MACQUARIE VILLAGE

PREFERRED PROJECT DESIGN REPORT

STAMFORD
PROPERTY SERVICES PTY LIMITED

FEBRUARY 2012
10030_UD_0502_B

OCULUS

AJ+C
ALLEN JACK+COTTIER

INTRODUCTION

This Preferred Project Design Report responds to submissions for the exhibited Concept Plan for Macquarie Village.

The purpose of this report is to respond to key urban design issues raised in the Submissions Report from the Department of Planning and Infrastructure. These include:

- Height, bulk and density
- Open space, public domain and streetscape
- Privacy of adjoining residential dwellings

The structure of this report begins with the design intent for the Preferred Project. This is followed by a summary of the changes from the exhibited Concept Plan. Key issues are addressed and supported by:

- Amended controls
- Updated visual impact
- Revised SEPP 65 and Residential Flat Design Code assessment.

Diagrams that demonstrate compliance with the Residential Flat Design Code's 'rules of thumb' are in the Appendix.

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

A PREFERRED PROJECT

A1 Preferred Project

A2 Response to Submissions

B KEY ISSUES

B1 Built form

B2 Open space and public domain

B3 Privacy of adjoining residential dwellings

LIST OF FIGURES

B4 Controls

B5 Staging

B6 Visual impact

C DESIGN ASSESSMENT

C1 Design Scheme

APPENDIX

Appendix Demonstration of compliance

A. PREFERRED PROJECT

Design Statement

Figure A1.1: Illustrative Preferred Project

The design intent is to create a new and vibrant community. The forerunner of a new era of housing and workplace development to the area; similar to the way Moore Park Gardens and The Village, Balgowlah offered an alternative lifestyle choice and building typologies in their areas.

This will be achieved by:

- Integrating the site and the new community into its context
- Unlocking links within the street network of the Macquarie Park Corridor
- Creating a new active street edge with good solar access and visibility
- Achieving strong connectivity with local transport
- Allowing pedestrian permeability through the site at accessible grades
- Maintaining and improving upon the bushland character along Epping Road.
- Providing housing appropriate to the market and context
- Providing well designed environmentally suitable housing
- Supporting the housing with good urban design and high quality landscaped open spaces
- Providing high quality communal facilities
- Enhancing the safety and security of the area.

Macquarie Village with its landmark building at the intersection of Epping and Herring Road will be a defining element of the Macquarie Park Corridor.

A1 PREFERRED PROJECT

Development Summary

Figure A1.2: View of landmark building at the corner of Epping and Herring Road marking an important entry point to Macquarie Park Corridor

Proposed Development Summary

Site location: 110-114 Herring Road, Macquarie Park

Site size: 22,434 m^2

GFA: 54,170 m^2

FSR: 2.41:1

Indicative apartment mix:

- 1 Bedroom apartments x 287 (50%)
- 2 Bedroom apartments x 238 (41%)
- 3 Bedroom apartments x 51 (9%)
- Adaptable apartments x 61 (10% of total number of apartments)

Indicative apartment sizes:

- Studio apartments: 31m^2 minimum
- 1 Bedroom apartments: 50m^2 - 68m^2
- 2 Bedroom apartments: 78m^2 - 107m^2
- 3 Bedroom apartments: 107m^2 - 138m^2
- Adaptable apartments: 61m^2 - 138m^2

Non-residential uses

- Non-residential uses such as retail, commercial, recreational and community facilities: 1200m^2
- 33 of the residential apartments at ground level are Small Office Home Office (SoHo's)

Carparking

- 627 residential car spaces provided in basement parking (61 car spaces are accessible)
- 68 visitor car spaces provided in basement
- 46 on-street car spaces (18 car spaces included for retail/commercial uses)
- 37 motorbike/moped spaces

Figure A1.3: Street level view from corner of Epping and Herring Roads looking North

Figure A1.4: Street level view from corner of Epping and Herring Roads looking West

Figure A1.5: Close up street level view from corner of Epping and Herring Roads

The Preferred Project for Macquarie Village is:

- Designed for its future context and will contribute to the quality and identity of the area.
- Consistent with the principles of the Macquarie Park Corridor DCP for built form, street and open space structure.
- Consistent with SEPP65 and Residential Flat Design Code's 'rules of thumb'.
- Responsive to the privacy of adjoining residential dwellings in its building separation from existing neighbouring buildings and it has no overshadowing impacts on Willandra Village or 116-118 Herring Road.
- Contributing to the Metropolitan Strategy's housing targets for the City of Ryde LGA.
- Improving the pedestrian amenity of the Macquarie Park Corridor through the provision of on-grade access at RL70 through the site and stair and lift access from the internal roads to Epping Road connecting to the existing bus stop.

A2 RESPONSE TO SUBMISSIONS

Summary of Changes

Figure A2.1: Summary of changes to the Exhibited Concept Plan

Key changes to the exhibited Concept Plan in response to submissions:

Open space and internal streets

- Overall communal open space has increased. The central courtyard with the pool has been increased in area. This has been achieved by:
  - Reducing the east-west internal street in front of Building C to a single lane with parallel parking and increasing the pool courtyard
  - Increasing the separation between Buildings M &Y to create more open space (OP2)
  - Increasing the separation between Buildings D & L to create a larger PlaySpace (OP3)
  - Widening the Garden of Earthly Delights to the east. (OP1)
- Sun access has increased to the central courtyard and the pool has shifted further south to receive more sun.

Height Built form & Density

- The building heights of Buildings W & L along Epping Road have been lowered.
- The landmark building (Building L) has been reduced to 18 storeys, transitioning to a height of 8 storeys at Building W on the northwestern boundary.
- Building C has increased in height to 15 storeys to reinforce the transition in height to the northwestern boundary.
- Building D and Building L achieve greater separation between buildings.
- Building L has an increased street setback of 7m to the corner of Herring and Epping Roads.
- Building M has been shortened to allow more solar access to the pool and courtyard.

B. KEY ISSUES

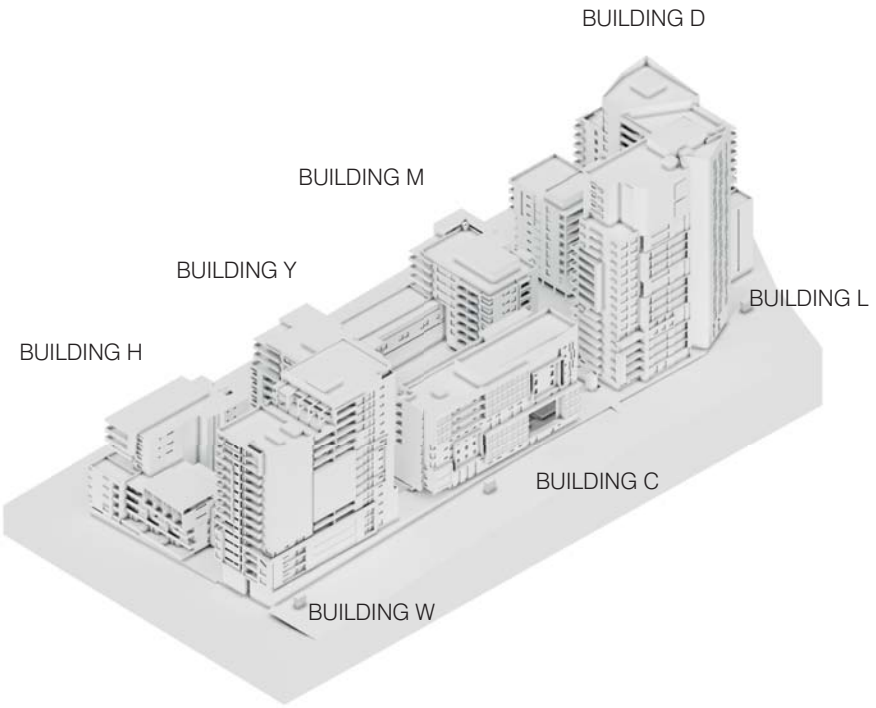
B1 BUILT FORM

Changes to Height, Bulk & Mass

The following series of diagrams illustrates in 3D the changes in height, bulk and mass to the buildings.

- The red dotted line shows a reduction in height, bulk or mass.
- The blue dotted line shows an increase in height, bulk or mass.

Exhibited Concept Plan



Preferred Project

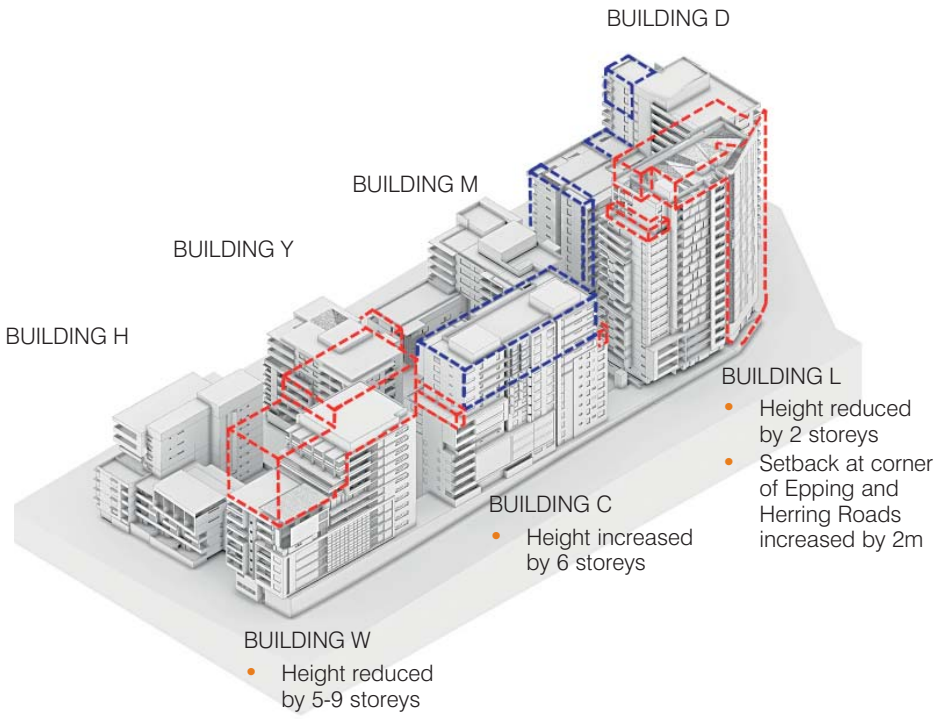
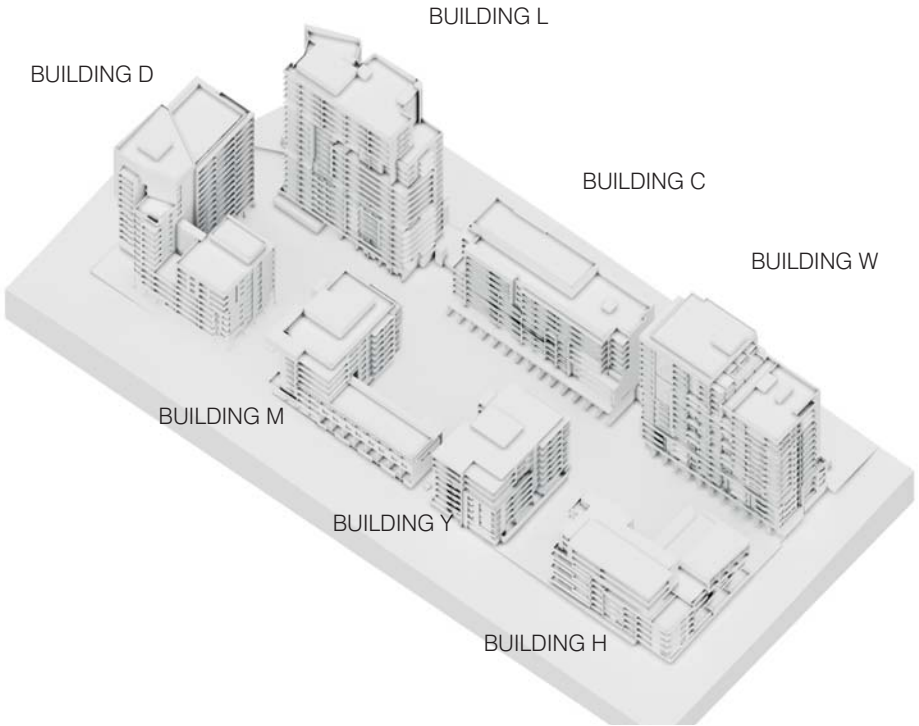


Figure B1.1: Diagram comparing built form changes from the Concept Plan to the Preferred Project view from the south

Changes to Height, Bulk & Mass

Exhibited Concept Plan



Preferred Project

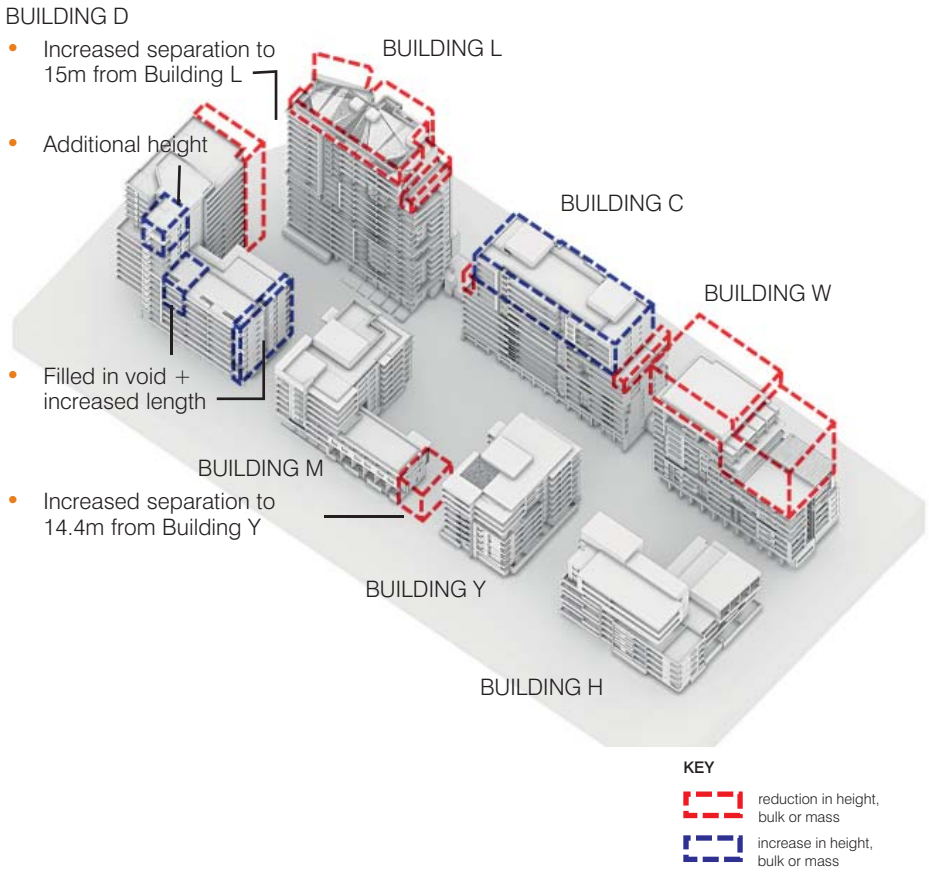


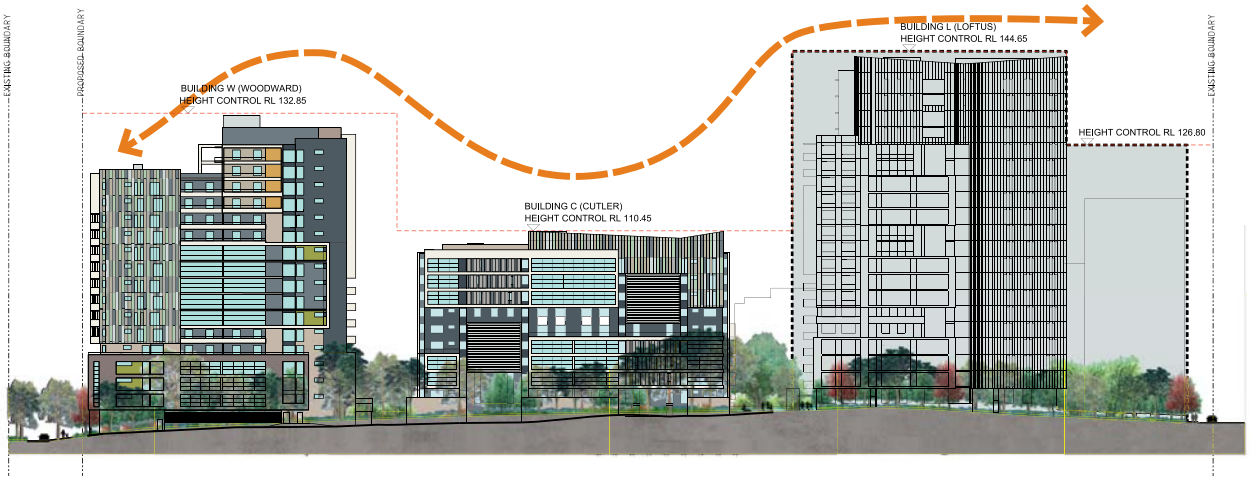
Figure B1.2: Diagram comparing built form changes from the Concept Plan to the Preferred Project view from the north

B1 BUILT FORM

Height Transition from Landmark Building to Northwestern Boundary

- The Exhibited Concept Plan recommended a modulated skyline along Epping Road.
- In response to the submissions raised by the Department of Planning and Infrastructure, the heights of buildings along Epping Road have been amended to transition in height from the landmark building down to the northwestern boundary.
- The Preferred Project heights are now as follows:
  - Landmark Building (Building L): 18 storeys
  - Building C: 13 storeys
  - Building W: 8-12 storeys.

Exhibited Concept Plan: Epping Road Elevation



Preferred Project: Epping Road Elevation

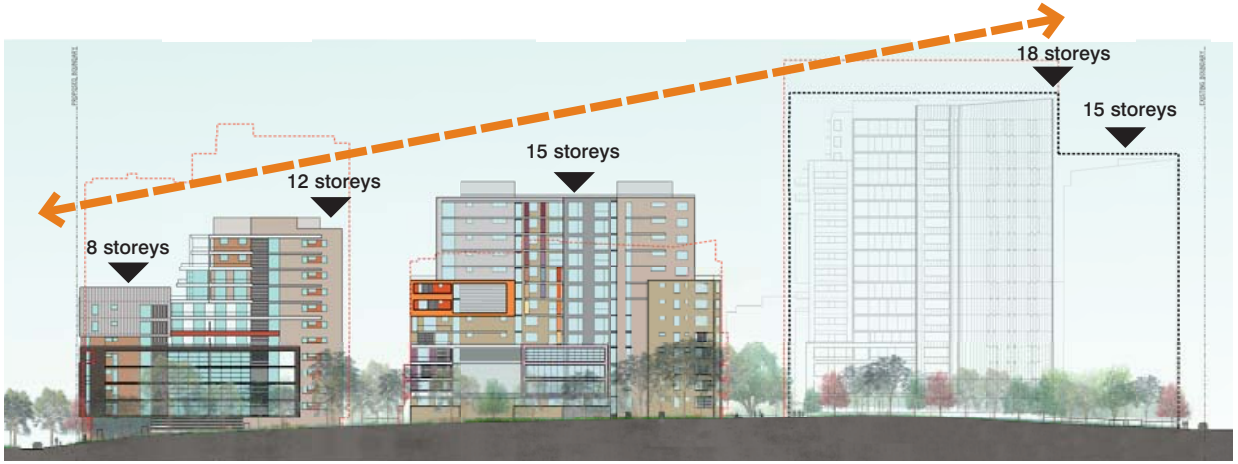
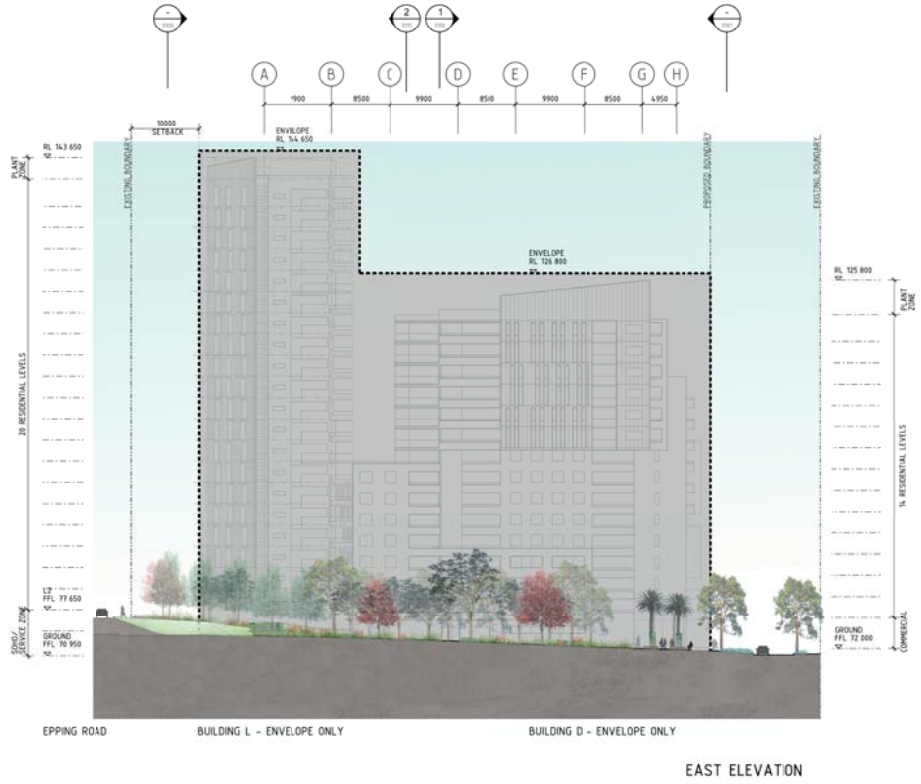


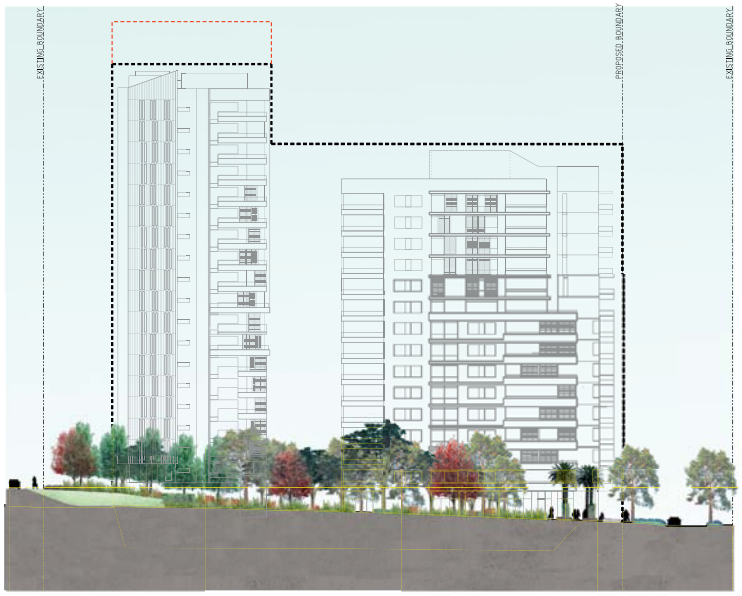
Figure B1.3: Diagrams showing the change in approach to the Epping Road elevation from the Concept Plan to the Preferred Project

Increased Separation Between Buildings D & L

Exhibited Concept Plan



Preferred Project



KEY

exhibited concept plan

Figure B1.4: Diagrams showing the change in approach to the Herring Road elevation from the Concept Plan to the Preferred Project

B1 BUILT FORM

Street Setbacks

Increased setback from 5m to 7m to the corner of Epping and Herring Roads

10m landscaped setback to Epping Road

5m setback to Herring Road

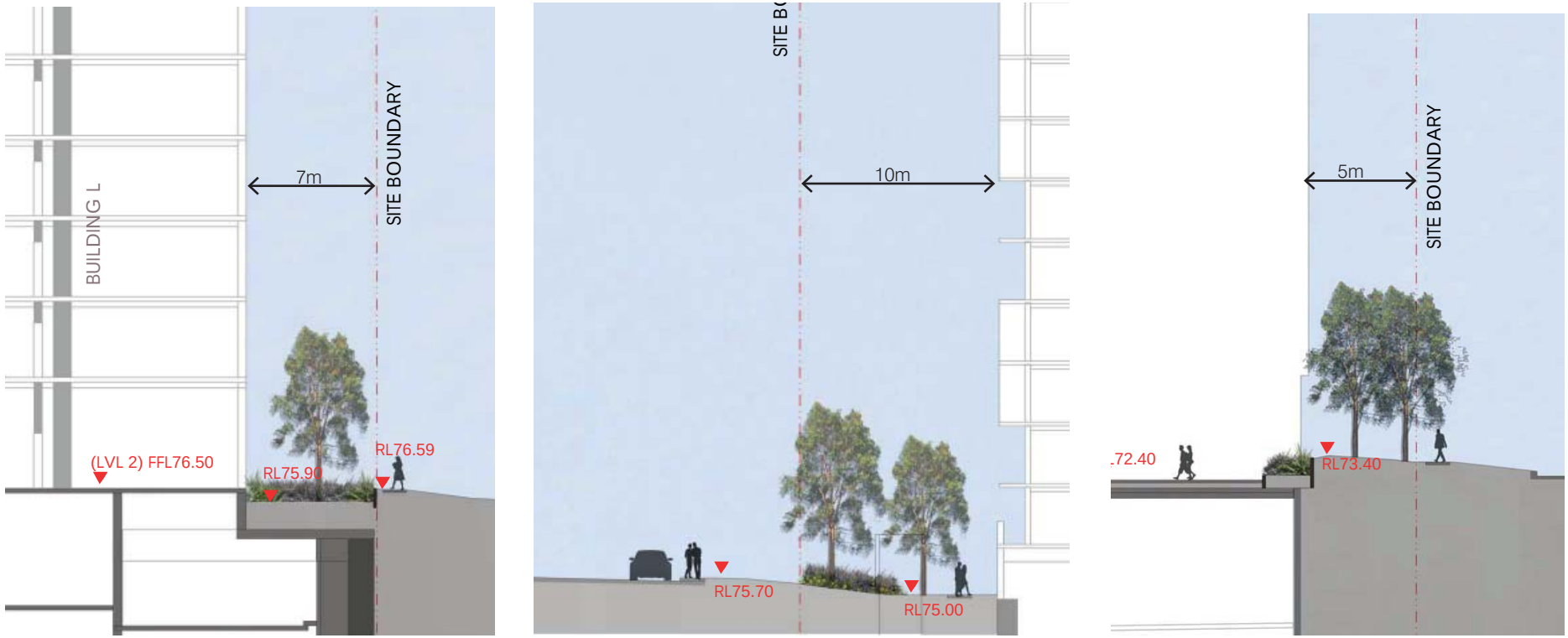
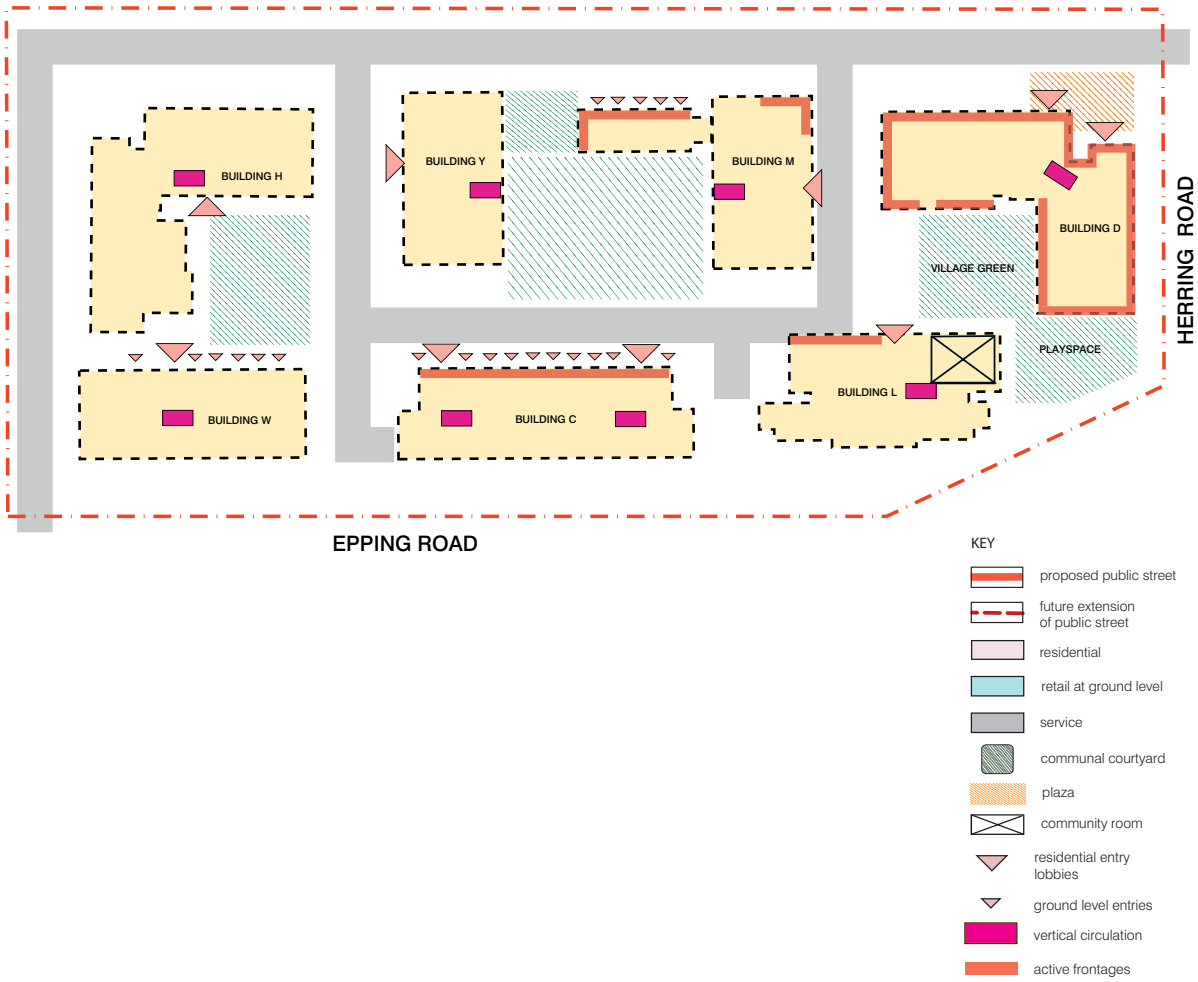


Figure B1.5: Street setbacks to Epping and Herring Roads

Active Frontages to Publicly Accessible Spaces



- This diagram illustrates the potential for active frontages to open space and streets. The potential for active frontages has been:
  - Extended along Building D's frontage to Herring Road
  - Created to the PlaySpace
  - Increased to the Village Green
- All the buildings will have a street address. Entry lobbies will be accessed from streets or open space.
- Ground level SoHo's will also have a direct and individual street address

Figure B1.6: Increased active frontages to open spaces

B2 OPEN SPACE & PUBLIC DOMAIN

Open Space Area Calculations

These diagrams demonstrate the increase in communal open space and the reduction in area of internal streets in response to the submissions. In particular:

- The increase in area to the open space located at the corner of Epping and Herring Roads
- The increase in area to the pool courtyard.

Exhibited Concept Plan

AREAS KEY	JANUARY 2011 SCHEME APPROX AREA (m2)	FEBRUARY 2012 SCHEME APPROX AREA (m2)	% DIFFERENCE
INTERNAL ROADS	2075	1507	28% reduction
PUBLIC OPEN SPACE	2425	2655	9% increase
PUBLICLY ACCESSIBLE COMMUNAL OPEN SPACE	7430	8135	9% increase
COMMUNITY FACILITY	80	234	292% increase
PRIVATE COMMUNAL OPEN SPACE	765	740	3% reduction
PRIVATE OPEN SPACE	975	835	14 % reduction

Preferred Project

AREAS KEY	JANUARY 2011 SCHEME APPROX AREA (m2)	FEBRUARY 2012 SCHEME APPROX AREA (m2)	% DIFFERENCE
INTERNAL ROADS	2075	1507	28% reduction
PUBLIC OPEN SPACE	2425	2655	9% increase
PUBLICLY ACCESSIBLE COMMUNAL OPEN SPACE	7430	8135	9% increase
COMMUNITY FACILITY	80	234	292% increase
PRIVATE COMMUNAL OPEN SPACE	765	740	3% reduction
PRIVATE OPEN SPACE	975	835	14 % reduction

Figure B2.1: Comparison of open space calculations for the Concept Plan and Preferred Project

Landscape Design Principles

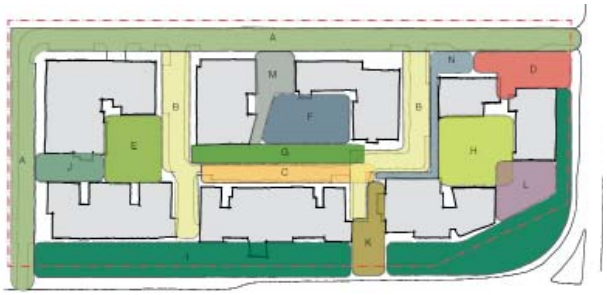


Figure B2.2: Key Spaces Diagram

- PRIMARY BUILDING ENTRIES
- SECONDARY BUILDING ENTRIES
- A PROPOSED DEDICATED ROAD
- B INTERNAL ACCESS ROAD
- C SHARED ZONE
- D ENTRY PLAZA
- E GARDEN OF EARTHLY DELIGHT
- F POOL GARDEN
- G CENTRAL PARK
- H VILLAGE GREEN
- I BUFFER ZONE
- J QUIET GARDEN
- K TERRACED ENTRY GARDEN
- L PLAY SPACE
- M LANE
- N STREET PLAZA

Overview

The overall landscape concept for Macquarie Village is based upon the following key design principles:

- recognising and reflecting the importance of the site and it's key location on the corner of Herring and Epping Roads;
- enhance the identity of the site and provide a series of logically well connected landscape spaces;
- providing clearly legible and safe pedestrian connections throughout the development and with the surrounding streets;
- reinforcing the main internal open space spine as the primary structuring device for the development;
- incorporating simple design treatments and a selection of robust landscape materials that minimise maintenance;
- retaining the majority of existing trees particularly along the Epping Road frontage;
- providing a planting palette that provides a distinct landscape character that utilises a combination of native and exotic plant material; and
- incorporating water sensitive urban design initiatives in the streetscape, gardens and other locations where appropriate.

The landscape concept proposes various landscape zones and spaces that will reinforce the character of the site all of which are connected by a well defined pedestrian circulation pattern.

The mixed use development has the opportunity to enhance the urban qualities of the area and to create a place that will be active and vibrant by encouraging interaction and use of the of the external spaces at all times of the day.

Internal Street and Open Space Network

An east-west open space spine and shared street in the centre of the development acts as the key organising device for the entire site. All buildings, lobbies, gardens and pathways can be identified and accessed from this area. Two 'dedicated' public roads will provide vehicular access to the site and contain a significant WSUD component.

Village Gardens

The public domain will comprise a number of interconnected spaces. The three main communal gardens – The Village Green, Central Park, Pool Garden and Garden of Earthly Delights, are communal garden spaces for people to sit, relax and enjoy. Each area has a different character and function, expressed through the diversity of scale, forms and planting. The transitional spaces between these elements allow people to access the building lobbies and provide cross connections through the site. Central Park acts as a linear connector between the other communal spaces.

The majority of the landscape will be created over carpark structure with the exception being the proposed dedicated roads and and buffer planting along Epping and Herring Roads.

B2 OPEN SPACE & PUBLIC DOMAIN

Landscape Concept Plan

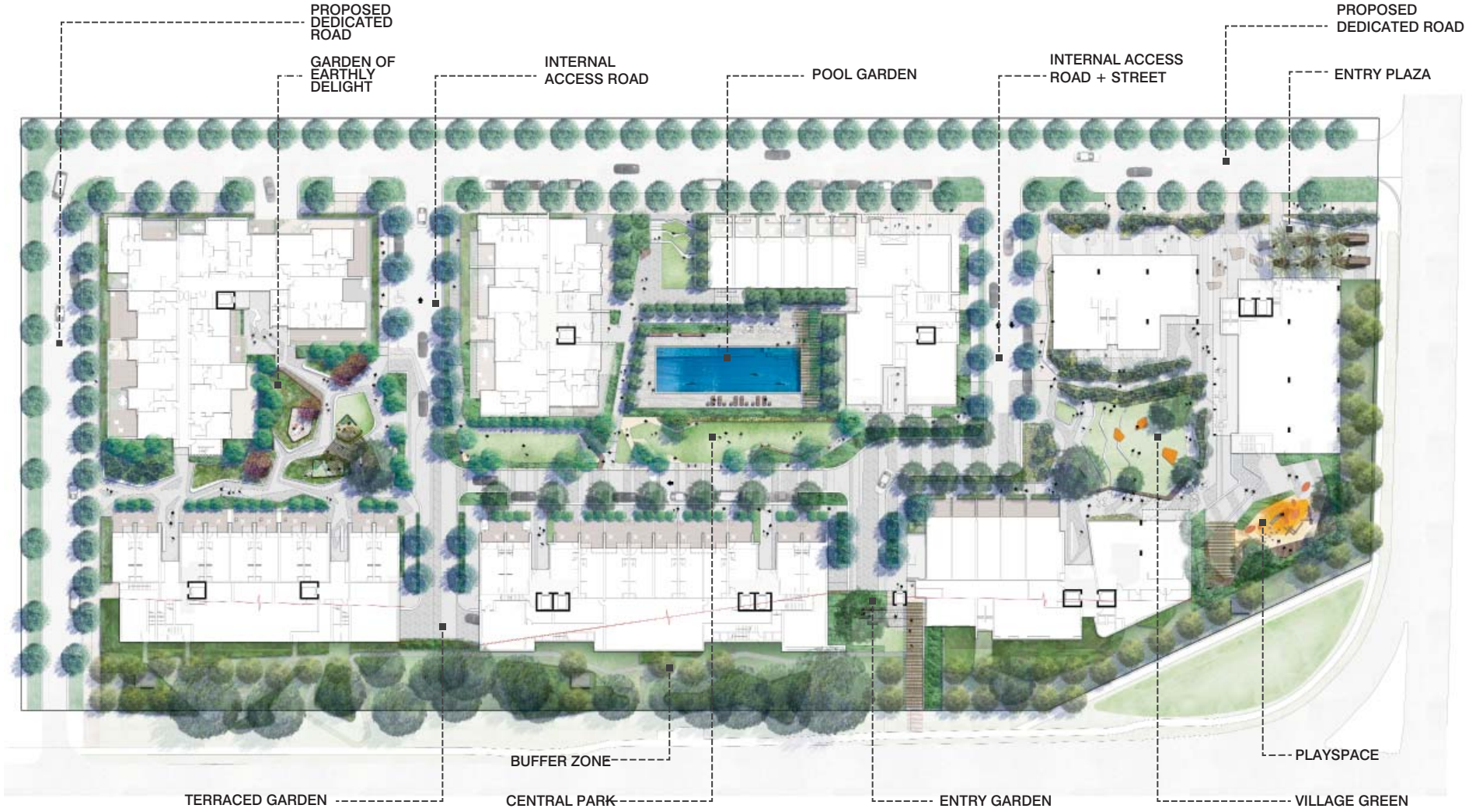


Figure B2.3: Landscape Masterplan

Public Domain

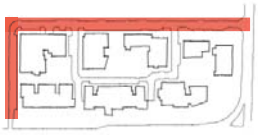


Figure B2.4: Detail Plan of Proposed Dedicated Road

Proposed Dedicated Road

There are two proposed dedicated roads within the project boundary which are proposed to be dedicated to, and ultimately maintained by, Council. The primary east-west connection off Herring Road and through the development will accommodate the majority of vehicular traffic to and from the site. This road is the principle entrance to the development and acts as the street address for several of the residential apartment buildings. The street has a continuous raingarden along the northern side and at regular intervals along the south side to assist with the treatment and cleaning of stormwater before it enters the Lane Cove River. This road will be planted primarily with *Tristaniopsis laurina* (Water Gum). The Type 3 road, running north-south will, connect the east-west road and Epping Road in the future and will be planted primarily with *Angophora costata* (Sydney Red Gum).

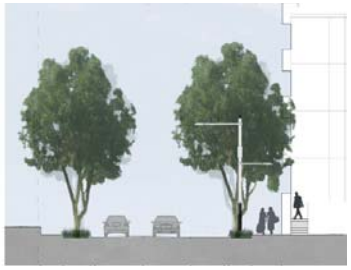


Figure B2.5: Detail Section of Proposed Dedicated Road

Components:

- on street parking
- water treatment in raingardens
- native street tree planting
- lighting
- seating
- wayfinding
- signage

Figure B2.6: Precedent images

B2 OPEN SPACE & PUBLIC DOMAIN

Private and Communal Domain

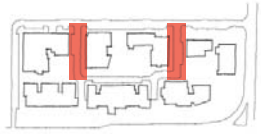


Figure B2.7: Detail Plan of Internal Road

Internal Access Road

The two internal access roads act as primary vehicular and pedestrian connections between the east-west Type 3 road and the carpark and lobby entries for the buildings. These two streets directly interface with two main landscaped gardens as well as the central park and internal shared street.

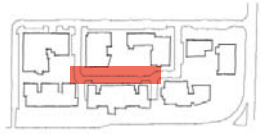
Figure B2.8: Detail Section of Internal Road

Components:

- on street parking
- street tree planting
- lighting
- wayfinding
- signage
- bike racks

Figure B2.9: Precedent images

Private and Communal Domain



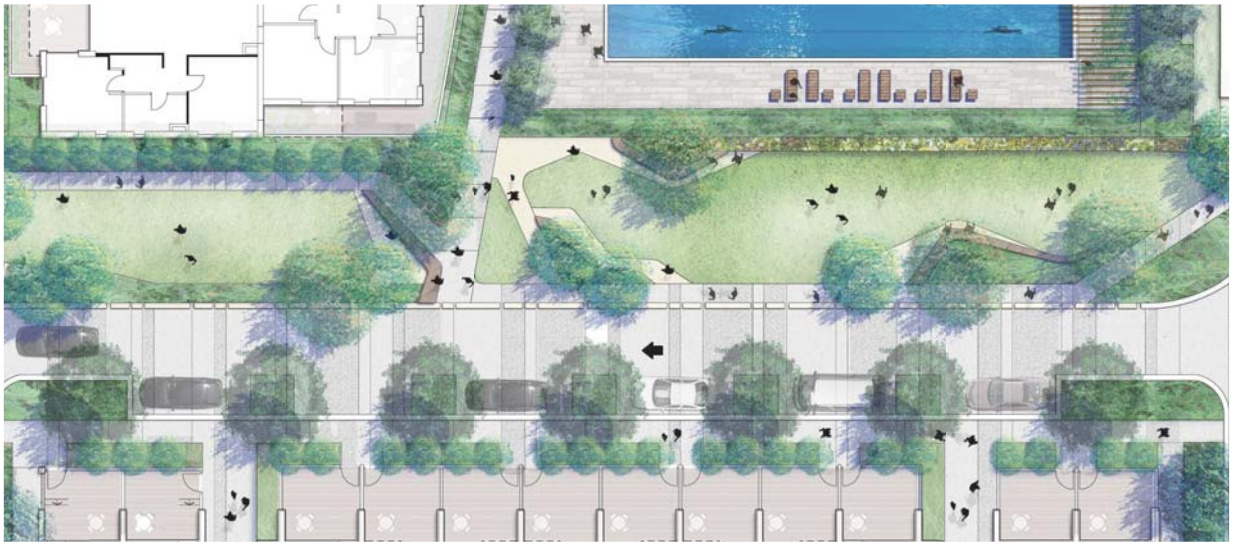


Figure B2.10: Detail Plan of Shared Zone

Central Park and Shared Zone

Central Park provides an internal east-west connection for pedestrians and provides a passive open space area that allows for seating, informal ball games, enoying the sunshine or reading a book. The shared zone provides a one way vehicular connection and has on grade parking for residents and visitors on one side with a park edge on the other.

The space incorporates shady feature trees, open grass areas, mass planting and a single avenue of large street tree planting and WSUD tree pits and swales. The street treatment designates it as a pedestrian priority zone. The ground plane will be textured using different aggregates and finishes of concrete in a sophisticated pattern to provide a human scale and 'calm' traffic. The large avenue trees will help to reduce the scale of the buildings and create an intimate parkland space for people to enjoy as well pedestrian connection across site.

Figure B2.11: Detail Section of Shared Zone

Components:

- special paving
- identity + entry
- on street parking
- bike racks
- lighting
- seating
- signage
- wayfinding

Figure B2.12: Precedent images

B2 OPEN SPACE & PUBLIC DOMAIN

Private and Communal Domain; Key Spaces

Figure B2.13: Detail Plan of Plaza

Entry Plaza

The Entry Plaza is an open outdoor paved seating area which provides opportunities to meet, to sit, relax or eat lunch. It will also be a visually interesting space to simply pass though. There is the potential to reuse some of the existing *Phoenix canariensis* (Canary Island Date Palms) from site. The active uses of the surrounding buildings allow the external space to be used for cafe seating, and also acts as a social space for the residents of Maquarie Village. Large colourfully planted planters provide a buffer against the road and help direct people into the site. Car park exhaust vents will be integrated into high quality timber elements and feature planters.

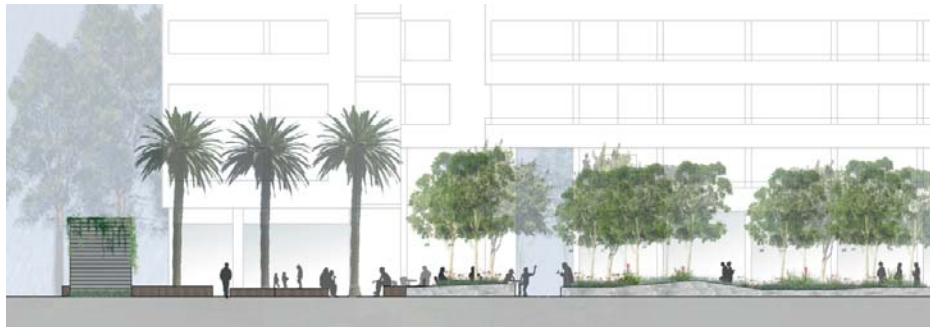


Figure B2.14: Detail Section of Plaza

Components:

- cafe seating
- palm tress
- identity + entry
- timber deck podiums
- signage
- wayfinding
- bike racks

Figure B2.15: Precedent images

Private and Communal Domain; Key Spaces

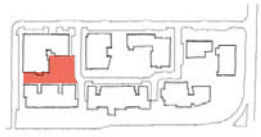


Figure B2.16: Detail Plan of Garden of Earthly Delight

Gardens of Earthly Delight

This garden has been designed to incorporate a series of intimate function-specific spaces within the context of the larger shared garden as well as being an interesting space to be viewed from above. It has an informal pathway providing residents with at grade access to the various building lobbies.

Undulating topography and planting define small, domestic scale garden rooms that are enclosed and sheltered. These rooms contain elements including seats and tables as well as overhead timber canopy structures that provide visual and audible privacy to the apartments above. Several 'rooms' are proposed with specific functions including: the 'Dinner Garden'; 'The Lounge'; 'The DayBed'; and, 'The Fire Pit'. Each are intended as private social spaces to be activated throughout the day as well as early evening and night.

Figure B2.17: Detail Section of Garden of Earthly Delight

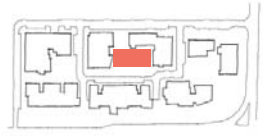
Components:

- shade
- seating + tables
- outdoor rooms
- lush planting
- flowers + foliage
- scents + colour

Figure B2.18: Precedent images

B2 OPEN SPACE & PUBLIC DOMAIN

Private and Communal Domain; Key Spaces



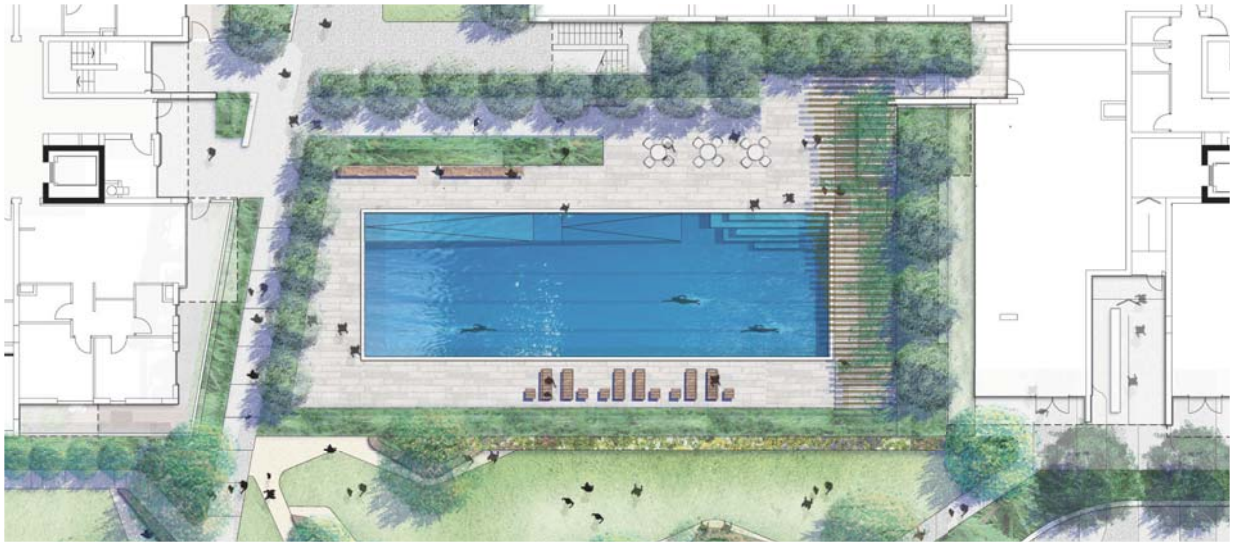


Figure B2.19: Detail Plan of Pool garden

Pool Garden

The pool garden provides opportunities for social interaction for all residents. It is a place to swim, soak up the sun or just relax and read a book.

The layered vegetation, with sub-tropical planting along the pool edge, provides a buffer to the buildings and helps create an internally focussed space. On the eastern side of the pool there is a large canopy structure giving a 'resort feel' to the garden and also providing visual privacy from the apartments above.

The lush character is continued with textured ground surfaces and strappy understorey planting. The pool garden, and pool itself, will be fully accessible with an equal access ramp.

Figure B2.20: Detail Section of Pool garden

Components:

- 20 metre pool
- pergola shelter
- seating
- lush planting
- lighting

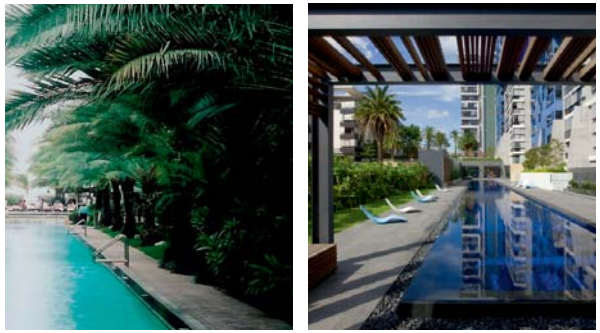


Figure B2.21: Precedent images

Private and Communal Domain; Key Spaces

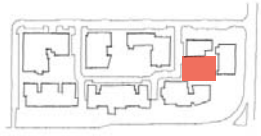


Figure B2.22: Detail Plan of Village Green

The Village Green and Community Facility

This garden consists of a series of simple lawn terraces that take advantage of good solar aspect to provide a space that can be used informally by the residents and local community.

The open lawn area allows for flexibility of use including the erection of small marquees and similar small scale temporary arrangements or informal ball games for small children. There is also an outdoor seating area associated with the community rooms.

The generous terraced turf steps help negotiate the change in grade between east and west and provide an open character for the garden. It also has opportunities for sculptural elements and installations.

The garden space is wrapped with densely planted *Eucalyptus leucoxylon 'Eukey Dwarf'* **(Dwarf Yellow Gum)** creating a natural edge to the space.

Figure B2.23: Detail Section of Village Green

Components:

- a place for respite
- a place to view from above
- a place for intimacy
- a place to lounge in the sun
- stairs
- lush planting
- low canopy

Figure B2.24: Precedent images

B2 OPEN SPACE & PUBLIC DOMAIN

Private and Communal Domain; Key Spaces

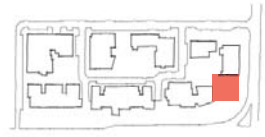


Figure B2.25: Detail Plan of PlaySpace

PlaySpace

The PlaySpace is a large garden room connecting to the Village Green incorporating simple custom design play elements and a graphic soft-fall surface.

The play equipment will be designed primarily for use by younger children with other complimentary facilities such as integrated seating, bbq, picnic table and small canopy structures being incorporated into the space. The space will be defined by bold, tactile, massed planting to its edges.

It also has direct connection to the community rooms and outdoor seating area.

Figure B2.26: Detail Section of PlaySpace

Components:

- soft fall
- bbq
- outdoor seating and tables
- shade canopy
- play equipment for small children

Figure B2.27: Precedent images

Private and Communal Domain; Key Spaces

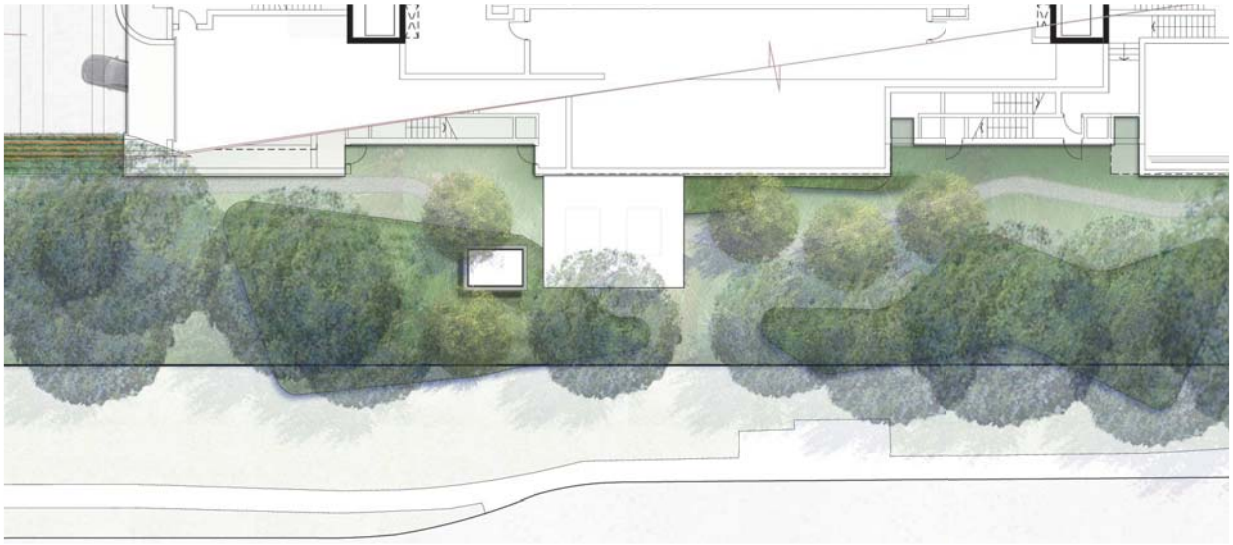


Figure B2.28: Detail Plan of Buffer

Epping Road Buffer

The buffer planting incorporates much of the trees and vegetation already existing on the southern edge of the site. In addition to the existing vegetation dense, infill planting of *Syncarpia glomulifera* (Turpentine) and other native forest species such as *Angophora costata* (Sydney Red Gum) will help mitigate the visual bulk of the buildings from Epping Road and screen the road from the lower levels of the development.

Figure B2.29: Detail Section of Buffer

Components:

- buffer planting between private gardens + Epping Road
- existing vegetation
- layered vegetation density + height
- dense screen planting
- colour + texture

Figure B2.30: Precedent images

B2 OPEN SPACE & PUBLIC DOMAIN

Private and Communal Domain; Key Spaces

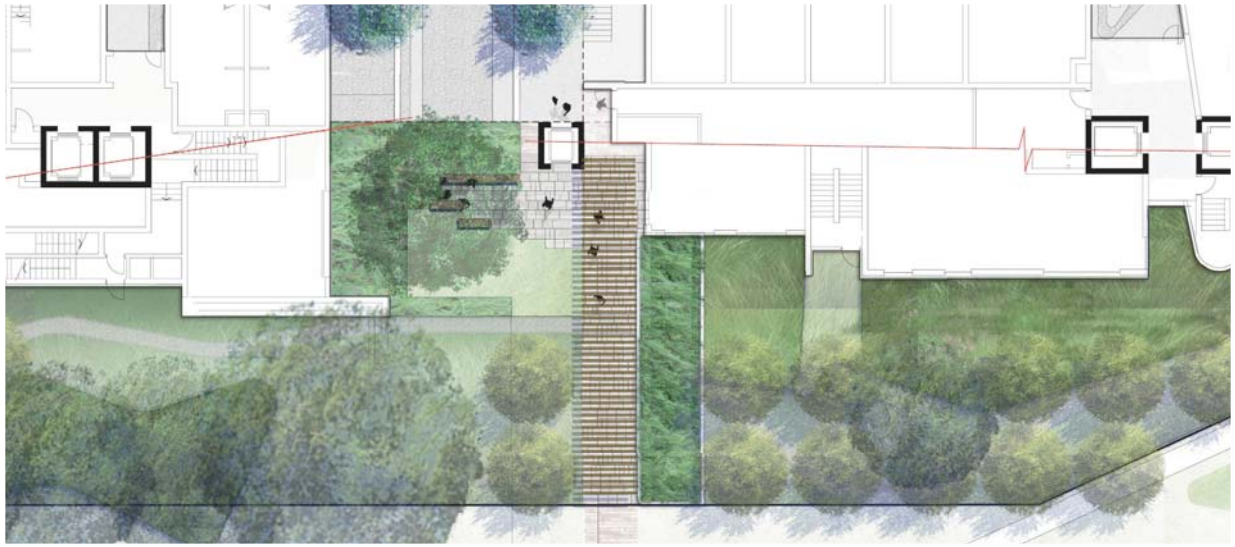


Figure B2.31: Detail Plan of Entry Garden

Entry Garden

This area provides the main pedestrian entry to the development from Epping Road. It is ideally located adjacent the existing bus stop on Epping Road and the change in level between the existing road level and the level of the new internal street, footpaths and open space. Access will be via both stair and a publicly accessible lift.

The planting will be lush with an emphasis on combining species with differing form and texture, flower and scent and layering for density and height.

Figure B2.32: Detail Section of Entry Garden

Components:

- stair + lift connections to Epping Road + public transport
- buffer + transition zone between private gardens + Epping Road
- dense screen planting

Figure B2.33: Precedent images

Improved solar access to pool: Mid-Winter

- These diagrams demonstrate improved solar access to the pool from 10am through to 1pm at mid-winter, the shortest day of the year.
- For comparison the red line shows the extent of the solar access of the exhibited concept plan.
- The overshadowing diagram at mid-winter illustrates improved solar access to the PlaySpace.

Figure B2.34: 10am Mid-Winter

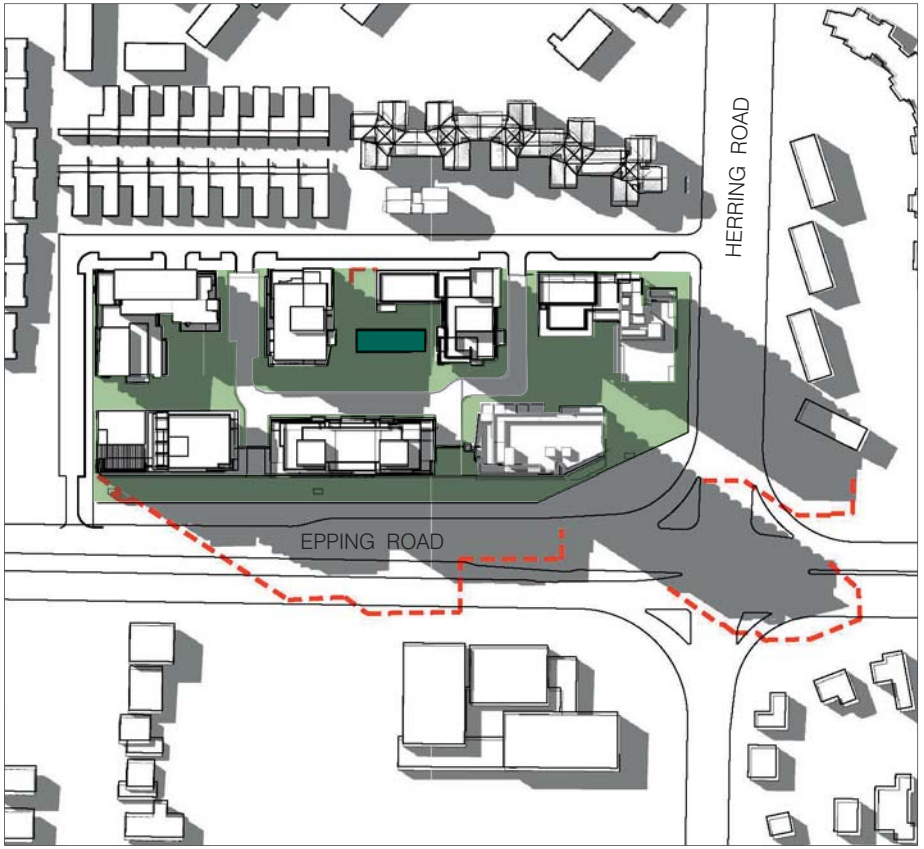


Figure B2.35: 1pm Mid Winter

B2 OPEN SPACE & PUBLIC DOMAIN

Improved solar access to the pool: Equinox

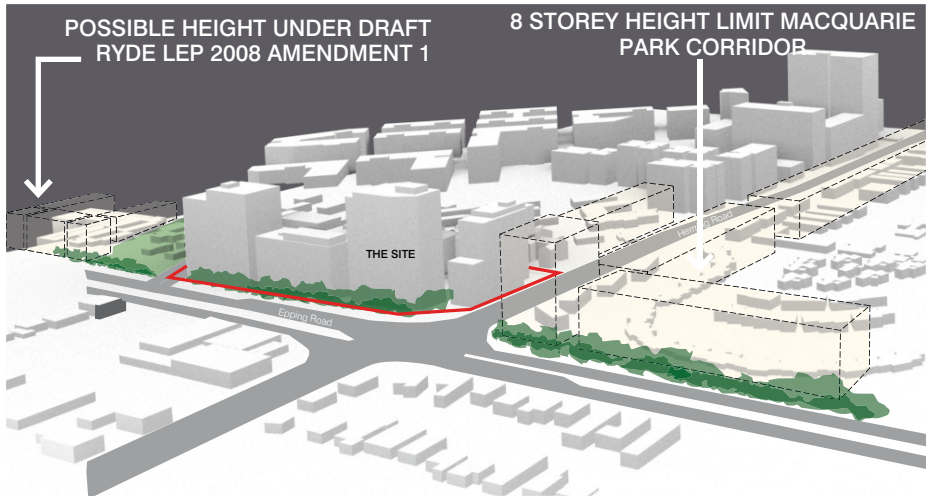
- These diagrams demonstrate improved solar access to the pool from 10am through to 1pm at Equinox - it is indicative of average condition between mid-winter and mid-summer
- For comparison the red line shows the extent of the solar access of the exhibited concept plan.
- The overshadowing diagram for 1pm at mid-winter illustrates improved solar access to the PlaySpace

Figure B2.36: 10am Equinox

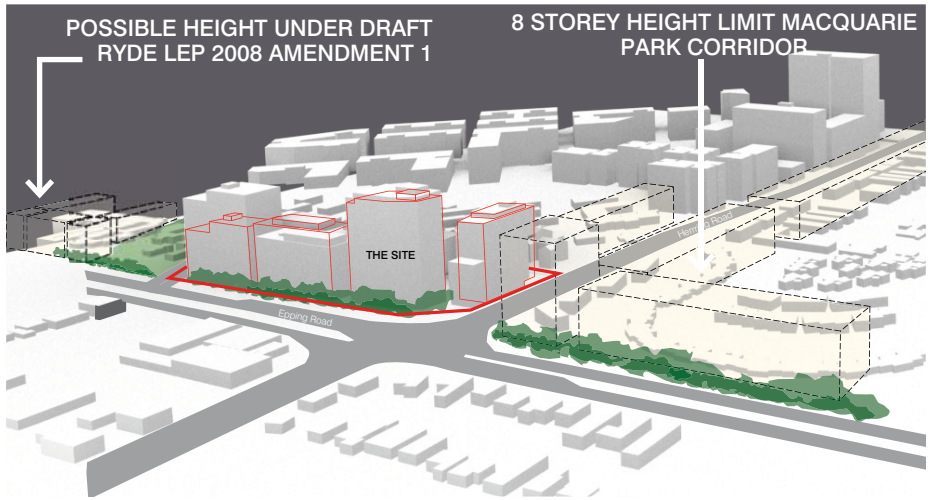
Figure B2.37: 1pm Equinox

PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS B3

Future Context of Macquarie Village



Exhibited Concept Plan



Preferred Project

- Both Willandra Village and Ivanhoe Place are large sites in single ownership that will redevelop in the future.
- These diagrams show the indicative future relationship of Macquarie Village to Willandra Village and Ivanhoe Place for the Concept Plan and the Preferred Project. These diagrams assume that they will be developed under Draft Ryde LEP 2008 Amendment 1.
- In the diagram below, the Preferred Project buildings are outlined in red over the exhibited Concept Plan.

Figure B3.1: Comparison of the Exhibited Concept Plan and the Preferred Project in the future context of Draft Ryde LEP 2008 Amendment 1

B3 PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS

DRAFT

Existing Willandra Village

Separation between Willandra Village dwellings are approximately less than 3m. The Preferred Project is proposing over 20m separations between the adjacent existing Willandra Village dwellings and Macquarie Village

Vegetation between Willandra Village and Macquarie Village provides screening and privacy

Larger openings are recessed behind porches

Existing windows are frosted and appear to be for service areas such as bathrooms and kitchens

Figure B3.2: Privacy analysis of the adjacent dwellings located at Willandra Village

PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS B3

Existing and Proposed Building Separations with Willandra Village

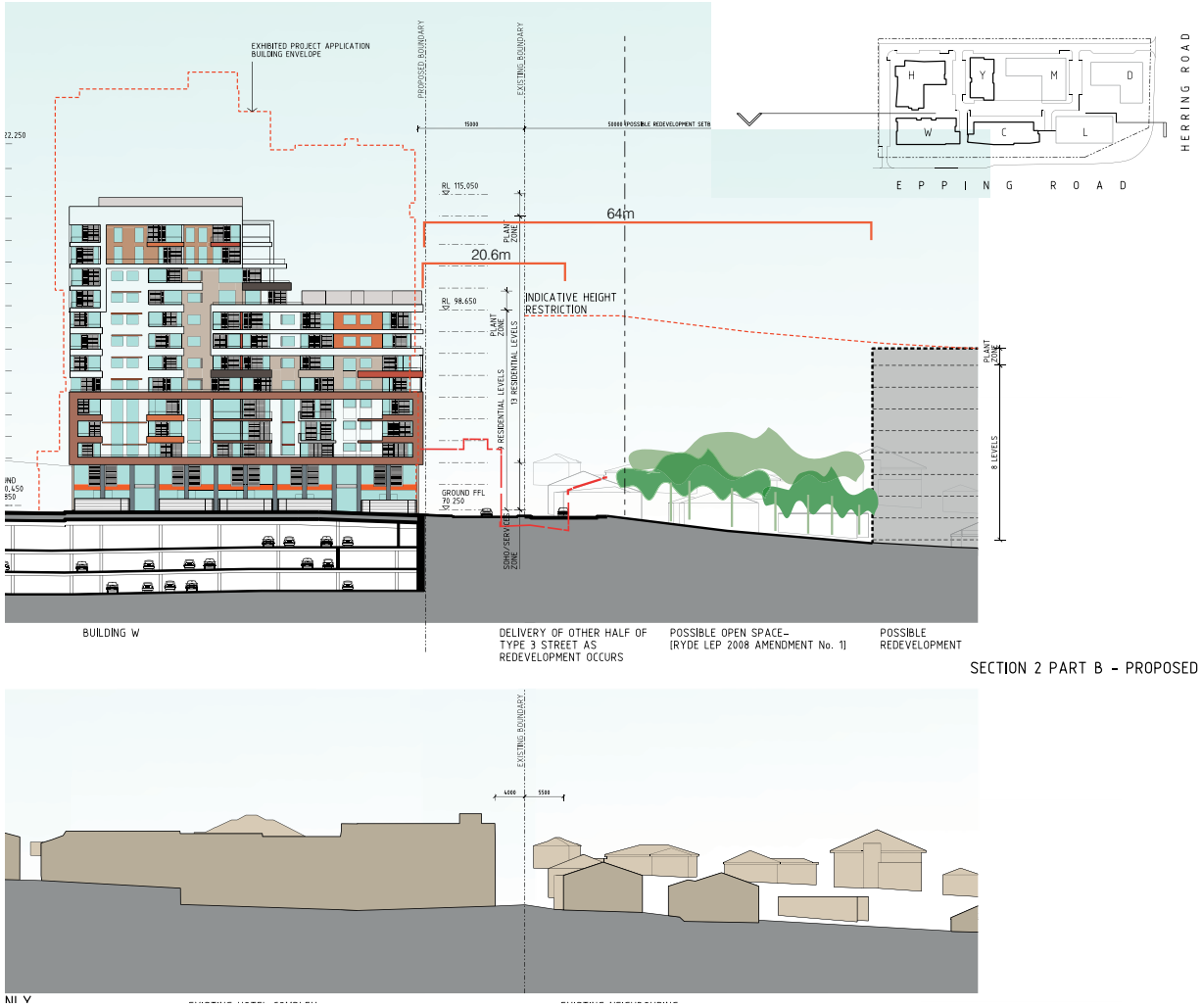


Figure B3.3: Existing and proposed building separations with Willandra Village

- Draft Ryde LEP 2008 Amendment 1 shows open space on the Willandra Village site. This, together with the proposed road between Willandra Village and Macquarie Village creates a 64m separation between buildings.
- The separation between existing adjacent building at Willandra Village and Building W will be over 20m. This exceeds the 18m separation required by Residential Flat Design Code Rules of Thumb for 8 storey buildings.
- Both the above conditions provide increased building separation compared to the existing separation of 9.8m.
- The proposed new street along the adjoining boundary includes street trees that will provide screening between the properties in addition to the existing vegatation.
- There are no overshadowing impacts to Willandra Village as the Macquarie Village development is to the south.

B3 PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS

DRAFT

Improved Separation and Privacy with Willandra Village

Existing building separation between neighbouring buildings

Proposed development

Figure 3.4: Before and after images showing improved building separation and privacy between Willandra Village and Macquarie Village

PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS B3

Existing and Proposed Building Separations with 116-118 Herring Road

- The following series of sections illustrate the changing condition along the northern boundary between Macquarie Village and 116-118 Herring Road.
- In all cases, there is almost three times the separation between the buildings located on 116-118 Herring and the proposed Macquarie Village buildings than the existing condition. That is, currently there is a 8.2m separation between existing buildings and a 20.2m separation between the proposed buildings and 116-118 Herring Road.
- In each diagram, to help the comparison, the proposed section is located above the existing. A red line indicating the existing separation between buildings is illustrated on the proposed section.
- Street trees will be planted along the northern boundary between Macquarie Village and 116-118 Herring Road

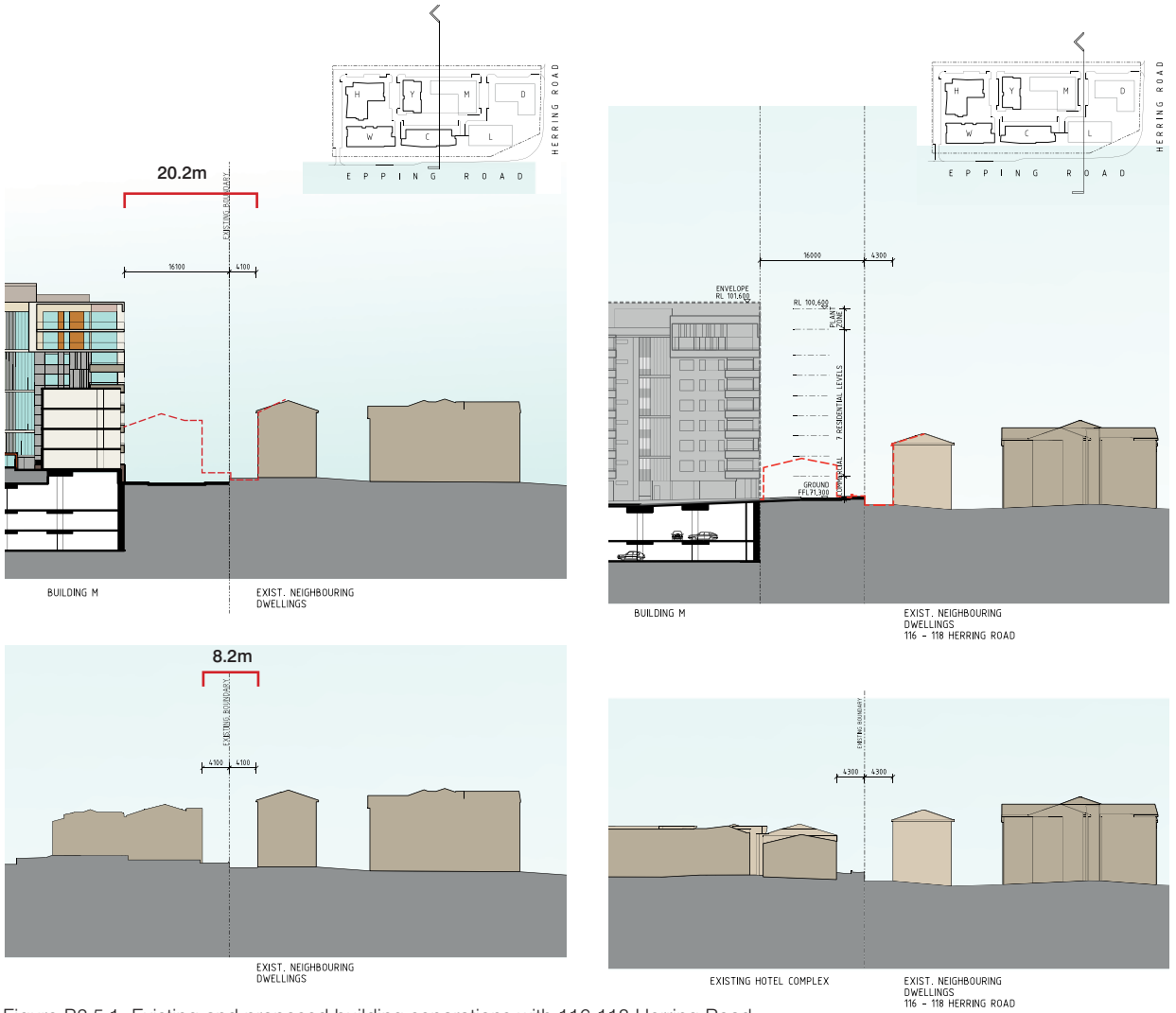


Figure B3.5.1: Existing and proposed building separations with 116-118 Herring Road

B3 PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS

DRAFT

Detailed Sections - Proposed Relationship with 116-118 Herring Road

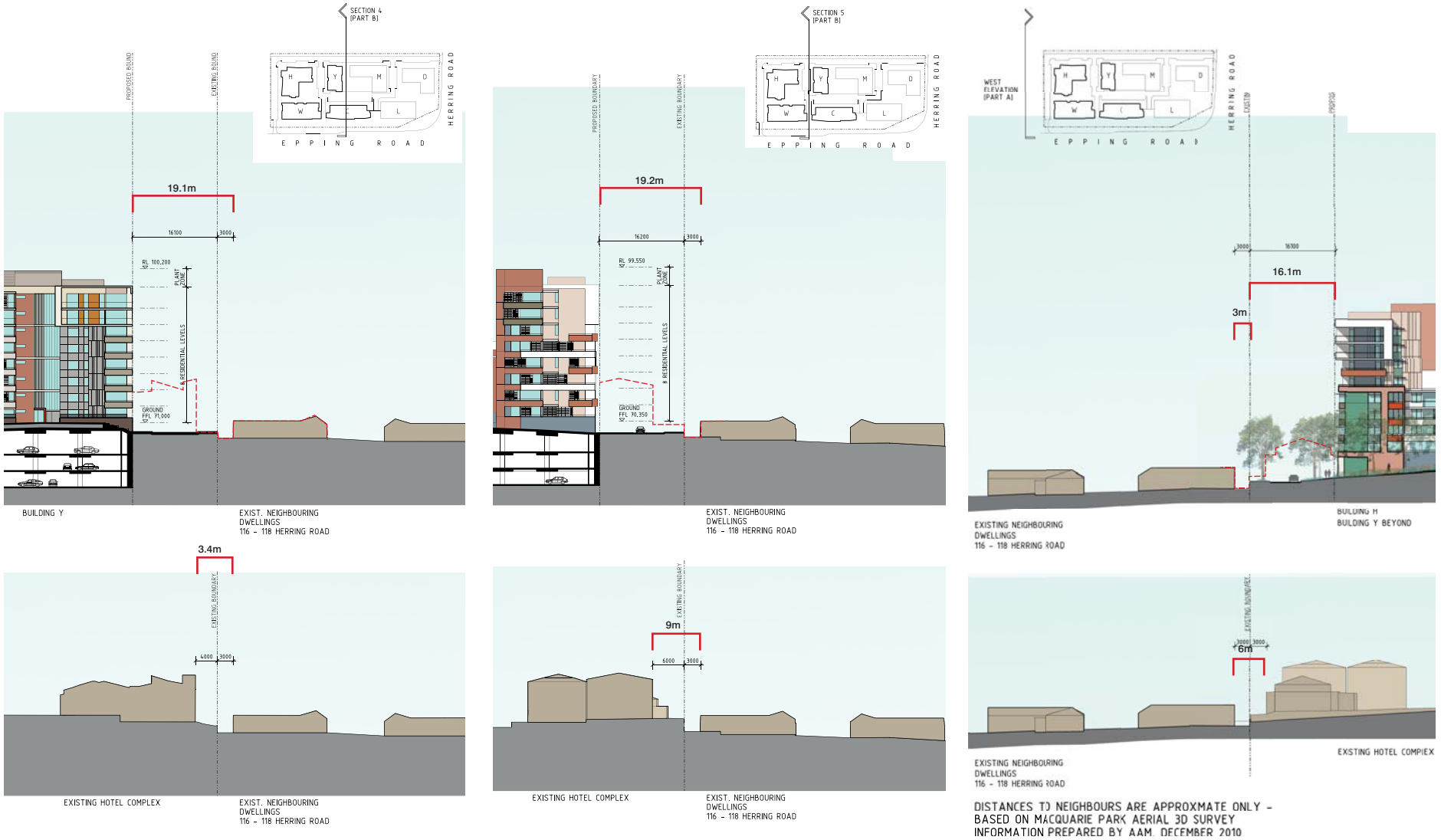
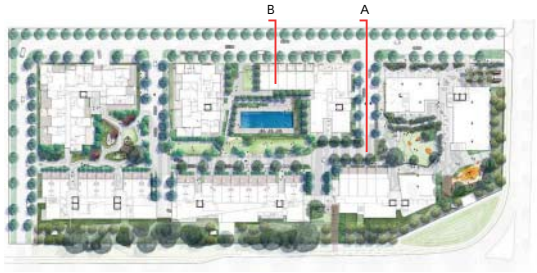


Figure B3.5.2: Existing and proposed building separations with 116-118 Herring Road along the northern boundary

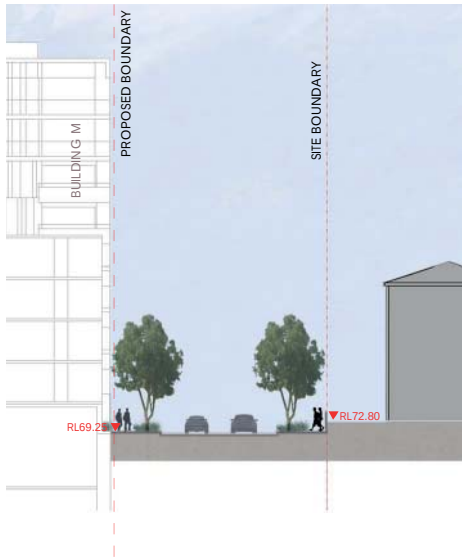
Additional Landscape Sections



KEY PLAN NTS

Additional landscape sections show the relationship between the proposed development, the new road and adjacent buildings, illustrating the design solution and landscape treatment.

SECTION A



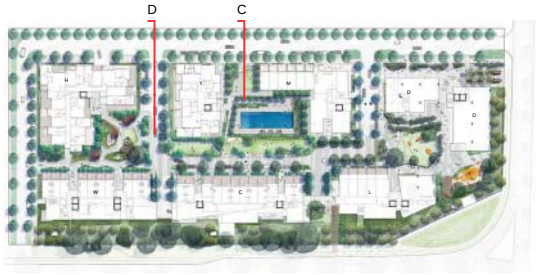
SECTION B

Figure B3.6.1: Detailed landscape sections through the new road and 116-118 Herring Road

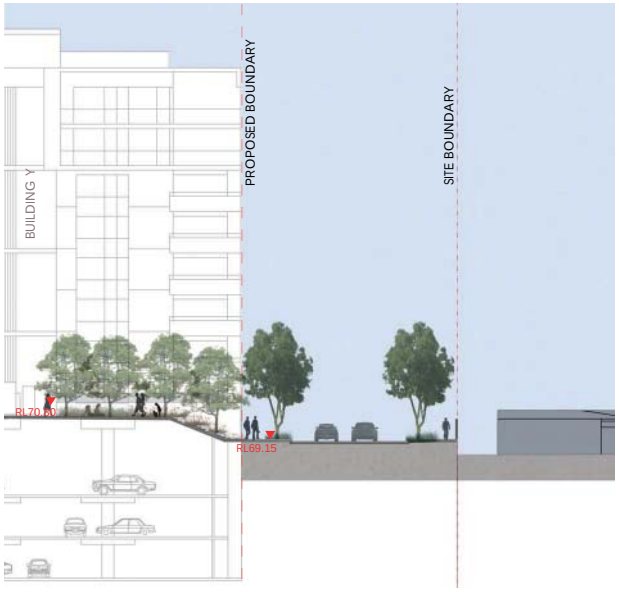
B3 PRIVACY OF ADJOINING RESIDENTIAL DWELLINGS

Additional Landscape Sections

DRAFT



KEY PLAN NTS



SECTION C

SECTION D

Figure B3.6.2: Detailed landscape sections through the new road and 116-118 Herring Road

Existing and proposed images from 116-118 Herring Road

Figure B3.7.1: Existing and proposed images from the south-eastern boundary of 116-118 Herring Road looking at Building D

Figure B3.7.2: Existing and proposed images from 116-118 Herring Road looking at Buildings Y & H

Figure B3.7.3: Existing and proposed images from 116-118 Herring Road looking south at Building M & Y

B4 CONTROLS

Built Form Controls

Building Height

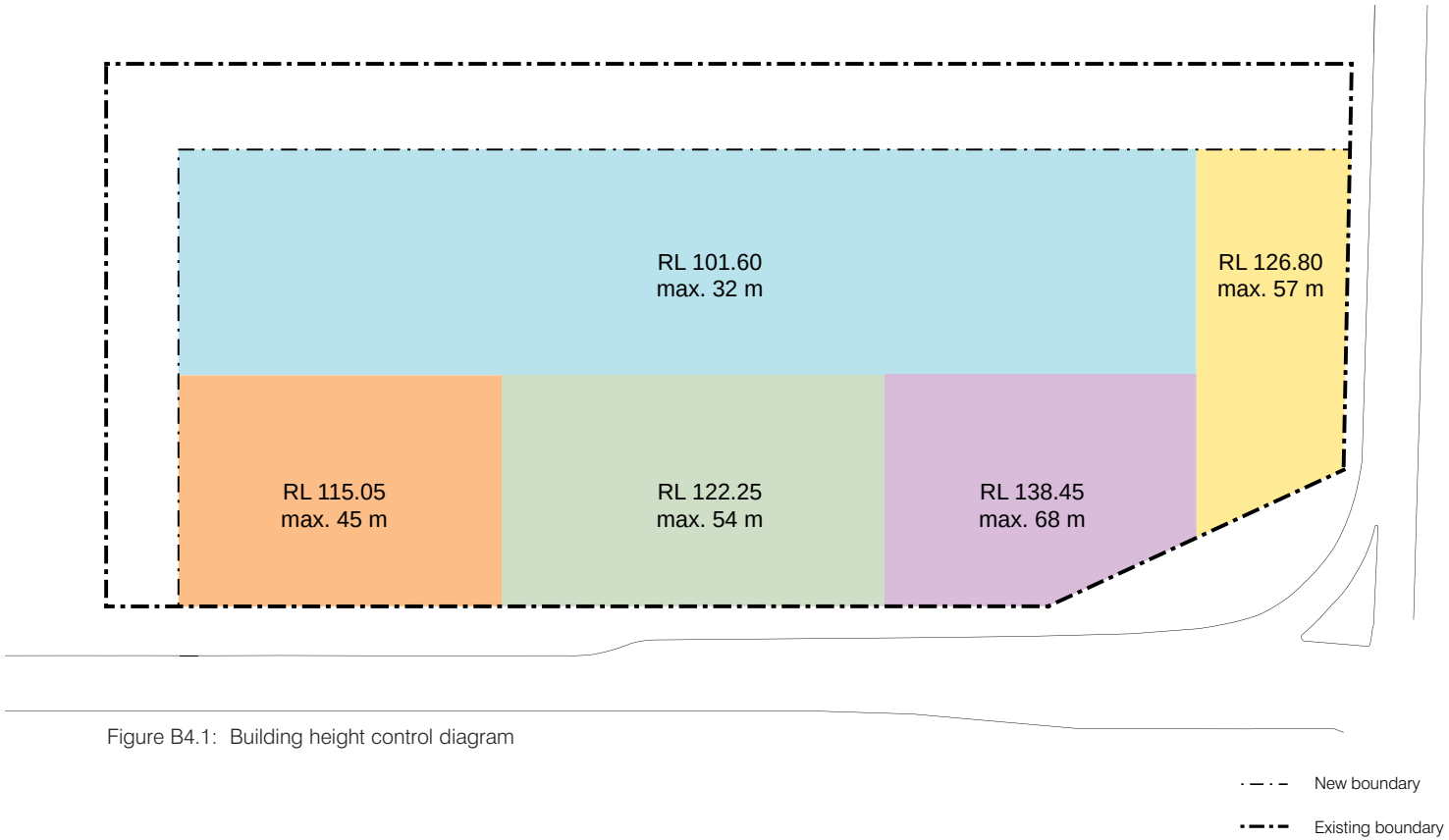


Figure B4.1: Building height control diagram

Objectives

- To create a 'gateway' to Herring Road from Epping Road.
- To contribute to the spatial hierarchy of Macquarie Park Corridor.
- To locate taller buildings where they have minimal overshadowing impact on surrounding residential neighbourhoods.
- To relate to the future context of Macquarie Park Corridor including Macquarie University and new buildings surrounding the train station.
- To ensure appropriate floor to floor heights for the uses in the development.
- To allow sufficient height to accommodate sloping topography across the site, parapets and access to roofs, roof gardens and terraces, plant rooms and service area.

Controls

- Maximum building heights in metres above podium level - datum RL 70 are as indicated in Figure B4.1: Building height control. Building heights assume:
  - 3.1 -5m floor to floor height for roof plant room
- Optimum floor to floor heights are as follow:
  - 3.6m for retail and facilities other than residential uses
  - 3.1m for residential uses

Built Form Controls

Building Height

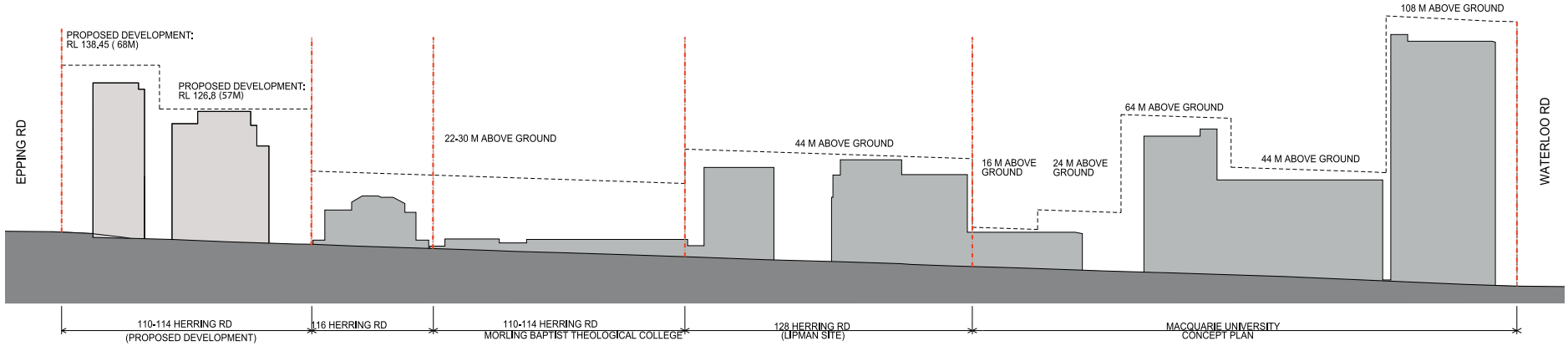


Figure B4.2: Height control along Herring Road

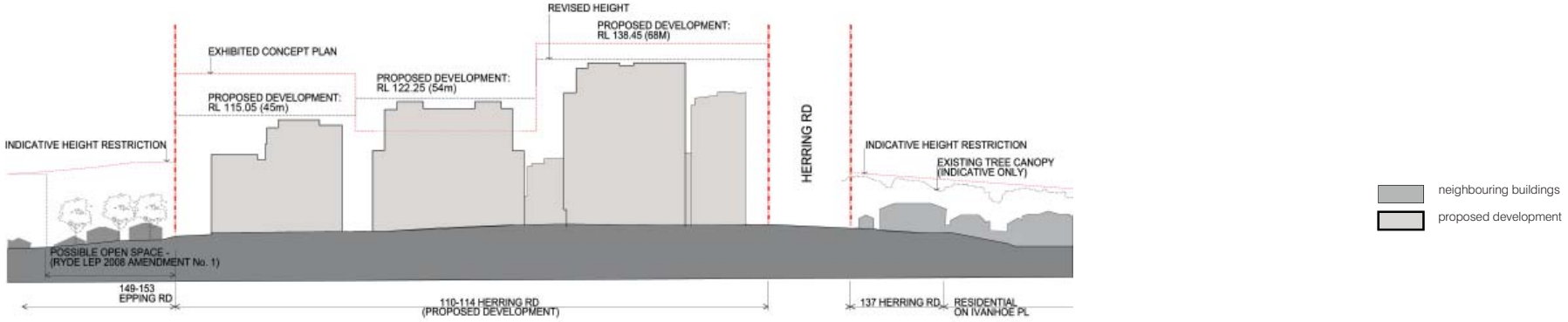


Figure B4.3: Height control along Epping Road

B4 CONTROLS

Built Form Controls

Building Setback

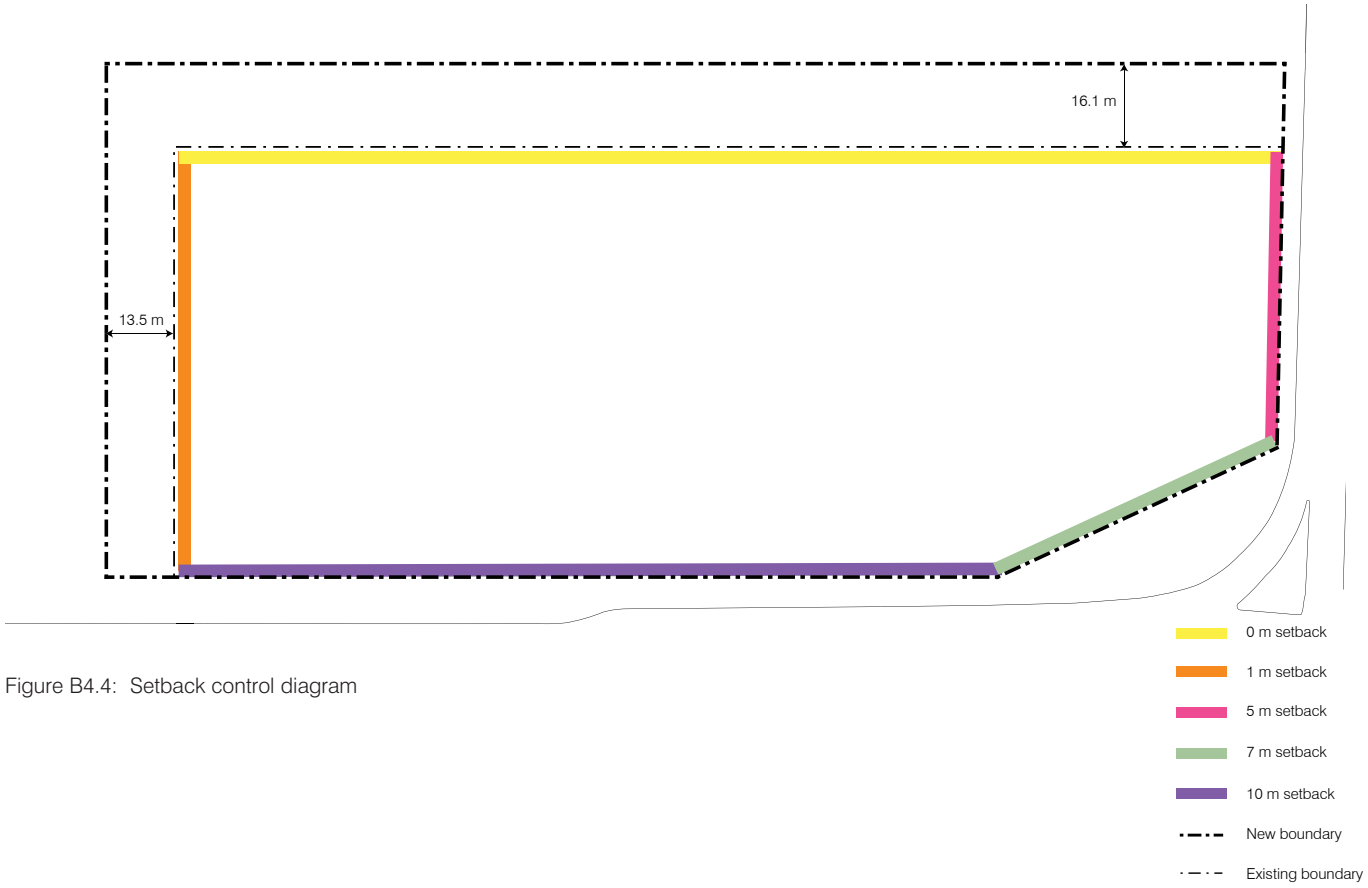


Figure B4.4: Setback control diagram

Objectives

- To manage change as redevelopment occurs
- To retain existing trees and maintain the landscaped character of Epping Road.
- To relate street setbacks to the proposed uses.
- To relate street setbacks to the street hierarchy and scale.
- To create active frontages and improve casual safety and surveillance of the public domain

General Controls

- Minimum street setbacks are as indicated in Figure B4.4: Setback control diagram

Built Form Controls

Building Separation

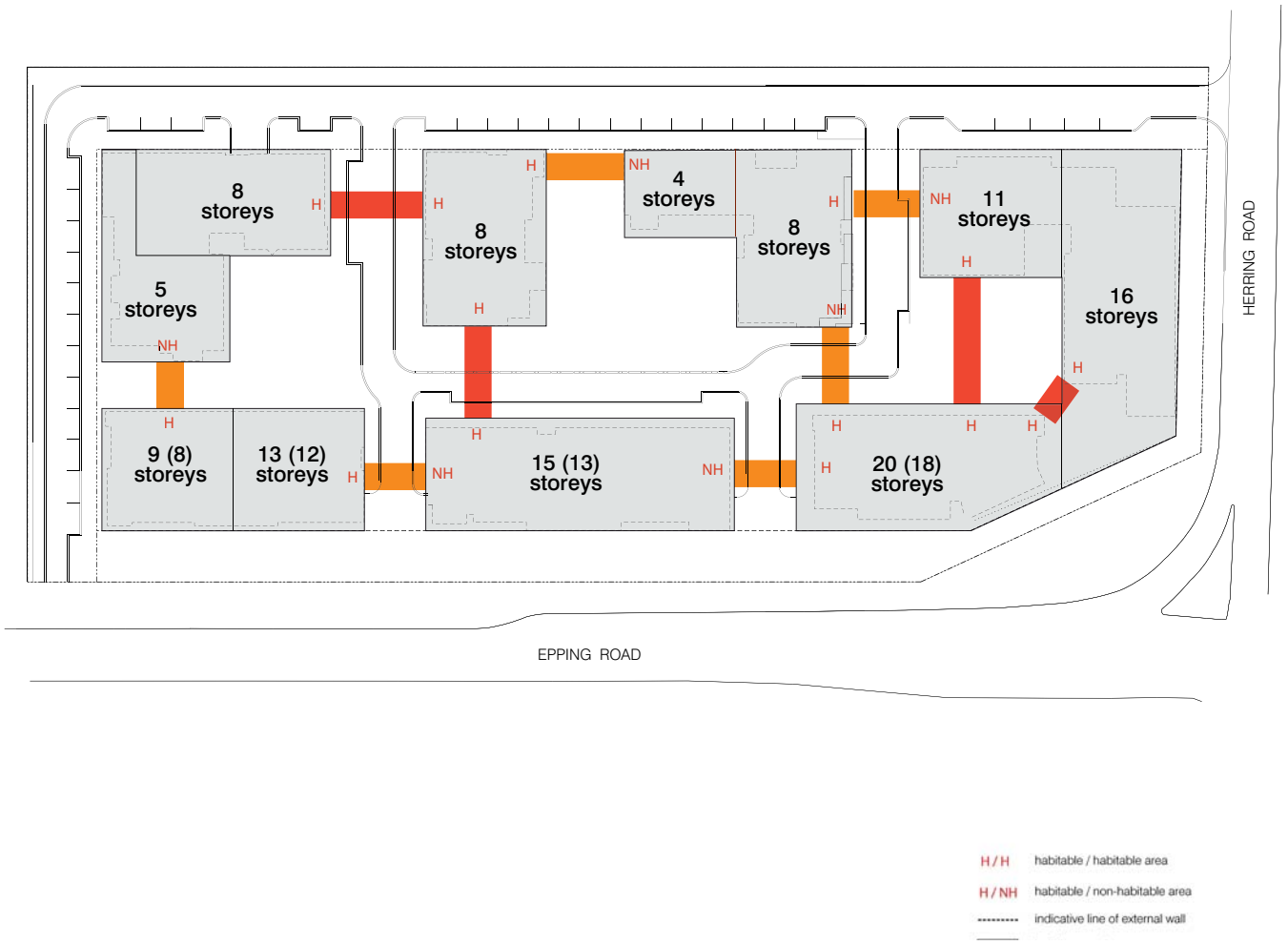


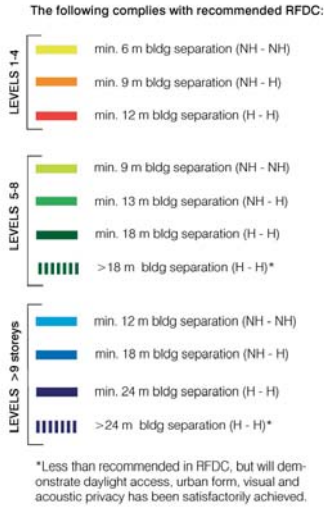
Figure B4.5: Building separation diagram - Levels 1-4 - up to 12m

Objectives

- To ensure high quality residential amenity within the development.
- To optimise solar access to apartments and communal open space.
- To create views to the sky from the communal and public domain.
- To enhance the spatial legibility of the development

Controls

- Sunlight access, visual and acoustic privacy will be achieved through the use of privacy screens, orientation and location of openings and architectural solutions where building separations depart from the recommended separations between buildings in the Residential Flat Design Code.



B4 CONTROLS

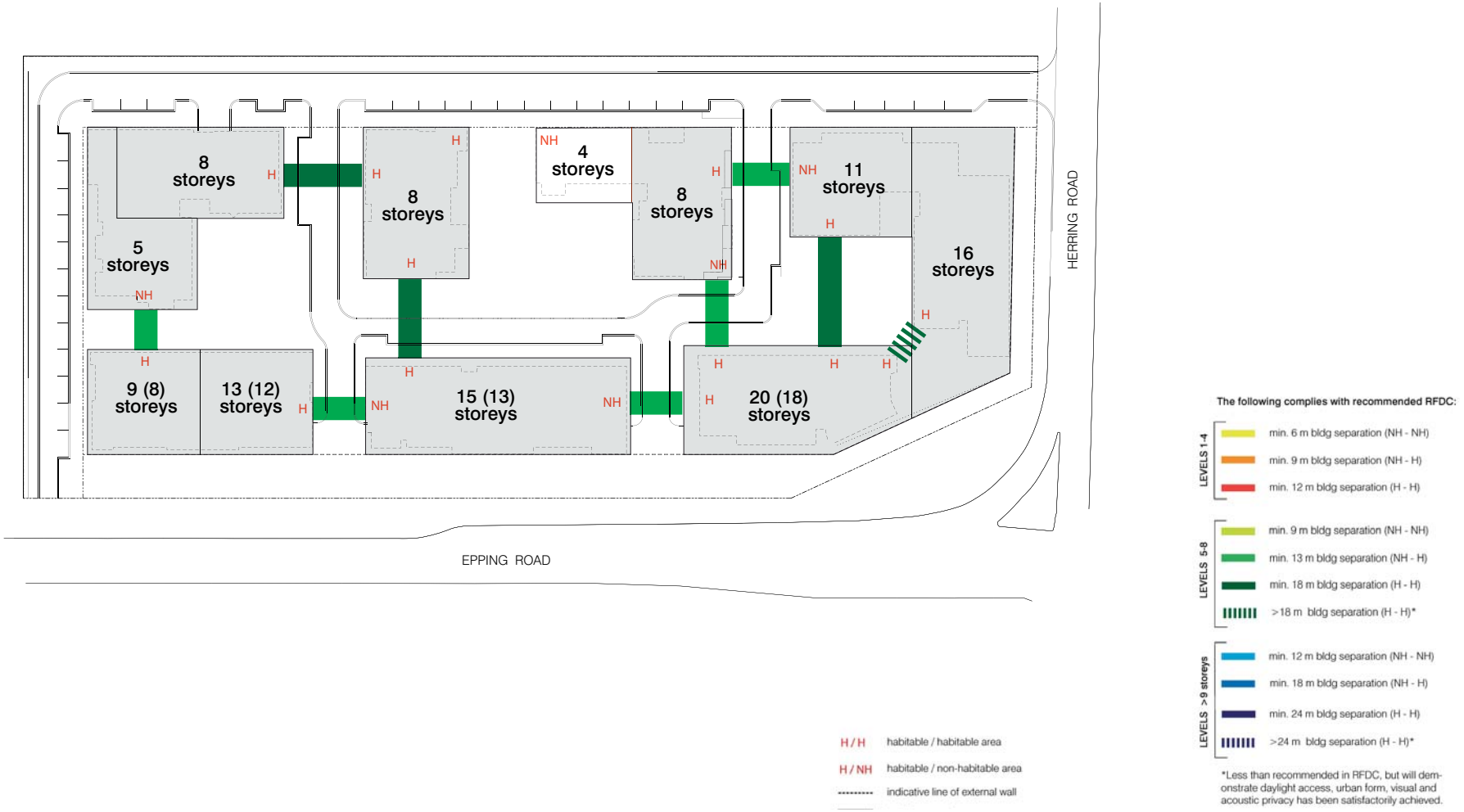


Figure B4.6: Building separation diagram - Levels 5-9 - 12m - 25m

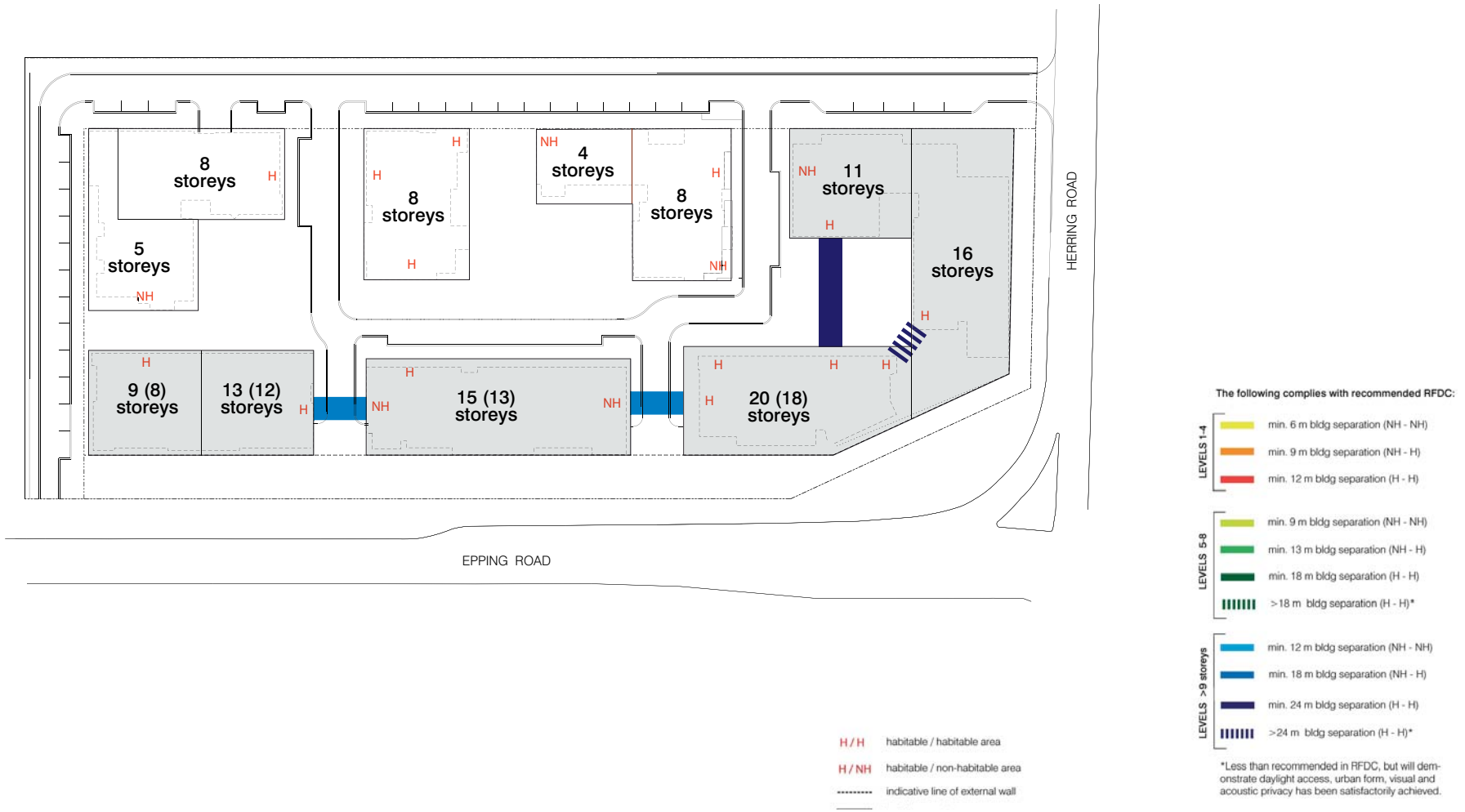


Figure B4.7: Building separation diagram - Levels above 9 storeys - over 25m

B5 STAGING

Stage 1

Stage 1 includes the following:

- Publicly dedicated road and internal roads and associated landscape and Water Sensitive Urban Design measures.
- Communal open space and swimming pool.
- 291 apartments in four residential buildings: Buildings W, H, Y and C.
- Parking:
  - Residents parking for 627 cars
  - Visitor parking for 96 cars
  - Retail parking for 10 cars

STAGE 1

Development Summary			
	1 BR	:	142 units
	2 BR	:	123 units
	3 BR	:	26 units
			291 units
Proposed Parking Provided in Stage 1	On-street parking	:	38 carparks
	Basement 1	:	255 carparks
	Basement 2	:	306 carparks
	Basement 3	:	134 carparks
			733 carparks

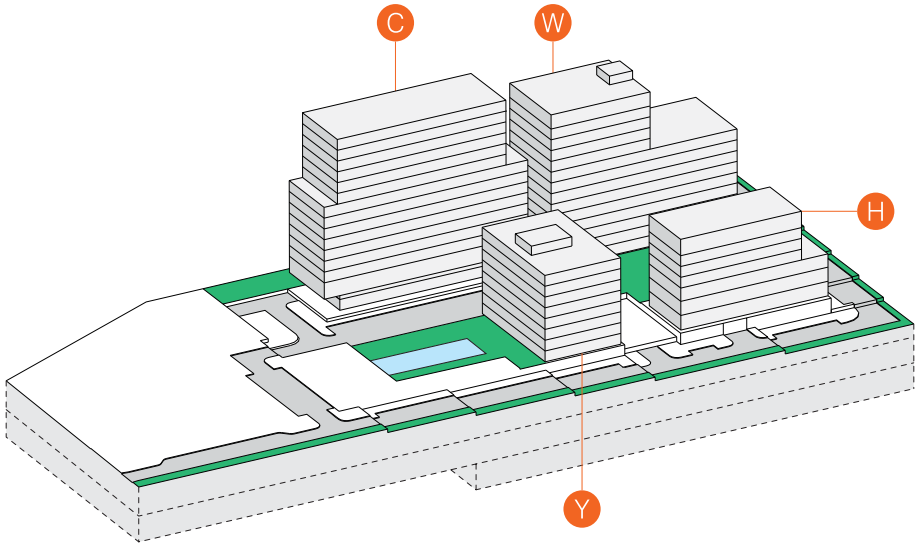


Figure B5.1: Stage 1

Stage 2

Stage 2 includes the following:

- Communal open space
- 285 apartments in three residential and mixed use buildings: Buildings L, M and D
- 823 m^2 of commercial/retail space
- 200 m^2 community room
- 195m^2 gym/residential facilities
- Parking:
  - Retail parking for 8 cars

STAGE 2

Development Summary

1 BR	:	145 units
2 BR	:	115 units
3 BR	:	25 units
		285 units

Proposed Parking Provided in Stage 2	On-street parking	:	8 carparks
	all basement car parking will be provided in stage 1		

Total proposed parking provided for Stage 1 & Stage 2	*Total Proposed Carparking*		
	733 (stage 1) + 8 (stage 2)	:	741 carparks

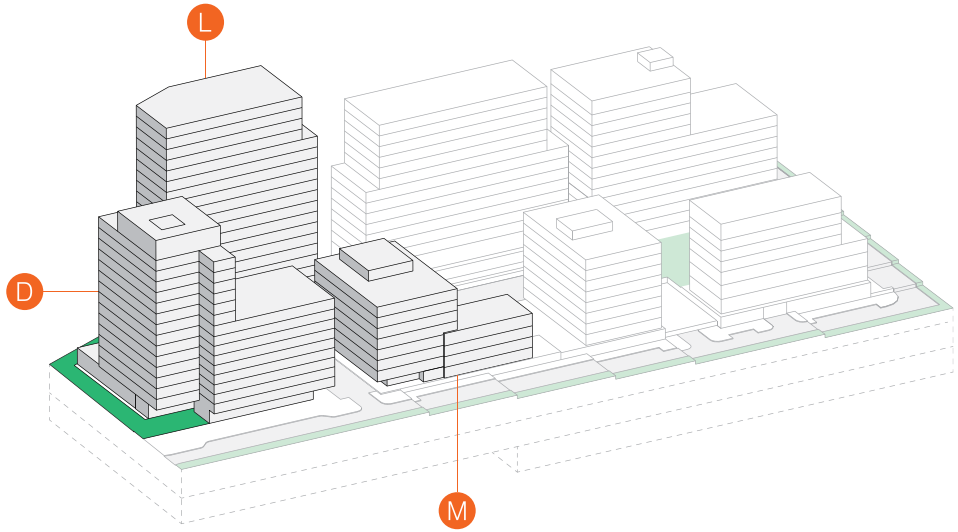


Figure B5.2: Stage 2

B6 VISUAL IMPACT

View Key Points

Figure B6.1: Key Views

Key Views

Figure B6.2: Key View A - View from Macquarie University

Figure B6.3: Key View B - View from Herring Road

Figure B6.4: Key View C - View from Macquarie University sports ground

Figure B6.5: Key View D - View from University Avenue, Macquarie University

exhibited concept plan

B6 VISUAL IMPACT

Key Views

Figure B6.6: Key View E - View from Epping Road

Figure B6.7: Key View F - View from corner of Epping Road and Balaclava Road

Figure B6.8: Key View G - View from Herring Road South

Figure B6.9: Key View H - View from Liberty Park

exhibited concept plan

SEPP 65 Response

SEPP 65 - DESIGN PRINCIPLES STATEMENT

Principle		Response
1	***Context***	
	Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area. *Responding to context involves identifying the desirable elements of a location's current character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.*	• The site is located in North Ryde and forms part of the Macquarie Park Corridor Redevelopment Area. It is within the Ryde City Council LGA. • Macquarie Park Corridor has been identified in the NSW Government Sydney Metropolitan Strategy as being a specialised centre that serves a range of commercial and research activities in the areas of information technology and telecommunication, pharmaceuticals, media and health care. • The Macquarie Park Corridor does not extend across the southern side of Epping Road; the width of Epping Road effectively separates the higher density developments to the north from the lower density areas to the south of Epping Road. • The area is easily accessible with direct access to a number of regional roads; Lane Cove Road, Epping Road and the M2 motorway. The railway station is located approximately 650m north of the site and links the Macquarie Park Corridor with the Epping-Chatswood railway line. • The existing surrounding context is mixed. Along Herring Road, there are commercial developments, student housing and residential apartment buildings. To the south are mostly detached dwellings and Macquarie University is to the northwest of the site. • The relationship of the development to its future context is critical. Macquarie Park Corridor is an area undergoing transition. The vision for Macquarie Park Corridor is a premium location for globally competitive businesses. This site is one of the few opportunities within the Macquarie Park Corridor capable of providing residential density. • Within the development, public streets are proposed to be dedicated to Council which will improve the permeability of the area and connectivity of the site to the existing road network. • The proposed design will fulfill Macquarie Park Corridor DCP's 'Built Form Network' by developing a '*secondary significant building'* on the corner of Herring Road and Epping Road that will serve as a gateway to the central train station precinct and provide a marker to the entrance of the business park. It also forms part of the *'taller development spines'* that runs along Herring Road from Epping Road north to Talevera Road.

B7 REVISED SEPP65 & RFDC ASSESSMENT

SEPP 65 Response

2	***Scale***	
	Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. *Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.*	• The scale of the development is consistent with the desired future character of the area. 128 Herring Road has a Part 3A Concept Plan approval building heights of 9 -12 storeys and Macquarie University has Concept Plan approval for 108m or approximately 30 storeys. • The site is located at the corner of Epping and Herring Roads. Epping Road forms the edge of the Macquarie Park Corridor. It is approximately 40m wide. The scale of the proposed buildings provides spatial definition commensurate with the width of the street. • The taller buildings are located adjacent to major roads and along the southern boundary of the site. Building heights along Epping Road are modulated ranging from 8 - 18 storeys to reduce the perception of bulk and scale along Epping Road providing a varied skyline. • The proposal provides for a variety of open spaces commensurate with the scale of the development.
3	***Built form***	
	Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. *Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.*	• A significant building is located on the corner of Epping Road and Herring Road to mark a key entry point into Macquarie Park Corridor. This is orientated east-west so that the short end of the building is viewed on approach along Epping Road; creating a tall slender landmark building. • The development will enhance the spatial hierarchy of the area. Building heights will be commensurate with street widths by locating: - lower buildings along new local streets - taller buildings along major roads. • Retail and commercial uses at ground level are permitted to be built to the street boundary to activate the street. • Building façades along Epping Road are composed to reduce the apparent building bulk with the use of detail elements, a variety of materials and colour. • The buildings in the development are arranged around three residential communal courtyards that provide amenity and outlook for the residents. • The separation between the building blocks allows for view corridors through the site from Epping Road.
4	***Density***	
	Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents).	• The site is one of the few opportunities to provide significant residential density within the Macquarie Park Corridor. This is due to the dominance of the Macquarie University and retail within the corridor. Additionally, many of the

	Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.	existing residential developments in the zone along Herring Road are strata titled and are therefore unlikely to be redeveloped in the current statutory climate. • The proposed density is appropriate for the site's location and context. The proposal satisfies the Metropolitan Strategy to plan for a housing mix near jobs, transport and services and the objectives of the State Plan to provide more jobs closer to home. The Draft Inner North Sub Regional Strategy identifies 12,000 dwellings to be accommodated within the City of Ryde LGA. This proposal provides approximately 576 dwellings with a mix of 1, 2 and 3 bedrooms. • The Macquarie Park Corridor is predominantly a business park used for commercial and retail uses. The provision of residential uses in the Macquarie Park Corridor will assist the 24-hour use of the precinct, encouraging people to both work and live within the Macquarie Park Corridor. • The site also provides retail and commercial uses as part of the mixed-use. • The site is close to: - a train station, located approximately 650m from the site - the Macquarie Shopping Centre which provides a large variety of retail and recreational options (cinemas and ice-skating rink) - childcare - medical centres - open space networks - schools; primary schools and Epping Boys High
5	***Resource, energy and water efficiency***	
	Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction. *Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.*	• The development is designed to respond to the requirements of BASIX, the Residential Flat Design Code and Green Star Rating (4 Star). • The new local street incorporates: - Water Sensitive Urban Design (WSUD) rain gardens to filter the stormwater; • Taller buildings are located to the south to maximise solar access to apartments and communal open spaces on the northern parts of the site. • Apartment layouts are designed to optimise Residential Flat Design Code's cross-ventilation requirements. • Outcomes for Stage 1 of this development include: - 43% of the development's landscape area is deep soil for stormwater infiltration and the retention of existing mature trees. - 67% of apartments are cross-ventilated.

B7 REVISED SEPP65 & RFDC ASSESSMENT

SEPP 65 Response

		- 70% of apartments have the required solar access in winter. - Collection of roof rainwater for grey water usage. - Architectural details such as sun shading and louvers to improve amenity.
6	***Landscape***	
	Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. *Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by coordinating water and soil management, solar access, microclimate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character.* *Landscape design should optimise usability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.*	• The existing landscape character along Epping Road is retained by maintaining as many of the existing native trees as possible and enhanced by additional tree planting. • The development provides a new dedicated local street and an internal street which will be landscaped with street trees appropriate for the width of the street and suitable to the local environment. • A series of landscaped communal courtyards linked by an internal street provide residential amenity on site. Each of these landscaped spaces has a different character providing a variety of 'outdoor rooms'. These include: - The Village Green - Pool Garden - Garden of Earthly Delights • All ground floor apartments have private landscaped courtyards that provide a transition zone between the public and private domain. These private landscaped courtyards also contribute to the landscape character of the internal street and the new dedicated public street, provide street address and activation.
7	***Amenity***	
	Good design provides amenity through the physical, spatial and environmental quality of a development. *Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.*	• The development provides the following mix of units and sizes: – 51% one bedroom apartments (50m2-68m2) – 40% two bedroom apartments (78m2-100m2) – 9% three bedroom apartments (107m2-138m2) • 10% of the units are designed to the requirements of AS 4299-1995 Adaptable Housing • All units provide adequate storage within the units and in the basement. • 11,535m2 of open space is provided (51% of the site area). • approx. 1200m2 of non-residential uses are provided to ensure convenience for residents • Communal courtyards, swimming pool and gym facilities provide passive and active recreational opportunities.

SEPP 65 Response

8	***Safety and security***	
	Good design optimises safety and security, both internal to the development and for the public domain. *This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.*	• Streets within the development are designed to be pedestrian friendly, well lit and have parking bays which will activate the street. • The thresholds between public, communal and private areas will be clearly defined to ensure a sense of ownership and legibility between the public and private domains. • All buildings have a street address and frontage providing clear entry points into residential buildings. • Retail and commercial uses are located along the new local street and Herring Road to activate these streets. These uses will have direct access from the street. • Apartment buildings overlook the landscaped communal courtyards providing passive surveillance of the open space areas and to improve safety, the development is designed to avoid blind corners and hidden spaces. • Most ground floor apartments have entries from the street which provide casual surveillance of the public domain. • Access to each building and apartments is coordinated with a security key system. • Secure parking for residents is located underground with clear and direct lift access to the apartments.
9	***Social dimensions and housing affordability***	
	Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. *New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community.* *New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.*	• The proposed development provides housing choice in the Macquarie Park Corridor. Facilities such as the communal courtyards, the pool and gym and retail/commercial uses at ground level will encourage social interaction amongst residents of the neighbourhood. • The provision of a new local street will assist in integrating the development into the existing neighbouring communities. • The proposed development will create opportunities for families in the surrounding neighbourhood to move within the area when the family needs change. • The provision of a nominal 51% one bedroom apartments in the development responds to the demographic needs of single person households and couples comprising 80% of the apartment market. The one bedroom product is also a more affordable entry point into the residential market. • 10% of units are designed to be adaptable to the needs of people with disabilities and to facilitate inter-generational changes and changing lifestyles.

B7 REVISED SEPP65 & RFDC ASSESSMENT

SEPP 65 Response

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

The intent of the aesthetics are:

- to 'de-formalise' the usual rigid and repetitive facades in multi-unit residential development that is the result of identical apartment plans stacked one on top
- to create a family of buildings but individualise each of the buildings through the use of a series of frames and valences
- to use colours that draw from the colours of the bush
- to use a variety of materials and textures to breakdown the mass of the buildings.

Response to Residential Flat Design Code Rules of Thumb

RFDC RULES OF THUMB SCHEDULE FOR PROJECT APPLICATION

Recommendation	Detail of Recommendation	Response for Proposed Project Application + Concept Plan
Building Depth		**YES**
	In general a depth of building 10-18m (glass to glass) wide is appropriate. Developments that propose wider than 18 m must demonstrate how satisfactory daylighting and natural ventilation are to be achieved.	
Building Separation		**Project Application: YES** **Concept Plan: YES with one exception**
	Distance between buildings: • Up to four storey/12m: – 12m between habitable rooms/balconies – 9 m between habitable/balconies and non-habitable rooms – 6 m between non-habitable rooms • Five to eight storeys/up to 25 metres: – 18m between habitable rooms/balconies – 13 m between habitable/balconies and non-habitable rooms – 9 m between non-habitable rooms • Nine storeys and above/ over 25 metres: – 24m between habitable rooms/balconies – 18 m between habitable/balconies and non-habitable rooms – 12 m between non-habitable rooms	**Project Application:** Building separations comply. Refer to building separation figures B.4.6, B.4.7 and B.4.8. **Concept Plan:** As measured on the diagonal, the indicative design indicates one area of variation from the rules of thumb. Refer to building separation figures B.4.6, B.4.7, B.4.8 and Figure Appendix 1.

B7 REVISED SEPP65 & RFDC ASSESSMENT

Response to Residential Flat Design Code Rules of Thumb

Deep Soil Zones		**YES**
	A minimum of 25 percent of the open space area of the site should be a deep soil zone.	Deep soil area: 4,975 m^2 or 43% of open space.
Communal Open Space		**YES**
	Communal open space to be 25-30% of site area	Communal open space. **Publically Accessible Open Space:** 12,272m^2 **Private Communal Open Space:** 740 m^2 Total Open Space: 11,535 m^2 or 51% of site area excluding internal roads. Refer to Figure Appendix 2.
Private Open Space on Ground Level		**NO**
	Minimum recommended area of private open space for each apartment at ground level or on a structure such as podium or carpark is 25sqm; minimum preferred dimension in one direction is 4m.	Percentage of apartments achieving 25m^2 private open space with min. dimension 4m: **Project Application Total:** 30% **Concept Plan Total:** Subject to future DA. Refer to Figure Appendix 4
Safety		**YES**
	Carry out a formal crime risk assessment for all residential development of more than 20 new dwellings	The development provides: • Legible definition of public and communal domain • Streets that will be well lit • Passive surveillance
Visual Privacy		**YES**
	To provide reasonable levels of visual privacy externally/internally during day and at night and to maximise outlook/ views from principal rooms and private open space without compromising visual privacy. Refer to Building Separation minimum standard.	In addition to building separation, fixed and operable privacy screens, external shading to windows, balconies and extended slab edges will help to avoid overlooking. Refer to Figure Appendix 1
Apartment Layout - Single Aspect Apartment		**YES and NO (with qualifications)**

Response to Residential Flat Design Code Rules of Thumb

	Single aspect apartments should be limited in depth to 8m from a window. If not, building must demonstrate a satisfactory daylighting and natural ventilation.	The majority of single aspect apartments are extended to 9-10m from a window. In these cases the non-habitable wet areas (such as bathrooms and laundries) are located in the 1-2m extended zone.
	Limit single aspect apartments with a southerly aspect (SW-SE) to max.10% of total units.	**Project Application:** 3% are single aspect apartments with southerly aspect **Concept Plan:** Concept Plan scheme demonstrates 12% are single aspect apartments with southerly aspect Refer to Figure Appendix 5
Apartment Layout – Kitchen		**YES and NO (with qualifications)**
	The back of a kitchen should be no more than 8m from a window. If not, building must demonstrate a satisfactory daylighting and natural ventilation.	Typically yes, most kitchens are no more than 8m from a window; those that exceed 8m are either a maximum of 9m or 10m from a window. All kitchens are mechanically ventilated with the following percentage of kitchens being naturally ventilated. **Project Application:** 22% are naturally ventilated. **Concept Plan:** Concept Plan scheme demonstrates 34% are naturally ventilated.
Apartment Layout – Cross-Over Apartments		**N/A**
	The width of cross-over or cross-through apartments over 15 m deep should be 4m or greater to avoid deep narrow apartment layouts. If not, building must demonstrate a satisfactory daylighting and natural ventilation.	There are no cross-over or cross-through apartments.
Apartment Layout – Unit Sizes		**Project Application: YES** **Concept Plan: YES with some exceptions**
	Minimum unit sizes 1 bed: 50 sqm 2 bed: 70 sqm 3 bed: 95sqm	**Project Application:** All unit sizes exceed the minimum desired. **Concept Plan:** The indicative design indicates that the minimum unit sizes exceed the minimum desired with the exception of 8 studio apartments in Building D. The range of unit

B7 REVISED SEPP65 & RFDC ASSESSMENT

Response to Residential Flat Design Code Rules of Thumb

		sizes are: 1 bed studio: 31 sqm – 34sqm 1 bed: 50 sqm – 68sqm 2 bed: 78 sqm – 100sqm 3 bed: 107sqm – 138sqm
Balconies		Project Application: YES Concept Plan: YES with some exceptions
	2m min balcony width. If alternate depth is proposed, need to demonstrate furniture layout.	Project Application: Achieved Concept Plan: The indicative design indicates that approximately eight south facing apartments in Building L do not have balconies. This is a design decision based on orientation and proximity to the busy intersection located on the corner of Epping and Herring roads.
Ceiling Heights		YES
	2.7m min ceiling height in habitable areas 2.25-2.4m ceiling height in non-habitable areas	Achieved
Ground Floor Apartments		YES
	Optimise the number of ground level units with separate entries. Provide ground floor apartments with access to private open space.	Project Application Total: 59% ground level apartments have separate entries. All ground floor apartments have access to private open space. Concept Plan Total: Subject to future DA. Refer to Figure Appendix 4
Internal Circulation		YES

Response to Residential Flat Design Code Rules of Thumb

Internal Circulation		**YES**
	In general, maximum 8 apartments off a double-loaded common area (except where amenity provided through crossover, dual aspect apartments)	Complies
Storage		**YES**
	Minimum storage provision facilities: 1 bed: 6m^3, 2 bed: 8m^3; 3 bed: 10 m^3. (With minimum 50% storage area located within unit)	Complies
Daylight Access		**YES**
	70% of units to receive 3 hours of direct sunlight in mid-winter to living rooms and private open spaces. In dense urban areas a minimum of 2 hours may be acceptable.	**Project Application:** 78% of apartments to receive 3 hours of sunlight in mid-winter to private open spaces and receive 2 hours of daylight into living areas. **Concept Plan:** Concept Plan scheme demonstrates that 67% of apartments to receive 3 hours of sunlight in mid-winter to private open spaces and receive 2 hours of daylight into living areas.
Natural Ventilation		**YES and NO**
	60% of units to be cross-ventilated 25% of kitchens within a development should have access to natural ventilation. Variation must demonstrate how natural ventilation can be satisfactorily achieved.	**Project Application:** 66% of apartments achieve cross ventilation. 22% of kitchens are naturally ventilated. **Concept Plan:** Concept Plan scheme demonstrates that 65% of apartments achieve cross ventilation. 34% of kitchens are naturally ventilated. All kitchens are mechanically ventilated.

C. DESIGN ASSESSMENT

C1 DESIGN SCHEME

Indicative Basement Plan -B1

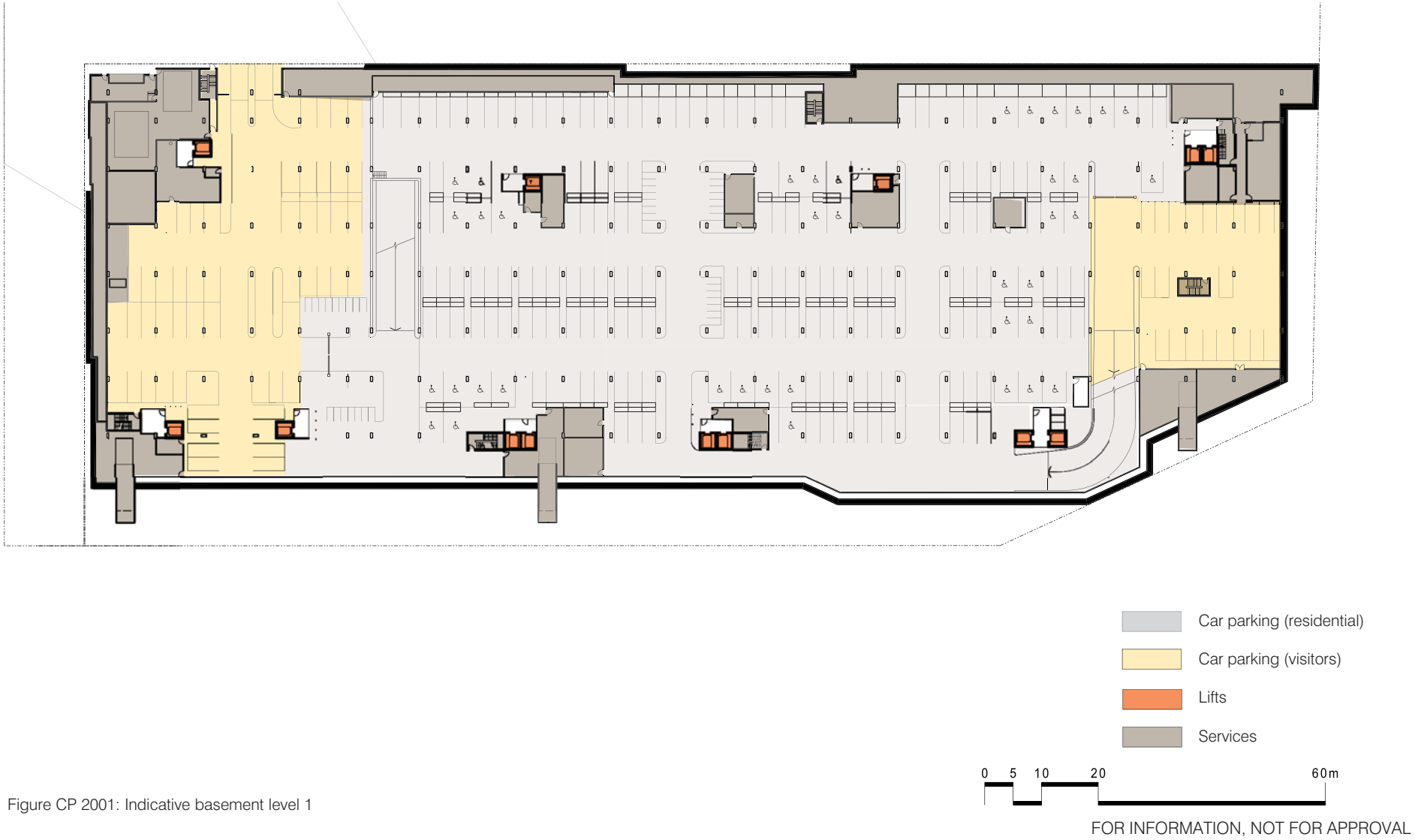


Figure CP 2001: Indicative basement level 1

FOR INFORMATION, NOT FOR APPROVAL

Indicative Ground Floor Plan

Figure CP 2101: Indicative ground level

FOR INFORMATION, NOT FOR APPROVAL

C1 DESIGN SCHEME

Indicative Level 1

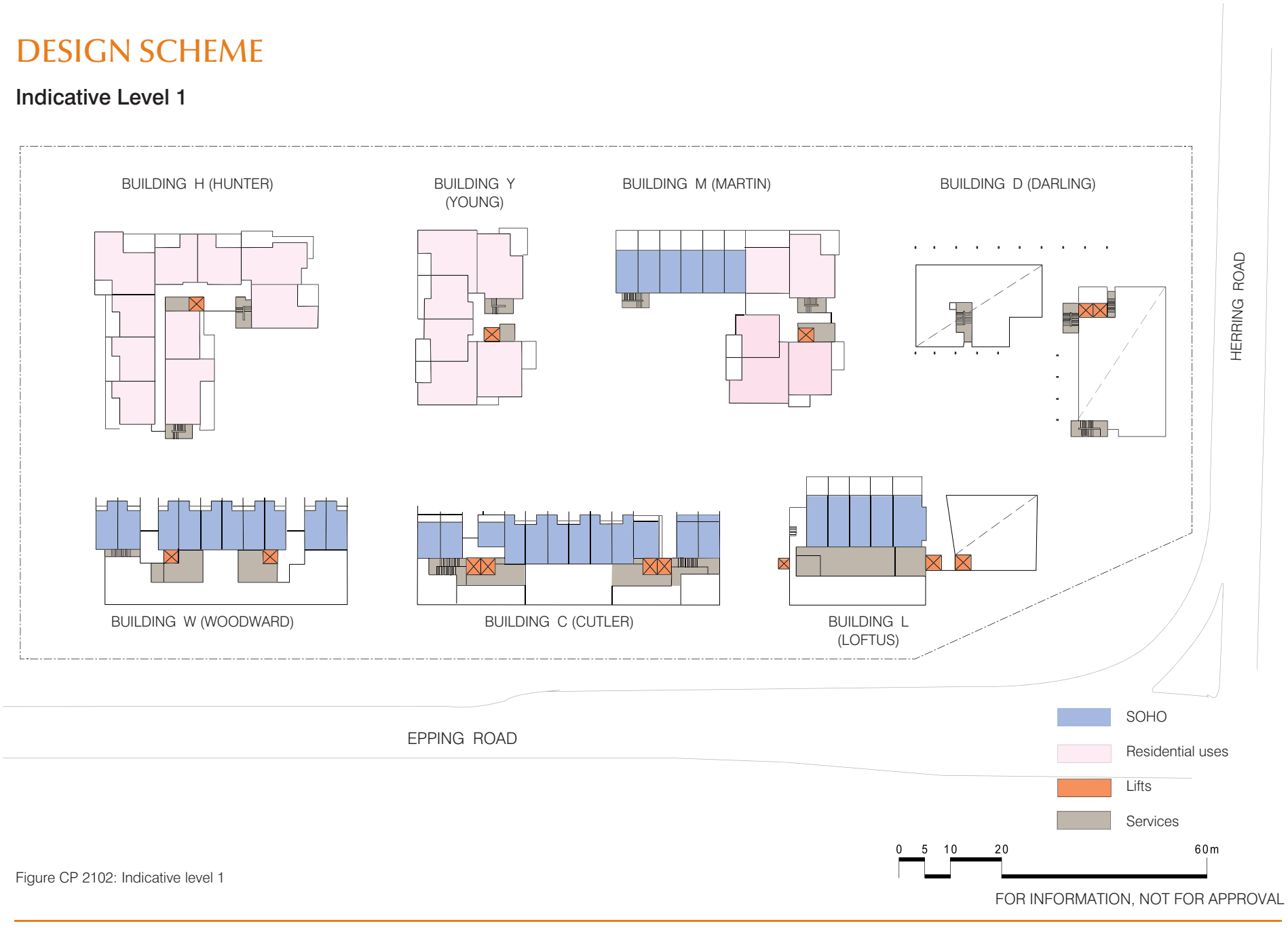


Figure CP 2102: Indicative level 1

Indicative Upper Floor Typical Plan

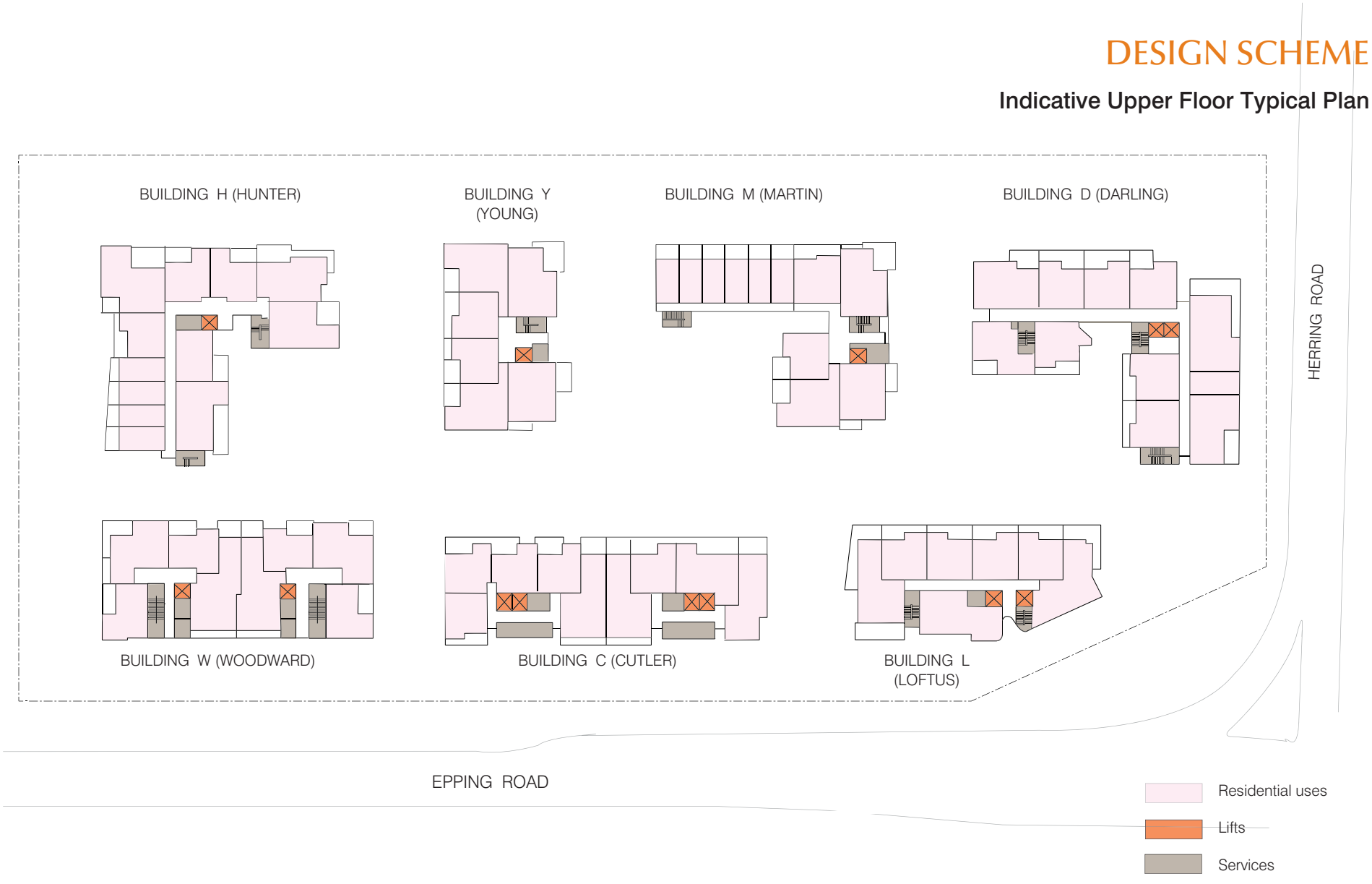
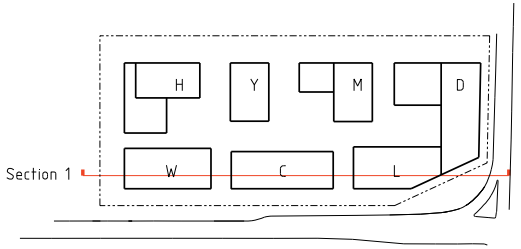


Figure CP 2103: Indicative upper floor typical level

FOR INFORMATION, NOT FOR APPROVAL

C1 DESIGN SCHEME

Long Site Section - Section 1



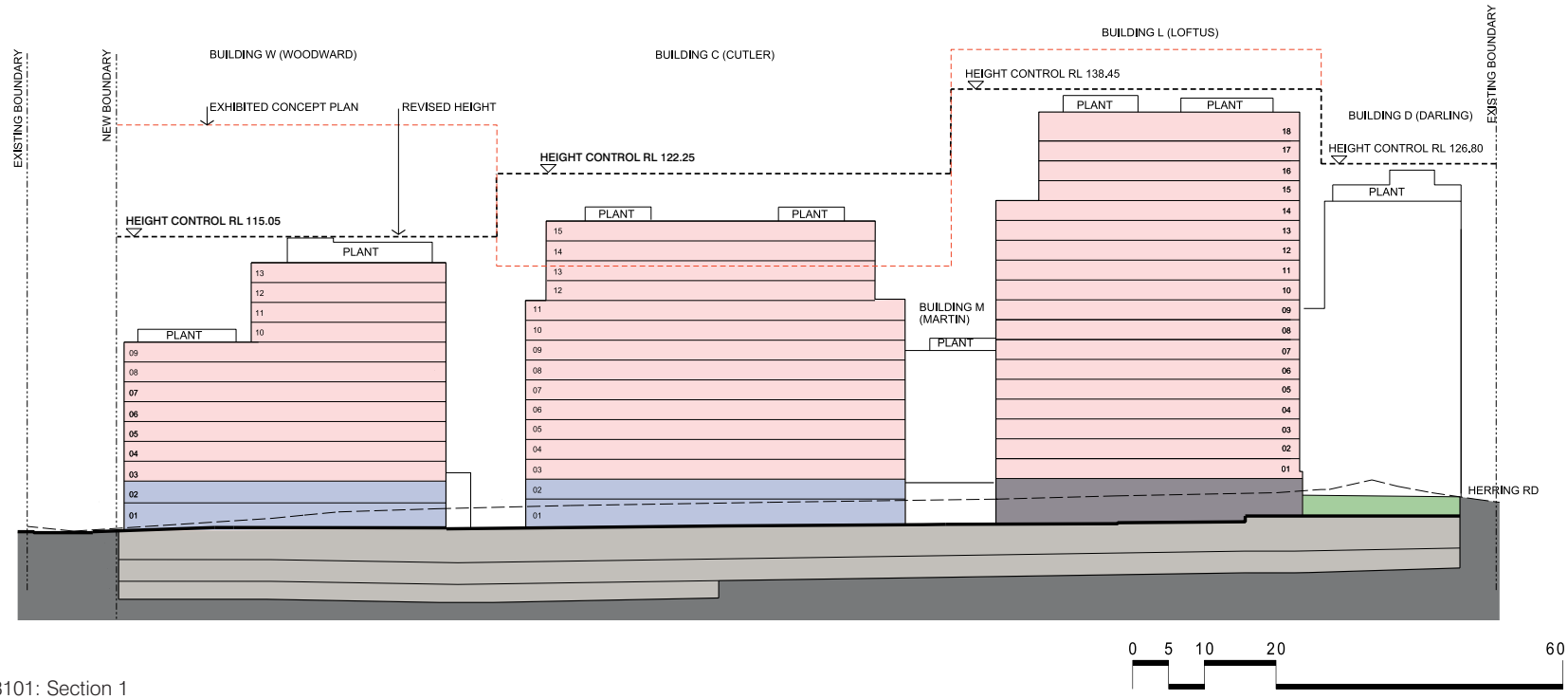
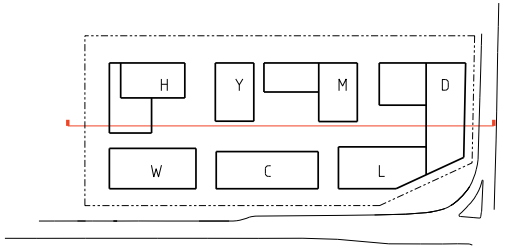


Figure CP 3101: Section 1

FOR INFORMATION, NOT FOR APPROVAL

Long Site Section - Section 2



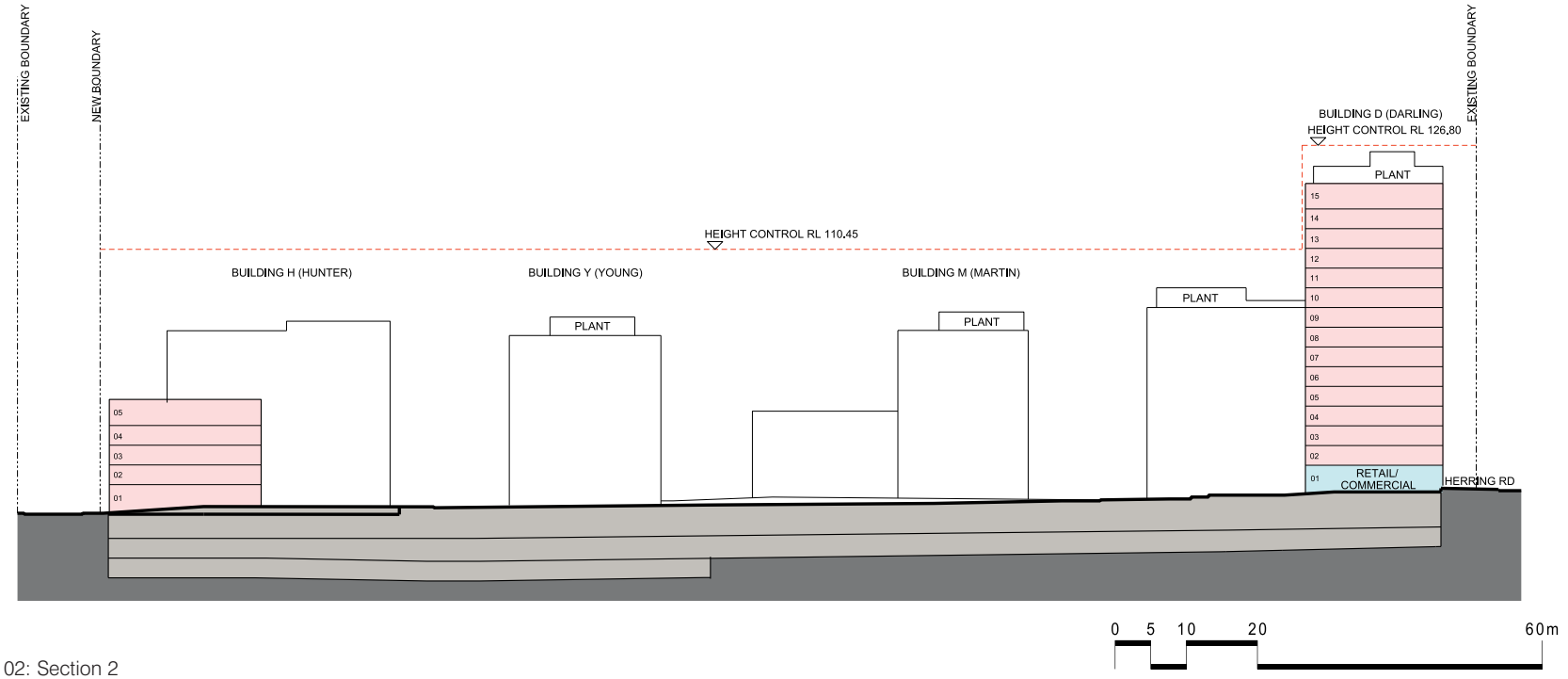


Figure CP 3102: Section 2

FOR INFORMATION, NOT FOR APPROVAL

C1 DESIGN SCHEME

Short Site Section - Section 3

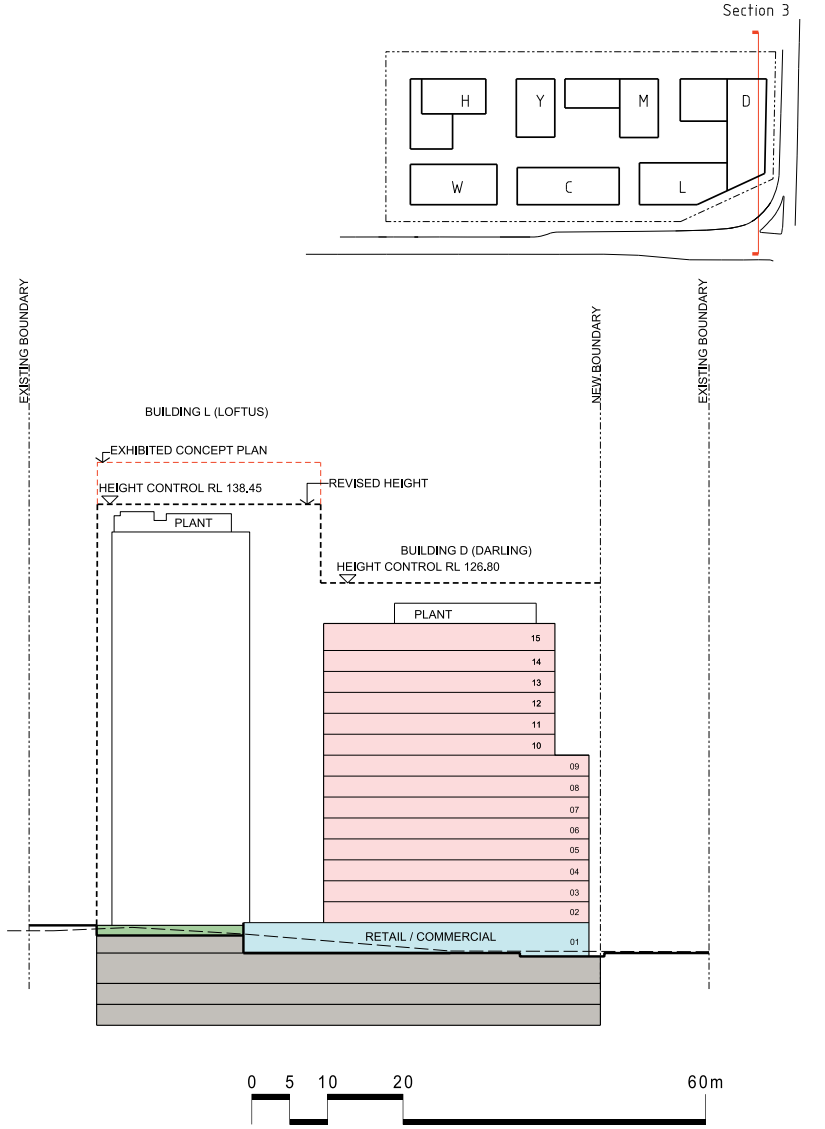
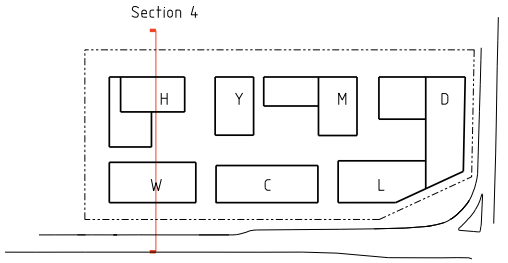


Figure CP 3103: Section 3

FOR INFORMATION, NOT FOR APPROVAL

Short Site Section - Section 4



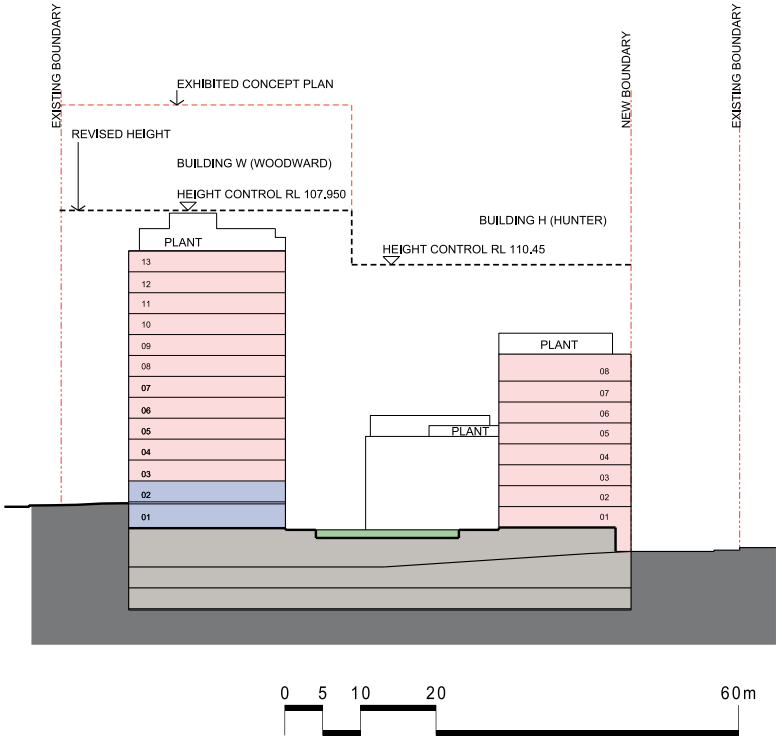
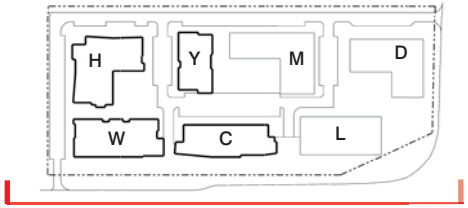


Figure CP 3104: Section 4

FOR INFORMATION, NOT FOR APPROVAL

C1 DESIGN SCHEME

Epping Road Elevation



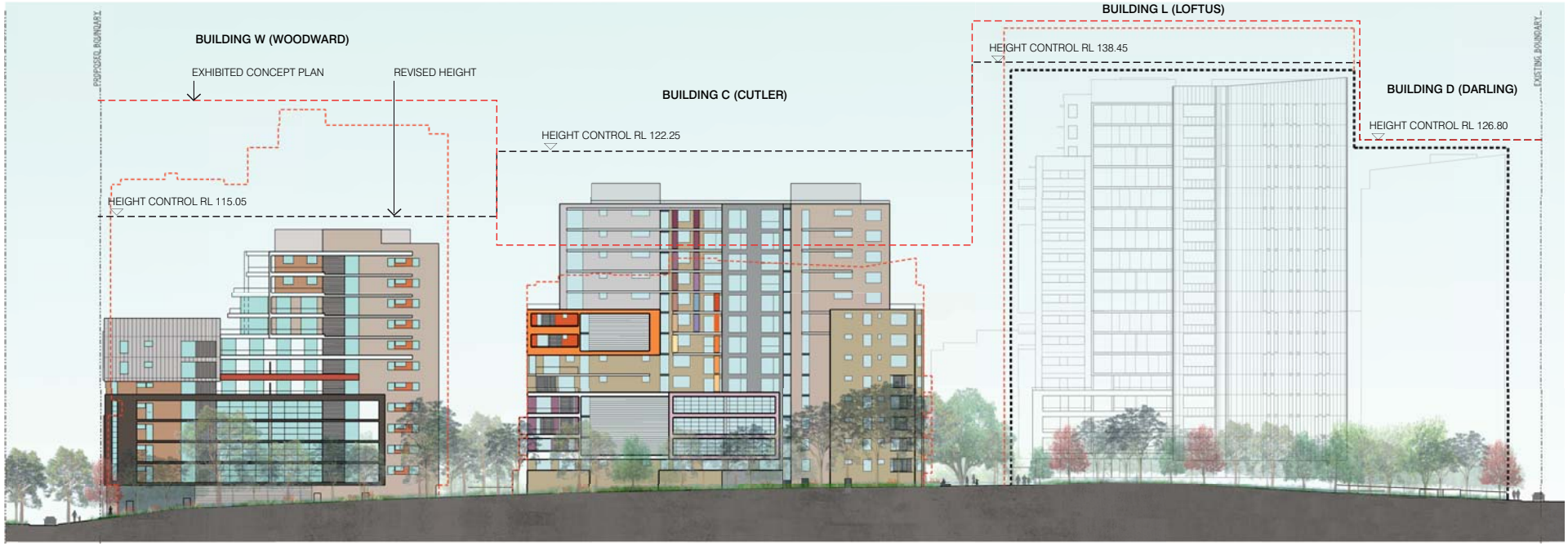
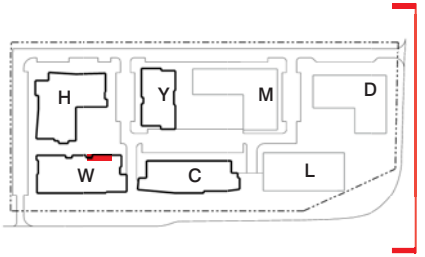


Figure CP 3201: Epping Road elevation

FOR INFORMATION, NOT FOR APPROVAL

Herring Road Elevation



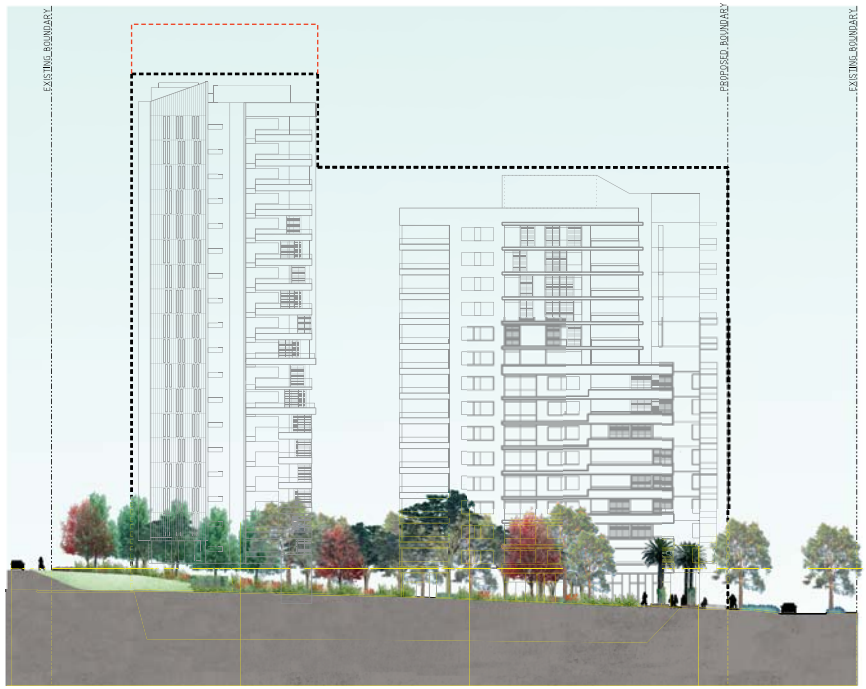
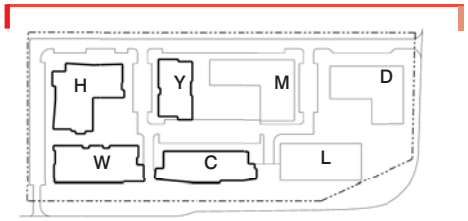


Figure CP 3202: Herring Road elevation

FOR INFORMATION, NOT FOR APPROVAL

C1 DESIGN SCHEME

New Long Road Elevation



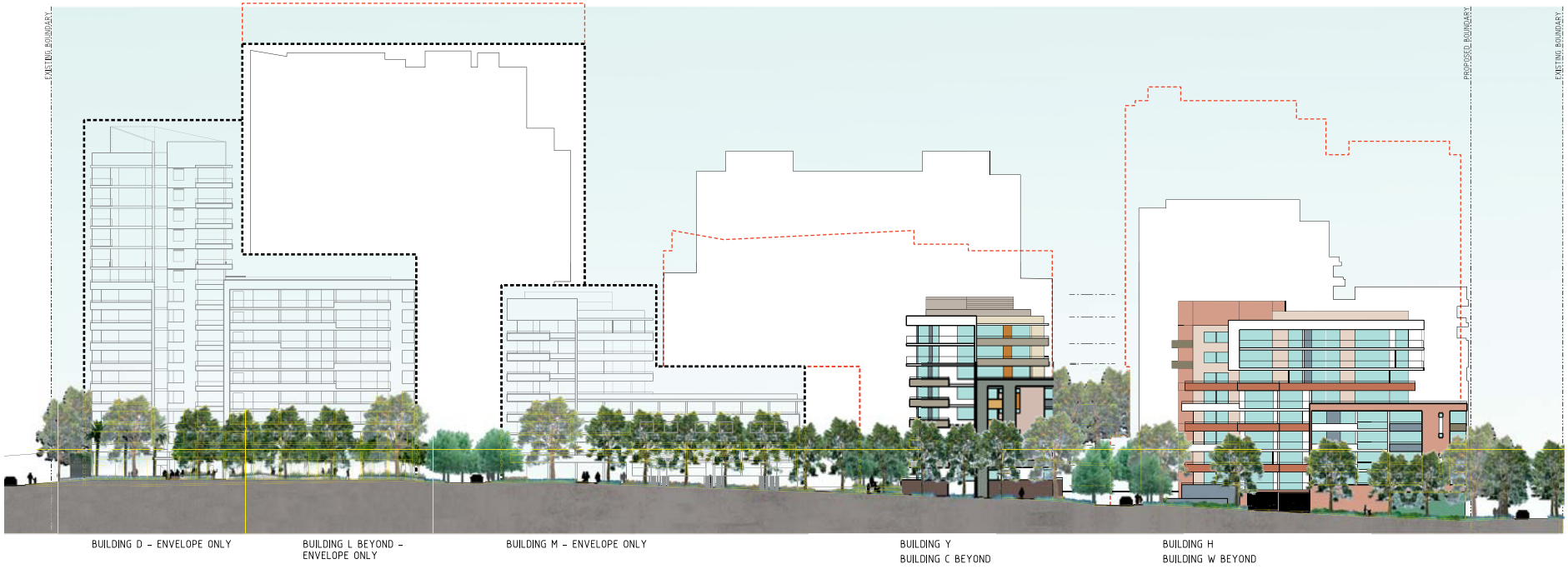


Figure CP 3203: New Long Road elevation

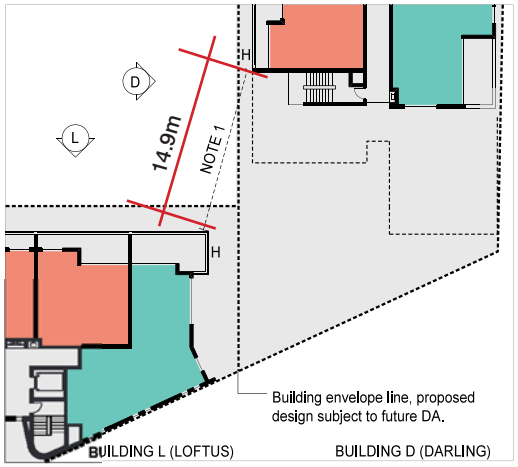
FOR INFORMATION, NOT FOR APPROVAL

APPENDIX

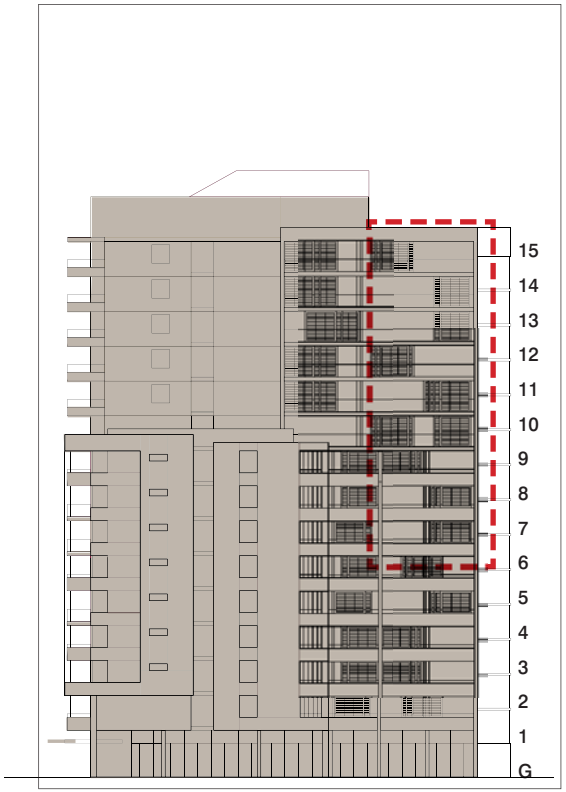
APPENDIX

Building Separation Detail and Residential Amenity

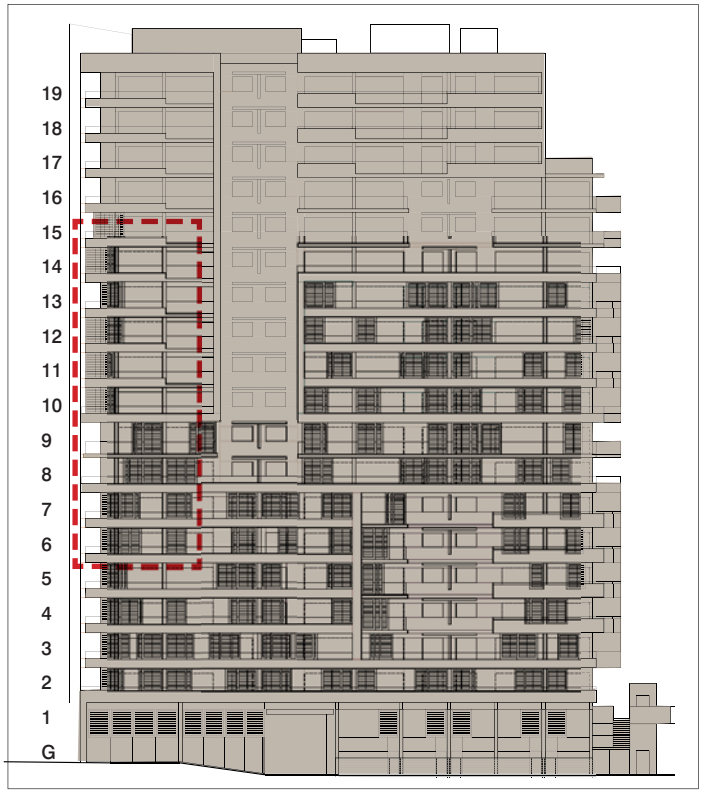
DETAIL C
TYPICAL PLAN



Building D - west elevation



Building L - north elevation



NOTE 1:
X = building separation by RFDC; Y= proposed design.
X =24m for 9 storeys and above/over 25m (H -H); Y=14.9m.
Where building separation departs from thos recommended in the RFDC, windows will be offset and screens used to ensure visual privacy.

Figure Appendix 1: Demonstrating residential amenity can be achieved for buildings with separations less than recommended in the Residential Flat Design Code

Deep Soil Zone + Communal Open Space

AREAS KEY	JANUARY 2011 SCHEME APPROX AREA (m2)	FEBRUARY 2012 SCHEME APPROX AREA (m2)	% DIFFERENCE
INTERNAL ROADS	2075	1507	28% reduction
PUBLIC OPEN SPACE	2425	2655	9% increase
PUBLICLY ACCESSIBLE COMMUNAL OPEN SPACE	7430	8135	9% increase
COMMUNITY FACILITY	80	234	292% increase
PRIVATE COMMUNAL OPEN SPACE	765	740	3% reduction
PRIVATE OPEN SPACE	975	835	14 % reduction

0 5 10 20 60m

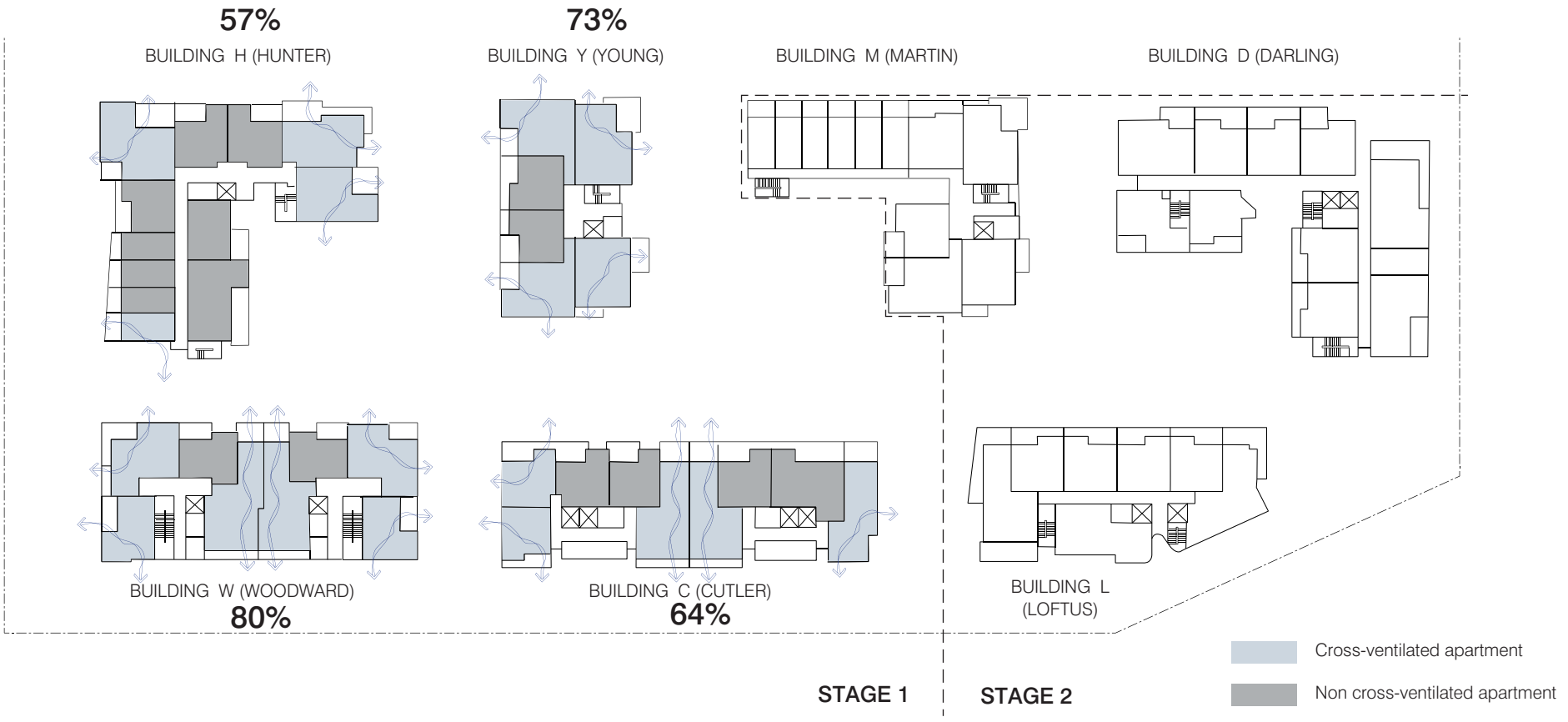
Figure Appendix 2: Deep soil zones + Communal Open space

APPENDIX

Natural Ventilation

STAGE 1 PA: SUBJECT TO APPROVAL AS PART OF CONCEPT PLAN APPLICATION

STAGE 2: INDICATIVE DESIGN APPROVAL OF APARTMENT LAYOUT SUBJECT TO STAGE 2 DA



TOTAL PERCENTAGE OF CROSS-VENTILATED APARTMENTS IN STAGE 1 = 69%

0 5 10 20 60m

Figure Appendix 3: Natural ventilation showing typical floor plan

Private Open Space at Ground Level

Figure Appendix 4: Private open space at ground level

APPENDIX

South West Aspect Apartments

STAGE 1 PA: SUBJECT TO APPROVAL AS
PART OF CONCEPT PLAN APPLICATION

STAGE 2: INDICATIVE DESIGN APPROVAL OF
APARTMENT LAYOUT SUBJECT TO STAGE 2 DA

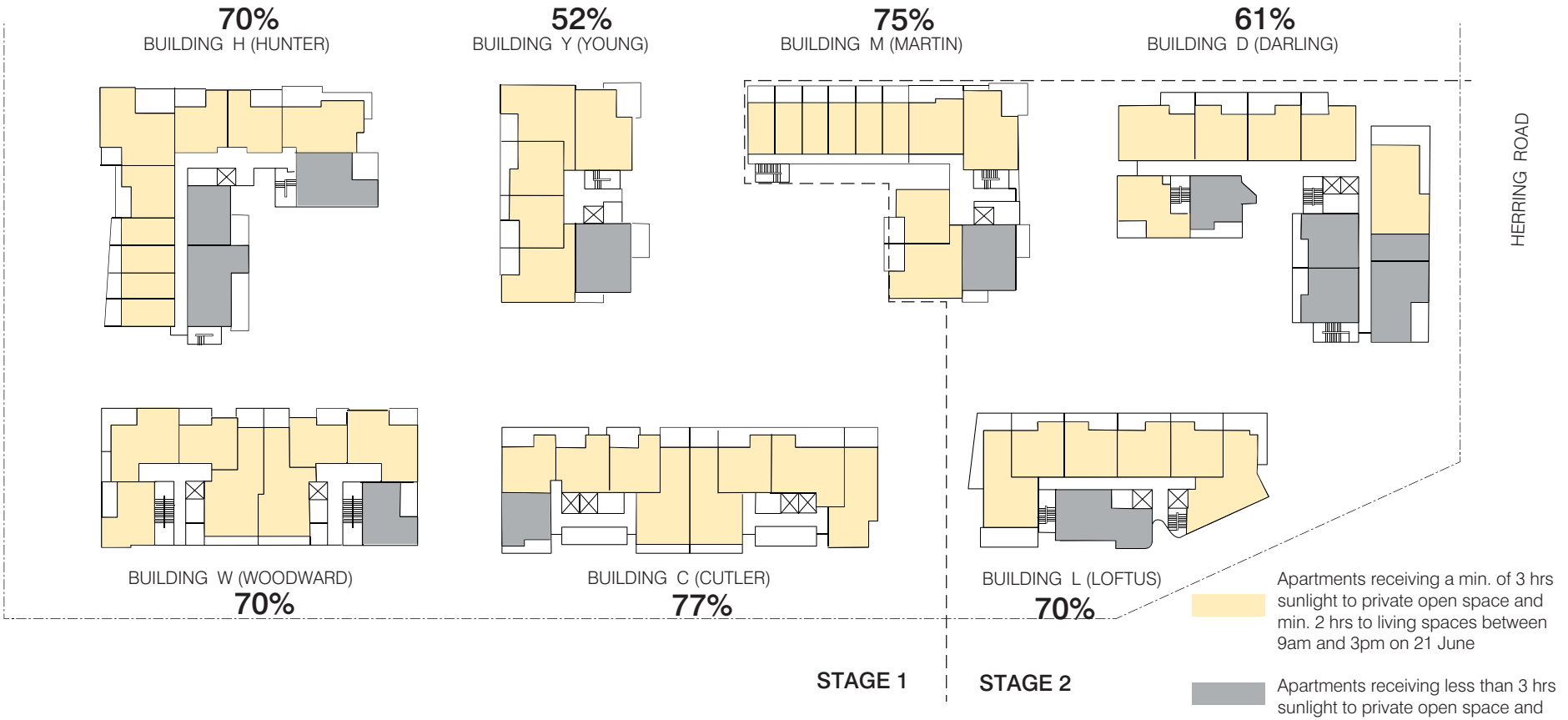
TOTAL PERCENTAGE OF SINGLE ASPECT APARTMENTS WITH A SW/SE ORIENTATION = 3%

Figure Appendix 5: Single aspect apartments showing typical floor plan

Daylight Access

STAGE 1 PA: SUBJECT TO APPROVAL AS
PART OF CONCEPT PLAN APPLICATION

STAGE 2: INDICATIVE DESIGN APPROVAL OF
APARTMENT LAYOUT SUBJECT TO STAGE 2 DA



TOTAL PERCENTAGE OF APARTMENTS RECEIVING ADEQUATE DAYLIGHT ACCESS = 69%

Figure Appendix 6: Daylight access showing typical floor plan