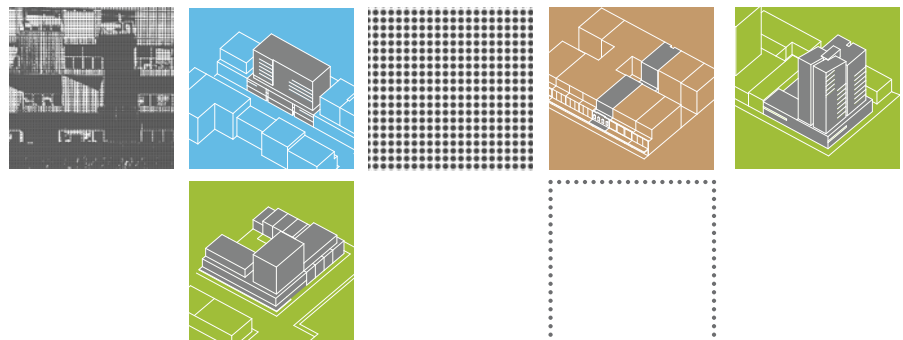


# MORELAND APARTMENT DESIGN CODE



## **MORELAND APARTMENT DESIGN CODE**

2015

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Moreland City Council

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MORELAND APARTMENT DESIGN CODE  
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# Part A - Introduction

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This section provides a summary of the Code's purpose, the type of developments that it applies to as well as its relationship to other planning scheme controls and the operation of the Code's requirements.

## A.1 Purpose

The purpose of the Moreland Apartment Design Code (MADC) is to improve the quality of higher density mixed use and residential development in the municipality. Council is seeking a higher standard of design that maximises opportunities for passive design, provides good amenity and facilities for residents and addresses the reasonable development opportunities of adjoining sites. Overall Council expects apartment development to provide for the health and wellbeing of its residents.

## A.2 Application of MADC

The MADC's objectives, standards and decision guidelines are also included in Clause 22.07 of the Moreland Planning Scheme. The MADC is a reference document in the Moreland Planning Scheme. Accordingly, the MADC must be used when assessing relevant planning permit applications.

The MADC will apply to mixed use and residential development of five or more storeys.

The MADC may be used for guidance for residential development under five storeys to encourage a higher standard of design, particularly for building types that provide for apartment style development.

Applications for development requiring an assessment under the MADC will be considered in conjunction with Council's place-based strategies such as structure plans, built form frameworks or other site-specific policies and provisions. These matters address public realm issues as such building height, upper level setbacks, street wall heights and interface to surrounding residential areas.

Should there be any conflict between a requirement in the MADC and a place-based policy or provision, the place-based policy or provision prevails.

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## A.3 Operation

The MADC is structured into the following parts:

### ***Part A – Introduction***

This section provides a summary of the Code's purpose, the type of developments that it applies to as well as its relationship to other planning scheme controls and the operation of the Code's requirements.

### ***Part B – Pre-application process, application requirements, urban context report, local context report and design response***

This part provides an overview of the pre-application processes that should be followed when applying for an apartment development of five or more storeys and explains the information that must be provided in the urban context report, local context report and design response. The information to be provided is additional to the requirements of Clause 52.35 of the Victoria Planning Provisions (VPPs) (Urban Context Report and Design Response for Development of Four or More Storeys)

### ***Part C – Building Types***

This part contains the different building types that maybe suitable for a particular type of site and context. The purpose of defining building types is to identify the built form considered ideal for various sites common to Moreland.

### ***Part D – Assessment Provisions***

This part contains the objectives, standards and decision guidelines on mixed use residential development and residential development of five or more storeys.

**Objectives** – describe the outcome to be achieved and must be met.

**Standards** – outline specific requirements that are considered necessary to achieve the objectives. Standards should normally be met. However, if the responsible authority is satisfied that a proposal for an alternative design solution meets the objective, an alternative may be considered.

**Decision Guidelines** – identify the factors the responsible authority will consider when assessing an application for planning permit. These factors include any relevant structure plan, policy or planning provision applying to the area, the opportunities and constraints of the site, the design response and the design guidelines.

**Design Guidelines** – provide advice on good design solutions that are considered suitable to meet the objectives and standards in common circumstances. Alternative design solutions can also be considered if it can be demonstrated that the objectives and standards are met.

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PART B

PRE - APPLICATION AND  
APPLICATION REQUIREMENTS





# Part B - Pre-application and Application Requirements

This section contains information on the pre-application process, application requirements, urban context report, local context report and design response requirements.

## B.1 Pre-application process

Buildings exceeding five or more storeys that contain a mix of commercial and residential uses often require a complex set of issues to be resolved to achieve a high quality outcome. The vast majority of such developments will occur in Moreland's activity centres, where there is already a complicated mixture of existing uses and built form. Against this background, Council considers that it may be appropriate to hold at least two pre-application meetings with Council officers.

Details of how to organise a pre-application meeting and what can be expected from a pre-application meeting are found on Council's website [www.moreland.vic.gov.au/pre-app](http://www.moreland.vic.gov.au/pre-app). A pre-application request can be downloaded from this webpage.

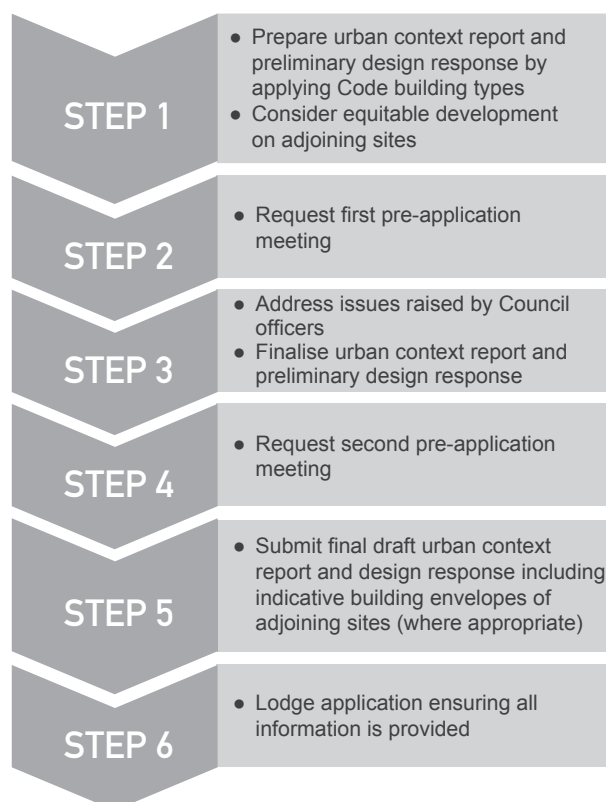
### **First pre-application meeting**

It is appropriate to hold a pre-application meeting to consider a draft site urban context report and indicative design response using the Code's Building typologies as a guide to identify the relevant planning and urban design issues that may affect the design parameters of the proposal and the reasonable development opportunities of adjoining sites. Council officers will provide feedback on the draft urban context report and

indicative design response having regard to the relevant planning objectives applying to the area, the nature of the building type and building envelope that may be appropriate for the site context, the nature of building envelopes of adjoining sites that address reasonable development opportunities of those sites and the information that should be submitted with the application.

### **Second Pre-application meeting**

At the second pre-application meeting a final draft of the urban context report and design response that responds to the issues raised by Council officers must be provided. Council officers will provide further written comments on any outstanding issues to be resolved prior to the lodgement of a planning application.



B.1 MADC Application Flow Chart

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## B.2 Application requirements

Council has prepared ***The planning process - A guide for applicants*** which is available from Council's website [www.moreland.vic.gov.au/urban-plan-guide](http://www.moreland.vic.gov.au/urban-plan-guide) to assist applicants apply for a planning permit. This Guide explains the information that must be submitted with an application.

In addition to the information that should be provided under the Guide, an application requiring an assessment under the MADC should include the following plans:

- Streetscape elevations articulating the existing streetscape (including any approved developments that will change the streetscape) and how the proposal sits within the elevation
- A three-dimensional perspective of the proposed development within the streetscape in the context of adjacent development
- Section diagrams of the proposed building(s)
- Potential building typologies of adjoining developable sites to ensure the reasonable development opportunities of those sites
- Shadow diagrams including sectional shadow diagrams identifying shadow impacts at different levels on adjoining properties and the public realm at hourly intervals between 9am and 3pm
- Concept landscape plan
- Demolition plan in applications involving the demolition of a heritage building

Other supporting reports should include (but is not limited to) the following:

- A written report providing a response to each element in this Code
- Completion of the MADC Checklist (See Appendix)
- A Sustainability Management Plan (SMP)
- An Accessibility Report (where appropriate, accessibility features must be clearly shown in all associated plans and architectural drawings)
- An Acoustic Report (generally for sites adjoining main roads, rail lines, industrial areas and live music venues) demonstrating compliance with section D.2.4 of this Code
- A preliminary site assessment prepared by a suitably qualified environmental professional identifying potential contamination risk
- A Waste Management and Disposal Plan
- A Traffic report and car parking demand assessment in accordance with Clause 52.06-6 of the VPPs

## B.3 Urban context report, local context report and design response

An urban context and design response must be provided in accordance with Clause 52.35 of the Victoria Planning Provisions (Urban Context Report and Design Response for Residential Development of Four or More Storeys).

### B.3.1 Urban Context Report

In addition to the requirements of Clause 52.35-02, the urban context report should include plans showing:

- Existing and emerging building types in the area
  - Location of proposed building(s) relative to the footprints, heights, open space, balconies and habitable rooms
- .....

- windows of surrounding buildings
- Indicative building envelopes of developable adjoining sites
- Prevailing street setbacks and street wall/podium heights
- Assessment of streetscape which analyses building form, scale and rhythm
- Heritage buildings and heritage streetscapes
- Existing shadow impacts on the subject land and surrounding properties

### B.3.2 Local Context Report

Local context provides the larger picture of the area, approximately 800 to 1000 metres radius from the site.

A local context analysis should include:

- The location of local shops, public transport services and public open spaces within five minutes walking distance (400 metres) and 10 minutes walk (800 metres) from the site
- Any significant environmental features such as vegetation, topography and significant views
- Any major facilities and institutions such as schools, hospitals etc.

### B.3.3 Design response

The design response is to be undertaken in two stages: the preliminary design response and the final design response. The purpose of the preliminary design response is to assist in the preparation of the pre-application meeting with Council officers so that formal written comments can be provided to applicants. The purpose of the final design response is to provide an opportunity to make any changes to the proposal as a result of the Council officer's written response.

#### B.3.3.1 Preliminary design response

The design principles should be established to reiterate findings from the urban context report and respond to the analysis of opportunities and constraints. The preliminary design response must be presented prior to the first pre-application meeting.

The preliminary design response must, as a minimum, include the following:

##### *Design Principles and Site Response*

- Proposed building type and indicative building envelope, including building depth. Building types suitable for Moreland are identified in Part C and should be based on the relevant planning objectives and strategies for the area, site size, orientation, location within a block and surrounding development patterns.
- Indicative building envelopes of developable adjoining properties to demonstrate the reasonable development opportunities of these properties.
- Building envelope showing proposed building height, building depth and building separation in the context of surrounding buildings (and take account of any approved development) as well as ground level and upper level setbacks and streetwall/podium heights.
- Identification of any significant vegetation and mature trees on the site or surrounding the site, if applicable.
- Proposed uses in context of the planning provisions affecting the site and surrounding building uses.

---

### **Building Envelope**

A graphic demonstration showing the proposed three-dimensional built form massing should be presented to communicate the design principles. This can be in the form of a hand drawn sketch or a block 3D perspective and should demonstrate how the proposed design:

- Responds to solar orientation to maximise the energy efficiency of the building
- Provides appropriate building type suited to the site's size, shape and orientation
- Provides appropriate building depth that will allow for passive design elements to be achieved
- Achieves appropriate building separation
- Relates to and improves the street character
- Responds to existing surrounding buildings in terms of scale and setbacks
- Responds to any relevant planning schemes provision and any relevant policy directions, including preferred future built form outcomes for the site if applicable

### **Orientation**

Orientation is critical to demonstrate how the proposed design maximises solar access, achieves natural ventilation and addresses the public realm.

### **Streetscape**

Streetscape demonstrates how the proposed design relates to the street in term of scale, proportion and rhythm, ground floor articulation and street activation through design. Streetscape should be demonstrated in the form of street elevation.

### **Internal Layout**

Internal layout identifying the main outlook, access to daylight and natural ventilation is important to enhance internal amenity. The internal layout should also show the location of lift core, circulation corridors, commercial occupancies and dwellings should be illustrated in the form of sketch design.

### **Overshadowing**

The proposed built form should maximise solar access to communal open space, private open space and dwellings. Shadow diagrams should be developed based on the proposed building envelope to demonstrate the overshadowing impacts of the proposed design on existing properties and the public realm. Shadow diagrams should be taken at 9am, 12pm and 3pm on the Equinox or Solstice (refer to relevant place-based strategy).

### **B.3.3.2 Final design response**

The final design response is the final detailed documentation of the proposed design. It should respond to feedback and revision of the preliminary design response.

The final design response generally includes:

- Any revised preliminary design response diagrams
  - Final architectural drawings for planning application including floor plans, elevations and sections
  - Detailed shadow diagrams of the final design
  - Other additional requirements indicated during the pre-application meeting process
-



# PART C

## BUILDING TYPE





# Part C - Building Types

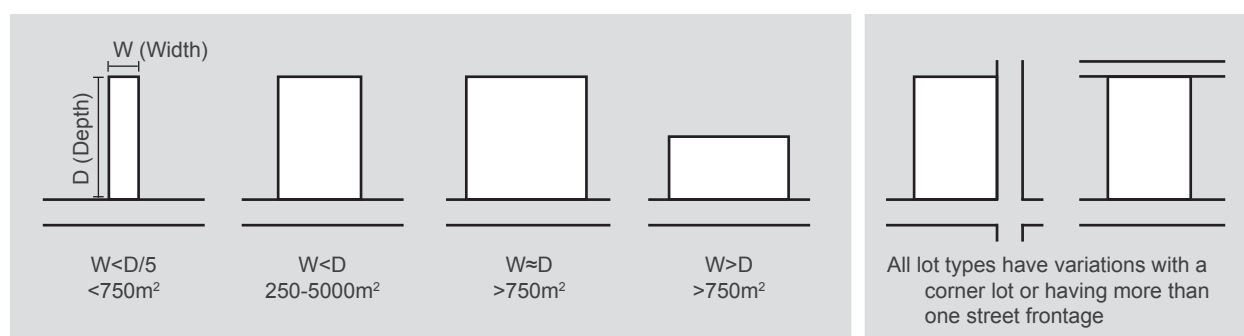
## What is a building type?

A variety of design solutions are possible for a particular development site based on site size, orientation, street frontage and site context. A building type is a generic building form that is suitable for a particular type of site and context. It is not a building but a desired 3D envelope which can be modified to allow site-specific response and architectural details. The purpose of defining building types is to identify the built form considered ideal for various sites common to Moreland.

Possible building types should be considered as part of the Urban Context Report and Design Response process. A preferred building type should be identified and confirmed with Council officers at pre-application stage.

## Building types for Moreland

The building types identified for Moreland are derived on the basis of the most common lot types suitable for higher density development in Moreland.



C.1 Most common lot types in Moreland



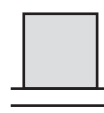

For the purposes of the Code the building types are limited to buildings five storeys or higher. Larger sites may have a combination of more than one building type. This provides for design choice and variation in the building form and flexibility to the designer. Suitable building types specific to Moreland are:

- Narrow Lot Building
- Block Building
- Slab Building
- Tower Building
- Courtyard Building
- Hybrid Building

The building types illustrated in this document are primarily suited to activity centres and shopping strips where increased density is considered desirable. Variation to some of the building types can be suitable for other areas and this has been illustrated where possible.

### Building type selection matrix

The building type selection matrix below illustrates the building types ideal for various lot types and lot sizes. The lot types are plotted on the top and the lot sizes are plotted on the left hand side. The blue boxes indicate the most common lot size and type combination found within Moreland, and makes recommendation for the most suitable building type.

	 W<D/5	 W<D	 W≈D	 W>D
<b>XS</b> <250m <sup>2</sup>	<b>A</b>			
<b>S</b> 250 - 750m <sup>2</sup>	<b>A</b>	<b>A B</b>		
<b>M</b> 750 - 2000m <sup>2</sup>		<b>B E</b>	<b>C E</b>	<b>C</b>
<b>L</b> 2000 - 5000m <sup>2</sup>		<b>D E F</b>	<b>C D E F</b>	<b>C D</b>
<b>XL</b> >5000m <sup>2</sup>			<b>E F</b>	<b>E F</b>

**A** Narrow Lot Building  
**B** Block Building  
**C** Slab Building

**D** Tower Building  
**E** Courtyard Building  
**F** Hybrid Building


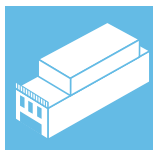
W Width  
 D Depth  
 Most common lot types in Moreland

Table C.1.a : Building Type Selection Matrix

The building types suggested for each lot type and size combination is considered the most suitable, however other options might be possible based on the exact size and context of a site.

The lot types indicated above show mid-block location but each lot type can have variations (e.g. a corner site, more than one street frontage etc.). In this case the building type will have slight variations based on the individual context.



## C.1 NARROW LOT BUILDING

Narrow Lot Building type is a thin narrow building generally found along traditional main streets like Sydney Road or in other strip shopping centres.

Generally, buildings on such narrow sites have poor internal amenity due to limited potential for natural light and ventilation. They also tend to overshadow and compromise the development potential for adjacent sites.

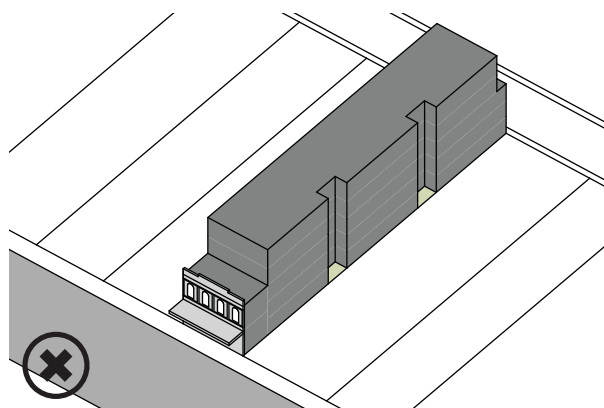
### Key characteristics

- Zero ground level setbacks. Some lots with rear land might require rear setback for vehicular access.
- Primarily relies on narrow frontages for natural light and ventilation. Corner sites have more possibilities for natural light and ventilation.
- A defined podium consistent with the existing character of the area or as identified in any relevant precinct/site specific provisions.
- Levels above the podium are setback to define and emphasise a consistent street wall.
- A courtyard in the middle of the building allowing natural light and ventilation.
- Main pedestrian access is from the primary street frontage.
- Most lots have primary street access and a secondary laneway access, but some might only have one street frontage.

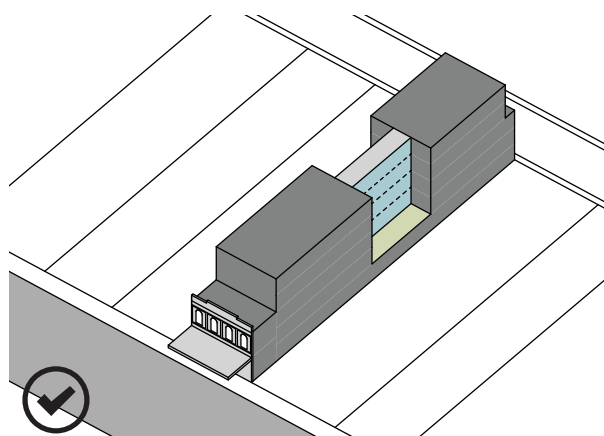
### Where to use

This building type is best used where -

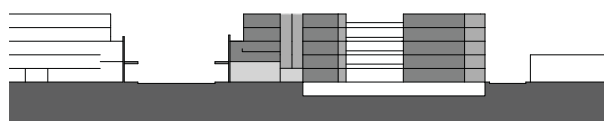
- the lots are very narrow and deep
- character of the street in terms of consistent podium height needs to be maintained
- retail/commercial use for the ground floor is desired with a zero front setback



C.1.1 Traditional Narrow Lot undesirable approach



C.1.2 Narrow Lot Building desirable approach

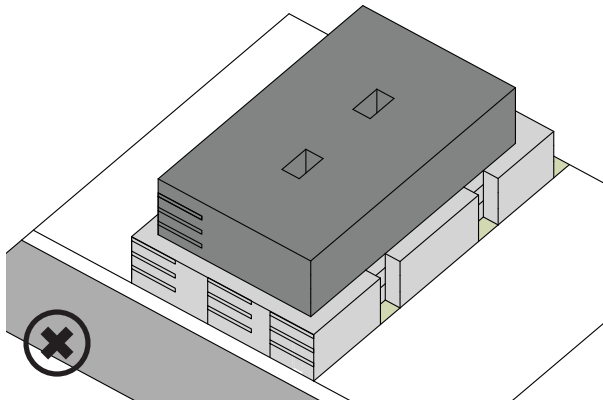


C.1.3 Section

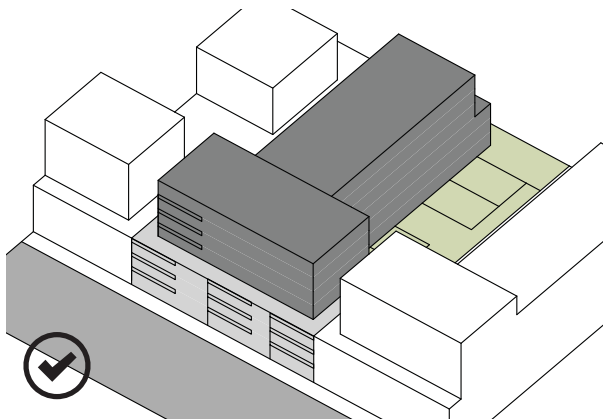


C.1.4 Example of Narrow Lot Building

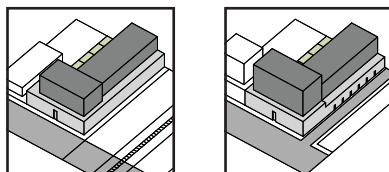
## C.2 BLOCK BUILDING



C.2.1 Traditional Block Building undesirable approach



C.2.2 Block apartment on a deep site mid-block



C.2.3 Block apartment variations



C.2.4 Example of Block Apartment off the Main Street

Block Building type is a building which has the shorter side of the site aligned along the street with dwellings normally arranged along a corridor. The lot type of Block Building has a shorter frontage along the street and is approximately 30m wide and 50m deep.

### Key characteristics

- Zero ground level front setbacks
- Might have a podium that defines the street edge based on the urban context
- The short frontage is along the street with main access from the primary street
- The front of the building along the street frontage is built to the boundary to create and emphasise the street wall. The rear of building is generally narrow allowing for better internal amenity.

### Where to use

The building type is best used where -

- the lot is deeper in proportion to street frontage
- for large or amalgamated lots along main streets and activity centre areas
- retail/commercial use on ground floor is desired with a zero front setback
- an infill within existing urban fabric is desired rather than a landmark





## C.3 SLAB BUILDING

Slab Building type is a building which unlike the Block Building type has the longer edge along the street frontage. This type is mainly suitable for lots that have a large street frontage and shallow depth, but are also used in larger lots as part of a group of buildings to create a strong street wall.

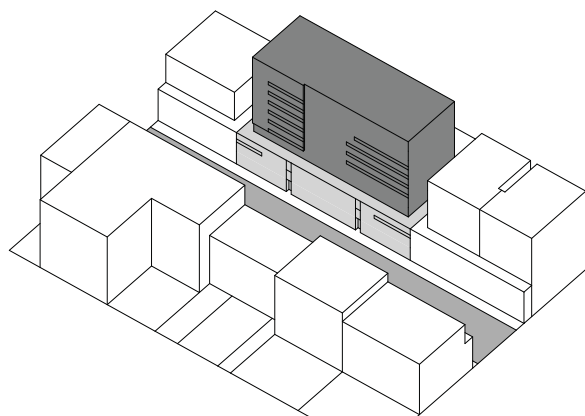
### Key characteristics

- Zero ground level setbacks along the street frontage. Generally has rear setback.
- The longer edge of the building is aligned to the street creating a strong street wall.
- May have a podium that defines the street edge with the upper levels setback based on existing character or relevant precinct/site specific provisions.
- One main pedestrian entrance from the primary street frontage.
- Mainly retail use on the ground floor.
- Dwellings are generally organised along a corridor with one or more circulation cores based on the size.

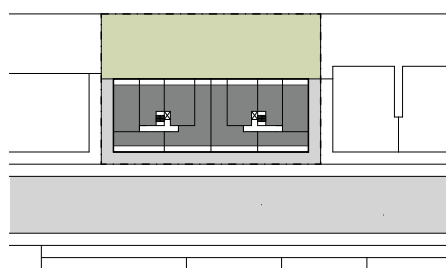
### Where to use

This building type is used where -

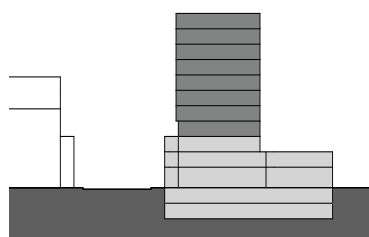
- the lot has a large street frontage and a shallow depth or as part of a group of buildings on larger lots
- a strong street wall is desired
- ground floor retail or commercial use is desired with a zero front setback
- on larger lots along main retail streets



C.3.1 Slab Apartment



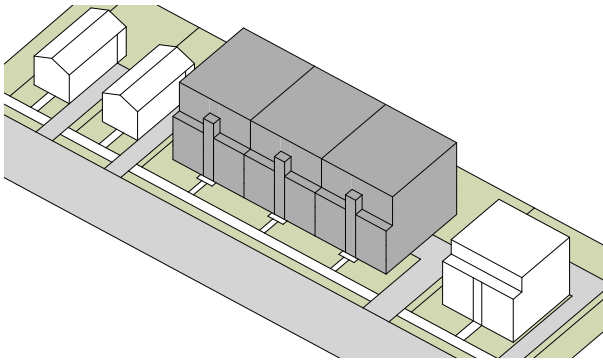
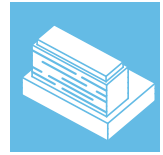
C.3.2 Plan



C.3.3 Section



C.3.4 Example of a slab building

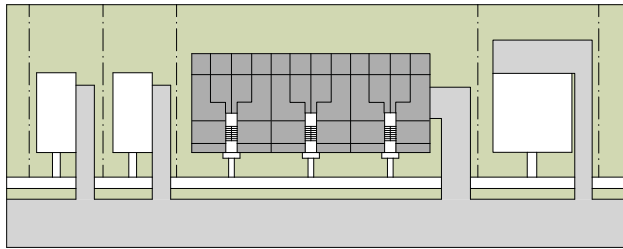


C.3.5 Row apartment

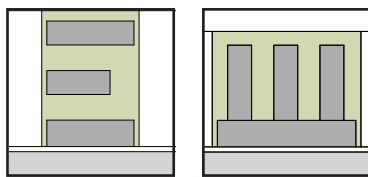
### Row Apartment Variation

A variation of the Slab Building type, which has various entrances from the street and is generally not higher than 4 storeys. This type is mainly suitable for residential areas off the retail streets.

The building is generally setback from the street with multiple residential entries and residential use on ground floor. Normally there are 2 to 6 dwellings organised around a circulation core which can have lift or just stair access.



C.3.6 Plan



C.3.7 Slab Apartment variations



C.3.8 Example of a row apartment building





## C.4 TOWER BUILDING

Tower Building type is a vertically proportioned building with a number of dwellings arranged around a central core. The building is a free standing element with a podium which defines the street wall.

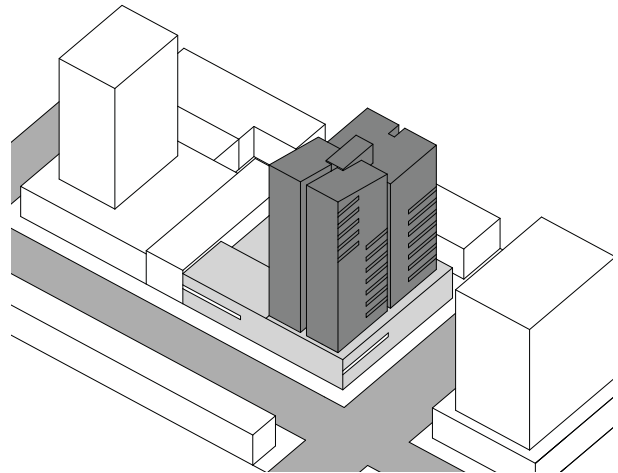
### Key characteristics

- Tall and slim built form
- Generally a podium defines the street wall height and relationship with the street
- The podium has zero ground and street wall setback to the primary street. The upper levels of the tower are setback to maximise light and view.
- Light and outlook from all four sides
- Internal layout is organised around a central circulation core

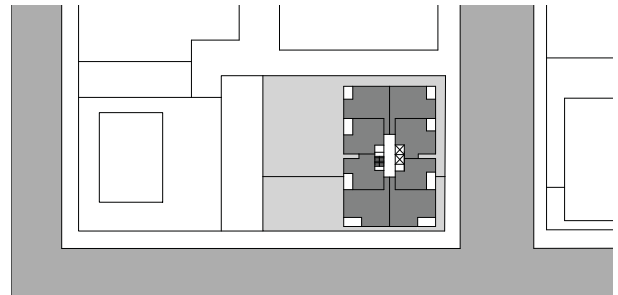
### Where to use

The building type is best used where -

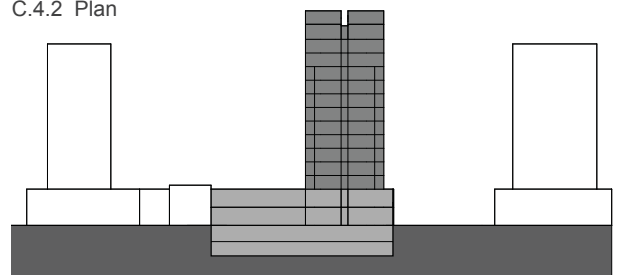
- the lots are large enough to provide an outlook on all four sides with appropriate building separation
- an existing or preferred context is a high density urban area
- a strong urban form or landmark is desired and is consistent with structure plan
- ideally suited for corner locations or on lots with more than one street frontage



C.4.1 Tower Apartment



C.4.2 Plan

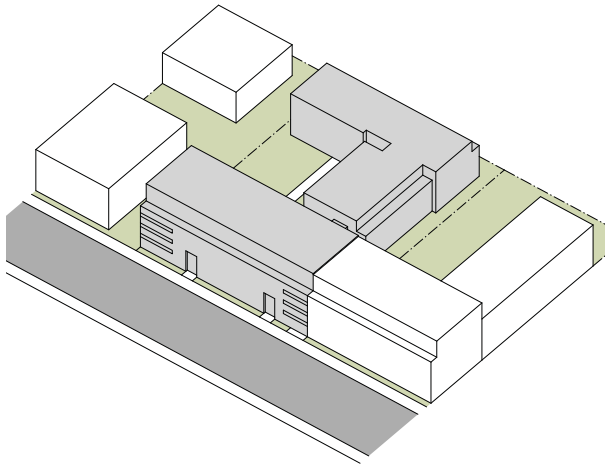


C.4.3 Section



C.4.4 Example of a tower apartment

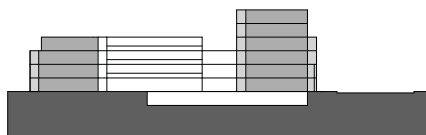
## C.5 COURTYARD BUILDING



C.5.1 Courtyard Apartment



C.5.2 Plan



C.5.3 Section



C.5.4 Example of a courtyard building

Courtyard Building type is a building which surrounds a courtyard open space. This courtyard can be enclosed on two or more sides with a building. Courtyard Building type can be a perimeter block which has a more urban street character with zero street setbacks defining the street edge.

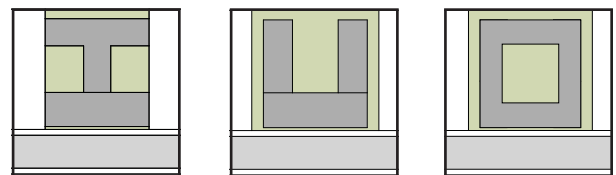
### Key characteristics

- Can have zero front setback if located in an area where ground floor retail is desirable
- Building is organised around a courtyard which provides outlook and can be used as a communal open space
- May have a podium based on local context
- Generally has multiple cores and entrances

### Where to use

The building type is best used where -

- lots are large enough to provide a communal space and outlook
- landscaped courtyard is desired due to the size of the development and availability of existing open space
- lots that have an external outlook which the building needs to address
- larger lots with more than one street frontage allow primary outlook in the centre of the site
- where significant vegetation or canopy trees already exist on the site



3.5.5 Courtyard apartment variations



## C.6 HYBRID BUILDING

Hybrid Building type is a combination of two or more building types on a large development site. The combination is a result of site specific conditions and size of the site.

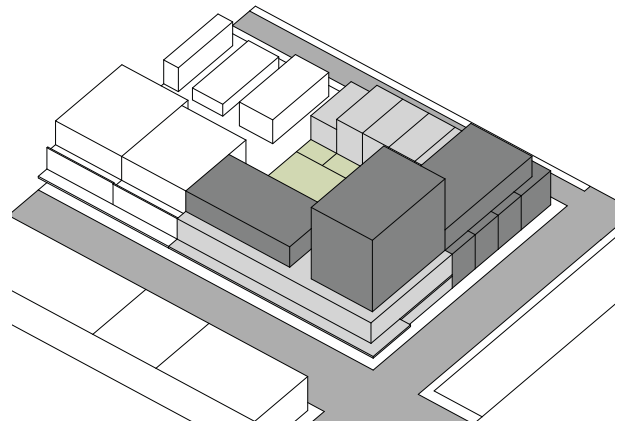
### Key Characteristics

- a mixture of building forms and architectural expression
- may have a zero ground level setbacks or side setback based on context
- generally has more than one street frontage

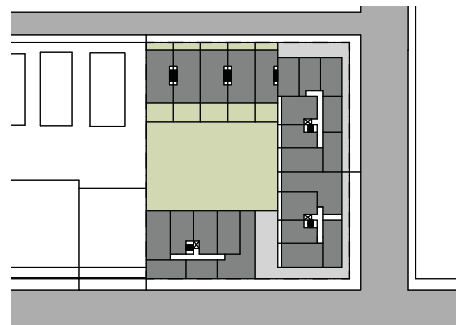
### Where to use

This building type is mainly used -

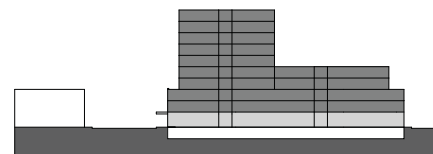
- on larger site which have potential for multiple buildings in various combinations
- for sites with different edge conditions requiring a different type or approach for each frontage
- where a variety of dwelling types is desired
- where significant vegetation or mature canopy trees already exist on the site



C.6.1 Hybrid Building which combines tower building, slab building and row building



C.6.2 Plan



C.6.3 Section

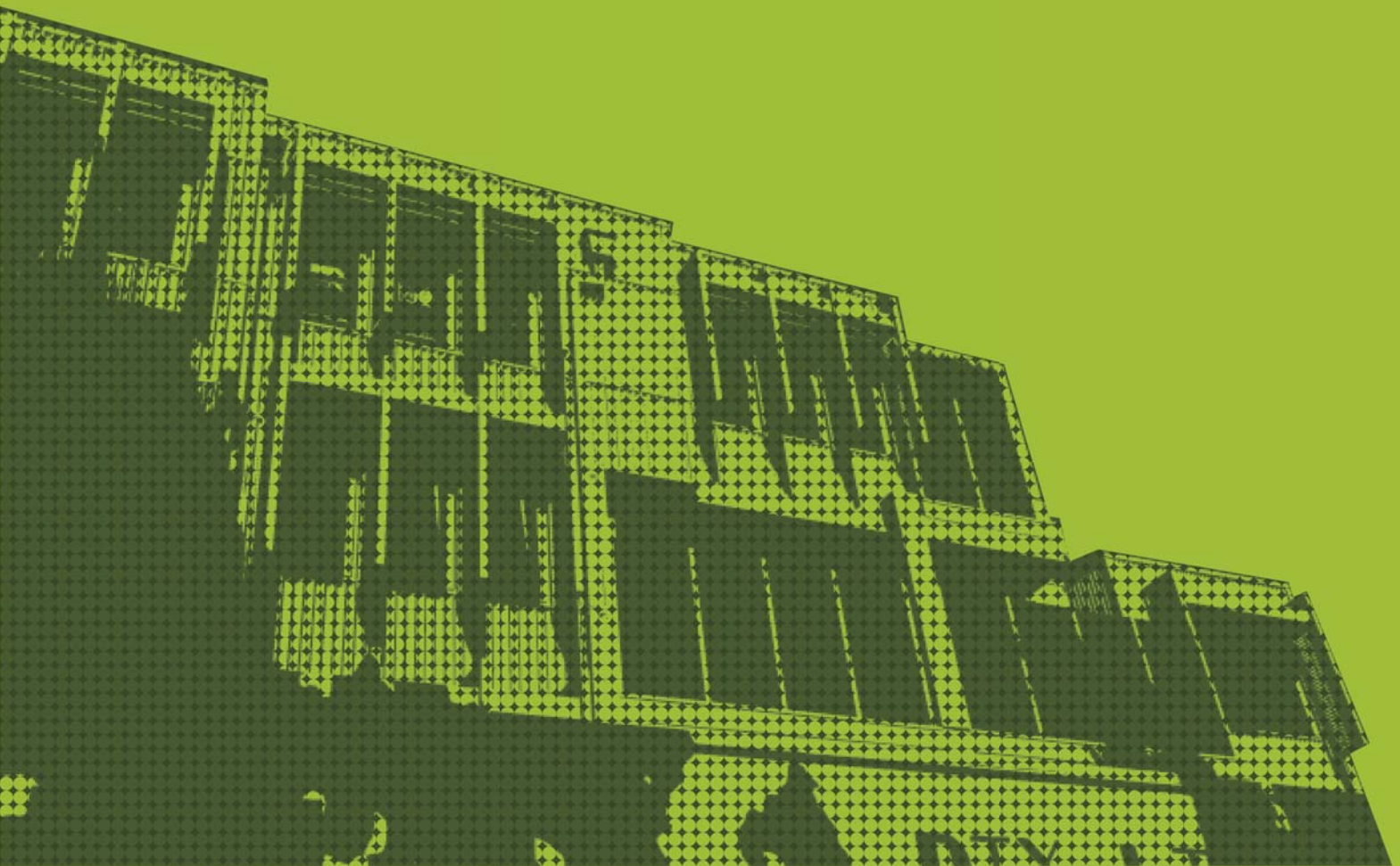


C.6.4 Example of a hybrid of slab apartments and row apartments

.....

# PART D

## ASSESSMENT PROVISIONS





## D.1 PASSIVE DESIGN ELEMENT

### D.1.1 BUILDING ORIENTATION



#### Objectives

- To balance optimum solar orientation with contextually responsive design to the public realm.

#### Standards

- The site layout should optimise solar access to the living areas of dwellings and open space areas.
- The building(s) should create an identifiable address to the street and/or the public realm.
- The building(s) should provide opportunities for passive surveillance of the public realm.
- Building(s) adjoining a public park or reserve should:
  - be substantially fronted by dwellings or open space.
  - clearly delineate private and public land to maximise outlook whilst avoiding a sense of privatisation of the public park or reserve.

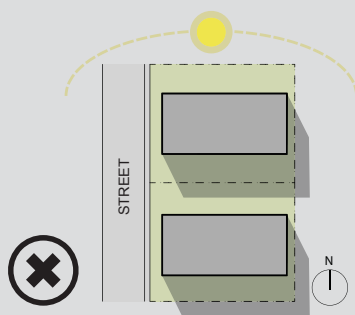
#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

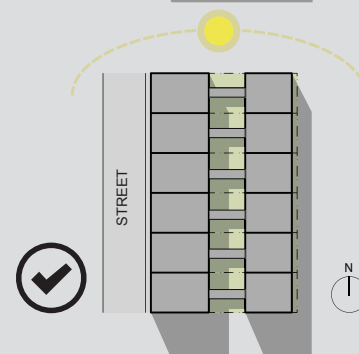
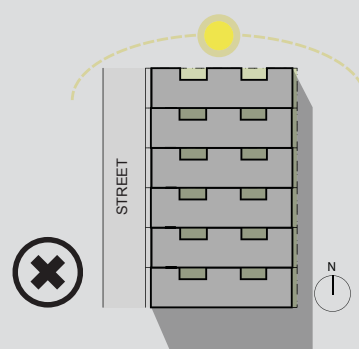
- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.
- The Sustainability Management Plan.



#### Design Guidelines: Building Orientation



1.1.1 Building layout should balance the requirement to create an edge to the street and maximising solar access



1.1.2 Narrow lot buildings with East - West orientation require continuous central courtyards across multiple sites to provide larger combined internal open space





## D.1 PASSIVE DESIGN ELEMENT

### D.1.2 BUILDING SEPARATION

#### Objectives

- To provide adequate daylight to living rooms and bedrooms.
- To provide opportunities for open space areas.
- To ensure buildings are located and designed to reduce overlooking into habitable rooms and private open space areas.
- To provide a quality outlook for residents.
- To ensure the equitable development opportunities of adjoining properties.

#### Standards

- The urban context report and design response should include an equitable development analysis to assess the implications for development opportunities and amenity impact within the application site and for adjoining sites.
- Building separation distances should comply with the Tables D.1.2.a, D.1.2.b, D.1.2.c. Separation between buildings is measured from glazing line to glazing line of habitable rooms or the external edge of any balcony, whichever is the lesser. These separation distances have a primary purpose to provide adequate access to daylight in living areas and bedrooms. Alternative design solutions may achieve that purpose with lesser separation distances.

**Table D.1.2.a Building separation to adjacent properties**

	Minimum building separation (measured from property boundary)	
	Living/Main balcony outlook to boundary line	Bedroom outlook to boundary line
Up to 4 storeys/12 metres	6 metres	3 metres
5-8 storeys (12-25m high) 5-8 storeys /up to 25 metres	9 metres	4.5 metres
9+ storeys/over 25 metres	12 metres	6 metres

**NOTE:**

- *Building separation is not required to the side or rear boundary where no outlook is proposed provided it does not affect the reasonable development opportunity of the adjoining site.*
- *Zero building separation applies on sites where a continuous street wall is encouraged under the relevant place-based control.*
- *Where existing dwellings have not incorporated access to daylight to habitable rooms on their own site in accordance with the building separation standards, the building separation standards will only apply to new development to the extent necessary to achieve a comparable contribution (from a minimum of one metre and a maximum of three metres) of daylight into the habitable rooms of the proposed dwellings.*
- *The building separation requirements commence at the first level of residential use.*





**Table D.1.2.b Building separation to a lane**

	Minimum building separation	
	Living/Main balcony outlook	Bedroom outlook
2 storeys (9 metres high)	0 metres (from boundary)	0 metres (from boundary)
3-8 storeys (up to 25 metres)	6 metres (from lane centre line)	3 metres (from lane centre line)
9+ storeys/over 25 metres	9 metres (from lane centre line)	6 metres (from lane centre line)

NOTE:

- The building separation requirements commence at the first level of residential use.

**Table D.1.2.c Building separation for buildings within sites**

	Minimum building separation				
	Living/Main balcony outlook to Living/Main balcony outlook	Bedroom outlook to bedroom outlook	Living/Main balcony outlook to bedroom outlook	Living/Main balcony outlook to no outlook	Bedroom outlook to no outlook
Up to 4 storeys/12 metres	12 m	6 m	9 m	6 m	3 m
5-8 storeys/up to 25 metres	18 m	9 m	13.5 m	9 m	4.5 m
9+ storeys/over 25 metres	24 m	12 m	18 m	12 m	6 m

NOTE:

- The building separation requirements commence at the first level of residential use.

- The use of light wells for daylight should be minimised.
- Where light wells are provided, they should:
  - Provide daylight access to bedrooms only.
  - Be painted in a light reflective colour.
  - Provide an opportunity for useable space at ground level.
  - Bedroom windows in separate dwellings that face light wells should be staggered to avoid direct overlooking.



- Light wells should comply with the following area and minimum width:

**Table D.1.2.d Light well minimum areas and dimensions**

Dwelling type	Minimum area and dimension
Up to 4 storeys/12 metres	9m <sup>2</sup> (minimum width 3m)
5-8 storeys/up to 25 metres	29m <sup>2</sup> (minimum width 4.5m)
9+ storeys/over 25 metres	51m <sup>2</sup> (minimum width 6m)

NOTE:

- *The light well minimum areas and dimensions may need to be varied for buildings containing multiple levels of non-residential uses.*

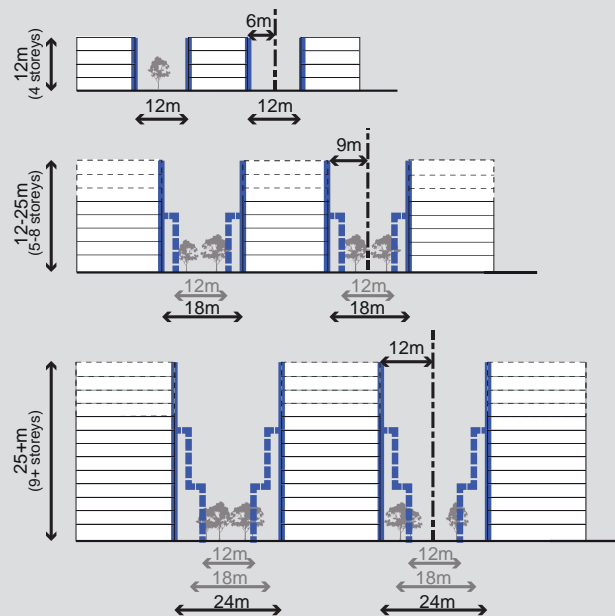
## Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

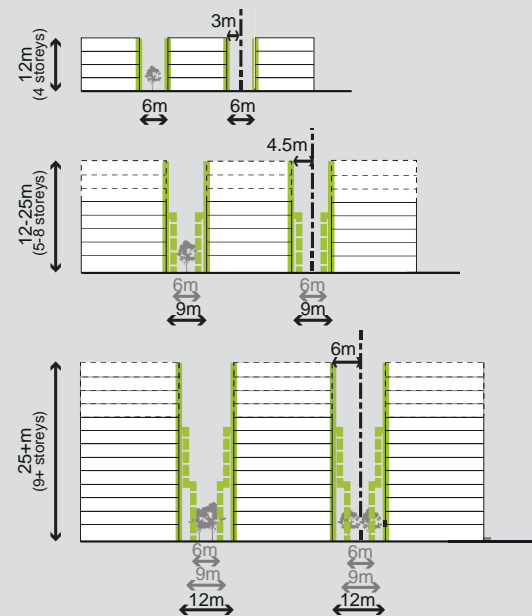
- Any structure plan, policy or planning scheme provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The reasonable development opportunities of adjoining lots.
- Whether existing dwellings have not reasonably incorporated access to daylight on their own site.
- Whether technical analysis demonstrates that separation distances of less than the benchmarks in the standard meet daylight performance requirements.
- The design guidelines.
- The Sustainability Management Plan.



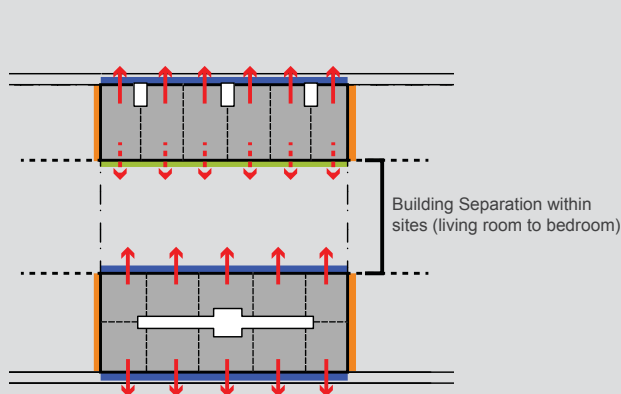
## Design Guidelines : Building Separation



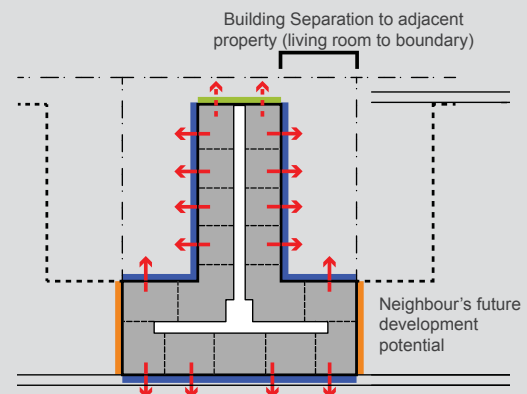
1.2.1 Building separation for living/main balcony outlook



1.2.2 Building separation for bedroom outlook



1.2.3 Building separation allows flexibility and different design outcomes depending on the type of outlook



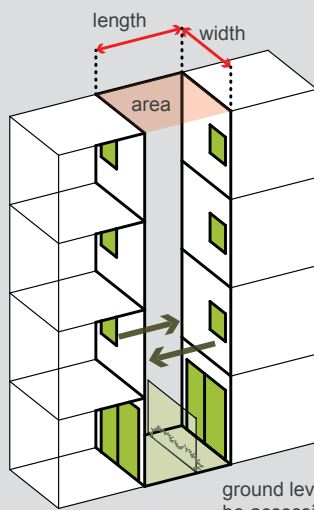
1.2.5 Space created by building separation used as communal open space

### KEY:

- Living/Main balcony outlook
- Bedroom outlook
- No outlook



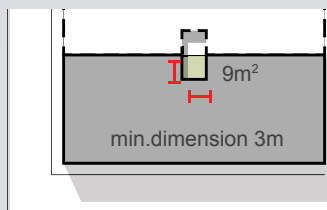
## Design Guidelines : Light Well



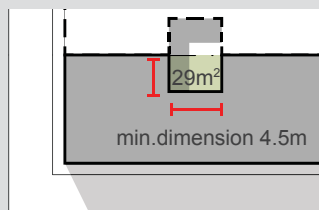
bedroom windows be staggered to avoid overlooking

ground level of the light well should be accessible via a door and can be converted into a landscaped area

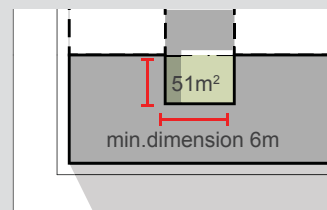
### 1.2.6 Minimum light well size



Up to 4 storeys/  
12 metres

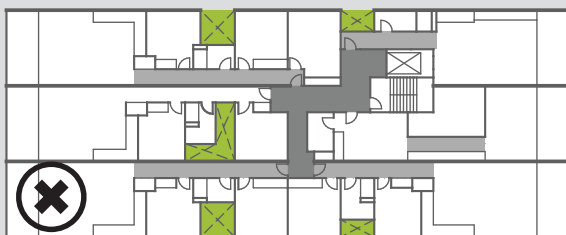


5-8 storeys/  
up to 25 metres

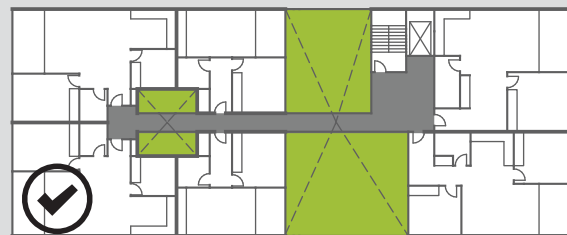


9+ storeys/  
over 25 metres

### 1.2.8 Size of light well increases as it goes higher to allow adequate light to the bottom apartment units



1.2.8 Building design which relies on small light wells creates bedrooms with insufficient light



1.2.9 Consolidation of light wells into a larger courtyard provides a more meaningful size of open space as a source of light. This will also result in better apartment layout with more useful internal space

## D.1 PASSIVE DESIGN ELEMENT

### D.1.3 DAYLIGHT ACCESS



#### Objectives

- To ensure adequate daylight to dwellings.

#### Standards

- Access to natural light in habitable rooms is to be principally achieved by compliance with Standard D.1.2 Building separation.
- The following minimum ceiling heights, measured from finished floor level (FFL) to finished ceiling Level (FCL), should apply:
  - Retail and commercial uses: min. 3.3 metres.
  - Residential uses: min. 2.7 metres for habitable rooms, min 2.4 metres for non-habitable rooms.
  - Above ground car parks: min 3.3 metres at ground floor, min 2.7 metres above ground floor.
- Reliance on borrowed light to bedrooms is discouraged. Where provided it is confined to one bedroom dwellings only and should meet the following requirements:
  - An operable internal door to the light source that is a minimum of 25% of the floor area of the bedroom.
  - The light source contains full height external windows along the full width of the living room to allow adequate daylight.
- Living areas (comprising living rooms, dining areas and kitchens) should not exceed a depth of 8 metres.
- All living rooms should have an external window that is open to the sky or a balcony that is open for at least one third of its perimeter.
- In battle-axe rooms the space providing access to daylight (which is not affected by any obstructions and is clear to the sky) should have a maximum length of twice its width.
- Buildings should provide windows to circulation corridors and lift lobbies to maximise daylight access.
- Developments which do not provide ceiling heights of 2.7 metres (measured from finished floor level to finished ceiling level) for habitable rooms should demonstrate that dwellings will receive adequate daylight access.

#### Decision Guidelines

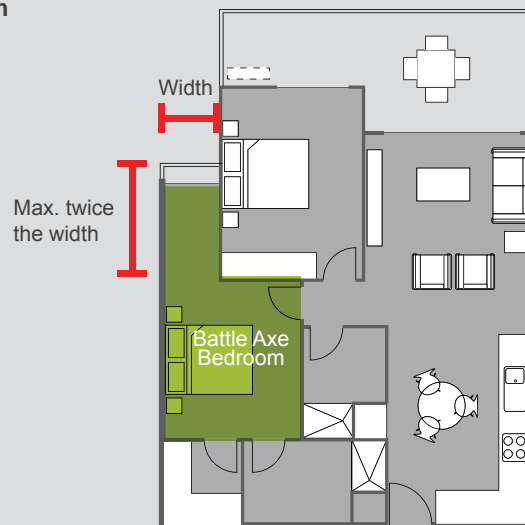
Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.
- Floor to ceiling height of habitable rooms and the extent of glazing.
- The Sustainability Management Plan.



## Design Guidelines : Battle Axe Rooms and Borrowed Light Bedroom

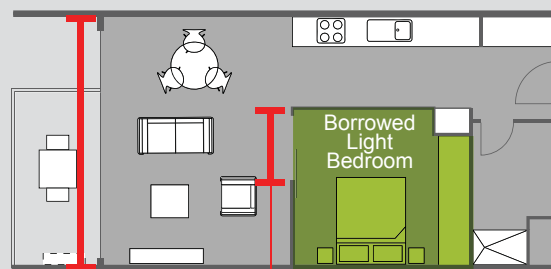
### Battle Axe (Saddle Back) Bedroom



- 1.3.1 The maximum length of the battle axe bedroom handle should not exceed twice the width of the handle to achieve minimum daylight standard to the bedroom

### Borrowed Light Bedroom

Floor to ceiling and wall to wall external opening



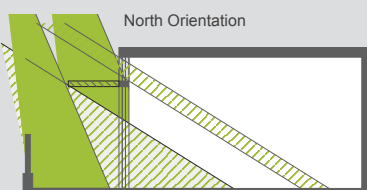
- 1.3.2 Apartment with borrowed light is a poor outcome, when it is unavoidable it should be arranged according to the diagram

Operable internal door should be more than 25% of the bedroom area

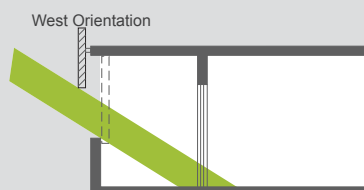


## Design Guidelines : Optimising Daylight Access

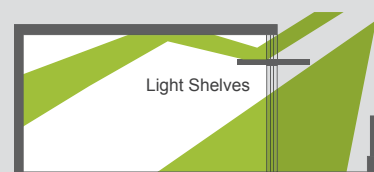
Design solutions can be used to optimise daylight access to habitable room's window.



- 1.3.3 Horizontal louvres on the north facing windows allow winter sun but block summer sun



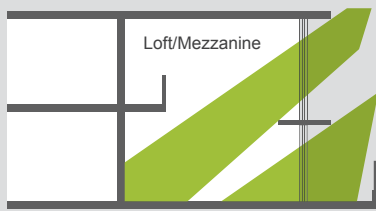
- 1.3.4 Louvred screens on west facing windows reduce sun penetration



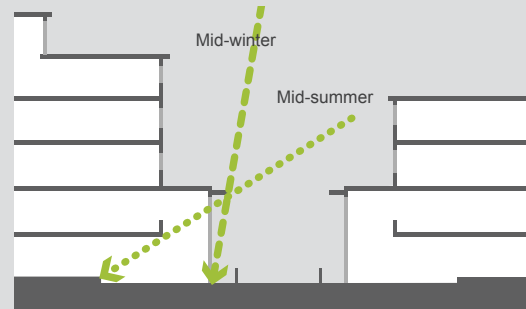
- 1.3.5 Light shelves allow light to disperse further in the room



## Design Guidelines : Optimising Daylight Access (continued)



1.3.6 Loft/mezzanine type apartment allow more sun penetration into the living room

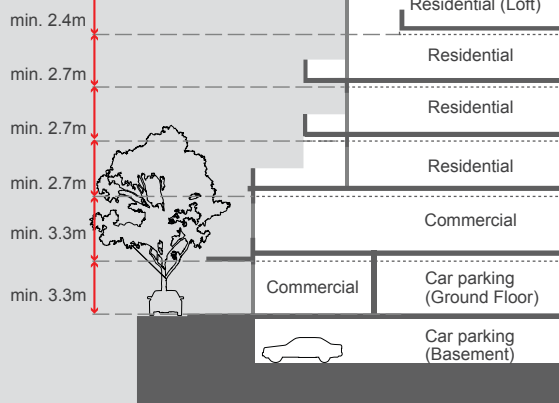


1.3.7 Double storey apartments on the ground floor & lower level facilitate better daylight access

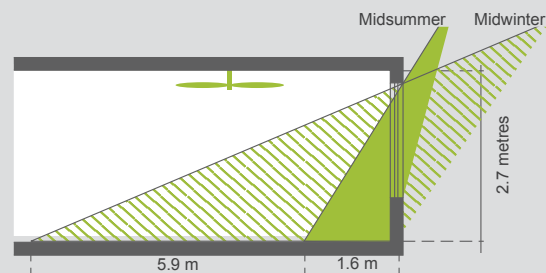
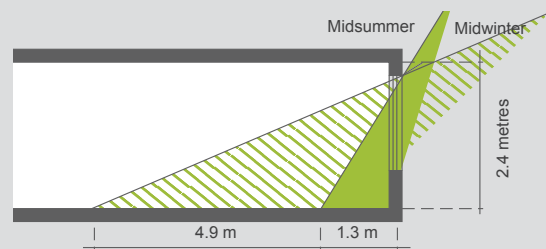


## Design Guidelines : Ceiling Heights

Minimum floor to ceiling height



1.3.8 Minimum ceiling heights for mixed-use buildings



1.3.9 Higher ceiling height allow greater daylight penetration in the room and provides potential space for a ceiling fan



1.3.10 Good ceiling height maximises daylight penetration into the room and provides potential space for a ceiling fan



## D.1 PASSIVE DESIGN ELEMENT

### D.1.4 NATURAL VENTILATION

#### Objectives

- To ensure adequate natural ventilation of dwellings and common areas.
- To provide for the thermal comfort of occupants by optimising the passive heating and cooling of dwellings and communal spaces.

#### Standards

- All habitable rooms should be naturally ventilated.
- Cross ventilated dwellings should be maximised, by:
  - Maximising the number of dual aspect dwellings.
  - Incorporating a breeze path between two ventilation openings within rooms, or from one room to another.
  - Where single sided ventilation is provided, deep rooms should be avoided.
- Operable windows to circulation corridors and lift lobbies should be provided to facilitate natural ventilation.
- Opportunities for external clothes drying should be provided.

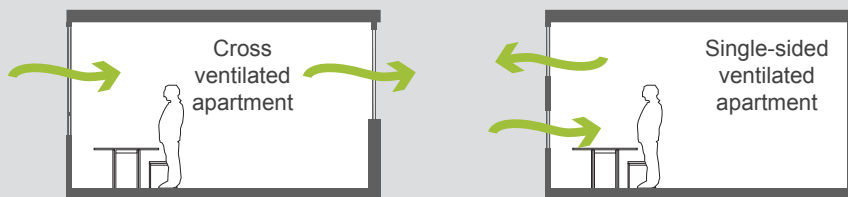
#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

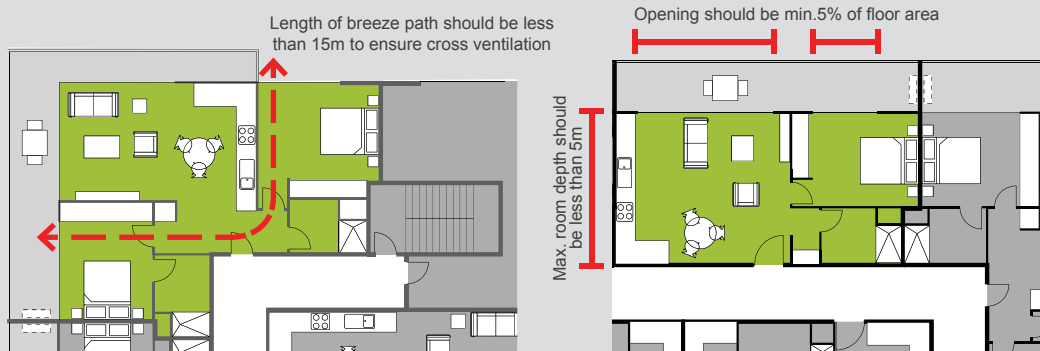
- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.
- The Sustainability Management Plan.



#### Design Guidelines: Natural Ventilation



1.4.1 Cross ventilated apartment & single sided ventilated apartment



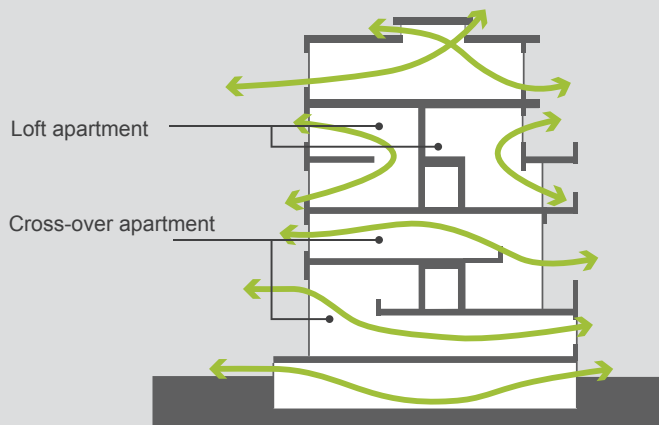
1.4.2 Cross ventilation is easily achieved in corner units

1.4.3 Single sided ventilation should have a maximum room depth of 5 metres

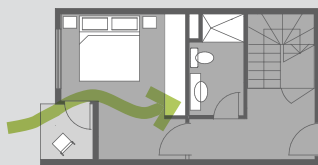




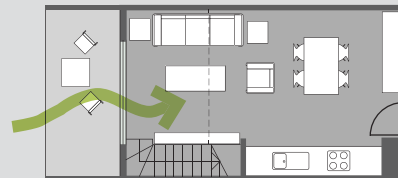
## Design Guidelines : Natural Ventilation (continued)



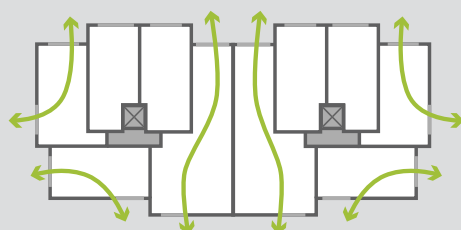
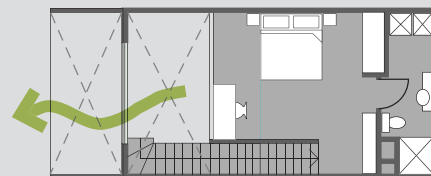
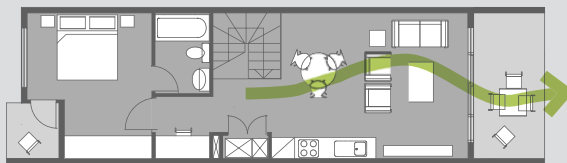
1.4.4 Vertically, cross ventilation can be provided with cross-over apartment and loft apartment to improve fresh air intake; semi-basement creates a naturally ventilated carpark



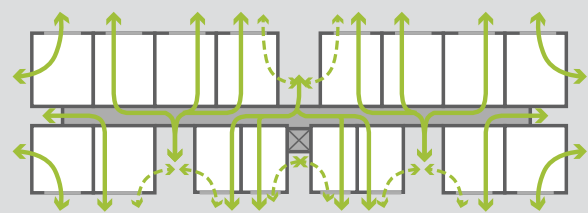
1.4.5 Cross-over apartment



1.4.6 Loft apartment



1.4.7 Cross ventilation can be accommodated on dual aspect apartments on corners. Dual aspect apartment can be provided in the middle by having multiple light cores



1.4.8 Cross ventilation can be provided using naturally ventilated corridors to reduce the breeze path to less than 15 metres



## D.1 PASSIVE DESIGN ELEMENT

### D.1.5 THERMAL COMFORT

#### Objectives

- To optimise provision of direct sunlight in winter while avoiding overheating in summer.
- To ensure comfortable internal temperatures for occupants throughout the year.
- To allow occupant control over thermal comfort.

#### Standards

- All dwellings should demonstrate that habitable room glazing receives adequate shading from summer sun and optimises solar access during winter. This could be via a combination of balconies, horizontal shading features and vertical shading features.
- Where external shading is not provided to northern, eastern or western facades, effective thermal comfort levels should be achieved by demonstrating a maximum cooling load for each dwelling using accredited energy rating software.
- Occupant control of the thermal environment should be facilitated. This could be through the provision of reversible ceilings, adjustable external shading devices, operable windows and zoning of mechanical heating and cooling systems where these are provided.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.
- The Sustainability Management Plan.



## Design Guidelines : External Shading and Balcony

### Balcony Type



#### Open Balcony

is suitable for desired openness such as within highly landscaped context



#### Half Enclosed Balcony

provides privacy for the occupants in an urban context & helps emphasize the street wall



#### Fully Enclosed Balcony

is suitable for apartments facing high traffic roads and for apartments in higher levels of tall buildings

### Balustrade



#### Solid Balustrade

provides a high degree of visual & acoustic privacy suitable for apartments on lower floors



#### Transparent Balustrade

provides optimum view, suitable for apartments on higher floors where privacy is not an issue



#### Semi Transparent Balustrade

such as perforated metal prevents overlooking from outside



#### Hybrid Balustrade

with partly solid & transparent material balances overlooking and gaining an optimum view.

### Sun Shading Devices



#### Canopy / Awning

provide protection from sun and rain



#### Window hood

provide sun protection and help to create rhythm on the facade



#### Integrated shading and facade design

provide sun shading and create an identity

### Screen



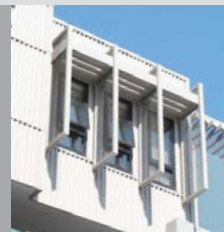
#### Fixed Screens

need to be installed to suit the differing context of each balcony



#### Adjustable Screens

are suitable for sun protection and privacy, providing flexibility for occupants



#### Vertical Screen

is suitable for facades facing west with low angle summer sun



#### Horizontal screen

is suitable for facades facing north with high angle summer sun

### 1.5.1 External shading and balcony



## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.1 DWELLING DIVERSITY

#### Objectives

- To provide a range of dwelling sizes.

#### Standards

- All developments should provide a range of dwelling sizes that includes the following types:
  - Studios.
  - 1 bedroom.
  - 2 bedrooms.
  - 3 bedrooms in developments of 50 or more dwellings.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The design guidelines.

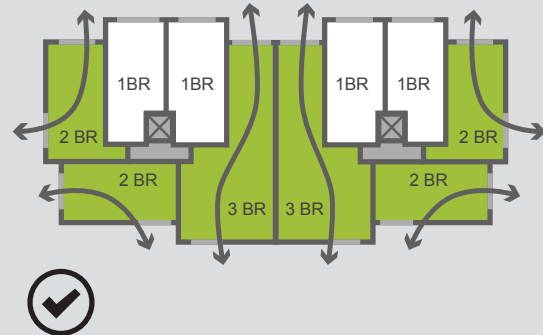


#### Design Guidelines : Dwelling Diversity

Having a mix of apartments also creates opportunity for better apartment amenity.



2.1.1 Most apartments are single aspect (no cross-ventilation) with two of them facing south



2.1.2 More than half of the apartments have dual aspects with no south facing unit

## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.2 DWELLING SIZE AND LAYOUT



#### Objectives

- To ensure that dwellings are suitably sized and arranged to meet the needs of occupants and to enable flexibility of use.

#### Standards

- Layout plans should illustrate the functionality and liveability of all proposed apartment types. These plans should also show typical furniture layouts.
- Dwellings should meet the minimum size standards in Table D.2.2.

**Table D.2.2 Minimum Dwelling Size Standards**

Dwelling type	Size
Studio	37m <sup>2</sup>
1 bedroom dwelling	50m <sup>2</sup>
2 bedroom dwelling	65m <sup>2</sup>
3 or more bedroom dwellings	90m <sup>2</sup>

#### Decision Guidelines

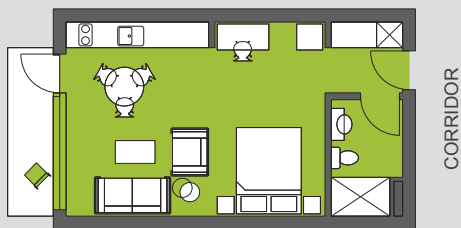
Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The floor to ceiling heights of dwellings.
- The size of the balcony.
- The design guidelines.

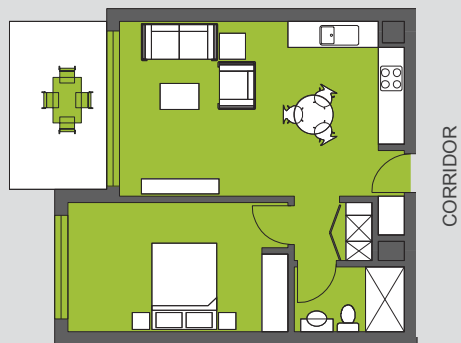


## Design Guidelines : Indicative Dwelling Layout

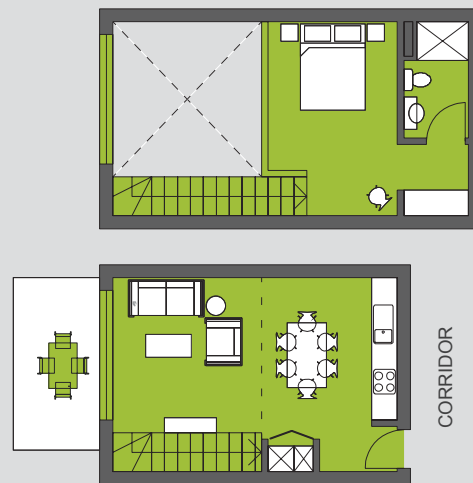
### Studio



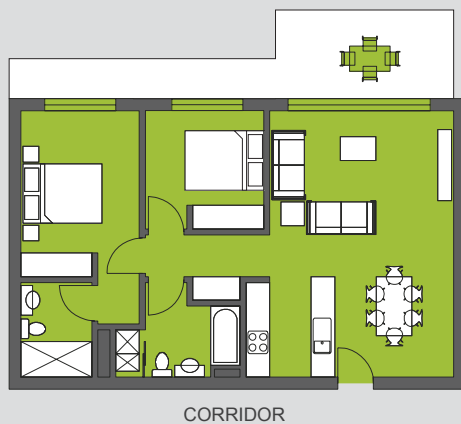
### 1 Bedroom - single aspect



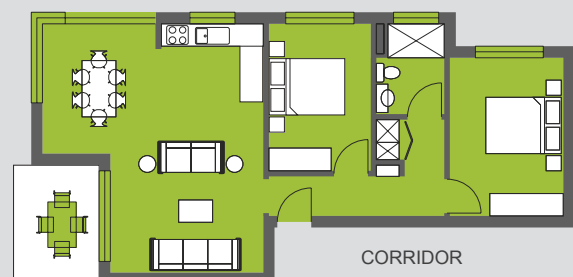
### 1 Bedroom - loft



### 2 Bedroom - single aspect



### 2 Bedroom - double aspects (corner)

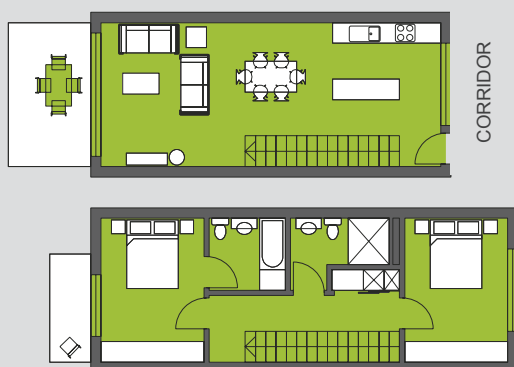


2.2.1 Indicative layout (1)

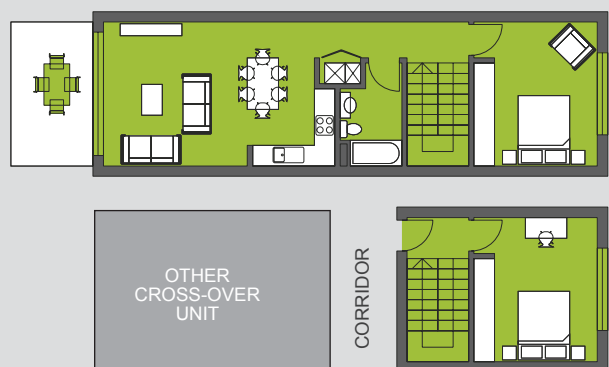


## Design Guidelines : Indicative Dwelling Layout (continued)

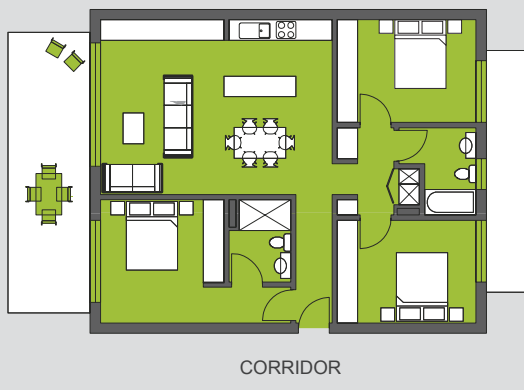
2 Bedroom - double storey



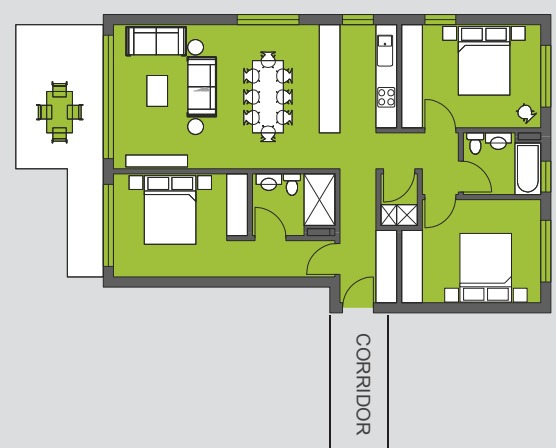
2 Bedroom - cross-over



3 Bedroom - dual aspects



3 Bedroom - triple aspects



### 2.2.2 Indicative layout (2)



## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.3 PEDESTRIAN ENTRY & CIRCULATION

#### Objectives

- To provide an identifiable street address.
- To provide shelter to the entrances of buildings.
- To ensure that circulation within buildings and access to dwellings and to communal areas is efficient and safe.

#### Standards

- Pedestrian entries should be clearly visible and identifiable from the public realm.
- Avoid location of ramps across building frontages which impede opportunities for direct access to individual tenancies.
- Provide awnings to the pedestrian entrances to buildings.
- The design of awnings should:
  - Be continuous along retail/commercial and key pedestrian routes.
  - Complement the existing height, depth and form of existing awnings, where appropriate.
  - Have regard to any built form controls regarding the preferred character or existing character of the area.
  - Contribute to the legibility of the building and the amenity of the public realm.
  - Provide illumination.
  - Provide sufficient protection from sun and rain.
- Distinguish the main entry to the apartment building from the entrances of any commercial and retail premises.
- Provide clear separation between vehicle and pedestrian entries to buildings.
- Provide a direct visual connection between the pedestrian entry and lift lobbies.
- Provide generous corridor widths and ceiling heights no less than 2.7 metres, particularly in entry areas, ground floor lobby and the waiting area around lifts.
- Minimise corridor lengths to give short, clear sight lines and better orientation from within the building.
- Natural light and ventilation should be provided to all communal circulation spaces.
- Provide visible and attractive stairs from the entry level to a minimum of four floors to encourage stair use.
- Long buildings should be designed with multiple cores instead of one core with a very long corridor to:
  - Increase the number of entries along a street.
  - Provide for more cross-ventilated dwellings which are not limited by corridors.
- Where dwellings are arranged off a double loaded corridor, corridor length should not exceed 25 metres. Any corridors longer than 25 metres should be articulated with design solutions such as:
  - Utilising a series of foyer areas, as break space from the long corridor.
  - Providing windows at the end of a corridor, along the corridor or around lift lobby areas.

#### Decision Guidelines

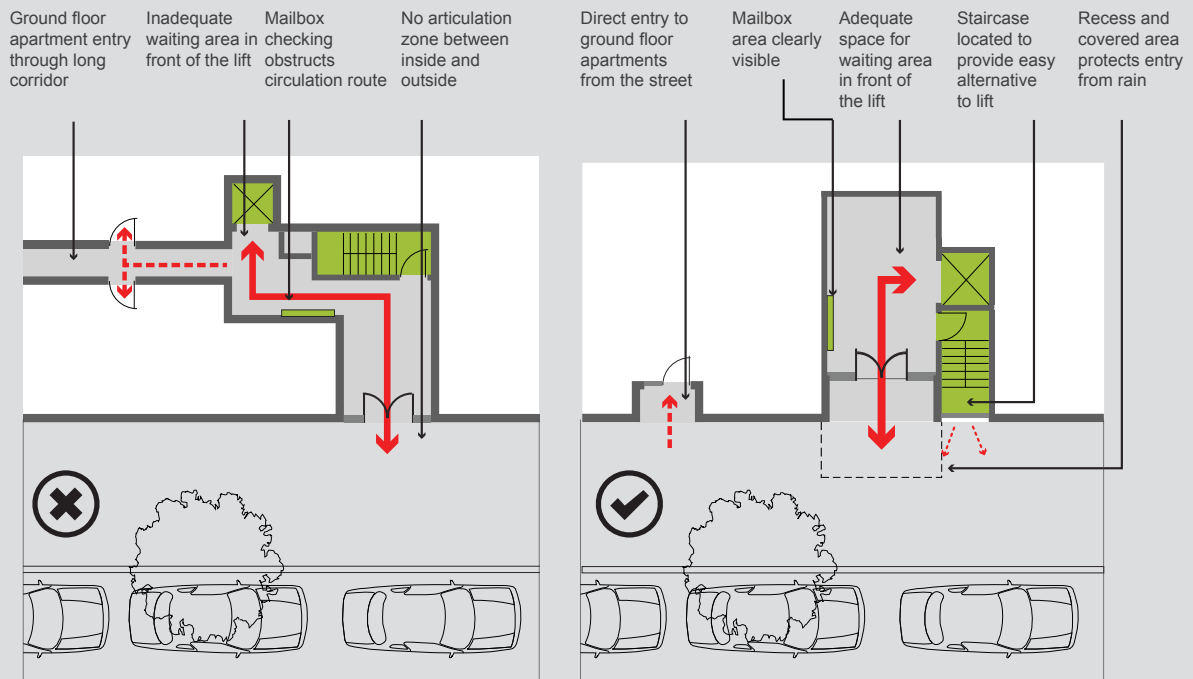
Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.

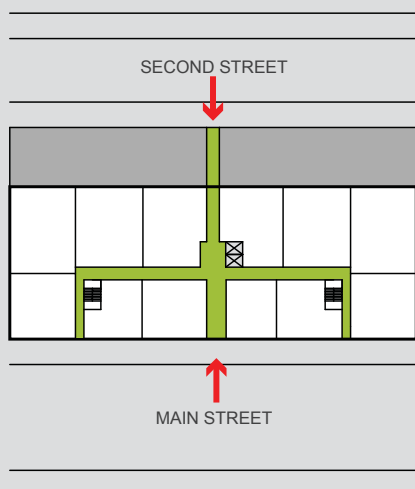




## Design Guidelines : Building Circulation



2.3.1 Pedestrian entries into apartments should be direct, providing a clear view from the footpath and a sufficient waiting area



2.3.2 Building with access to two parallel streets should provide direct access to the lift lobby from both streets



2.3.3 Combination of staircase and entry will encourage residents to use staircase instead of lift; staircase which is visible from the street activates the street



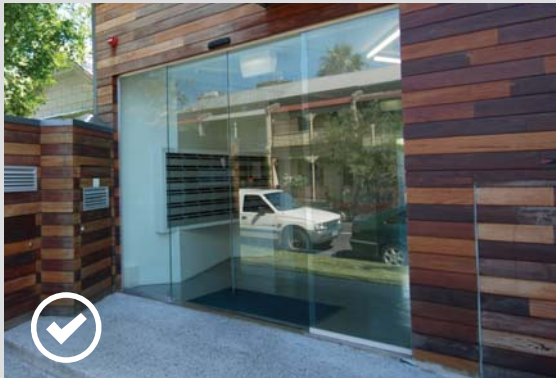
## Design Guidelines : Pedestrian Entry



2.3.4 The main entry to the building needs to be easily identifiable from the street and sheltered



2.3.5 Multiple pedestrian entrances for ground floor residential



2.3.6 Mail boxes which strengthen the sense of address for the building and activate the street frontage is a good outcome



2.3.7 Mail boxes which are not protected from weather, located away from the building entry and create conflict between pedestrian and traffic are considered a poor outcome



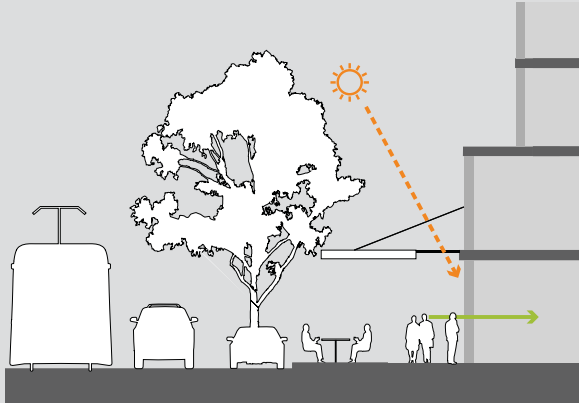
2.3.8 Fire hydrant and other electrical services should be located perpendicular to the street to minimise large blank walls



2.3.9 Services such as fire hydrant and electrical transformer should not be visually prominent to the street



## Design Guidelines : Awning



2.3.10 Deep awnings should be designed to be half transparent to maximise daylight penetration to the window display and internal shop area



2.3.11 Transparent/semi-transparent awning improves daylight intake to the internal retail area while still protecting from rain; this awning is equipped with solar panels



2.3.12 Good awning design gives consideration to the context of the retail street



2.3.13 Awnings that do not relate to the context and do not provide weather protection are considered a poor outcome and should be avoided



## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.4 ACOUSTIC PERFORMANCE

#### Objectives

- To minimise noise transfer through the siting of buildings and building layout.
- To minimise noise through apartment layout and acoustic treatments.

#### Standards

- Window and door openings should be oriented away from noise sources.
- Noisy areas within buildings including building entries and doors should be located next to or above each other and quieter areas next to or above quieter areas.
- Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources.
- Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal spaces and circulation areas should be located at least away from bedrooms.
- Internal apartment layout should separate noisy spaces from quiet spaces, using a number of the following design responses:
  - Rooms with similar noise requirements should be grouped together.
  - Doors should separate different use zones.
  - Wardrobes in bedrooms should be co-located to act as sound buffers.
- Where physical separation cannot be achieved noise conflicts should be resolved using the following design solutions:
  - Double or acoustic glazing.
  - Acoustic seals.
  - Use of materials with low noise penetration properties.
  - Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- The acoustic report (when required).
- Any structure plan, policy or planning provision applying to the area.



#### Design Guidelines : Acoustic Performance



2.4.1 Solid balustrade for balconies reduces the noise transmitted into the apartment from busy road





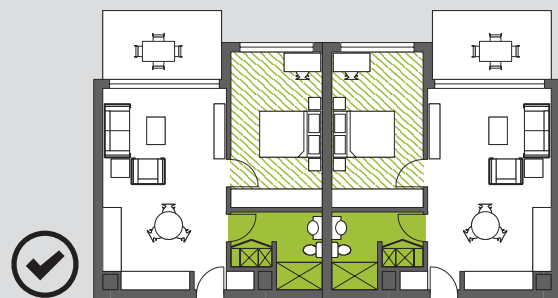
## Design Guidelines : Acoustic Performance (continued)



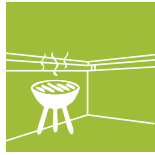
2.4.2 Locate living spaces and particularly bedrooms away from noise source such as lifts, staircases and other plant rooms; use bathroom, storage or laundry as a buffer



2.4.3 Noisy areas such as living room and kitchen to be separated from quiet areas such as bedroom; laundry can be inserted in a separated room or combined within bathroom to reduce noise



2.4.4 Adjacent typical units should be mirrored to group room functions and the type of noise.



## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.5 PRIVATE OPEN SPACE

#### Objectives

- To provide functional and useable private open space areas for individual dwellings.

#### Standards

- Provide ground floor dwellings with access to landscaped open space having regard to the urban context.
- Orient private open space to maximise solar access.
- All dwellings should include a balcony with the following sizes and dimensions:

**Table D.2.5 Private Open Space Minimum Size Standards**

Dwelling type	Minimum Area	Minimum depth
1 Bedroom apartments	8m <sup>2</sup>	2m
2 Bedroom apartments	10m <sup>2</sup>	2m
3 Bedroom apartments	12m <sup>2</sup>	2.5m

- The balcony should be extended to adjoin the living area to extend the living space.
- Air conditioning units should not inhibit the use and amenity of private open space.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- The opportunities and constraints of the site.
- The design response.
- The design guidelines.
- Any structure plan, policy or planning provision applying to the area.



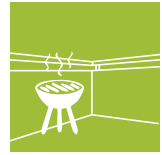
#### Design Guidelines : Private Open Space



2.5.1 Balcony with usable size provide high amenity for occupants



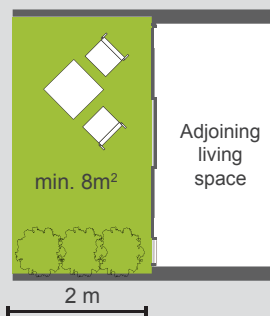
2.5.2 Ground floor or podium private terrace should be designed to provide landscaping and minimise overlooking



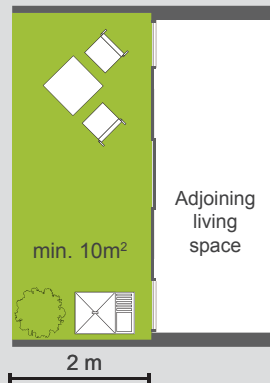
## Design Guidelines : Private Open Space (continued)

Design balconies and terraces in response to the local climate and context thereby increasing the usefulness of the space.

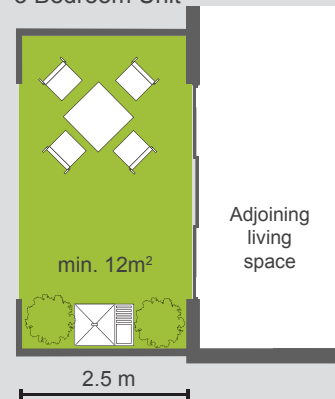
1 Bedroom Unit



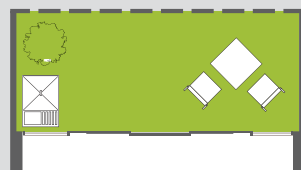
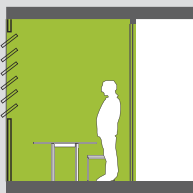
2 Bedroom Unit



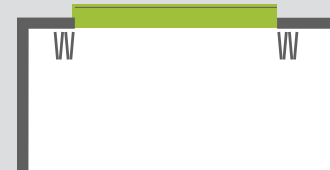
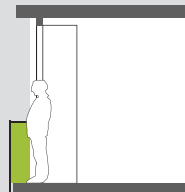
3 Bedroom Unit



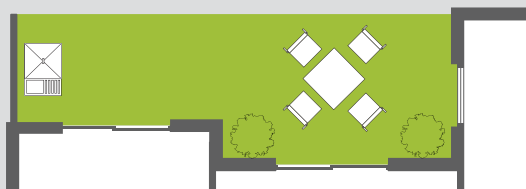
### 2.5.3 Minimum size standard for private open space



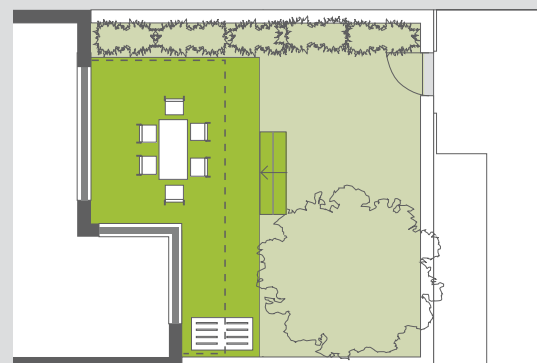
2.5.4 A loggia type balcony is suitable for facades facing a noisy street or apartment on higher levels



2.5.5 Juliet balcony is suitable for apartments facing south which needs light penetration deeper into the room



2.5.6 Balcony which can be accessed from multiple rooms creates a larger space and allows variety of arrangement



2.5.7 Ground floor private terrace should be generous in size to provide adequate buffer with communal/public area



## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.6 PRIVACY

#### Objectives

- To ensure a reasonable level of privacy to residents within a building and to residents in adjacent buildings.

#### Standards

- Overlooking should be minimised principally by compliance with D.1.2 Building separation.
- Dwelling layouts should be designed to minimise direct overlooking into habitable spaces and private open spaces instead of reliance on screening/obscuring measures that adversely impact on the quality of the outlook.
- Where direct views into private open space and habitable rooms are unavoidable, measures to reduce overlooking should be considered. Such measures may include level changes, landscaping, balconies, balustrades to balconies and screening devices such as horizontal or vertical fins.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

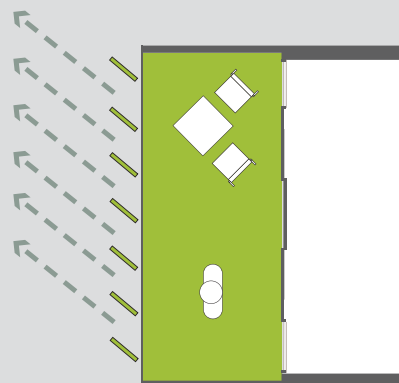
- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.



#### Design Guidelines : Overlooking from Balconies



2.6.1 High screening in a small balcony is a poor outcome which reduces occupant's internal amenity

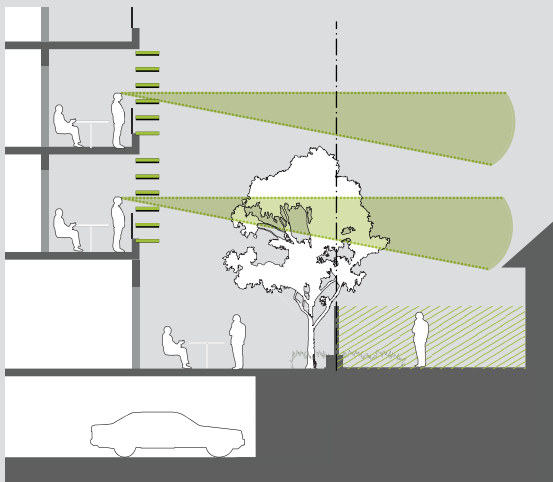


2.6.2 Angled vertical louvres provide a view in particular direction while limiting in another direction

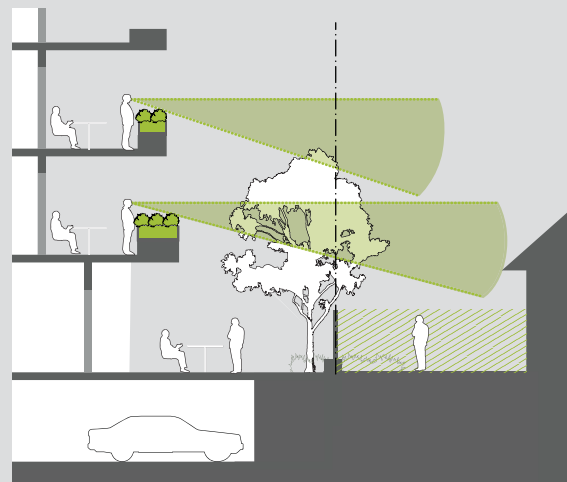




## Design Guidelines : Overlooking from Balconies (continued)



2.6.3 Horizontal louvers allow looking in the distance and prevent looking down



2.6.4 Balcony planter box provides green outlook and limit looking down



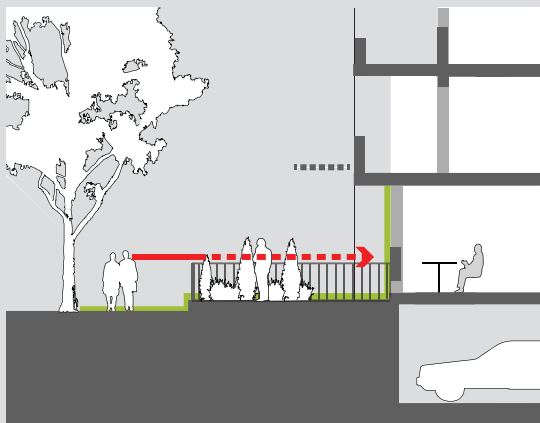
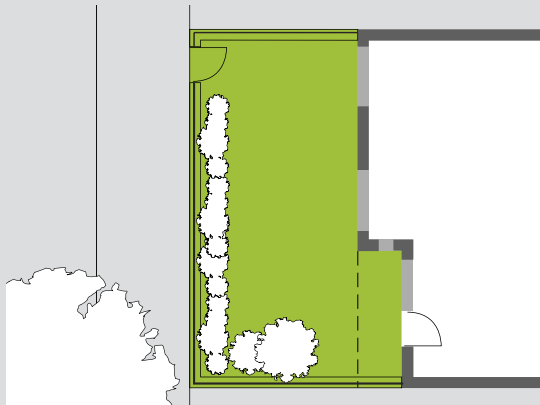
2.6.5 Solid balustrades on the lower floors provide privacy for residents with upper level balconies which are not directly visible from the street can have transparent balustrades



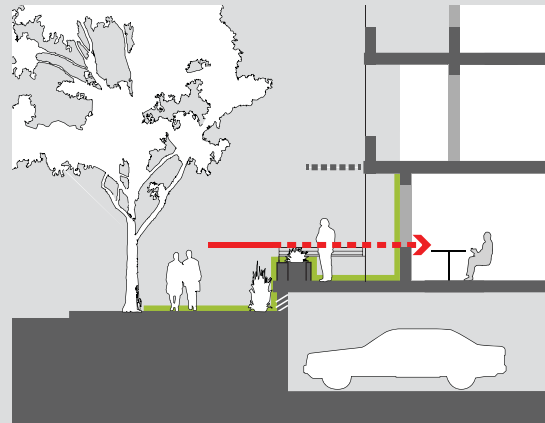
2.6.6 Flexible sliding louvred screens provide privacy to suit building occupants and create a dynamic facade



## Design Guidelines : Residential Frontage



2.6.7 Landscaping should be used to create privacy for ground floor residential dwellings



2.6.8 Raised level for ground floor apartments provides privacy for the resident and casual surveillance to the street. It also allows natural ventilation into the semi-basement car park



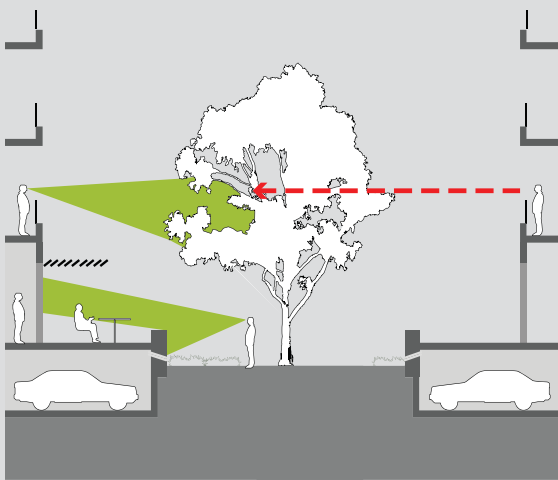
2.6.9 Ground floor residential with direct access from the street create sense of ownership and activate the street



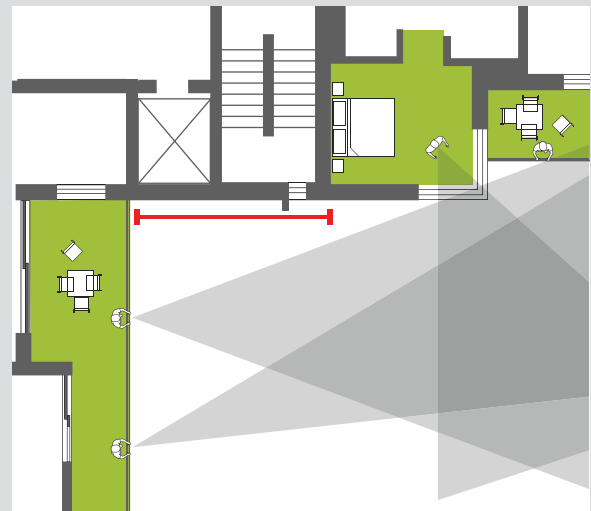
2.6.10 Ground floor apartment directly adjacent to a park or other public space should provide direct access while providing clear separation between public and private



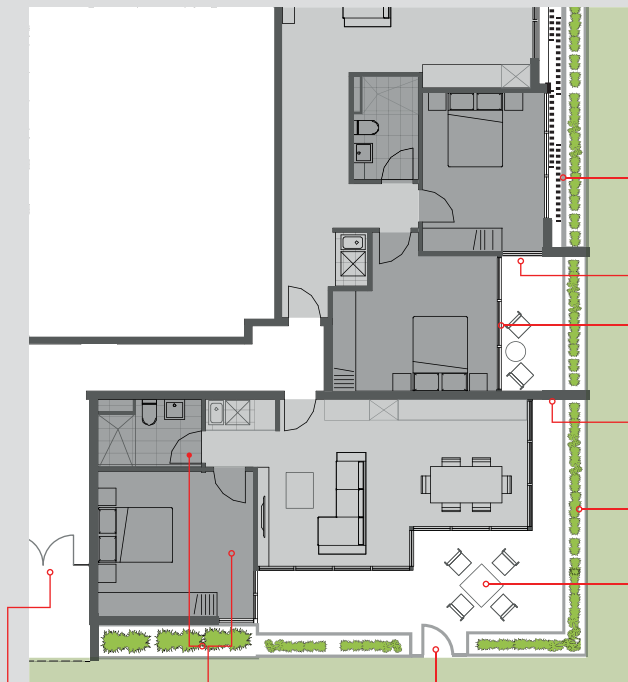
## Design Guidelines : Visual Privacy within Development



2.6.11 Raised terrace and vegetation screen provides privacy for units facing internal courtyard



2.6.12 Locating circulation cores at the corners helps create separation between balconies



Avoid direct overlooking to the bedrooms from high traffic areas such as apartment entry

Avoid direct overlooking from courtyard to private areas such as bedrooms and bathrooms

Direct entry from communal area to ground floor units

Adjustable screen for ground floor living room/bedroom near the communal path

Windows to the unit's own terrace provide more privacy than a frontal window to communal courtyard

Create a recess area to distance the bedroom area away from the courtyard

Full wall separation between units improve terrace's privacy

Plants create a buffer from courtyard to the ground floor apartments

Create adequate space for ground floor terrace

2.6.13 Dwellings adjacent to a communal open space such as courtyard and passages require interface design to provide visual privacy



## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.7 OPEN SPACE AND LANDSCAPE DESIGN

#### Objectives

- To provide and integrate open space within the site layout.
- To integrate landscape design with the overall site layout and building design.
- To enhance urban landscapes and respond to the existing or desired landscape context.
- To enhance landscaping in the public realm.
- To provide opportunities for landscaping that minimises the impact of the urban heat island effect and that contributes to the micro-climate of the site.

#### Standards

- Solar access to open space areas should be maximised.
- The landscape layout and design should:
  - Protect any significant landscape features including mature trees and vegetation.
  - Take into account the soil type, drainage patterns and other relevant conditions of the site.
  - Allow for intended vegetation without affecting the structural integrity of the building.
  - Identify opportunities for deep soil planting on large sites that is of sufficient dimension to allow for the planting of canopy trees.
  - Consider green walls and green roofs for thermal insulation and reduction in the urban heat island affect.
  - Identify opportunities to provide landscaping in the public realm.
- Impervious areas should be minimised through measures such as rain gardens, permeable pavements, grassed areas, vegetated green roofs and other on-site detention systems to reduce the volume storage required, cool the local area and provide irrigation to landscaping.
- Regular irrigation of vegetation should be provided using non-potable water where possible.
- Landscapes should be designed to allow for effective on-going maintenance and to accommodate intended performance.
- Green roofs, green facades and other landscape structures are encouraged, particularly if areas for deep soil planting are not provided.
- Contribute to landscaping in the public realm in accordance with Moreland's Streets Landscape Strategy 2012-2022, if appropriate.
- A landscape design report prepared by a suitably qualified landscape architect.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area, including any Council street tree or public park planting programs.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.
- The landscape architect report.



## Design Guidelines : Open Space and Landscape Design



2.7.1 Deep soil zones are areas of natural ground which allow planting of large trees on the site and have various environmental benefits such as reducing stormwater run-offs and urban heat island. Deep soil zone should be provided on sites larger than 2000m<sup>2</sup> for a minimum of 5% of site area



2.7.2 Consolidate location of plant room, lift overrun and other roof equipment to maximise rooftop open space or roof garden



2.7.3 Green facades are usually created using creepers such as Boston ivy or creeping figs in planter boxes



2.7.4 Green walls can be used as a facade feature which improves building insulation in summer and winter, it will need careful consideration of irrigation and maintenance





## D.2 INTERNAL AMENITY AND FACILITIES

### D.2.8 COMMUNAL FACILITIES

#### Objectives

- To provide adequate communal facilities.

#### Standards

- All buildings with 20 or more dwellings should provide a communal open space area(s) of 2.5 square metres per dwelling.
- The effective use of roof space, podiums and light wells for communal open space is encouraged.
- All communal spaces and facilities should be safe, accessible and, where possible, naturally lit and ventilated.
- Communal open space should be:
  - Consolidated into a recognisable and useable area.
  - Reasonably accessible from dwellings and from any internal communal open space area.
- Facilities should be provided for a range of age groups where size permits, incorporating some of the following elements:
  - Seating for individuals or groups.
  - Barbeque areas.
  - Play equipment or play areas.
  - Swimming pools, gyms or common rooms.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.



#### Design Guidelines : Ground and Podium Communal Space



2.8.1 Communal open space on ground floors can be used as community gardens in large developments



2.8.2 Communal open space should be directly accessible from the apartments fronting the space



## Design Guidelines : Roof Top Communal Space

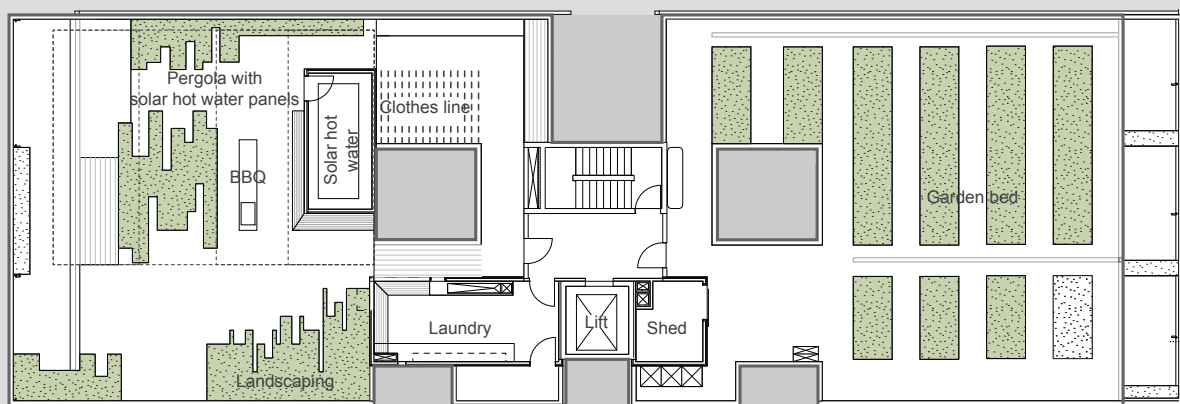
In high density areas roof tops provide a good opportunity to create a communal space.



2.8.3 Roof top gardens should have protected space such as pergolas and protective walls to create a more comfortable outdoor area



2.8.4 Rooftop communal space can be a space to show case sustainable features such as solar panels, energy meter display and promote social uses such garden beds



2.8.5 Rooftop communal space layout plan which provides BBQ area, laundry, clothes drying area, communal garden and a shared tool shed



## D.2 INTERNAL AMENITY AND FACILITIES/ D.2.9 SITE SERVICES

### D.2.9.1 BICYCLE & CAR PARKING

#### Objectives

- To ensure that bicycle and car parking areas and facilities are convenient, accessible and safe.
- To ensure sufficient bicycle facilities are provided.

#### Standards

##### Provision of bicycle facilities

- Bicycle parking should be provided in accordance with the requirements of Table D.2.9.1.

**Table D.2.9.1 Minimum Size Standards**

Use	Bicycle parking rate
Dwelling	1 space per studio and 1 bedroom dwelling 2 spaces per 2+ bedroom dwelling
Office	1 employee space per 200m <sup>2</sup> gross floor area 1 visitor space per 750m <sup>2</sup> over 1000m <sup>2</sup>
Shop	1 employee space per 300m <sup>2</sup> gross floor area 1 visitor space per 500m <sup>2</sup> over 1000m <sup>2</sup>

- Reductions of the standard car parking rates in Clause 52.06 will be considered having regard to the level of provision of bicycle parking.
- Bicycle parking should be located as close as possible to the building entrance.
- Bicycle parking should be accessible, safe and secure.
- Showers and change facilities should be provided in accordance with Clause 52.34.
- Bicycle spaces should be designed in accordance with the design suggestions contained within The bicycle parking handbook, Bicycle Network Victoria, October 2004, or as may be amended from time to time.
- Appropriate signage directing cyclists to the visitor spaces should be provided in accordance with the requirements of Clause 52.34-5.

##### Layout of car parking

- Car parking should:
  - Be reasonably close and convenient to the uses it serves.
  - Be secure and designed to allow safe and efficient movements within the development.
  - Be well ventilated if enclosed.
  - Provide scope for the parking of motorcycles.
- Car park areas should be located in basement levels or, if located at or above ground, car parks should be concealed from view through the use of occupied tenancies ('sleeved' with other uses) or dwellings.
- When semi-basement car parking is proposed, the area should be naturally ventilated.
- External car parks and vehicle accessways should be located at least 1.5 metres from the windows of habitable rooms. This setback may be reduced to 1 metre where there is a fence at least 1.5 metres high or where window sills are at least 1.4 metres above the accessway.





- Vehicle accessways be separated from pedestrian entry points.
- Car parking areas should be designed to maximise safety, including clear lines of sight to lifts, stairs and exit points, be well lit and clearly signed.

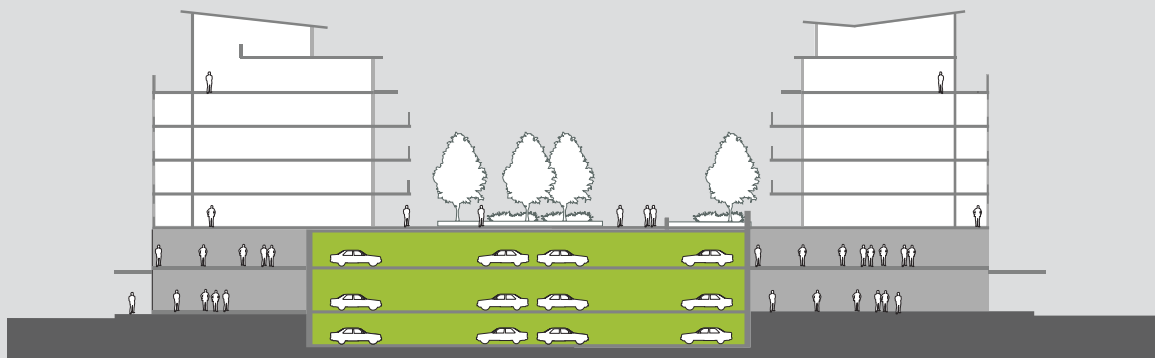
### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

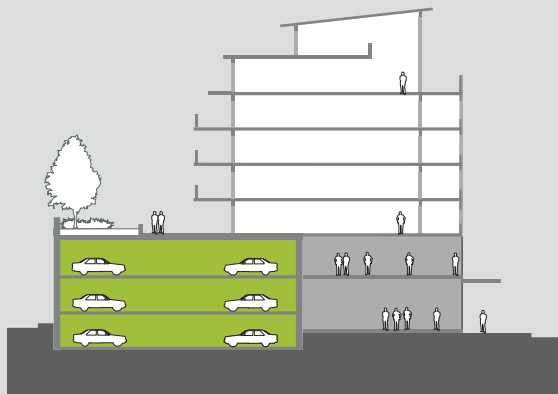
- Any structure plan, policy or planning provision applying to the area.
- The opportunities and constraints of the site.
- The design response.
- The design guidelines.



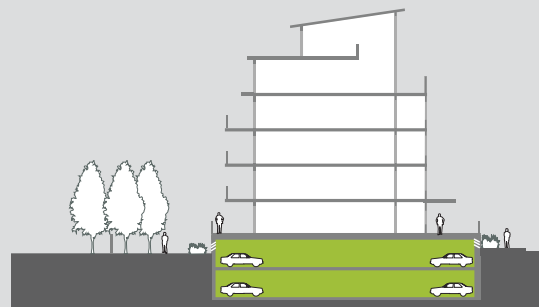
#### Design Guidelines : Car Parking Interface



2.9.1 Car parking should be located in the basement or if located above-ground should be sleeved from the public domain with other uses such as commercial or residential



2.9.2 In sites with main road frontages above ground parking should be located at the rear of the site, behind retail and commercial uses



2.9.3 Semi basement car parking should only be used in residential areas with landscaping to screen it. The raised ground floor provides privacy and naturally ventilated basement. The height of the basement above natural ground should not be more than 90 cm



## Design Guidelines : Car Parking Interface (continued)



2.9.4 Poorly designed above ground car parking has a negative impact on public realm and reduces the passive surveillance of the street



2.9.5 Landscaping should be used to screen the semi-basement car parking



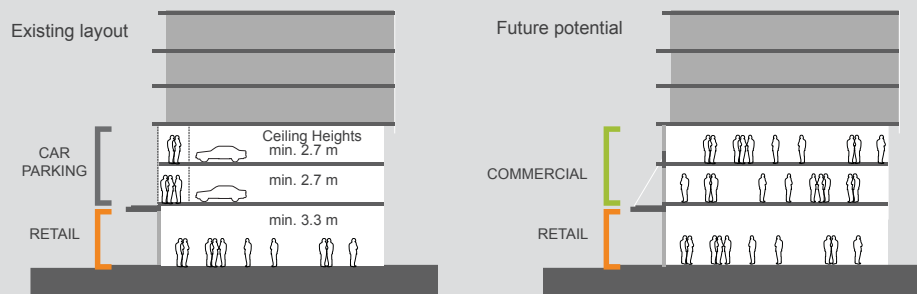
2.9.6 Multiple garage entries on ground floor do not activate the street and create conflict between pedestrians and traffic



2.9.7 Reduce the number of driveways with a single vehicle entry leading to rear communal car parking



## Design Guidelines : Flexible Use



2.9.8 Higher ceiling heights for above ground car parking allows future retrofitting of the space for other uses



### Design Guidelines : Integrated Bicycle Design



2.9.9 Bicycle parking should be integrated into the ground floor or communal space design instead of in the basement



## D.2 INTERNAL AMENITY AND FACILITIES/ D.2.9 SITE SERVICES

### D.2.9.2 PRIVATE STORAGE SPACE

#### Objectives

- To provide sufficient and accessible storage for each dwelling.

#### Standards

- All dwellings should provide adequate storage for everyday household items.
- Additional storage space should be provided as follows:
  - 4m<sup>3</sup> for Studio and 1 bedroom apartments.
  - 6m<sup>3</sup> for 2 bedroom apartment.
  - 8m<sup>3</sup> for 3 bedroom apartment.
- Storage space does not include bicycle or car parking.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- Any structure plan, policy or planning provision applying to the area.
- The design guidelines.



#### Design Guidelines : Private Storage Space



2.9.11 Storage space should be located within apartments, as dedicated storage rooms on each floor, or in the basement

## D.2 INTERNAL AMENITY AND FACILITIES/ D.2.9 SITE SERVICES

### D.2.9.3 WASTE MANAGEMENT



#### Objectives

- To ensure that the design of buildings provide for sustainable management facilities and services.

#### Standards

- Waste management systems should be designed to meet best practice standards outlined in 'Guide to Best Practice Waste Management in Multi-Unit Developments' (Sustainability Victoria October 2010 and as updated), giving considerations to any local requirements.
- A dedicated storage area(s) for separation, collection and recycling of waste with ease of access for all building occupants and waste collection contractors that is sufficiently sized to accommodate various recyclables should be provided.
- Dedicated facilities should be provided for composting and green waste where opportunity exists for on-site disposal and reuse.

#### Decision Guidelines

Before deciding on an application, the Responsible Authority must consider:

- Extent of compliance with Waste Management Plan.
- Any structure plan, policy or planning provision applying to the area.



## Design Guidelines : Waste Management

### Examples of best practice waste management in apartment developments above four storeys:

<b>Option 1:*</b>	Use wheelie bins or bulk bins for garbage and recyclables, with bins stored in a communal storage area. Residents carry all waste and recyclables from their unit directly to the communal storage area.
<b>Option 2:</b>	Provide room for interim storage of garbage on each floor. A caretaker takes garbage and recyclables from the interim storage area to a communal storage area.
<b>Option 3:</b>	Install a chute system for garbage, leading to a central garbage room at the bottom of the building. Provide room for interim storage of recyclables that also houses the garbage chute inlet hopper on each floor.
<b>Option 3 (variation):</b>	Install a chute system for garbage. Provide a central storage area for recyclables at the bottom of the building.

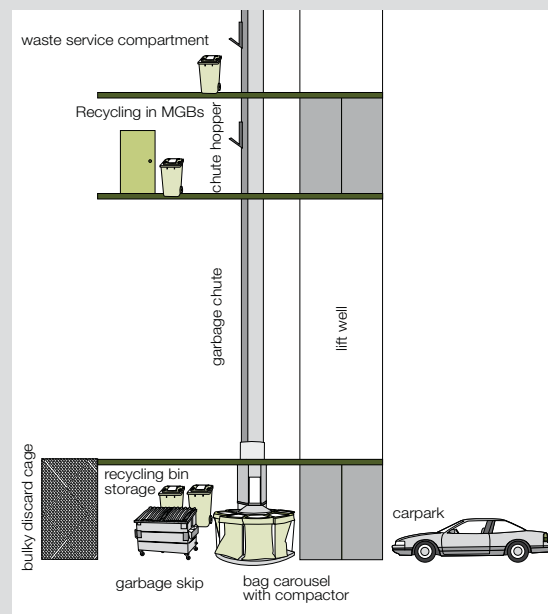
#### NOTE:

\*Option 1 is not recommended for buildings more than 7 storeys

Poor design decisions on waste management system in apartment design can have serious repercussions for the management of the building due to the large amount of waste generated.

Choosing the right waste management will depend on the desired residents' amenity and building management system such as:

- Amenity could be reduced if residents carry garbage and recycling down main lifts and stairwells if there is no service lift (Option 1).
- A caretaker needed to regularly remove garbage and recyclables from the interim storage areas and transfer them to the communal storage area (Option 2).
- Regular maintenance, including cleaning and unblocking chutes, is likely to be required (Option 3).



2.9.12 Refuse chute system in apartment

Source: extracted from Guide to Best Practice for Waste Management in Multi-unit Developments [www.sustainability.vic.gov.au](http://www.sustainability.vic.gov.au)

# APPENDIX





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# MADC Checklist

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## Purpose of Checklist

Council adopted the Moreland Apartment Design Code (MADC) on 12 August 2015. It is now Council policy to require all applications for residential and mixed use development of five or more storeys to comply with the Code. The Code is a performance based planning policy that contains discretionary standards and mandatory objectives. The purpose of this checklist is to provide applicants with a tool to check whether they comply with the Code's standards and to provide an explanation where there is non-compliance with the Code's standards. The completion of the checklist will assist Council's urban planners to more expeditiously assess applications made under the Code.

It should be noted that some of the checklist requirements include some provisions from the Activity Centre Zone Schedule 1 applying in the Coburg Activity Centre and Design and Development Overlays Schedules 18, 19 and 20 applying to the Brunswick Activity Centre. These have been included in the checklist to enable a brief assessment of the proposal against key criteria relation to building height, street wall heights, upper level setbacks and interface to residential areas.

## Application Details

Property address	
Applicant name	
Lodgement date	
Application No. (office use only)	
Number of dwellings	
Site area	
Density (number of dwelling/site area in hectare)	

## Activity Centre Zone/Design and Development Overlay Requirements

	Metres	Storeys	Applicant Comments	Officer Comments
Building height				
Planning scheme height				
Proposed height				
Street wall				
Planning scheme wall height		N/A		
Proposed street wall height		N/A		
Upper level setbacks				
Planning scheme upper level setbacks		N/A		
Proposed upper level setbacks		N/A		
Residential interface				
Planning scheme requirement		N/A		
Proposed interface		N/A		

*Note: Please refer to the relevant section of the ACZ schedule and DDO to ascertain requirements*

### D.1.1 Building Orientation

	Yes/No	Applicant Comments	Officer Comments
Site layout should optimise solar access to living areas and open space areas			
Buildings should create an identifiable street address and/or to the public realm			
Building should provide opportunities for passive surveillance to public realm			
Buildings adjoining a public park or reserve should: <ul style="list-style-type: none"> <li>• Be substantially fronted by dwellings or open space</li> <li>• Clearly delineate private and public land to maximise outlook whilst avoiding a sense of privatisation</li> </ul>			

## D.1.2 Building Separation

A. To Adjacent Properties					
	Living/main balcony outlook to boundary	Bedroom outlook to boundary	Yes/No	Applicant Comments	Officer Comments
<b>Up to 4 storeys/12 metres</b>	<b>6 m</b>	<b>3 m</b>			
1 <sup>st</sup> side boundary					
2 <sup>nd</sup> side boundary					
Rear boundary*					
<b>5-8 storeys/up to 25 metres</b>	<b>9 m</b>	<b>4.5 m</b>			
1 <sup>st</sup> side boundary					
2 <sup>nd</sup> side boundary					
Rear boundary*					
<b>9+ storeys</b>	<b>12 m</b>	<b>6 m</b>			
1 <sup>st</sup> side boundary					
2 <sup>nd</sup> side boundary					
Rear boundary*					

*Note: Where ACZ and DDO do not apply*

B. To Laneways					
	Living/main balcony outlook	Bedroom outlook	Yes/No	Applicant Comments	Officer Comments
2 storeys (9 m high)	0 m (from boundary)	0 m (from boundary)			
3-8 storeys (up to 25 m)	6 m (from lane centre)	3 m (from lane centre)			
9+ storeys (over 25 m)	9 m (from lane centre)	6 m (from lane centre)			

C. Within Sites								
	Living/main balcony outlook to living/main balcony outlook	Bedroom outlook to bedroom outlook	Living/main outlook to bedroom outlook	Living/main balcony outlook to no outlook	Bedroom outlook to no outlook	Yes/No	Applicant Comments	Officer Comments
2 storeys (9 m high)	12 m	6 m	9 m	6 m	3 m			
3-8 storeys (up to 25 m)	18 m	9 m	13.5 m	9 m	4.5 m			
9+ storeys (over 25 m)	24 m	12 m	18 m	12 m	6 m			

D. Lightwell Requirements			
	Yes/No	Applicant Comments	Officer Comments
Use of lightwells should be minimised			
Where lightwells are provided, they should: <ul style="list-style-type: none"> <li>Provide daylight access to bedrooms only</li> <li>Be painted in a light reflective colour</li> <li>Provide an opportunity for useable space at ground level</li> <li>Bedroom windows in separate dwellings that face lightwells should be staggered to avoid direct overlooking</li> </ul>			
	Number		
No. of bedrooms relying on lightwells			

E. Lightwell Dimensions				
	Minimum area and dimension	Yes/No	Applicant Comments	Officer Comments
Up to 4 storeys/12 metres	9m <sup>2</sup> (min. width 3 m)			
5-8 storeys/up to 25 metres	29m <sup>2</sup> (min. width 4.5 m)			
9+ storeys	51m <sup>2</sup> (min. width 6 m)			

### D.1.3 Daylight Access

	Yes/No	Applicant Comments	Officer Comments
Compliance with building separation			
Minimum floor to ceiling heights: <ul style="list-style-type: none"> <li>• Retail/office: 3.3 m</li> <li>• Car parks:               <ul style="list-style-type: none"> <li>– Ground floor: 3.3 m</li> <li>– Above ground floor: 2.7 m</li> </ul> </li> <li>• Residential:               <ul style="list-style-type: none"> <li>– Habitable rooms: 2.7m</li> <li>– Non-habitable rooms: 2.4m</li> </ul> </li> </ul>			
Reliance on borrowed light is discouraged. Where provided it is confined to one bedroom dwellings only and should meet the following requirements: <ul style="list-style-type: none"> <li>• An operable internal door 25% of the floor area of the bedroom</li> <li>• Light source contains full height external windows along full width of living room</li> </ul>			
Living areas not to exceed 8 metres depth			
All living areas should have an external window that is open to the sky or a balcony that is open for at least one third of its perimeter			
Battle-axe dimensions have a maximum length of twice its width			
Provision of windows in corridors/lift lobbies			
	Number		
<i>No. of bedrooms with borrowed light</i>			

## D.1.4 Natural ventilation

	Yes/No	Applicant Comments	Officer Comments
All habitable rooms should be naturally ventilated			
Cross ventilation should be maximised by: <ul style="list-style-type: none"> <li>Maximising number of dual aspect dwellings</li> <li>Incorporating a breeze path between two openings within rooms or from one room or another</li> <li>Avoidance of deep rooms for single-sided rooms</li> </ul>			
Operable windows to circulation corridors and lift lobbies			
External clothes drying			
	<b>Number</b>		
<i>No. of dual aspect dwellings</i>			

## D.1.5 Thermal comfort

	Yes/No	Applicant Comments	Officer Comments
External shading: <ul style="list-style-type: none"> <li>North</li> <li>East</li> <li>West</li> </ul>			
Where external shading not provided, effective thermal comfort levels to be achieved by demonstrating a maximum cooling load for each apartment			
Provision for occupant control to be facilitated			

## D.2.1 Dwelling Diversity

	Number	Applicant Comments	Officer Comments
No. of dwellings			
1 bedroom			
2 bedroom			
3+ bedroom			

## D.2.2 Dwelling Size and Layout

	Proposed (Average)	Applicant Comments	Officer Comments
Studio - 37m <sup>2</sup>			
1 bedroom - 50m <sup>2</sup>			
2 bedroom - 65m <sup>2</sup>			
3+ bedroom - 90m <sup>2</sup>			

## D.2.3 Pedestrian Entry and Circulation

	Yes/No	Applicant Comments	Officer Comments
<b>Entries</b> Clearly visible and identifiable from public realm Avoid location of ramps across frontages Distinguish main entry to apartments and entries to any retail or office entries Provide clear separation between vehicle and pedestrian entries Provide a direct visual connection between pedestrian entries and lift lobbies			
<b>Awnings</b> Continuous along commercial areas Complementary to existing awnings Meet any built form requirements Contribute to the legibility of buildings Provide illumination Provide protection from sun and rain			
<b>Corridors</b> Generous widths and minimum 2.7 metre height Minimise corridor lengths to give short, clear sightlines and better orientation Provide natural light and ventilation Provide visible and attractive stairs from entry level to first four levels Long buildings to be designed with multiple cores Long corridors to: <ul style="list-style-type: none"> <li>• Increase the number of entries along a street</li> <li>• Provide cross-ventilation</li> </ul>			

<p>Double-loaded corridors should not exceed 25 metres. Corridors exceeding 25 metres should provide:</p> <ul style="list-style-type: none"> <li>• A series of foyer areas or break space</li> <li>• Windows at the end of the corridor, along the corridor or around lift lobby areas</li> </ul>			
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## D.2.4 Acoustic performance

	Yes/No	Applicant Comments	Officer Comments
<p>Orient windows and doors from noise sources</p> <p>Co-locate noisy areas within buildings and co-locate quieter areas</p> <p>Locate storage, circulation areas and non-habitable rooms to buffer noise from external sources</p> <p>Locate noise sources such as garage doors, driveways, service areas, plant room buildings, mechanical equipment away from bedrooms</p> <p>Internal apartment layout should separate noise spaces from quiet spaces by:</p> <ul style="list-style-type: none"> <li>• Grouping together rooms with similar noise requirements</li> <li>• Using doors to separate different use zones</li> <li>• Co-locating wardrobes to act as sound buffers</li> </ul> <p>Where physical separation cannot be achieved</p> <ul style="list-style-type: none"> <li>• Use double or acoustic glazing</li> <li>• Use acoustic seals</li> <li>• Use materials with low noise penetration</li> <li>• Use continuous walls to ground level courtyards</li> </ul>			

## D.2.5 Private Open Space

	Proposed (Average)	Applicant Comments	Officer Comments
1 bedroom 8m <sup>2</sup> (2m min. width)			
2 bedroom 10m <sup>2</sup> (2m min. width)			
3+ bedroom 12m <sup>2</sup> (2.5m min. width)			



## D.2.6 Privacy

	Yes/No	Applicant Comments	Officer Comments
Compliance with building separation			
Minimisation of direct overlooking without reliance on screening			
Use of measures where direct overlooking cannot be avoided			

## D.2.7 Open Space and Landscape Design

	Yes/No	Applicant Comments	Officer Comments
Solar access to open space areas should be maximised			
<b>Landscaping layout</b> Protect any significant trees and vegetation Take into account soil type, drainage patterns and other conditions Ensure vegetation does not affect structural integrity Identify opportunities for deep soil planting on large sites Consider green walls and roofs Identify opportunities for landscaping in public realm			
Minimise impervious areas through measures such as rain gardens, permeable pavements, grassed areas, vegetated green roofs and other on-site detention systems Use non-potable where possible for irrigation of vegetation Allow effective on-going maintenance of landscaping Use green roofs, green facades and other landscaping features if deep soil planting not provided Contribute to landscaping public realm			
Submit landscape design report			

## D.2.8 Communal Facilities

	Yes/No	Applicant Comments	Officer Comments
Provide 2.5m <sup>2</sup> per dwelling for communal facilities in buildings with 20 or more dwellings			
<p>Encourage effective use of roof space, podiums and light courts</p> <p>Provide safe, accessible, naturally lit and ventilated</p> <p>Communal open space should be:</p> <ul style="list-style-type: none"> <li>Consolidated into a recognisable and useable area</li> <li>Reasonably accessible from dwellings and from any internal communal open space</li> </ul> <p>Provide for a range of facilities</p>			

### D.2.9.1 Bicycle and Car parking

		Applicant Comments	Officer Comments
<b>Car parking</b>	<b>No.</b>		
No. of spaces required:			
No. of spaces proposed:			
Dispensation sought:			
<b>Bicycle parking</b>	<b>No.</b>		
<p>No. of spaces proposed:</p> <p>Dwelling requirements</p> <ul style="list-style-type: none"> <li>– 1 space per studio and 1 bedroom dwelling</li> <li>– 2 spaces per 2+ bedroom dwelling</li> </ul> <p>Office requirements</p> <ul style="list-style-type: none"> <li>– 1 employee space per 200m<sup>2</sup> GFA</li> <li>– 1 visitor space per 750 m<sup>2</sup> over 1000m<sup>2</sup></li> </ul> <p>Shop requirements</p> <ul style="list-style-type: none"> <li>– 1 employee space per 300 m<sup>2</sup> GFA</li> <li>– 1 visitor space per 500m<sup>2</sup> over 1000m<sup>2</sup></li> </ul>			
<b>Bicycle Design</b>	<b>Yes/No</b>		
<p>Locate bicycle parking close to building entrance</p> <p>Ensure bicycle areas are accessible, safe and secure</p> <p>Shower and change facilities are provided</p> <p>Bicycle areas are designed in accordance with design suggestions</p> <p>Provision of signage</p>			

Car parking design	Yes/No		
Ensure close and convenient to areas they serve Ensure car parks are secure, safe and efficient Well ventilated if enclosed Make provision for parking of motor cycles Locate car parks within basements or conceal from uses if at ground or above ground Locate car parks 1.5m from habitable rooms windows Separate vehicle accessways from pedestrian entries Maximise safety, provide clear lines of sight, be well lit and signed			

*Note: Car parking space is a requirement of Clause 52.06 not MADC*

## D.2.9.2 Private storage Space

	Yes/No	Applicant Comments	Officer Comments
4m <sup>3</sup> for studio/1-bedroom			
6m <sup>3</sup> for 2-bedroom			
8m <sup>3</sup> for 3-bedroom			

## D.2.9.1 Waste

	Yes/No	Applicant Comments	Officer Comments
Design waste areas in accordance with Guide to Best Practice Waste Management in Multi-Unit developments			
Provide dedicated storage areas for separation, collection and recycling of waste			
Provide dedicated storage areas for composting and green waste where opportunity exists for on-site disposal and reuse			



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