



# Appendices

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Glossary

*This part includes checklists for information required at different stages in the planning process*

## APPENDIX 1

### Site analysis checklist

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Site location</b>	Broad map or aerial photo showing site location in relation to surrounding centres, shops, civic/community facilities and transport		
<b>Aerial photograph</b>	Colour aerial photographs of site in its context		
<b>Local context plan</b>	Plan(s) of the existing features of the wider context including adjoining properties and the other side of the street, that show:		
	<ul style="list-style-type: none"> <li>• pattern of buildings, proposed building envelopes, setbacks and subdivision pattern</li> </ul>		
	<ul style="list-style-type: none"> <li>• land use and building typologies of adjacent and opposite buildings in the street</li> </ul>		
	<ul style="list-style-type: none"> <li>• movement and access for vehicles, servicing, pedestrians and cyclists</li> </ul>		
	<ul style="list-style-type: none"> <li>• topography, landscape, open spaces and vegetation</li> </ul>		
	<ul style="list-style-type: none"> <li>• significant views to and from the site</li> </ul>		
<b>Site context and survey plan</b>	Plan(s) of the existing site based on a survey drawing showing the features of the immediate site including:		
	<ul style="list-style-type: none"> <li>• boundaries, site dimensions, site area, north point</li> </ul>		
	<ul style="list-style-type: none"> <li>• topography, showing relative levels and contours at 0.5 metre intervals for the site and across site boundaries where level changes exist, any unique natural features such as rock outcrops, watercourses, existing cut or fill, adjacent streets and sites</li> </ul>		
	<ul style="list-style-type: none"> <li>• location and size of major trees on site and relative levels where relevant, on adjacent properties and street trees</li> </ul>		
	<ul style="list-style-type: none"> <li>• location and use of existing buildings or built features on the site</li> </ul>		
	<ul style="list-style-type: none"> <li>• location and important characteristics of adjacent public, communal and private open spaces</li> </ul>		
	<ul style="list-style-type: none"> <li>• location and height of existing windows, balconies, walls and fences on adjacent properties facing the site, as well as parapet and ridge lines</li> </ul>		
	<ul style="list-style-type: none"> <li>• pedestrian and vehicular access points, driveways and features such as service poles, bus stops, fire hydrants etc.</li> </ul>		
	<ul style="list-style-type: none"> <li>• location of utility services, including easements and drainage</li> </ul>		
	<ul style="list-style-type: none"> <li>• location of any other relevant features</li> </ul>		

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Streetscape elevations and sections</b>	Photographs or drawings of the site in relation to the streetscape and along both sides of any street that the development fronts, that show:		
	<ul style="list-style-type: none"> <li>• overall height (storeys, metres) and important parapet/datum lines of adjacent buildings</li> </ul>		
	<ul style="list-style-type: none"> <li>• patterns of building frontage, street setbacks and side setbacks</li> </ul>		
	<ul style="list-style-type: none"> <li>• planned heights</li> </ul>		
<b>Analysis</b>	Plan that synthesises and interprets the context, streetscape and site documentation into opportunities and constraints that generate design parameters, including the following information:		
	<ul style="list-style-type: none"> <li>• orientation and any overshadowing of the site and adjoining properties by neighbouring structures (excludes vegetation). The winter sun path should also be shown between 9 am and 3 pm on 21 June</li> </ul>		
	<ul style="list-style-type: none"> <li>• identification of prevailing wind</li> </ul>		
	<ul style="list-style-type: none"> <li>• the geotechnical characteristics of the site and suitability of the proposed development</li> </ul>		
	<ul style="list-style-type: none"> <li>• the public domain interface and street setback</li> </ul>		
	<ul style="list-style-type: none"> <li>• relationship to and interface with adjacent properties, including side and rear setbacks</li> </ul>		
	<ul style="list-style-type: none"> <li>• ventilation for the subject site and immediate neighbours</li> </ul>		
	<ul style="list-style-type: none"> <li>• proposed building footprint location</li> </ul>		
	<ul style="list-style-type: none"> <li>• retained and proposed significant trees and deep soil zones</li> </ul>		
	<ul style="list-style-type: none"> <li>• proposed communal open space</li> </ul>		
	<ul style="list-style-type: none"> <li>• proposed car park footprint and depth</li> </ul>		
	<ul style="list-style-type: none"> <li>• proposed building entries</li> </ul>		
	<ul style="list-style-type: none"> <li>• supporting written material - this should include technical advice from specialists involved in the development process including landscape architects, arborists, geotechnical engineers and/or contamination specialists where applicable</li> </ul>		

## APPENDIX 2

### Pre-development application design proposal checklist

This Apartment Design Guide encourages pre-development application (pre-DA) discussions. To ensure maximum benefit of pre-DA discussions, consent authorities should appoint an urban designer or architect to provide specialist design advice. This may be a member of the Design Review Panel. Early input about the design may help to resolve issues prior to a development application being submitted.

Where a council requests panel members to attend a pre-DA discussion, it should be held at a regular time, and before the scheduled Design Review Panel meeting.

Pre-DA discussions are a critical component of the development process. Meeting early in the process allows for discussion and agreement of the overall design approach. This provides greater efficiency at the development assessment stage and also saves time and costs associated with revisions or major modifications. Minutes from pre-DA discussions should be issued by the consent authority within one week of the meeting or as soon as available.

The adjacent table shows the basic information that should be provided by the applicant before the pre-DA discussion. The emphasis should be on having enough information to communicate the proposal rather than having fully resolved drawings of every aspect of the project.

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Development details</b>	A summary of the proposal that establishes the: <ul style="list-style-type: none"> <li>• Floor space ratio</li> <li>• Building height in metres and storeys</li> <li>• Number and mix of apartments</li> <li>• Number of car parking spaces</li> <li>• Indicative percentage of apartments receiving the minimum level of cross ventilation and daylight access</li> </ul>		
<b>Design quality statement</b>	A draft statement of key points that establishes how the proposal satisfies the design quality principles of State Environmental Planning Policy No. 65		
<b>Precedents</b>	Images of precedents relevant to the proposal such as: <ul style="list-style-type: none"> <li>• streetscape concept</li> <li>• landscape design</li> <li>• communal open spaces use</li> <li>• building elements such as entries, balconies, materials</li> </ul>		
<b>Site analysis</b>	Prepared consistent with Appendix 1 of the Apartment Design Guide		
<b>Site plan</b>	A drawing to scale showing: <ul style="list-style-type: none"> <li>• any proposed site amalgamation or subdivision</li> <li>• the indicative footprint of the proposal</li> <li>• setbacks and building separation dimensions</li> <li>• site entry points</li> <li>• areas of communal open space and private open space</li> <li>• indicative locations of planting and deep soil zones including retained or proposes significant trees</li> <li>• interface with public domain</li> </ul>		
<b>Floor plans</b>	Drawings to scale showing: <ul style="list-style-type: none"> <li>• the internal building layout and unit type distribution for the ground floor, representative middle floor, and the top floor</li> <li>• typical car park layout</li> <li>• sample unit plans with furniture layouts, key room depth dimensions and balcony sizes</li> </ul>		
<b>Building mass elevations</b>	Drawing to scale showing the basic massing of the proposal in the context of the adjacent three properties, or for 50m in each direction, on each elevation. This drawing should show, in diagrammatic form: <ul style="list-style-type: none"> <li>• the composition of the elevations including ground level, roof form, and articulation of massing of the overall building</li> <li>• pattern of buildings and spaces between buildings along the street</li> <li>• the profile of any existing buildings</li> </ul>		
<b>Sections</b>	A drawing to scale showing: <ul style="list-style-type: none"> <li>• the proposal and adjacent buildings</li> <li>• the relationship of the proposal to the ground plane, streets, open spaces and deep soil zones</li> </ul>		

## APPENDIX 3

### Development application – recommended documentation checklist

Information required in a development application is established in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. For residential apartment development, SEPP 65 provides additional recommendations for development application requirements.

The following table elaborates on the SEPP recommendations and is a guide that suggests more detailed and well resolved drawings to assist with demonstrating better design practice. The consent authority may also identify additional information that is required for the assessment of a residential apartment development. All plans, elevations and sections should be drawn to scale and include a graphic scale bar and true north point. A cover page with drawing list and BASIX commitments should be included.

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Development details</b>	A summary document that provides the key details of the development proposal. It contains information such as the:		
	<ul style="list-style-type: none"> <li>• floor space ratio of the development</li> </ul>		
	<ul style="list-style-type: none"> <li>• number, mix, size and accessibility of apartments</li> </ul>		
	<ul style="list-style-type: none"> <li>• number of car parking spaces for use (residential, retail, accessible, visitor etc.)</li> </ul>		
	<ul style="list-style-type: none"> <li>• percentage of cross ventilation and daylight compliance</li> </ul>		
<b>Statement of Environmental Effects</b>	In addition to the consent authorities requirements:		
	<ul style="list-style-type: none"> <li>• An explanation of the design in terms of the design quality principles set out in Schedule 1 of <i>State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development</i></li> </ul>		
	<ul style="list-style-type: none"> <li>• If the proposed development is within an area where the built form and density is changing, statements about how the proposed development responds to the existing context and contributes to desired future character of the area</li> </ul>		
	<ul style="list-style-type: none"> <li>• Description of how the proposed development achieves the relevant objectives and design criteria of the Apartment Design Guide</li> </ul>		
<b>Site analysis</b>	Prepared consistent with Appendix 1 of the Apartment Design Guide		

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Site plan</b>	A scale drawing showing:		
	<ul style="list-style-type: none"> <li>any proposed site amalgamation or subdivision</li> </ul>		
	<ul style="list-style-type: none"> <li>location of any proposed buildings or works in relation to setbacks, building envelope controls and building separation dimensions</li> </ul>		
	<ul style="list-style-type: none"> <li>proposed finished levels of land in relation to existing and proposed buildings and roads</li> </ul>		
	<ul style="list-style-type: none"> <li>pedestrian and vehicular site entries and access</li> </ul>		
	<ul style="list-style-type: none"> <li>interface of the ground floor plan with the public domain and with open spaces within the site</li> </ul>		
	<ul style="list-style-type: none"> <li>areas of communal open space and private open space</li> </ul>		
	<ul style="list-style-type: none"> <li>indicative locations of planting and deep soil zones including retained or proposed significant trees</li> </ul>		
<b>Landscape plan</b>	A scale drawing showing:		
	<ul style="list-style-type: none"> <li>the building footprint of the proposal including pedestrian, vehicle and service access</li> </ul>		
	<ul style="list-style-type: none"> <li>trees to be removed shown dotted</li> </ul>		
	<ul style="list-style-type: none"> <li>trees to remain with their tree protection zones (relative to the proposed development)</li> </ul>		
	<ul style="list-style-type: none"> <li>deep soil zones and associated tree planting</li> </ul>		
	<ul style="list-style-type: none"> <li>areas of planting on structure and soil depth</li> </ul>		
	<ul style="list-style-type: none"> <li>proposed planting including species and size</li> </ul>		
	<ul style="list-style-type: none"> <li>details of public space, communal open space and private open space</li> </ul>		
	<ul style="list-style-type: none"> <li>external ramps, stairs and retaining wall levels</li> </ul>		
	<ul style="list-style-type: none"> <li>security features and access points</li> </ul>		
	<ul style="list-style-type: none"> <li>built landscape elements (fences, pergolas, walls, planters and water features)</li> </ul>		
	<ul style="list-style-type: none"> <li>ground surface treatment with indicative materials and finishes</li> </ul>		
	<ul style="list-style-type: none"> <li>site lighting</li> </ul>		
	<ul style="list-style-type: none"> <li>water management and irrigation concept design</li> </ul>		

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Floor plans</b>	A scale drawing showing:		
	<ul style="list-style-type: none"> <li>all levels of the building including roof plan</li> </ul>		
	<ul style="list-style-type: none"> <li>layout of entries, circulation areas, lifts and stairs, communal spaces, and service rooms with key dimensions and RLs shown</li> </ul>		
	<ul style="list-style-type: none"> <li>apartment plans with apartment numbers and areas, all fenestration, typical furniture layouts for each apartment type, room dimensions and intended use and private open space dimensions</li> </ul>		
	<ul style="list-style-type: none"> <li>accessibility clearance templates for accessible units and common spaces</li> </ul>		
	<ul style="list-style-type: none"> <li>visual privacy separation shown and dimensions where necessary</li> </ul>		
	<ul style="list-style-type: none"> <li>vehicle and service access, circulation and parking</li> </ul>		
	<ul style="list-style-type: none"> <li>storage areas</li> </ul>		
<b>Elevations</b>	A scale drawing showing:		
	<ul style="list-style-type: none"> <li>proposed building height and RL lines</li> </ul>		
	<ul style="list-style-type: none"> <li>building height control</li> </ul>		
	<ul style="list-style-type: none"> <li>setbacks or envelope outline</li> </ul>		
	<ul style="list-style-type: none"> <li>building length and articulation</li> </ul>		
	<ul style="list-style-type: none"> <li>the detail and features of the facade and roof design</li> </ul>		
	<ul style="list-style-type: none"> <li>any existing buildings on the site</li> </ul>		
	<ul style="list-style-type: none"> <li>building entries (pedestrian, vehicular and service)</li> </ul>		
	<ul style="list-style-type: none"> <li>profile of buildings on adjacent properties or for 50m in each direction, whichever is most appropriate</li> </ul>		
<b>Sections</b>	A scale drawing showing:		
	<ul style="list-style-type: none"> <li>proposed building height and RL lines</li> </ul>		
	<ul style="list-style-type: none"> <li>building height control</li> </ul>		
	<ul style="list-style-type: none"> <li>setbacks or envelope outline</li> </ul>		
	<ul style="list-style-type: none"> <li>adjacent buildings</li> </ul>		
	<ul style="list-style-type: none"> <li>building circulation</li> </ul>		
	<ul style="list-style-type: none"> <li>the relationship of the proposal to the ground plane, the street and open spaces particularly at thresholds</li> </ul>		



Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Sections (continued)</b>	<ul style="list-style-type: none"> <li>the location and treatment of car parking</li> </ul>		
	<ul style="list-style-type: none"> <li>the location of deep soil and soil depth allowance for planting on structure (where applicable)</li> </ul>		
	<ul style="list-style-type: none"> <li>building separation within the development and between neighbouring buildings</li> </ul>		
	<ul style="list-style-type: none"> <li>ceiling heights throughout the development</li> </ul>		
	<ul style="list-style-type: none"> <li>detailed sections of the proposed facades</li> </ul>		
<b>Solar access study</b>	Where required, graphic documentation at winter solstice (21 June) at a minimum of hourly intervals showing:		
	<ul style="list-style-type: none"> <li>number of hours of solar access to the principal communal open space</li> </ul>		
	<ul style="list-style-type: none"> <li>number of hours of solar access to units within the proposal and tabulation of results</li> </ul>		
	<ul style="list-style-type: none"> <li>overshadowing of existing adjacent properties and overshadowing of future potential development where neighbouring sites are planned for higher density</li> </ul>		
	<ul style="list-style-type: none"> <li>elevation shadows if shadow is likely to fall on neighbouring windows, openings or solar panels</li> </ul>		
<b>Cross ventilation study</b>	Where required, graphic documentation of unobstructed path of air movement through dual aspect apartments and tabulation of results		
<b>Material and finishes board</b>	A sample board of the proposed external materials, finishes and colours of the proposal, keyed to elevations		
<b>Illustrative views</b>	Photomontages or similar rendering or perspective drawings illustrating the proposal in the context of surrounding development. <i>Note: Illustrative views need to be prepared using a perspective that relates to the human eye. Where a photomontage is prepared, it should use a photo taken by a full frame camera with a 50mm lens and 46 degree angle of view</i>		
<b>Models</b>	<ul style="list-style-type: none"> <li>A three dimensional computer generated model showing views of the development from adjacent streets and buildings</li> </ul>		
	<ul style="list-style-type: none"> <li>A physical model that shows the massing of the proposal that includes relevant context (particularly for developments of 20 apartments or more, or on contentious sites) if required by the consent authority</li> </ul>		

## APPENDIX 4

### Apartment building types - Example schemes

#### 01

#### Narrow infill apartment



This example scheme divides the built form into two components, a front component that addresses the street to the south and a longer rear building positioned perpendicular to the street alignment.

The front building faces the street and provides a unified streetscape. This allows for a prominent building entry as well as overlooking of the street from balconies and windows of apartments. One of the side setbacks of the front building is able to be reduced to 3 metres as the side wall has no windows to the neighbour. The rear component has increased setbacks to resolve privacy and overshadowing impacts to adjoining properties. Ground floor apartments are two levels and accessed from a private courtyard.

The building height relates to the area's desired future character. Height is also determined by sunlight access requirements to communal and private spaces for this development and its neighbours, and changes from 4 storeys at the street frontage to 3 storeys at the rear. This change in height also provides an opportunity for a roof garden.

Dual aspect apartments (dwellings with windows and/or balconies to at least two sides) allow for a high level of amenity for residents. Likewise the setbacks provide areas for communal open space, deep soil and retention of significant trees. The split level basement parking area is accessed from a single point on the lower side of the street frontage.

#### Context and subdivision

Suburban infill site in an area undergoing transition from detached dwellings to residential flat buildings; the site is a consolidation of two detached housing lots

#### Key considerations

- visual privacy and sunlight access to proposed apartments and adjoining properties
- visual impact of vehicle access to car park

#### Design qualities

- all proposed apartments are dual aspect and offer natural cross ventilation
- daylight access is shared equitably

#### Dimensions and data

Site dimensions: 20m wide x 50m deep

Site area: 1,000m<sup>2</sup>

Building height: 3-4 storeys above ground

FSR: 1.1:1

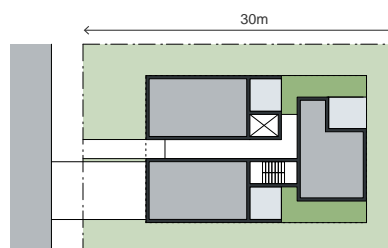
Building depth: 9.5-13m

Setbacks: front setback consistent with established pattern in street; side setback 3-4m; rear setback 6m

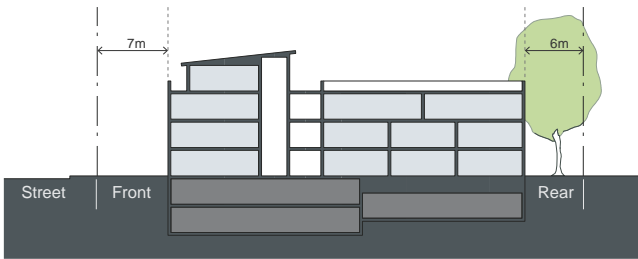
Deep soil: 40%

Car parking: 15 spaces (basement)

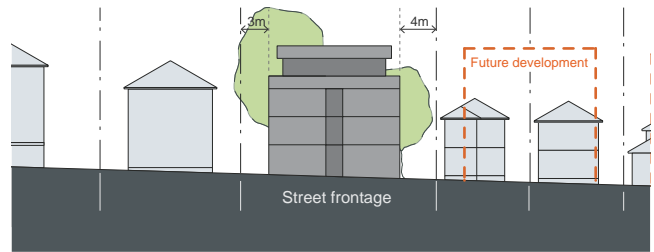
Number of dwellings and mix:  
11 apartments with a mix of 1 and 2 bedrooms



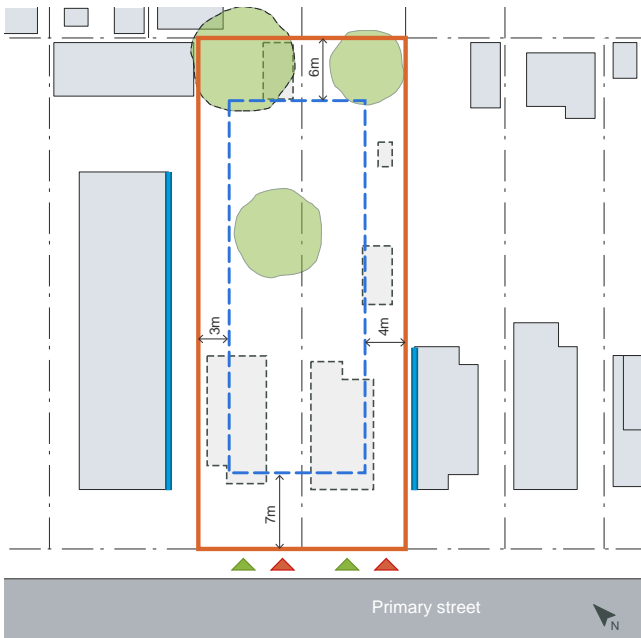
Narrow infill apartment types are modular and can be adapted to fit various site depths. This example is situated on a 30m deep lot



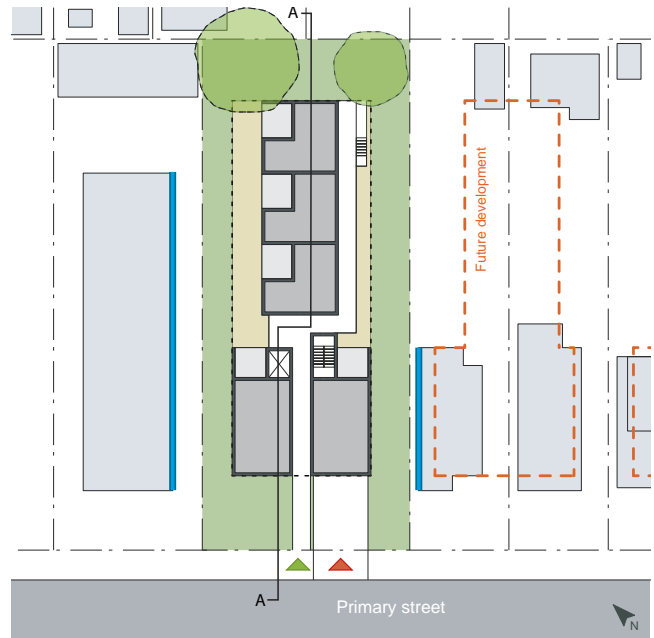
Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



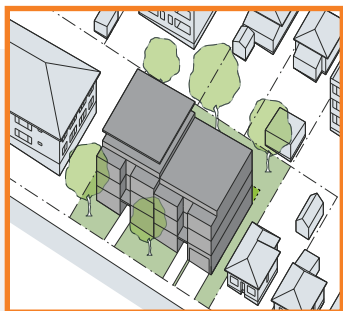
Proposed development - Typical ground level plan

- Site boundary
- - - Proposed development footprint
- ▲ Pedestrian access
- ▼ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

# Apartment building types - Example schemes

## 02

### Row apartments



This example scheme of a row apartment type uses two separate volumes to step down the street in response to the site slope and the height of neighbouring buildings. To further integrate with the neighbourhood character, the front of the building is aligned with adjacent properties to achieve a consistent setback and open space character.

Building entries, balconies and windows address the street and provide passive surveillance, while non-habitable rooms face the side boundaries. A generous rear setback allows for visual privacy and ensures solar access to private open spaces.

Site amenity is maximised by providing deep soil areas which incorporate the existing significant vegetation in both the front and rear setbacks. Vehicle access is restricted to a single access point and basement car parking is contained within the building footprint.



Row apartment types are modular and can be adapted to fit various site widths. They are well suited to wide, shallow lots and typically have 2-3 apartments accessed off one common access core

#### Context and subdivision

The site is a consolidation of three narrow residential lots, located in a suburban area undergoing an increase in density with a mix of detached, duplex, terrace and apartment buildings

#### Key considerations

- character of the area and streetscape
- visual privacy and overshadowing of adjacent properties
- retention of existing trees

#### Design qualities

- building scale (3 levels + 4th level setback) relates well to existing urban character
- dual aspect apartments with good daylight access and natural ventilation
- good visual privacy for residents and neighbours with balconies facing the street and rear garden

#### Data

Site dimensions: 33m wide x 33.5m deep

Site area: 1,100m<sup>2</sup>

Building height: 3-4 storeys above ground

FSR: 1:1

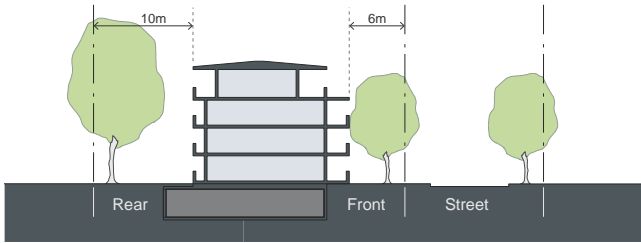
Building depth: 17m (including balconies)

Setbacks: front setback consistent with established pattern in street; side setback 3m; rear setback 10m

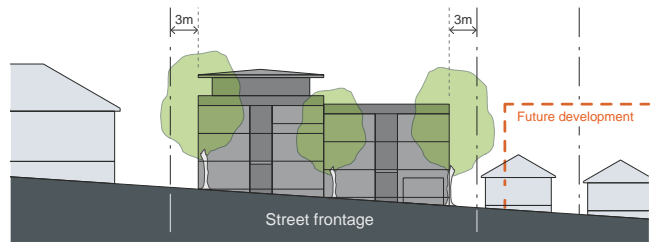
Deep soil: 35%

Car parking: 17 spaces (basement)

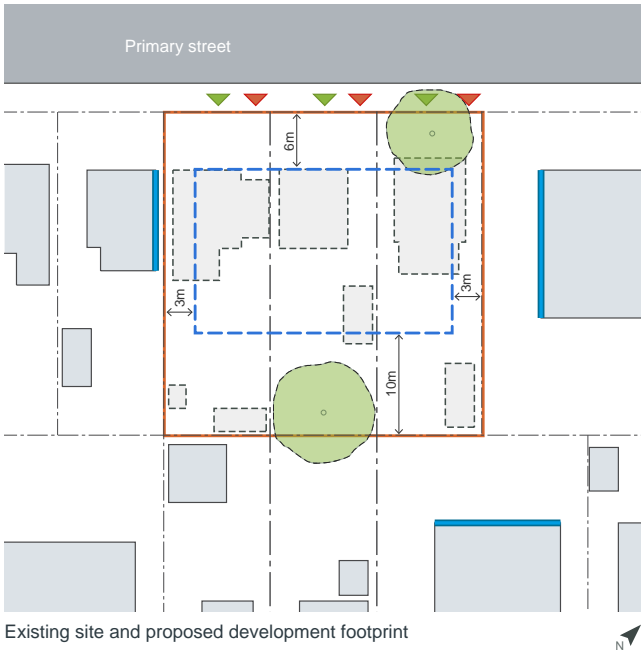
Number of dwellings and mix:  
12 apartments, predominantly 2 bedrooms



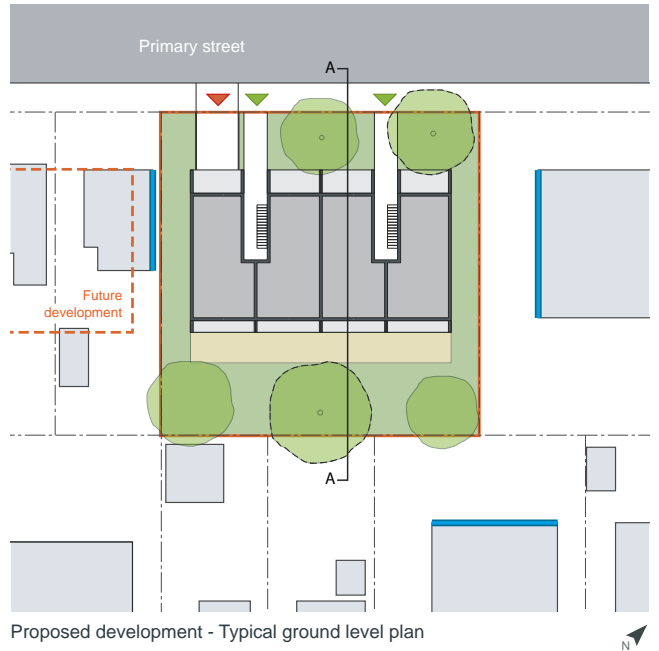
Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



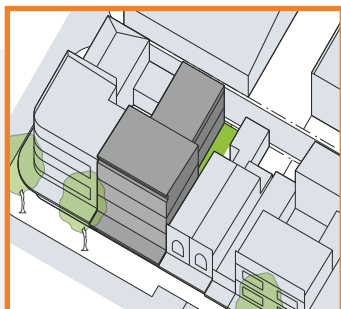
Proposed development - Typical ground level plan

- Site boundary
- - - Proposed development footprint
- ▲ Pedestrian access
- ▼ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 03

#### Shop top apartments



This example scheme adopts the established building alignment, responds to the fine urban grain of the main street and provides for a continuous awning along the street frontage.

Above the retail and to the rear of the site, a mix of 1 and 2 bed apartments are located in a 'T' configuration of 3 to 4 storeys. The front building extends to side boundaries to provide a continuous street wall. Dual aspect apartments ensure good daylight access and natural ventilation.

The building to the rear is perpendicular to the main street and setback from both side and rear boundaries. This provides amenity benefits including a small courtyard space, privacy to residents and neighbouring dwellings and access to sunlight. Solutions such as adjustable screens may be required on the northern elevation to manage privacy impacts.

Access for the residential apartments is separated from access to the ground floor retail, enhancing safety. Likewise access from the main street and rear lane, as well as the layout of apartments facilitates passive surveillance to both the main street and rear lane, increasing safety and security.

The rear lane provides access to a single level basement car park with planting above the basement structure. Where possible, opportunities to create or retain deep soil zones within side and rear setbacks should be explored on sites similar to this example.

#### Context and subdivision

Urban main street undergoing renewal; heights range between 2 and 3 storeys and buildings are built to the street alignment; the development site is a consolidation of three retail terrace lots fronting a busy road to the north-west and laneway to the south-east; adjacent development includes a mix of three storey shop top apartments and 2 storey retail buildings

#### Key considerations

- heritage values of adjacent buildings and retention of streetscape character
- interface between residential and non-residential uses
- visual privacy and noise impacts

#### Design qualities

- more homes within a local centre in walkable distance to services and facilities
- continuous street wall height and proportion
- activation and increased surveillance of rear lane

#### Dimensions and data

Site dimensions: 15m wide x 30m deep

Site area: 450m<sup>2</sup>

Building height: 3-4 storeys above ground

FSR: 1.8:1

Building depth: 7.5-12m

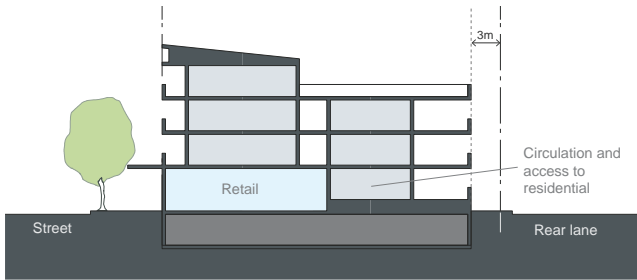
Setbacks: zero front setback consistent with established pattern in street; zero side setback; rear setback 3m

Deep soil: 13%

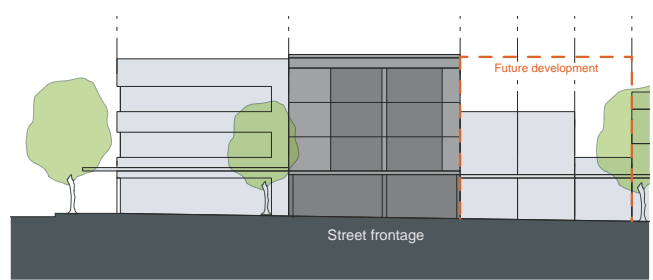
Car parking: 7 spaces (basement)

Retail GFA: 100m<sup>2</sup> (ground floor)

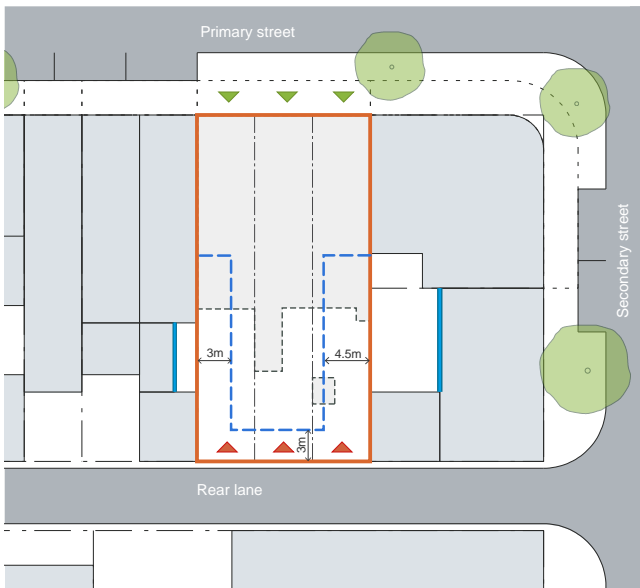
Number of dwellings and mix:  
9 apartments with a mix of 1 and 2 bedrooms



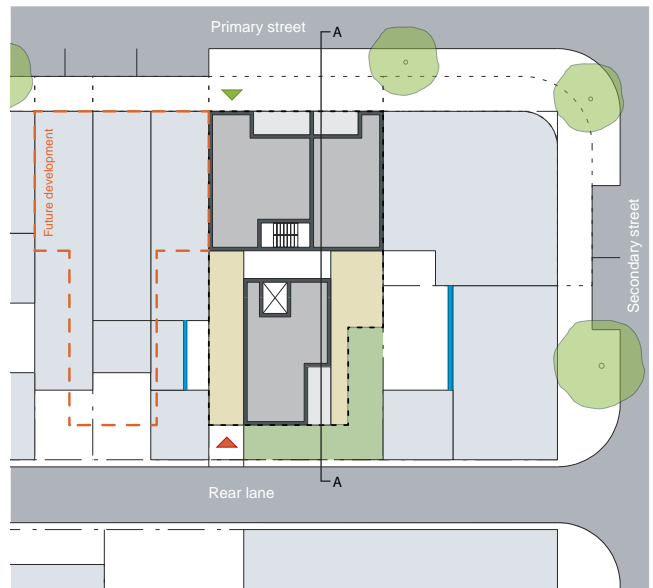
Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



Proposed development - Typical upper level plan

- Site boundary
- - - Proposed development footprint
- ▶ Pedestrian access
- ▶ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 04

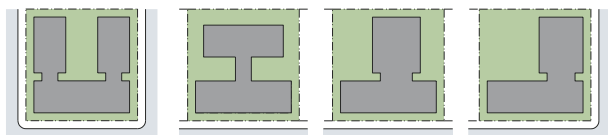
#### Courtyard apartments (U-shape)



This example of a U-shaped courtyard apartment building addresses both the primary street frontage and the rear lane which increases safety by encouraging activity and surveillance. Access points to apartments from the courtyard are clearly defined by three access cores which help to break up the building into smaller masses and contribute to better surveillance, daylight access and natural ventilation.

The prominent central courtyard present an attractive landscaped setting to the street. Surveillance of the central courtyard and side boundaries is achieved from balconies and windows. In this example and on properties with similar characteristics the transition from public to private space should be carefully considered and managed.

Visual privacy and daylight access to adjacent sites is allowed for by appropriate building separation and height. Amenity within the site is achieved through a 12m building separation (courtyard) and a building orientation that enables an attractive outlook and good daylight access. Larger side setbacks provide opportunities to retain significant trees and vehicle access is off the rear lane.



Courtyard apartment types can take many forms depending on the site configuration and orientation and be adapted or combined accordingly

#### Context and subdivision

Suburban area undergoing transition from detached dwellings to residential flat buildings; two lots have been consolidated to form the development site; dual frontage to street and rear lane

#### Key considerations

- visual privacy for adjoining properties
- overshadowing of courtyard
- design of corners to ensure good daylight access to apartments

#### Design qualities

- activates both the street and the rear lane
- communal courtyard increases opportunities for social interaction for residents
- integration with neighbourhood character by orienting either the short ends or the long frontage to the street
- suited to step with the slope and be oriented to capture views, daylight and prevailing breezes
- suitable to respond to a variety of lots shapes

#### Dimensions and data

Site dimensions: 43m wide x 35m deep

Site area: 1,470m<sup>2</sup>

Building height: 3-4 storeys above ground

FSR: 1:1

Building depth: 7m - 10m

Setbacks: front setback consistent with established pattern in street; side setback 6m; rear setback 3m, courtyard (between buildings) 12m

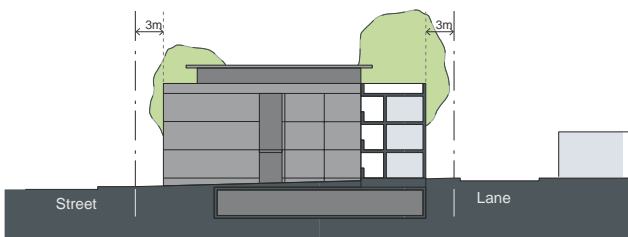
Deep soil: 30%

Car parking: 22 spaces (basement)

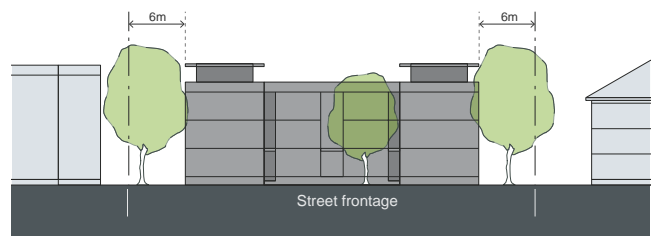
Retail component: 100m<sup>2</sup> ground floor

Number of dwellings and mix:  
19 apartments with a mix of 1, 2 and 3 bedrooms

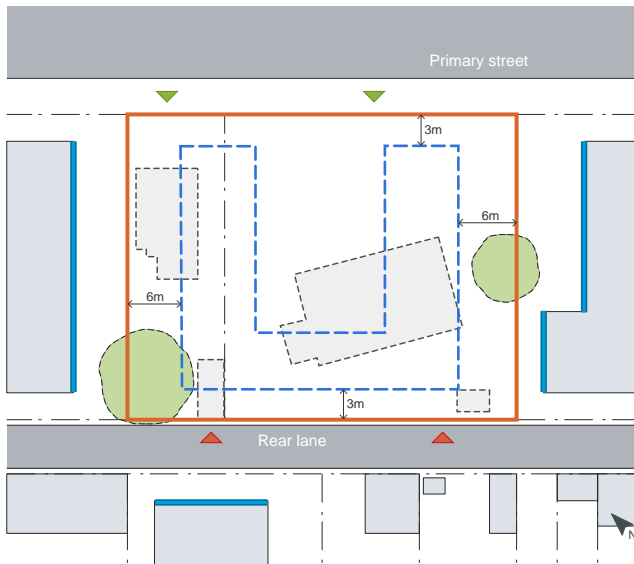




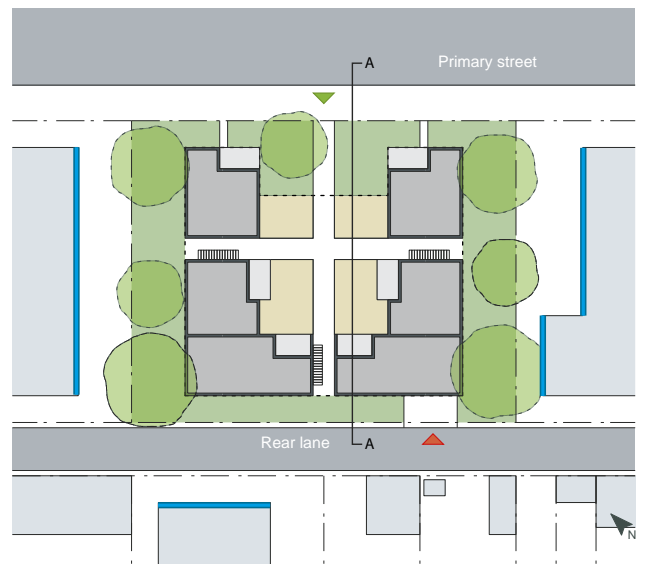
Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



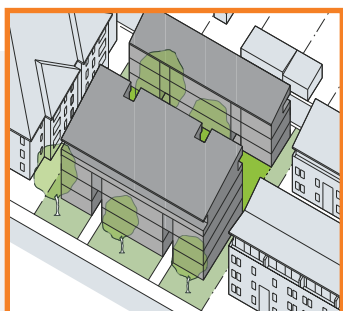
Proposed development - Typical ground level plan

- Site boundary
- - - Proposed development footprint
- ▶ Pedestrian access
- ▲ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 05

#### Courtyard apartments (linear)



This example uses a centralised courtyard between two linear buildings to optimise development of the site while ensuring good amenity. By using this typology it is possible to provide consistent setbacks to the street and lane, a sense of address and good surveillance of the public domain.

Building height should relate to the adjacent development, street width and the direction of solar access. In this example, the larger 4 storey building fronts the wider street while the 3 storey building is oriented to the north and fronts the narrower lane. This lower building height allows for sunlight to access to the courtyard behind.

Amenity to neighbouring properties is improved by providing greater visual privacy and improved daylight and sunlight access than would otherwise be possible with a building perpendicular to the street alignment. Walls facing the side boundary are mostly blank with windows only to common entry corridors and non-habitable rooms. This improves the privacy to adjacent properties that have habitable windows and balconies facing the side boundary.

A centralised courtyard provides separation between facades and a pleasant open space for passive recreation. The courtyard also provides opportunities to retain any significant vegetation and overlap deep soil with communal open space. In addition, planting on top of the car park increases the attractiveness and usability of this area. Vehicle access is from the lane to a split level car park which is located predominantly below the building footprint.

#### Context and subdivision

Suburban area in transition to increased density with a mix of apartment buildings and detached dwellings; the development site is an amalgamation of four traditional detached housing lots with street and rear lane frontage

#### Key considerations

- visual privacy for adjoining properties
- adequate building separation to ensure good solar access and ventilation

#### Design qualities

- multiple building entries achieve activation of the street and rear lane
- front building forms part of an intended street wall
- can be adapted for narrow sites and include SOHO units (live/work) or small commercial tenancies
- suitable for sloping sites

#### Dimensions and data

Site dimensions: 45m wide x 40m deep

Site area: 1,800m<sup>2</sup>

Building height: 3-4 storeys above ground

FSR: 1.3:1

Building depth: 7.8m - 16.2m

Setbacks: front setback consistent with established pattern in street; side setback 3m

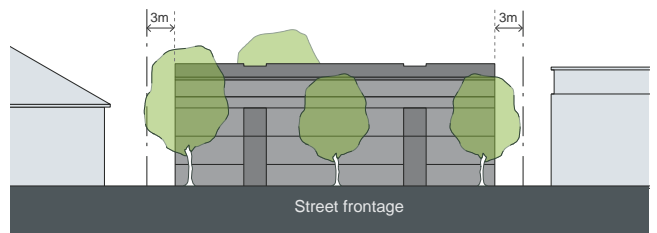
Deep soil: 20%

Car parking: 25 spaces (basement)

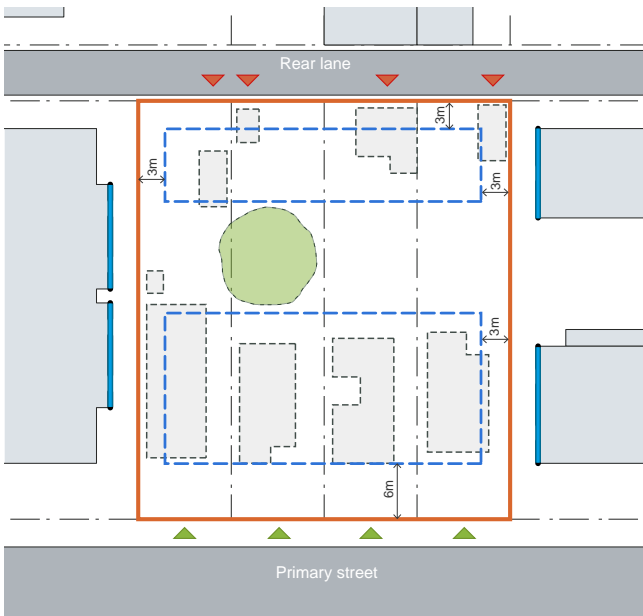
Number of dwellings and mix:  
22 apartments with a mix of 1, 2 and 3 bedrooms



Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



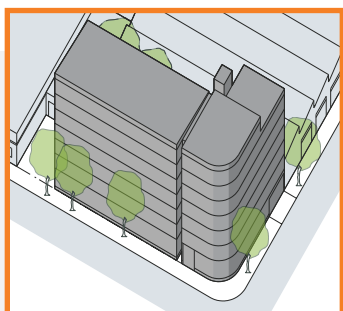
Proposed development - Typical ground level plan

- Site boundary
- - - Proposed development footprint
- ▲ Pedestrian access
- ▼ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 06

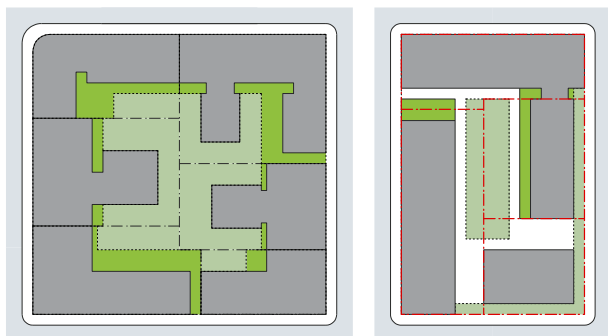
#### Perimeter block apartments



This example uses a perimeter block building to align the development with both street edges and clearly define the street corner. The building is constructed to the side boundaries in anticipation of future development and has a desired continuous street wall height for the area.

Residential apartments are set above the noisy street level. Noise impacts are buffered by balconies and adjustable screens. Two storey apartments are arranged along an open gallery to maximise northern solar access, while single storey apartments are located towards the corner adjacent to the lift core.

Privacy within the site and to future neighbouring residential apartment development is achieved through a rear boundary setback. This also creates space for a communal courtyard with deep soil zones and landscaping on the top of the basement structure. Vehicle access is off the secondary street and designed to minimise safety risks for pedestrians.



Perimeter blocks can be delivered in stages and over time. They are often designed as a series of buildings which share a central communal open space and/or basement car parking

#### Context and subdivision

Former industrial area under transition into urban neighbourhood; the site is located on a street corner and surrounded by industrial sheds and several new apartment buildings

#### Key considerations

- visual privacy and good daylight access to neighbouring properties
- relationship and interface between residential and non-residential uses
- emphasis on design of corner component

#### Design qualities

- clearly defines the visually prominent street corner
- supports a vibrant neighbourhood by creating active retail frontages at ground level facing the street
- offers high residential amenity due to shallow building depth and dual aspect apartments
- defines the desired future streetscape scale

#### Dimensions and data

Site dimensions: 41m wide x 23m deep

Site area: 950m<sup>2</sup>

Building height: 6-7 storeys above ground

FSR: 3.3:1

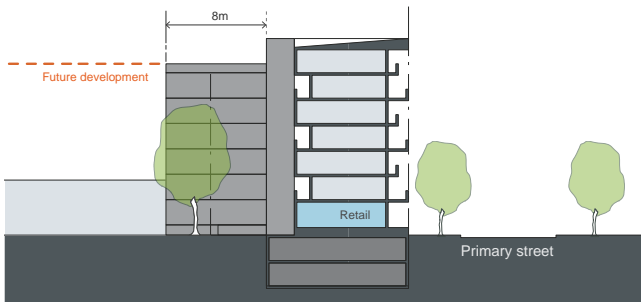
Building depth: 9.6m - 13.5m

Setbacks: zero front setback consistent with established pattern in street; zero side and rear setback

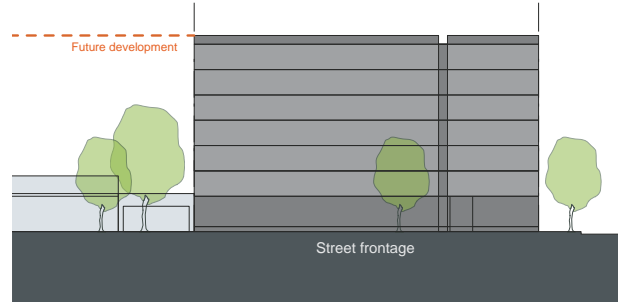
Deep soil: 13%

Car parking: 38 spaces (basement)

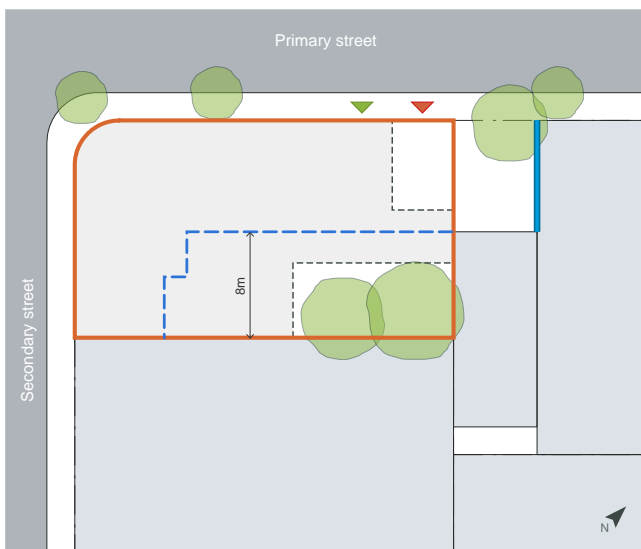
Number of dwellings and mix:  
29 apartments with a mix of 2 and 3 bedrooms



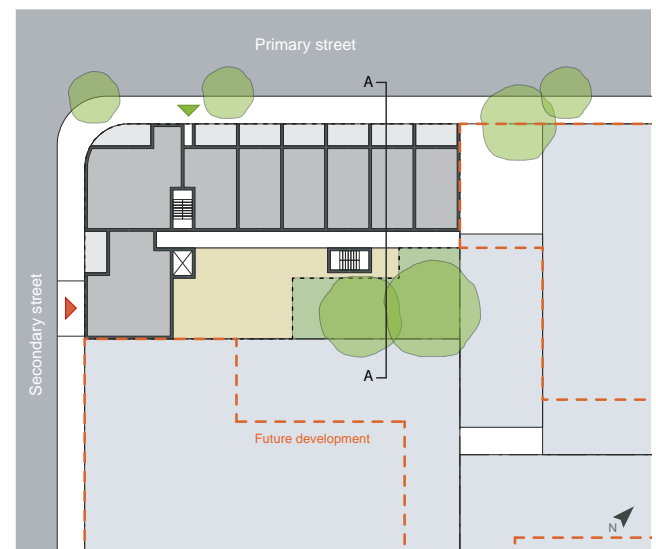
Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



Proposed development - Typical upper level plan

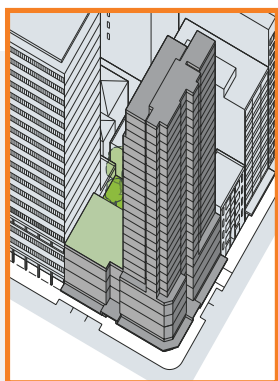
- Site boundary
- - - Proposed development footprint
- ▲ Pedestrian access
- ▲ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 07

#### Tower apartments (podium)

This example consists of three distinct built form components: a ground floor retail level with full site coverage, a podium with commercial floors and a residential tower. The building integrates with its context by building to the street alignment and providing a street wall height that is consistent with the typical range of the area.



The ground floor interface balances the need for flexible use of space with the potential for varied tenancy sizes that encourage activation and a vibrant street life. Commercial floors above the ground level retail act as a buffer and vertically separate noisy areas from upper level apartments. Entries to the residential lobbies are directly accessible from the street, and are distinctly separate from retail and commercial entrances.

While the tower has a repetitive floor layout, facade articulation offers the opportunity to group floors together and vary facade treatments to add interest. Each residential floor has eight apartments that are accessed from the lift core, with windows at the end of common corridors. Corner apartments are cross ventilated. Balconies at higher levels may need to be partially enclosed to resolve wind impacts, e.g. through operable louvres or wintergardens.

In highly urbanised locations, deep soil zones may be impractical to provide. This example compensates for the lack of deep soil by landscaping the roof of the podium, providing common open space for residents and environmental benefits through improving the local microclimate. Access to basement parking is from the secondary street frontage and integrated into the overall building design.

#### Context and subdivision

An inner city corner site with a mix of towers and street wall buildings; predominant street wall height ranges between 20m and 45m; podium buildings are constructed to the street alignment and have a zero setback to side boundaries

#### Key considerations

- visual impact of tower element
- visual privacy to neighbouring development
- overshadowing of communal and public space and neighbouring development

#### Design qualities

- provides housing in a centre or CBD
- residential uses activate the area outside of business hours (applicable to inner city or CBD location)
- podium provides a communal open space area for residents. It also integrates the building into the streetscape with a continuous street wall height
- opportunity to be a gateway building or landmark

#### Dimensions and data

Site dimensions: 46m wide x 38m deep

Site area: 1,750m<sup>2</sup>

Building height: 4 to 25 storeys above ground

FSR (retail): 2.8:1; FSR (residential): 8.4:1

Building depth (retail/commercial): 25m

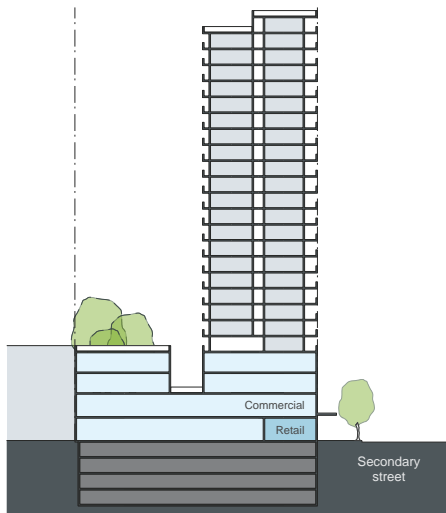
Building depth (residential): 18m

Setbacks: zero front setback consistent with established pattern in street; zero side and rear setback

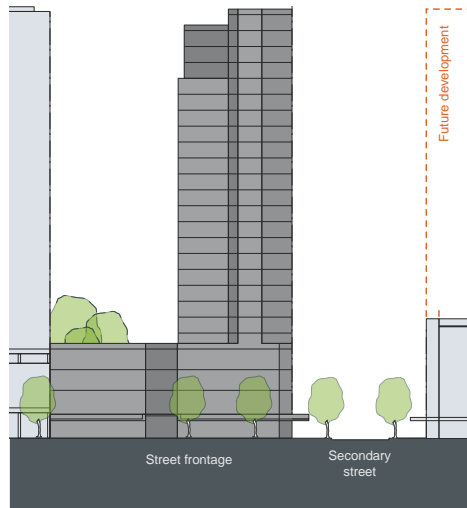
Deep soil: 0%, Planting on structure: 24%

Car parking: 110 spaces (basement)

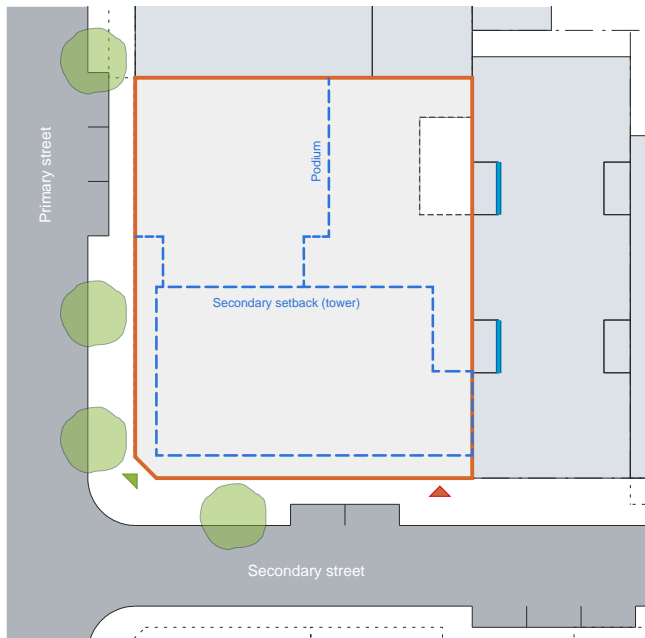
Number of dwellings and mix:  
150 apartments with a mix of studio, 1, 2 & 3 bedrooms



Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



Proposed development - Typical upper level plan

- Site boundary
- - - Proposed development footprint
- ▶ Pedestrian access
- ▶ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 08

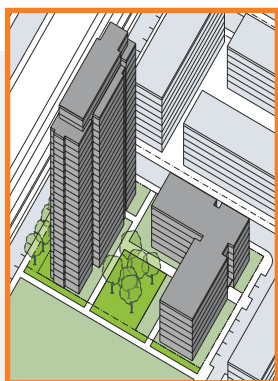
#### Tower apartments (freestanding)

This development integrates with its context by aligning with the setback of adjacent buildings and providing an address to surrounding streets. The location of the tower minimises overshadowing of communal and public open space and neighbouring development. The orientation of the building along the north-south axis maximises views and enables good solar access to all apartments.

Communal open space for residents is provided in the centre of the site facing the public park. The basement car park has a U-shaped footprint over two levels and wraps around a deep soil zone under the communal courtyard. Vehicle access is located on the secondary street to the south.

Pedestrian entries to lobbies are located along all street frontages. Additional access is provided from the public park to the north and off the communal courtyard. At ground level, apartments have direct access from the street or the communal courtyard and the design allows for live-work apartments and retail space facing the street.

The tower has a central core with eight apartments per floor. All circulation corridors have access to natural light and ventilation.



#### Context and subdivision

The site is located within a predominantly residential context at the edge of a town centre, adjacent to a (noisy) railway line to the east and defined by streets on three sides and a public park to the north

#### Key considerations

- visual impact of tower element
- visual privacy to neighbouring development
- overshadowing of communal and public space and neighbouring development
- relationship with streetscape

#### Design qualities

- small footprint minimises hard surface areas and reduces urban heat island effect
- excellent views, daylight access and natural ventilation for residents
- separation from noise sources (e.g. busy road/rail)
- opportunity to be a gateway building or landmark

#### Dimensions and data

Site dimensions: 95m wide x 62m deep

Site area: 5,890m<sup>2</sup>

Building height: 25 storeys above ground

FSR: 4.4:1

Building depth: 15.5m - 21.5m

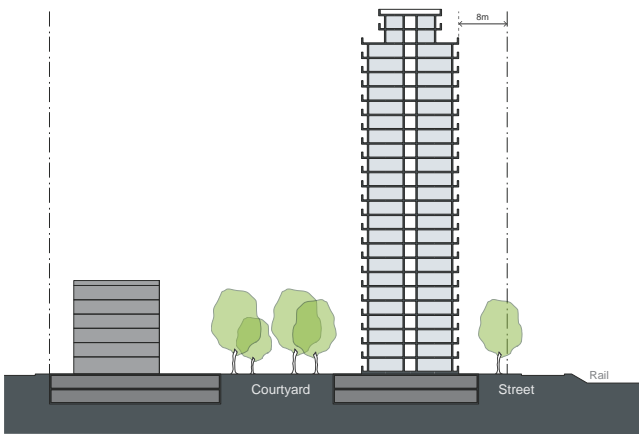
Setbacks: landscaped setback, consistent with surrounding context

Deep soil: 14%

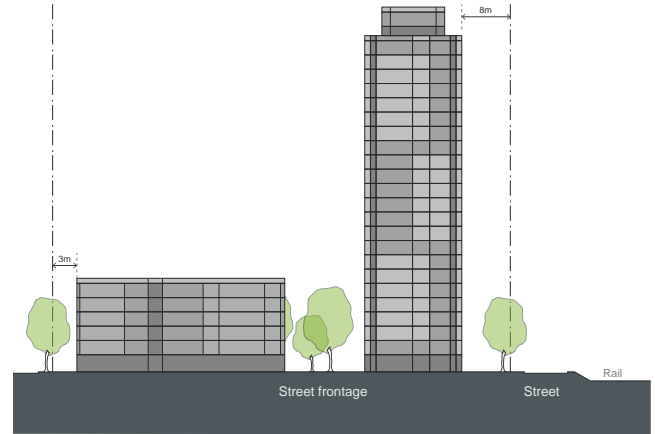
Car parking: 340 spaces (basement)

Number of dwellings and mix:  
314 apartments with a mix of 1, 2 and 3 bedrooms

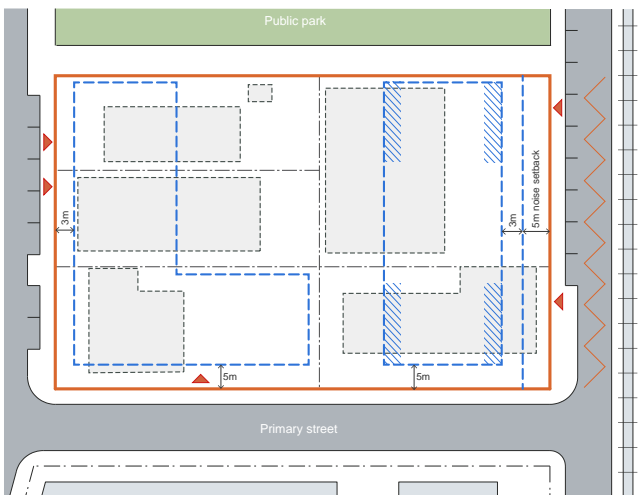




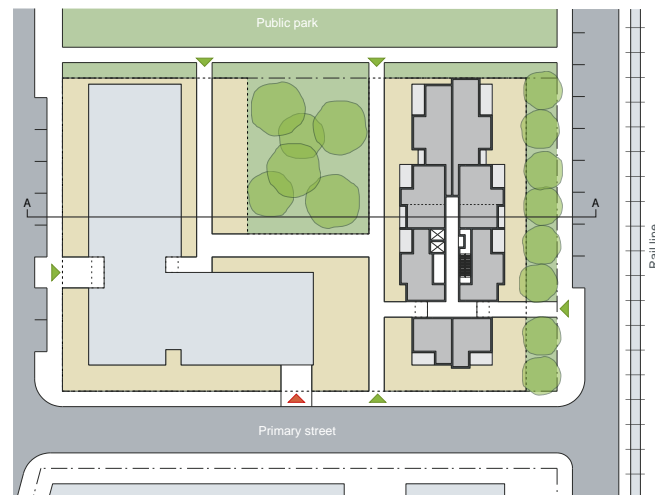
Proposed development - Section A



Proposed development - Street elevation



Existing site and proposed development footprint



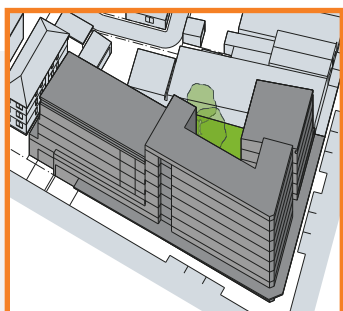
Proposed development - Typical upper level plan

- Site boundary
- Proposed development footprint
- ▶ Pedestrian access
- ▶ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms

## Apartment building types - Example schemes

### 09

#### Hybrid (mixed) development



This example scheme of a mixed use development is an amalgamation of four lots and is located on a prominent street corner. It consists of a single level retail podium with full site coverage and residential apartments on the upper levels.

The sharp street corner is defined and both streets are addressed through the use of commercial frontages (windows and entries) and a continuous awning that turns the corner. Lift cores to residential floors above are located at the street edge. Single storey units are stacked vertically on the corner and accessed from an open gallery while crossover apartments to either side of the building maximise northern sunlight access.

Communal open space is provided on the podium with substantial planting on structure (roof garden). Large trees and adequate building separation further enhance residential amenity. Vehicle access to the basement car park and the retail loading dock are located off the secondary street to the north.

Integrating residential apartments with large format commercial uses requires detailed consideration to resolve potential conflicts between uses. The location of retail and residential entries, the arrangement of loading docks and basement car parking and the impact and mitigation of noise generated by the commercial component are some examples.

#### Context and subdivision

A prominent corner site that addresses two streets with different streetscape character; surrounding buildings are anticipated to redevelop into similar density and height; desired future character of the area includes active street frontages, continuous awnings, zero building alignments and street frontage heights of 17 to 24m

#### Key considerations

- relationship and activation of surrounding streets
- relationship and interface between residential and non-residential uses and mitigation of potential conflicts between them
- emphasis on design of prominent corner component

#### Design qualities

- clear street address with active frontages
- podium roof gardens add to residential amenity
- selection of robust facade materials
- integration of photo voltaics (PV) on roofs and awnings

#### Dimensions and data

Site dimensions: 80 x 45m (irregular)

Site area: 2,840m<sup>2</sup>

Building height: 5-7 storeys above ground

FSR: 2.8:1 residential and 0.8:1 retail

Building depth (residential): 10.2 - 17m

Setbacks: nil front setback, 2.4m front setback upper levels, nil side setback, 3m upper levels, nil rear setback, 9m upper levels

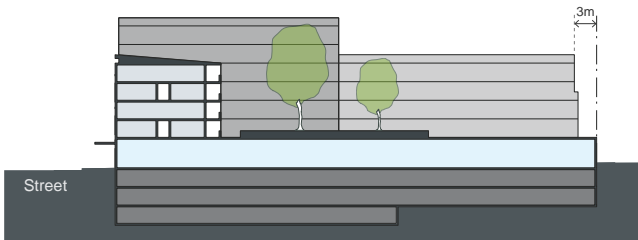
Deep soil zone: 0%, Planting on structure: 10%

Car parking: 210 spaces (basement) including parking for both residential and non-residential uses

Retail GFA: 2,270m<sup>2</sup> (ground floor)

Number of dwellings and mix:

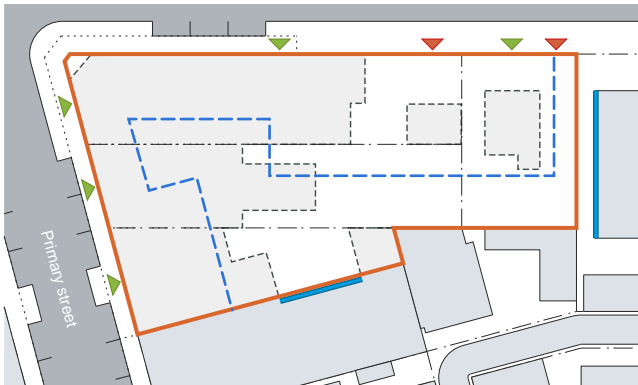
64 apartments with a mix of 1, 2 and 3 bedrooms



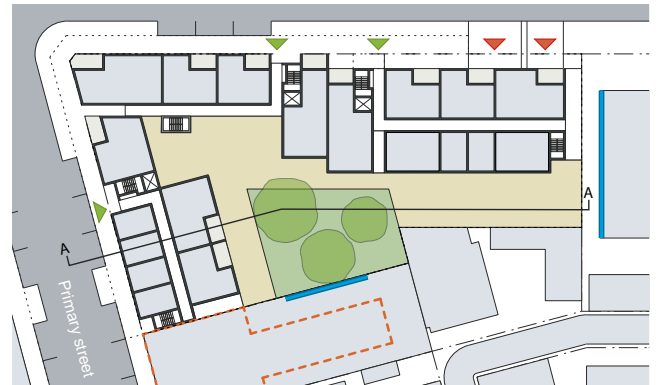
Proposed development - Section A



Proposed development - Street elevation

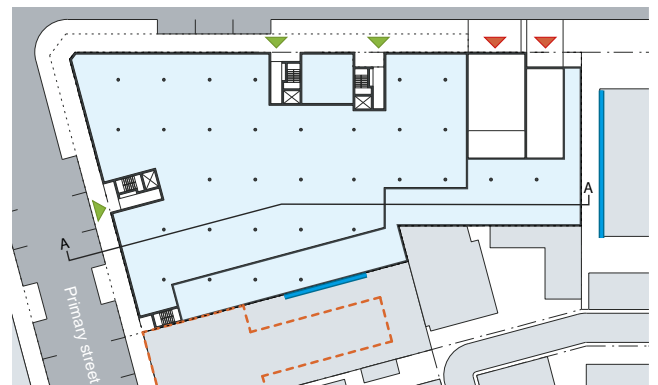


Existing site and proposed development footprint



Proposed development - Typical upper level plan

- Site boundary
- - - Proposed development footprint
- ▲ Pedestrian access
- ▼ Vehicular access
- Deep soil zone
- Significant tree to be retained
- Walls with balconies or windows to habitable rooms



Proposed development - Ground level plan

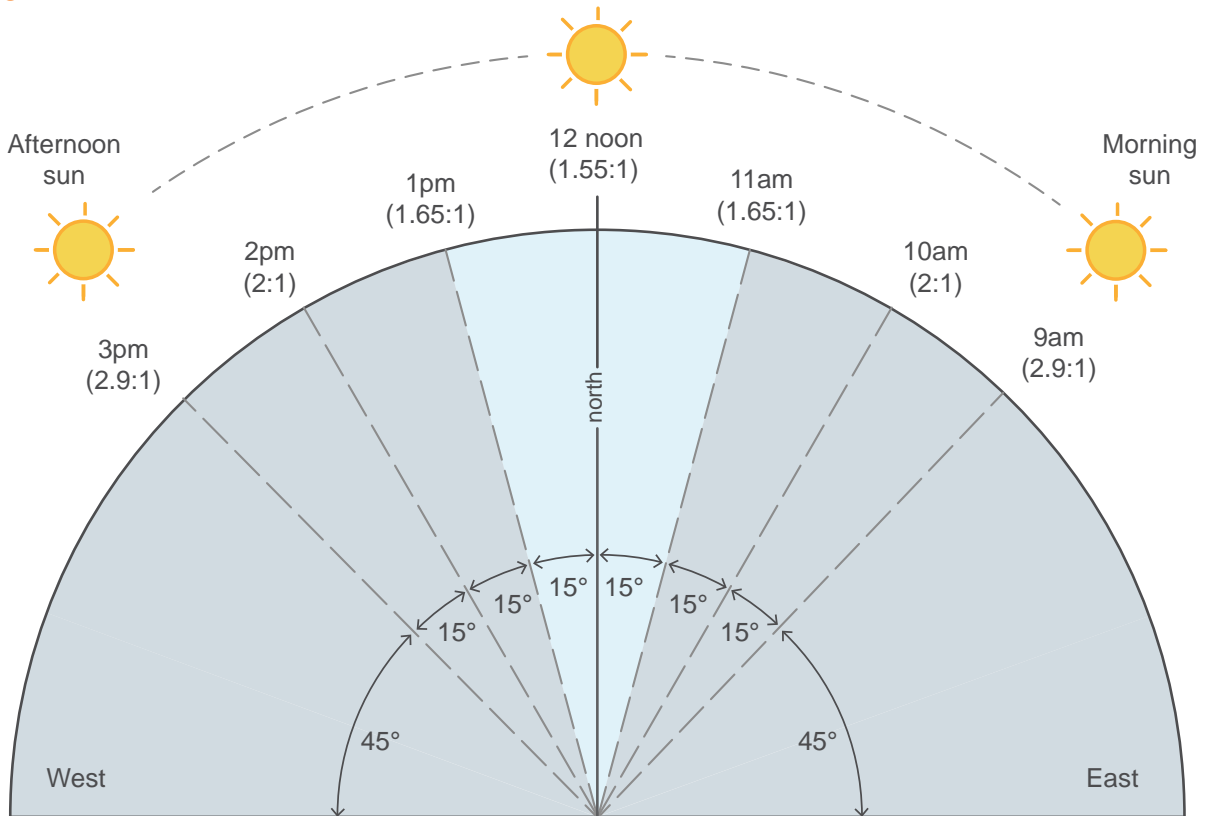


## APPENDIX 5

### Sunlight access analysis tool

To achieve 2 hours of direct sunlight in mid winter, a good test is to check whether the sun can 'see' the living room window and private open space between 11 am and 1 pm in plan view

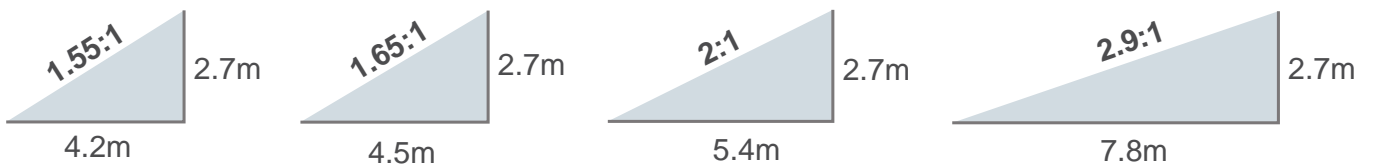
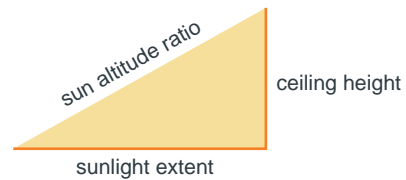
#### Sunlight access tool



Based on Sydney coordinates  
33° South 151.20° East +10 GMT for winter solstice at 21 June

#### Sun altitude ratios

The ratios below can be used to determine how far sunlight extends into apartments at a given time of day, according to the ratios indicated on the sunlight access tool above



## Glossary

### Acoustic privacy

a measure of sound insulation between apartments, between apartments and communal areas, and between external and internal spaces

### Adaptable housing

housing that is designed and built to accommodate future changes to suit occupants with mobility impairment or life cycle needs

### Adaptive reuse

the conversion of an existing building or structure from one use to another, or from one configuration to another

### Amenity

the 'liveability', comfort or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is important in the public, communal and private domains and includes the enjoyment of sunlight, views, privacy and quiet. It also includes protection from pollution and odours

### Aircraft noise

aircraft noise is identified as contours on the Australian Noise Exposure Forecast (ANEF) Map. The higher the ANEF contour value, the greater the exposure to aircraft noise

### Articulation zone

an area in front of the building line that may contain porticos, balconies, bay windows, decks, patios, pergolas, terraces, verandahs, window box treatments, window bays, awnings and sun shading features

### Attached dwelling

as defined in the *Standard Instrument - Principal Local Environmental Plan*

### Bay window

window element which projects a short way past the face of the building. It can have windows on the return walls and sometimes incorporates a seat

### BCA

Building Code of Australia

### Building line

the predominant line formed by the main external face of the building. Balconies or bay window projections may or may not be included depending on desired streetscape

### Building height

as defined in the *Standard Instrument - Principal Local Environmental Plan*

### Building depth

is the overall cross section dimension of a building envelope. It includes the internal floor plate, external walls, balconies, external circulation and articulation such as recesses and steps in plan and section

### Business zones

land identified on a Land Zoning Map within a local environmental plan as a B1 Neighbourhood Centre, B2 Local Centre, B3 Commercial Core, B4 Mixed Use, B5 Business Development, B6 Enterprise Corridor, B7 Business Park or B8 Metropolitan Centre zone

*Note: residential apartment development may not be permissible or appropriate in all Business zones*

### Busy road or rail line

as defined in *State Environmental Planning Policy (Infrastructure) 2007* and *Development Near Rail Corridors and Busy Roads – Interim Guideline*

### Cadastre

the current subdivisional pattern of a locality on the ground e.g. boundaries, roads, waterways, parcel identifiers and names

### Clerestory

high level windows that can be part of a wall above a lower roof

### Communal open space

outdoor space located within the site at ground level or on a structure that is within common ownership and for the recreational use of residents of the development. Communal open space may be accessible to residents only, or to the public

### Core

vertical circulation (lift and/or stairs) within a building. A single core may include multiple lifts serving the same floor area

### Corner apartment

cross ventilating apartments on one level with aspects at least 90 degrees apart. Corner apartments are commonly located on the outermost corners of buildings

**Cornice**

decorative horizontal moulding at the top of a building which 'crowns' or finishes the external facade

**Courtyard**

communal space at ground level or on a structure (podium or roof) that is open to the sky, formed by the building and enclosed on 3 or more sides

**Cross-over apartment**

cross ventilating apartment with two opposite aspects and with a change in level between one side of the building and the other

**Cross-through apartment**

cross ventilating apartment on one level with two opposite aspects

**Datum point or datum line**

a significant point or line in space established by the existing or desired context, often defined as an Australian Height Datum. For example, the top of significant trees or the cornice of a heritage building

**Daylight**

consists of both skylight (diffuse light from the sky) and sunlight (direct beam radiation from the sun). Daylight changes with the time of day, season and weather conditions

**Deep soil zone**

area of soil within a development that are unimpeded by buildings or structures above and below ground and have a minimum dimension of 6m. Deep soil zones exclude basement car parks, services, swimming pools, tennis courts and impervious surfaces including car parks, driveways and roof areas

**Dense urban area**

an area where the permitted floor space ratio for development under a local environmental plan is 2.5:1 or greater

**Director-General's Design Excellence Guidelines**

the Design Excellence Guidelines issued by the Director-General in October 2010

**Dual aspect apartment**

cross ventilating apartments which have at least two major external walls facing in different directions, including corner, cross-over and cross-through apartments

**Dual key apartment**

an apartment with a common internal corridor and lockable doors to sections within the apartment so that it is able to be separated into 2 independent units. Under the BCA, dual key apartments are regarded as two sole occupancy units. They are also considered as two units when calculating apartment mix

**Effective Openable Area (EOA)**

the minimum area of clear opening of a window that can take part in providing natural ventilation. The effective openable area of a sliding or hung sash window can be measured in elevation. Hinged windows such as casement, awning and hopper windows may measure the diagonal plane from the sash to the jamb and add the triangles at either end up to a total area of the window opening in the wall. Obstructions within 2m of a window reduce the effective openable area as measured in elevation. Fly screens and security screens will reduce the effective openable area by half

**Facade**

the external face of a building, generally the principal face, facing a public street or space

**Floor Space Ratio**

as defined in the *Standard Instrument - Principal Local Environmental Plan*

**Gallery access**

an external corridor, generally single loaded, which provides access to individual apartments along its length

**Glass line**

inside face of windows on the external walls of a building

**Guide to Traffic Generating Developments**

Guide to Traffic Generating Developments, published by Roads and Maritime Services (formerly RTA) and available on its' website

**Green roof**

a roof surface that supports the growth of vegetation, comprised of a waterproofing membrane, drainage layer, organic growing medium (soil) and vegetation. Green roofs can be classified as either extensive or intensive, depending on the depth of substrate used and the level of maintenance required. Intensive green roofs are generally greater than 300mm deep and are designed as accessible landscape spaces with pathways and other features. Extensive green roofs are generally less than 300mm deep and are generally not trafficable

**Green wall**

a wall with fixtures to facilitate climbing plants. It can also be a cladding structure with growing medium to facilitate plant growth

**Habitable room**

a room used for normal domestic activities, and includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room and sunroom; but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods, as defined by the BCA

**Juliet balcony**

a small projecting balcony, generally ornamental or only large enough for one person standing

**Livable Housing Design Guidelines**

Livable Housing Design Guidelines, published by Livable Housing Australia and available on its' website

**Master bedroom**

the main bedroom within an apartment, often the largest with an ensuite bathroom

**Mid winter**

is 21 June (winter solstice) when the sun is lowest in the sky

**Mixed use development**

as defined in the *Standard Instrument - Principal Local Environmental Plan*

**Multi dwelling housing**

as defined in the *Standard Instrument - Principal Local Environmental Plan*

**Natural cross ventilation**

natural ventilation which allows air to flow between positive pressure on the windward side of the building to the negative pressure on the leeward side of the building providing a greater degree of comfort and amenity for occupants. The connection between these windows must provide a clear, unobstructed air flow path. For an apartment to be considered cross ventilated, the majority of the primary living space and n-1 bedrooms (where n is the number of bedrooms) should be on a ventilation path

**Non-habitable room**

a space of a specialised nature not occupied frequently or for extended periods, including a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom or clothes-drying room, as defined by the BCA

**On-grade**

on ground level

**Open plan**

apartment layouts where spaces are not divided into discrete rooms, but are open and connected to allow flexibility of use (typically living, dining, kitchen and study areas)

**Operable screening device**

sliding, folding or retractable elements on a building designed to provide shade, privacy, and protection from natural elements

**Operable walls**

walls which can be moved, for example by sliding, folding, or pivoting, to allow for different room configurations or a balcony

**Parapet**

a horizontal low wall or barrier at the edge of a balcony or roof. Often taken to refer to the decorative element which establishes the street wall height of heritage buildings (see cornice)

**Perimeter block**

development where buildings generally define the street edge and enclose or partially enclose an area in the middle of the block

**Plenum**

a duct or chamber, usually with grilles, that air passes through. Plenums of small cross section tend to limit the passage of air and are not equivalent in performance to standard windows

**Podium**

the base of a building upon which taller (tower) elements are positioned

**Potable water**

water which conforms to Australian Standards for drinking quality



**Primary private open space**

the principal area of private open space, usually the largest consolidated area

**Private open space**

outdoor space located at ground level or on a structure that is within private ownership and provided for the recreational use of residents of the associated apartment

**Primary windows**

windows to habitable rooms located on the external wall of a buildings; primary windows may be supplemented by windows in courtyards, skylights, notches and along galleries

**Principal usable part of communal open space**

a consolidated part of the communal open space that is designed as the primary focus of recreational activity and social interaction

**Public open space**

public land for the purpose of open space and vested in or under the control of a public authority

**Residential flat building**

as defined in the *Standard Instrument - Principal Local Environmental Plan*

**Shop top housing**

as defined in the *Standard Instrument - Principal Local Environmental Plan*

**Silhouette**

a building outline viewed against the sky

**Sloping site**

a site with a slope of 15% or greater

**Small lots**

sites with an area of less than 650 square metres

**Soffit**

the undersurface of a balcony or other projecting building element

**Solar access**

is the ability of a building to continue to receive direct sunlight without obstruction from other buildings or impediments, not including trees

**Stack effect ventilation / solar chimney**

air convection resulting from hot air being pushed up and out by colder denser air which is drawn in at a lower level

**Street setback**

the space along the street frontage between the property boundary and the building. Refer to building line or setback as defined in the *Standard Instrument - Principal Local Environmental Plan*

**Studio apartment**

an apartment consisting of one habitable room that combines kitchen, living and sleeping space

**Sunlight**

direct beam radiation from the sun

**Sydney Metropolitan Area**

the 41 Local Government Areas of Ashfield, Auburn, Bankstown, Blacktown, Blue Mountains, Botany, Burwood, Canada Bay, Camden, Campbelltown, Canterbury, Fairfield, Hawkesbury, Holroyd, Hornsby, Hunters Hill, Hurstville, Kogarah, Ku-Ring-Gai, Lane Cove, Leichhardt, Liverpool, Manly, Marrickville, Mosman, North Sydney, Parramatta, Penrith, Pittwater, Randwick, Rockdale, Ryde, Strathfield, Sutherland, Sydney, The Hills, Warringah, Waverley, Willoughby, Wollondilly and Woollahra

**Terrace**

an outdoor area, usually paved and unroofed, that is connected to an apartment and accessible from at least one room. May be on-grade or on a structure (podium or roof)

**Universal design**

international design philosophy that enables people to carry on living in the same home by ensuring apartments are able to change with the needs of the occupant

**Wintergarden**

an enclosed balcony, typically glazed and can be used to minimise noise impacts along busy roads, railway lines and from aircraft noise

**Ziggurat**

having the form of a terraced structure with successive receding storeys

