required.

Note: The control above applies to all development regardless of the steepness of the site.

8C.4 APARTMENT MIX AND ACCESSIBILITY (continued)

Controls

5 Where the internal finished floor level of a ground floor dwelling and/or private open space is not more than 0.9m below the existing ground level at the building line, the ground level adjacent to the building is to be levelled to the finished floor level for a distance of 3.0m from the building line.

Note: A step at the threshold for compliance with waterproofing requirements is acceptable, however thresholds to the primary private open space are to be accessible for all Platinum Level dwellings.

6 For Platinum level units with more than one level, an internal lift is to be provided to allow access to all levels.

Note: Provision of a lift is not in lieu of accommodating Platinum Level provisions required at the dwelling entry level.

7 Chair lifts, platform lifts and the like are not permitted on internal and external communal/shared paths and circulation areas. Where lifts are required they are to be constructed within lift shafts with full weather protection for users.

8C.5 BUILDING ENTRIES

Further controls that may ap	Further controls that may apply					
	SECTION B PART 14 - Urban Precincts and Sites	SECTION C PART 22.1 - Equitable Access				
Objectives	Controls					
 To ensure the building entry and address is a clear and identifiable element in the street and is safely accessible to all. To ensure the building entry contributes positively to the streetscape and building facade design. To provide entries that relate to the street and pedestrian movement and promote pedestrian activity along building frontages. To provide legible, safe and pleasant circulation spaces at the buildings street interface. To ensure changes in levels between the street and the development are integrated and maintain physical and visual activation and accessibility. To provide separate, secure and identifiable entry paths for residential occupants of the building. 	 are to be in accordance with 2 Buildings are to address the s i) level and direct main entrand visible from the streed ii) with the path to the buildi where site configuration i 3 Buildings with street frontage entries to activate the street f 4 Building entries from principal flush transition with adjoining 5 Street footpath levels are not are to occur on private land be doorway. Ramping, escalator malls and shopping centres at and interface from the street be preserved Figure 8C.5-1: Separate entries to commercial and residential premises in a mixed use development. Use of clear glazing enables passive	rances to lift/building directly accessible et; or ng entry readily visible from the street is conducive to having a side entry. es over 18m long are to have multiple frontages. al active street frontages are to provide a				

8C

8C.5 BUILDING ENTRIES (continued)

Controls

- 6 The building entry is to be legible and integrated with horizontal and vertical building facade architectural elements. At street level, the entry is to be articulated with awnings, porticos, recesses or projecting bays for clear identification.
- 7 Entries to upper level uses are not to dominate ground floor shopfronts. These entries are not to occupy more than 20% of the principal active street frontage.
- 8 Entries and lobbies to apartments are to be separated from commercial entries and are to be clearly demarcated and provide direct access from the street.
- 9 All entry areas are to be well lit and designed to avoid any potential concealment or entrapment areas.
- 10 Fire egress is not to face the principal active street frontage. If this is unavoidable, the fire egress is to be integrated into the lobby entrance or shopfront design.
- 11 Lockable mail boxes are to be:
 - i) provided close to the street; and
 - ii) be at 90 degrees to the street and to Australia Post standards; and
 - iii) integrated with building entries.
- 12 Entries are to have street numbering that is clearly visible from the street.
- 13 Buildings with dual street frontage are to provide a building entry to both street frontages that meets the requirements of Part 14 Urban Precincts and Sites of this DCP.

8C.6 INTERNAL COMMON CIRCULATION AREAS

Controls

Non-Residential Component

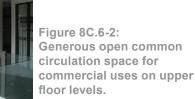
- 1 The design of internal common circulation is to provide adequate pedestrian mobility and access space, and comply with the provisions in AS1428.1 and AS1428.2 - Design for Access and Mobility.
- 2 All common circulation areas including foyers, lift lobbies and stairways are to have:
 - appropriate levels of lighting with a preference for natural light i) where possible;
 - short corridor lengths that give clear sight lines; ii)

Note: Fire doors within corridors are not considered to shorten corridors.

- iii) clear signage showing the location of commercial facilities, apartments, common areas as well as general direction finding;
- iv) natural ventilation;
- v) low maintenance and robust materials.
- 3 Where artificial lighting is required energy efficient lights are to be used in conjunction with timers or daylight controls.
- 4 Building design is to avoid blind corners or dark alcoves near lifts and stairwells, at entrances, along corridors and walkways and within car parks and provide opportunities for passive surveillance of circulation spaces.
- 5 Separate access points (via lift or stairs) are to be provided for each different use. Both commercial and residential are to have its own entry.
- 6 Seating areas are to be provided within the foyer/atrium of commercial components and are encouraged in common circulation areas near workspaces.

Residential Components

7 Common circulation spaces are to comply with the requirements stipulated by SEPP (Housing) 2021 Apartment Design Guide Part 4F - Common Circulation and Spaces.



Objectives

users.

1 To provide accessible,

circulation spaces for all

building occupants and

safe and pleasant

2 To minimise ongoing

maintenance costs

by providing natural ventilation, natural light,

efficient lighting and

circulation areas.

3 To ensure that

standards.

appriopriate materials to

development controlled

is deferred to in these

by SEPP (Housing) 2021 Apartment Design Guide

Figure 8C.6-1: Generous ceiling height to lift lobby to promote daylight access.

8C.7 ROOF FORMS AND PODIUMS

Further controls that may apply						
SECTION A PART 8A.4 - Wind Impact			SECTION C PART 23.5 - Roof terraces and podiums			
Objectives	Controls					
1 To provide well designed and articulated upper floor forms.	dif	1 The upper storeys of mixed use buildings are to be articulated with differentiated roof forms, maisonettes or mezzanine penthouses or similar (<i>see Figures 8C.7-1</i>).				
2 To prevent any increased overshadowing of adjoining properties.	of an	grated into the overall design e from the public domain or These elements include lift				
3 To contribute to the overall design and environmental		overruns, plant equipment, chimneys, vent stacks, water storage, communication devices and signage.				
performance of buildings. 4 To encourage the use of	wit	Roof design is to respond to solar access and prevailing weather with the use of elements such as eaves, skillion roofs, awnings or recesses with a minimum overhang of 0.6m.				
podiums for open space.	4 WI	nere solar panels are provide	d they are to be integrated into the			
5 To minimise visual impacts of service facilities on roof		of line.				
tops.			s or green podiums is encouraged.			
6 To ensure the design of communal open space protects the amenity of nearby residents.	6 Lightweight pergolas, sun screens, privacy screens and planters are permitted on the roof or podium, provided they are integrated with the building and facade design and do not increase the bulk of the building, create visual clutter or impact on significant views fron adjoining properties.					
	pro In wa so	otect privacy within the develo these circumstances planter Ills or balustrades for privacy	d for communal open space are to opment and neighbouring propertie boxes are to be incorporated into and amenity (see <i>Figure 8C.7-2</i>). In be set back from the building edge			
		e location of air intake vents a in accordance with AS 1668.	and exhaust discharge points are to			
Figure 8C.7-1: Articulated upper stories	No and as	te: Architectural plans are to she d exhaust discharge points properties associated with air supply parks, plant rooms and waste st	ow the locations of air intake vents osed as part of the development, such and exhaust systems for basement			
		view	Figure 8C.7-2: Incorporation of			

Incorporation of planter boxes into walls or balustrades of podiums and terraces.

8C.8 COMMUNAL OPEN SPACE

SECTION A PART 8A.4 - Wind Impact	SECTION C PART 23.5 - Roof terraces and podiums
Objectives	Controls
 To ensure occupants have direct access to sunlight within areas of communal open space. To ensure early consideration of storage of equipment, access to water, ease of rubbish removal and effective drainage for garden maintenance. To provide communal open space that adds to the amenity of the development and facilitates social interaction. To provide communal open space that is responsive to the site and its context. To ensure high quality communal open space that is well integrated within the development. To ensure the design of communal open space protects the amenity of nearby residents. To ensure useability of open terraces and balconies within developments. To provide safe, useable, attractive and accessible communal open space for residents. 	 Access to any communal open space is to be provided for people with a disability in accordance with Part 2 Section 7 of AS 1428. The location and design of the Primary communal open space is to optimise opportunities for active and passive social and recreation activities, summer shade, solar access and orientation, summer shade, outlook, and maintain the privacy of residents on adjoining lower density residential dwelling sites. To encourage use, communal open space is to incorporate: shared facilities such as barbecue facilities, drinking water taps, play equipment and seating; Note: Facilities are to be appropriate to the space and demonstrates consideration to the amenity of nearby residents. sun shading devices and wind screens; landscape elements, including small to medium trees. Concealment or entrapment areas are not to be created within the communal open space. Separate communal open spaces for nor residential usesare encouraged. For saftey reasons, the communal open space (except for roof terraces) is to be capable of surveillance from at least two apartments and from at least two business units where communal spaces are provided for non-residential uses.

8C.8 COMMUNAL OPEN SPACE (continued)

Controls

7 Garden maintenance storage areas and connections to water and drainage are to be provided to communal open space.

Note: Proposals are to demonstrate entry and access to communal open spaces and common areas for maintenance purposes.

Residential Components

8 A minimum of 10m² of communal open space per dwelling is to be provided. This can be provided on the podium or roof area.

Note: Roof top communal open space(s) may be required in circumstances where a ground level or podium level communal open space cannot meet performance requirements.

- 9 At least one single area of Primary communal open space for the residents is to be provided with the following requirements:
 - i) a minimum area of 80m²; and
 - ii) a minimum dimension of 8m; and
 - iii) access to direct sunlight for at least two hours between 9am and 3pm on 21st June, to at least 50% of the space, and
 - iv) directly accessible from the internal common circulation/lobby area.
- 10 Where additional parcels of communal open space are required to meet 8C.8(7) above, a minimum dimension of 5m is required.



Figure 8C.8-2: Use of roof terrace for communal open space in a mixed use development.



Figure 8C.8-3: Use of roof terrace for community garden in communal open space

8C.9 BUILDING FACADES AND ARTICULATION

Further controls that may apply					
SECTION A	SECTION B	SECTION C			
PART 8C.11 - Awnings	PART 14 - Urban Precinct and Sites	PART 23.3 - Sustainability of			
PART 8C.14 - Ground Floor		Building Materials			
Commercial		PART 23.4 - Materials and Finishes			
Uses		PART 23.6 - Building Services			

Objectives

- 1 To create a coherent street character on the Pacific Highway and Mona Vale Road retail strips and other active street frontages in the urban precincts.
- 2 To promote buildings of high architectural quality that contribute to the planned future character.
- 3 To ensure a continuous and aligned façade to the street.
- 4 To encourage pedestrian activity at street level.
- 5 To ensure awnings are:
 - integrated with the continuous street wall; and
 - avoid transparent and translucent materials which are difficult to clean and provide limited shade to the footpath.

Controls

Street Walls

- 1 Mixed use building façades are to be aligned to the front lot boundary of the primary street frontage, to create a continuous street wall edge. See Figure 8C.9-1 and Figure 8C.9-2.
- 2 Street wall requirements do not apply to:
 - i) mixed use buildings in R4 zones where commercial uses are permitted under Schedule 1 of the KLEP; and
 - ii) where alternate site specific controls are applied under Part 14 Urban Precincts of this DCP.
- 3 Continuous opaque horizontal awnings are to be provided to the full length of the Primary Street frontage Street Wall. Glass awnings are not permitted.Refer to Figures 8C.9-1 and 8C.9-2.



Figure 8C.9-1: Consistent 3 storey street wall facade to complement the traditional 'main street' facade.



Locate and site new buildings to create a continuous street wall edge

All buildings provide continuous horizontal awnings

All buildings are aligned with the primary street frontage

Figure 8C.9-2: Street Wall Awning

OPMEN1

Objectives

- 6 To integrate building elements (such as balconyies, terraces, openings) into the overall building form and facade design.
- 7 To create building facades that are environmentally responsive.
- 8 To demonstrate appropriate levels of architectural detail that will achieve the desired urban character of Ku-ring-gai.
- 9 To enable the building facade. entries and openings to directly relate to the street frontage.
- 10To ensure that private open space design allows views and passive surveillance of the street while providing for safety and visual privacy of residents.
- 11 To ensure openings and articulation on the elevations do not compromise the liveability of the internal areas.
- 12 To provide distinct building articulation on corner sites that reinforce the street intersection and create a unique memorable building that supports urban wayfinding.
- 13To reinforce street intersections and create landmarks.

8C.9 BUILDING FACADES AND ARTICULATION (continued)

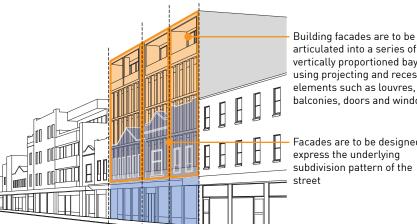
Controls

Facade Articulation

5 Façades are to be designed to express the underlying fine grain subdivision pattern of the street. See Figure 8C.9-3 and Figure 8C.9-4.



Original building (blue) fabric of development site comprises 3 subdivided lots each with separate buildings.



articulated into a series of vertically proportioned bays using projecting and recessed elements such as louvres, balconies, doors and windows

Facades are to be designed to express the underlying subdivision pattern of the

Consolidated development (orange) lot includes vertical articulation of the original 3 subdivision patterns.

Figure 8C.9-3:

Building articulation and modulation based on existing fine grain subdivision patterns.

6 Building façades are to focus on vertically proportioned bays using projecting and recessed elements and architectural details such as louvres, balconies, doors and windows. See Figure 8C.9-3 and Figure 8C.9-4.

8C.9 BUILDING FACADES AND ARTICULATION (continued)

Controls



-Divide the facade into a series of bays that reflect the scale and rhythm of existing subdivision pattern

-Introduce well proportioned recesses to avoid dominant horizontal expression in the facade

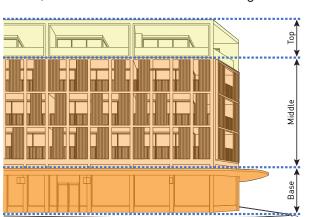
Compose and design architectural elements such as louvres, balconies and windows to reflect a balanced vertical proportion

Incorporate continuous awnings to give human scale to the design of the building at ground level -Use glazed shopfronts to provide active street frontages

Figure 8C.9-4: Façades with architectural details and materials that create shadows and depth that achieve a three dimensional quality and vertical articulation.

7 Façades are to include a tripartite building articulation that distinguishes the building's base, middle and top. This may be achieved through projections, recesses, architectural elements or changes in proportions, materials and finishes. Refer to Figure 8C.9-5.

Figure 8C.9-5: Tripartite building articulating base, middle and top of a building.



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8C.9 BUILDING FACADES AND ARTICULATION (continued)

Controls

- 8 Windows to a habitable room are to be situated to create opportunities for passive surveillance of the street. Snorkel windows are not permitted.
- 9 All facades are to be designed to minimise on-going maintenance and weathering by:
 - i) selecting appropiate robust materials/finishes;
 - ii) including appropriate building edge, balcony edge, sill head and parapet detailing that demonstrates protection from prevailing weather and harsh solar aspects.

Note: Refer to Part 23.4 Materials, Finishes and Colours of this DCP.

- 10 Subterranean rooms for residential and non-residential purposes are not permitted.
- 11 Building facades are to be designed to respond to solar access by using solar protection elements such as eaves, louvres and other sun shading devices as environmental controls.
- 12 All building elements including shading devices, signage, drainage pipes, awnings/colonnades, solar devices and communication devices are to be coordinated and integrated with the overall facade design.

Note: See Part 12 of this DCP for other signage requirements.

Balconies

- 13 Balconies that run the full length of the building facade are not permitted.
- 14 Balconies are not to project more than 1.5m from the outermost wall of the building facade unless they are an integrated part of the building composition.

Note: Setback and building separation requirements apply to balcony projections.

Note: Refer to Part 23.4 Control 20 for further requirements on balconies.

8C.9 BUILDING FACADES AND ARTICULATION (continued)

Controls

Corner Sites

- 15 Street corners are to be emphasised architecturally by articulating parts of the building and façade, including:
 - i) chamfered, splayed or rounded façades extending through the height of the building;
 - ii) variations in building height to express the corner;
 - iii) variations in materials and finishes;
 - iv) changes in building roof form;
 - v) projecting or recessed balconies.
- 16 Buildings located on corner sites are to turn the corner and address both street frontages equally, including at street level with active street frontages by utilising:
 - glazed shopfronts displaying goods or internal activities to all ground floor facades;
 - ii) building entries on the corner.



Include chamfered / rounded corners extending through the height of the facade detailed as stronger visual elements

Turn the corner and address both street frontages

Provide building entries on corners to activate and express corner locations

Figure 8C.9-6: Corner site articulation

Objectives

- 1 To support accessible pedestrian activity and enhance the amenity, safety and surveillance of the public domain.
- 2 To provide direct physical and visual connection between the private and public domain.
- 3 To ensure activation and surveillance at street level.
- 4 To provide visual interest at street level.
- 5 To provide internal ventilation systems that contribute to flexibility and adaptability of use in the future.

8C.10 GROUND FLOOR COMMERCIAL USES

Controls

1 Building entries to each individual commercial premises are to be level with adjoining footpaths, with openings (doors and windows) that allow a direct visual connection between the building and the street. See Figure 8C.10-4.

Note: Variations may be permitted on very steep streets.



Figure 8C.10-1: Level access to all shopfronts.

2 Building slabs are to be stepped on sloping sites to ensure ground floor level does not exceed 0.3m above or below finished footpath level.

Note: Variations may be permitted on very steep streets.

- 3 Ground floor street frontages are to provide for active uses that contribute to the active street frontage.
- 4 Buildings on principal active street frontages are to:
 - i) maintain active frontage to 80% of the length of the building facade at the street level;
 - ii) support a mix of activities, including after hour activities;
 - iii) provide facades that address the street and public domain with appropriate facade treatments at street level that respond to the pedestrian scale;
 - iv) contain well articulated pedestrian entrances at frequent intervals;
 - v) provide continuous awnings;
 - vi) avoid the incorporation of vehicle access points; and
 - vii) not have projecting basements.

8C.10 GROUND FLOOR COMMERCIAL USES (continued)

Controls

- 5 Buildings on supporting active street frontages (including mixed use buildings in R4 High Density Residential zones) are to:
 - i) minimise the extent of blank walls and incorporate modulation or changes in texture and materials to reduce their impact;
 - ii) support dispersed pedestrian-oriented activities with well articulated entrances;
 - iii) provide facades that address the street and public domain and integrate vehicle access where provided; and
 - iv) provide awnings, especially at key pedestrian entry points.
- 6 Ground floor building design articulation for retail/commercial uses are to avoid the creation of dark alcoves or entrapment areas.
- 7 The sill height of street frontage windows are not to be more than 1.2m above the adjacent street paving at any point. See Figure 8C.10-2.



Figure 8C.10-2: Sill height controls for ground floor commercial premises to achieve an active street frontage.

- 8 External finishes at street level are to be robust and graffiti resistant, eg. ceramic tiles and metal.
- 9 Clear glazing is to be provided to all windows of active street frontage.
- 10 Security roller shutters are not permitted on the external face of the building. Where they are deemed necessary, grilles or transparent security shutters may only be used behind the window display.
- 11 Openable shopfronts for restaurants and cafes are to be provided where practicable. See Figure 8C.10-3 and Figure 8C.10-4.
- 12 No residential dwellings are permitted on the street level frontage. Where dwellings are provided on the street level frontage, the development is considered to be a Residential Flat Building and is to comply with all controls in Part 7 Residential Flat Buildings.
- 13 All new development is to be designed to include an internal ventilation shaft to ensure future alterations do not place the shaft in an unsuitable location.



Figure 8C.10-3: Openable shopfronts with merchandise creates interest and engages the passer-by.



Figure 8C.10-4: Cafe with an openable shopfront contributes to street activity.

Objectives

- 1 To ensure that awnings are in scale with development and overall design.
- 2 To ensure that awnings are designed to be consistent throughout Kuring-gai and with adjacent developments awning structures.
- 3 To provide high levels of pedestrian amenity with sun and rain protection.
- 4 To create well lit, visible street frontages that deter vandalism.
- 5 To create a pedestrian scale at street level.



Figure 8C.11-1: Awning stepped to express building entry

8C.11 AWNINGS

Controls

- 1 Continuous awning is to be provided to the full length of the principal active street frontage.
- 2 Provide awnings along the supporting active street frontages (including mixed use buildings in R4 - High Density Residential zones) wherever practical, especially at key pedestrian entrances.
- 3 Awning design is restricted to suspended steel box section type along the principal active street frontages. Variations may be permitted in certain situations such as corners and building entries.
- 4 Glass awnings are not permitted.
- 5 Awning heights are to be between 3m and 3.5m except where integration with an adjoining property's awning(s) is desired, in which event awning height is not to be greater than 4.2m. Refer to Figure 8C.11-2.
- 6 Awnings are to be set back a minimum of 0.6m from the face of the kerb and to wrap around the corner on corner sites. Where street trees are required, the entire length of the awning is to be set back from the inside edge of the tree hole. Cut outs for trees and light poles in awnings are not permitted.

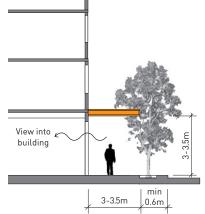




Figure 8C.11-2: Awnings dimension controls.

Figure 8C.11-3: Suspended steel box section type awning with under awning lighting.

- 7 Awning depths are to be between 3 and 3.5m along the principal active street frontages. Refer to Figure 8C.11-2.
- 8 Steps within an awning for design articulation or to accommodate sloping streets are to be integrated with the building design and architectural composition of the elevations. The step is not to exceed 0.7m in height. See Figure 8C.15-1.
- 9 Vertical canvas drop blinds are not permitted along the outer edge of awnings.
- 10 Provide under awning lighting recessed into the soffit of the awning or wall mounted on the building.
- 11 Under awning lighting is to achieve luminance levels consistent with community safety and security in *AS1228.1-2001*. Evendebi taturi

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8C.12 COLONNADES

Objectives

- 1 To ensure that colonnades are safe, accessible and in keeping with desired streetscape character and appropriate to the development in scale and overall design.
- 2 To ensure that colonnades respond to the pedestrian scale of the street.
- 3 To provide colonnades that increase pedestrian amenity with sun and rain protection.
- 4 To provide colonnades that facilitate opportunities for outdoor dining.
- 5 To ensure that colonnade areas are well lit and have high visibility.



Figure 8C.12-1: Colonnade space within property boundary.



Figure 8C.12-3: Colonnade space used for outdoor dining.

Controls

- 1 All colonnade spaces are to be within the property boundary.
- 2 Colonnades are to have a height/width ratio no less than 1.5:1, a minimum width of 2.4m, and a minimum soffit height of 3.6m.

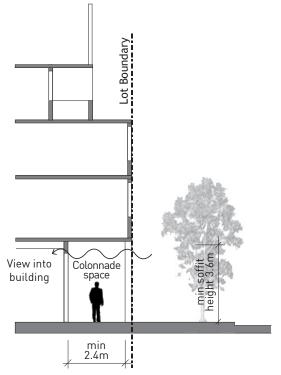


Figure 8C.12-2: Colonnade space activates street level.

- 3 Colonnade heights and widths are to be continuous along a block, and should readily allow extension into neighbouring sites.
- 4 The size and spacing of supports are to be designed to allow pedestrian circulation and views of ground floor activity from the street, and avoid concealment areas.
- 5 On sloping sites an access point with a flush transition is to be provided between the colonnade area and adjoining footpaths.
- 6 Provide under colonnade lighting recessed into the soffit of the colonnade or wall mounted on the building, ensuring shadowed recesses are not created as potential entrapment areas.
- 7 Under colonnade lighting is to achieve luminance levels consistent with community safety and security in *AS1228.1-2001*.
- 8 Vertical canvas drop blinds are not permitted along edge of colonnades.

Objectives

- 1 To ensure that internal ceiling heights are coordinated with external building form requirements.
- 2 To provide internal ceiling heights that contribute to flexibility and adaptability of use in the future.
- 3 To create buildings that facilitate a 'sense of space' by maximising natural light and ventilation.
- 4 To ensure that development controlled by SEPP (Housing) 2021 Apartment Design Guide is deferred to in these standards.



Figure 8C.13-1: Internal ceiling height responded to the parapet line of adjoining heritage building.

8C.13 INTERNAL CEILING HEIGHTS

Controls

Non-Residential Component

- 1 For all new buildings in the E1 Local Centre zone, the MU1 Mixed Use zone, and sites within the R4 High Density Residential zone where commercial development is permitted under Schedule 1 of the KLEP, the minimum ceiling heights, measured from finished floor level (FFL) to finished ceiling level (FCL), are to be:
 - i) 4.0m for ground floor cafe/restaraunt uses (or 4.4m from FFL to next floor FFL);
 - i) 3.3m for ground floor and first floor retail or commercial uses (or 3.7m from FFL to next floor FFL);
 - ii) 3m for non-residential uses on all other floors (or 3.4m from FFL to next floor FFL).
- 2 Internal ceiling heights and slab levels are to be coordinated with external height requirements and key datum lines. External building elements requiring coordination is to include:
 - i) datum lines and parapet lines set by the context or the Built Form controls in Part 14 Urban Precincts and Sites;
 - ii) the cornices and string courses of adjacent heritage buildings; and/or
 - iii) existing exterior awning levels or colonnade heights.

Residential Component

3 The minimum ceiling heights for all areas within the residential flat building are to comply with the ceiling heights stipulated in *SEPP* (Housing) 2021 Apartment Design Guide Part 4C - Ceiling Heights.

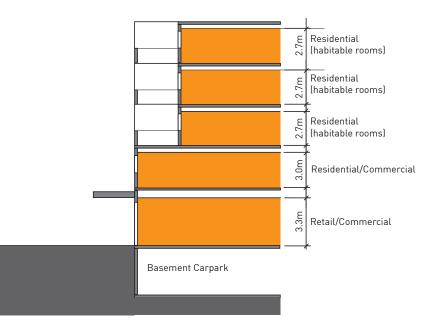


Figure 8C.13-2: Internal ceiling height requirements for mixed use buildings.

8C.14 VISUAL PRIVACY

Further controls that may apply					
SECTION A PART 8A.4 - Building Separation	SECTION C PART 23.8 - General Visual Privacy				
Objectives	Controls				
 To ensure high standards of visual privacy for all occupants within the development. To minimise the impact of development on the visual privacy of neighbouring occupants of residential dwellings. 	 Non-Residential Component Buildings are to be designed to ensure privacy for residents of the development and of the neighbouring site. In addition to design options outlined in Section C Part 3.5 of this DCP, design measures may also include: i) off-setting balconies in relation to adjacent balconies; ii) using recessed balconies and/or vertical fins between adjacent private balconies; 				
3 To ensure that development controlled by SEPP (Housing) 2021 Apartment Design Guide is deferred to in these standards.	 iii) using solid or semi-transparent balustrades to balconies (<i>see Figure 8C.18-1</i>); iv) using louvres/screen panels to windows and balconies (<i>see Figure 8C.18-2</i>); v) incorporating planter boxes into walls or balustrades to increas the visual separation between areas; 				
	 Residential uses including residential entry foyers from street level, and apartments at podium level are to be separated from non- residential common areas, communal open space and the public domain. Examples include the use of: Continuous transparent balustrades are not permitted to balconies or terraces for the lower 3 storeys. Screening between apartments is to be integrated with the overall building design. <i>Residential Component</i> 				
Figure 8C.14-1: Use of different types of balustrades.	5 Buildings are to be designed to ensure privacy for residents of the development and of the neighbouring site as stipulated in <i>SEPP</i> (Housing) 2021 Apartment Design Guide Part 3F - Visual Privacy				

3C

8C.15 ACOUSTIC PRIVACY

	SECT PART	ION B 20 - Developme or Rail Nois		SECTION PART 23	I C .7 - General Acoustic Privacy
Dbjectives	Con	trols			
 To ensure high standards of acoustic privacy for occupants and neighbours of the development. To ensure that mixed use development is designed and constructed to minimise the impact of external noise and facilitate comfortable living conditions for residents/ 	1	planning, constr acoustic standa within buildings,	ruction and mate rds in relation to , including AS21	erials in ac noise trar 07-2000: A	he impact of noise throu cordance with the releva nsmission between and Acoustics- Recommende building interiors.
	2	In addition to specific noise sources such as traffic or rail lines, proposed developments are to consider:			
		 the specific nature of the premises, (eg. pub, restaurant, hairdressers, laundromat; supermarket) and any associated outdoor areas; 			
occupants.		ii) the proposed hours of operation;			
To ensure that development within mixed use zones incorporates measures to protect the amenity of existing		 iii) the late night operation of equipment (such as coolrooms and generators) and services within premises (such as drycleaners cafes, restaurants, entertainment facilities, etc); 			
		iv) any tonal, low frequency, impulsive, or intermittent noise resulti from the development;			
residents.		v) the existing	hours of operati	on of surro	ounding business uses;
To minimise noise impacts		vi) the size and	l patron capacity	of the pre	emises;
 of late night operation of mechanical equipment on nearby or adjoining residents. To avoid a concentration of high noise generating premises within close proximity to residential uses. 		vii) the cumulative impact of the premises on the mix, diversity and possible concentration of late night uses in the locality.			
	3	The maximum internal LAeq 15 minute noise levels of any development is not to exceed the noise levels as set out in Figure 8C.15-1.			
		qualified acoustic	consultant to asse bise attenuation m	ess complia	t be undertaken by a suitabl nce with the above criteria. e to be included in this repor
			Amen	ity Criteri	a
			Reccommend	ed LAeq N	loise Level, dB(A)
		Time of day ¹	Maximum nois -Windows ope		Maximum noise level -Windows closed
		Day	60		50
		Evening	50		40
		Night	45		35

ay': From 7:00am to 6:00pm Monday to Saturday; or 8:00am to 6:00pm Sundays and public holidays

Evening: The period from 6:00pm to 10:00pm

Night: The remaining time periods.

4 For requirements on noise levels associated with air conditioning, kitchen, bathroom, laundry ventilation, or other mechanical ventilation systems and other plant refer to Part 23.8 of this DCP.

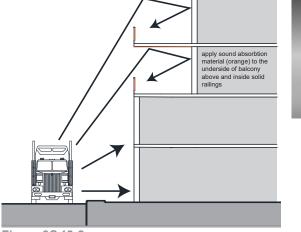
8C.15 ACOUSTIC PRIVACY (continued)

Controls

- 5 Noise reduction measures to achieve these outcomes may include, but are not limited to the following design criteria:
 - incorporating appropriate noise shielding or attenuation i) techniques into the design and construction of the building. In particular, noise shielding will be required between uses, walls and floors;
 - ii) using noise barrier planning principles such as using the building mass to shield noise (eg using podiums to shield noise from below); and locating non-habitable rooms towards the noise source and habitable rooms oriented to quieter areas on the site; minimising the size and number of windows and balconies oriented to the noise source.

Note: Refer to Part 20 Development Near Rail Corridors and Busy Roads.

- iii) enclosing plant rooms;
- iv) locating plant in basements;
- v) minimising the amount of shared walls between apartments, commercial occupancies and/or plant;
- vi) locating building services (laundries/ storage areas) and circulation zone apartment entries away from noise sensitive areas (ie. bedrooms) to provide a buffer from noise generators, such as traffic, mechanical plant equipment, and service and loading vehicle entries (see Figure 8C.15-2);
- vii) recessing balconies and fitting sound absorption materials (see Figure 8C.15-3);
- viii) fitting out building services, (including plant, piping and ducting) with appropriate acoustic insulation; (comment delete as it is required by BCA);
- ix) replacing conventional roof design with eaves by a flat roof with parapets where requirements for weather protection are otherwise achieved;
- using solid core doors, thicker window glass, double glazing, X) baffles to openable windows.

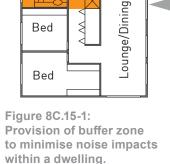






circulation areas used to buffer noise sensitive areas. Circulation Kitchen

Service and



₹

Bath

Bed

8C.15 ACOUSTIC PRIVACY (continued)

Controls

Commercial uses in residential zones

- 6 Commercial uses, where permitted in R4 (High Density Residential) zones, are to only operate within the following hours:
 - i) 9:00am to 6:00pm weekdays;
 - ii) 9:00am to 4:00pm Saturdays; and
 - iii) 9:00am to 1:00pm Sundays.
- 7 Use of mixed use buildings in R4 (High Density Residential) zones providing medical services outside of the above hours and on public holidays will be permitted in the case of emergency services.

Commercial Uses in business zones

- 8 Commercial uses, where permitted in E1 (Local Centre) zones are to only operate within the following hours:
 - i) 7:00am to 10:00pm weekdays and Saturdays; and
 - ii) 8:00am to 9:00pm Sundays and public holidays.
- 9 Loading docks associated with commercial uses in E1 (Local Centre) zones are to operate within the following hours:
 - i) 6:00am to 8:00pm weekdays; and
 - ii) 8:00am to 5:00pm Saturdays;
 - iii) 8:00am to 2:00pm Sundays and Public Holidays.

8C.16 LATE NIGHT TRADING

Objectives

- 1 To ensure that late night premises provide adequate safety and security for patrons, nearby or adjoining residents/occupants and the general public within the vicinity.
- 2 To ensure that late night trading premises are designed, constructed and managed to minimise the impact of noise on nearby residents/ occupants.
- 3 To reduce the potential for anti-social behaviour and promote positive social activities.
- 4 To avoid a concentration of high noise late night trading premises in close proximity to residential uses.



Figure 8C.16.1 Well lit night time street activity.

Controls

- 1 Development for late night trading premises are to be designed to minimise the impacts of noise production on nearby and adjoining premises.
- 2 In particular, proposed developments are to consider:
 - i) the size and patron capacity of the premises, including for associated outdoor areas;
 - ii) the proposed hours of operation;
 - iii) the existing hours of operation of surrounding business uses;
 - iv) the cumulative impact of the premises on the mix, diversity and possible concentration of late night uses in the locality;
 - measures to ensure adequate safety, security and crime prevention both on the site and in the public domain immediately adjacent to, and surrounding, the premises;
 - vi) the accessibility and frequency of public transport during the late night trading hours.
- 3 Crime reduction measures to achieve these outcomes may include, but are not limited to the following:
 - i) lighting at entry, exits and outdoor areas;
 - ii) locating late night trading entries, exits and outdoor areas away from noise sensitive areas (eg bedrooms);
 - iii) minimising the size and number of residential windows and balconies oriented towards the entries, exits and outdoor areas associated with the late night premises;
 - iv) providing windows from residential living areas that overlook the development to provide passive surveillance of the street.
 - v) providing unobstructed sightlines within and around the development.
- 4 Development applications for late night trading premises are to be accompanied by a detailed plan of management which addresses amenity, safety and security and demonstrates a strong commitment to effectively managing potential noise impacts on adjoining and surrounding land uses.

Note: Proposals for smaller late night premises may not be required to provide a plan of management. A pre-lodgement meeting with Council is recommended for any proposal that includes late night trading.

Objectives

- 1 To ensure buildings maximise the opportunities for sun and wind drying of clothes.
- 2 To provide external air clothes drying areas that do not detract from the visual appearance of the building and common areas.

8C.17 EXTERNAL AIR CLOTHES DRYING FACILITIES

Controls

- 1 Each apartment is required to have access to an external air clothes drying area, eg. a screened balcony, a terrace or common area.
- 2 External air clothes drying areas are to be screened from public and common open space areas. Refer to Figure 8C.17-1.
- 3 Where provided in common areas, drying facilities, including clothes lines, are to be provided.

Screened area is concealing clothes line from public domain



Figure 8C.17-1: Screened balconies for external air clothes drying facilities.

8C.18 SERVICES

Further controls that may apply					
		SECTION C PART 23.6 - Building Services PART 25 - Waste Management			
Objectives	Controls				

- 1 All developments are to design and locate utility infrastructure to minimise their impact on the structure.
- 1 All developments are to make provision for waste and recycling storage and collection within the building basement.
- 2 Building services, including within basements and on rooftops, are not to be visible from the public.