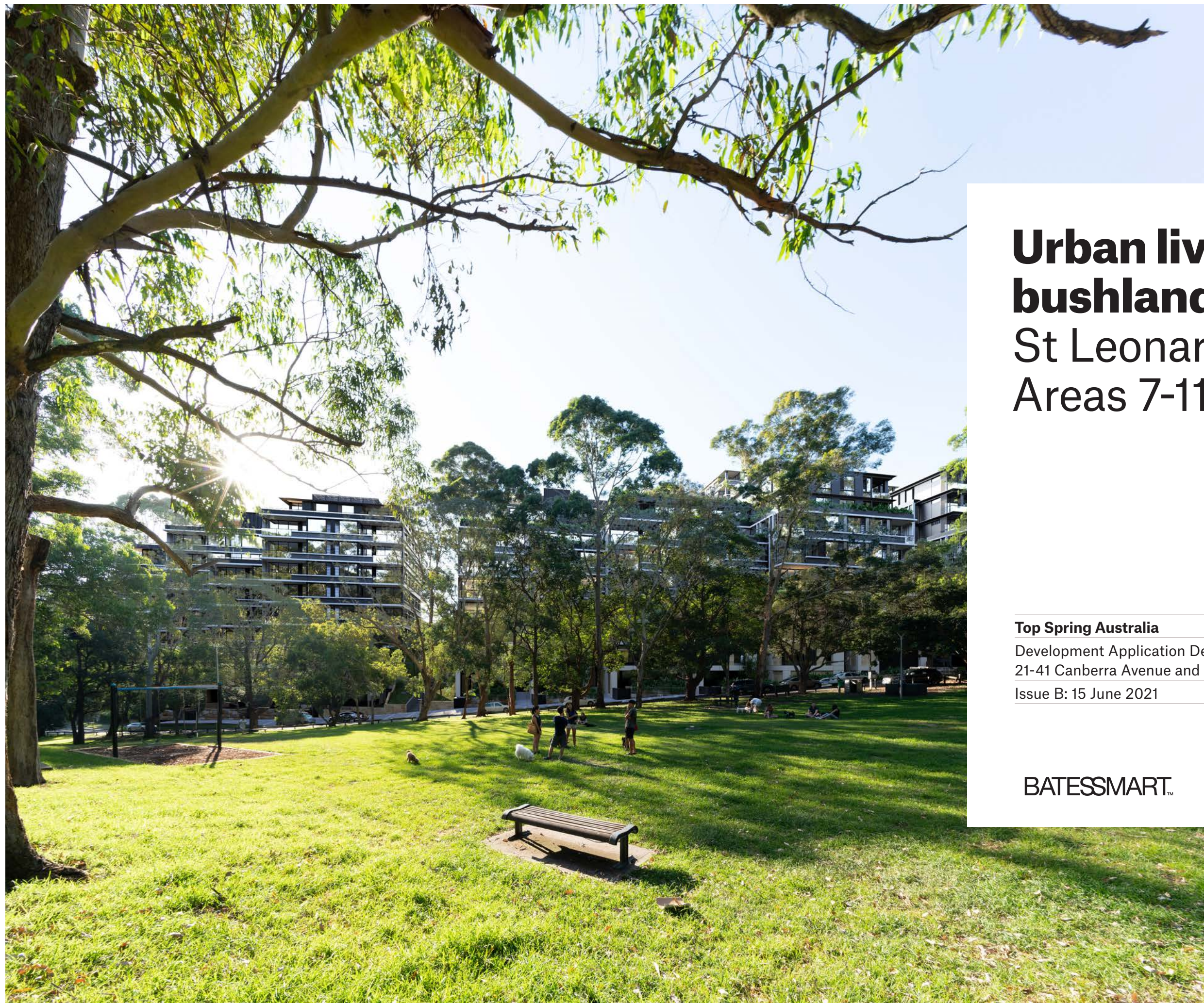




Urban living in a bushland setting

St Leonards South Areas 7-11

Top Spring Australia

Development Application Design Report for
21-41 Canberra Avenue and 18-32 Holdsworth Avenue

Issue B: 15 June 2021

BATESSMART™

 TOPSPRING

Transformative
thinking for the
future city.

Bates Smart is a city-making design practice. We combine architecture, interior design and urban design to create places and spaces that improve people’s lives. We have been transforming Australian cities for 165 years, improving our surroundings, our opportunities, our growth and our quality of life.



Melbourne
1 Nicholson Street
Melbourne
Victoria 3000
Australia

T +61 3 8664 6200
F +61 3 8664 6300

batesmart.com

Sydney
43 Brisbane Street
Surry Hills
New South Wales 2010
Australia

T +61 2 8354 5100
F +61 2 8354 5199

ABN 68 094 740 986

Client

Top Spring Australia

Design Team

Architecture + Urban Design Bates Smart

Landscape Arcadia Landscape Architects

Project Manager PDS Group

Town Planning Mecone

Structure + Civil Meinhardt Bonacci

Building Services IGS

Traffic JMT

Public Art FLYNN

Fire Engineer Core Engineering

Waste Elephants Foot

Flooding Cardno

BCA + Accessibility Blackett Maguire & Goldsmith

Cost Planner WT Partnership

Project Number S12199

Disclaimer

The Scheme (drawings documents information and materials) contained within this brochure have been prepared by Bates Smart Architects Pty Ltd solely for the purpose of providing information about potential schemes. The materials should not be considered to be error free or to include all relevant information. Nothing in this brochure in any way constitutes advice or a representation by Bates Smart nor does the transmission or sending of these materials create any contractual relationship. Neither Bates Smart nor any of its officers, employees, agents or contractors, will be liable for any direct or indirect loss or damage you may suffer or incur arising directly or indirectly from the use of any materials from this brochure. Bates Smart retains copyright and all present and future moral rights in all intellectual property in all the materials authored by it and in any works executed from these drawings and documents. Note: All area calculations are advisory only and all figures should be checked and verified by a licensed surveyor.



Contents

1.0	Introduction	05	5.0	Landscape	47	Appendices		
			5.1	Landscape Concept	48	A1	Development Application Drawings	69
2.0	Site and Context Analysis	07	5.2	Landscape Masterplan	49	A2	ADG Compliance Checklist	148
2.1	Local Context	08	5.3	Roof Terraces	50	A3	Materials and Finishes Board	159
2.2	The Site	10	6.0	Facade and Materials	51		Index of SEPP 65 Principles	
2.3	Topography	10	6.1	Facade Concept	52		Principle 1: Context and Neighbourhood Character	6
2.4	Public Domain Enhancements	11	6.2	Kit of Parts	55		Principle 2: Built Form and Scale	16
2.5	Existing Trees	11	6.3	Material Palette	56		Principle 3: Density	67
2.6	Allowable Envelope	12	6.4	Horizontal Facade Expression	57		Principle 4: Sustainability	62
2.7	Lane Cove Council Reference Scheme	12	6.5	Vertical Facade Expression	58		Principle 5: Landscape	47
3.0	Massing Approach	13	6.6	Sandstone Base: Townhouses/Garden Apartments	59		Principle 6: Amenity	28
3.1	Stepped Streetwall Buildings	14	6.7	Upper Level Penthouse floors	60		Principle 7: Safety	24
3.2	Staggered Park frontage	14	7.0	Sustainability	61		Principle 8: Housing Diversity and Social Interaction	68
3.3	Stepped building heights	15	7.1	Environmentally Sustainable Design	62		Principle 9: Aesthetics	51
3.4	South facing corner views	15	8.0	Parking and Services	63			
3.5	Townhouses to Canberra Avenue	16	8.1	Parking Access Strategy	64			
3.6	Stepped Plinth to River Road	16	8.2	Basement Parking Layout	64			
3.7	Open Space Strategy	17	8.3	Bicycle Parking	65			
3.8	Rooftop Amenity	17	8.4	Waste Collection	65			
4.0	Design Description	18	8.5	Building Services Strategy	66			
4.1	Overview	19	9.0	Density and Yield	67			
4.2	Lower ground level (Canberra Avenue)	21	9.1	Density	68			
4.3	Upper ground level (Holdsworth Avenue/Green Spine)	26	9.2	Dwelling Size and Mix	68			
4.4	Typical floor apartments	30	9.3	Accessibility and Adaptable Housing	68			
4.5	Penthouse levels	36	9.4	Parking	68			
4.6	Compliance with Site Specific Planning Controls	38	9.5	Apartment Mix and Affordability	68			
			9.6	Staging	68			

1.0 Introduction

SEPP65 Verification Statement

We confirm that Matthew Allen of Bates Smart Architects directed the design of the Development Application and that Mr. Allen is registered as an architect in accordance with the Architects Act 2003.

We confirm that in our professional opinion the proposed design is consistent with the design principles set out in State Environmental Planning Policy 65 – Design Quality of Residential Flat Development and has been designed with regard to the Apartment Design Guide (ADG).



This Design Report has been prepared by Bates Smart Architects on behalf of Top Spring Australia and forms part of a Development Application to be submitted to Lane Cove City Council.

It describes the proposed urban design and architectural response for the site known as 21-41 Canberra Avenue and 18-32 Holdsworth Avenue within the St Leonards South Masterplan Area. The proposal has been developed with consideration to the Lane Cove LEP and DCP as well as site specific DCP for St Leonards South and associated Landscape Masterplan.

In summary, the development proposes:

- 329 dwellings in 5 buildings
- 3 park-front buildings with a primary frontage to Canberra Avenue
- 2 taller buildings with a primary frontage to Holdsworth Avenue
- A public through site link connecting the two streets
- A combined basement carpark over 3.5 levels
- 2,500m2 communal garden at the heart of the site
- Communal roof terraces on top of the buildings
- Landscaped setbacks to all street frontages

Reinforcing the key principles of the St Leonards South Masterplan

Our vision is for a sustainable and permeable residential precinct that celebrates the site's location at the transition from the high-density transit-oriented development along Pacific Highway to the bushland corridor of Berry's Creek in Wollstonecraft.

Our massing strategy proposes a series of stepped building forms which adopt the north-south street alignment of the local area but stagger along the park frontage to present an open and expressive form to Newlands Park. Taking advantage of the steep hillside, duplex townhouse typologies activate the Canberra Avenue frontage.

The landscaped ground plane consolidates communal gardens in the Green Spine, improves the public link connecting Holdsworth and Canberra Avenues and increases the size of the Holdsworth Avenue Pocket Park.

2.0

Site and Context Analysis

2.1 Local Context

St Leonards South is a 6-hectare precinct located immediately south-west of the St Leonards Strategic Centre, recently rezoned from a low-density residential precinct to R4 High Density Residential. The existing housing precinct is bounded by the rail line south of St Leonards Station, Marshall Avenue, the eastern side of Park Road and the northern side of River Road.

The local area includes two existing open spaces in close proximity to the site:

- Newlands Park (1 Ha): immediately opposite the site, the park includes open lawn areas and a playground within a setting of mature trees;
- Gore Hill Oval (3.3 Ha): a sports oval surrounded by mature trees which is subject to a potential upgrade by Willoughby Council including play area, half court, fitness equipment, picnic shelter and possible indoor multi-use sports facility;

The existing character of the site is largely determined by its topography, vegetation and built form. The significant grade changes both north-south and west-east provide for varied views, elevated in places. The existing tree cover, in both public and private ownerships, creates a green, leafy character. Street tree planting, where well established, tends to limit expansive views in some directions whilst focusing views down the streets.

Key

St Leonards South Masterplan

Site boundary

The local area has a leafy and relatively tranquil character which will be retained through retention of significant tree planting along streets and in public and private open space.

Principle 1: Context and neighbourhood character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.



1



2

Pictured

- 1. Canberra Avenue looking south
- 2. Newlands Park
- 3. Canberra Avenue looking south
- 4. 39/41 River Road property
- 5. 19 Canberra Avenue
- 6. Southern end of Holdsworth Avenue
- 7. Holdsworth Avenue looking north



3



7



4



5





2.2 The Site

The site is approximately 1.26 hectares in size and currently accommodates 20 residential lots, comprising a mix of one to two storey dwellings fronting Canberra Avenue and Holdsworth Avenue.

Immediately to the north and west of the site are other similar one to two storey residential dwellings. Newlands Park lies to the south east.

The lot ownership is consistent with Areas 7-11 defined in Lane Cove Council's recently amended LEP.



2.3 Topography

The site has considerable level change falling over 8m west to east and 18m north to south. Holdsworth Avenue, on the western boundary falls 4.7m while the longer Canberra Avenue frontage falls 8.5m.



2.4 Public Domain Enhancements

The existing site is bounded by River Road, Canberra Ave, Holdsworth Ave, and a pedestrian link connecting Holdsworth Ave to River Road.

Council's rezoning includes a series of public domain upgrades to enhance the landscape character of the local area. The end of Holdsworth Avenue is to be closed and turned into a pocket park, and a new east/west through site link will connect Berry Road and Holdsworth Ave to Newlands Park. Council's draft rezoning proposes a 15m wide link on the land immediately north of the site.



2.5 Existing Trees

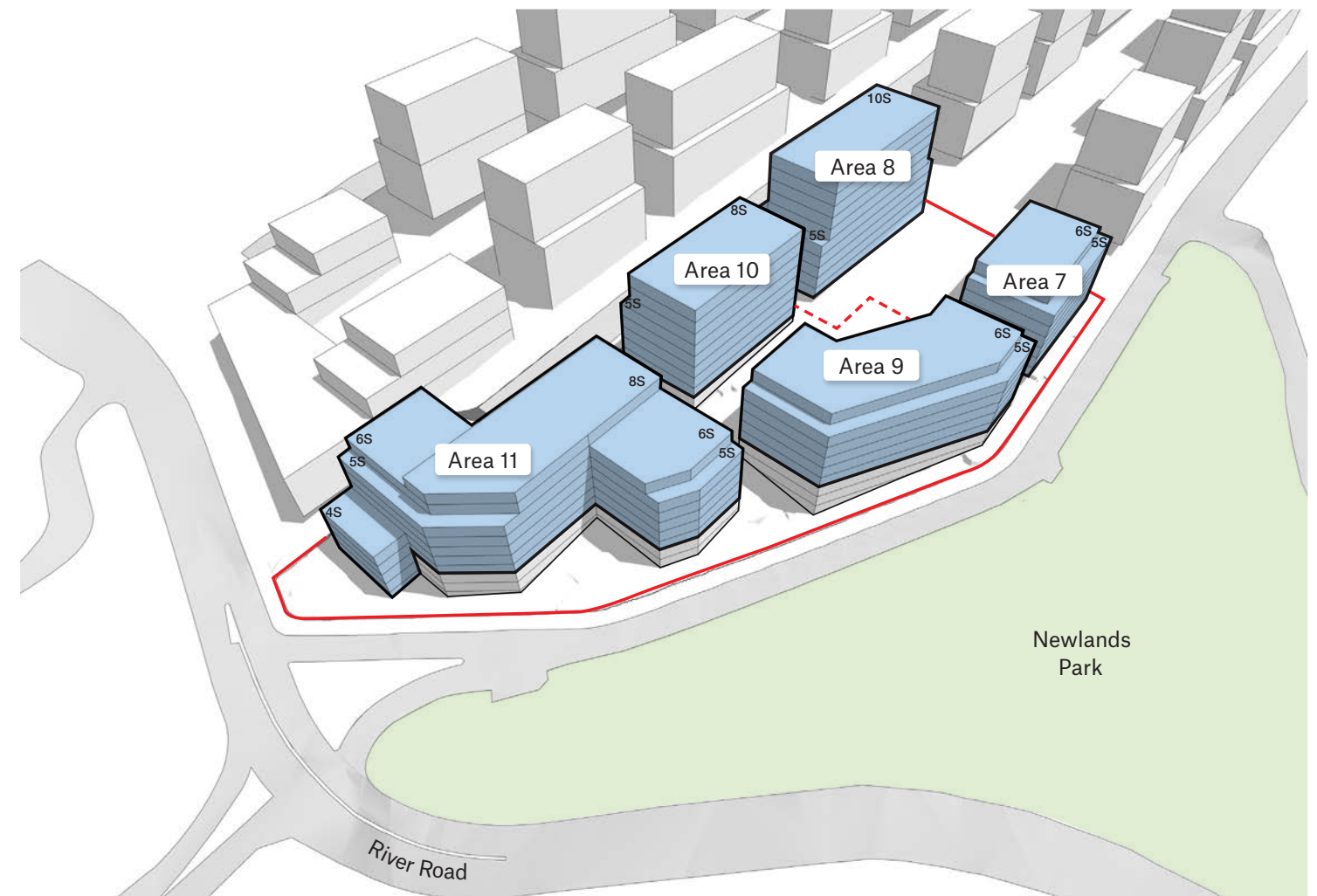
The Arborist has identified significant trees recommended for retention, including the following trees on site:

- A. *Eucalyptus saligna* (Sydney Blue Gum)
- B&C. *Liquidambar styraciflua* (Liquidamber)
- D. *Eucalyptus scoparia* (Wallangara White Gum)



2.6 Allowable Envelope

The LEP height controls propose a maximum height limit of 25m to areas 7 and 9, 31m to areas 10 and 11, and 37m to area 8. The proposed envelope is set back 4m from each of the street frontages and a further 3m above Level 5. Along the River Road frontage, the envelope is stepped further to mitigate overshadowing of the residential area to the south.



2.7 Lane Cove Council Reference Scheme

The St Leonards South DCP includes indicative massing shown above. While the DCP proposed 6 storeys fronting the park on Areas 7, 9 and 11, it allows for any area lost due to the steep crossfalls to be transferred to the top of the buildings.

Massing on Areas 7, 8, 9 and 10 is aligned with the street frontage while massing on Area 11 – a triangular site – shows a largely orthogonal floorplate stepping away from Canberra Avenue.

3.0

Massing Approach



3.1 Stepped Streetwall buildings

On Holdsworth Avenue and the northern part of Canberra Avenue, where building alignments run north/south, the massing and street frontage heights of building 7, 8 and 10 are provided precisely in accordance with the DCP.



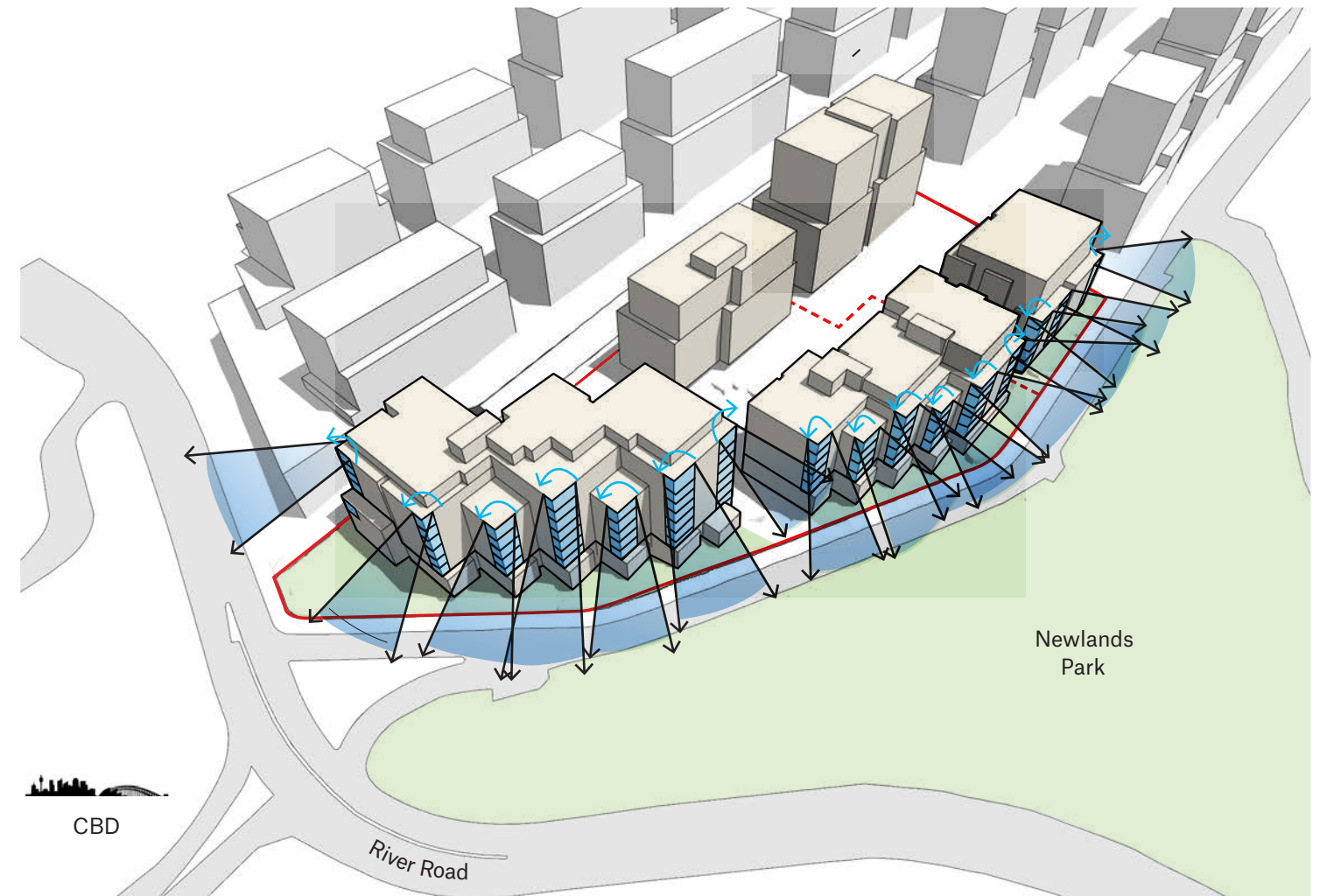
3.2 Staggered park frontage

Where Canberra Avenue curves to the southwest in front of areas 9 and 11, we have proposed a more nuanced approach than the unarticulated 5+3 storey streetwall suggested by the DCP envelopes. The massing steps both in plan – expressing many corners rather than a consistent wall – and in section – expressing a 2-storey base and a setback roof, rather than a 5-storey streetwall with 3 storeys above.



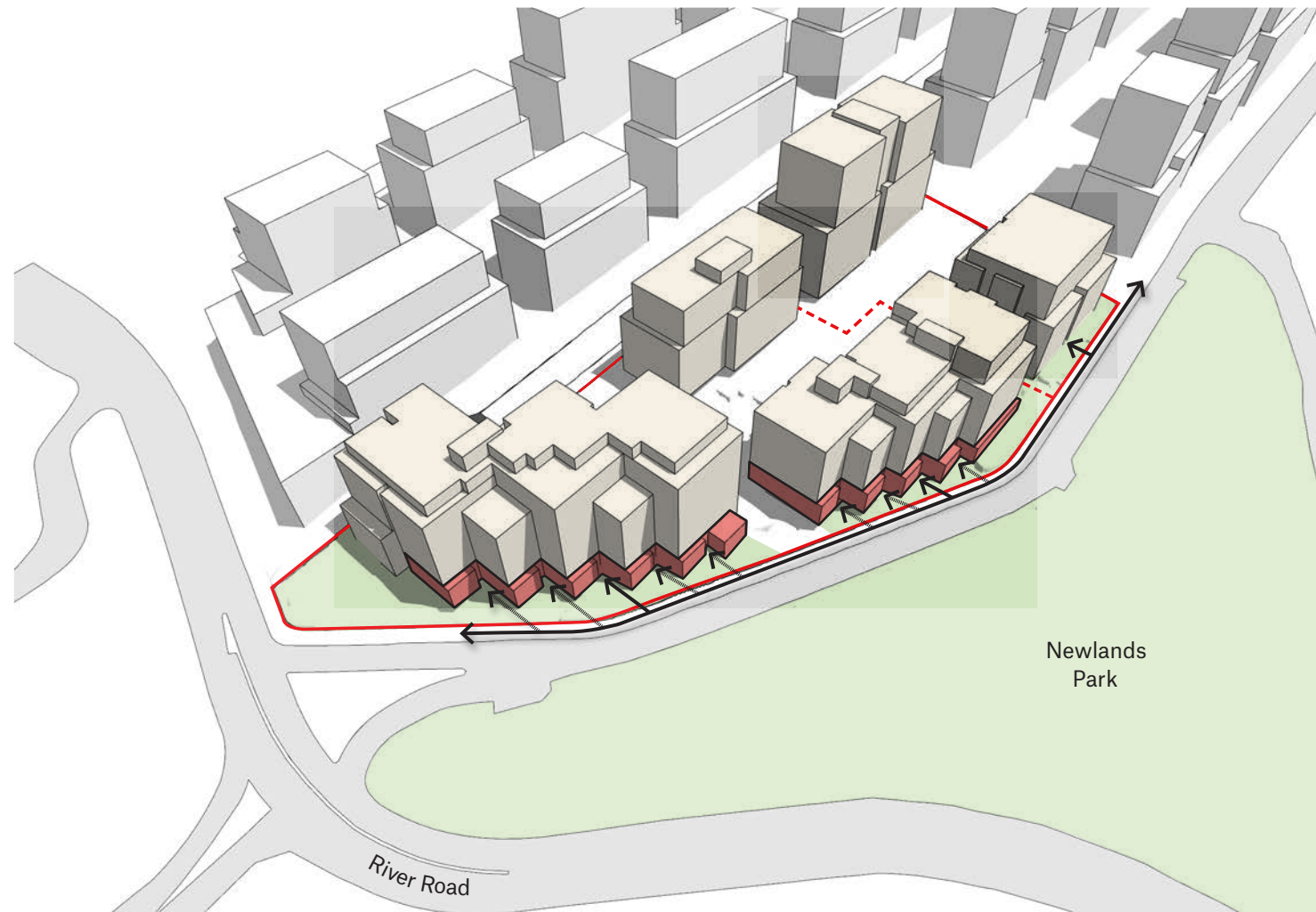
3.3 Stepping building heights

Overall building heights step down the hillside providing a transitional built form at the southeastern corner of the St Leonards South precinct. In accordance with the DCP controls, building height is expressed in number of complete storeys.



3.4 South facing corner views

The proposed massing compensates for limited solar access by providing south and east facing apartments with improved cross ventilation – maximising dwellings with corner or dual aspect – and excellent views over the park and, from upper levels, views to the Sydney CBD.



3.5 Townhouses to Canberra Avenue

At the base of the buildings, individually expressed two-storey townhouses slide forward from the main building volume, providing activation and human scale to the street and park frontage. Between the townhouses are access points into the buildings for apartment lobbies, bike parking and building services.



3.6 Stepped Plinth to River Road

On the southern frontage to River Road, the massing is pulled back to retain the magnificent Sydney Blue Gum. In this location the design proposes an expressed four storey streetwall as a transitional height element stepping down from the Area 20 massing to the 2-storey townhouses fronting Canberra Avenue.



3.7 Open space strategy

The ground level open space offers a mix of public, private and communal open space.

- A 6m wide publicly accessible through site link connects Holdsworth Avenue to Newlands Park immediately north of Building 11.
- Alongside council's proposed Holdsworth Avenue pocket park, an additional area of communal open space is provided in the sunniest location.
- To the north of the link is the Green Spine - a communal open space for residents' use.
- Immediately to the north of the site is a new public green link running east west through the precinct.
- Newlands Park can be extended by council to the site boundary in future, when Canberra Avenue is closed.



3.8 Rooftop amenity

The stepped form provides increased opportunities for usable roof terraces. Building 9, 10 and 11 all propose communal roof terraces which offer sunny outdoor areas to occupants of apartments with limited solar access.

4.0

Design Description

4.1 Overview

Consistent with the St Leonards South Masterplan, the design proposes one apartment building on each of the five 'superlots'.

Each building has a primary entry from the street and a secondary entry from the green spine. Deceptively simple in plan, the steeply sloping site is complex in section: a 22m crossfall means seven different levels interface with the ground.

On Canberra Avenue, Buildings 7, 9 and 11 meet the street three levels below the green spine.

- Building 7 has eight residential levels (including 2 part storeys), three of which are set back above a five storey street wall
- Building 9 has nine residential levels (including 3 part storeys) which step back and away from the street
- Building 11 has 10 residential levels (including 3 part storeys) which step back and away from the street, with the topmost storey presenting to the Holdsworth Avenue side

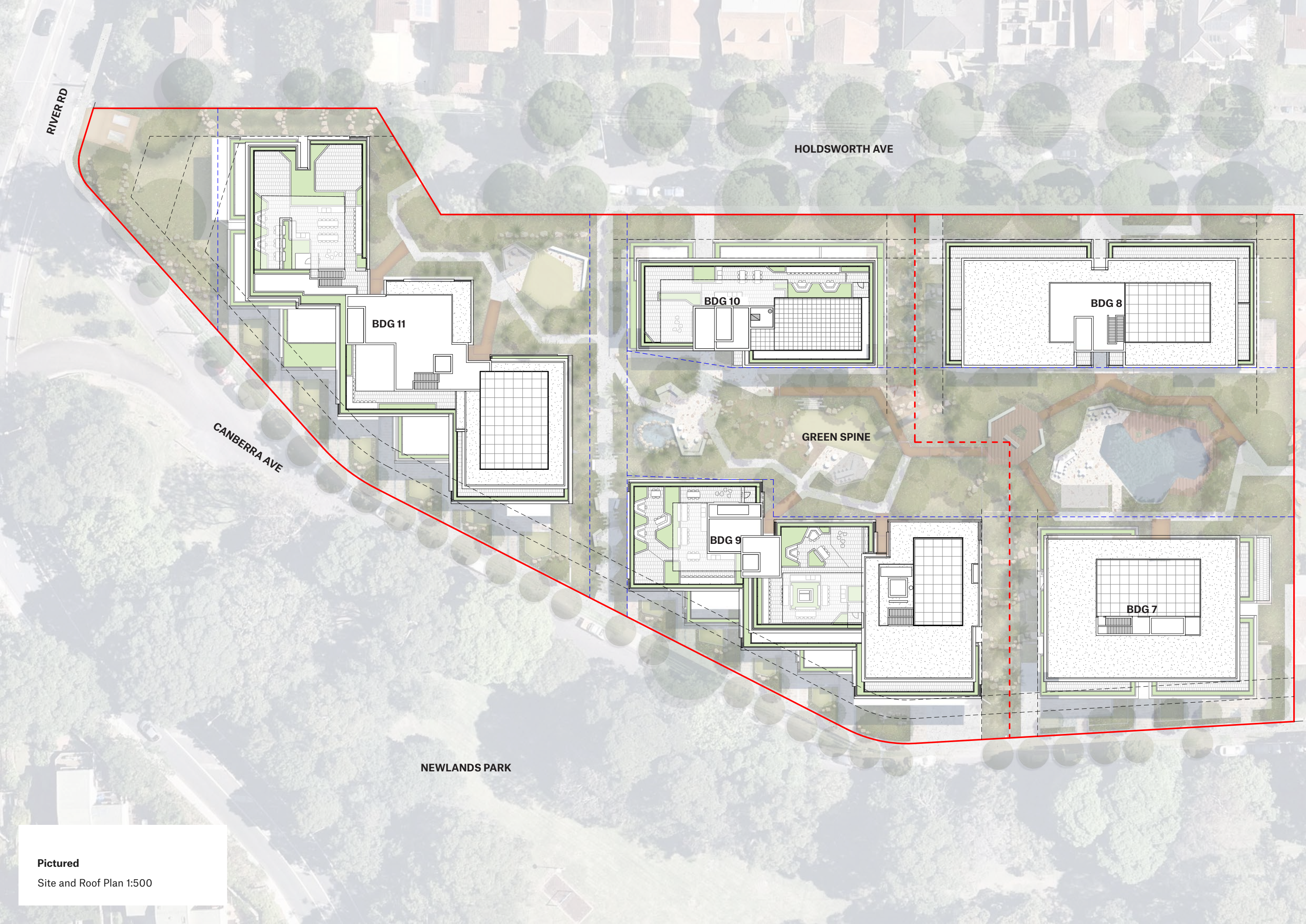
On Holdsworth Avenue, Buildings 8 and 10 are defined by a 5 storey streetwall with set back upper floors.

- Building 8 has eleven residential levels (including 1 part storey) made up of the five-storey streetwall and five upper levels, plus a lower ground level facing into the green spine
- Building 10 has eight residential levels made up of the five-storey streetwall and three upper levels. It is the only building which has both its street lobby and green spine lobby on the same level.

Principle 2: Built form and scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings. Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation 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.





RIVER RD

HOLDSWORTH AVE

CANBERRA AVE

BDG 11

BDG 10

BDG 8

GREEN SPINE

BDG 9

BDG 7

NEWLANDS PARK

Pictured

Site and Roof Plan 1:500

4.2 Lower Ground Level

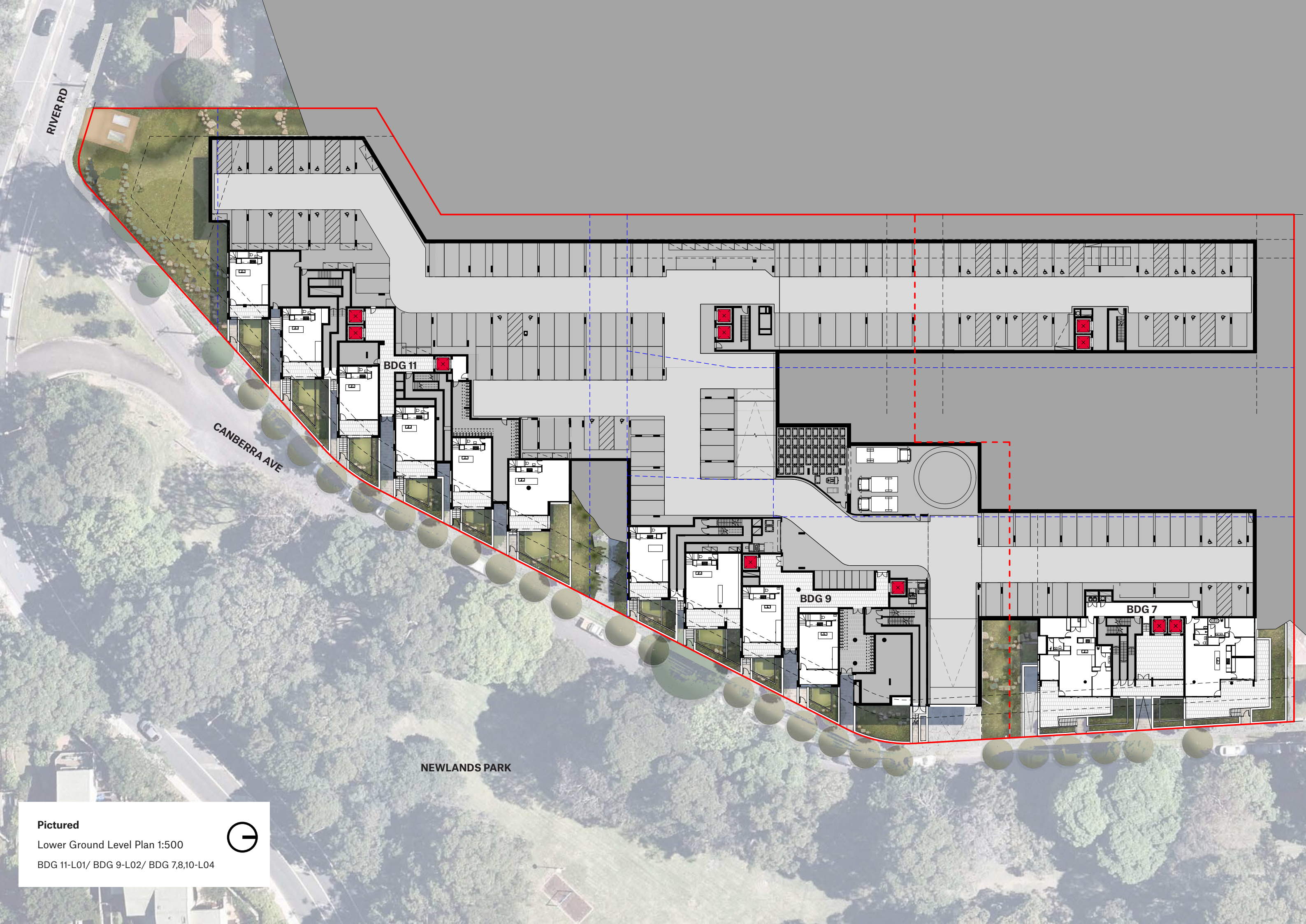
Fronting Canberra Avenue, the scheme proposes a sequence of two storey townhouses to provide passive surveillance and activation of the park frontage

Each townhouse is expressed separately, with building breaks accommodating access points into apartment lobbies, bike parking, fire escapes and service areas. The two storey townhouses 'sleeve' the lower levels of the basement carpark, with the lowest basement floor aligning with the lowest residential level.

The basement extent has been carefully considered to allow retention of existing significant trees and provide extensive deep soil, with a focus on the Green Spine and at the perimeter of the site.

All cars and trucks will access the site from a single point of entry on Canberra Avenue. Trucks up to 4.5m height have direct access into a central loading area for waste collection and removalists. Parking is accommodated over 2-4 levels under each building depending on the parking requirements for each core.





RIVER RD

CANBERRA AVE

BDG 11

BDG 9

BDG 7

NEWLANDS PARK

Pictured

Lower Ground Level Plan 1:500

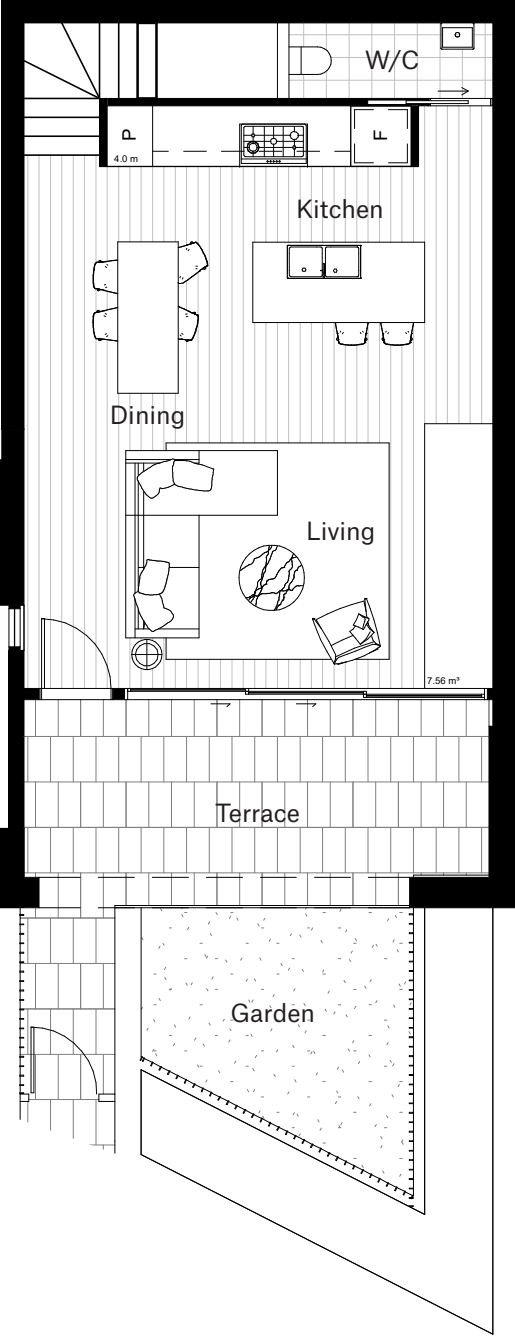
BDG 11-L01/ BDG 9-L02/ BDG 7,8,10-L04



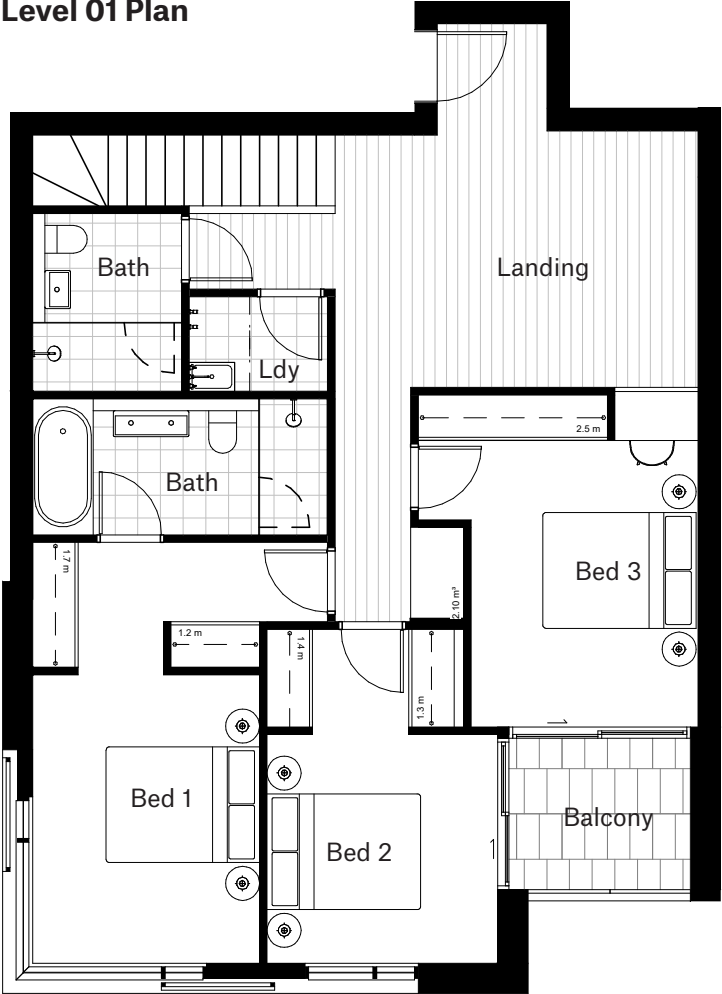
4.2.1 Townhouses

Each townhouse includes a direct street entrance and an elevated garden with view over the street. Living rooms are at ground level with three bedrooms on the upper floor. Carpark and lobby access is provided from the upper level.

Ground Level Plan



Level 01 Plan





4.2.2 Apartment Lobbies

Each of the apartment buildings have lobby entries on Canberra Avenue located discreetly between the expressed townhouses. Buried into the hillside, the lobbies receive direct daylight from the glazed entry doors which is contrasted by a feature lighting design alongside each set of lifts.



4.2.3 Vehicle Entry

The main vehicle entry is located at the northern end of building 9. The design seeks to mitigate impacts on surrounding dwellings through appropriate separation and screening. To both the north and south, the nearest dwellings are over 9m away and elevated 2m above the driveway, with plantrooms and/or planting providing a generous buffer. Immediately above the driveway, a deep planted terrace provides a buffer to the first residential level.

4.2.4 Future Canberra Ave closure

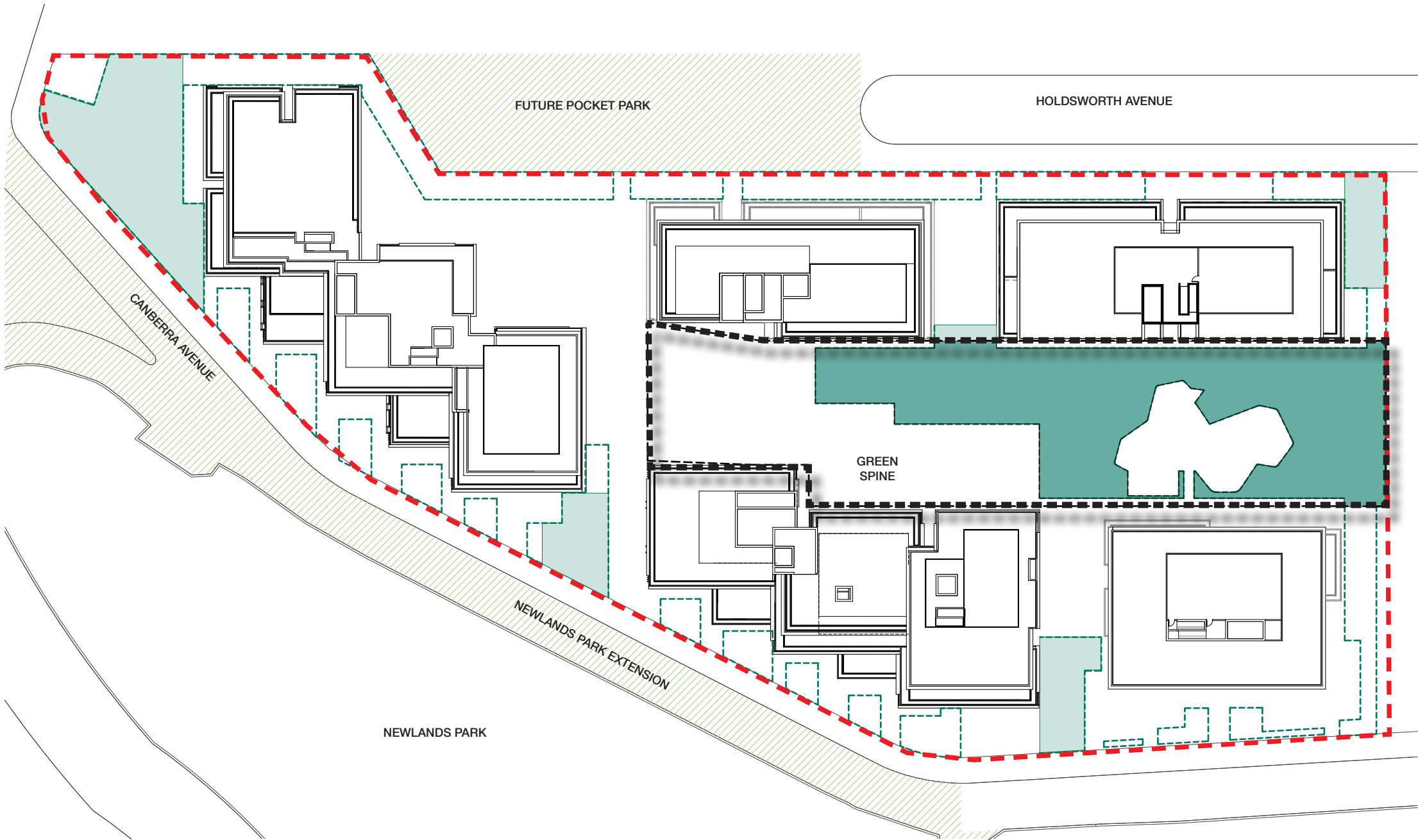
The street interface has been designed to accommodate the future closure of Canberra Avenue, with the vehicle access limited to the northern edge of area 9. The redesign of the park edge will need to accommodate a shared path in some form to maintain safe access to the front doors of each of the townhouses.

4.2.5 Deep Soil

The basements have been arranged to maximise deep soil in the Green Spine and at the perimeter of the site, particularly when proximate to retained trees. This results in very high levels of deep soil:

- More than 15% of the total site area has deep soil with a dimension greater than 6m
- More than 25% of the site area is deep soil if we include the landscaped front setbacks.
- More than 50% of the green spine is deep soil, even allowing for an impervious swimming pool

Key	
	Site Boundary
	Green Spine
	Deep soil in the Green Spine
	ADG Deep Soil
	Total Deep Soil
	Nominated area of Canberra Avenue closure & Holdsworth Avenue pocket park



4.3 Upper ground level

Three storeys above Canberra Avenue, the upper ground level/s connect each of the five buildings into the Green Spine and building 8, 10 and 11 to Holdsworth Avenue.

Buildings 8 and 10 address Holdsworth Avenue in a consistent streetwall, with building breaks defining the main lobby entries. Both building provide through lobbies with connection to the green spine. Buildings 7,9 and 11, which have street entries from Canberra Avenue, each have secondary lobbies into the green spine which are accessed via entry 'portals' which maintain privacy to adjacent apartments.

In order to maximise the generous landscape character of the precinct, ground level terraces have been limited to the footprint of buildings to give existing and proposed trees the best chance to flourish.

Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.





Pictured

Upper Ground Level Plan 1:500

BDG 11-L04/ BDG 9,10-L05/ BDG 7-L06/
BDG 8-L06,07



4.3.1 Holdsworth Avenue lobbies

On Holdsworth Avenue, apartment building lobbies are strongly defined by a full height break in the streetwall, aligning the requirement for façade articulation with a clearly identifiable marker. A projecting canopy reinforces the entry upon approach.

4.3.2 Green Spine entry portals

Buildings 7, 9 and 11 all have lobbies at green spine level. To maximise privacy to adjacent apartments, each of the entries is accessed by a timber bridge/portal which screens views, improves acoustic protection and provides weather protection.



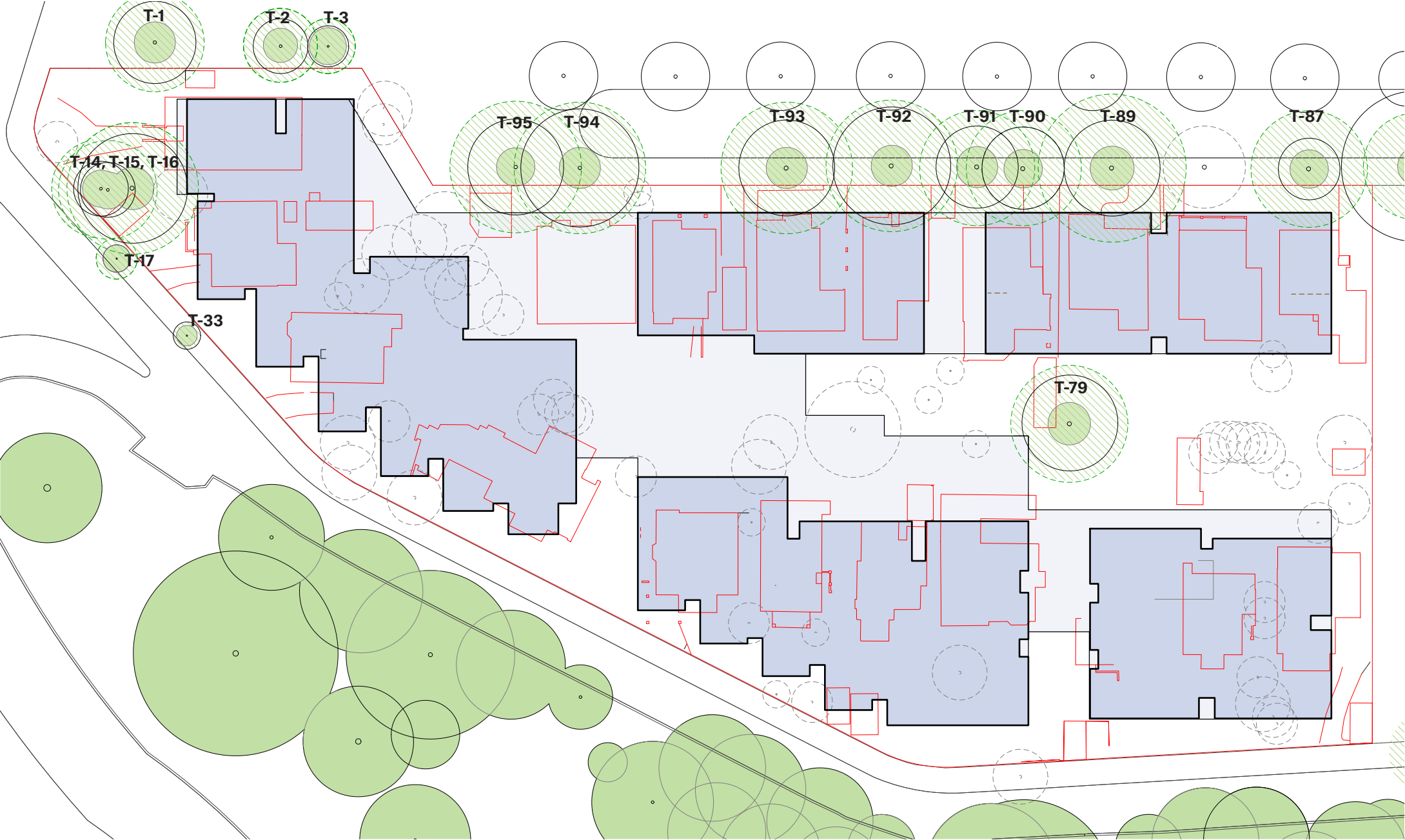
Pictured

- 1. Green Spine entry portal
- 2. Building 8 entry
- 3. Building 10 entry

4.3.3 Tree Retention

The arborist assessed 103 trees associated with the site and has provided detailed investigation of their significance, health and impact on TPZ zones from existing building and driveway locations. Seventeen significant trees within and directly surrounding the site are proposed for retention, including the majority of the street trees on Holdsworth and Canberra Avenue, the Blue Gum near River Road, and the White Gum in the green spine. Deep soil is proposed in the zones of tree retention and around the perimeter landscaped setbacks.

Key	
	Proposed Building Foot Print
	Proposed Basement Foot Print
	Existing Buildings and Driveways
	Retained Trees
	Tree Protection Zones
	Removed Trees



4.4 Typical Floor Apartments

On a typical level, apartments are grouped in clusters of rectilinear forms, with layouts arranged to maximise corner balconies and apartments with more than one aspect.

Buildings 8 and 10 – aligned with Holdsworth Avenue – are each expressed in two wings separated by a full height façade break which is aligned with the lift lobby.

Building 7 – deeper in plan and shorter in length – utilises a central core to reduce apartment depths and maximise residential amenity.

Building 9 and 11 both adopt multi-core floorplates to minimise the number of apartments sharing a lift, reduce the length of common corridors and maximising the number of apartments which are naturally cross ventilated.



Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

RIVER RD

HOLDSWORTH AVE

CANBERRA AVE

GREEN SPINE

NEWLANDS PARK

BDG 11

BDG 10

BDG 8

BDG 9

BDG 7

Pictured

Typical Plan 1:500

BDG 11-L05/ BDG 9,10-L06/ BDG 7,8-L08



4.4.1 Solar Access

The Apartment Design Guide requires that at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight from 9am-3pm at midwinter, but acknowledges that ‘achieving the design criteria may not be possible on some sites. This includes... on south facing sloping sites... where significant views are oriented away from the desired aspect for direct sunlight’. Areas 9 and 11 are steeply sloping south facing sites and benefit from significant views in a south easterly direction.

Our approach to optimise solar access is to:

- Arrange massing to maximise solar access to facade area
- Arrange apartments within the massing to maximise solar access
- Deliver 70% of apartments sitewide with 2 hours solar access
- Ensure apartments without 2 hours solar access have high amenity

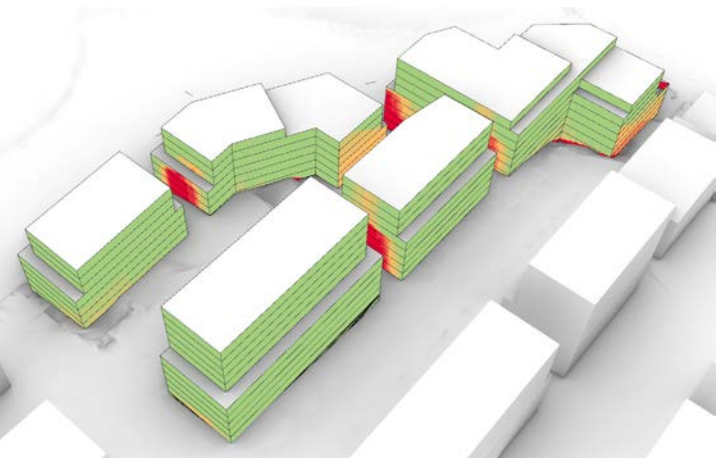
Maximising solar access to façade area

Initially, we compared three alternative massing strategies to satisfy ourselves that the preferred massing delivered the maximum amount of sunlight to the available façade area. These are illustrated below.

LCC reference scheme

- Only 30% of Area 9 facade area receives >2 hours midwinter sun
- Only 25% of Area 11 facade area receives >2 hours midwinter sun

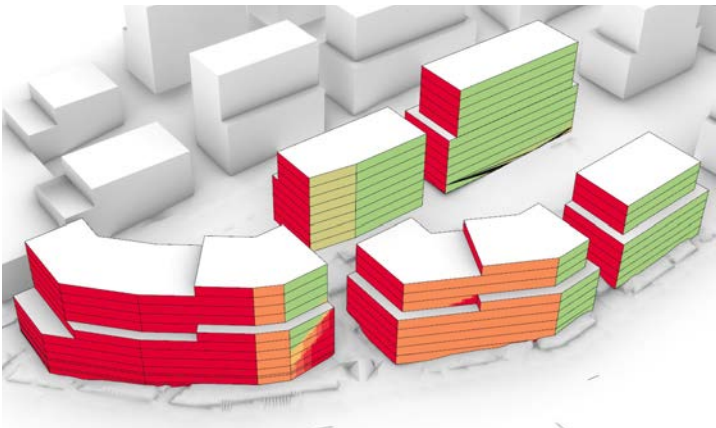
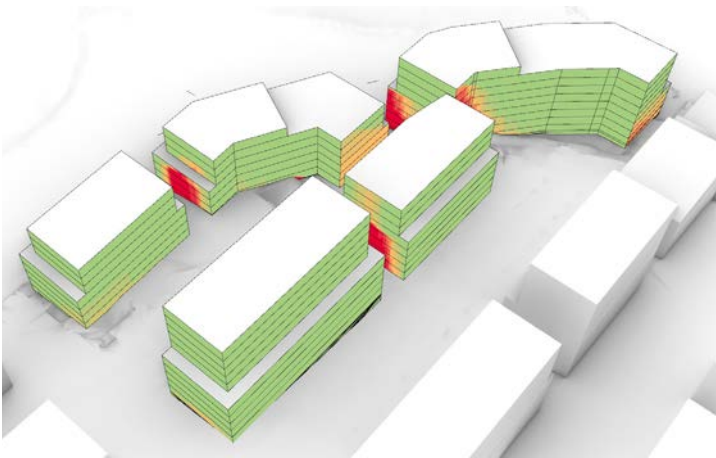
Mid-Winter Solar Analysis from 9am to 3pm						
Area	7	8	9	10	11	Total
2+ hours of sun	69%	76%	30%	52%	25%	49%
1-2 hours of sun	12%	9%	11%	26%	14%	13%
0-1 hours of sun	19%	14%	58%	22%	61%	38%



Canberra Avenue Streetwall scheme

- 30% of Area 9 facade area receives >2 hours sun (no change to reference scheme)
- 29% of Area 11 facade area receives >2 hours sun (4% more than reference scheme)

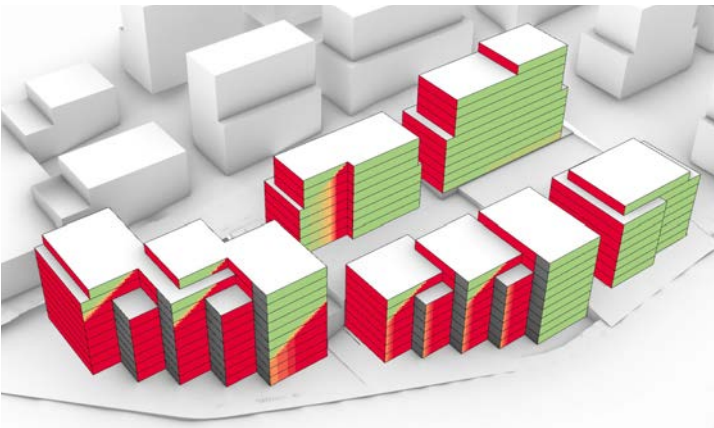
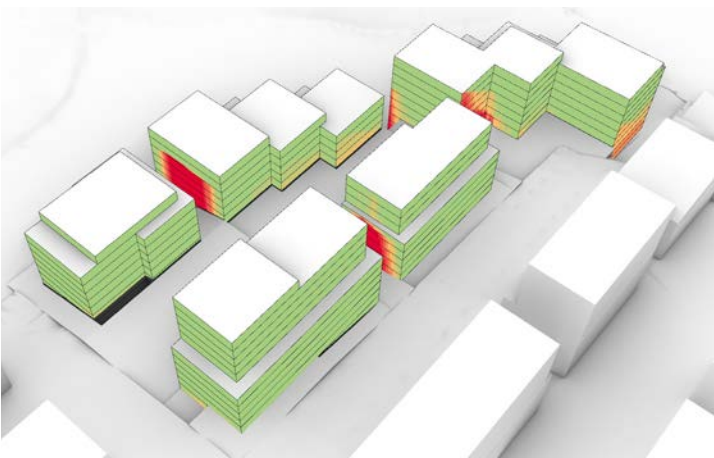
Mid-Winter Solar Analysis from 9am to 3pm						
Area	7	8	9	10	11	Total
2+ hours of sun	69%	76%	30%	52%	29%	51%
1-2 hours of sun	12%	9%	11%	26%	11%	11%
0-1 hours of sun	19%	14%	58%	22%	60%	38%



Proposed Massing

- 34% of Area 9 facade area receives >2 hours sun (4% more than reference scheme)
- 38% of Area 11 facade area receives >2 hours sun (13% more than reference scheme)

Mid-Winter Solar Analysis from 9am to 3pm						
Area	7	8	9	10	11	Total
2+ hours of sun	73%	75%	34%	53%	38%	54%
1-2 hours of sun	5%	10%	18%	18%	10%	12%
0-1 hours of sun	22%	15%	48%	28%	52%	34%



4.0 DESIGN DESCRIPTION

Arrange apartments to maximise solar access

To maximise solar performance, we then:

- Oriented apartments toward northern aspect where possible
- Located smaller dwellings on facades which receive sun
- Located living rooms at facade line

Across the project, 70.2% of dwellings receive more than 2 hours solar access to living rooms and balconies on the winter solstice

Apartments with 2 hours solar access

	Bldg 7	Bldg 8	Bldg 9	Bldg 10	Bldg 11	
Level 16	-	4	-	-	-	
Level 15	-	4	-	-	-	
Level 14	-	4	-	-	-	
Level 13	-	4	-	-	-	
Level 12	-	4	-	4	-	
Level 11	4	10	-	4	-	
Level 10	6	8	3	4	3	
Level 9	6	8	5	7	10	
Level 8	8	8	7	6	10	
Level 7	8	8	5	6	7	
Level 6	7	3	5	6	5	
Level 5	4	-	4	6	6	
Level 4	2	-	1	-	6	
Level 3	-	-	1	-	0	
Level 2	-	-	0	-	0	
Level 1	-	-	-	-	0	
Total	45	65	31	43	47	231
	100%	90%	47%	93%	47%	70.2%

Key

Apartments receiving 2+ hours of sun to living room and private open space

Apartments receiving 2+ hours of sun to private open space



4.4.2 Cross Ventilation

The stepped and staggered floorplan to areas 9 and 11 maximises the number of corner aspect cross-ventilated dwellings.

Across the project, 66.6% of dwellings are naturally cross ventilated with window openings on two or more orientations.

Apartments with Cross Ventilation						
	Bldg 7	Bldg 8	Bldg 9	Bldg 10	Bldg 11	
Level 16	-	4	-	-	-	
Level 15	-	4	-	-	-	
Level 14	-	4	-	-	-	
Level 13	-	4	-	-	-	
Level 12	-	4	-	2	-	
Level 11	4	4	-	2	-	
Level 10	4	4	2	2	3	
Level 9	4	4	3	4	8	
Level 8	4	4	7	4	8	
Level 7	4	4	9	4	10	
Level 6	4	2	9	4	10	
Level 5	2	-	9	4	10	
Level 4	2	-	6	-	10	
Level 3	-	-	1	-	7	
Level 2	-	-	4	-	1	
Level 1	-	-	-	-	6	
Total	28	42	50	26	73	219
	62%	58%	76%	57%	73%	66.6%

Key

Apartments benefiting from cross ventilation due to corner location



4.4.3 Views

All apartments fronting Canberra Avenue benefit from open views into the treescape of Newlands Park and Berry Creek. In addition, upper floor dwellings benefit from high level views over the tree canopy toward Sydney Harbour and the CBD.



1



2

Pictured

- 1. Southeast outlook from building 9 (RL 85.2) over Newlands Park and towards City and Harbour
- 2. Diagram showing views to Newlands Park and CBD

4.5 Penthouse Levels

Each of the buildings has a series of penthouse levels resolved uniquely for its location.

Building 7, 8 and 10 have a 5-storey defined streetwall, above which upper level penthouses are set back from the street in a smaller floorplate. Buildings 7 and 8 both arrange four apartments each with from a corner aspect. Building 10 also proposes 4 apartments but delivers a 3-bed at both ends combined with two 2-beds in the middle.

Buildings 9 and 11 terrace back from Canberra Avenue over multiple floors, resulting in three levels which benefit from roof terraces looking out over Newlands Park. In these locations the bespoke penthouses are uniquely arranged to capitalise on the view and outdoor space.



RIVER RD

HOLDSWORTH AVE

CANBERRA AVE

GREEN SPINE

NEWLANDS PARK

BDG 11

BDG 10

BDG 8

BDG 9

BDG 7

Pictured

Upper Level Plan 1:500

BDG 11-L08,09,10/ BDG 9-L08,09/ BDG 10-L10
BDG 7-L11/ BDG 8-L12



4.6 Compliance with Site Specific Planning Controls

In keeping with the massing approach of the broader St Leonards South precinct, the scheme proposes a series of small footprint rectangular forms which step down the hillside. Building heights vary from 7-11 storeys as the massing steps down the hill, however all are accommodated below the 25m, 31m and 37m LEP height limits.

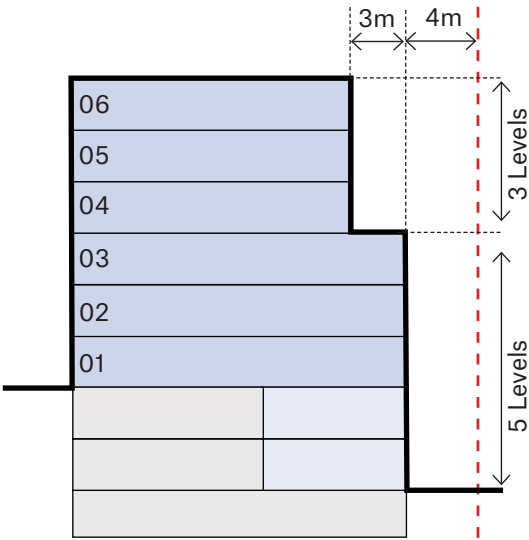


4.6.1 Massing approach to Canberra Avenue South

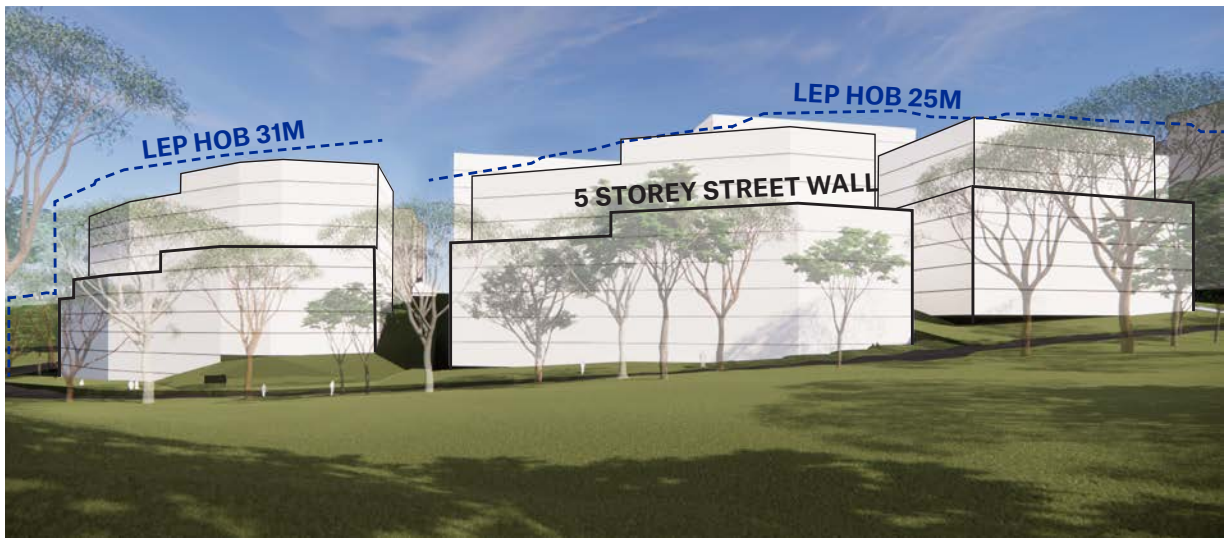
The proposal has strictly adhered to the DCP envelopes on areas 7, 8 and 10, but proposes an alternative massing strategy to areas 9 and 11, improving the relationship with the public domain: both Newlands Park and the Holdsworth Avenue Pocket Park.

DCP Compliant scheme
Buildings 7,8&10

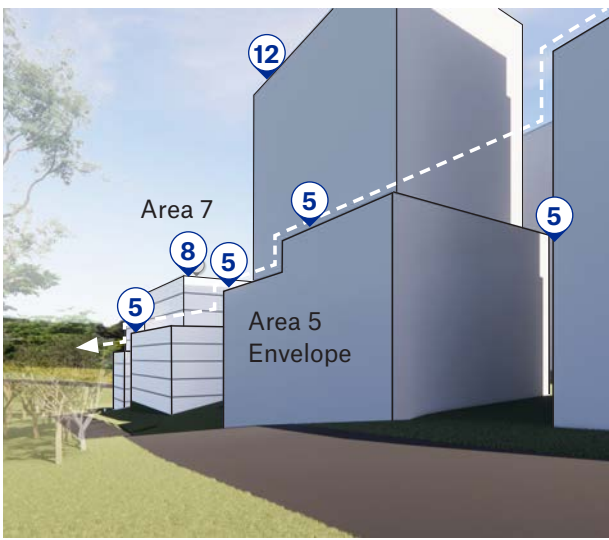
- 4m landscaped setback
- 5-storey streetwall
- 3m setback to upper levels
- 6 full storeys



Diagrammatic section of DCP massing



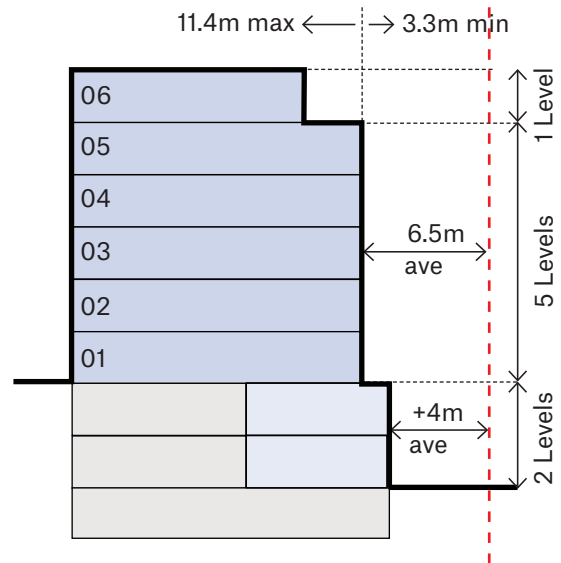
View of DCP massing from Newlands Park



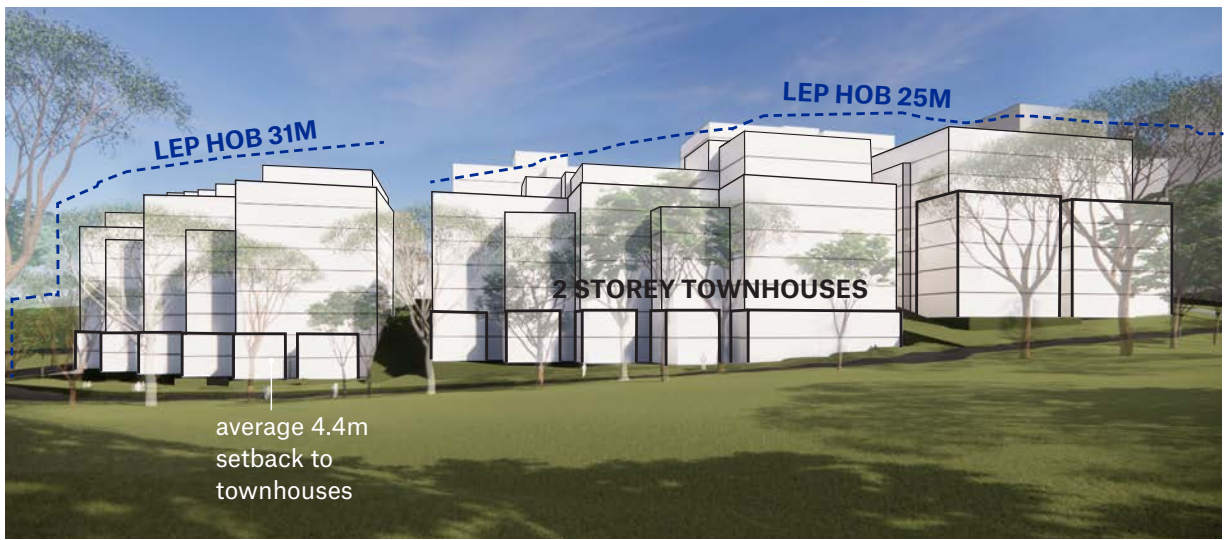
View of DCP massing from Canberra Ave

Proposed Massing
Buildings 9&11

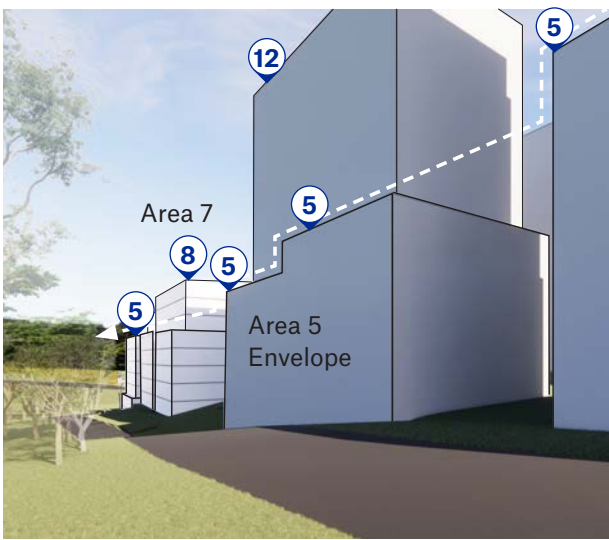
- 2-storey townhouses brought forward +4m average setback
- Streetwall varies in stepped and staggered form with average setback of 6.5m
- Key upper floors are set back 3m to reduce height at the street edge setback at 8.8m
- Area 7 & the north end of 9 adopt typical section for N/S streets



Diagrammatic section of Proposed massing



View of Proposed massing from Newlands Park



View of Proposed massing from Canberra Ave

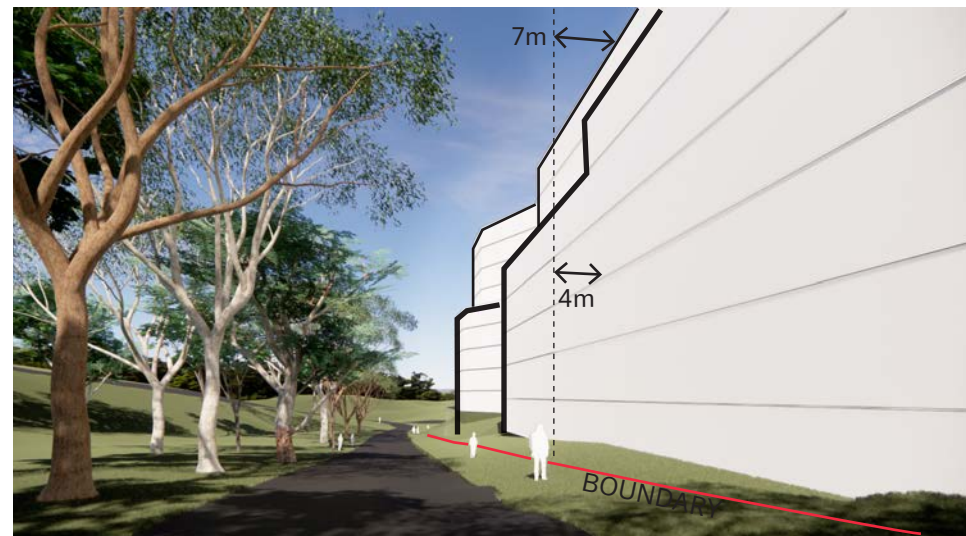
4.0 DESIGN DESCRIPTION

The proposed design is for a stepped and staggered form in both plan and section in contrast to a consistent street wall envisages by the DCP controls.

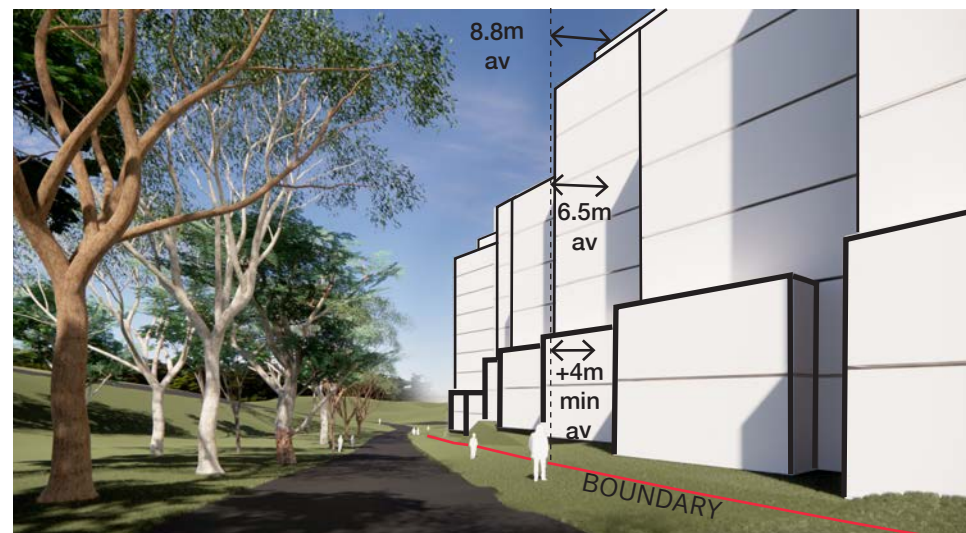
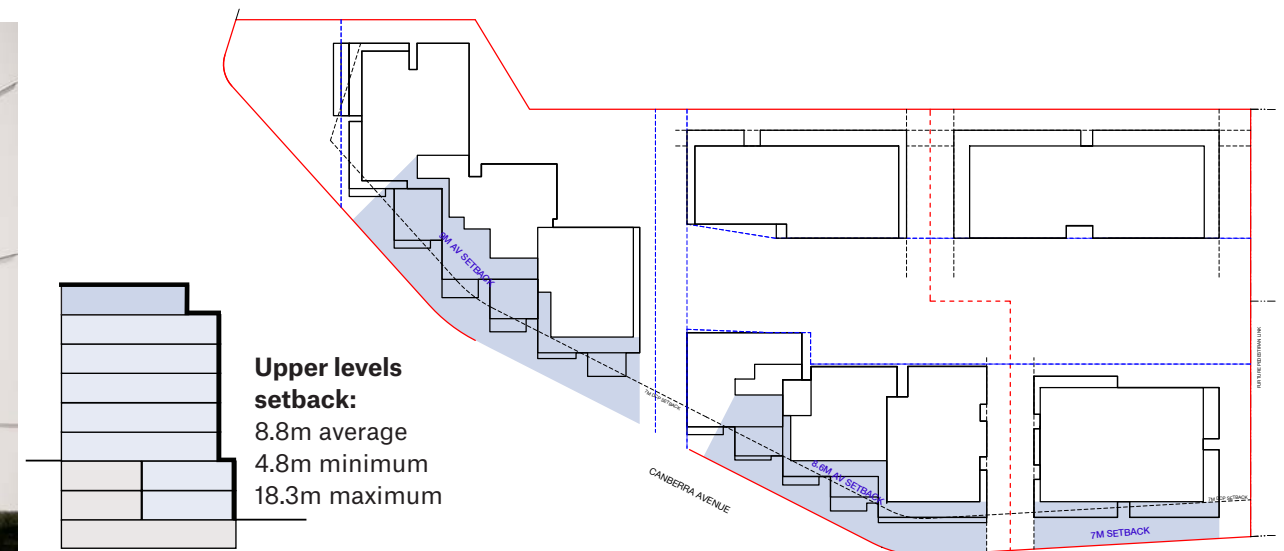
- Building forms are generally aligned north/south consistent with the precinct, staggered along the angled Canberra Avenue frontage to maximise the number of expressed corners.
- At the lower levels, 2 storey townhouses are expressed separately and brought forward to an average 4m setback providing human scale at the street edge.
- The main streetwall varies in form with an average setback of 6.5m, greater than the DCPs 4m minimum.
- Key upper levels are further set back to reduce overall bulk achieving an average setback of 8.5m, greater than the DCPs 7m minimum.

This alternative approach delivers several key benefits:

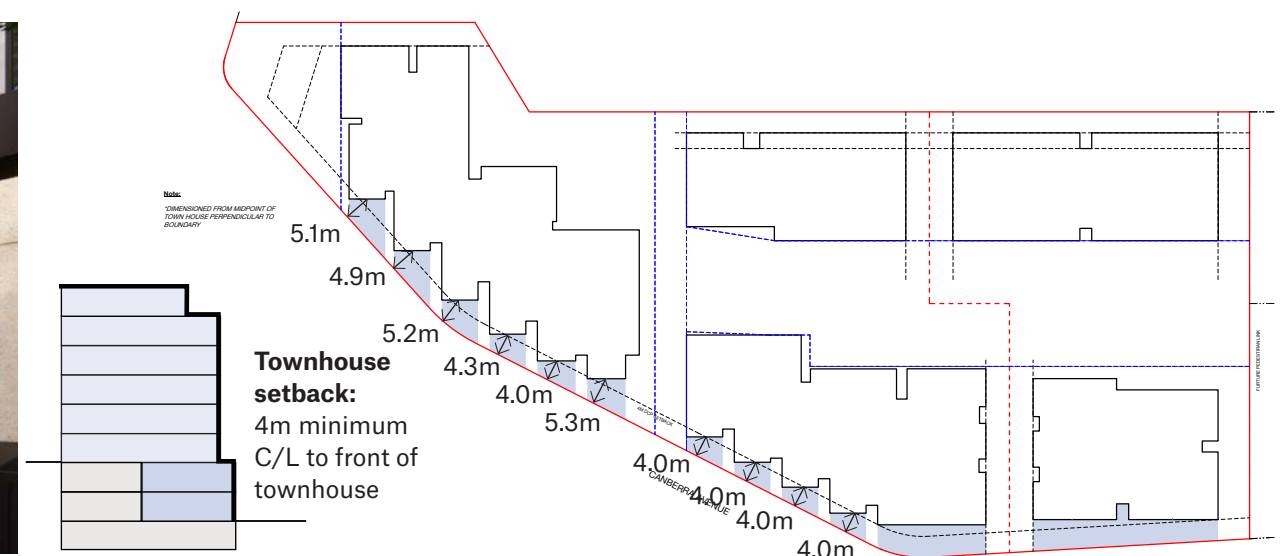
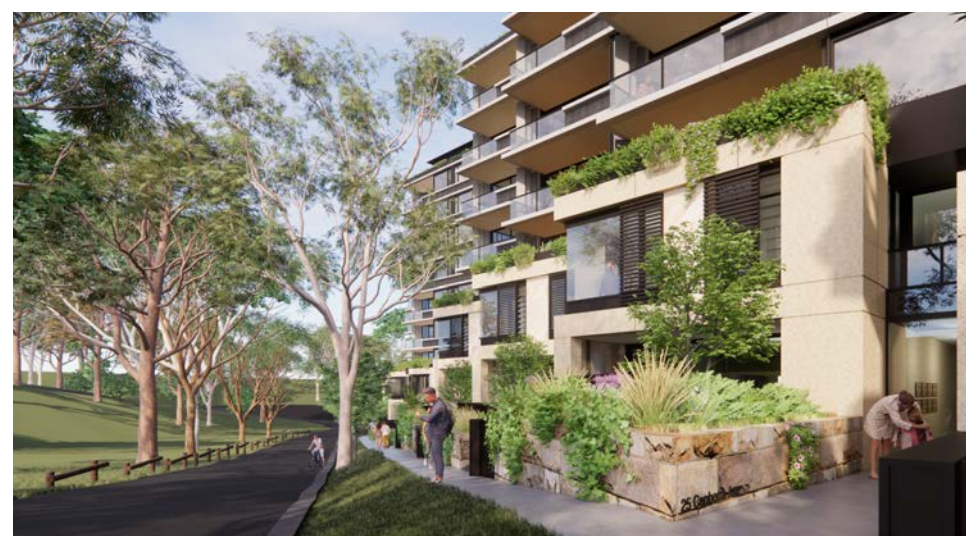
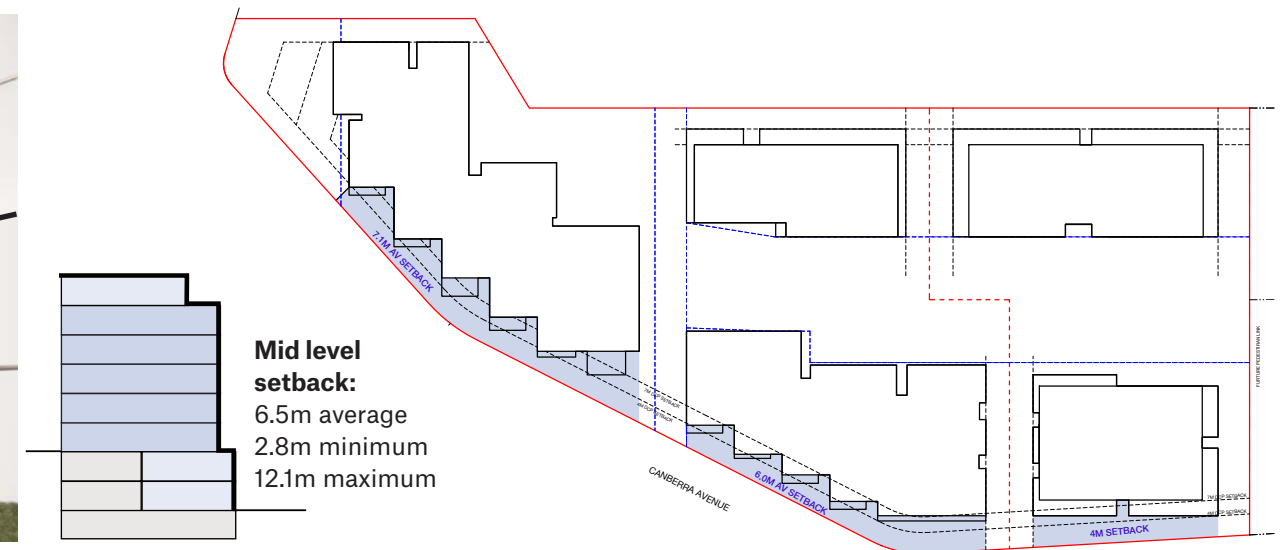
- Consistency with the DCP objective to 'provide transitional built form at the edges of the precinct'
- Expressed 2-storey townhouses provide human scale at street edge
- Upper level 1-2 storey setbacks are less visible than a 3-storey upper volume
- Increased building articulation
- Reduced overshadowing to Newlands Park when compared to the LEP compliant envelope.
- Equivalent or better average setbacks at ground level, street wall and upper volumes.
- Minor encroachments into minimum setbacks are compensated for by greater setbacks throughout



View of DCP massing from Canberra Ave



View of Proposed massing from Canberra Ave



4.0 DESIGN DESCRIPTION

Overshadowing to Newlands Park

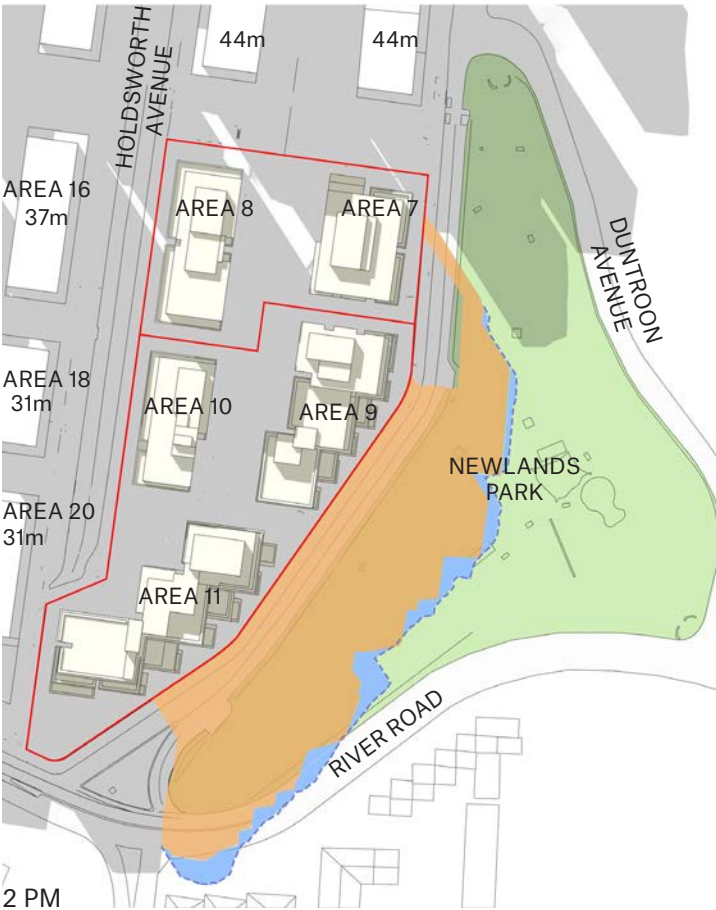
This series of diagrams illustrates the mid-winter overshadowing of the proposed scheme compared with the overshadowing of LEP/DCP compliance envelopes. They demonstrate that, despite some minor exceedances, the proposed massing has significantly lesser shadow impact than the allowable massing.

The proposal has used various methods to minimize overshadowing impacts on Newlands Park including adoption of:

- a stepped and staggered built form
- setbacks to upper levels
- location and extent of roof top plant
-

Key

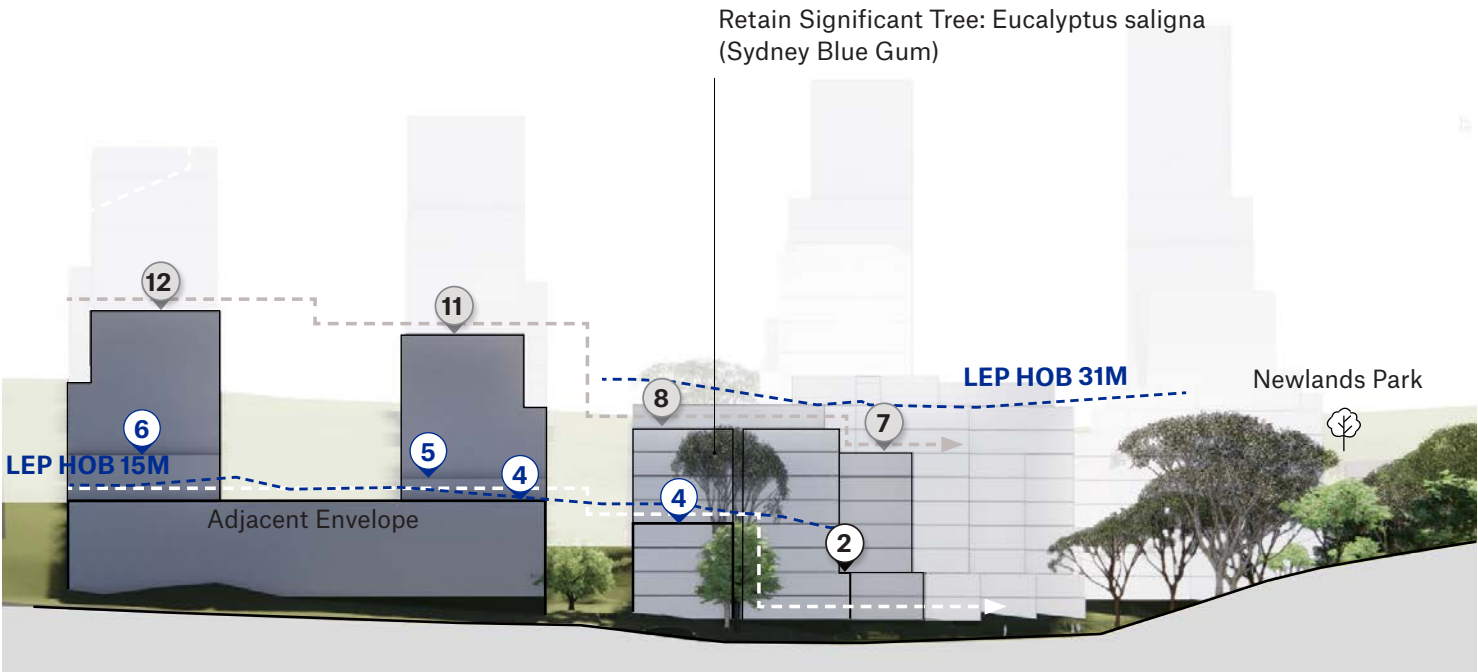
	Shadows cast from adjacent sites
	Shadows cast from proposed development
	Extent of shadows cast from allowable envelope



4.6.2 Massing approach to River Road

On the southern frontage, we have proposed to pull the massing away from the River Road frontage in order to retain the magnificent Sydney Blue Gum located on site.

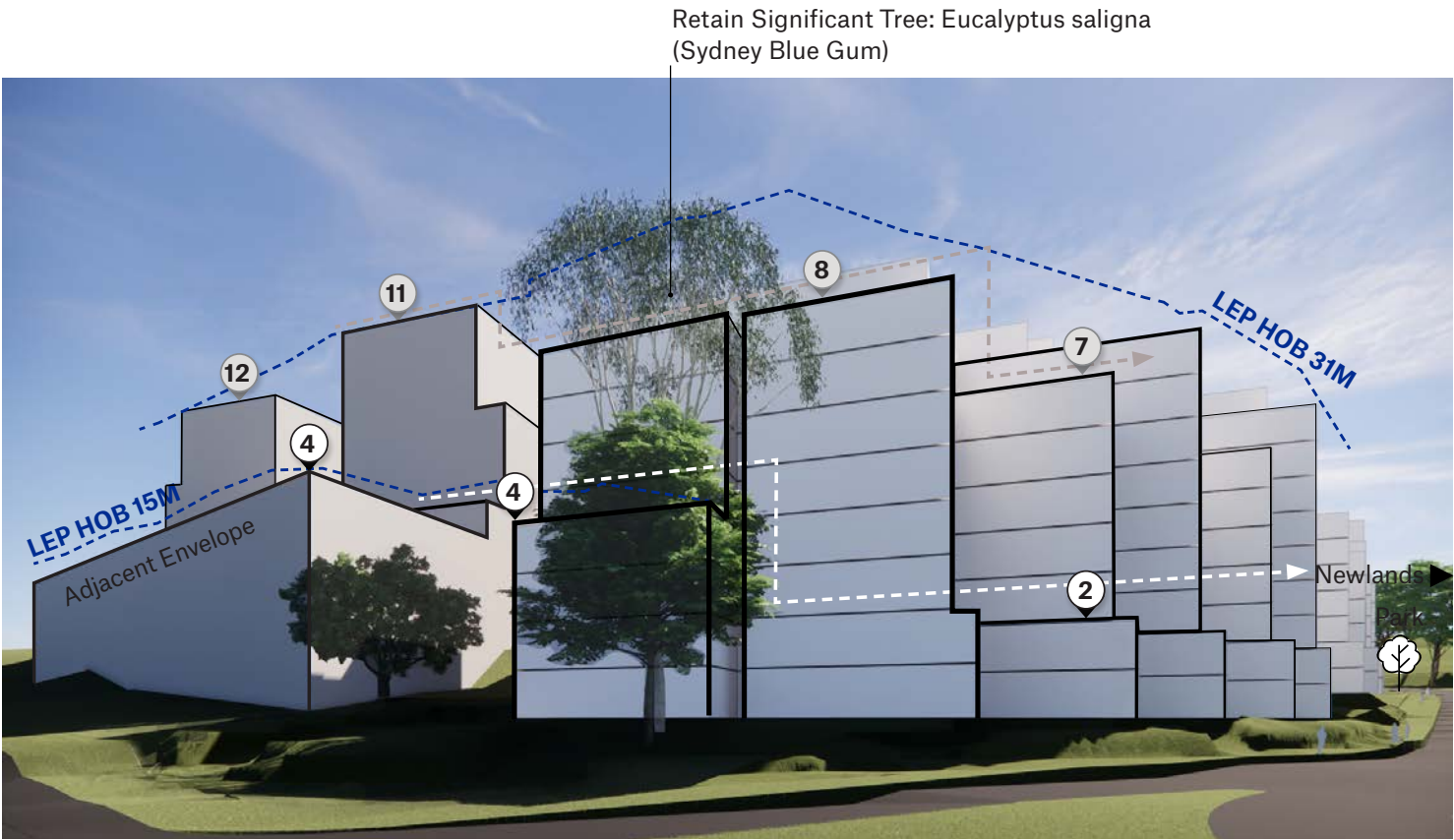
The design proposes an expressed four storey streetwall as a transitional height element stepping down from the Area 20 massing to the 2-storey townhouses fronting Canberra Avenue.



Elevation of Proposed Massing (River Road)



View of Proposed Design from River Road



View of Proposed Massing from River Road

4.0 DESIGN DESCRIPTION

4.6.3 Building Height

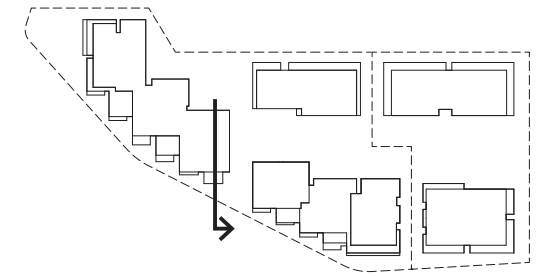
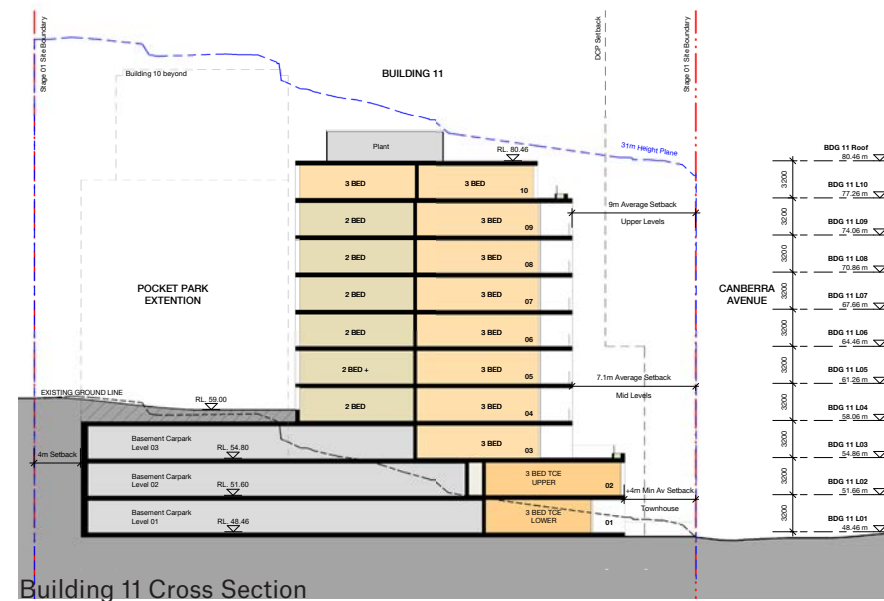
The DCP includes controls for both maximum building height, and a maximum number of levels (above street) for the streetwall above which upper storeys must be set back. At 6.4.6 the DCP notes regarding Incentive Heights: 'The definition of height should enable the nominated number of full storeys... Part storeys resulting from excavation of steep slopes and as activating frontage for basement or semi basement parking will not count as storeys...'

Levels from Street

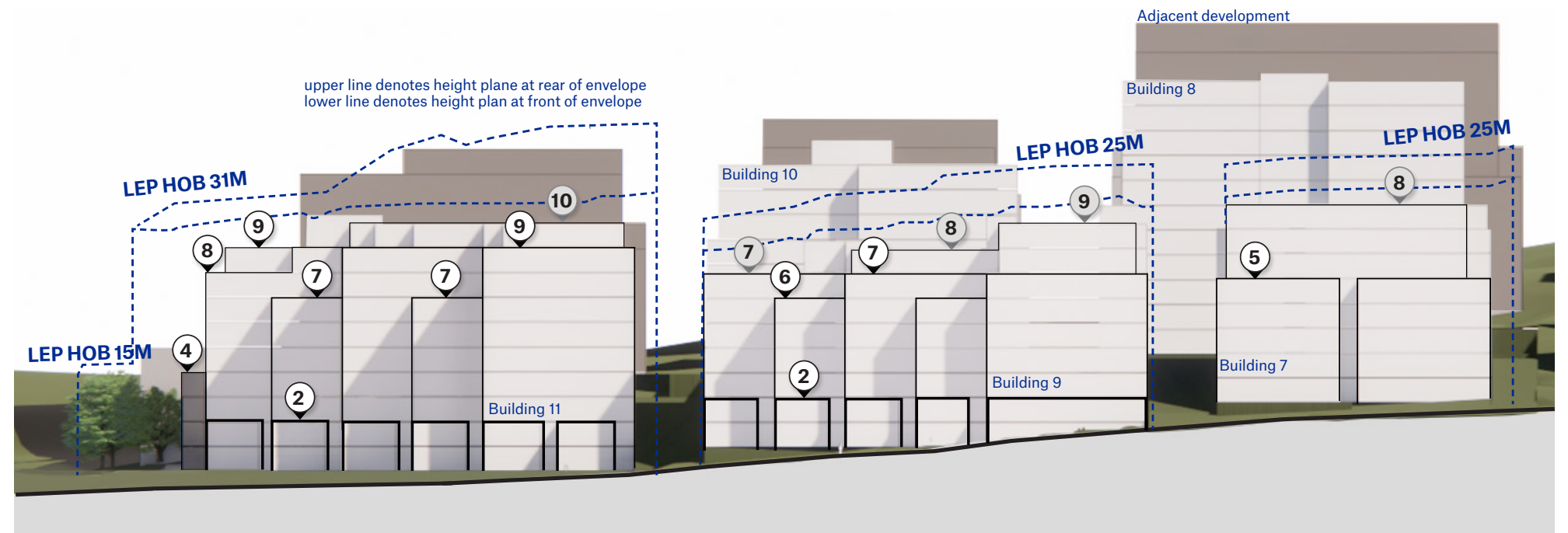
The proposed stepped and staggered form presents to Newlands Park as 7-9 storeys above street level, or 5-7 storeys above the expressed townhouses.

Building height in storeys

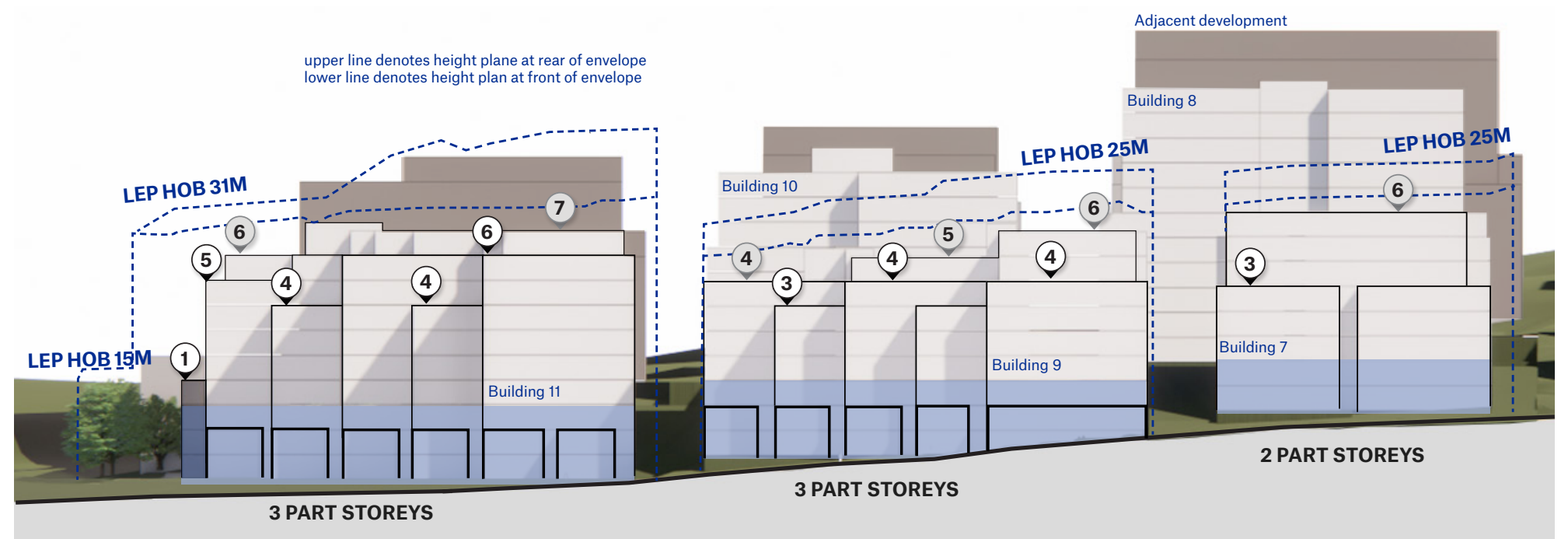
Due to steep slope of site there is a 2-3 storey level change from Holdsworth Ave to Canberra Ave. According to the definition in the DCP, this results in a height in storeys as illustrated below. Buildings 7 and 9 have no more than 6 full storeys, and while building 11 has a seventh storey, it is set a long way back from Canberra Avenue and fronts the Holdsworth Avenue pocket park.



Proposed Massing (Canberra Ave) Levels from Street



Proposed Massing (Canberra Ave) Building height in full storeys

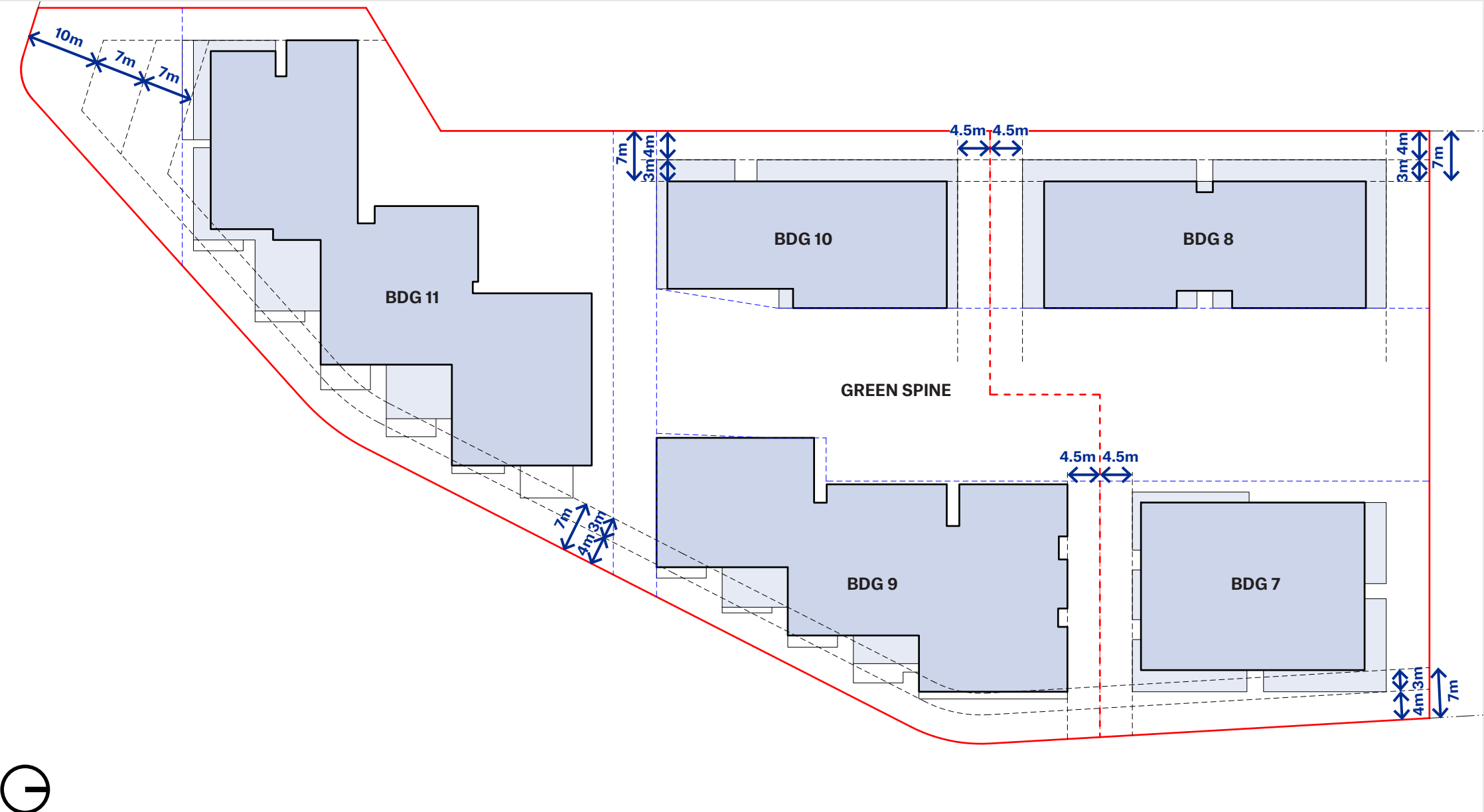


4.6.4 Setbacks

On areas 7,8 and 10, all building setbacks comply with the DCP:

- Minimum 4m landscaped setback to street frontages
- 6m landscaped setback to the northern frontage
- 3m upper floor setback above level 5 to streets and the northern frontage

As described in section 4.5.1, on areas 9 and 11, the design proposes a stepped and staggered form which delivers average setback distances exceeding the minimum dimensions noted in the DCP to Canberra Avenue.



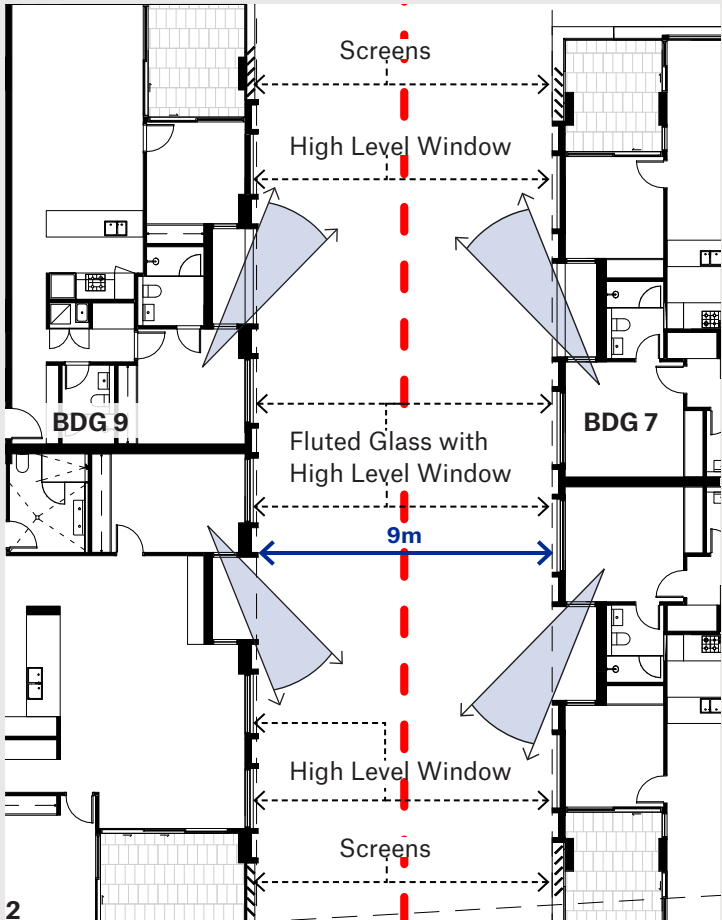
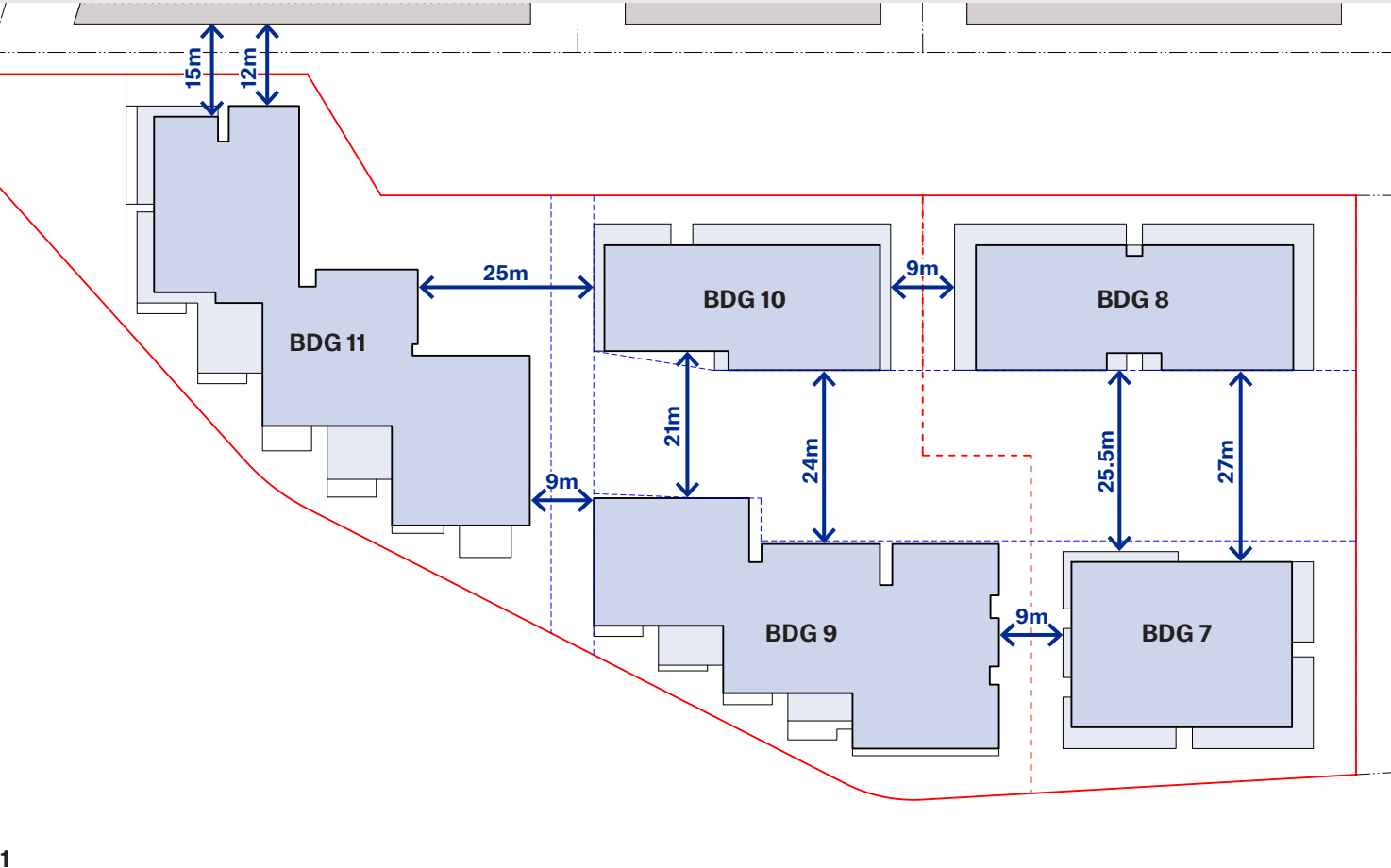
4.6.5 Building Separation

Building separation across the green spine varies from 20.6m to 28.5m, significantly more than the 18m ADG minimum.

Where building separations are 9m, screening elements and façade articulation has been developed to provide angled views perpendicular to the façade line. The design complies with ADG minimum building separation for five to eight storeys of 9m between non-habitable rooms.

Building 11s western façade is 4.5m from the boundary and will be 12m from the Area 20 building. The proposed design allows Area 20 to have habitable room windows along the full length of its eastern frontage compliant with ADG building separations. This is achieved in two parts: For the northern half we have proposed no habitable room windows as both building heights exceed 4 storeys; while in the southern half Area 20 is 4 storeys allowing habitable rooms in both buildings.

In these instances of 9m and 12m building separation, rather than proposing blank walls, to maximise apartment amenity while maintaining privacy we have proposed translucent glazing up to 2.1m high, with sliding windows at high level.



Pictured

- 1. Building Separation summary plan
- 2. Building 7/9 detail plan
- 3. North Elevation of Building 9
- 4. South Elevation of Building 7

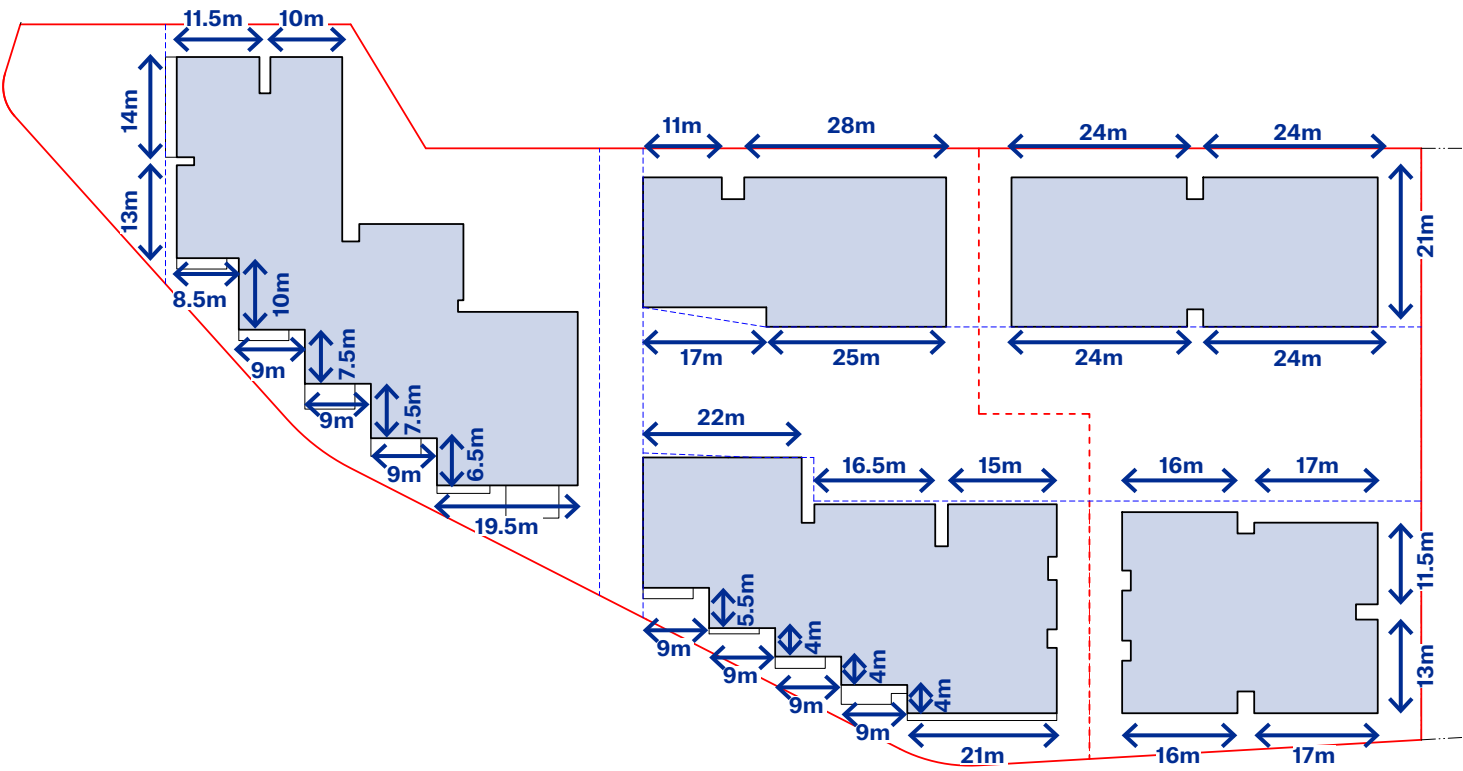


4.6.6 Building Length

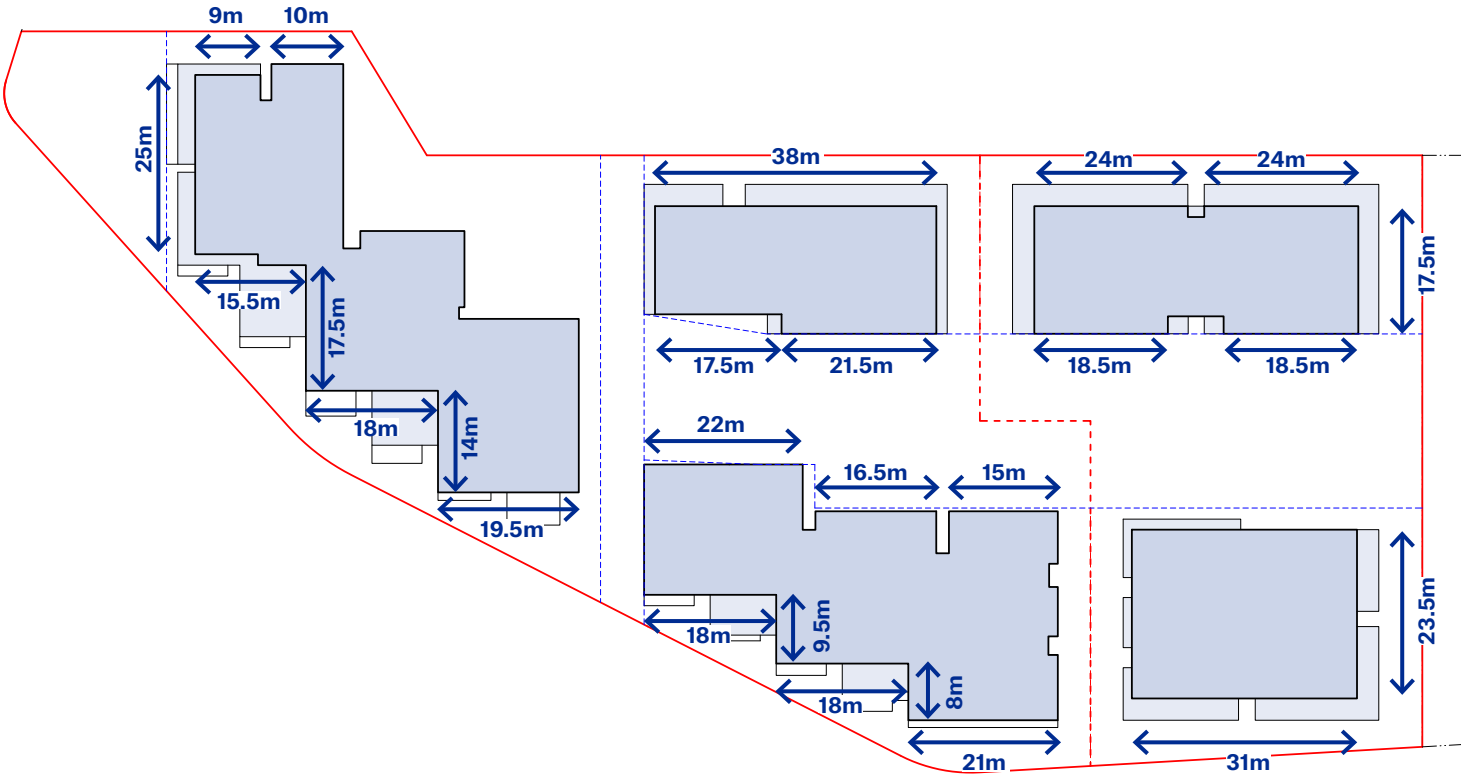
The buildings are expressed as a cluster of rectilinear forms, with breaks used as vertical articulation to reduce building length and act as entry markers into the building.

The building breaks are generally 3m deep and one room wide, optimally sized to define the building entry, break the façade length and screen the secondary façade from view. This results in a lower floorplate with no individual façade length longer than 25m: significantly less than the DCPs 35m maximum

At upper level, all facades are less than 35m with the exception of building 10, which has 3 levels at 38m.



Typical Levels Plan Outline



Typical Upper Levels Plan Outline

5.0

Landscape

5.1 Landscape Concept

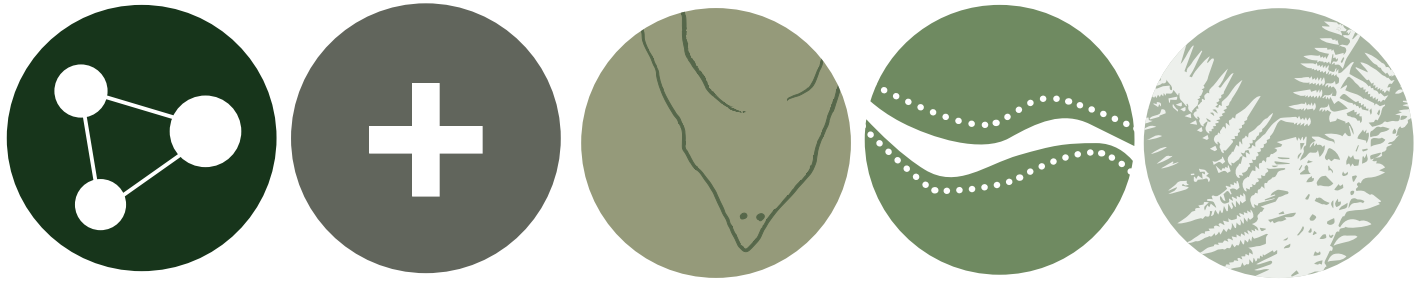
Our vision is to create an ecologically responsible, vibrant new community nestled within verdant planting corridors, edges and setbacks to further enhance the existing green corridors of the St Leonards area.

Design Principles

- Garden life/social life: Supporting a social, connected community within a verdant green setting.
- Urban oasis: Ameliorate microclimatic issues, designing for comfort and safety.
- Design with Country: Paying our respects to the Cammeraygal, the design should connect with the local landscape and support its health.
- A chain of places: Create a chain of places for the community to explore, emulating the journey along Berry Creek.
- Refined Naturalism: Support a natural character with an elegant twist.

Design Moves

- Green links: Create a native corridor link to surrounding ecosystems of the Newlands Park, Berrys Creek and Berry Island.
- A sensory journey: Support human experience by creating an environment of sensory delight. Part closures to Holdsworth and Canberra to increase public domain and amenity.
- Community spaces: Strings of diverse public and private community spaces to support healthy outdoor living.



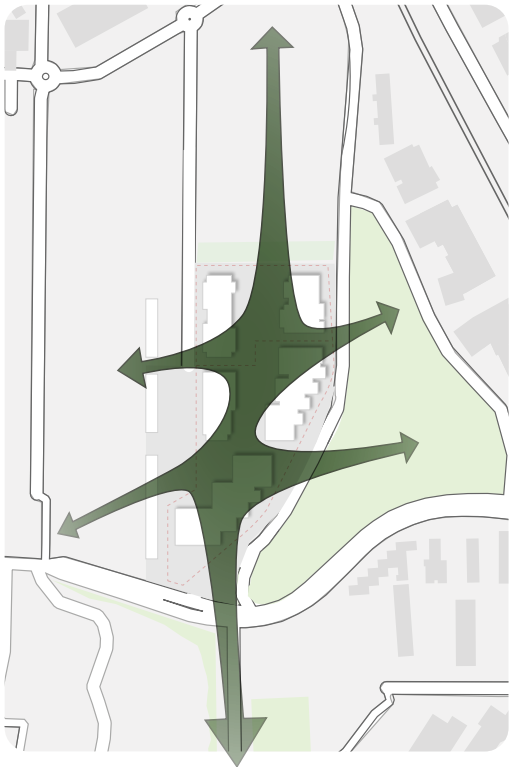
Garden life/social life Urban oasis Design with Country A chain of spaces Refined Naturalism

Principle 5: Landscape

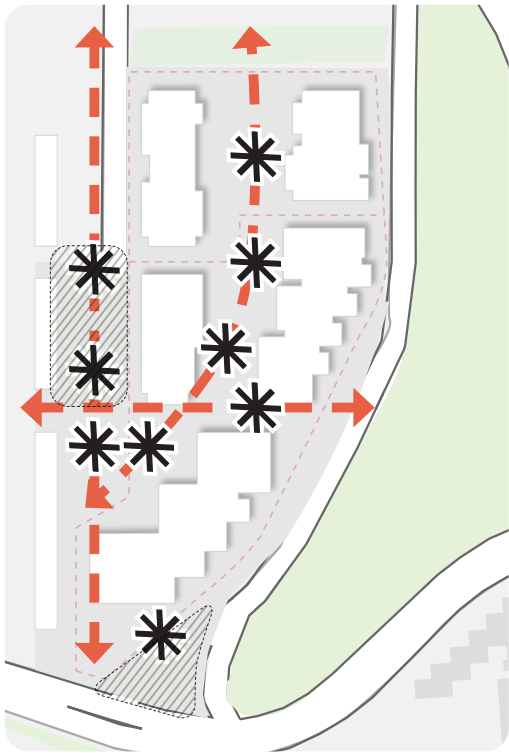
Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development’s environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.

Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours’ amenity and provides for practical establishment and long term management.



GREEN LINKS



A SENSORY JOURNEY



COMMUNITY SPACES

5.2 Landscape Masterplan

- Pictured
1. Bioretention zone

2. Drainage swale

3. Through site link

4. Elevated boardwalks/natural trail

5. Private communal lawns

6. Private communal bbq areas

7. Garden rooms

8. Childrens play space

9. Private Pool

10. Waterfall/cascade wall



5.3 Roof Terraces



6.0

Facade and Materials

6.1 Facade Concept

The building forms step back and down the hillside revealing a series of stepped terraces, apartments and landscaped platforms towards Newlands Park.



Inspired by the local Cammeraygal creek corridors, our façade approach interprets the contrasting conditions of the rocky fern gullies and vertical eucalypt forest.

6.0 FACADE AND MATERIALS

The base of the building proposes a heavily planted sandstone plinth above which strongly vertical façade columns contrast with floating horizontal edge beams.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures. The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.



6.0 FACADE AND MATERIALS

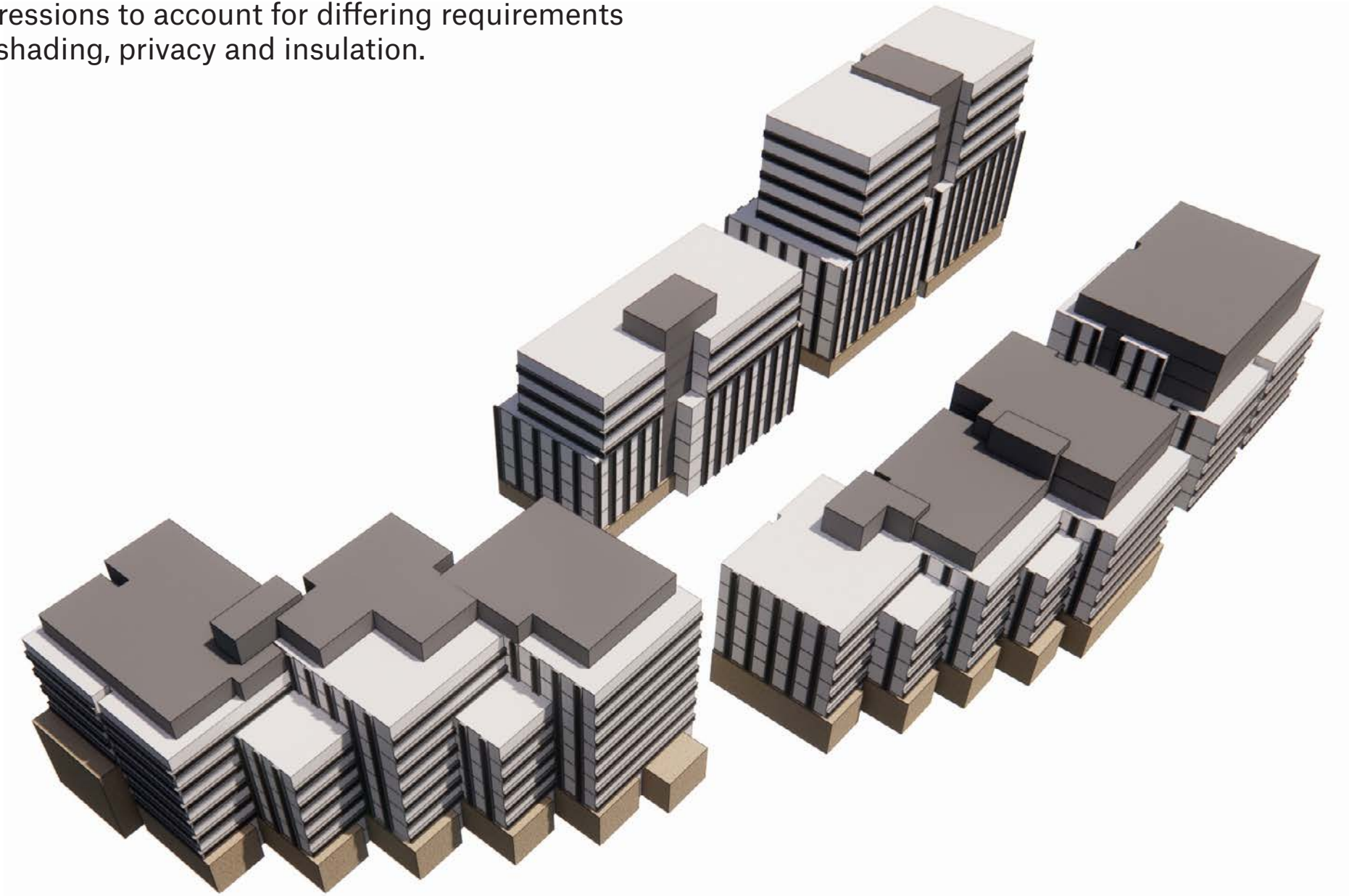
The horizontal expression provides open views from generous balconies, while the vertical expression provides more enclosure and privacy. Rooftop levels are recessive, expressed in dark metal cladding, while the townhouses provide a more solid base, optimising privacy with connection to the outdoors.



6.2 Kit of parts

Different facades for different conditions

The facade design explores a palette of warm robust materials using a modular ‘kit of parts’ which respond differently to each orientation. We have developed four different facade expressions to account for differing requirements for shading, privacy and insulation.



Horizontal Expression
Offering a panoramic outlook to landscape



Vertical Expression
Offering desire for a street wall and screened facade



Sandstone Base
Grounding the buildings in the steeply sloping site



Setback Expression
Reducing the perceived height of building

6.3 Material Palette

Natural, robust,
earthy finishes

Sitting equally comfortably with the urban environment of Pacific Highway and the bushland quality of Berry’s Creek, our material palette proposes a natural, robust, earthy selection of materials & finishes.

Pictured

- 1. Clear vision glass for windows, doors and balustrades.
- 2. Fluted glass for visual privacy but maintaining excellent daylight
- 3. Charcoal aluminium framing to door, window and balustrade frames
- 4. Anodised aluminium in pale bronze finish to sunshades & privacy screens
- 5. Balcony soffits in white painted finish
- 6. Facade slab edges and column edges: light grey rendered masonry
- 7. Facade upstand and column infills: charcoal rendered masonry
- 8. Sandstone Wall Cladding
- 9. Sandstone toned masonry
- 10. Decking to balconies
- 11. Sandstone/masonry block garden walls



1



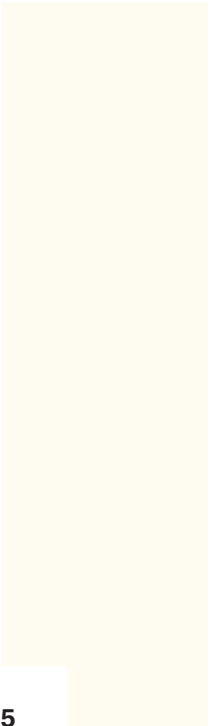
2



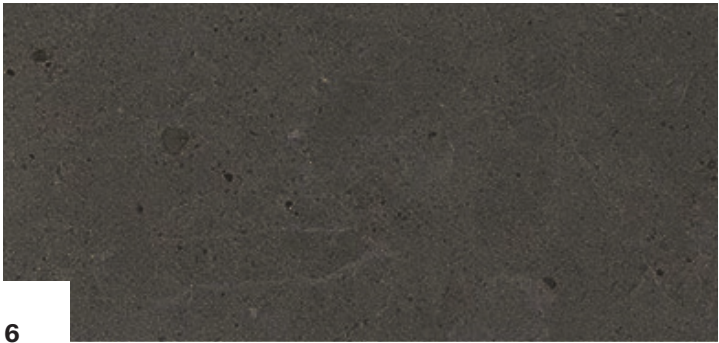
3



4



5



6



8



10



7



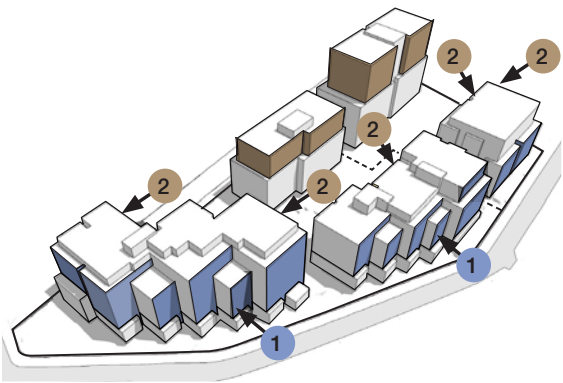
9



11

6.4 Horizontal Façade Expression

Fronting Newlands Park and on upper levels of the Holdsworth Avenue buildings, a horizontal façade of expressed slab edges and stop/start masonry upstands prioritises panoramic views of the landscape. On south and east facing facades, large picture windows are complemented by glass louvres for excellent ventilation, while north and west facing facades are supplemented by an additional horizontal sunshade and high- level sliding window.



1



Soffit painted white

750mm H stained concrete spandrel and sill projection

Expressed concrete slab edge

600mm W operable glass louvres

Windows & door systems in charcoal finish and clear vision glass.

Metal balustrade in charcoal finish with clear glass panels

Timber Decking

2



Soffit painted white

Fluted glass spandrel panel

750mm H stained concrete spandrel and sill projection

Expressed concrete slab edge

Horizontal sunshade

600mm W operable glass louvres

High level sliding window

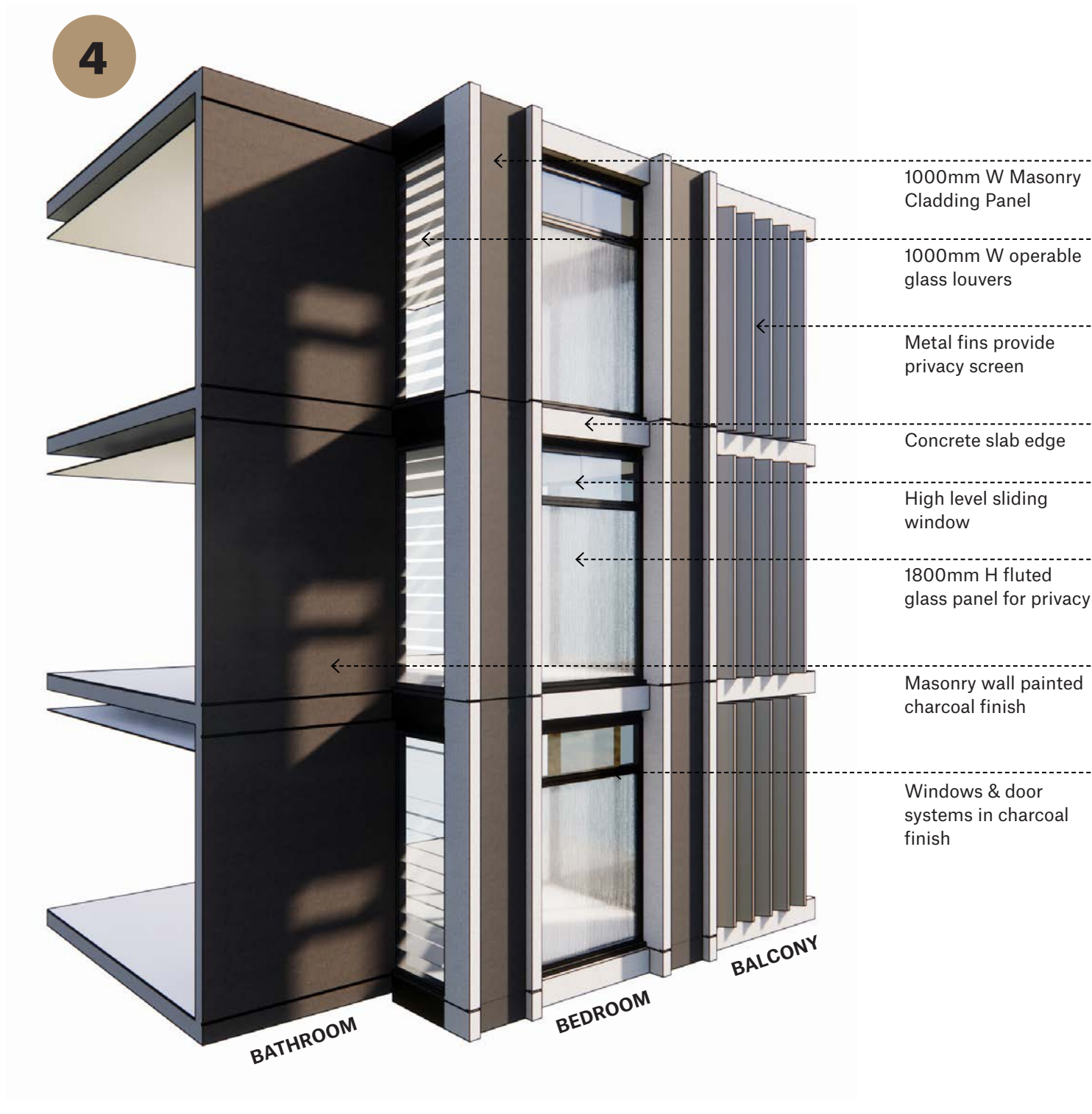
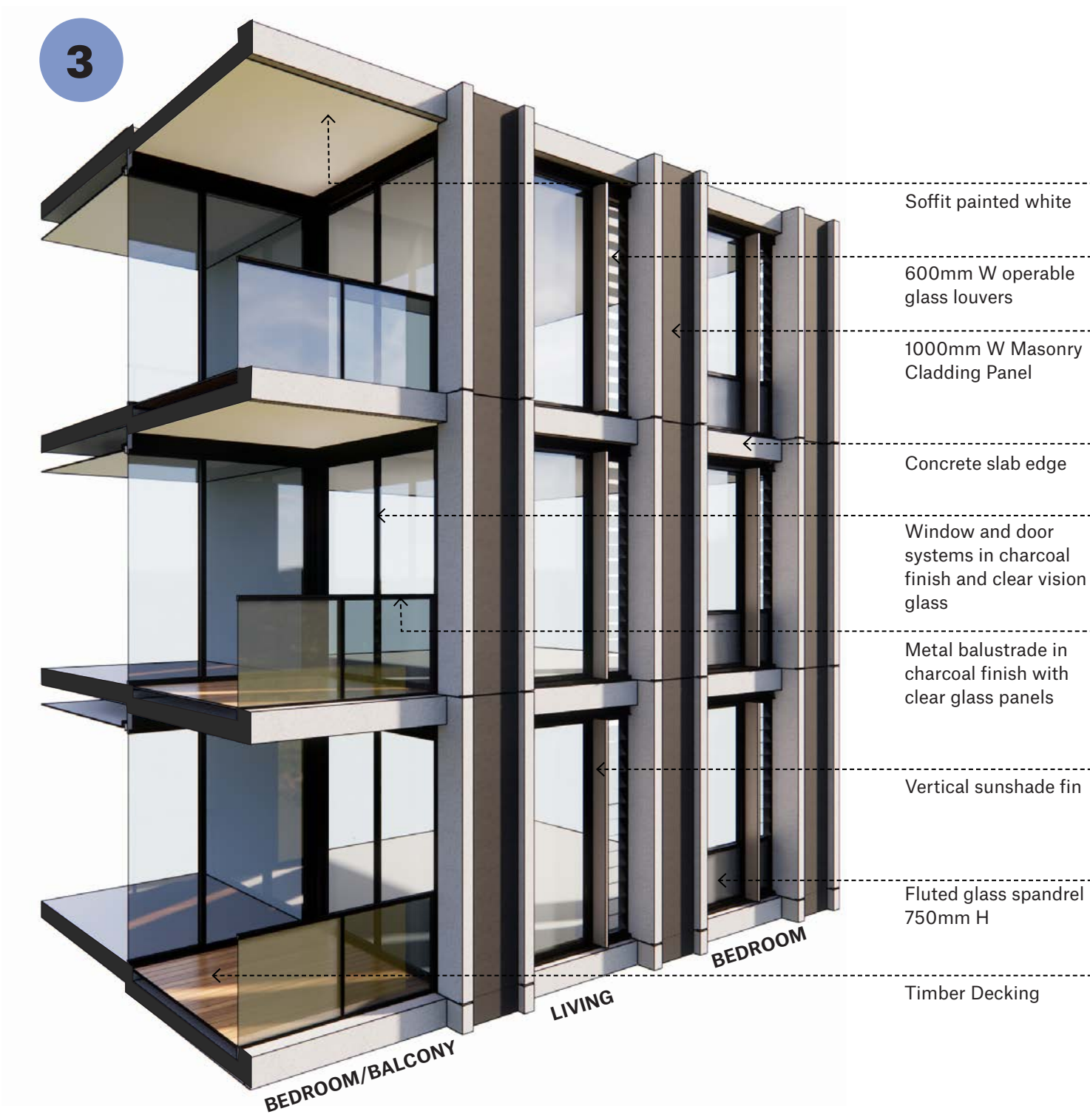
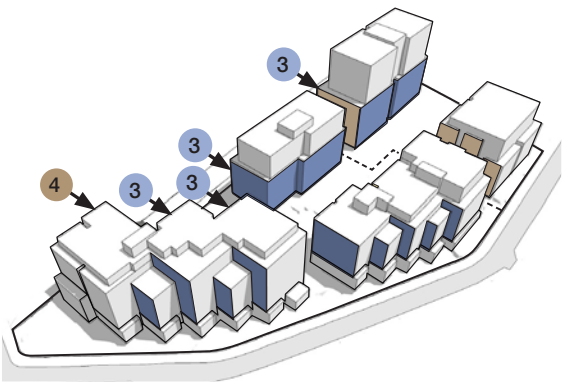
Windows systems in charcoal finish and clear vision glass

Metal balustrade in charcoal finish with clear glass panels

Timber Decking

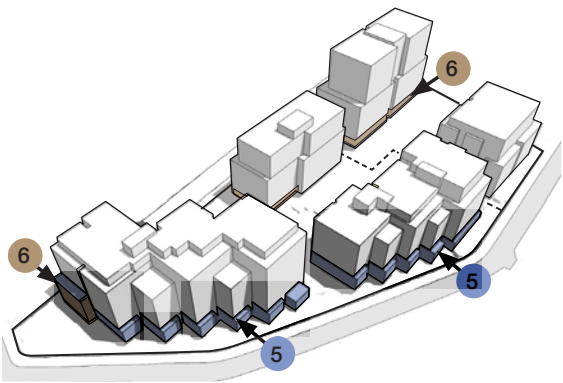
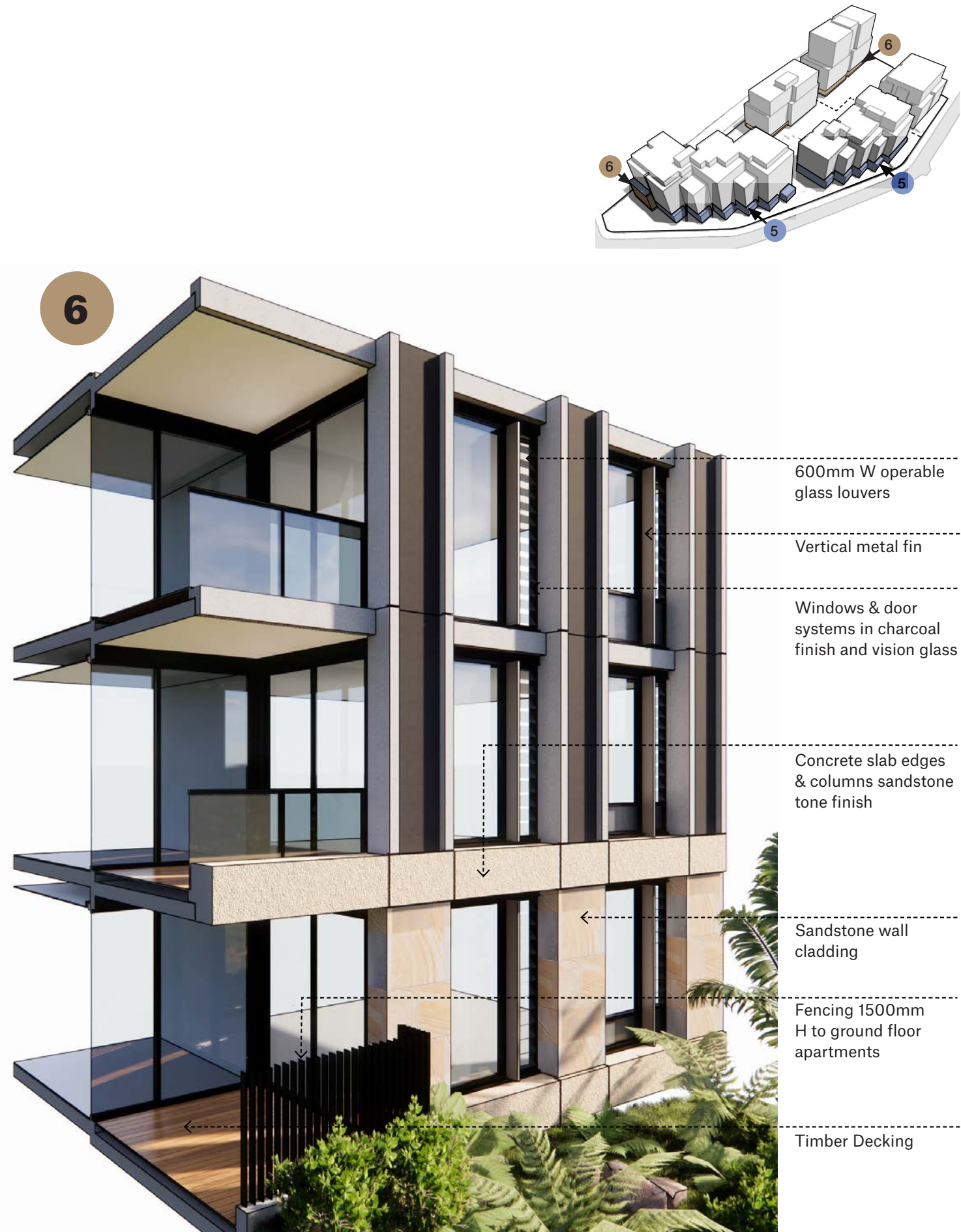
6.5 Vertical Façade Expression

Fronting Holdsworth Avenue, a similar set of façade components are applied vertically to create a strongly defined streetwall of expressed pilasters. Each room is defined by a glazing bay which is full height in living rooms and has a spandrel glass upstand to bedrooms. The vertical expression is further emphasised with full height shading fins. Shown in type 4, the vertical expression is adapted to provide enhanced privacy where building separation is limited. Privacy louvres, perpendicular windows and translucent glazing mitigate potential overlooking while provide high-amenity spaces.



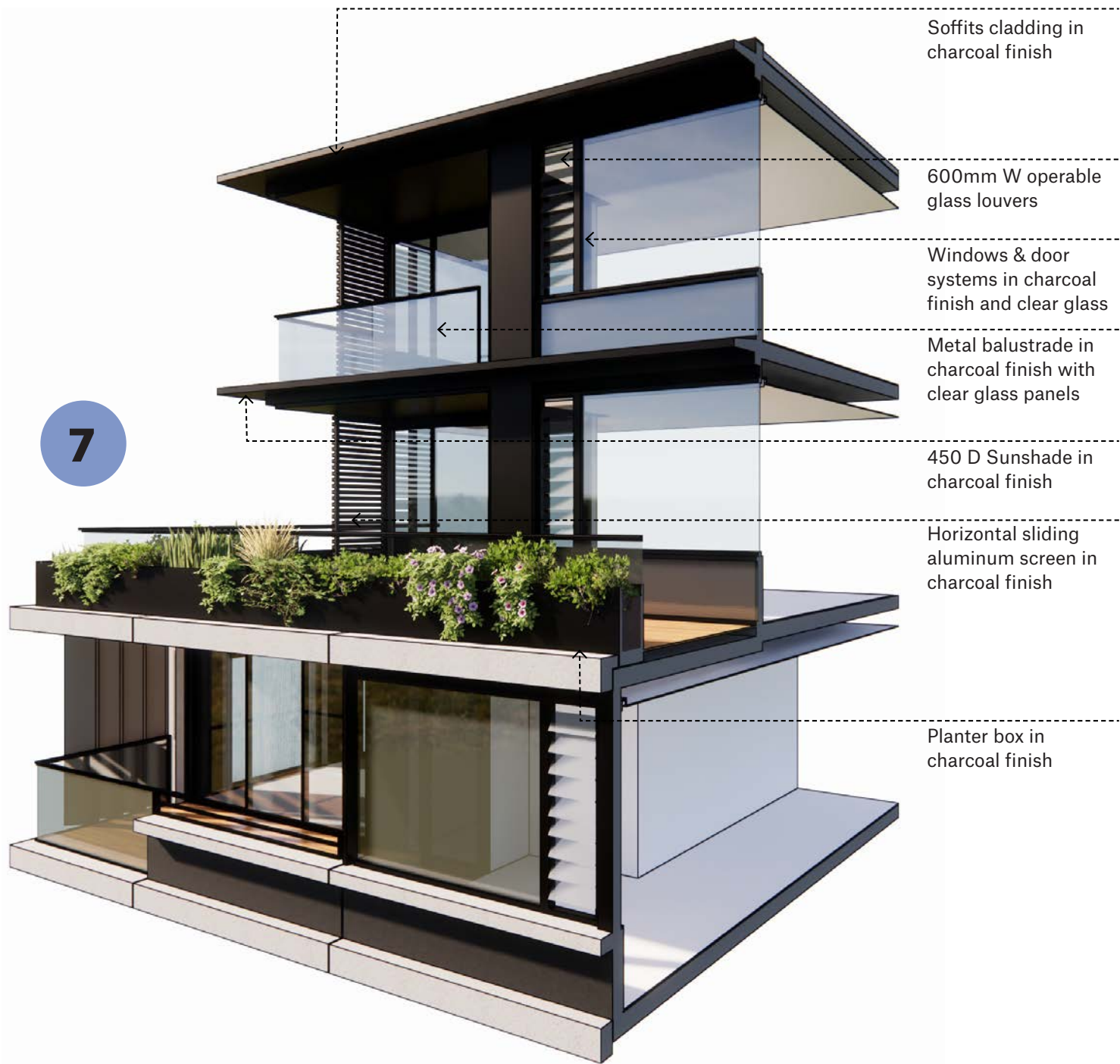
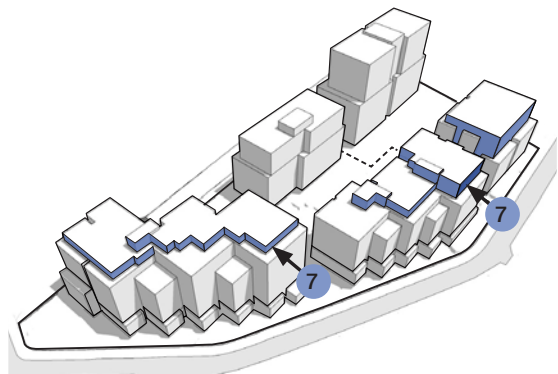
6.6 Sandstone Base: Townhouses & Garden Apartments

Where the buildings meet the ground, an expressed plinth of sandstone, sandy toned concrete and verdant planting provide a contextual and engaging interface. Fronting Canberra Avenue, two-storey townhouses combine upper-level bedrooms, ground-floor living spaces, a private garden and individual entry from the street. In the Green Spine, single level garden apartments are accommodated in an expressed base, benefiting from terraces which spill out into the landscape by up to 1m.



6.7 Upper Level Penthouse floors

Where upper levels require further setbacks behind the secondary streetwall, a simple expression of dark cladding provides a recessive appearance to minimise the perceived bulk. Combined with generous planters along the setback edge, the façade approach delivers a transitional built form in areas of highest height sensitivity.



7.0

Sustainability

7.1 Environmentally Sustainable Design

The design adopts simple passive environmental design principles.

The building envelope is designed to utilise the energy of the sun and natural ventilation to keep occupants comfortable whilst reducing the need for mechanical heating and cooling. These principles include:

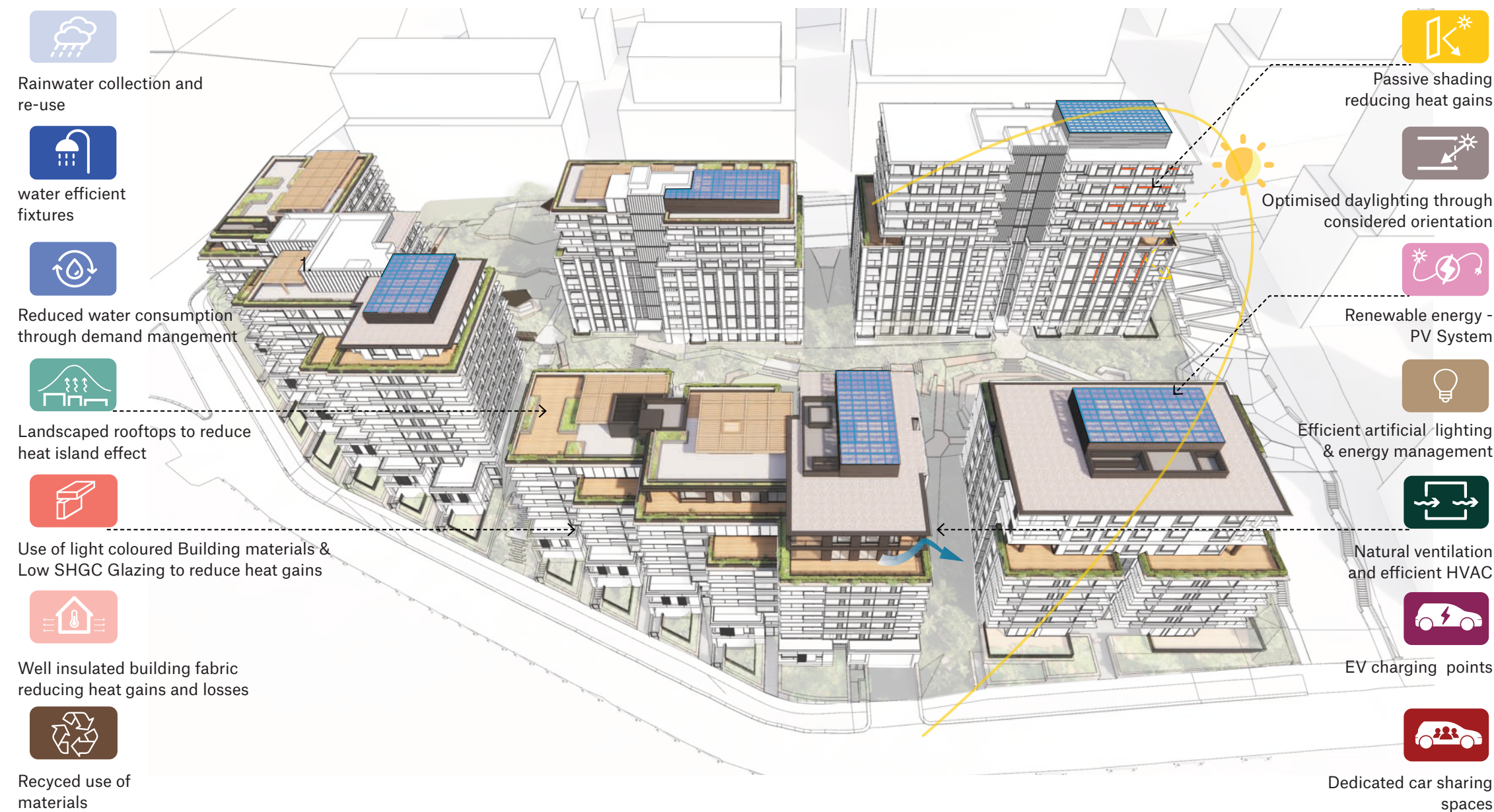
- Natural ventilation to corridors and apartments achieving 67% natural cross ventilation
- Maximising daylight to all habitable rooms. 71% of apartments achieve direct solar access for 2 hours at midwinter to living rooms and private open space
- Incorporating landscaping elements over and around the building structure that provide shading to the building as well as help reduce heat island effect
- Apartment orientation - layout and orientation within apartments has been carefully considered to ensure habitable and frequently used rooms to take advantage of the sun when wanted, but limiting overheating and glare
- The building’s facade incorporates materials that have been carefully selected to minimise heat gain and the creation of hot microclimates. For instance, the use of light-coloured paving materials and roofing that maximises Solar Reflectance.

Other ESD initiatives include:

- A 100kW Solar PV system which will offset the Greenhouse Gas emissions related to base building lighting energy consumption by approx. 30%.
- 5 EV Charging points.
- Water consumption measures within the common areas will be minimised and the development will commit to XX% reduction
- On-site rainwater detention and re-use
- All other initiatives outlined in the diagram.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.



8.0

Parking and Services

8.0 PARKING AND SERVICES

8.1 Parking Access Strategy

Vehicular access has been arranged to minimise impact on the road network and public domain, with all cars and service vehicles accessing the site from one entry point on Canberra Avenue.

Providing a single, consolidated access driveway aligns with best practice for transit-oriented developments by prioritising the movement of pedestrians and cyclists at street level. To emphasise pedestrian priority along Canberra Avenue the driveway entrance is fully integrated with the adjoining footpath at one continuous level.

Access from Canberra Avenue is considered preferable from a traffic perspective to reduce conflicts between entering and exiting vehicles from the numerous future site access driveways to be constructed along Holdsworth Avenue.

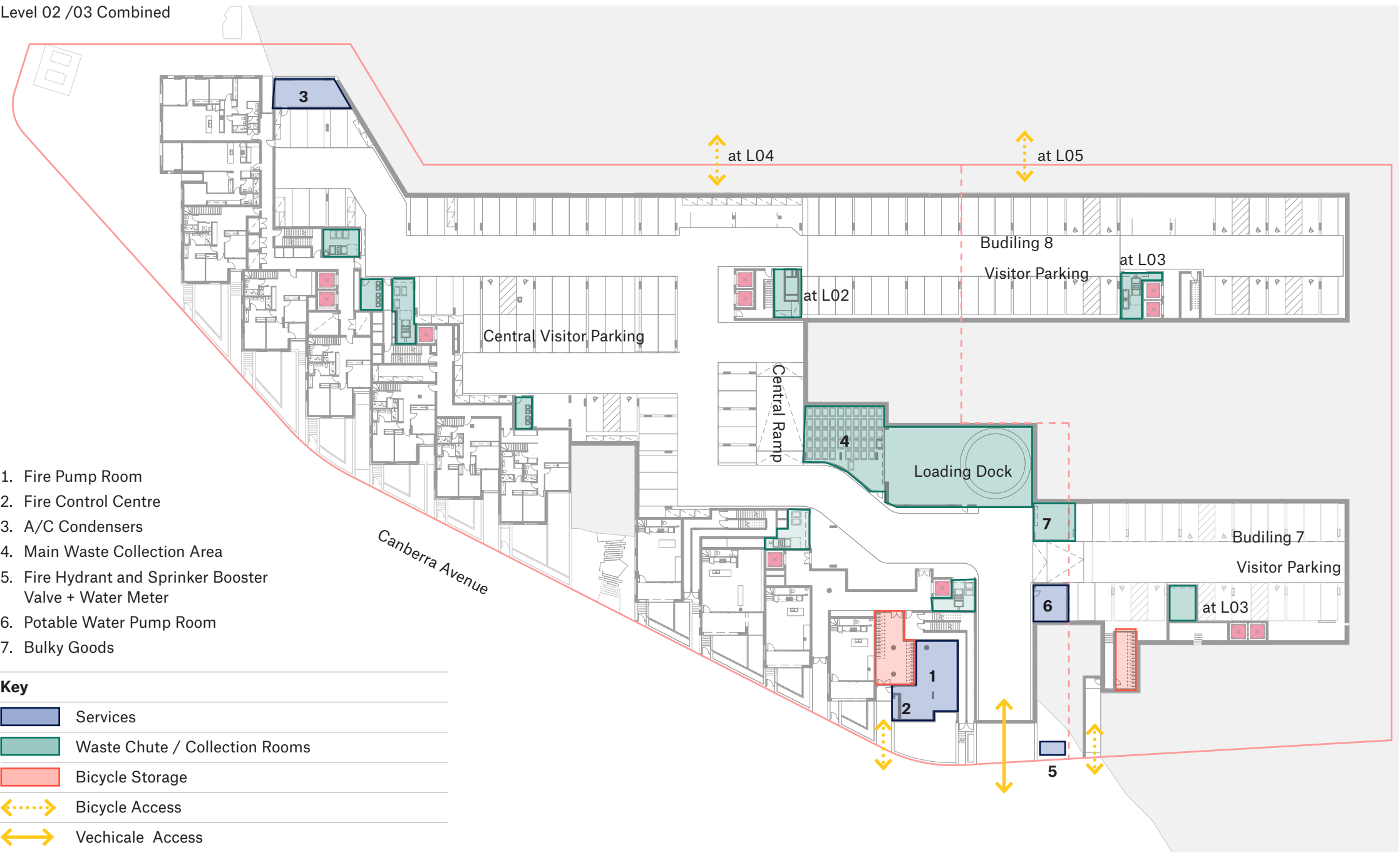
Canberra Avenue also has significantly better access to the regional road network given it connects with Duntroon Avenue which in turns connects to the River Road. This strong access to the higher order road network from Canberra Avenue reduces the extent of traffic circulation on local streets within the St Leonards South precinct

8.2 Basement Parking Layout

A single carpark entry/exit point provides internal access to three levels of basement parking generally located under building footprints and cut into the hillside. A centrally located ramp provides access to all levels.

Accessible carparks are generally located adjacent to the relevant lift cores, and visitor parking is located near the arrival point to the basement. Stage 1 (Building 9, 10 and 11) have a centralised visitor parking area near the entry on Level 2, while building 7 and 8 have additional visitor spaces near the entry to their parking area on level 3.

While some storage cages are located in the parking area, the majority of residential storage is located in half levels under buildings 7, 8 and 9.



8.3 Bicycle Parking

Consistent with best practice transport-oriented development, bicycle parking has been given equal consideration to pedestrian and vehicle access. Each building accommodates its own bike store accessed independently from the street, allowing cyclists to safely park their bikes without compromising other transport modes.

Buildings 7, 9 and 11 each have bike parking areas accessed directly from Canberra Avenue, while buildings 8 and 10 both have bike stores access from Holdsworth Ave.

8.4 Waste Collection Strategy

The waste strategy is managed in four steps:

- 1. Each resident is responsible for transferring their household waste to a central room on each level, which includes a waste chute and two recycling bins.
- 2. Recycling bins are rotated to a centralised collection point by the building manager as required.
- 3. Each building has a waste room on level 2 (in the basement) with level access to loading dock, except building 8 which is on the level above. Tugs will transport bins between the building waste room and the centralised collection point.
- 4. The centralised collection point is collocated with a bulky good storage area and the main loading area which allows up to 3 trucks (1 MRV waste truck and 2 SRV removalist trucks) simultaneous access.

At Level 02, where waste chute collection rooms are located at the same level as dwellings, an additional waste and recycling stores have been provided for these residents.



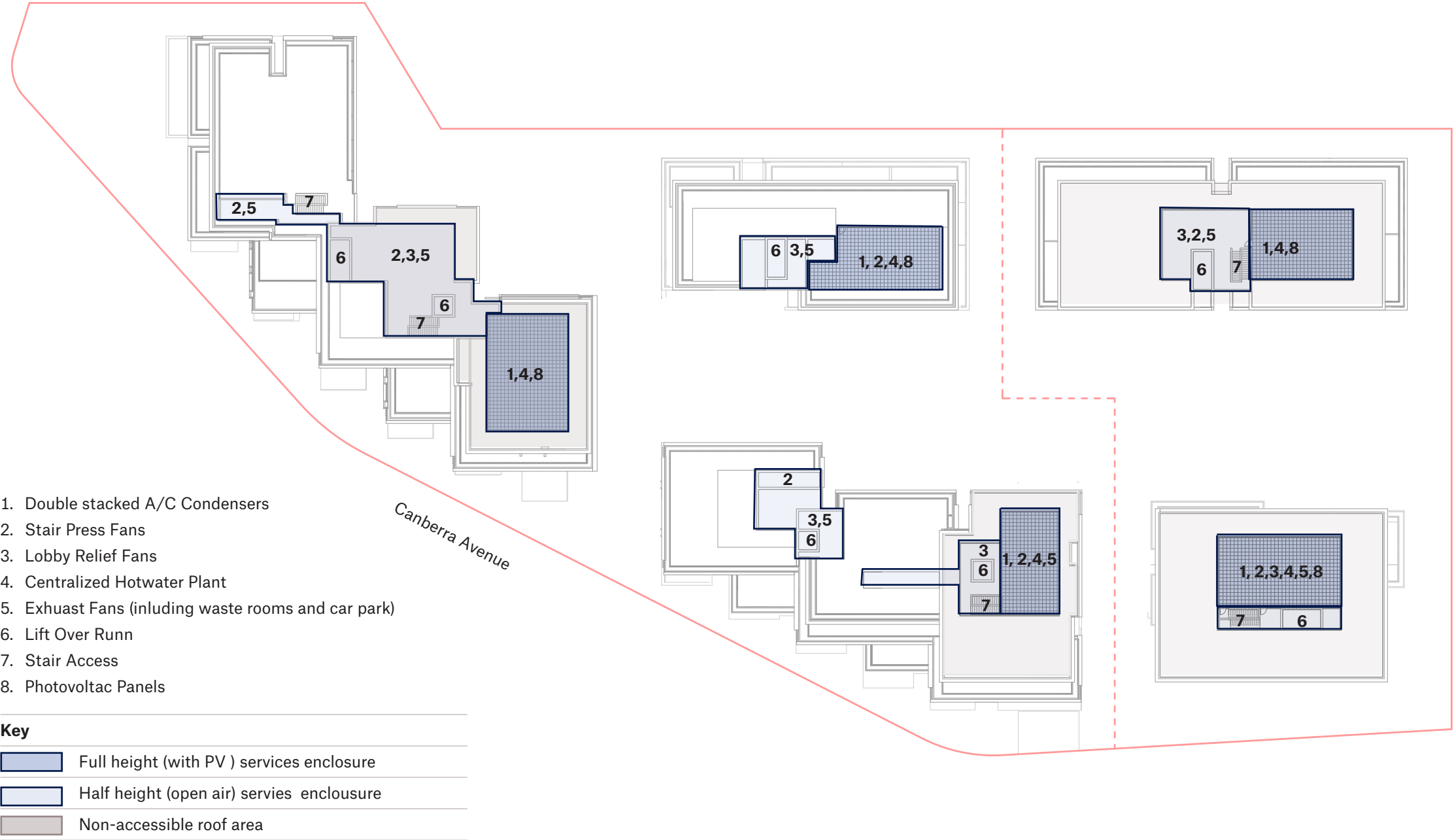
8.5 Building Services Strategy

Each building has a separate but centralized mechanical and hotwater system located at the top most roof level. Services are located in either open air half height (1.5m) louvered enclosures or full height (2.6m) semi enclosed spaces utilizing Photovoltaic cells as roof fabric for common area power generation and screening overlooking of buildings behind.

A/C Condensers are located at roof level or as for Building 9&11 in ventilated service rooms at lower levels. This frees up roof area for communal out door space.

A kiosk substation is located on River Road and supplies power to the Main Switch and Distribution Rooms at L01

The fire pump room (with storage tank below) and fire control centre is located on Canberra Avenue for ease of access of Fire Services. The fire hydrant and sprinkler booster valves are adjacent to this between building 9 &7.



9.0

Density and Yield

9.0 Density and Yield

Consistent with recently adopted planning controls

9.1 Density

The overall density of the development is consistent with the recently adopted planning controls. The proposal delivers a total residential GFA of 32,898m² on a site area of 12,653m², resulting in an FSR of 2.60:1.

9.2 Dwelling Size and Mix

The development comprises a total of 329 dwellings comprising the following mix of dwelling types.

Unit Type	No.	Mix	Size Range
1-bed	72	21.9%	50-63m2
2-bed	179	54.4%	73-110m2
3-bed	68	20.6%	95-163m2
3-bed Townhouse	10	3.0%	139-186m2

This complies with the DCP requirement to provide a minimum of 20% 1-bedroom dwellings and a minimum of 20% 3-bedroom dwellings.

9.3 Accessibility and Adaptable Housing

Accessibility has been well considered despite the steep topography of the existing site. All buildings have level access lobbies to the street, the green spine and, where relevant, rooftop communal gardens.

The scheme proposes 281 no visitable dwellings and 66no adaptable dwellings, made up of 10no. 1-beds, 22no. 2-beds and 34no. 3-beds. This complies with the DCP requirement to provide a minimum of 80% visitable dwellings and a minimum of 20% adaptable dwellings.

9.4 Parking

The scheme proposes 372 parking spaces including 66 visitor spaces. Accessible spaces have been provided for all addaptable units and at a rate of 1/10 visitor spaces.

9.5 Apartment Mix and Affordability

The buildings will contain a broad range of apartment types and sizes aiming to create a socially diverse neighbourhood. To cater for single occupiers, couples, sharers and families, the apartment mix includes 1, 2 and 3 bedroom units.

The development contributes to housing affordability by providing a range of different apartment sizes and configurations, including 25 adaptable units. The different apartment types have been distributed evenly throughout.

9.6 Staging

The building is highly likely to be constructed in two stages. The current staging strategy is to complete building 9, 10 and 11 in stage one and to follow with buildings 7 and 8 in a second stage. This has informed the location of the loading dock and key services infrastructure.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area’s existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Principle 8: Housing diversity and social interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets. Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.