

42 HONEYSUCKLE DRIVE COTTAGE CREEK PRECINCT NEWCASTLE

NEWCASTLE CITY COUNCIL
DEVELOPMENT APPLICATION

ARCHITECTURAL DESIGN REPORT

OCTOBER 2017

BATESSMARTTM

CLIENT

Doma Group
THE DOMA GROUP



PROJECT NUMBER

s12109

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1.0 INTRODUCTION

DEVELOPMENT SUMMARY

This design submission has been prepared by Bates Smart for and on behalf of Doma Group for the site known as 42 Honeysuckle Drive, Newcastle and describes the Development Application proposal to be submitted to Newcastle City Council.

The proposal consists of a 4 storey residential apartment development located over a 5 level hotel component and a 5 level carpark.

The residential component of the development consists 52 apartments ranging in type from 1, 2 or 3 bedrooms dwelling types, while the Hotel is made up of 154 rooms, suites and serviced apartments.

Our design concept gives careful consideration to the objectives of the DCP and the Doma Group brief and aims to maximise the quality and amenity of the hotel spaces and residential apartments.

The landscape design has been developed in collaboration with Sydney Design Collective and forms an integral part of the design solution. It includes the design of a communal courtyard along with wide residential private terraces with expansive views.

The design response references the local architectural character of Newcastle and the industrial heritage of the site.

This proposal consists of an activated ground plane fronting Honeysuckle drive along with an articulated corner element providing identity to the signature hotel and residential apartment development.

DEVELOPMENT SUMMARY

Floor Space

Site Area	3,728m ²
Total GFA	10,309m ²
FSR	2.76:1

Hotel

Standard Rooms	140
Suite Rooms	7

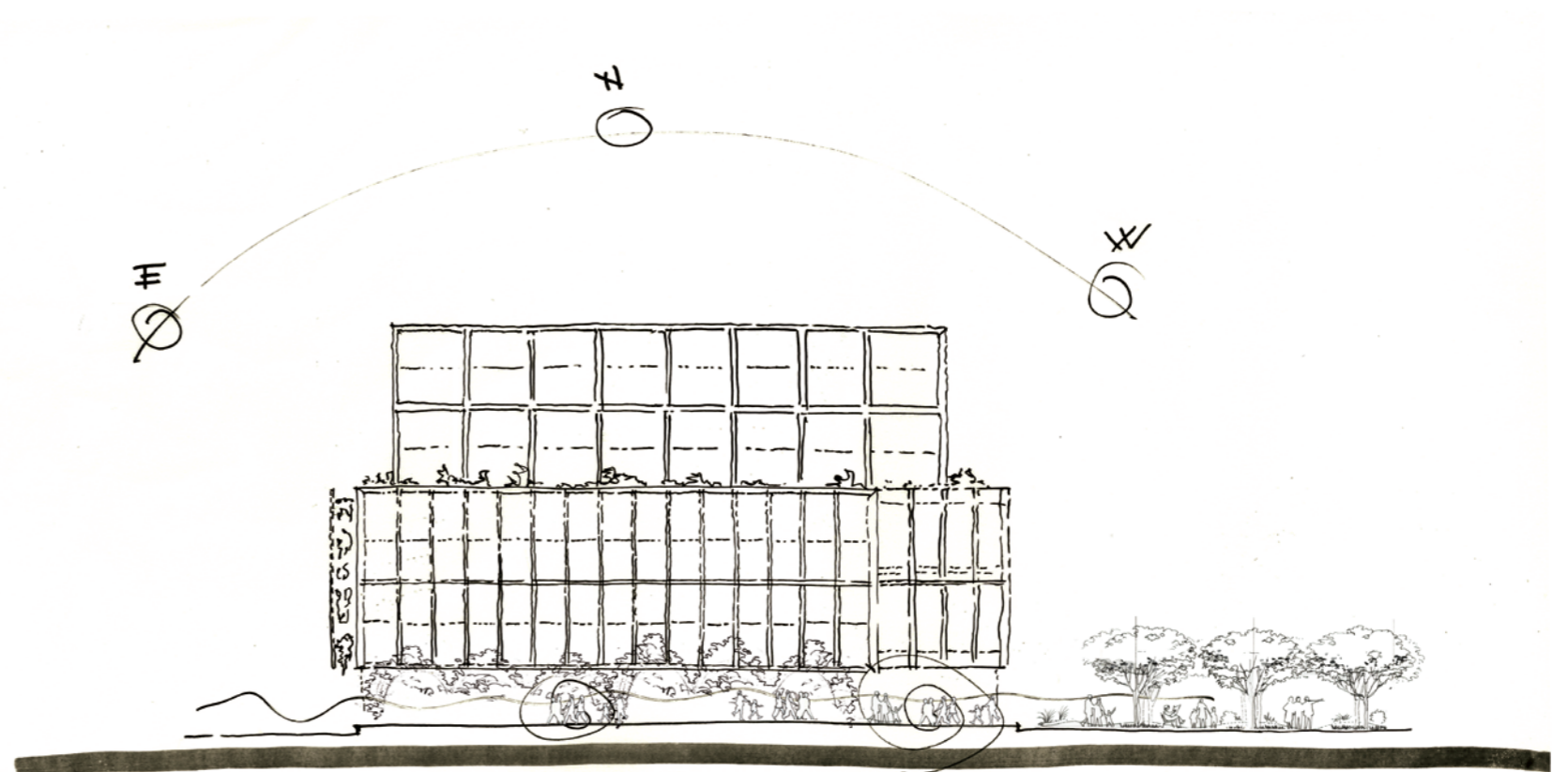
Serviced Apartments

Dwellings	7
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Residential Mix

Dwellings	52 units
Comprising	6 one bedroom apartments
	33 two bedroom apartments
	13 three bedroom terraces

Car parking (total 244 car spaces)



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2.0 **SITE & CONTEXT** **ANALYSIS**

2.0 SITE & CONTEXT ANALYSIS

2.1 LOCATION

The site is located at 42 Honeysuckle Drive, situated within the Local Government Area (LGA) of Newcastle and comprises one title described as Lot 22 DP 1072217.

The site is a truncated rectangle configuration with a frontage to Honeysuckle Drive of approximately 50 meters and a gross site area of 3,728 m². The immediate context consists of a drainage channel to the west, Honeysuckle Drive and foreshore public open space to the north, three storey commercial development to the east a land reserved for the Newcastle light rail to the south.

In the broader context the site is well located adjacent to the Hunter River foreshore and the Rail and Light rail interchange to the west with the proposed light rail line running to the immediate south of the site.

The precinct of Honeysuckle Drive is recognised as a State Significant Site (SSS), and developments that meet an identified capital investment threshold in Honeysuckle are treated as State Significant Development under the Environmental Planning and Assessment Act 1979 (the Act).

All other developments requiring consent in the Honeysuckle location but not meeting the threshold, are treated in accordance with part 4 of the Act.

The DCP allows for a 30m maximum height building with 2.5m setbacks on the north and west sides, 4m on the east and south sides and 6m at the upper levels.





1.



2.

2.2 SITE PHOTOS

Given the prominent location of the site opposite the Honeysuckle foreshore and high visibility of the north west corner (photo 1) fronting Honeysuckle Drive, the proposed scheme seeks to respond to this context.



3.



4.



5.

2.2 SITE CONSTRAINTS AND EXISTING CONTEXT

The site is a truncated rectangle configuration with a frontage to Honeysuckle Drive of approximately 50 meters.

The site is bounded by:

- Hunter Water site to the east
- Railway reservation to the south
- Honeysuckle Drive to the north.
- Public Domain area to the west

Basement and lift shaft openings are at the 1% AEP level of 2.5m AHD

SEPP65 Design Quality Principles

Principle 1: Context and Neighborhood 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 can be defined as the key natural and built features of an area.

Responding to context involves identifying the desirable elements of an areas 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 established areas, those undergoing change or identified for change.

2.3 SITE 42 NEIGHBOURHOOD DCP CONTEXT & CONSTRAINTS

The LEP 2012 guide allows for a mixed use development comprising of commercial premises (retail) at ground level, with tourist and visitor accommodation and RFB and can be designed to achieve the intended outcomes and objectives of SEPP 65 and the Apartment Design Guide.

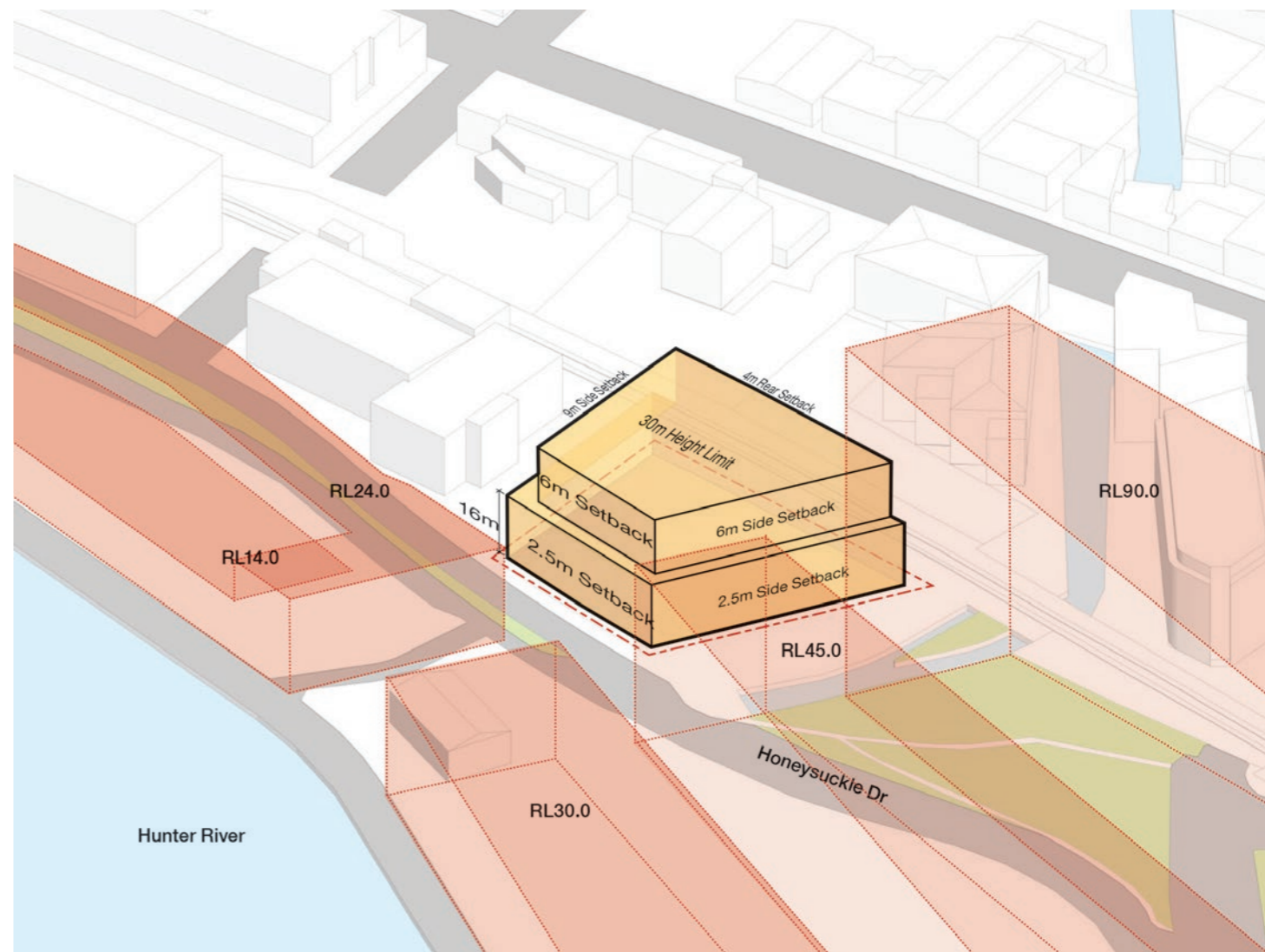
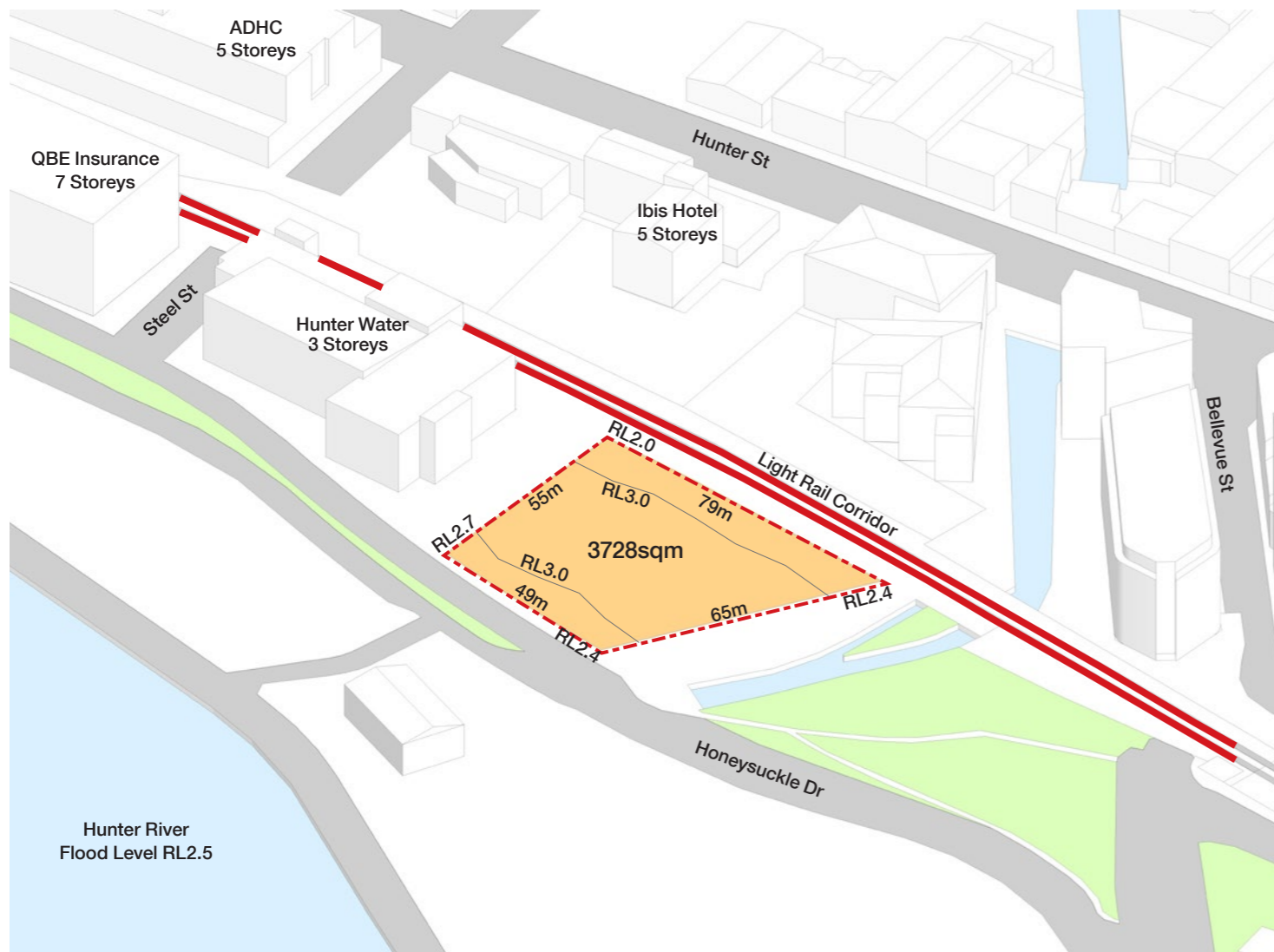
The LEP allows for a maximum height of 30m for the building from ground level, and allows different future developments for the surrounding sites.

SEPP65 Design Quality Principles

Principle 2: Built Form and Scale

Good design achieves a scale, bulk and height appropriate to the existing 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.



2.4 SOLAR ACCESS

The street frontage of Honeysuckle Drive facing predominantly to the north provides the opportunity for the project accommodation to be arranged in a U shape. The residential apartments to the upper levels are arranged around a central courtyard with their frontages oriented to the north, east and west which achieves the desire for all apartments to receive direct sunlight.

The Hotel rooms to the lower levels are oriented to the north and west which also provides for direct solar access.

As required by SEPP65 Apartment Design Guide (ADG), a minimum of 70% of the apartments achieve at least 2 hours of direct sunlight to living rooms and balconies between 9 am and 3 pm in Mid Winter.

SEPP65 Design Quality Principles

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.

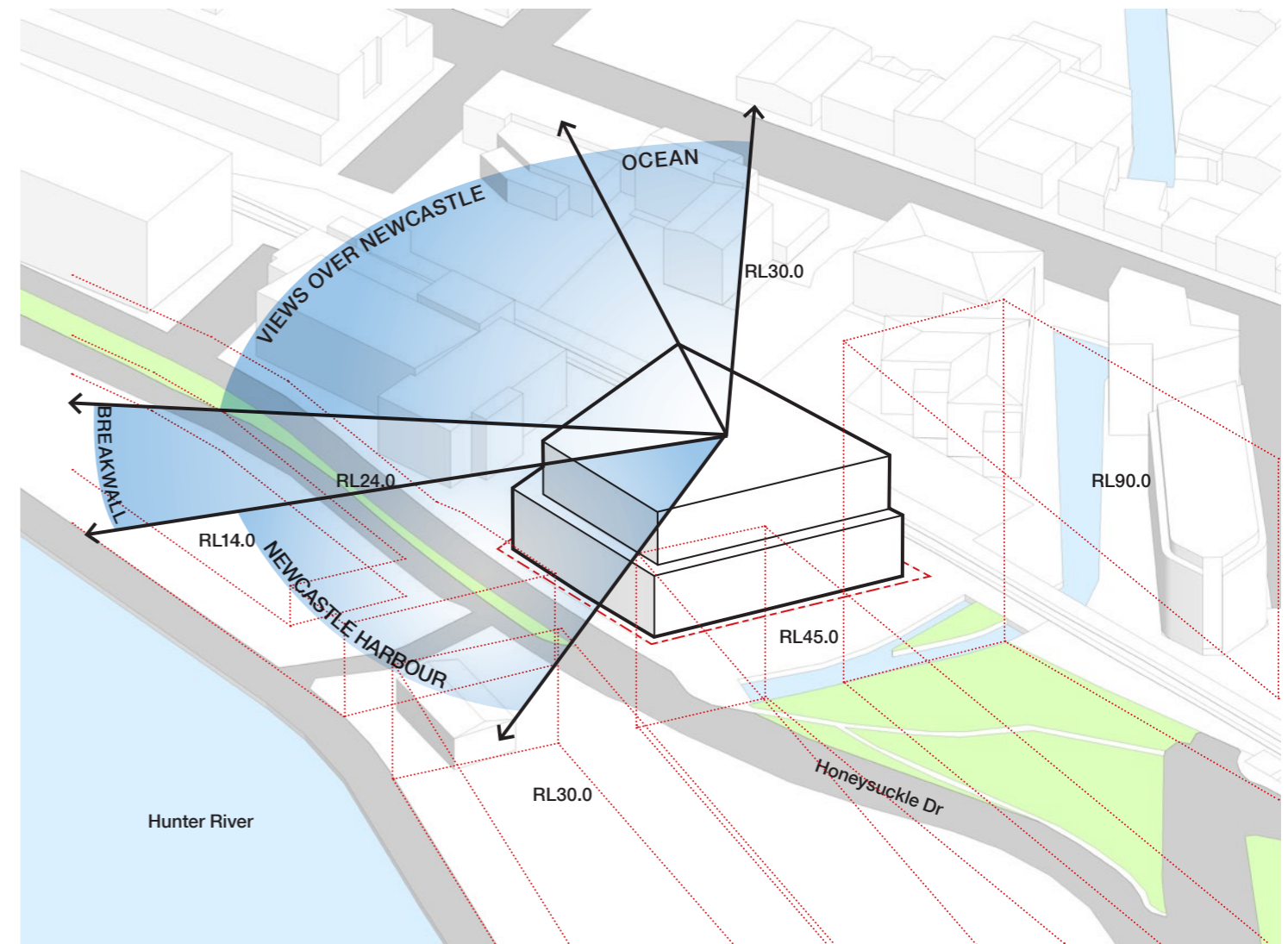
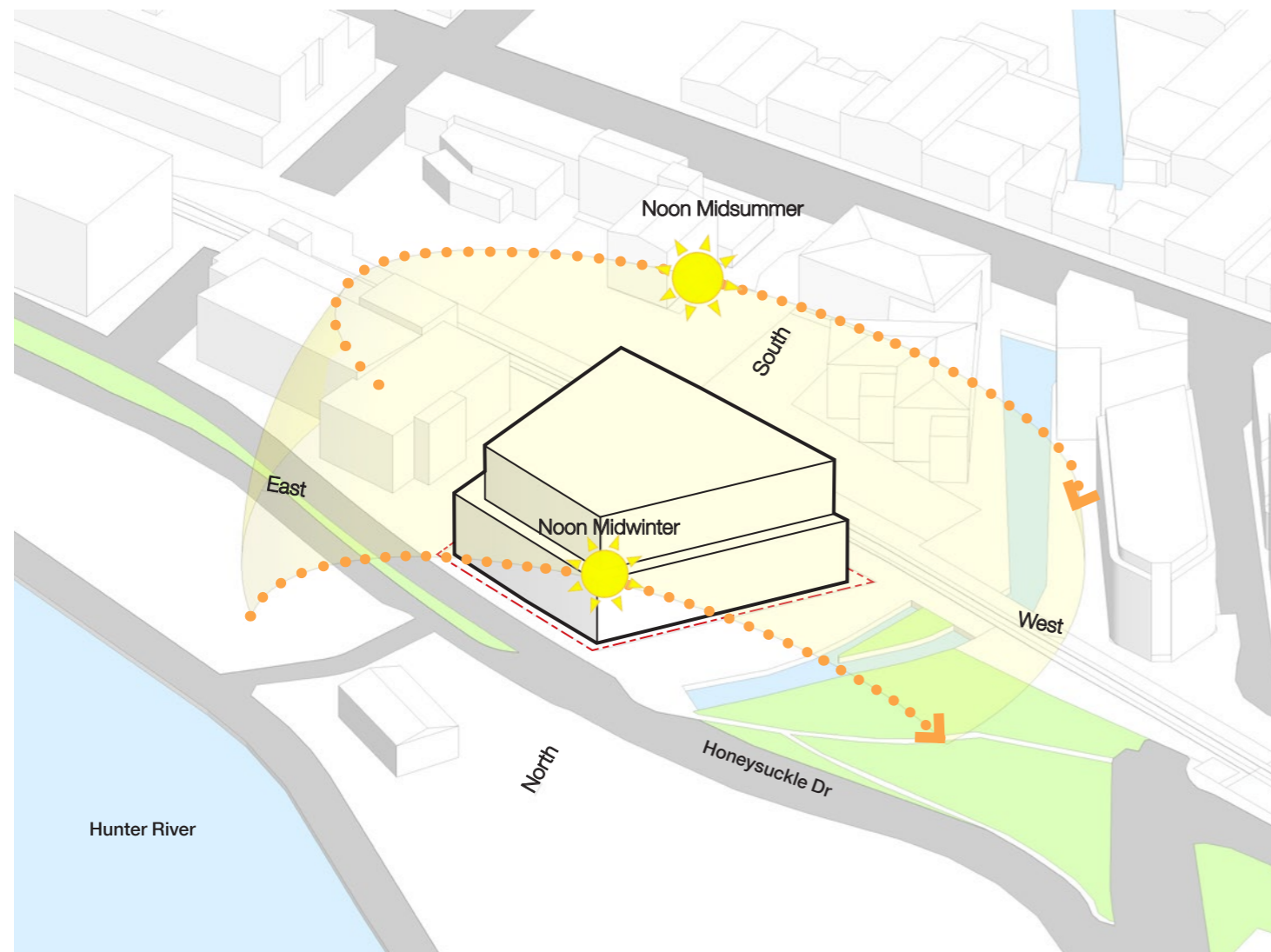
2.5 VIEW CORRIDORS

The U shaped configuration of the building is also advantageous when analysing the access to views from the residential apartments and hotel rooms. The apartments facing to the East will achieve views across the Newcastle CBD to the ocean beyond while the North and West facing apartments and Hotel rooms access views of the Hunter River, Harbour and foreshore.

SEPP65 Design Quality Principles

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 ground water recharge and vegetation







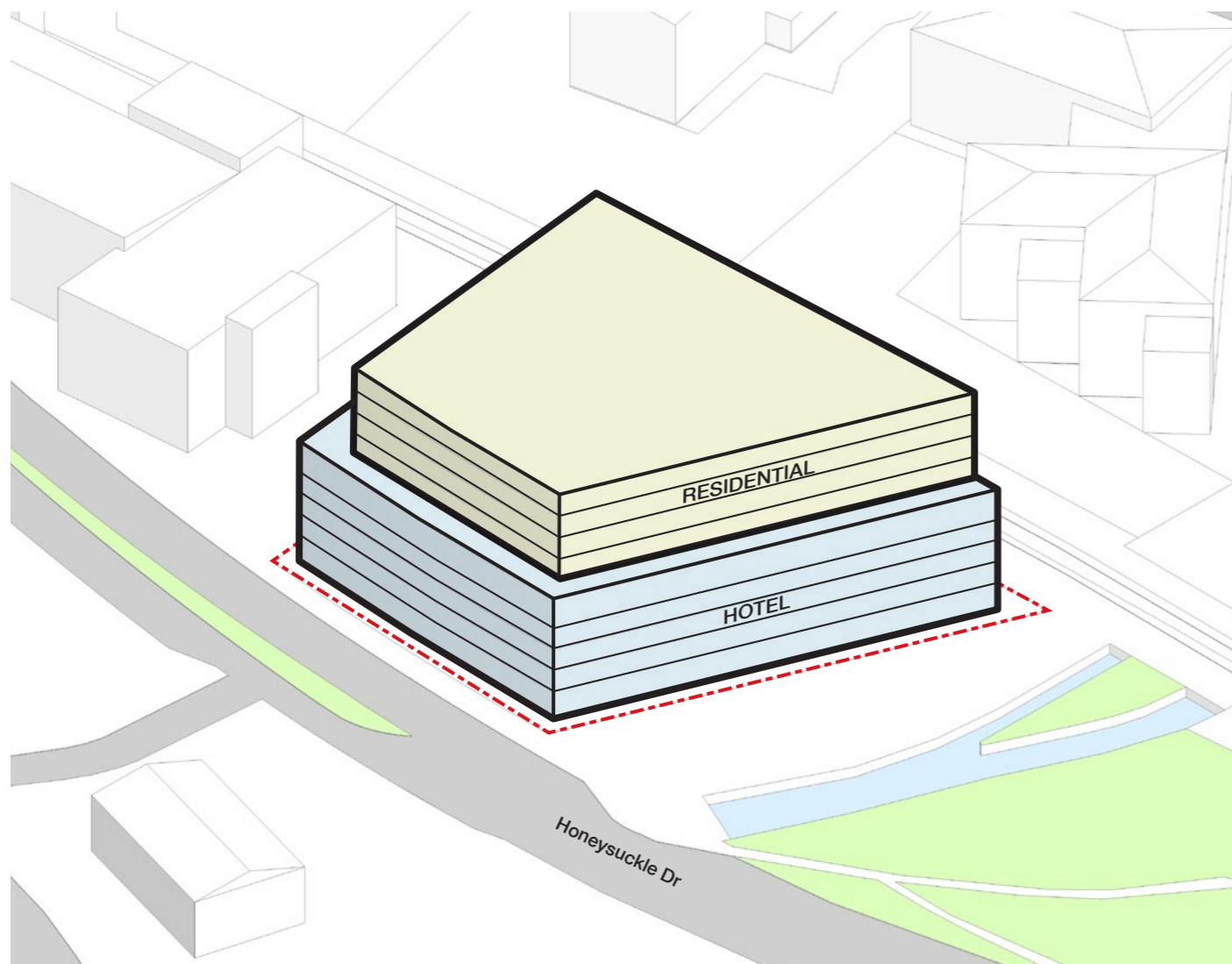
3.0 DESIGN CONCEPT



3.0 DESIGN CONCEPT

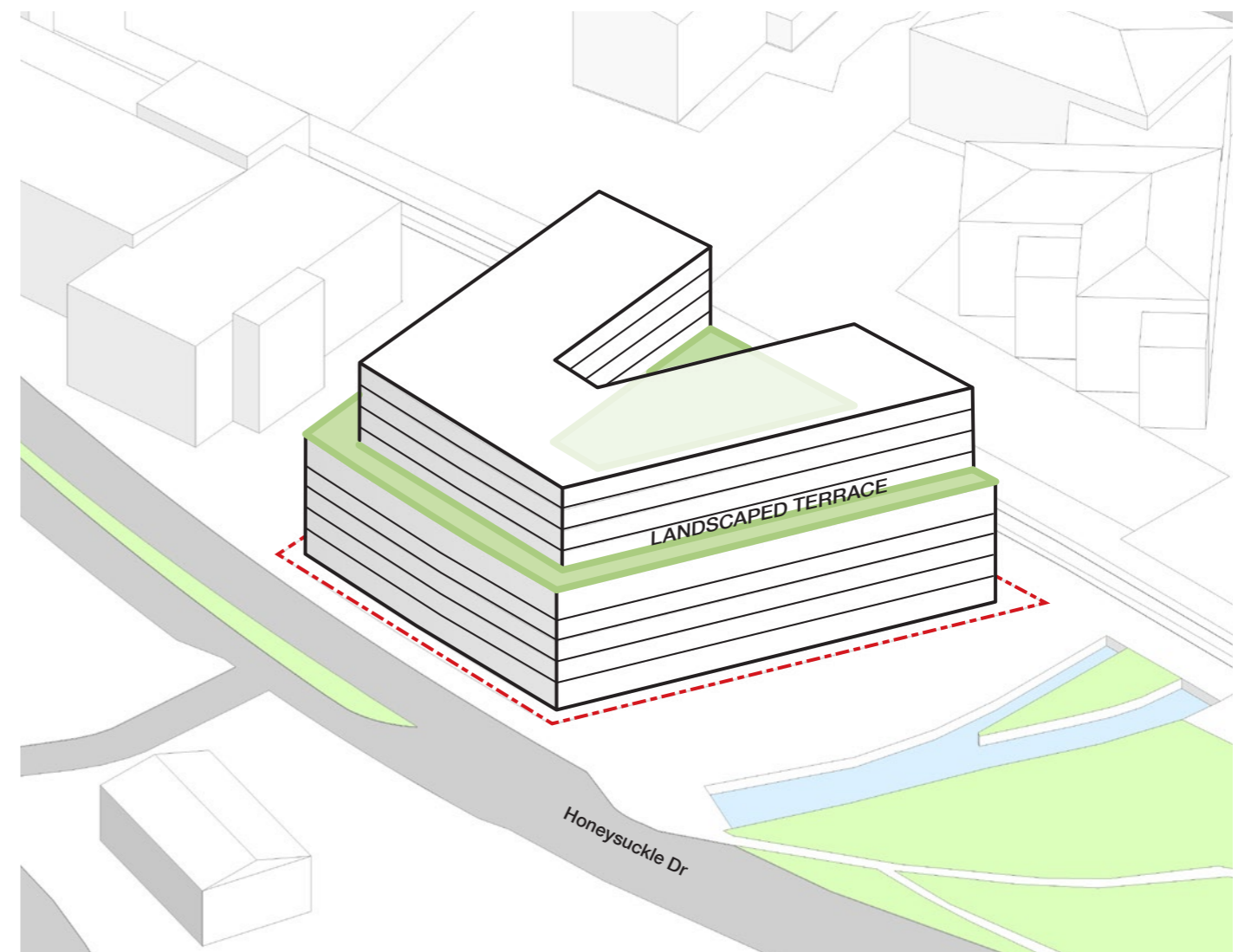
3.1 Brief

The project brief requires the provision of an activated street frontage to Honeysuckle Drive with a 4 storey Hotel development over which conceals a split level above ground carpark behind. The Hotel and carpark form a podium for the residential apartment block to the upper 4 storeys



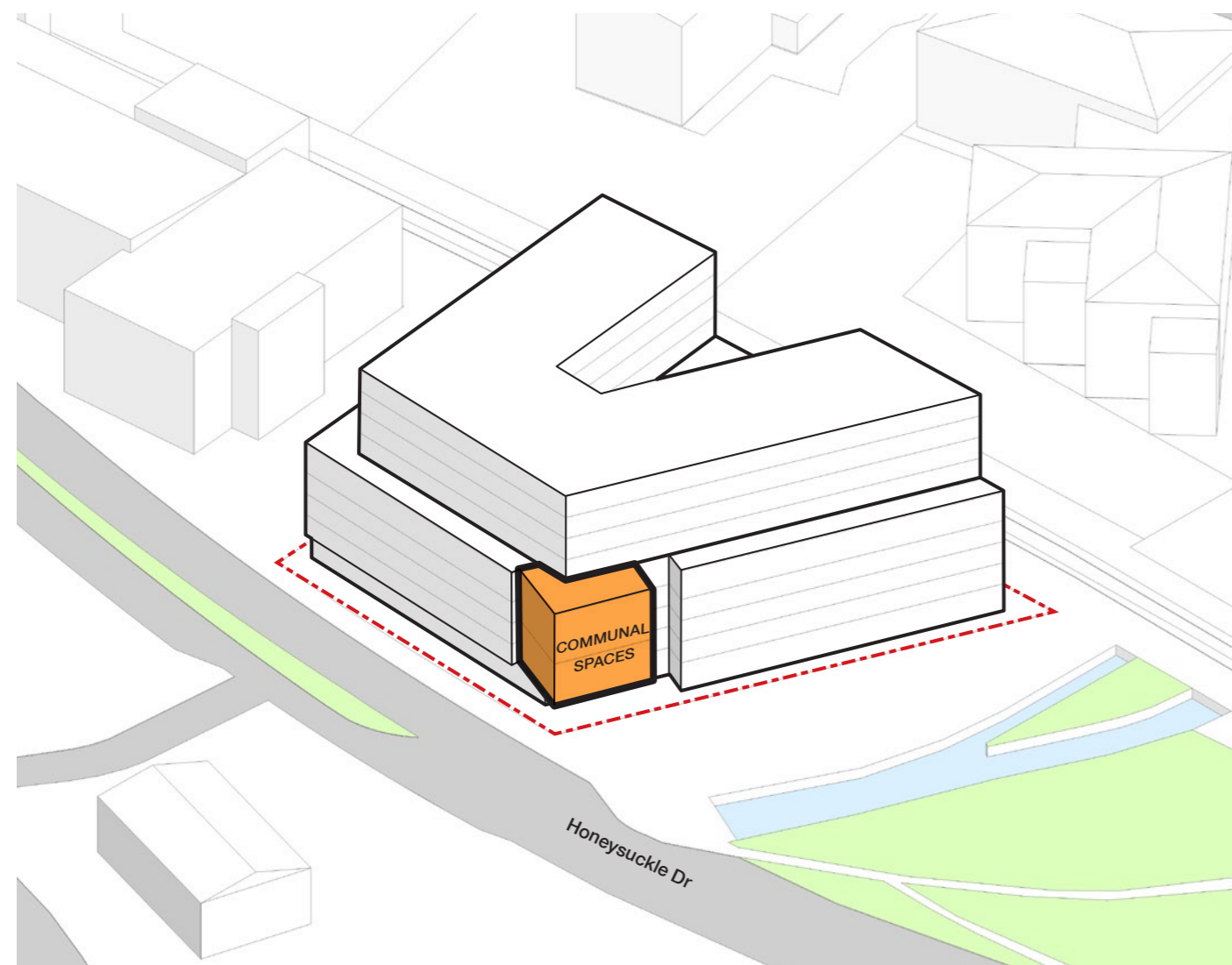
3.2 Landscape

The size, configuration and orientation of the site provides the opportunity for a U shaped residential apartment block arranged around a landscaped courtyard with large terraces the north, east and west frontages of the setback level also providing significant landscaping opportunity.



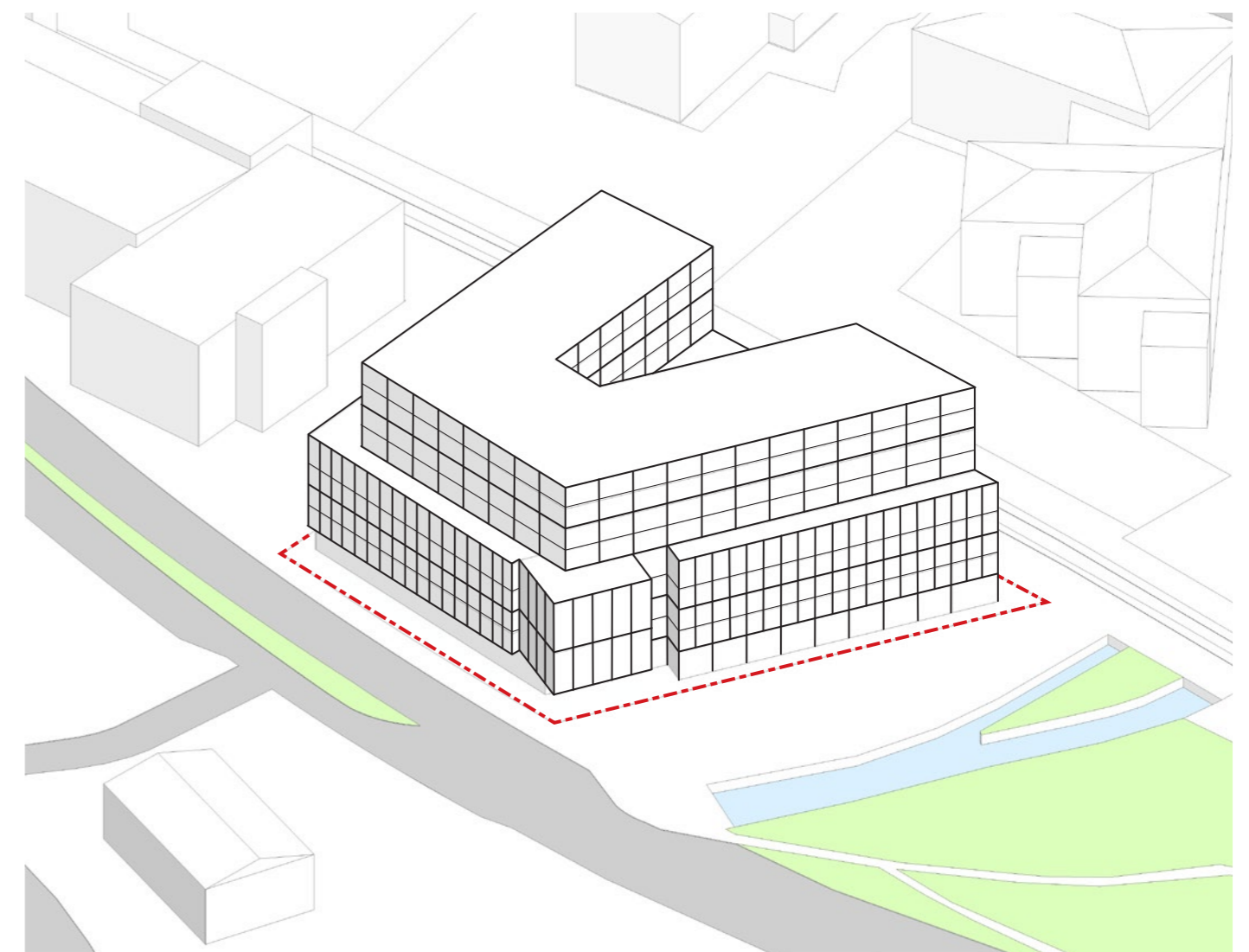
3.3 Massing / Articulation / Identity

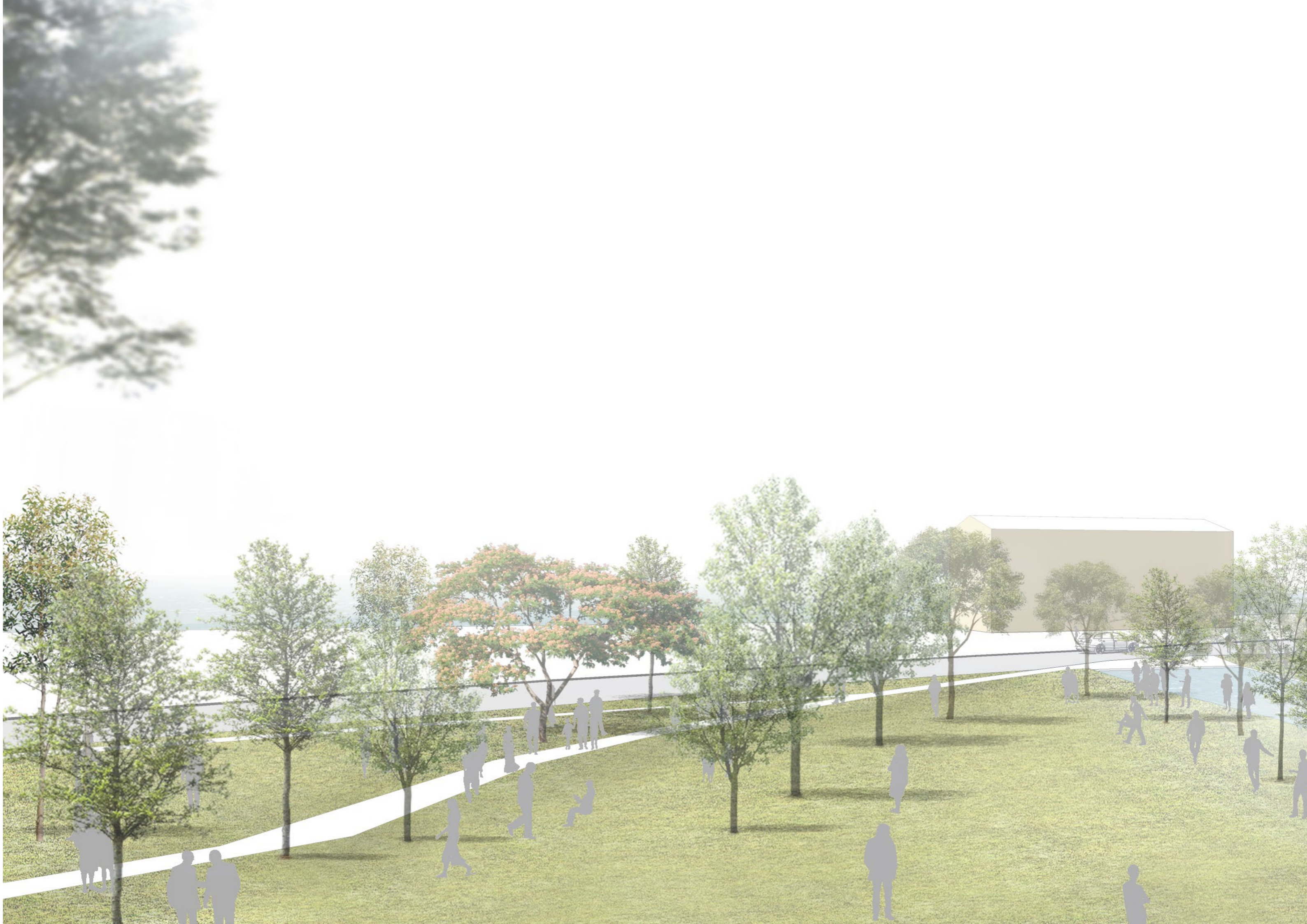
The massing of the built form provides the opportunity to articulate the north west corner fronting Honeysuckle Drive and the adjacent park to incorporate an identifying element into the building massing. This corner element contains communal Hotel spaces over the main Hotel entry lobby and is a distinctive marker for the Hotel and the project as a whole



3.4 Facade Concept

The facade concept is based on an architectural expression of the structural grid inherent in the nature of the building planning. A hierarchy of forms are created through the composition of two storey expressive structural elements encompassing a recessive sub structure. The proportions of the hotel component vary to that of the residential component due to their differing planning modules further expressed through material selection.







4.0 DESIGN DESCRIPTION

4.0 DESIGN RESPONSE + OVERVIEW

The proposal consists of a 4 storey 'U' shaped apartment building accommodating 52 apartments over a block form podium containing a 5 storey, 152 room hotel and 240 space split level car park. There is an activated street frontage at Ground Level consisting of the Hotel reception and retail opportunity fronting Honeysuckle Drive.

Ground Level

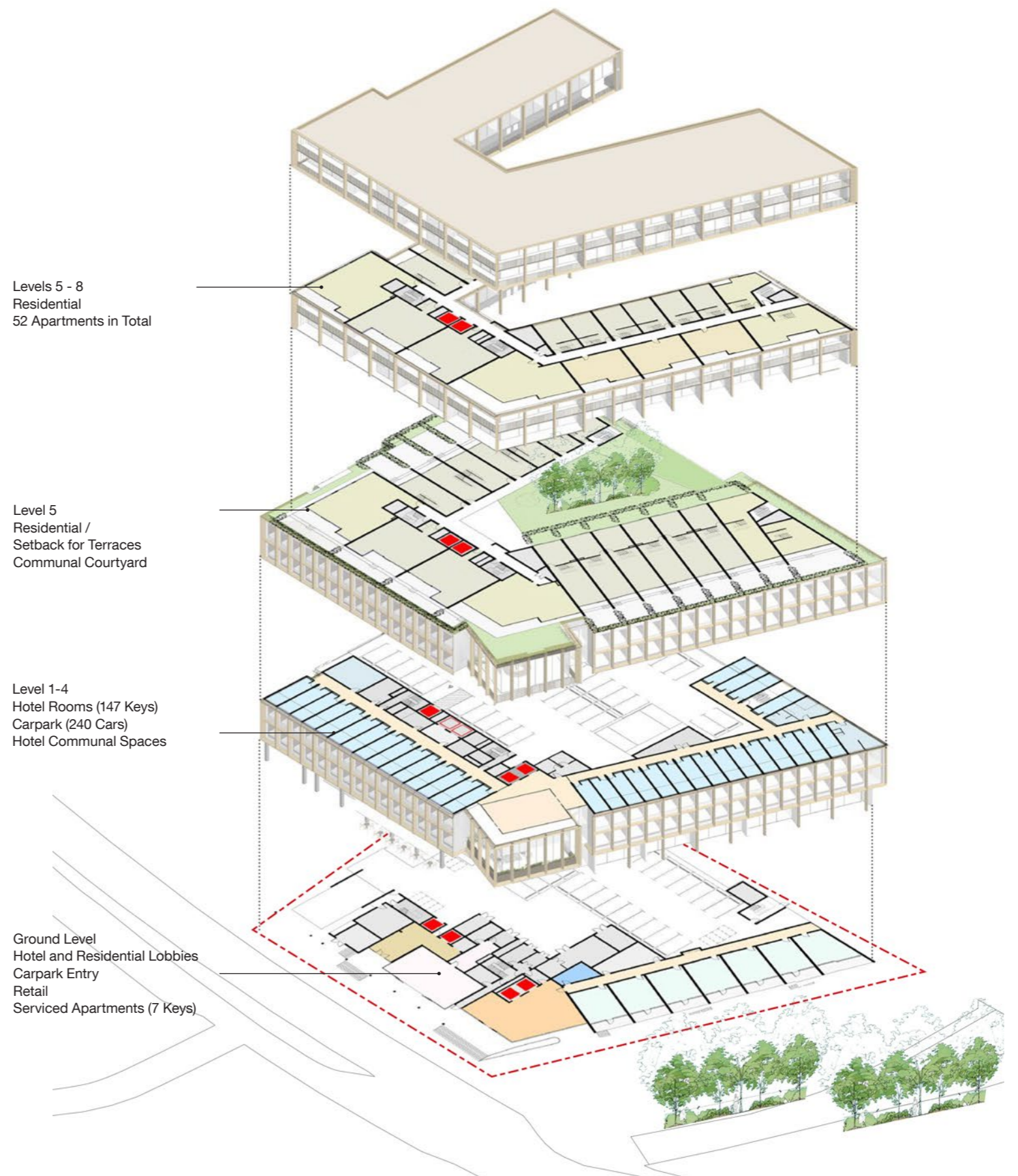
The Honeysuckle Drive frontage to the northern edge of the site consists of the Hotel entry to the prominent north western corner, adjacent a commercial tenancy / food and beverage opportunity, Residential Entry Lobby and discreet car park and loading dock entry to the east. The western edge of the development consists of seven 1 and 2 bedroom serviced apartments fronting on to Public Domain and with direct access

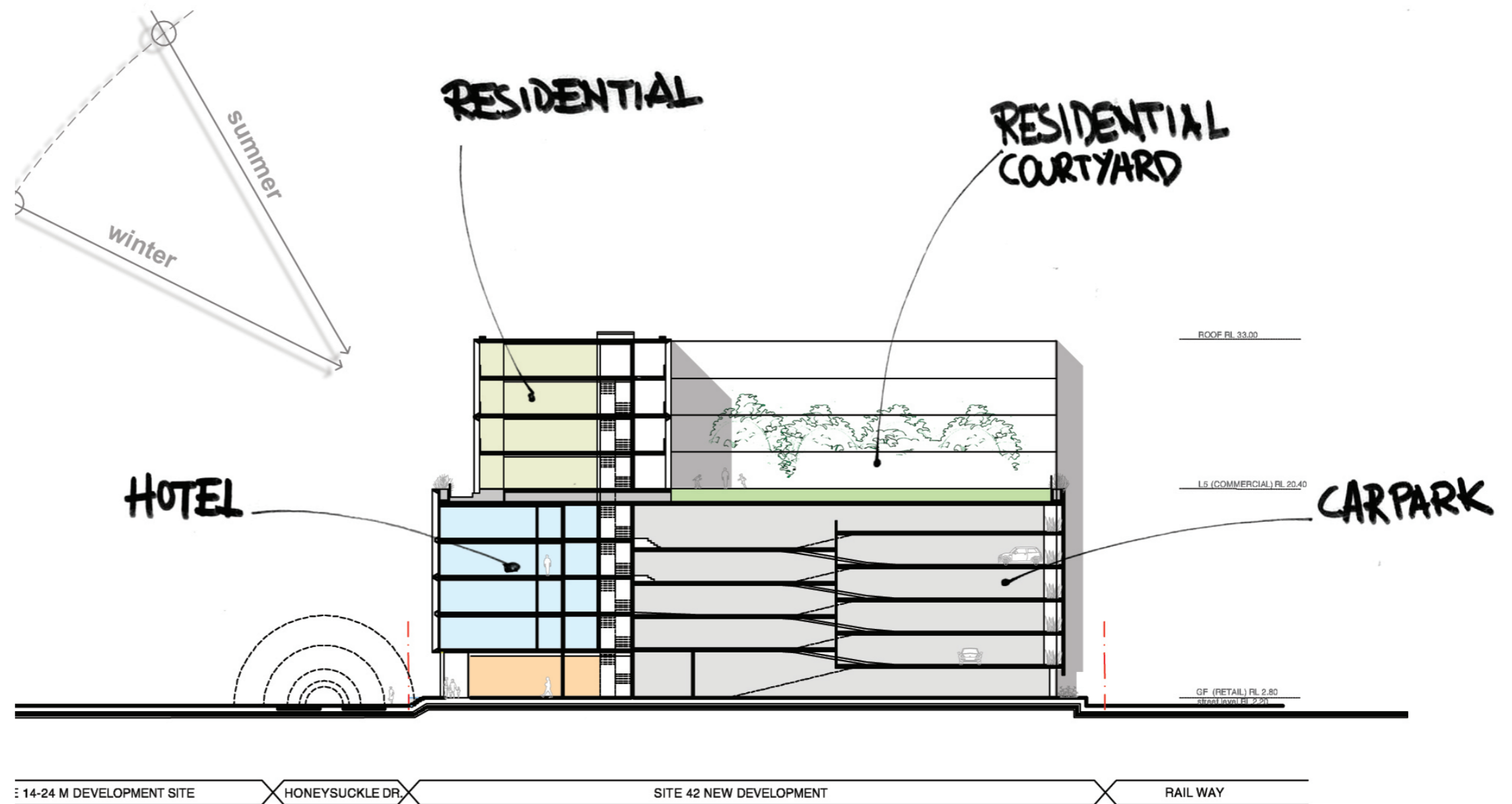
Levels 1-4

These levels contain the Hotel Room component of the proposed development with the rooms predominantly oriented to the north and western facades with some additional rooms to the western side of the southern facade. The north west corner element consists of common facilities for use by the Hotel occupants such as a library, lounge, gym and informal food and beverage area. Behind the accommodation sits the split level carpark facility with louvred facades to the south and east to provide natural ventilation. The carpark also contains bike and motorbike parks, residential storage and various servicing requirements.

Levels 5-8

The upper levels contain the residential apartment component of the proposed development which is arranged in a 'U' shape around a landscaped central communal courtyard at Level 5. There are a variety of 1, 2 and 3 bedroom apartment typologies and configurations however they are all oriented to either the north, east or west to maximise their solar access and aspect towards the prevailing views. The apartments are also set back significantly at Level 5 to reduce the massing while also providing the opportunity for large terraces and landscaping to apartments at this level.

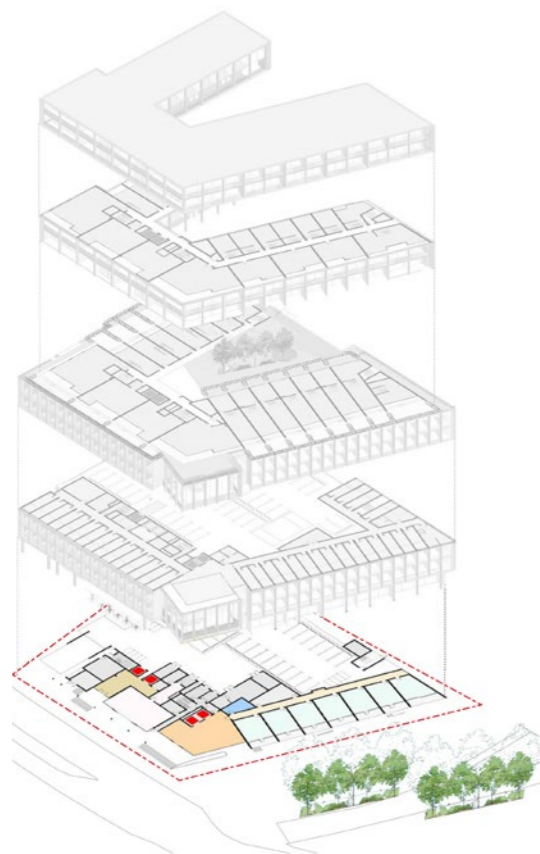




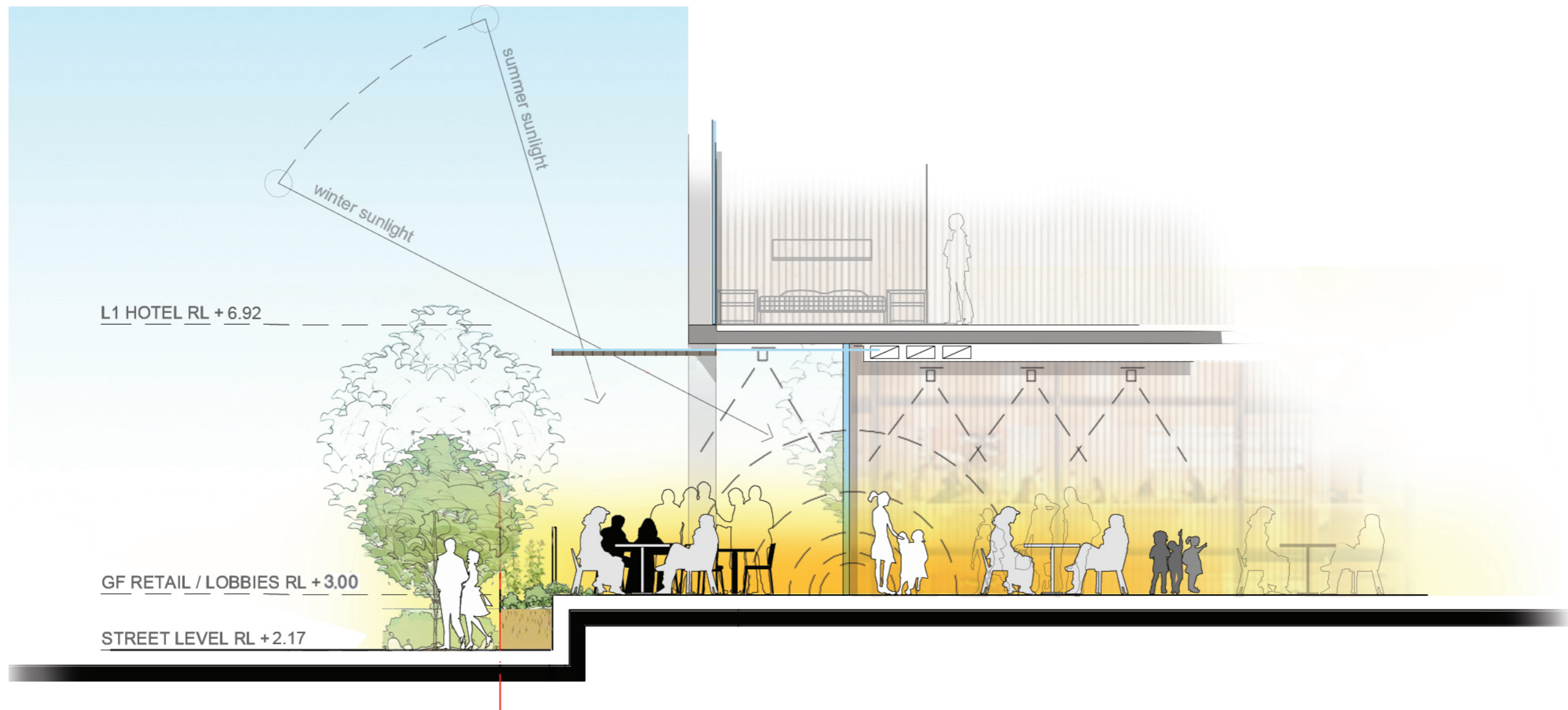


4.1 GROUND PLANE ACTIVATION

A key component of this proposal is the activation of the ground plane fronting onto the main street frontage of Honeysuckle Drive. The Hotel reception is located on the highly visible north western corner of the site providing the development with an prominence and identity. Retail tenancy/s then occupy the main street frontage with an external dining terrace and landscaping to promote activation and street presence. The residential apartment lobby bookends the retail.



The retail opportunity, hotel and residential lobbies fronting on to Honeysuckle Drive will provide activation to the streetscape



HONEYSUCKLE DRIVE

GF EXTERNAL ACTIVATION

RETAIL / RESTAURANT



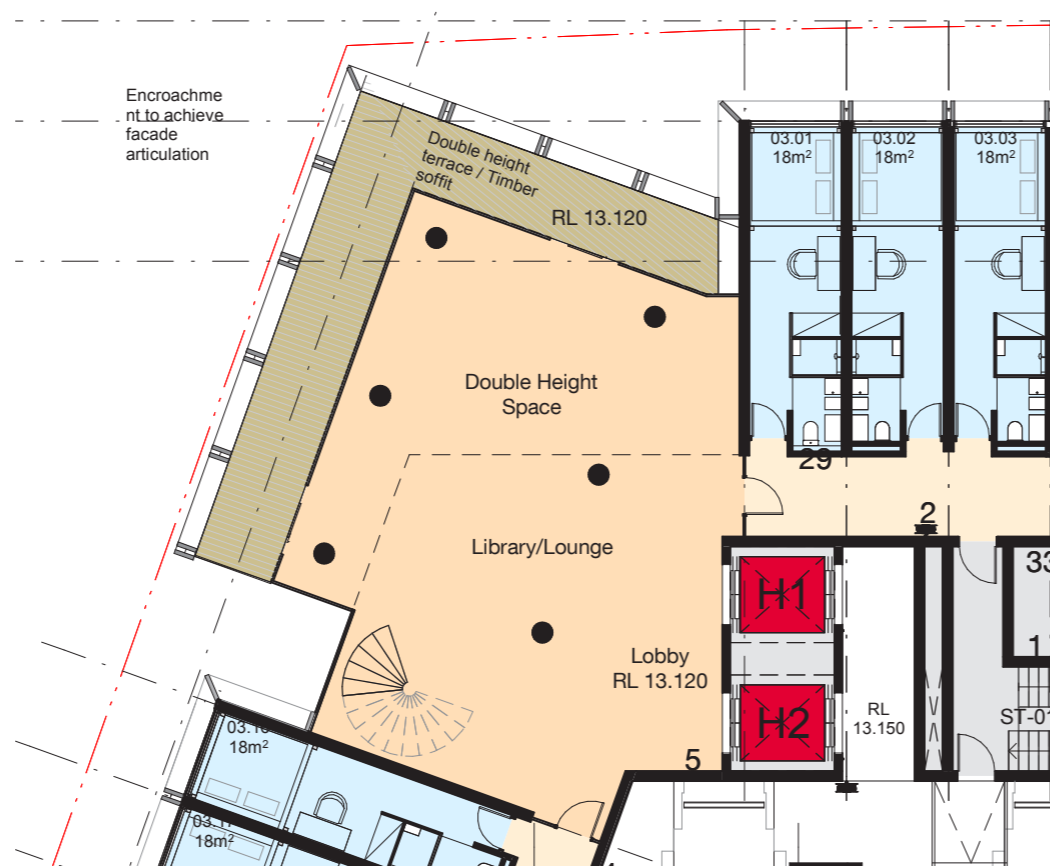
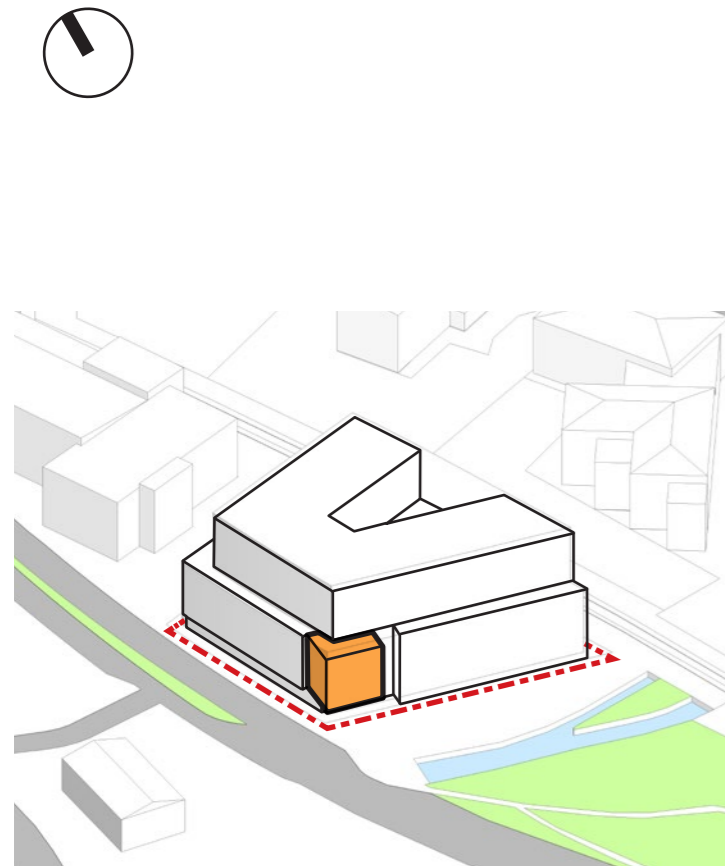
...bringing activation to Honeysuckle Drive



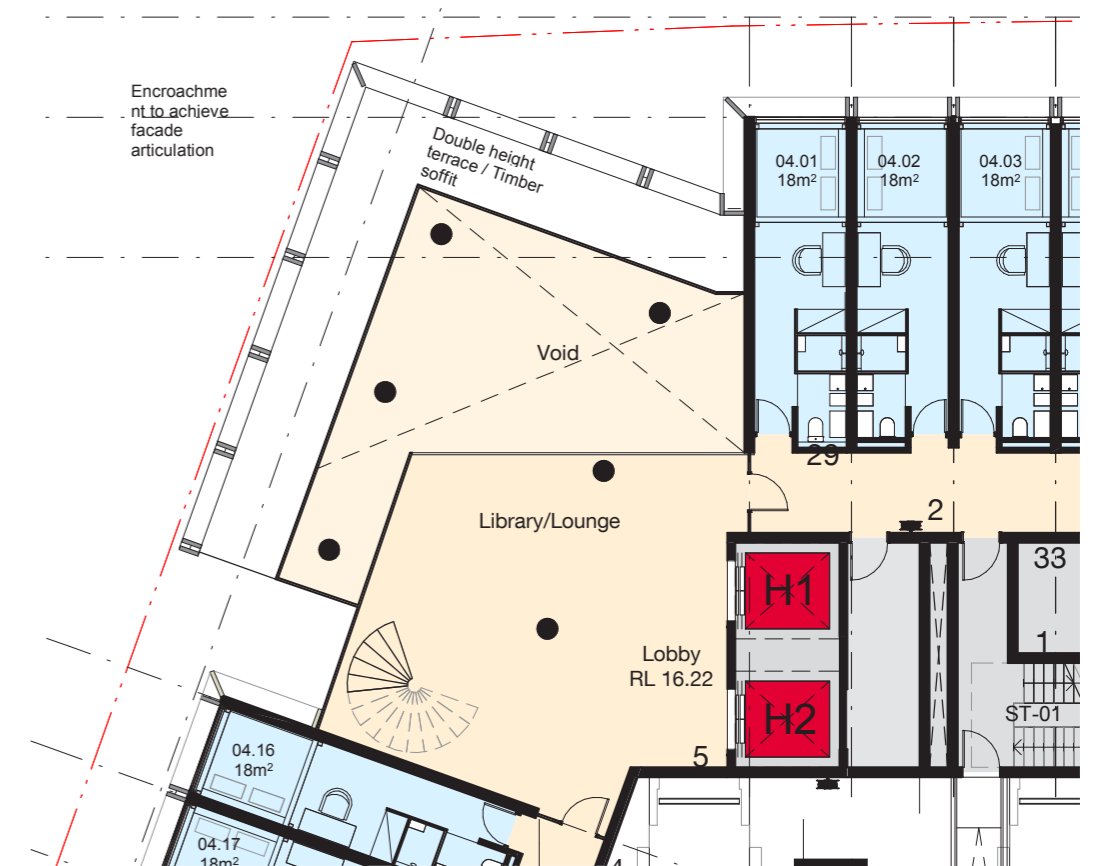


4.3 HOTEL COMMUNAL SPACES - CORNER ACTIVATION

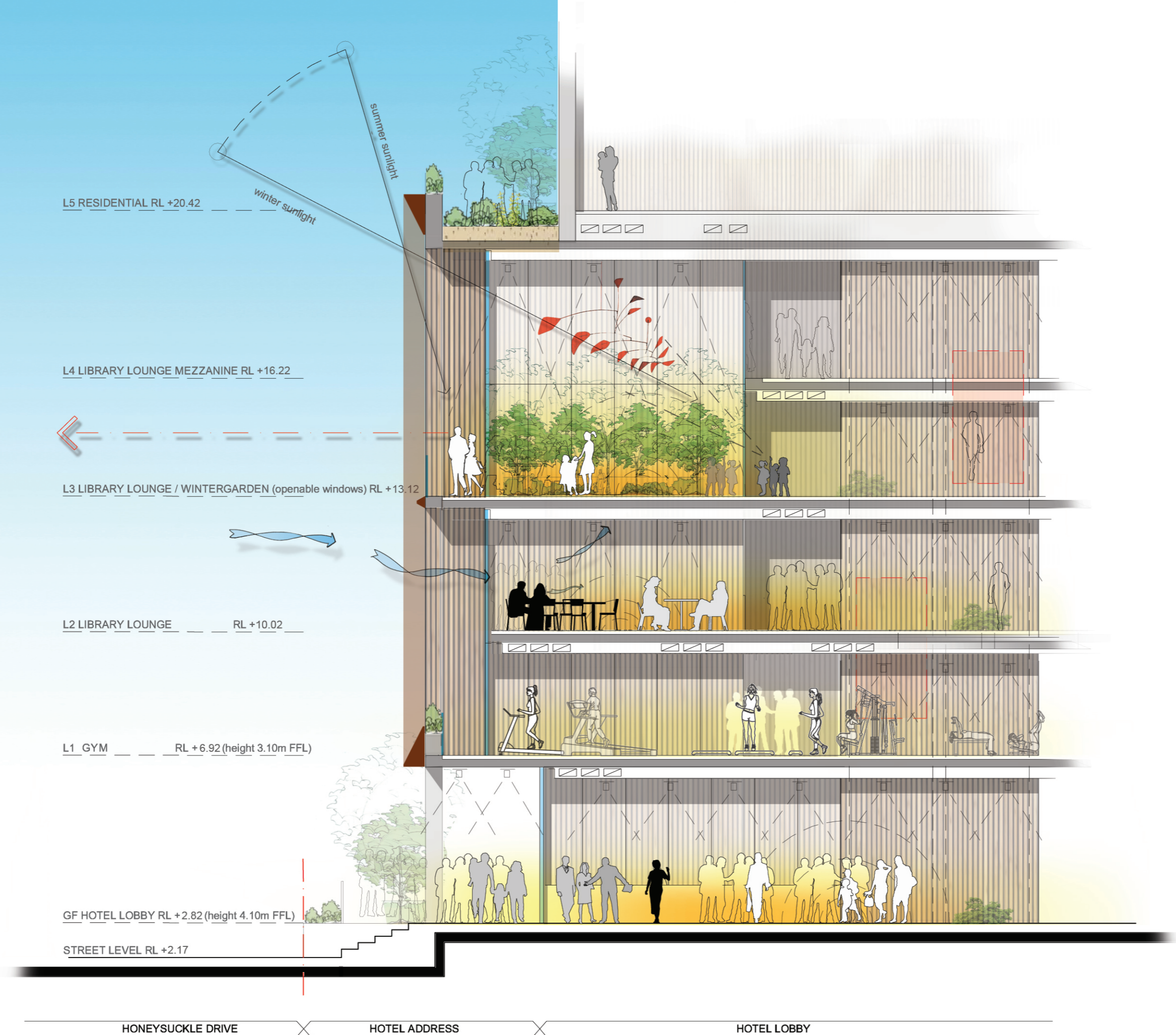
The north west corner of the site is highly visible when viewed from Honeysuckle Drive to the west looking towards the east due to the undeveloped land adjacent immediately adjacent the site and the low rise nature of the buildings in the general vicinity. The proposed design responds to this opportunity by providing a visibly distinctive corner element set off the main building facades and rotated off the northern axis are right angles to the western boundary. This element provides the building with identity and a focal point for the precinct. The Hotel planning seeks to accentuate this corner piece even further through activation by locating the Hotel reception and main entry at ground level with active uses to the levels over with a Gym on level 1, Food and Beverage on level 2 and double height volume to levels 3 and 4 consisting of a Library and Guest Lounge. There are significant views from this corner out across the Hunter River.



LIBRARY LOUNGE PLAN (LEV. 3)

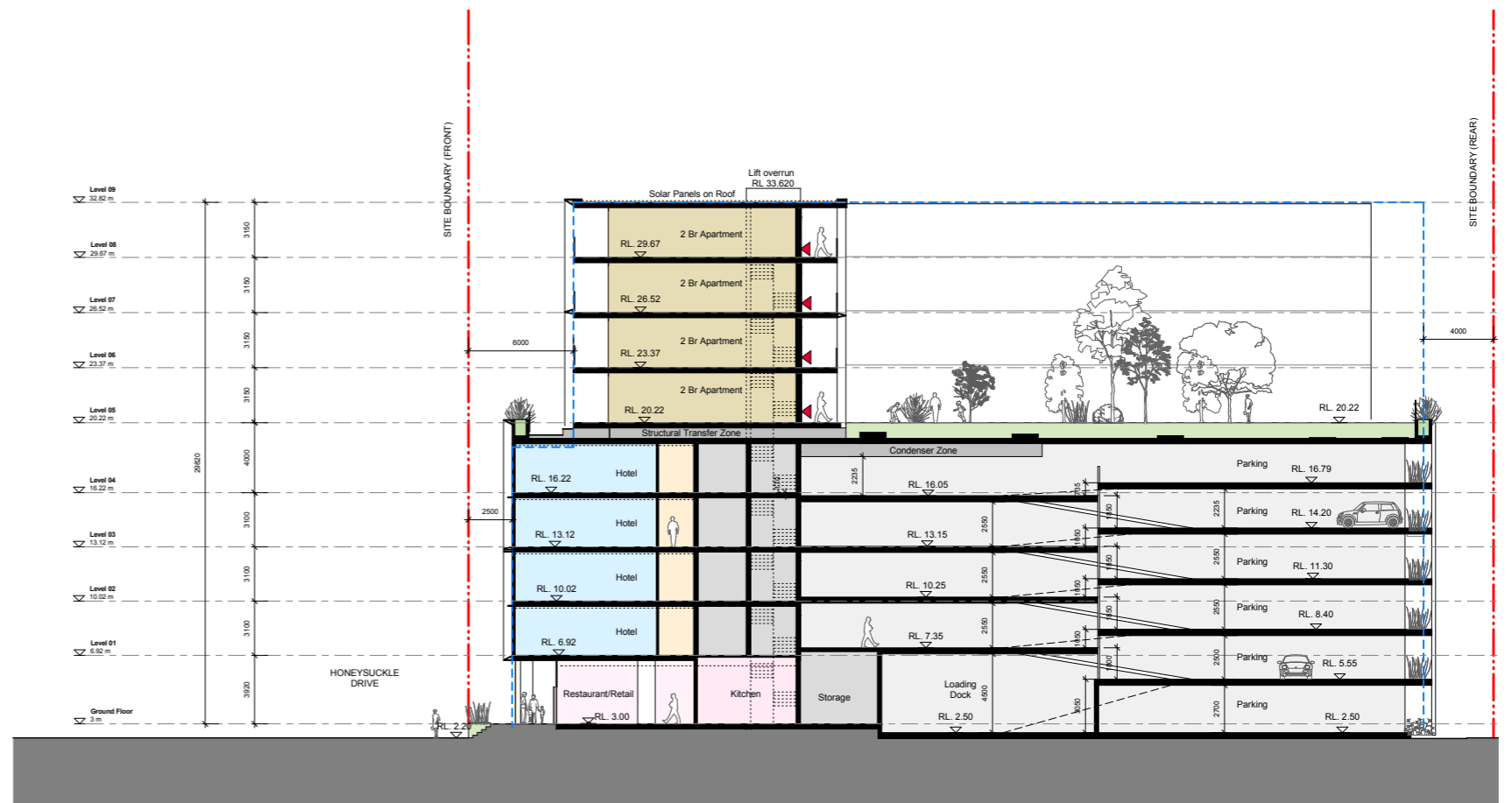
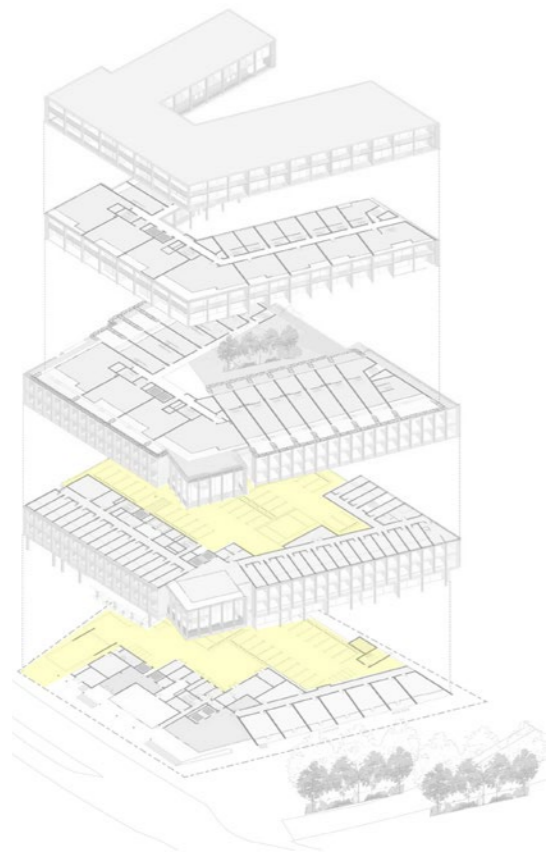


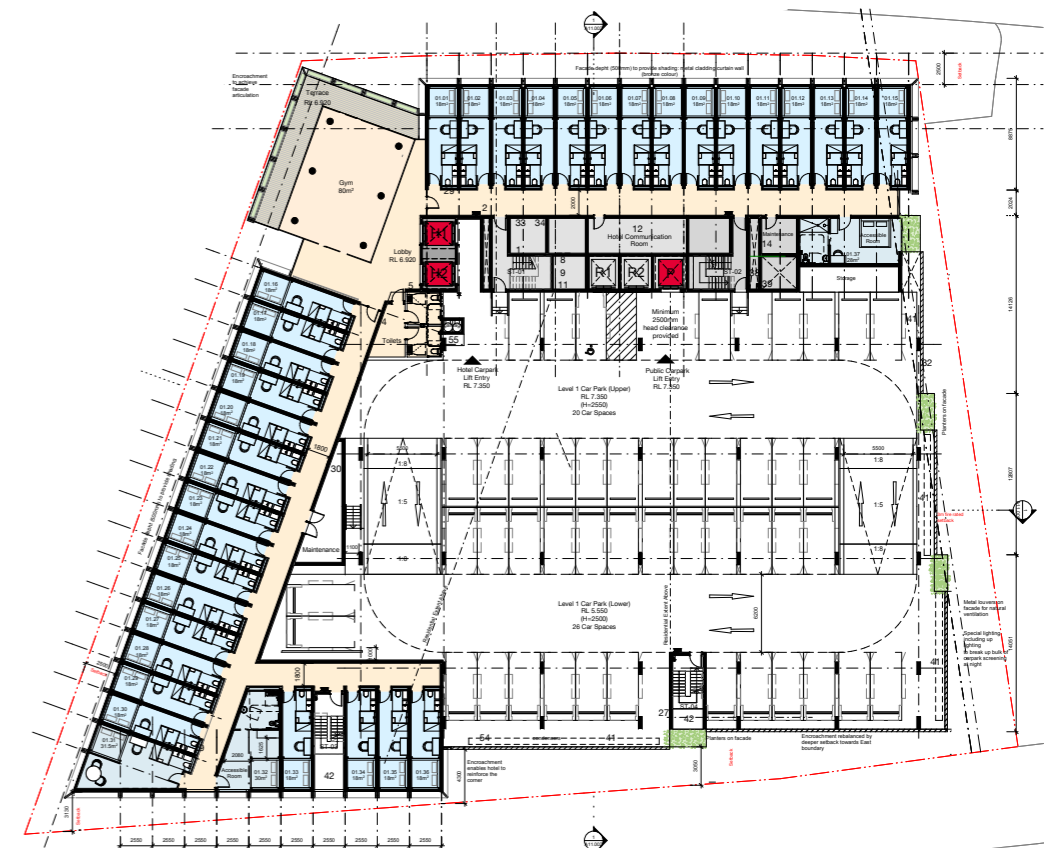
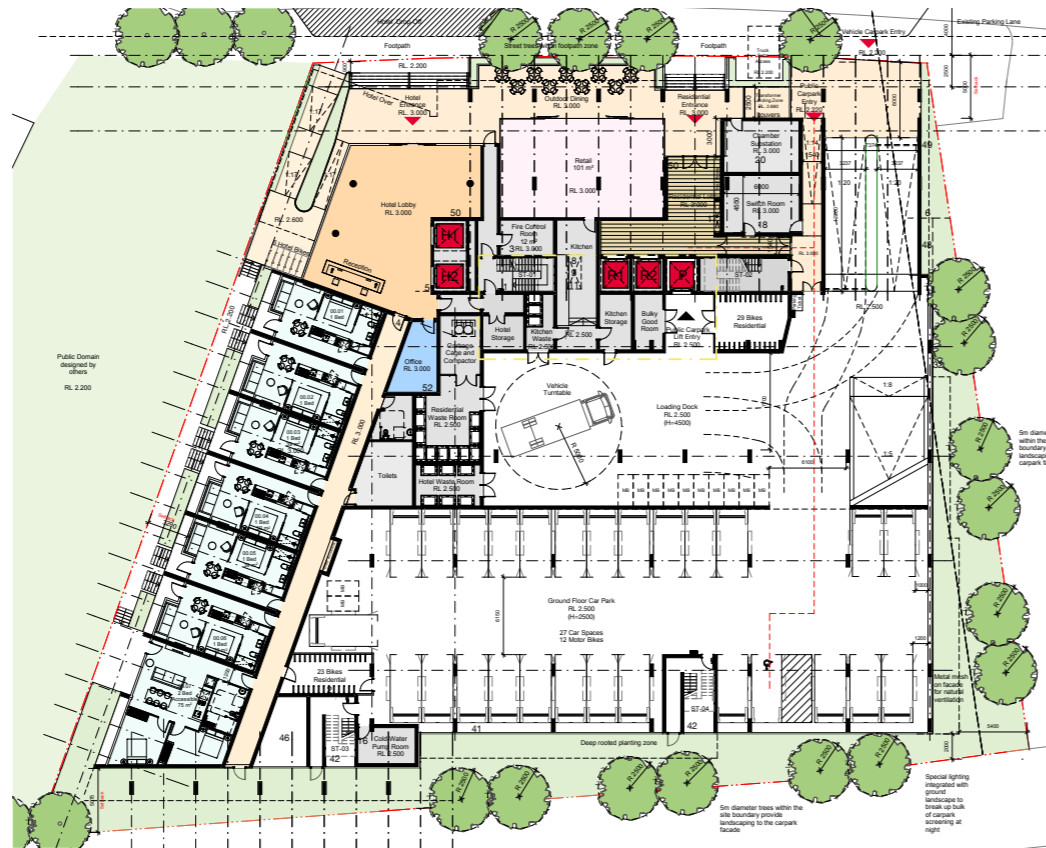
LIBRARY LOUNGE PLAN (LEV. 4)



4.4 CAR PARK

The proposed project contains a multi- purpose car park from Ground to Level 4 which is screened by the Hotel component of the project to the north and west while the east and south facades are screened from view using a vertical metal louvre system that also allows for the carpark to be naturally ventilated. The car park is entered from the eastern end of the Honeysuckle Drive frontage. The Ground Level contains the loading dock area and ancillary storage and waste rooms. Car parking is then arranged over a series of split levels and accommodates at total of 244 cars. In addition there are 12 spaces for motorbikes and 58 spaces for bikes. Residential storage cages are also locate strategically throughout the carpark taking into account the necessity for easy access and security.



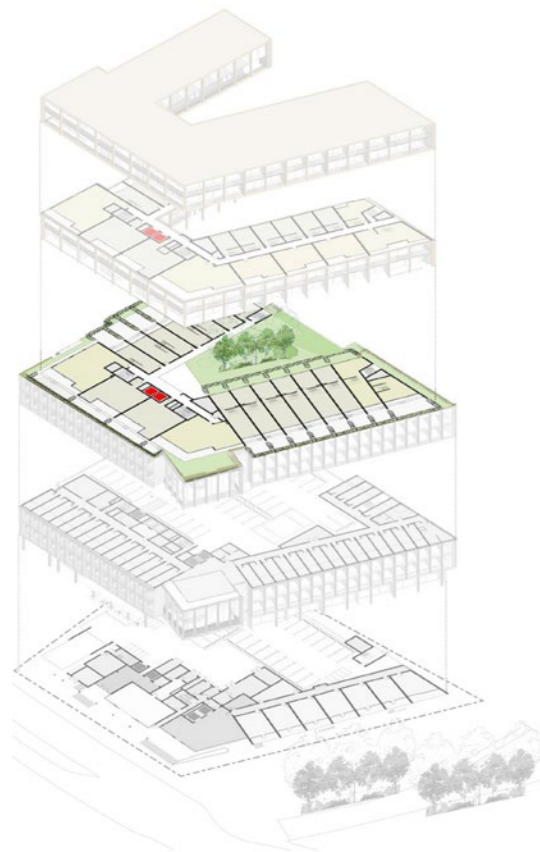


4.5 RESIDENTIAL

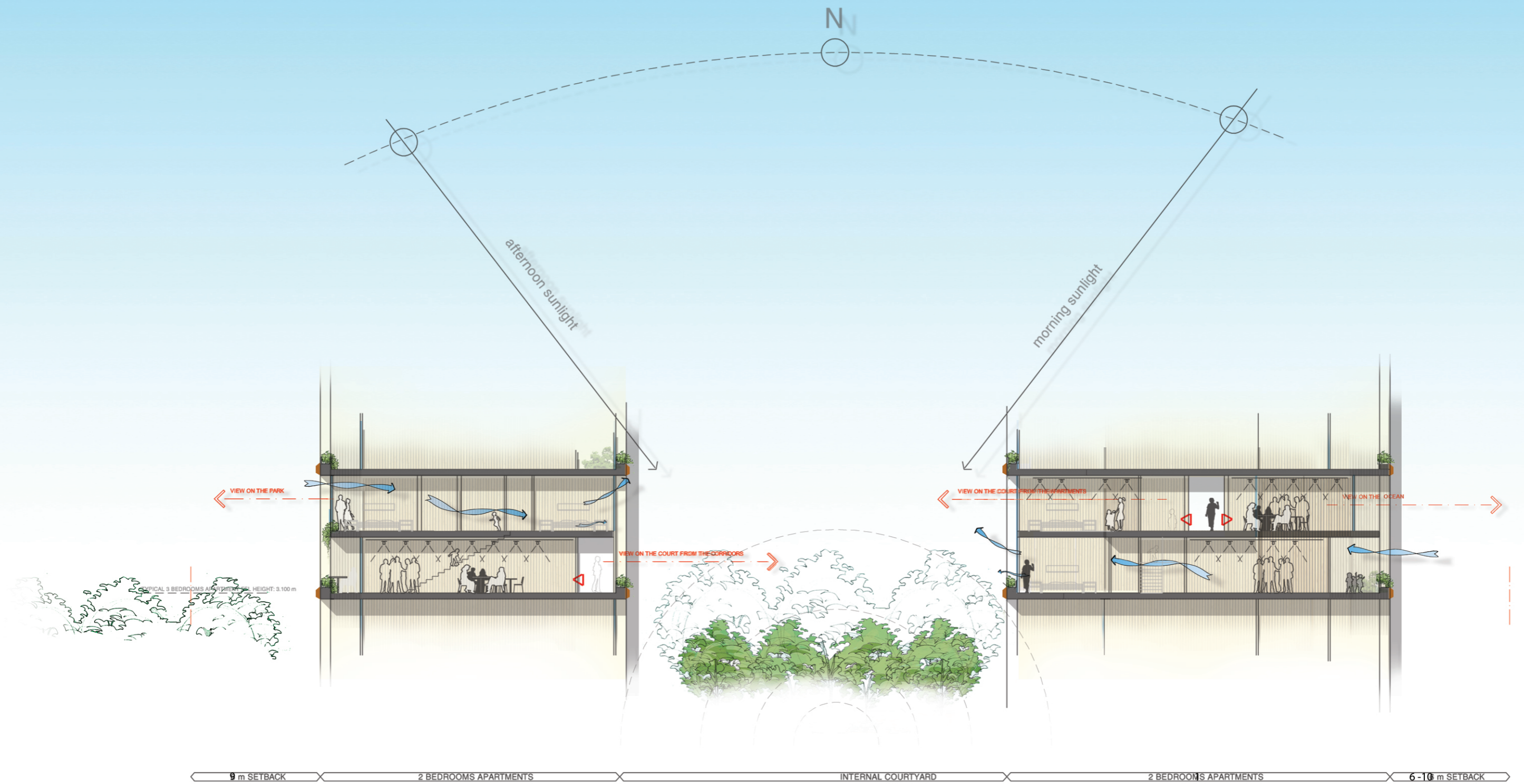
The residential development encompasses the upper four floors from Levels 5 to 8. The apartments are arranged in three wings around a central, communal, landscaped courtyard. The north, east and west frontages are setback from the building line of the Hotel levels below which helps to articulate the building form by providing two distinct volumes that consists of the residential component sitting atop the Hotel Podium. The building setback at Level 5 also allows the opportunity for large residential terraces providing significant amenity to the apartments at this level. There are 52 apartments in total consisting of a variety of typologies, including single and multi-storey configurations made up of the following mix:

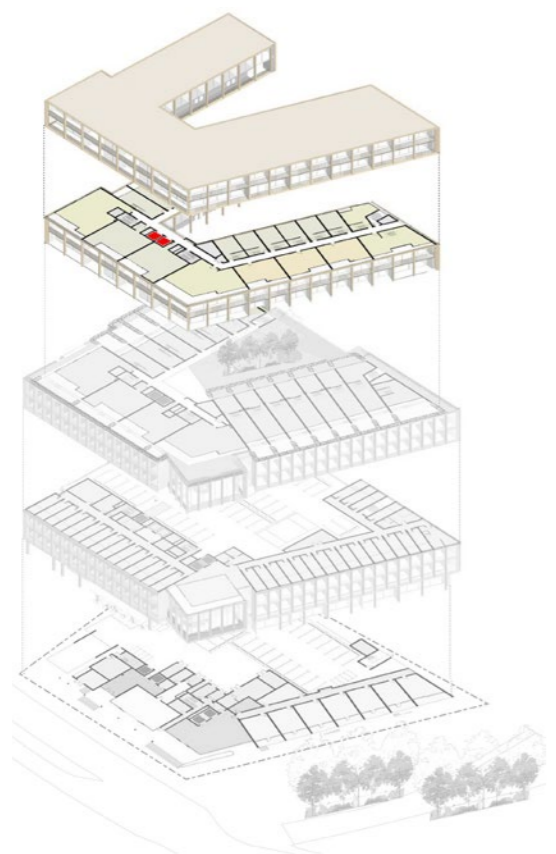
- 6 x 1 Bed apartments
- 33 x 2 Bed apartments
- 13 x 3 Bed apartments

Open corridors to the courtyard facades and double storey typologies allow for 73% of the apartments to be cross ventilated. As required by the Apartment Design Guide 20% of the residential apartments are required to comply with the Livable Housing Guidelines silver level for universal design features. The design currently has allocated 14 apartments to meet the silver standard which is in excess of the minimum requirement of 11.



RESIDENTIAL TYPICAL PLAN LEVELS 5 AND 8





RESIDENTIAL TYPICAL PLAN LEVELS 6 AND 7

The new building will have a strong relationship with nature.





4.6 NATURAL VENTILATION

The design carefully arranges apartments so as to maximise the opportunity for cross ventilation in line with the principles outlined for buildings less than 10 storeys in the SEPP65 Apartment Design Guide (ADG).

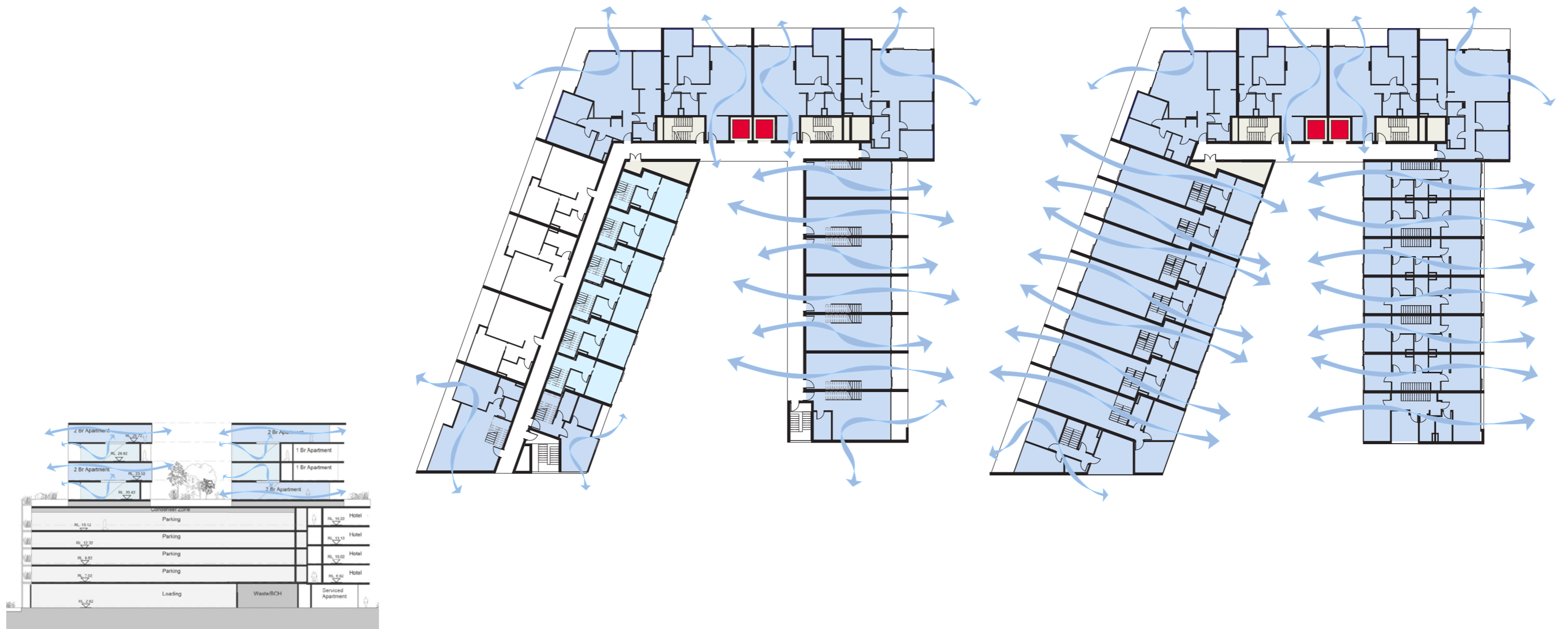
Apartment facades consist of balconies with full height sliding doors and all habitable rooms have operable windows. Corridors to the courtyard facades are semi enclosed allowing the opportunity for cross ventilation to what would normally be considered single aspect type apartment. The scheme provides cross ventilation to 38 of 52 apartments which is equivalent to 73% and in excess of the minimum requirement for 60% according to the ADG.

Vertical louvres to the carpark facades provides for a naturally ventilated car park which minimises further the energy consumption of this project given the absence of mechanical ventilation system.

SEPP65 Design Quality Principles

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of 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 re-use of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

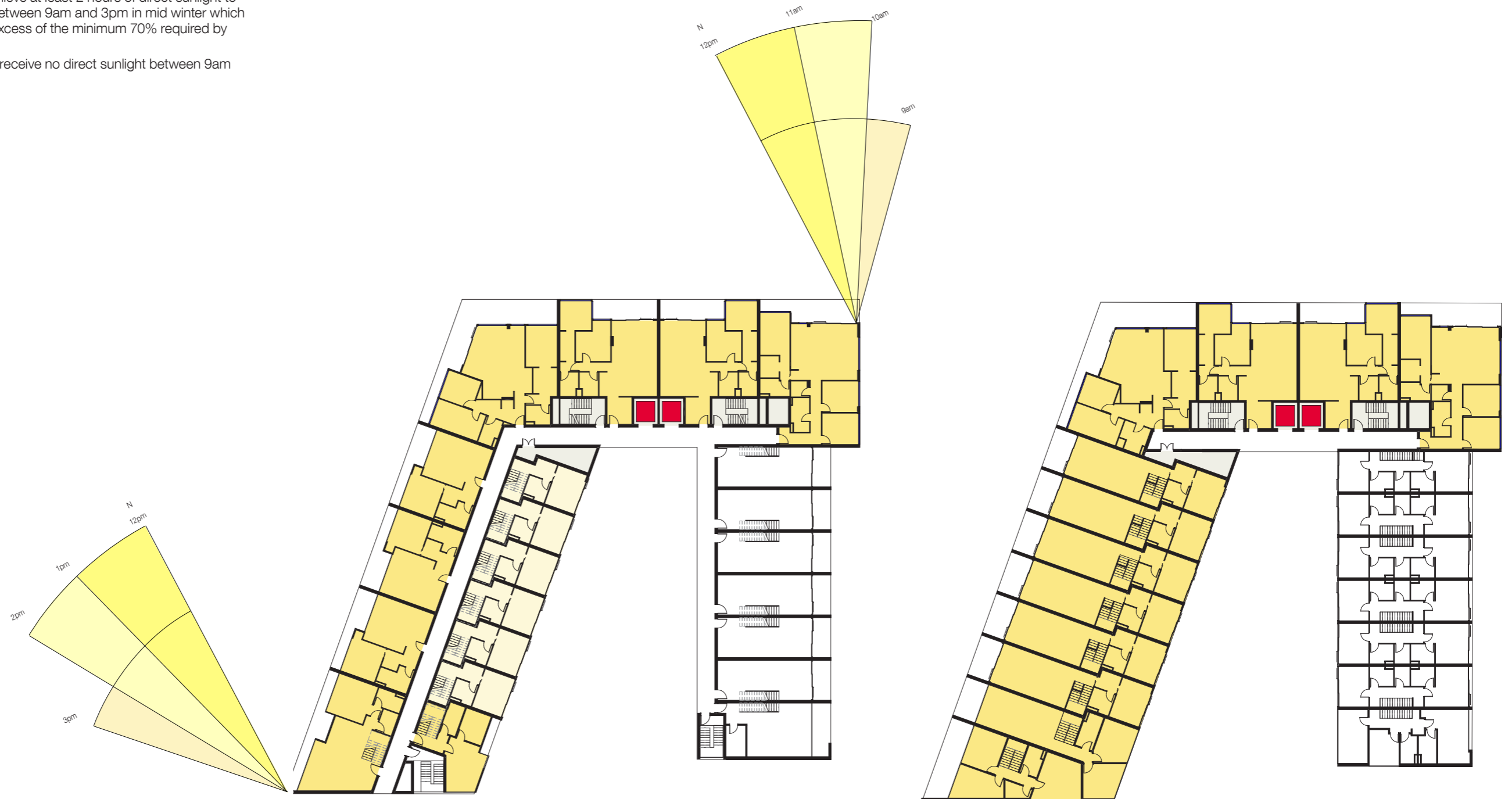


4.7 SOLAR ACCESS

Solar access to balconies and living spaces is a crucial design consideration and the site configuration and orientation in conjunction with the apartment arrangements maximise the opportunity for access to direct sunlight.

Of the 52 apartments, 38 achieve at least 2 hours of direct sunlight to living rooms and balconies between 9am and 3pm in mid winter which is equivalent to 73% and in excess of the minimum 70% required by the ADG.

Nil apartments in the project receive no direct sunlight between 9am and 3pm in mid winter.



4.8 APARTMENT TYPOLOGIES

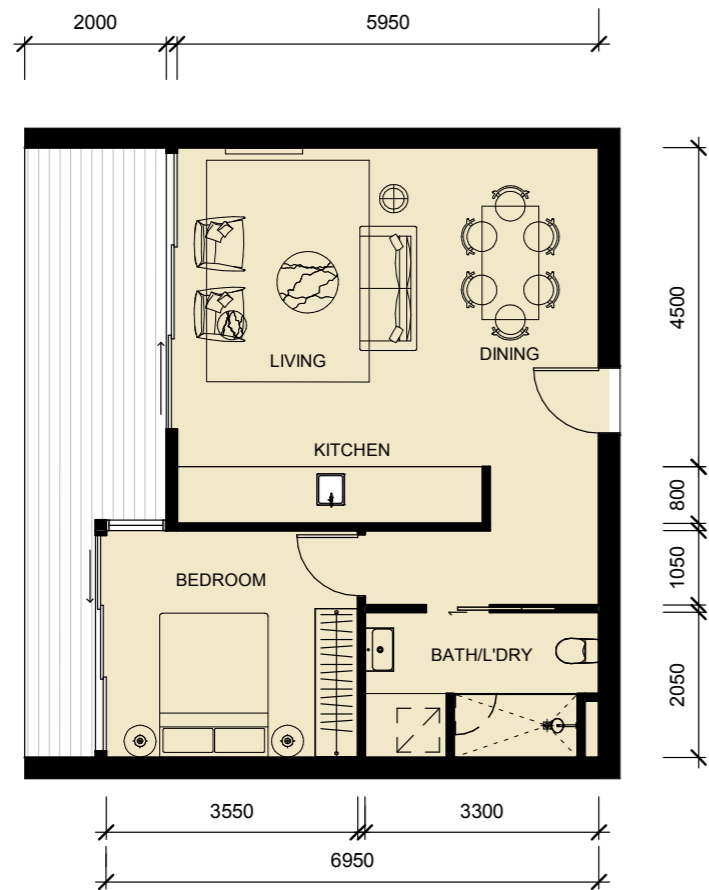
Apartments are designed to provide a variety of sizes and typologies. There is a mixture of single storey and double storey types with a mix of one, two and three bedroom types, all with large balconies and terraces and landscaped communal spaces to provide a connection to nature and a health living environment. Apartment planning is based on maximising living habitable spaces with clean, simple and legible planning. All the apartments are designed to meet the Silver Standard of the Livable Housing Guidelines, which equates to 100% of the project which is compliant with the accessibility requirements.

SEPP65 Design Quality Principles

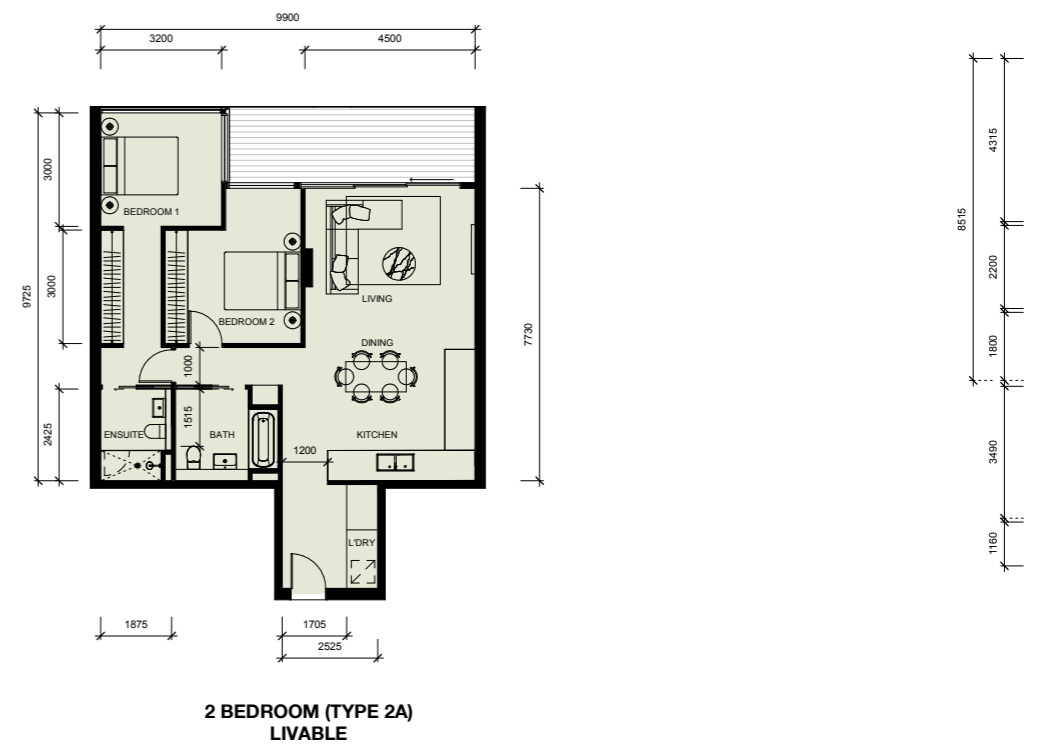
Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbors. 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.

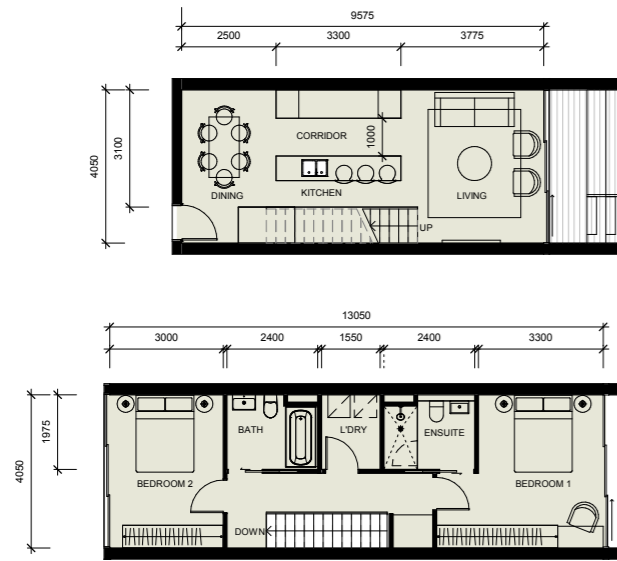


1 Bedroom (Type 1A)
Livable apartment (x 6)

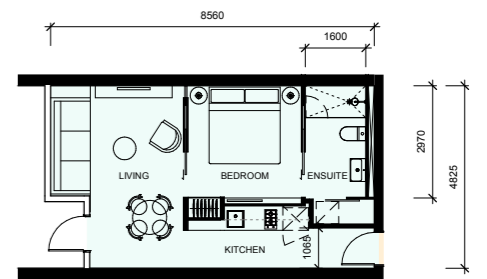
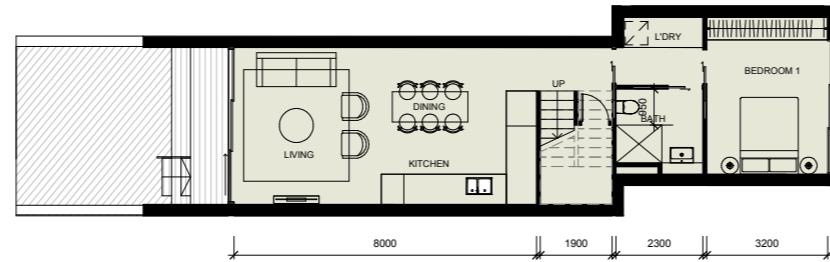


2 Bedroom (Type 2A)
Livable apartment (x8)

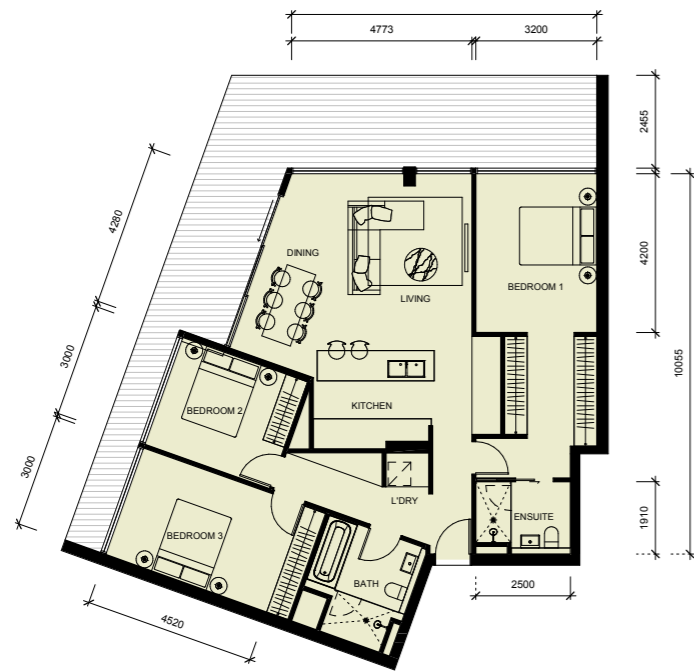
2 Bedroom (Type 2C)



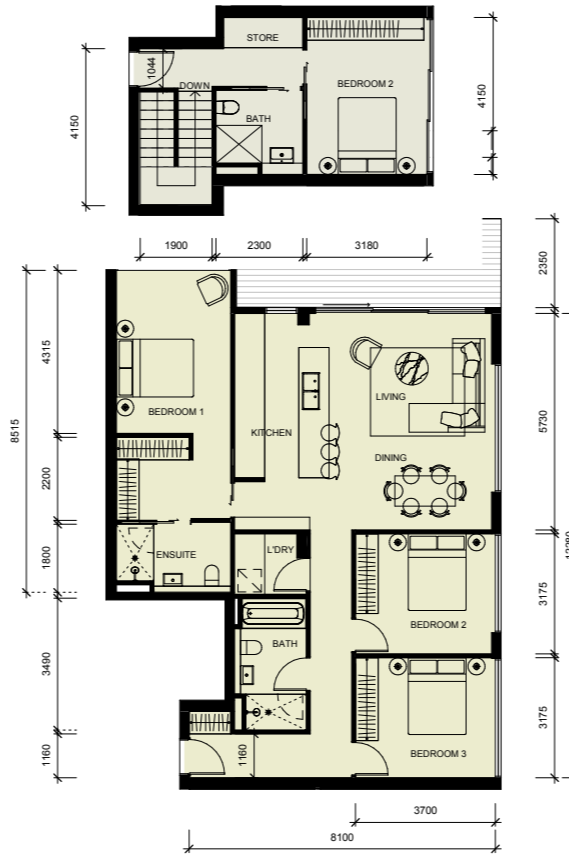
2 Bedroom (Type 2B)



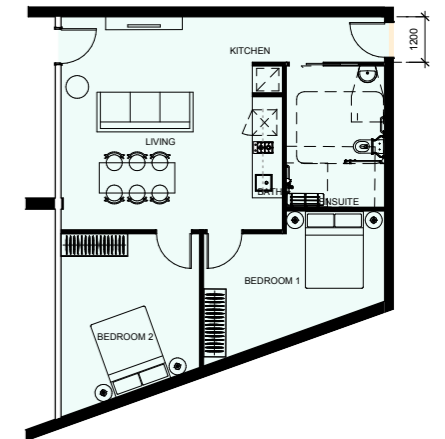
1 Bedroom (Served Apartment)



3 Bedroom (Type 3A)



3 Bedroom (Type 3B)



2 Bedroom (Served Apartment)
Accessible apartment





5.0 FACADE & MATERIALS

5.0 FACADE + MATERIALS

5.1 CONTEXTUAL ANALYSIS

The architecture of Newcastle is defined by a rich diversity of styles that reflect the city's prosperity and growth throughout the 19th and 20th centuries. Newcastle is traditionally an area of heavy industry and in particular that relating to the exportation of coal from the loading terminals of the Hunter River.

The proposed design is based on a contextual response that draws on the local architectural character of Newcastle, the industrial heritage of the adjacent ports facility and the form and identity of buildings in the general vicinity. Massing, proportions, structural expression and materials are all elements used in this design proposal to provide a conceptual response to the site.

5.2 ARCHITECTURAL RESPONSE

The architectural response can be broken down into two distinctive volumes containing the Hotel and Residential components over the recessive and transparent ground plane. Expressing the structure is the key design component. The regular grid of the Hotel room layout to Levels 1-4 is articulated via a dominant and expressive two storey structural bay to Levels 1, 3 and 5 with a secondary recessive facade element to Levels 2 and 4. The expressed grid of the Hotel facade is clad with a light bronze metal panel wrapping the structure and combined with a two storey glazed facade infill panel to each bay creating a series of vertical rectangular expressions to the Hotel Volume.

The residential component is set back at Level 5 from the volume below to provide a distinctive secondary element from Level 5 to 8. The articulation of the residential volume follows a similar language of expressive dominant structure broken down into two storey elements with recessive infill to intermediate levels. The proportions of the residential levels provide a distinctive character given the residential modules are double the width of the Hotel modules below. The dominant expressive structural frame is clad in a similar material to that of the Hotel below however the tone is a darker bronze colour to differentiate this volume. The infill to the double storey expressed structural forms consist of large format glazing to the apartment facades coupled with metal palisade type balustrades and planters to articulate the balconies.

The perimeter of the setback at level 5 is articulated by dense low height planting that contributes to the delineation between the podium volume of the Hotel to the setback Residential levels over.

The Carpark facades are screened with vertical 'Z' section purelins powder coated black and fixed at a 45 degree angle to provide visual screening while allowing for a naturally ventilated carpark. Planters are located at various points and are connected with vertical planted screens to provide visual relief.

SEPP65 Design Quality Principles

Principle 9: Aesthetics

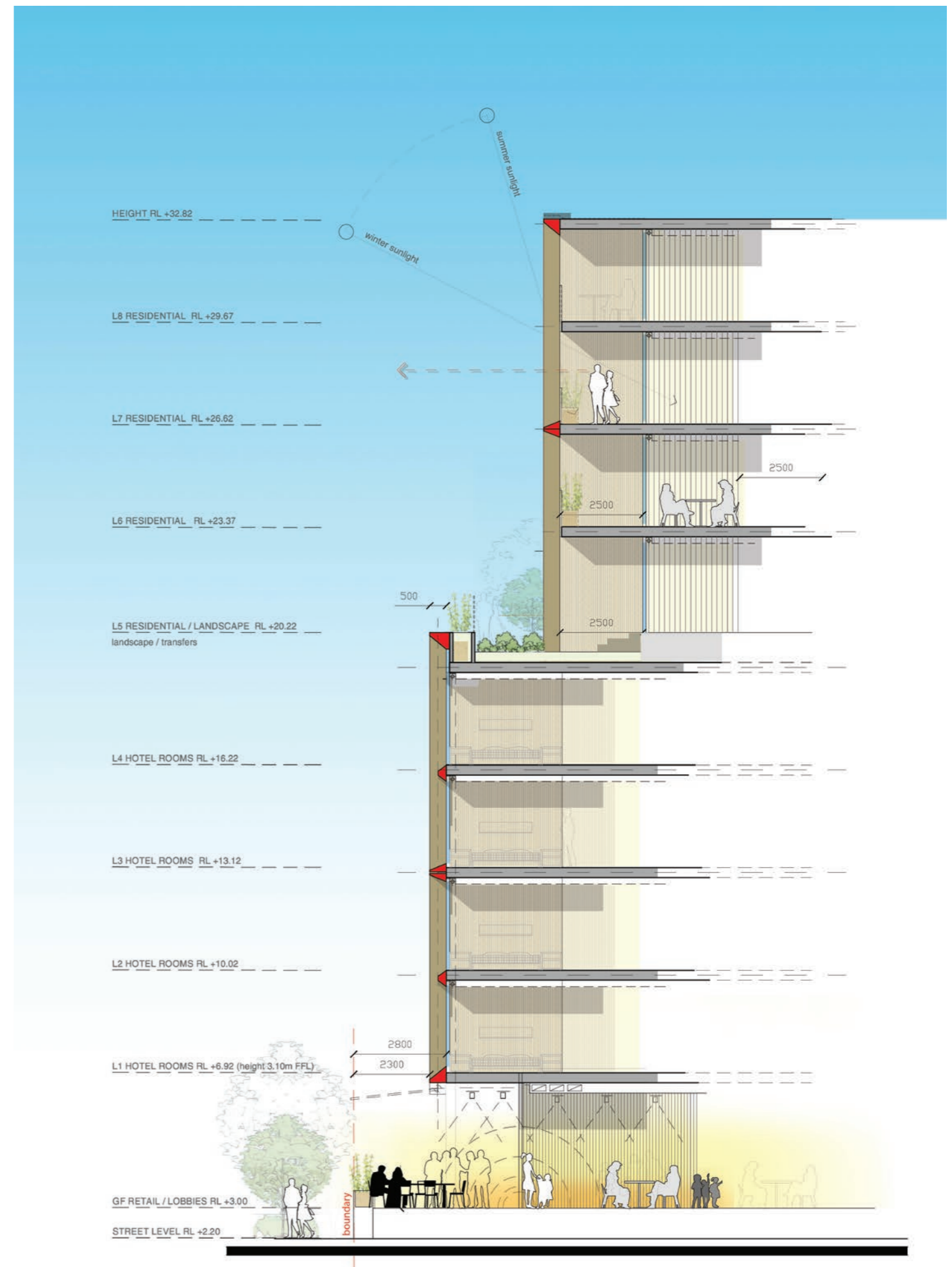
Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colors and textures.

The visual appearance of well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the street scape.

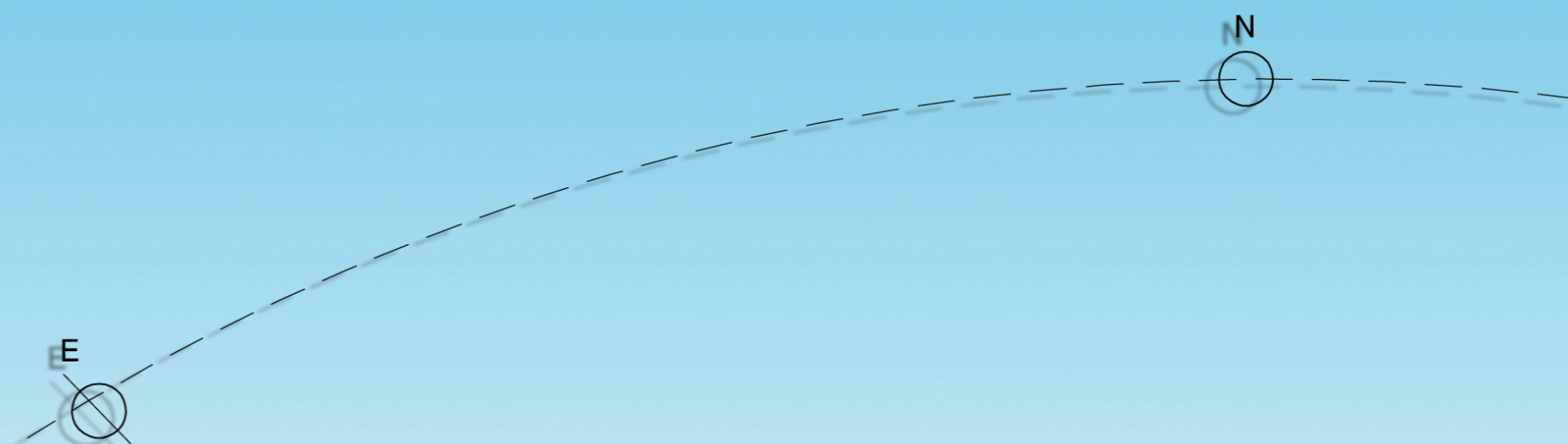




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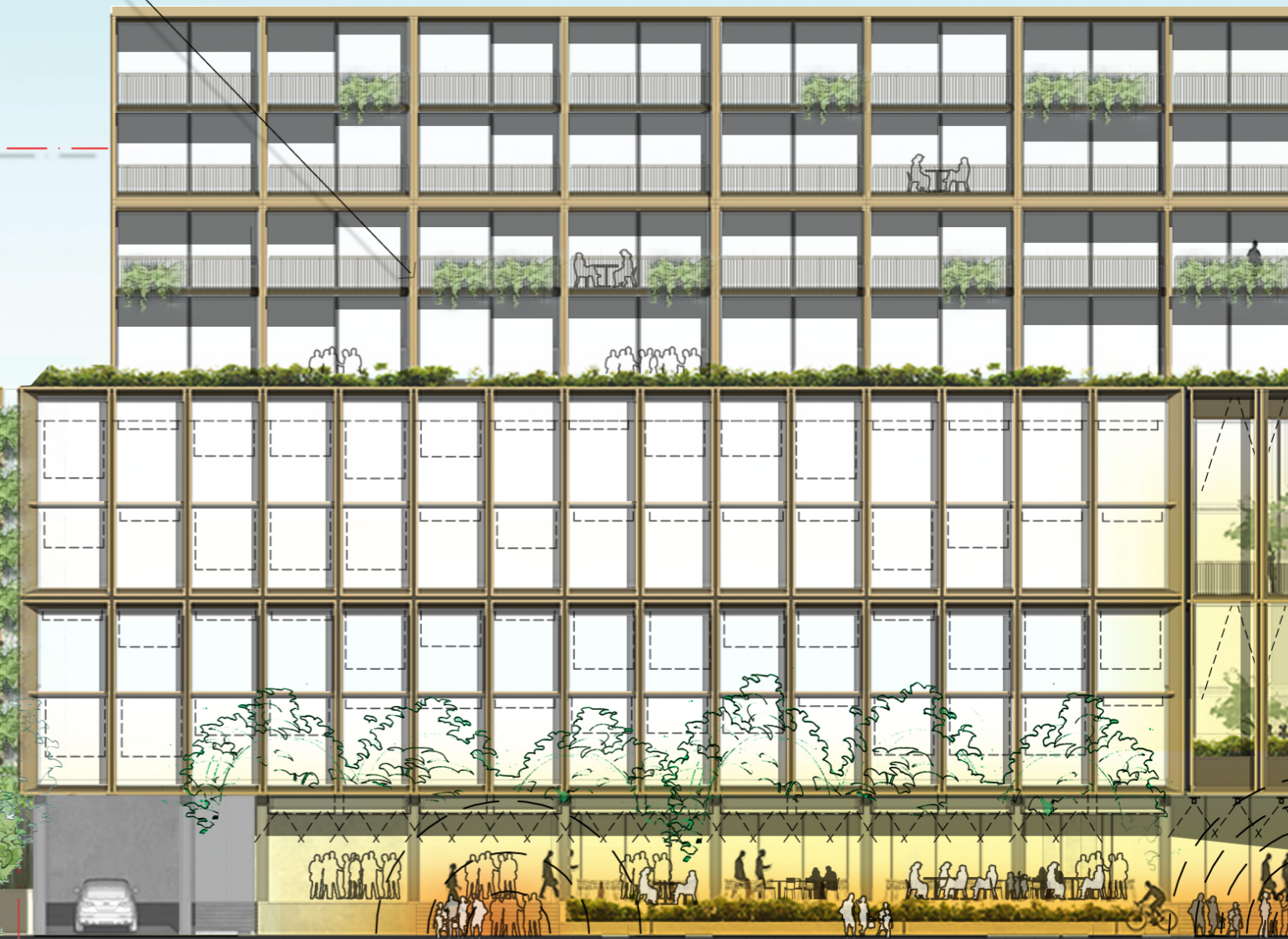
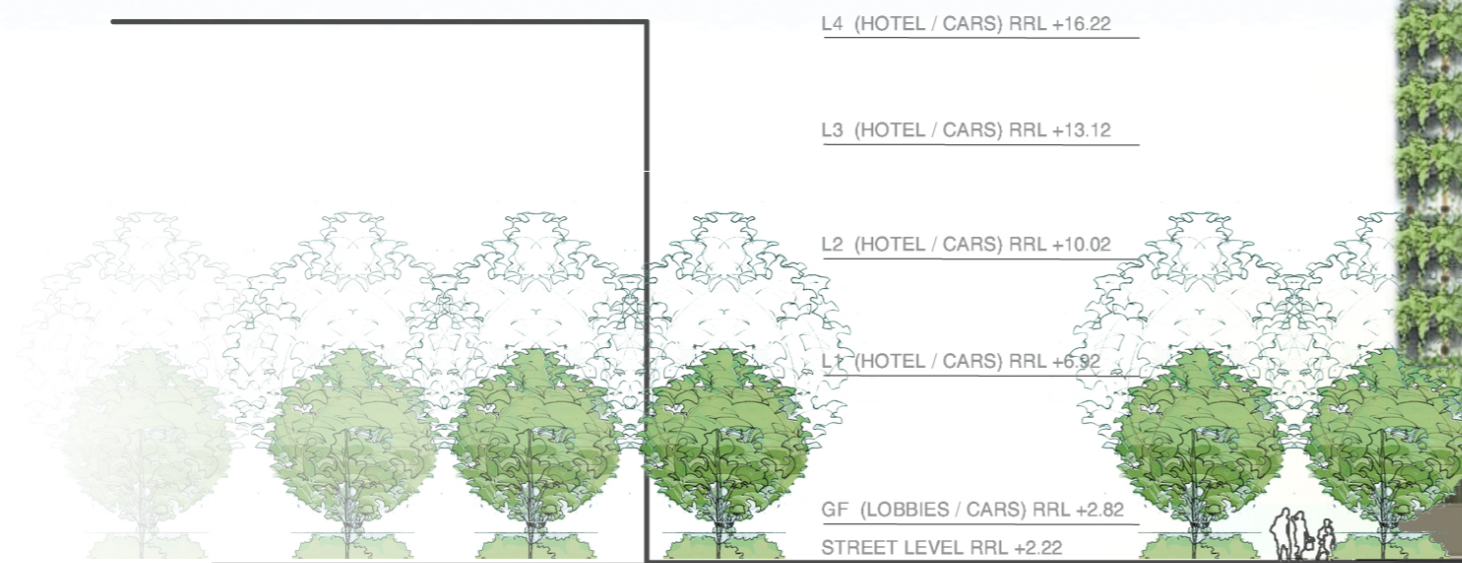


NORTH ELEVATION



- L9 (ROOF) RRL +32.82
- L8 (RESIDENTIAL) RRL +29.67
- L7 (RESIDENTIAL) RRL +26.52
- L6 (RESIDENTIAL) RRL +23.37
- L5 (RESIDENTIAL / COURTYARD) RRL +20.22
- L4 (HOTEL / CARS) RRL +16.22
- L3 (HOTEL / CARS) RRL +13.12
- L2 (HOTEL / CARS) RRL +10.02
- L1 (HOTEL / CARS) RRL +6.92
- GF (LOBBIES / CARS) RRL +2.82
- STREET LEVEL RRL +2.22

view on the ocean



CARPARK ADDRESS

RESIDENTIAL LOBBY ADDRESS

HOTEL ADDRESS

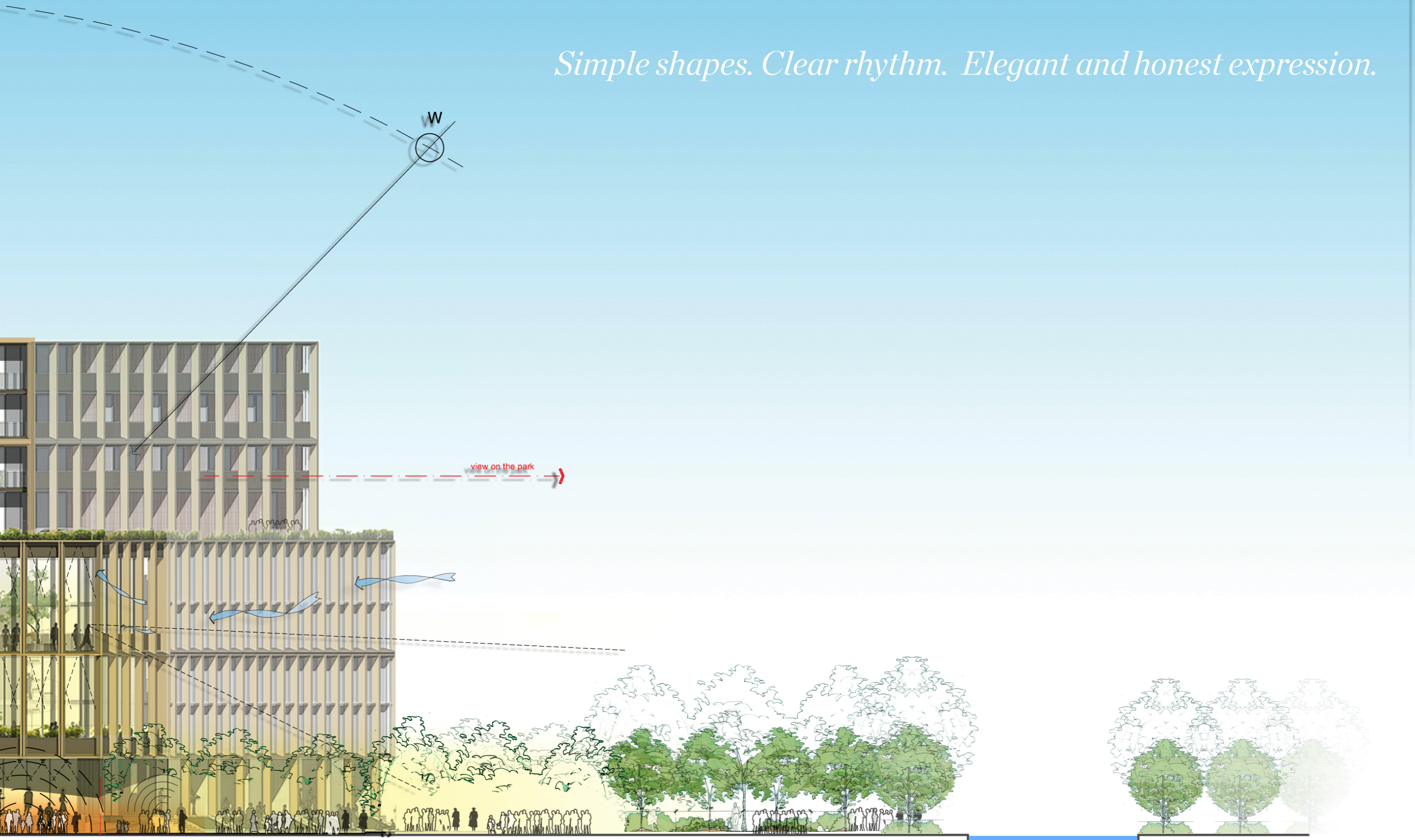


HUNTER WATER SITE

HOTEL ROOMS

HOTEL ADDRESS


Simple shapes. Clear rhythm. Elegant and honest expression.



HOTEL LOBBY
ADDRESS

ILITIES

BATESMOUNTAIN CREEK PARKLAND

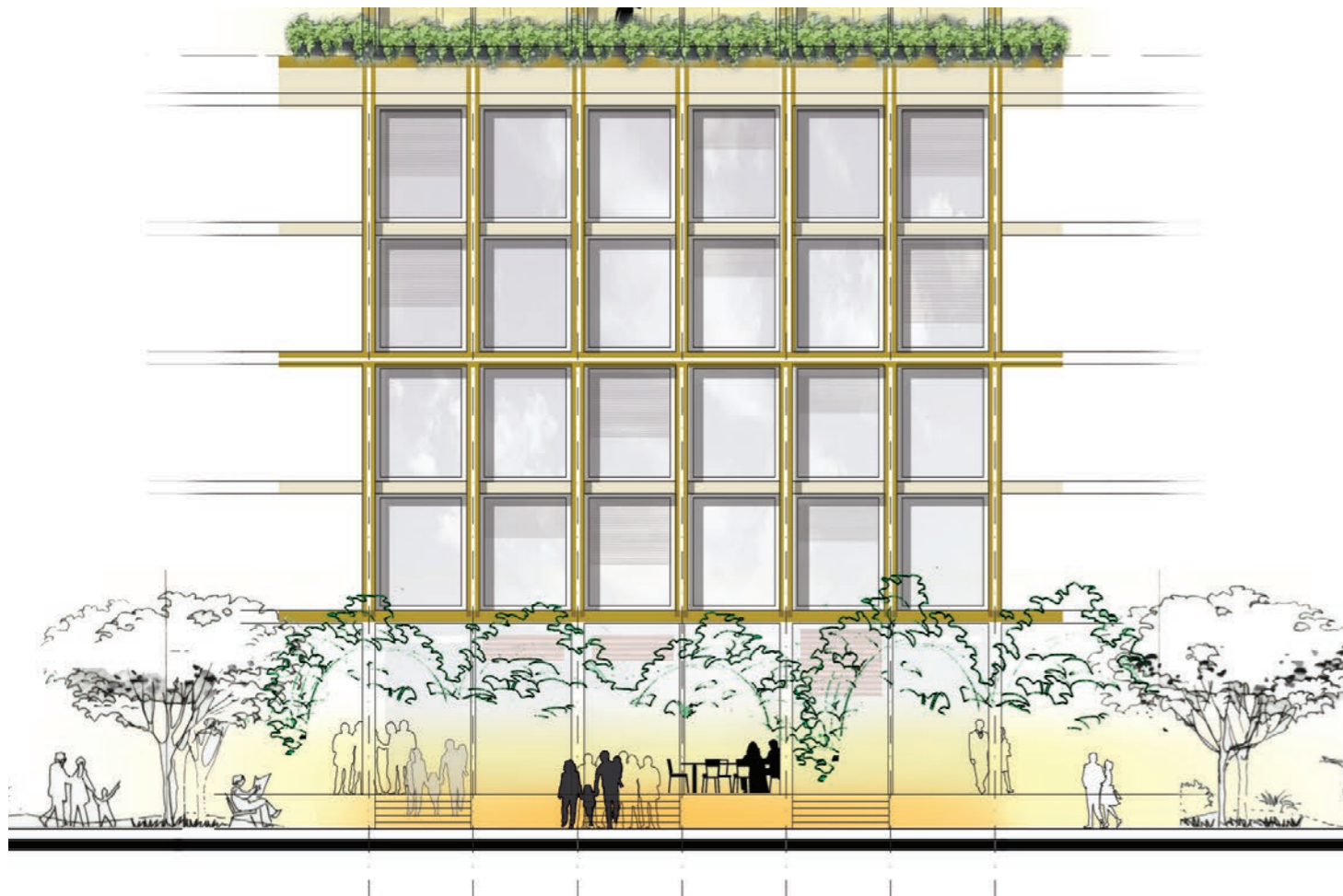
A modern multi-story building with a glass facade and balconies, featuring the text "SHARP AND HONEST MATERIALITY" overlaid in the center. The building has a mix of materials, including wood slats and metal frames. The balconies have dark railings and some have small plants. The sky is a pale, hazy blue with light clouds. The overall aesthetic is clean and architectural.

SHARP AND HONEST MATERIALITY

*The design intent is to express an honest
grid facade by using a brushed metal
cladding*



5.3 HOTEL & RETAIL FACADES



HOTEL & RETAIL FACADE ELEVATION STUDY



HOTEL & RETAIL FACADE DETAIL STUDY

Double height volume with double glazed facade system. Glazing to consist of high performance clear vision glass to meet performance requirements of the relevant codes and standards.

Double height expressed facade framing wrapped in a folded light bronze aluminium sheet. Module is based on the width of a single Hotel room.

Secondary recessive horizontal framing

Glazed canopy of retail frontage consists of clear laminated glass with dark mesh inter-layer supported by bronze aluminium perimeter frame pinned to the underside of the projecting Level 01 slab

5.4 RESIDENTIAL FACADES



RESIDENTIAL FACADE ELEVATION STUDY



Double height expression to projecting facade element wrapped with dark bronze metal cladding

Mid level is a secondary recessive element with dark bronze metal cover to slab edge

Full height glazing panels with performance glass to the residential facades

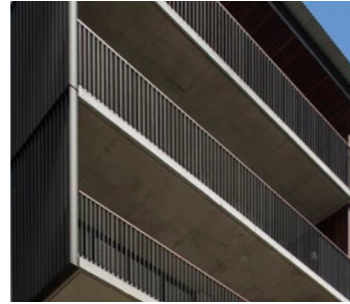
Metal palisade type balustrade

Planter boxes to balconies softens the facade while also providing privacy opportunities to private open space

HOTEL & RETAIL FACADE DETAIL STUDY



1. Metal cladding curtain wall facade in bronze colour.



2. Metal balustrades / Dark bronze colour



3. Double height winter garden / timber finishes



4. Landscape on residential setback



5. Planters

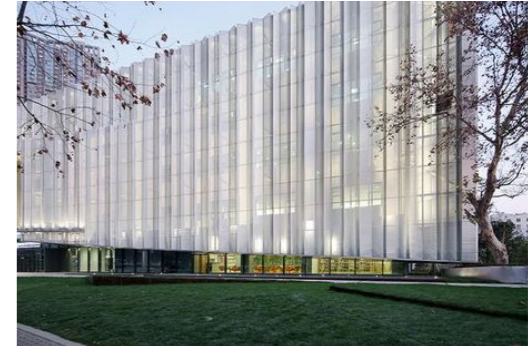
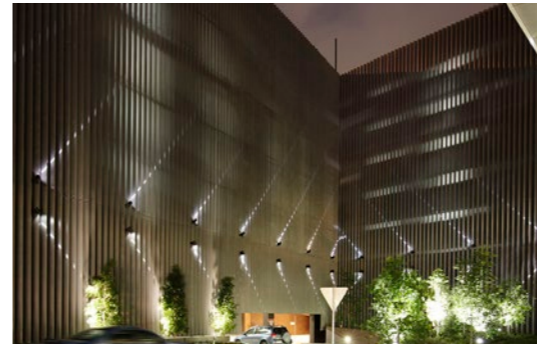


*Study of the details and materials at the basis of the facade design.
Practical needs as inputs for the aesthetic outcome.*

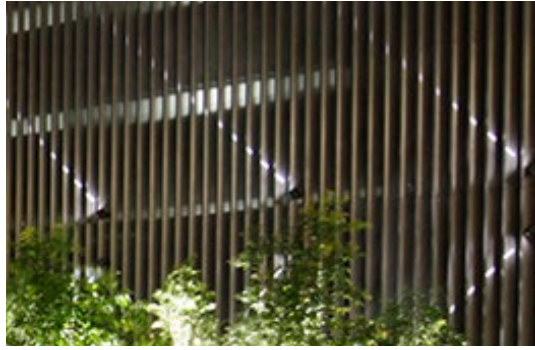


Hotel Room discharge detail

5.4 CARPARK FACADE

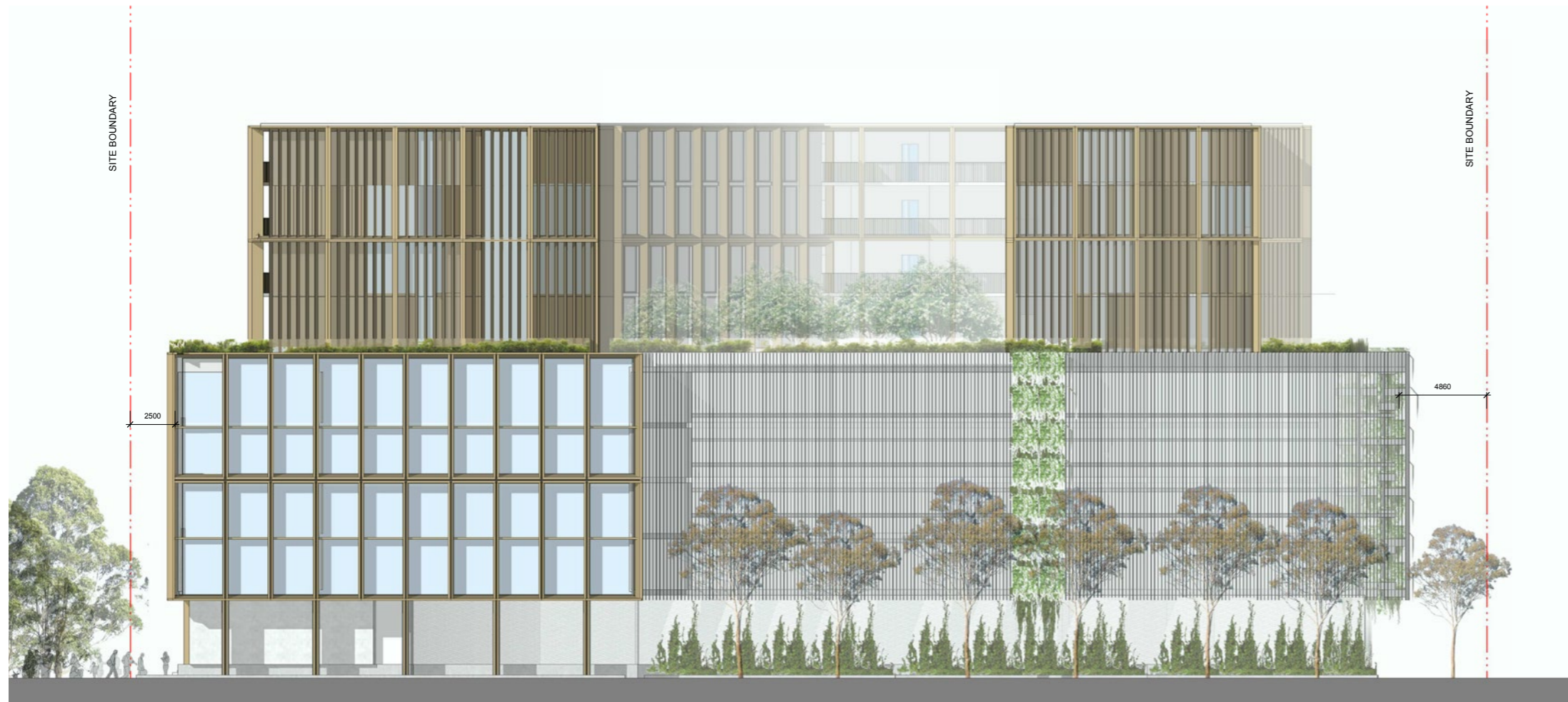


CARPARK FACADE DESIGN STUDY



1. Metal louvres facade.

2. Planters.



6.0 LANDSCAPE + PUBLIC REALM

SEPP65 Design Quality Principles

Principle 5: Landscape

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

Good landscape design enhances the developments 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 optimizes usability, privacy and opportunities

6.1 HONEYSUCKLE PUBLIC DOMAIN STRATEGY 2001

The Honeysuckle Public Domain Strategy is a briefing document that provides a basis to inform development and built outcomes in the Honeysuckle precinct

The Strategy seeks to:

- / provide the setting for development
- / shape the public realm
- / identify the heart and soul of the place
- / is an extension of the fundamental objective of providing Honeysuckle with a breath of new life by implementing the vision of creating 'Newcastle's home by the harbour'.

6.2 THE COTTAGE CREEK PRECINCT

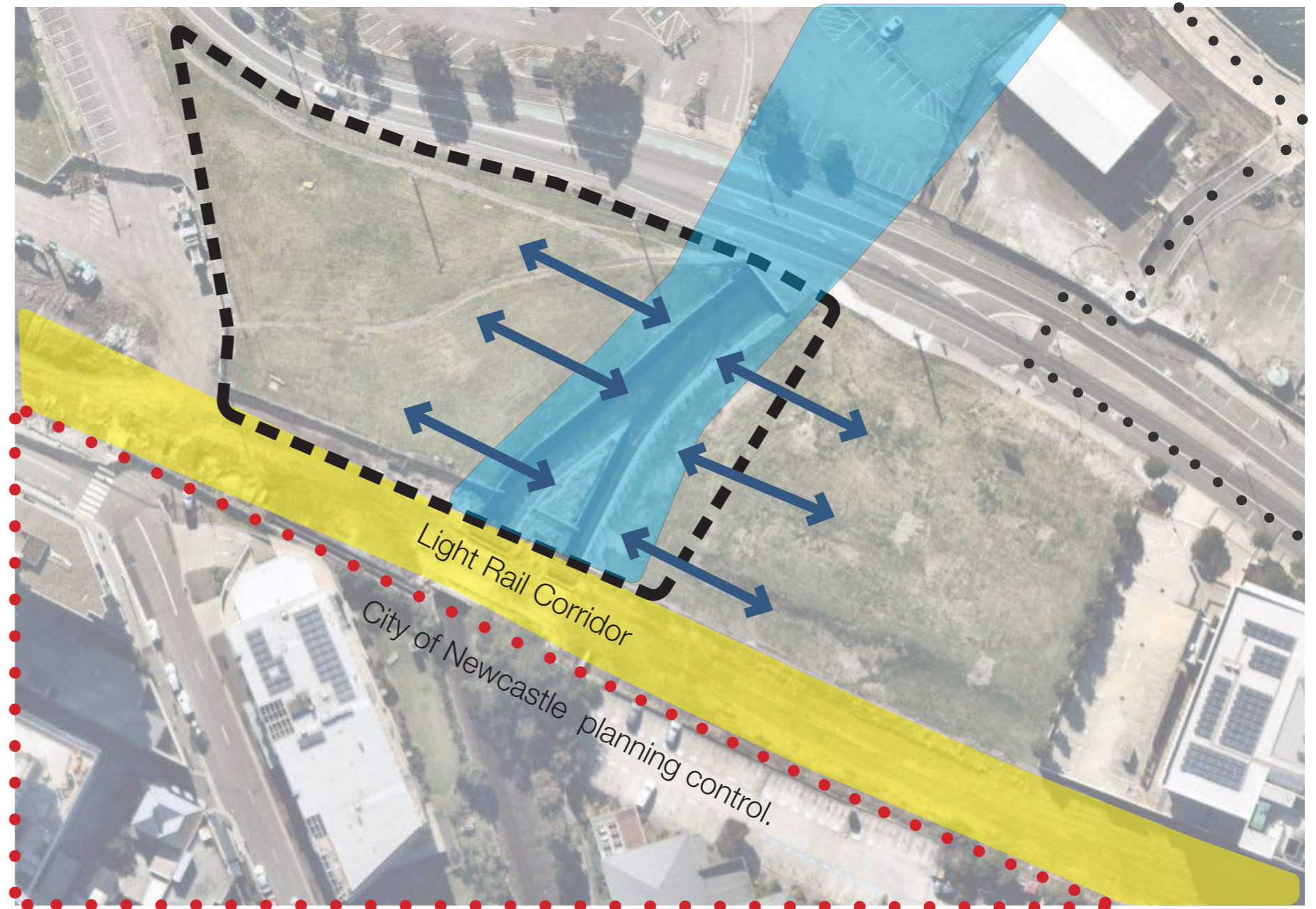
42 Honeysuckle Drive is located at the centre of The Cottage Creek Precinct. The precinct incorporates a highly degraded engineered storm water canal immediately adjacent the subject site and the vision is to transform this area into a hybridised urban waterway that balances ecological, flooding and water quality requirements with public interaction and connection with Cottage Creek through Public Domain activation with outdoor eateries and pocket parks.

6.2 HONEYSUCKLE DRIVE

The vision for Honeysuckle Drive is that it become one of the premier Boulevards in Newcastle which will be contextually and ecologically integrated to create a highly layered and legible street scape. Activated street edges at the ground level is a key design driver for the future vision of Honeysuckle Drive.

6.3 LIGHT RAIL CORRIDOR

Interfacing with the light rail corridor to the south of the Cottage Creek precinct is also an important consideration for any development in this area. The light rail will provide a frequent public transport service allowing greater access too and from this precinct and as such there needs to be a degree of legibility and consideration of the interface and legibility.



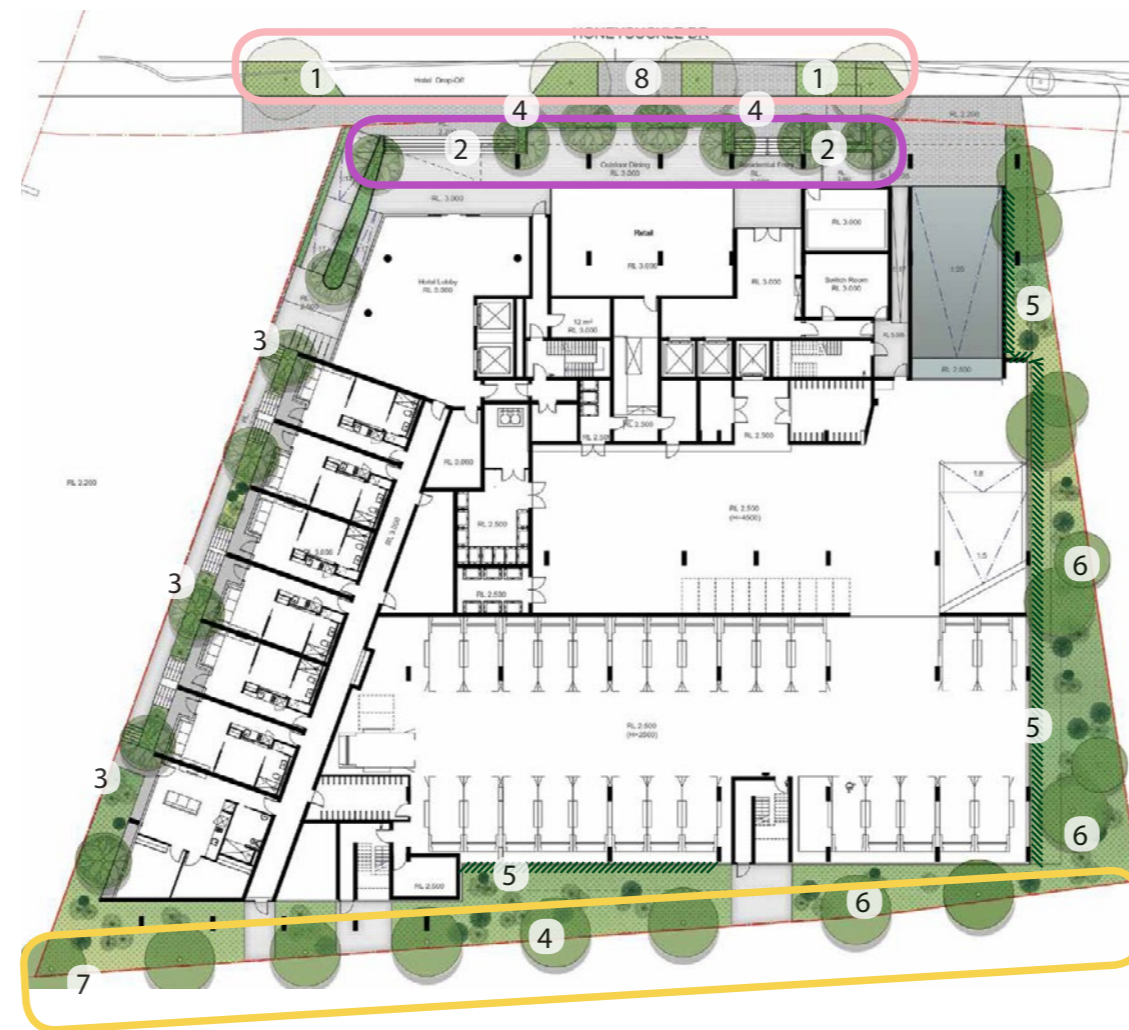
6.4 GROUND LEVEL AND PUBLIC DOMAIN

The Honeysuckle Drive street scape design principles are based on the existing street scape treatments provided to sites developed previously to the east of the subject site.

The existing concrete and paver banding treatment will be continued for the footpaths and trees can be accommodated within the parking lanes to keep the pedestrian footpaths clear of obstruction. Space needs to be provided for pedestrians, car parking, vehicle entry, trees and the cycle way

PLAN KEY

1. Street tree planting to Honeysuckle Drive located in parking lanes to provide street side shade within generous planted blisters
2. RAised terrace to Honeysuckle Drive frontage provides the opportunity for secondary planting to include tress and low level planting to soften the interface between the development and the street scape
3. Planter beds provided to the courtyards of the serviced apartments to the western boundary to create a buffer between public and private open spaces
4. Tree planting to building perimeter to frame connections to surrounding public space
5. Vertical green walls to soften the car park facades
6. Significant trees to help ground the project into the green planted zones to the eastern and southern site boundaries.
7. Potential for a meaningful an engagement with the future light rail
8. Bike parking on street near crossing point to enhance retail opportunity



6.5 DESIGN PRINCIPLES

- Build upon the architectural concept to create a strong sense of place and building identity.
- Respond to existing site conditions with landscape gestures that creates an attractive residential environment and a strong connection between proposed building and public domain.
- Propose robust high quality materials and finishes that are consistent with the architectural benchmarks.
- Ensure that the proposed landscape elements allows for clear permeability and circulation.
- Consider ongoing maintenance requirements of the landscape components.
- Create communal spaces that are attractive, comfortable, and provides and uplifting everyday experience.
- Use drought and exposure tolerant planting that uses a mixture of hardy exotic and native species suitable for rooftop planting.
- Temporary nature of water in Australia
- Directing Water for a Purpose
- Access defining spaces with a function
- Water body as gathering space



6.6 PRIVATE TERRACES & COMMUNAL COURTYARD

Landscapes for different people and purpose

A diverse group of landscape spaces ranging from private terraces to large BBQ and communal spaces catering for two or more large groups.

Tree planting for privacy.

1. Garden feel to small scale spaces, including all private terraces.
2. Spaces defined with paved areas and low walls and screening.
3. A generosity of trees and planting.
4. Larger spaces for 8 or more people that provides built shade, BBQ, outlook and views.

Connection as landscape

The connections are varied in detailing and hierarchy. They have the following attributes:

Main connections run north south along grid axis

5. Minor connections east west and to help define spaces.
6. Connections are disjointed for interest

Water as foci + thresholds

A series of water channels and basins will connect the landscape and provide intrigue. It is for aesthetic appeal as well as above ground irrigation. Other attributes include:

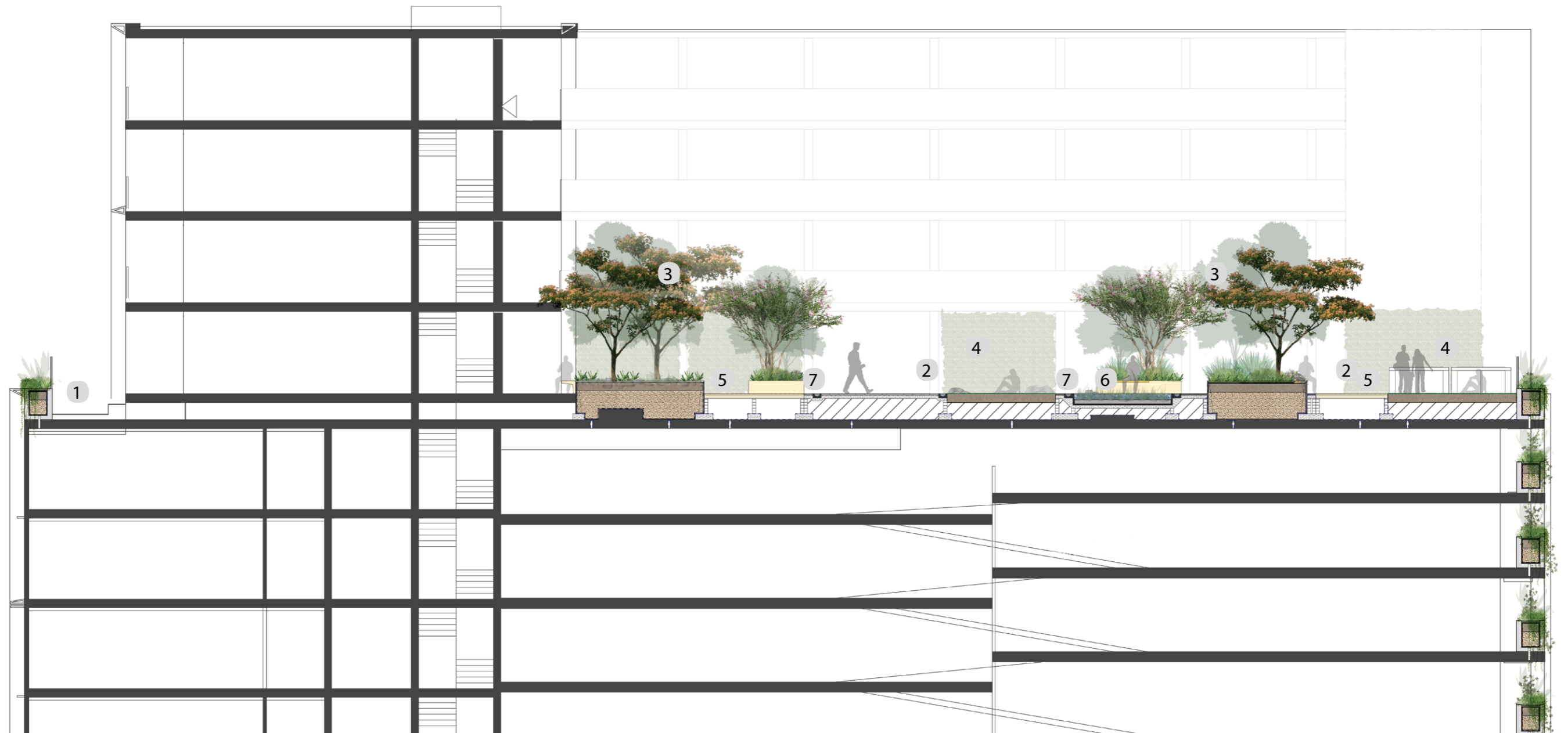
6. Contrast of stillness and movement. The water that is ephemeral at times
7. Main channel to run north south along grid axis
8. Communal Residential area.

Trees to frame and shade

Opportunities for tree planting exists in both the courtyard and private spaces. A variation of native and exotic will provide contrasts in texture, foliage and filtered light.

Tree planting in the main courtyard will vary in size and form to create different characters.





6.7 PLANTING

Public Domain

- Medium sized exposure tolerant street trees to provide shade and greenery.
- Suggested species include locally native *Syzigium leuhmanniana*, *S. australe* or *Glochidion ferdinandii*
- Additional massed planting may be possible where space permits to contribute greenery on the street.

Green Facades and Tensioned Frames

- A number of different native vine species will be utilized depending on exposure and shade conditions.
- Tensioned systems will be proprietary, high quality 316 stainless steel cables and fittings,

Planting for Level 5 Courtyards and Terraces

- Tree species will be a mixture of small to medium trees that are selected for adaptability to the varied conditions.
- Tree species will be smaller in private terraces to enable views and to be of an appropriate scale.
- Low planting and shrubs will provide privacy and screening, design interest and will predominantly use local native species in clever ways to create a bold planting scheme.



Glochidion ferdinandii



Acmena Allyn's magic



Anigozanthis Bush Ranger



Lomandra Little Con



Babingtonia compacta



Aphenopetalum resinosum



Eustrephis latifolius



Cissus antarctica



Cissus hyperglauca



Pandorea pandorana



Hibiscus tilaceus



Corymbia ficifolia cultivars



Banksia integrifolia Roller Coaster

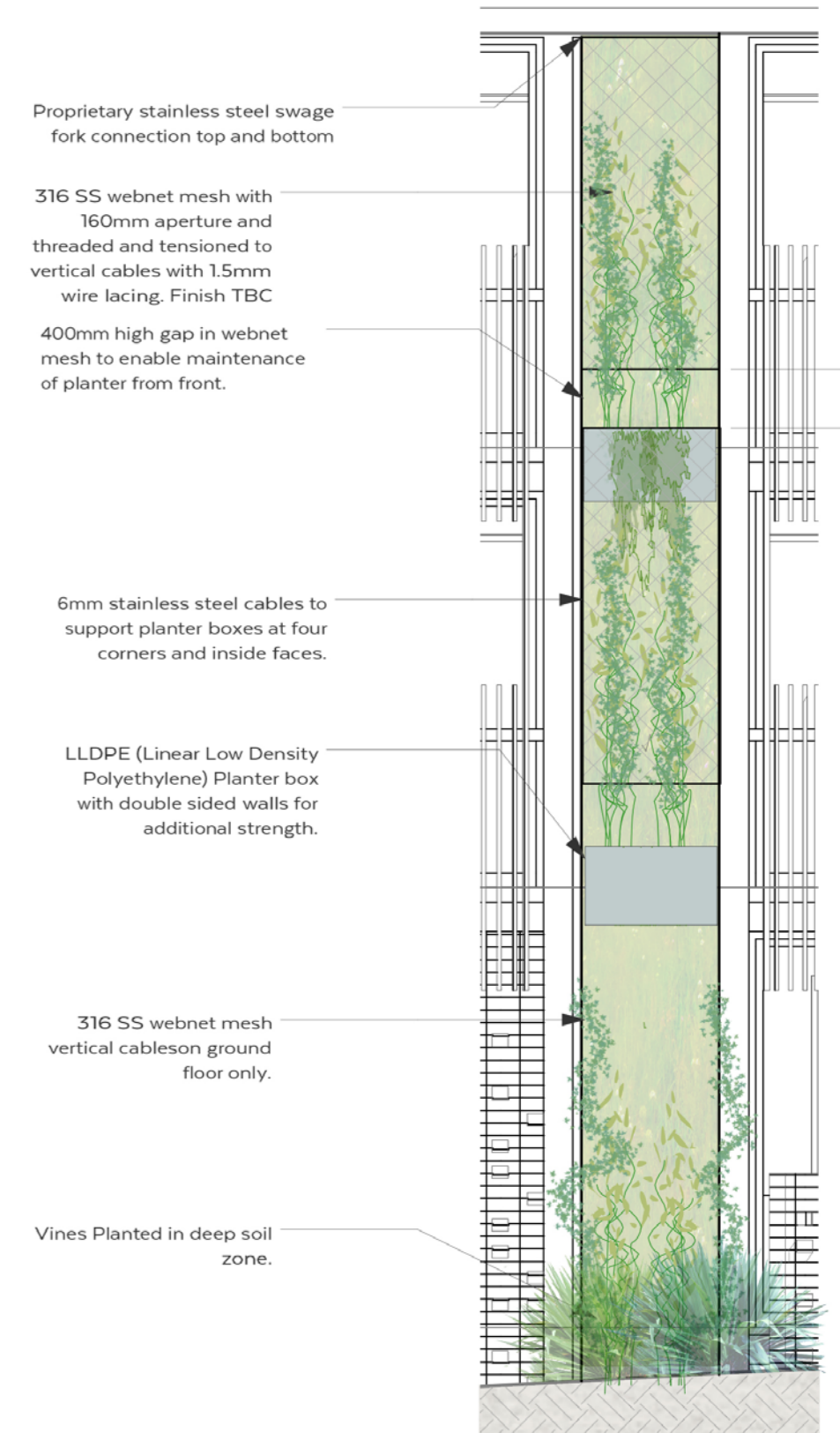
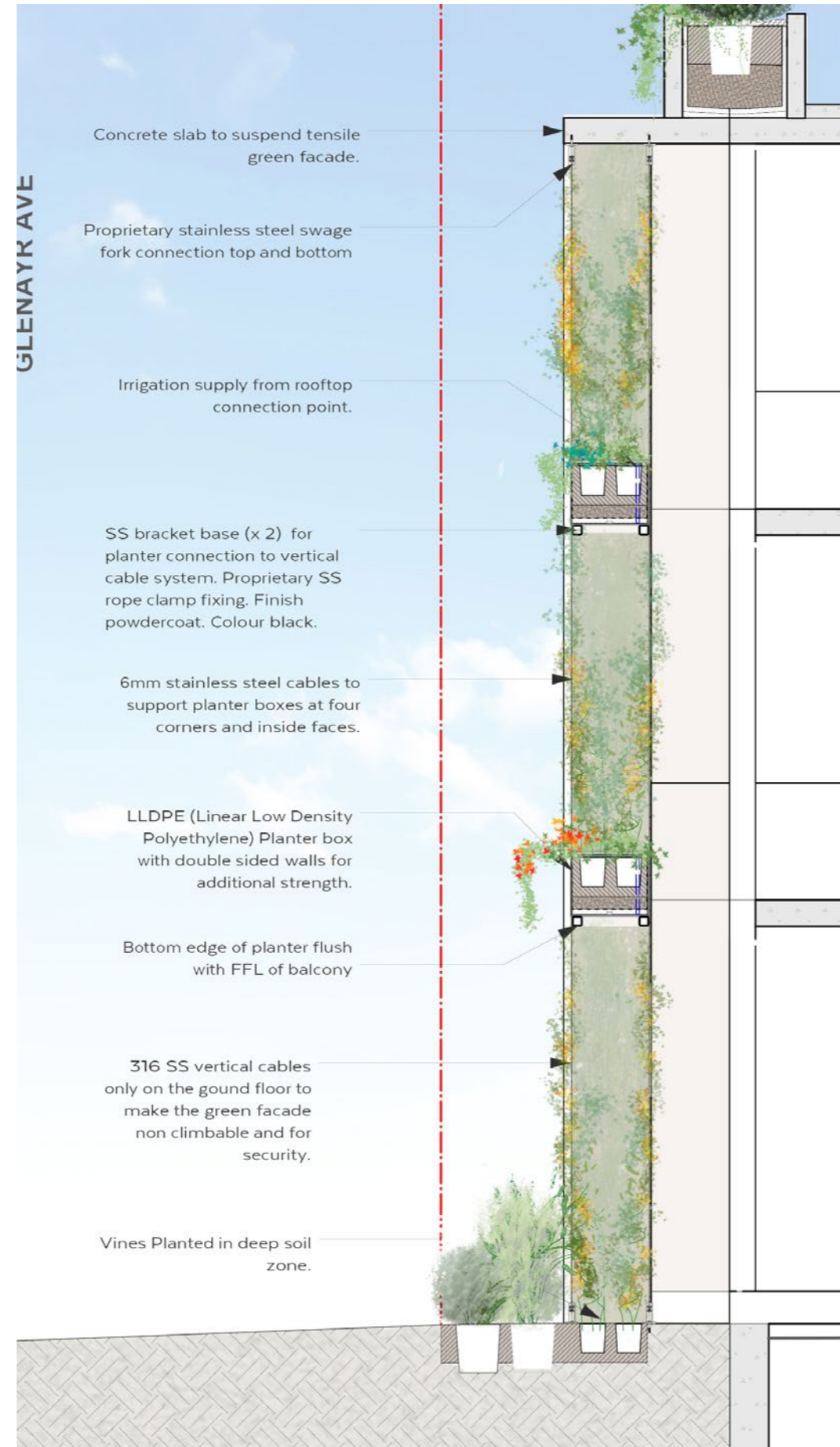


Darwinia citriodora



Leucophyta brown

6.8 VERTICAL GREEN FACADES



7.0 SUSTAINABILITY

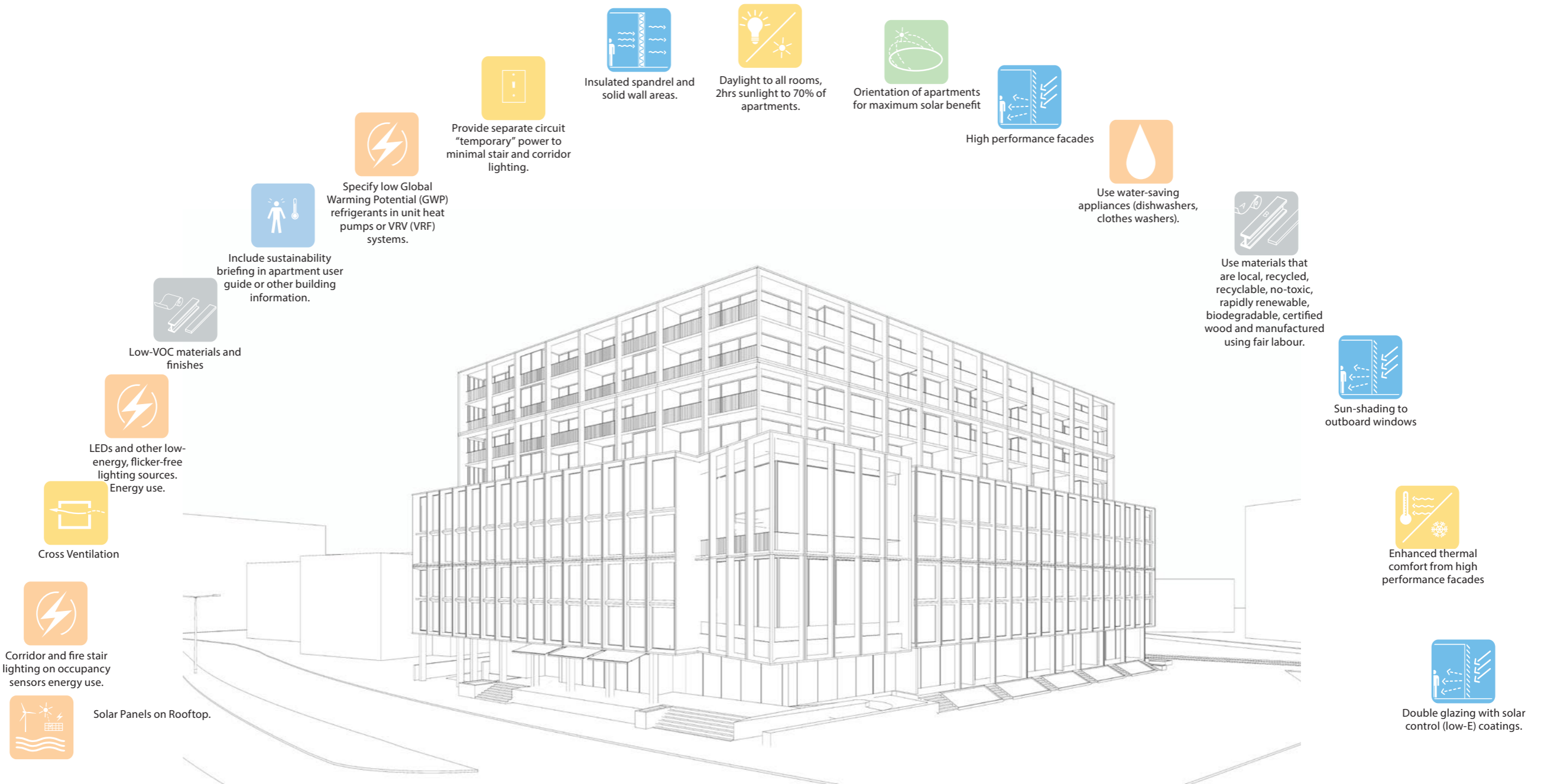
SEPP65 Design Quality Principles

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.

The proposed design has focused on reducing the demand on resources via the use of simple passive strategies, which also offer excellent amenity to future residents. These passive strategies are supplemented with building systems to further reduce ongoing resource use. There is a detailed description in separate ESD reports and BASIX certificates, however a summary of these strategies follows:

- / The dwellings have been oriented to provide a good level of solar access in mid winter, providing passive heating and improving daylight penetration in the winter months
- / Material selection is intentionally robust, reducing ongoing maintenance requirements
- / Building fabric is to be specified with higher than industry standard insulation values to reduce heat transfer, improving thermal comfort
- / Wide eaves and horizontal projections are proposed to reduce solar gains
- / Rainwater reuse tanks are to be installed to reduce water consumption
- / High efficiency appliances will be specified to reduce on-going water and power consumption
- / Indigenous planting is generally proposed to reduce water consumption in landscape areas



8.0 SAFETY

SEPP65 Design Quality Principles

Principle 7: Safety

Good design optimizes 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.

The proposed scheme has been designed to minimise the opportunity for crime in accordance with the CPTED principles of surveillance, access control, territorial reinforcement, and space management. The following principals demonstrate this approach:

- / Private open space and living areas are located along all primary frontages above the ground floor to provide activated spaces that allow good surveillance of surrounds
- / Windows to secondary frontages to facilitate surveillance down towards the ground plane
- / Residential entry points and circulation areas are clearly separated from public areas without compromising passive surveillance
- / A secure entry system at residential entry points linked to the apartments allows access through the external security point upon confirmation from inside
- / High quality public domain and architectural lighting throughout the development will assist in securing the area at night

9.0 DENSITY

SEPP65 Design Quality Principles

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.

7.1 DENSITY

The site area is 3,728sqm. The development proposes sqm of Gross Floor Area which equates to an FSR of 2.761:1.

7.1 HOTEL ROOM SIZE AND MIX

The 154 room Hotel consists of the following accommodation types:

Hotel	No.	Mix	Size
Standard Rooms	140		18sqm
Suites	7		31.5sqm

Serviced Apartments

1 Bed	6		39sqm
2 Bed	1		75sqm

Of these there are a total of 8 accessible rooms made up of 7 Hotel rooms and 1 serviced apartment

7.2 DWELLING SIZE AND MIX

The residential component of the proposed building accommodates a total of 52 residences with a mix of 1, 2 and 3-bedroom apartments. 14 of these apartments are designed to comply with the Livable Housing Code Silver Standard design.

The proposal includes the following mix of dwelling types:

Apartment Type	No	Mix	Size Range
1 Bed	6	11.5%	54sqm
2 bed	32	61.5%	88-90sqm ²
2 Bed + study	1	2%	102sqm ²
3 Bed	13	25%	111-116sqm ²

7.3 PARKING

The parking is accessed from Honeysuckle drive and is contained in a split level arrangement where a total of 240 spaces are provided and allocated as follows:

- / 16 retail / commercial
- / 154 Hotel
- / 52 Residential
- / 18 Public
- / 12 Motor bikes
- / 12 Bicycle parks
- /



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APPENDICES

APPENDIX A GFA PLANS



Area Schedule (GFA)	
Building Use	Area (m2)

Ground Floor	
Hotel	600 m ²
Residential	51 m ²
Retail	135 m ²

Level 01	
Hotel	1115 m ²

Level 02	
Hotel	1088 m ²

Level 03	
Hotel	1088 m ²

Level 04	
Hotel	1029 m ²

Level 05	
Residential	1273 m ²

Level 06	
Residential	1064 m ²
Residential	250 m ²

Level 07	
Residential	250 m ²
Residential	961 m ²

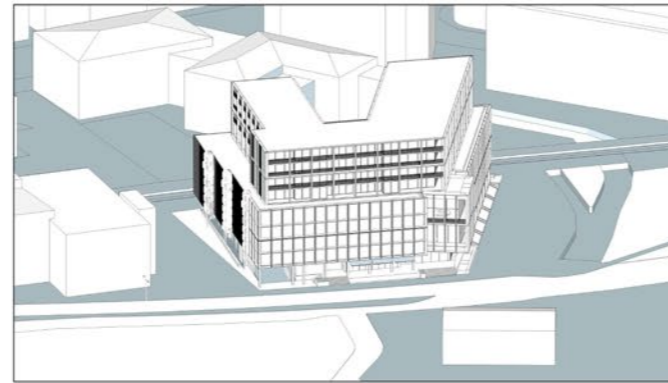
Level 08	
Residential	1405 m ²
Residential	10311 m ²

Area Schedule (GFA) Totals	
Building Use	Area (m2)

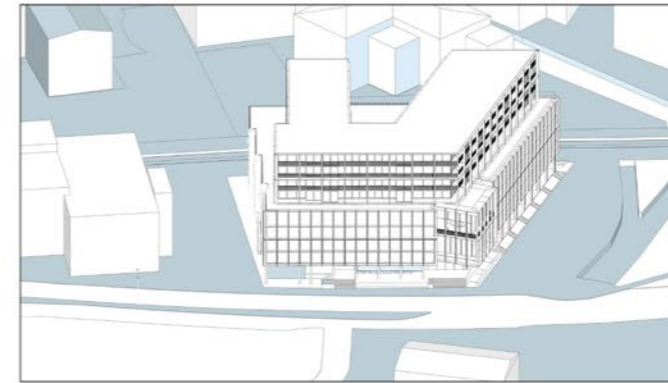
Hotel	4921 m ²
Residential	5255 m ²
Retail	135 m ²
	10311 m ²

APPENDIX B SOLAR ACCESS

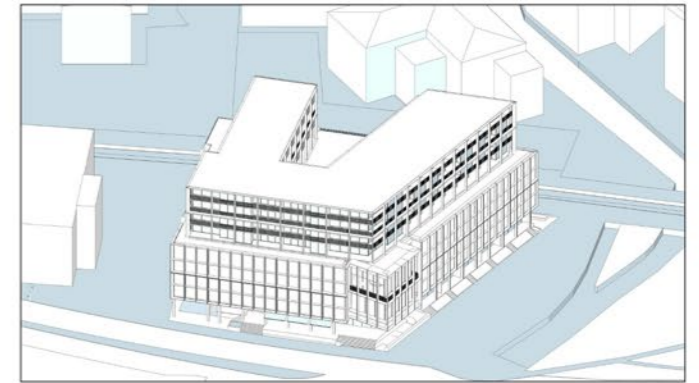
Views from the sun



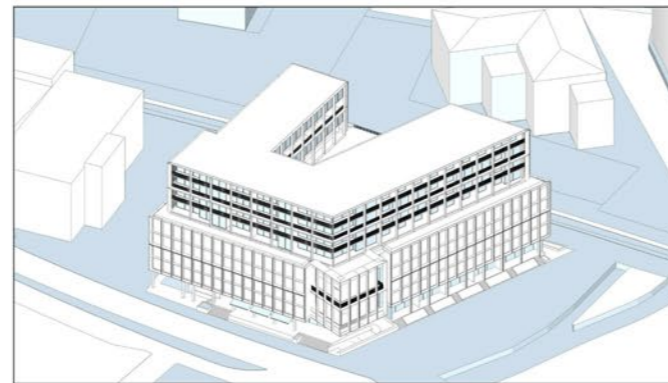
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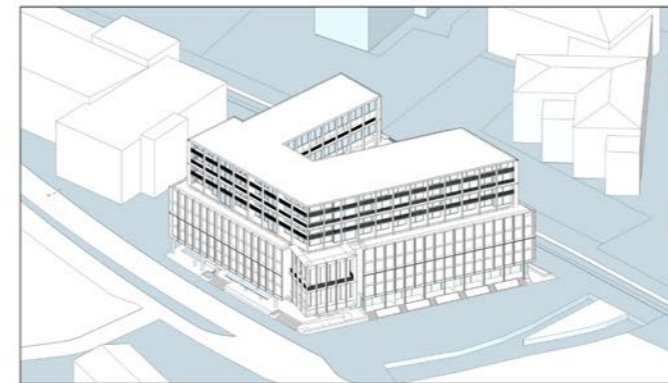
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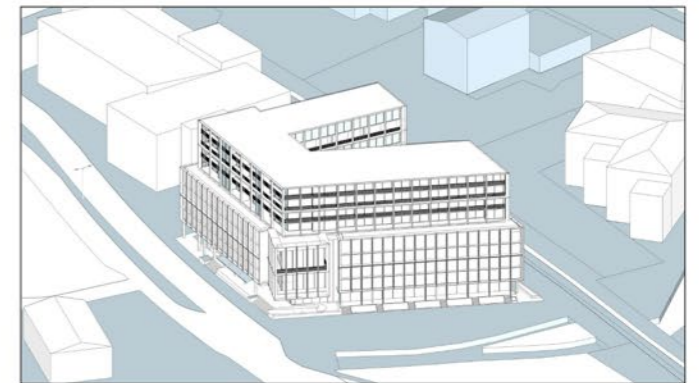
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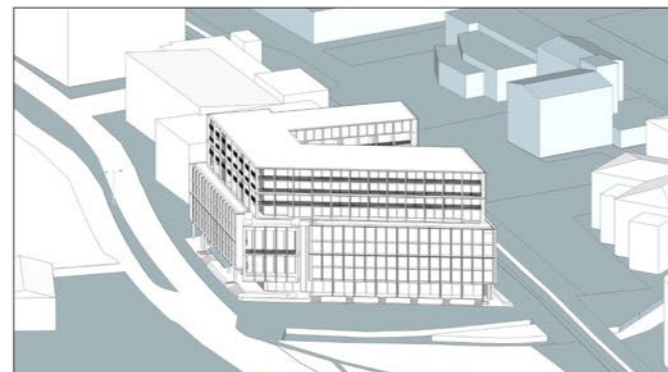
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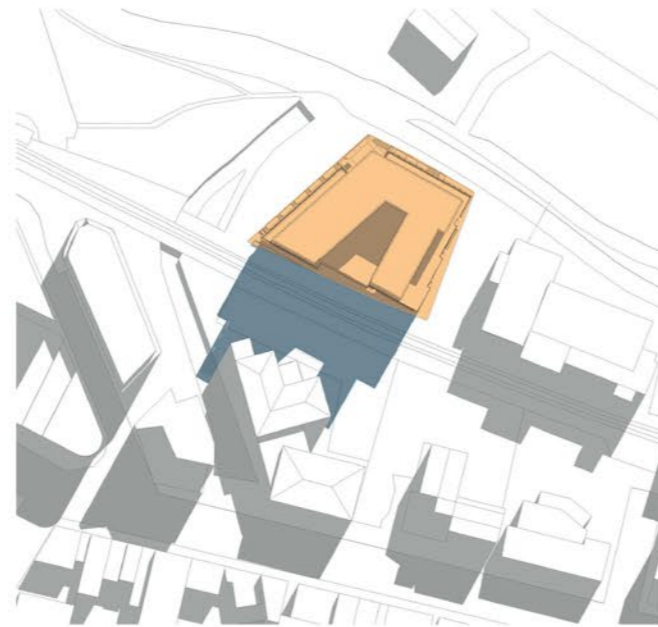


APPENDIX C SHADOW DIAGRAMS

Winter Solstice - June 21



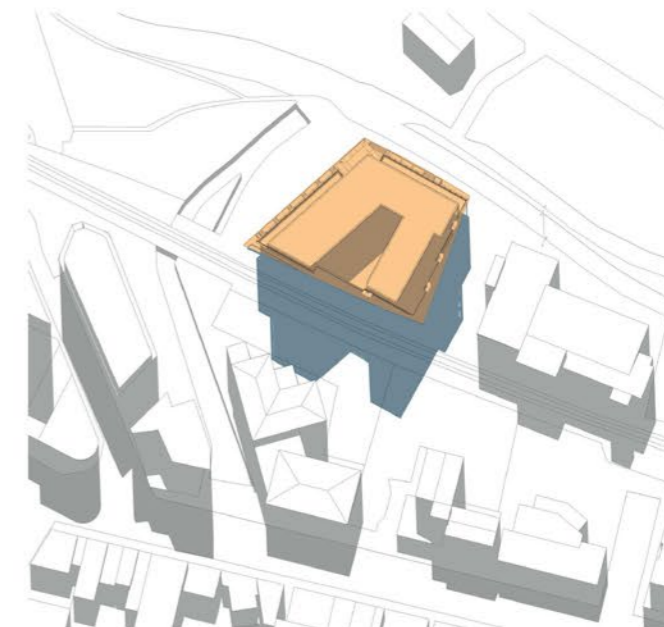
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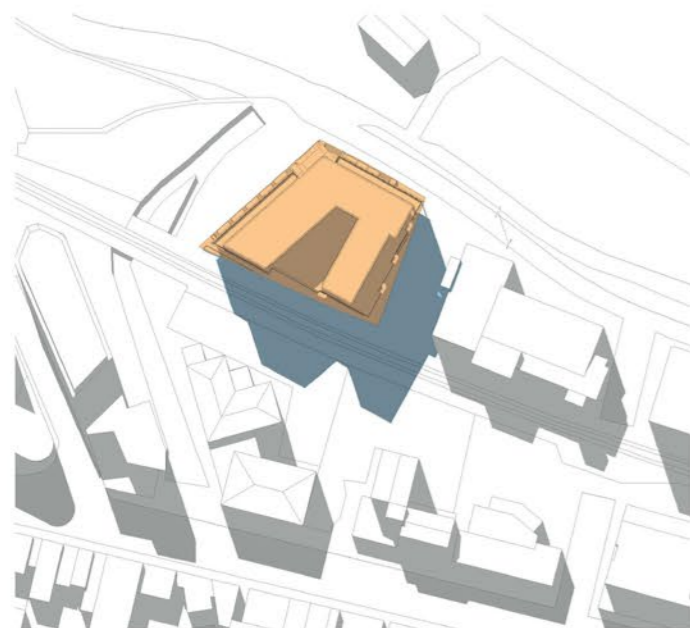
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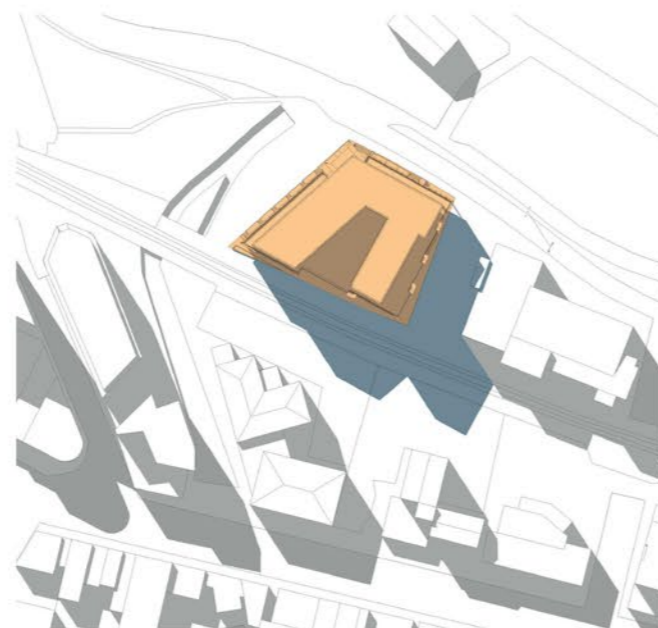
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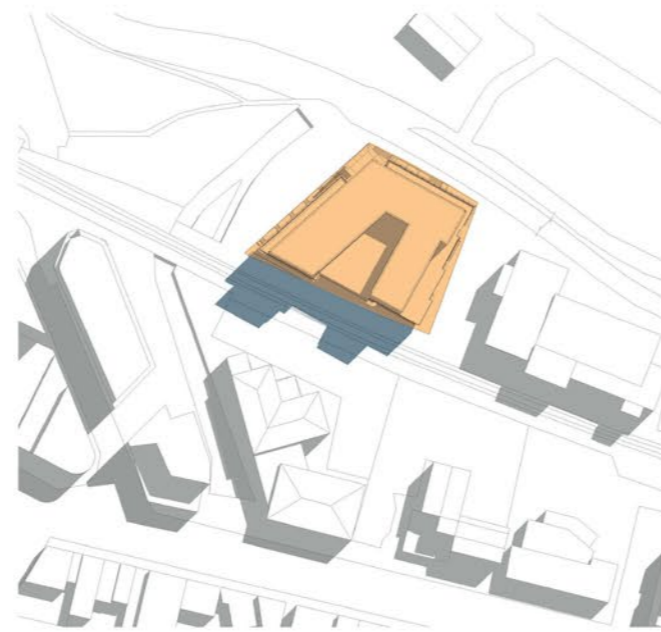


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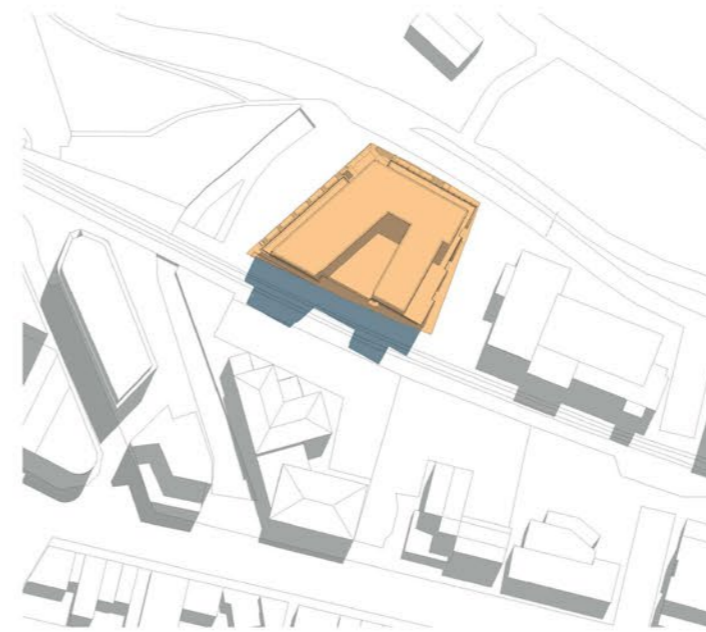
Equinox- March 21 / September 22



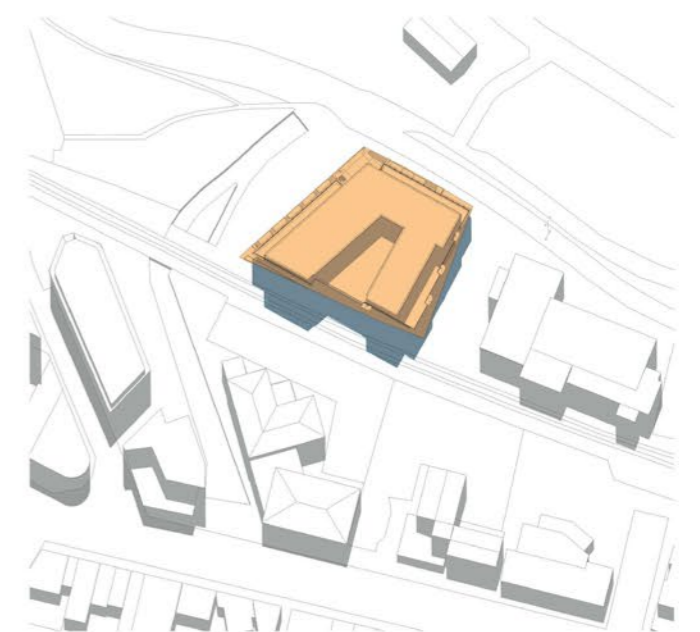
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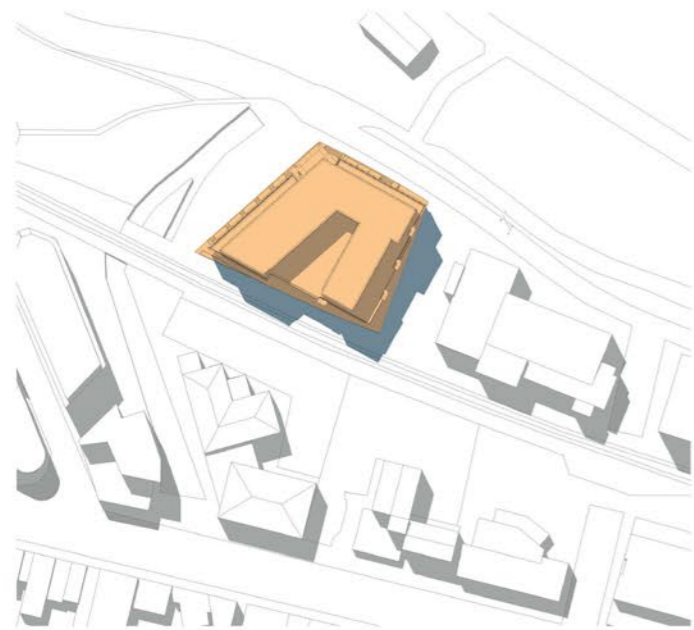
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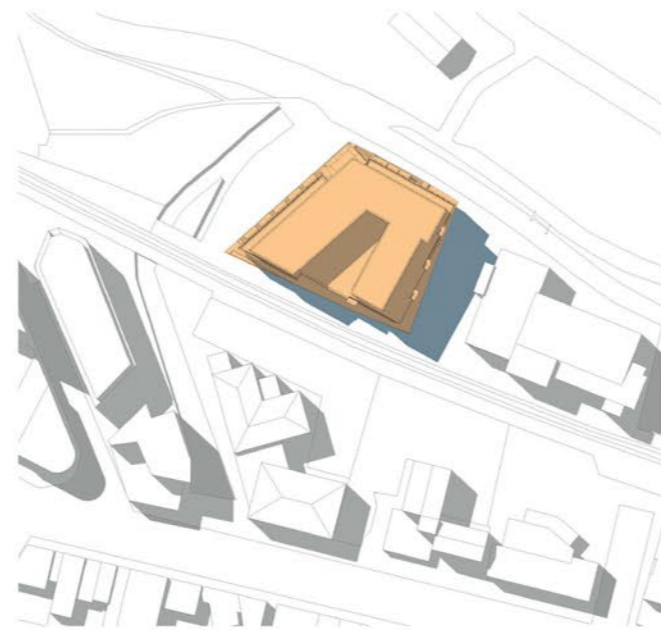
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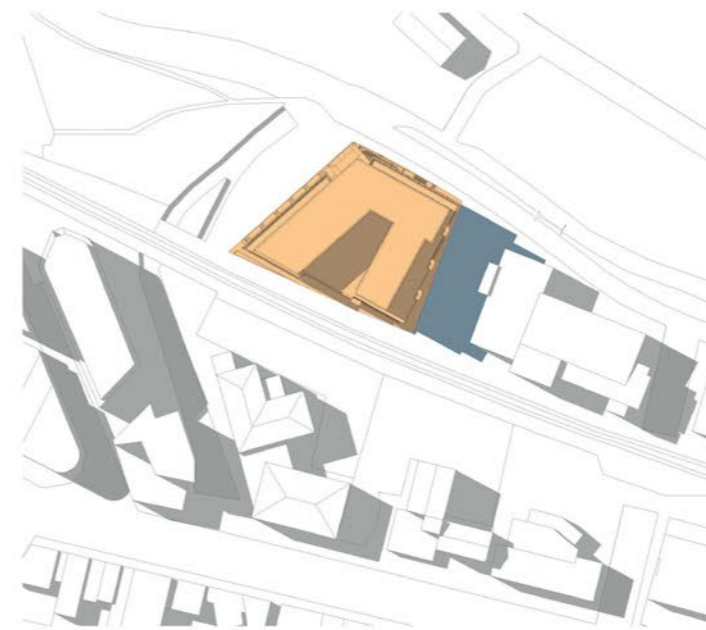
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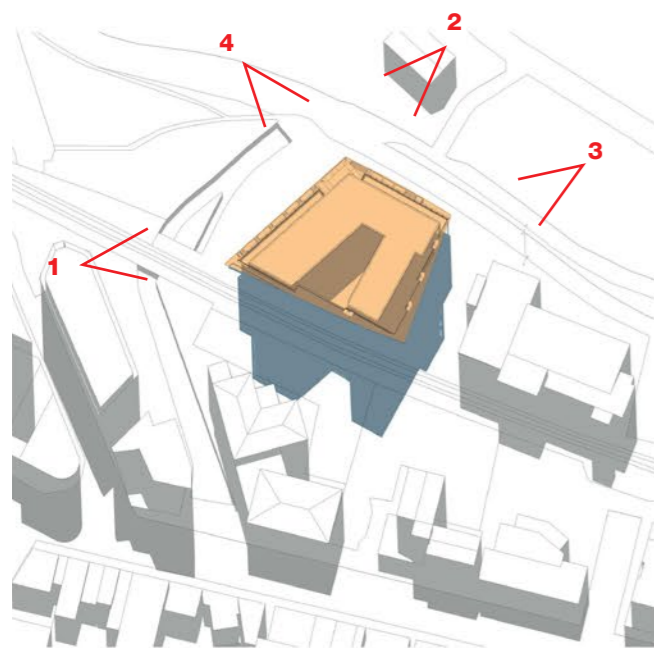
APPENDIX D VIEW ANALYSIS



1. SOUTH - WEST VIEW, 6.8 M AHD



2. NORTH VIEW, 19.9 M AHD



KEYPLAN



3. NORTH - EAST VIEW, 23.0 M AHD



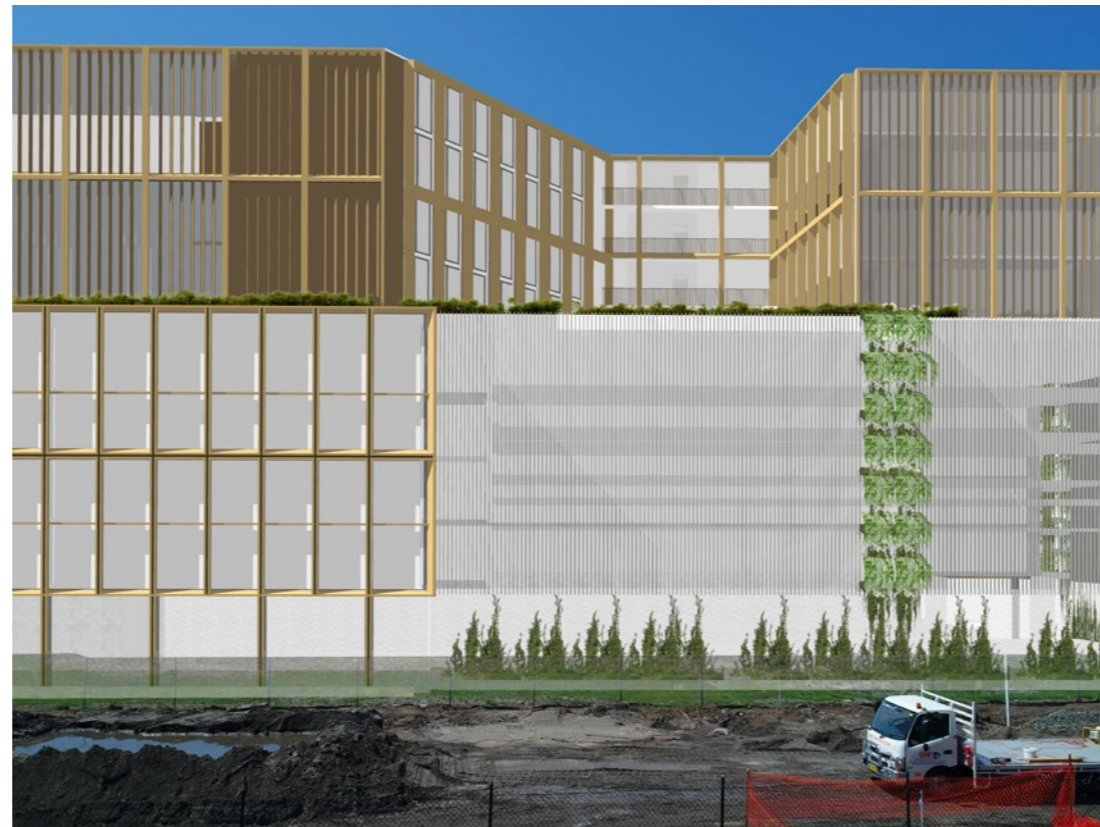
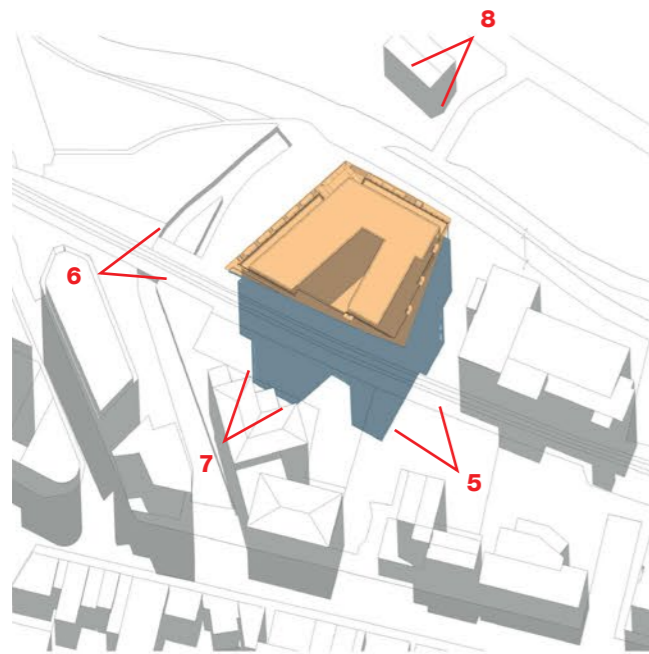
4. NORTH WEST VIEW, 23.0 M AHD



5. SOUTH - EAST VIEW, 26.0 M AHD



6. SOUTH - WEST VIEW, 21.0 M AHD



7. SOUTH VIEW, 7.7 M AHD



8. NORTH VIEW, 30.5 M AHD



APPENDIX E SEPP65 & ADG COMPLIANCE CHECKLIST

DA DESIGN REPORT

ADG Ref.	Item Description	Notes	Compliance
PART3 SITING THE DEVELOPMENT			
3A SITE ANALYSIS			
3A-1 p47	Objective: Site Analysis illustrates that design decisions have been based on opportunities & constraints of the site conditions & their relationship to the surrounding context.		✓
	Design Guidance	Considered	
	Each element in the Site Analysis Checklist is addressed.	YES	
3B ORIENTATION			
3B-1 p49	Objective: Building types & layouts respond to the streetscape & site while optimising solar access within the development		✓
	Design Guidance	Considered	
	Buildings along the street frontage define the street by facing it & incorporating direct access from the street	YES	
	Where the street frontage is to the east or west, rear buildings are orientated to the north	NA	
	Where the street frontage is to the north or south, over-shadowing to the south is minimised & buildings behind the street frontage are orientated to the east & west	NA	
3B-2 p49	Objective: Overshadowing of neighbouring properties is minimised during mid winter.		✓
	Design Guidance	Considered	
	Living areas, private open space & communal open space receive solar access in accordance with section 3D Communal & Public Open Space and section 4A Solar & Daylight Access	YES	
	Solar access to living rooms, balconies & private open spaces of neighbours are considered	YES	
	Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%	YES	
	If the proposal will reduce the solar access of neighbours, building separation is increased beyond minimums contained in 3F Visual Privacy	NA	
	Overshadowing is minimised to the south or downhill by increased upper level setbacks	YES	
	Buildings are orientated at 90 deg to the boundary with neighbouring properties to minimise overshadowing & privacy impacts, particularly where minimum setbacks are used & where buildings are higher than the adjoining development	NA	
	A minimum of 4 hours of solar access is retained to solar collectors on neighbouring buildings	NA	
3C PUBLIC DOMAIN INTERFACE			
3C-1 p51	Objective: Transition between private & public domain is achieved without compromising safety & security.		✓
	Design Guidance	Considered	
	Terraces, balconies and courtyard apartments have direct street entry, where appropriate	YES	
	Changes in level between private terraces, front gardens & dwelling entries above the street level provide surveillance & improve visual privacy for ground level dwellings	YES	
	Upper level balconies & windows overlook the public domain	YES	
	Front fences & walls along street frontages use visually permeable materials & treatments. Height of solid fences or walls is limited to 1m	YES	
	Length of solid walls is limited along street frontages	YES	
	Opportunities for casual interaction between residents & the public domain is provided for. Design solutions may include seating at building entries, near letter boxes & in private courtyards adjacent to streets	YES	

ADG Ref.	Item Description	Notes	Compliance
	In developments with multiple buildings and/or entries, pedestrian entries & spaces associated with individual buildings/entries are differentiated to improve legibility for residents, using the following design solutions:		
	<ul style="list-style-type: none"> Architectural detailing Changes in materials Plant Species Colours Opportunities for people to be concealed are minimised 		YES
3C-2 p53	Objective: Amenity of the public domain is retained & enhanced.		✓
	Design Guidance	Considered	
	Planting is used to soften the edges of any raised terraces to the street, for example above sub-basement car parking	YES	
	Mail boxes are located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	YES	
	The visual prominence of underground car park vents is minimised & located at a low level where possible	NA	
	Substations, pump rooms, garbage storage areas & other service requirements are located in basement car parks or out of view	NA	
	Ramping for accessibility is minimised by building entry location & setting ground floor levels in relation to footpath levels	YES	
	Durable, graffiti resistant & easily cleanable materials are used	NA	
	Where development adjoins public parks, open space or bushland, the design positively addresses this interface & uses the following design solutions:		
	<ul style="list-style-type: none"> Street access, pedestrian paths & building entries are clearly defined Paths, low fences & planting are clearly delineate between communal/private open space & the adjoining public open space Minimal use of blank walls, fences & ground level parking 		YES
	On sloping sites protrusion of car parking above ground level is minimised by using split levels to step underground car parking		YES
COMMUNAL & PUBLIC OPEN SPACE			
3D-1 p55	Objective: An adequate area of communal open space is provided to enhance residential amenity & to provide opportunities for landscaping.		✓
	Design Criteria		
	1 Communal open space has a minimum area equal to 25% of the site		✓
	2 Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)		✓
	Design Guidance	Considered	
	Communal open space is consolidated into a well designed, easily identified & usable area	YES	
	Communal open space have a minimum dimension of 3m. Larger developments should consider greater dimensions	NA	
	Communal open space are co-located with deep soil areas	YES	
	Direct, equitable access are provided to communal open space areas from common circulation areas, entries & lobbies	YES	
	Where communal open space cannot be provided at ground level, it is provided on a podium or roof	YES	

DA DESIGN REPORT

ADG Ref.	Item Description	Notes	Compliance
	Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they need to:		
	<ul style="list-style-type: none"> Provide communal spaces elsewhere such as a landscaped roof top terrace or a common room Provide larger balconies or increased private open space for apartments Demonstrate good proximity to public open space & facilities and/or provide contributions to public open space 		YES
3D-2 p57	Objective: Communal open space is designed to allow for a range of activities, respond to site conditions & be attractive and inviting		✓
	Design Guidance		Considered
	Facilities are provided within communal open spaces & common spaces for a range of age groups (see 4F Common Circulation & Spaces), incorporating the following:		
	<ul style="list-style-type: none"> Seating for individuals or groups Barbeque areas Play equipment or play areas Swimming pools, gyms, tennis courts or common rooms 		YES
	Location of facilities responds to microclimate & site conditions with access to sun in winter, shade in summer & shelter from strong winds & down drafts		YES
	Visual impacts of services are minimised, including location of ventilation duct outlets from basement car parks, electrical substations & detention tanks		YES
3D-3 p57	Objective: Communal open space is designed to maximise safety.		✓
	Design Guidance		Considered
	Communal open space & public domain should be readily visible from habitable rooms & private open space areas while maintaining visual privacy. Design solutions include:		
	<ul style="list-style-type: none"> Bay windows Corner windows Balconies 		YES
	Communal open space is well lit		YES
	Communal open space/facilities that are provided for children & young people are safe and contained		YES
3D-4 p59	Objective: Public open space, where provided, responds to the existing pattern & uses of the neighbourhood.		✓
	Design Guidance		Considered
	Public open space is well connected with public streets along at least one edge		YES
	POS is connected with nearby parks & other landscape elements		NA
	POS is linked through view lines, pedestrian desire paths, termination points & the wider street grid		YES
	Solar access is provided year round along with protection from strong winds		YES
	Opportunities for a range of recreational activities is provided for people of all ages		YES
	Positive street address & active street frontages are provided adjacent to POS		NA
	Boundaries are clearly defined between POS & private areas		YES
3E	DEEP SOIL ZONES		
3E-1 p61	Objective: Deep soil zones are suitable for healthy plant & tree growth, improve residential amenity and promote management of water and air quality.		✓
	Design Criteria		

ADG Ref.	Item Description	Notes	Compliance												
1	Deep soil zones are to meet the following minimum requirements:														
	<table border="1"> <thead> <tr> <th>Site Area (sqm)</th> <th>Minimum Dim. (m)</th> <th>Deep Soil Zone (% of site area)</th> </tr> </thead> <tbody> <tr> <td>less than 650</td> <td>-</td> <td rowspan="3">7</td> </tr> <tr> <td>650-1500</td> <td>3</td> </tr> <tr> <td>greater than 1500</td> <td>6</td> </tr> <tr> <td>greater than 1500 with significant existing tree cover</td> <td>6</td> <td></td> </tr> </tbody> </table>	Site Area (sqm)	Minimum Dim. (m)	Deep Soil Zone (% of site area)	less than 650	-	7	650-1500	3	greater than 1500	6	greater than 1500 with significant existing tree cover	6		✓
Site Area (sqm)	Minimum Dim. (m)	Deep Soil Zone (% of site area)													
less than 650	-	7													
650-1500	3														
greater than 1500	6														
greater than 1500 with significant existing tree cover	6														
	Design Guidance		Considered												
	On some sites it may be possible to provide larger deep soil zones, depending on the site area & context:														
	<ul style="list-style-type: none"> 10% of the site as deep soil on sites with an area of 650sqm - 1,500sqm 15% of the site as deep soil on sites greater than 1,500sqm 		YES												
	Deep soil zones are located to retain existing significant trees & to allow for the development of healthy root systems, providing anchorage & stability for mature trees. Design solutions may include:														
	<ul style="list-style-type: none"> Basement & sub-basement car park design that is consolidated beneath building footprints Use of increased front & side setbacks Adequate clearance around trees to ensure long term health Co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil 		YES												
	Achieving the design criteria may not be possible on some sites including where:														
	<ul style="list-style-type: none"> location & building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres) there is 100% site coverage or non-residential uses at ground floor level 		YES												
	Where a proposal does not achieve deep soil requirements, acceptable stormwater management is achieved & alternative forms of planting provided														
3F	VISUAL PRIVACY														
3F-1 p63	Objective: Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external & internal visual privacy.		✓												
	Design Criteria														
1	Separation between windows & balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side & rear boundaries are as follows:														
	<table border="1"> <thead> <tr> <th>Building Height (m)</th> <th>Habitable Rooms & Balconies. (m)</th> <th>Non-Habitable Rooms (m)</th> </tr> </thead> <tbody> <tr> <td>up to 12 4 storeys)</td> <td>6</td> <td>3</td> </tr> <tr> <td>up to 25 (5-8 storeys)</td> <td>9</td> <td>4.5</td> </tr> <tr> <td>over 25 (9+ storeys)</td> <td>12</td> <td>6</td> </tr> </tbody> </table>	Building Height (m)	Habitable Rooms & Balconies. (m)	Non-Habitable Rooms (m)	up to 12 4 storeys)	6	3	up to 25 (5-8 storeys)	9	4.5	over 25 (9+ storeys)	12	6	✓	
Building Height (m)	Habitable Rooms & Balconies. (m)	Non-Habitable Rooms (m)													
up to 12 4 storeys)	6	3													
up to 25 (5-8 storeys)	9	4.5													
over 25 (9+ storeys)	12	6													
	Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room.														
	Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.														
	Design Guidance		Considered												
	Generally as the height increases, one step in the built form is desirable due to building separations. Any additional steps do not to cause a 'ziggurat' appearance		YES												

DA DESIGN REPORT

ADG Ref.	Item Description	Notes	Compliance
	For residential buildings next to commercial buildings, separation distances are measured as follows:		
	<ul style="list-style-type: none"> Retail, office spaces & commercial balconies use the habitable room distances Service & plant areas use the non-habitable room distances 		YES
	New development are located & oriented to maximise visual privacy between buildings on site & for neighbouring buildings. Design solutions include:		
	<ul style="list-style-type: none"> site layout & building are orientated to minimise privacy impacts (see 3B Orientation) on sloping sites, apartments on different levels have appropriate visual separation distances (see pg 63 figure 3F.4) 		YES
	Apartment buildings have an increased separation distance of 3m (in addition to 3F-1 Design Criteria) when adjacent to a different zone that permits lower density residential development, to provide for a transition in scale & increased landscaping (pg 63 figure 3F.5)		YES
	Direct lines of sight are avoided for windows & balconies across corners		YES
	No separation is required between blank walls		YES
3F-2 p65	Objective: Site & building design elements increase privacy without compromising access to light & air and balance outlook & views from habitable rooms & private open space.		✓
	Design Guidance		Considered
	Communal open space, common areas & access paths are separated from private open space & windows to apartments, particularly habitable room windows. Design solutions include:		
	<ul style="list-style-type: none"> setbacks solid or partially solid balustrades on balconies at lower levels fencing and/or trees and vegetation to separate spaces screening devices bay windows or pop out windows to provide privacy in one direction & outlook in another raising apartments or private open space above the public domain or communal open space planter boxes incorporated into walls & balustrades to increase visual separation pergolas or shading devices to limit overlooking of lower apartments or private open space on constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels on windows and/or balconies 		YES
	Bedrooms, living spaces & other habitable rooms are separated from gallery access & other open circulation space by the apartment's service areas		YES
	Balconies & private terraces are located in front of living rooms to increase internal privacy		YES
	Windows are offset from the windows of adjacent buildings		YES
	Recessed balconies and/or vertical fins are used between adjacent balconies		YES
3G	PEDESTRIAN ACCESS & ENTRIES		
3G-1 p67	Objective: Building entries & pedestrian access connects to and addresses the public domain.		✓
	Design Guidance		Considered
	Multiple entries (including communal building entries & individual ground floor entries) activate the street edge		YES
	Entry locations relate to the street & subdivision pattern, and the existing pedestrian network		YES
	Building entries are clearly identifiable. Communal entries are clearly distinguishable from private entries		YES
	Where street frontage is limited, a primary street address should be provided with clear sight lines and pathways to secondary building entries		YES
3G-2 p67	Objective: Access, entries & pathways are accessible & easy to identify.		✓

ADG Ref.	Item Description	Notes	Compliance
	Design Guidance		Considered
	Building access areas including lift lobbies, stairwells & hallways are clearly visible from the public domain & communal spaces		YES
	The design of ground floors & underground car parks minimise level changes along pathways & entries		NA
	Steps & ramps are integrated into the overall building & landscape design		YES
	For large developments 'way finding' maps are provided to assist visitors & residents		YES
	For large developments electronic access & audio/video intercom are provided to manage access		YES
3G-3 p67	Objective: Large sites provide pedestrian links for access to streets & connection to destinations.		✓
	Design Guidance		Considered
	Pedestrian links through sites facilitate direct connections to open space, main streets, centres & public transport		YES
	Pedestrian links are direct, have clear sight lines, are overlooked by habitable rooms or private open spaces of dwellings, are well lit & contain active uses, where appropriate		YES
3H	VEHICLE ACCESS		
3H-1 p69	Objective: Vehicle access points are designed & located to achieve safety, minimise conflicts between pedestrians & vehicles and create high quality streetscapes.		✓
	Design Guidance		Considered
	Car park access is integrated with the building's overall facade. Design solutions include:		
	<ul style="list-style-type: none"> materials & colour palette minimise visibility from street security doors/gates minimise voids in the facade where doors are not provided, visible interiors reflect facade design, and building services, pipes & ducts are concealed 		YES
	Car park entries are located behind the building line		YES
	Vehicle entries are located at the lowest point of the site, minimising ramp lengths, excavation & impacts on the building form and layout		YES
	Car park entry & access are located on secondary streets or lanes where available		YES
	Vehicle standing areas that increase driveway width & encroach into setbacks are avoided		YES
	Access point is located to avoid headlight glare to habitable rooms		YES
	Adequate separation distances are provided between vehicle entries & street intersections		YES
	The width & number of vehicle access points are limited to the minimum		YES
	Visual impact of long driveways is minimised through changing alignments & screen planting		YES
	The need for large vehicles to enter or turn around within the site is avoided		YES
	Garbage collection, loading & servicing areas are screened		YES
	Clear sight lines are provided at pedestrian & vehicle crossings		YES
	Traffic calming devices, such as changes in paving material or textures, are used where appropriate		YES
	Pedestrian & vehicle access are separated & distinguishable. Design solutions include:		
	<ul style="list-style-type: none"> Changes in surface materials Level changes Landscaping for separation 		YES
3J	BICYCLE & CAR PARKING		
3J-1 p71	Objective: Car parking is provided based on proximity to public transport in metropolitan Sydney & centres in regional areas.		✓
	Design Criteria		

DA DESIGN REPORT

ADG Ref.	Item Description	Notes	Compliance
1	For development in the following locations: <ul style="list-style-type: none"> on sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area; or on land zoned, and sites within 400m of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents & visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less. The car parking needs for a development must be provided off street.		✓
	Design Guidance		Considered
	Where a car share scheme operates locally, car share parking spaces are provided within the development.		YES
	Where less car parking is provided in a development, council do not provide on street resident parking permits		YES
3J-2 p71	Objective: Parking & facilities are provided for other modes of transport.		✓
	Design Guidance		Considered
	Conveniently located & sufficient numbers of parking spaces are provided for motorbikes & scooters		YES
	Secure undercover bicycle parking is provided & easily accessible from both public domain & common areas		YES
	Conveniently located charging stations are provided for electric vehicles, where desirable		NA
3J-3 p73	Objective: Car park design & access is safe and secure.		✓
	Design Guidance		Considered
	Supporting facilities within car parks, including garbage, plant & switch rooms, storage areas & car wash bays can be accessed without crossing car parking spaces		YES
	Direct, clearly visible & well lit access is provided into common circulation areas		YES
	Clearly defined & visible lobby or waiting area is provided to lifts & stairs		YES
	For larger car parks, safe pedestrian access is clearly defined & circulation areas have good lighting, colour, line marking and/or bollards		YES
3J-4 p73	Objective: Visual & environmental impacts of underground car parking are minimised.		✓
	Design Guidance		Considered
	Excavation minimised through efficient car park layouts & ramp design		YES
	Car parking layout is well organised, using a logical, efficient structural grid & double loaded aisles		YES
	Protrusion of car parks do not exceed 1m above ground level. Solution include stepping car park levels or using split levels on sloping sites		YES
	Natural ventilation is provided to basement & sub-basement car parking		YES
	Ventilation grills or screening devices for car parking openings are integrated into the facade & landscape design		YES
3J-5 p75	Objective: Visual & environmental impacts of on-grade car parking are minimised.		✓
	Design Guidance		Considered
	On-grade car parking is avoided		NO

ADG Ref.	Item Description	Notes	Compliance
	Where on-grade car parking is unavoidable, the following design solutions are used: <ul style="list-style-type: none"> Parking is located on the side or rear of the lot away from the primary street frontage Cars are screened from view of streets, buildings, communal & private open space areas Safe & direct access to building entry points is provided Parking is incorporated into the landscape design, by extending planting & materials into the car park space Stormwater run-off is managed appropriately from car parking surfaces Bio-swales, rain gardens or on site detention tanks are provided, where appropriate Light coloured paving materials or permeable paving systems are used. Shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures to large areas of paving 		YES
3J-6 p75	Objective: Visual & environmental impacts of above ground enclosed car parking are minimised.		✓
	Design Guidance		Considered
	Exposed parking is not located along primary street frontages		YES
	Screening, landscaping & other design elements including public art are used to integrate the above ground car parking with the facade. Design solutions include: <ul style="list-style-type: none"> Car parking that is concealed behind facade, with windows integrated into the overall facade design (limited to developments where larger floor plate podium is suitable at lower levels) Car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage 		YES
	Positive street address & active frontages are provided at ground level		YES

PART4 DESIGNING THE BUILDING			
4A	SOLAR & DAYLIGHT ACCESS		
4A-1 p79	Objective: To optimise number of apartments receiving sunlight to habitable rooms, primary windows & private open space.		✓
	Design Criteria		
	1 Living rooms & private open spaces of at least 70% of apartments in a building receive a minimum of 2 hrs direct sunlight between 9am - 3pm at mid winter in Sydney Metropolitan Area and in Newcastle and Wollongong local government areas		✓
	2 In all other areas, living rooms & private open spaces of at least 70% of apartments in a building receive a minimum of 3 hrs direct sunlight between 9 am - 3 pm at mid winter		✓
	3 A maximum of 15% of apartments in a building receive no direct sunlight between 9 am - 3 pm at mid winter		✓
	Design Guidance		Considered
	The design maximises north aspect. The number of single aspect south facing apartments is minimised		YES
	Single aspect, single storey apartments have a northerly or easterly aspect		YES
	Living areas are located to the north and service areas to the south & west of apartments		YES
	To optimise direct sunlight to habitable rooms & balconies a number of the following design features are used: <ul style="list-style-type: none"> Dual aspect apartments Shallow apartment layouts Two storey & mezzanine level apartments Bay windows 		YES

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ADG Ref.	Item Description	Notes	Compliance
	To maximise the benefit to residents of direct sunlight within living rooms & private open spaces, a minimum of 1sqm of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes		YES
	Achieving the design criteria may not be possible where: <ul style="list-style-type: none"> greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source on south facing sloping sites significant views are oriented away from the desired aspect for direct sunlight 		YES
	Design drawings need to demonstrate how site constraints & orientation preclude meeting Design Criteria & how the development meets the objective.		
4A-2 p81	Objective: Daylight access is maximised where sunlight is limited.		✓
	Design Guidance		Considered
	Courtyards, skylights & high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms		YES
	Where courtyards are used: <ul style="list-style-type: none"> Use is restricted to kitchens, bathrooms & service areas Building services are concealed with appropriate detailing & materials to visible walls Courtyards are fully open to the sky Access is provided to the light well from communal area for cleaning & maintenance Acoustic privacy, fire safety & minimum privacy separation distances (see 3F Visual Privacy) are achieved 		YES
	Opportunities for reflected light into apartments are optimised through: <ul style="list-style-type: none"> Reflective exterior surfaces on buildings opposite south facing windows Positioning windows to face other buildings or surfaces (on neighbouring sites or within site) that will reflect light Integrating light shelves into the design Light coloured internal finishes 		YES
4A-3 p81	Objective: Design incorporates shading & glare control, particularly for warmer months.		✓
	Design Guidance		Considered
	A number of the following design features are used: <ul style="list-style-type: none"> Balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas Shading devices such as eaves, awnings, balconies, pergolas, external louvres & planting Horizontal shading to north facing windows Vertical shading to east & particularly west facing windows Operable shading to allow adjustment & choice High performance glass that minimises external glare off windows, with consideration given to reduce tint glass or glass with a reflectance level below 20% (reflective films are avoided) 		YES
4B	NATURAL VENTILATION		
4B-1 p83	Objective: All habitable rooms are naturally ventilated.		✓
	Design Guidance		Considered
	The building's orientation maximises capture & use of prevailing breezes for natural ventilation in habitable rooms		YES
	Depths of habitable rooms support natural ventilation		YES
	The area of unobstructed window openings should be equal to at least 5% of the floor area served		YES
	Light wells are not the primary air source for habitable rooms		YES

ADG Ref.	Item Description	Notes	Compliance
	Doors & openable windows maximise natural ventilation opportunities by using the following design solutions: <ul style="list-style-type: none"> Adjustable windows with large effective openable areas Variety of window types that provide safety & flexibility such as awnings & louvres Windows that occupants can reconfigure to funnel breezes into apartment, such as vertical louvres, casement windows & externally opening doors 		YES
4B-2 p83	Objective: The layout & design of single aspect apartments maximises natural ventilation.		✓
	Design Guidance		Considered
	Apartment depths limited to maximise ventilation & airflow		YES
	Natural ventilation to single aspect apartments is achieved with the following design solutions: <ul style="list-style-type: none"> Primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) Stack effect ventilation, solar chimneys or similar used to naturally ventilate internal building areas or rooms such as bathrooms & laundries Courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation & avoid trapped smells 		YES
4B-3 p85	Objective: Number of apartments with natural cross vent is maximised to create comfortable indoor environments for residents.		✓
	Design Criteria		
	1 At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed		✓
	2 Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line		✓
	Design Guidance		Considered
	The building includes dual aspect apartments, cross through apartments & corner apartments, and limited apartment depths		YES
	In cross-through apartments, external window & door opening sizes/ areas on one side of an apartment (inlet side) are approximately equal to the external window & door opening sizes/areas on the other side of the apartment (outlet side)		YES
	Apartments are designed to minimise the number of corners, doors & rooms that might obstruct airflow		YES
	Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation & airflow		YES
4C	CEILING HEIGHTS		
4C-1 p87	Objective: Ceiling height achieves sufficient natural ventilation & daylight access.		✓
	Design Criteria		

ADG Ref.	Item Description	Notes	Compliance												
1	Measured from finished floor level to finished ceiling level, minimum ceiling heights are:														
	<table border="1"> <thead> <tr> <th colspan="2">Minimum Ceiling Height for apt and mixed-used buildings (m)</th> </tr> </thead> <tbody> <tr> <td>Habitable rooms</td> <td>2.7</td> </tr> <tr> <td>Non-habitable rooms</td> <td>2.4</td> </tr> <tr> <td>For 2 storey apts</td> <td>2.7 for main living area floor 2.4 for second floor, where its area does not exceed 50% of the apt area</td> </tr> <tr> <td>Attic spaces</td> <td>1.8 at edge of room with 30deg minimum ceiling slope</td> </tr> <tr> <td>If located in mixed-used areas</td> <td>3.3 for ground and first floor to promote future flexibility of use</td> </tr> </tbody> </table>		Minimum Ceiling Height for apt and mixed-used buildings (m)		Habitable rooms	2.7	Non-habitable rooms	2.4	For 2 storey apts	2.7 for main living area floor 2.4 for second floor, where its area does not exceed 50% of the apt area	Attic spaces	1.8 at edge of room with 30deg minimum ceiling slope	If located in mixed-used areas	3.3 for ground and first floor to promote future flexibility of use	✓
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Attic spaces	1.8 at edge of room with 30deg minimum ceiling slope														
If located in mixed-used areas	3.3 for ground and first floor to promote future flexibility of use														
	These minimums do not preclude higher ceilings if desired														
	Design Guidance		Considered												
	Ceiling height accommodates use of ceiling fans for cooling & heat distribution		YES												
4C-2 p87	Objective: Ceiling height increases the sense of space in apartments & provides for well proportioned rooms.		✓												
	Design Guidance		Considered												
	A number of the following design solutions are used:														
	<ul style="list-style-type: none"> Hierarchy of rooms in apartment is defined using changes in ceiling heights & alternatives such as raked or curved ceilings, or double height spaces Well proportioned rooms are provided, for example, smaller rooms feel larger & more spacious with higher ceilings Ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor & coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist 		YES												
4C-3 p87	Objective: Ceiling heights contribute to the flexibility of building use over the life of the building.		✓												
	Design Guidance		Considered												
	Ceiling heights of lower level apartments should be greater than the minimum required by Design Criteria allowing flexibility & conversion to non-residential uses		NA												
4D	APARTMENT SIZE & LAYOUT														
4D-1 p89	Objective: The layout of rooms within apartment is functional, well organised & provides a high standard of amenity.		✓												
	Design Criteria														
1	Apartments have the following minimum internal areas:														
	<table border="1"> <thead> <tr> <th>Apartment Type</th> <th>Minimum Internal Area (sqm)</th> </tr> </thead> <tbody> <tr> <td>Studio</td> <td>35</td> </tr> <tr> <td>1 Bedroom</td> <td>50</td> </tr> <tr> <td>2 Bedroom</td> <td>70</td> </tr> <tr> <td>3 Bedroom</td> <td>90</td> </tr> </tbody> </table>		Apartment Type	Minimum Internal Area (sqm)	Studio	35	1 Bedroom	50	2 Bedroom	70	3 Bedroom	90	✓		
Apartment Type	Minimum Internal Area (sqm)														
Studio	35														
1 Bedroom	50														
2 Bedroom	70														
3 Bedroom	90														
	The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5sqm each.														
	A fourth bedroom & further additional bedrooms increase the minimum internal area by 12sqm each														
2	Every habitable room has a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight & air is not borrowed from other rooms		✓												
	Design Guidance		Considered												

ADG Ref.	Item Description	Notes	Compliance
	Kitchens is not located as part of the main circulation space in larger apartments (such as hallway or entry space)		YES
	A window is visible from any point in a habitable room		YES
	Where minimum areas or room dimensions are not met, apartments demonstrate that they are well designed and demonstrate the usability & functionality of the space with realistically scaled furniture layouts & circulation areas.		YES
4D-2 p89	Objective: Environmental performance of the apartment is maximised.		✓
	Design Criteria		
1	Habitable room depths are limited to a maximum of 2.5 x the ceiling height		✓
2	In open plan layouts (living, dining & kitchen are combined) maximum habitable room depth is 8m from a window		✓
	Design Guidance		Considered
	Greater than minimum ceiling heights allow for proportional increases in room depth up to the permitted max depths		YES
	All living areas & bedrooms are located on the external face of building		YES
	Where possible:		
	<ul style="list-style-type: none"> bathrooms & laundries have external openable window main living spaces are oriented toward the primary outlook & aspect and away from noise sources 		YES
4D-3 p91	Objective: Apartment layouts are designed to accommodate a variety of household activities & needs.		✓
	Design Criteria		
1	Master bedrooms have a minimum area of 10sqm & other bedrooms 9sqm (excluding wardrobe space)		✓
2	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)		✓
3	Living rooms or combined living/dining rooms have a minimum width of:		
	<ul style="list-style-type: none"> 3.6m for studio & 1 bedroom apartments 4m for 2 & 3 bedroom apartments 		✓
4	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts		✓
	Design Guidance		Considered
	Access to bedrooms, bathrooms & laundries is separated from living areas minimising direct openings between living & service areas		YES
	All bedrooms allow a minimum length of 1.5m for robes		YES
	Main bedroom of apartment or studio apartment is provided with a wardrobe of minimum 1.8m L x 0.6m D x 2.1m H		
	Apartment layouts allow flexibility over time, design solutions include:		
	<ul style="list-style-type: none"> Dimensions that facilitate a variety of furniture arrangements & removal Spaces for a range of activities & privacy levels between different spaces within the apartment Dual master apartments Dual key apartments Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the BCA & for calculating mix of apartments Room sizes & proportions or open plans (rectangular spaces 2:3 are more easily furnished than square spaces 1:1) Efficient planning of circulation by stairs, corridors & through rooms to maximise the amount of usable floor space in rooms 		YES
4E	PRIVATE OPEN SPACE & BALCONIES		
4E-1 p93	Objective: Apartments provide appropriately sized private open space & balconies to enhance residential amenity.		✓
	Design Criteria		

DA DESIGN REPORT

ADG Ref.	Item Description	Notes	Compliance														
1	All apartments are required to have primary balconies as follows:																
	<table border="1"> <thead> <tr> <th>Apartment Type</th> <th>Minimum Area (sqm)</th> <th>Minimum Depth (m)</th> </tr> </thead> <tbody> <tr> <td>Studio</td> <td>4</td> <td>-</td> </tr> <tr> <td>1 Bedroom</td> <td>8</td> <td>2</td> </tr> <tr> <td>2 Bedroom</td> <td>10</td> <td>2</td> </tr> <tr> <td>3+ Bedroom</td> <td>12</td> <td>2.4</td> </tr> </tbody> </table>	Apartment Type	Minimum Area (sqm)	Minimum Depth (m)	Studio	4	-	1 Bedroom	8	2	2 Bedroom	10	2	3+ Bedroom	12	2.4	✓
Apartment Type	Minimum Area (sqm)	Minimum Depth (m)															
Studio	4	-															
1 Bedroom	8	2															
2 Bedroom	10	2															
3+ Bedroom	12	2.4															
	The minimum balcony depth to be counted as contributing to the balcony area is 1m																
2	For apartments at ground level or on podium or similar, a private open space is provided instead of a balcony. It must have minimum area of 15sqm & minimum depth of 3m		✓														
	Design Guidance		Considered														
	Increased communal open space are provided where the number or size of balconies are reduced		NA														
	Storage areas on balconies is additional to the minimum balcony size		YES														
	Balcony use may be limited in some proposals where:																
	<ul style="list-style-type: none"> consistently high wind speeds at 10 storeys & above close proximity to road, rail or other noise sources exposure to significant levels of aircraft noise heritage & adaptive reuse of existing buildings 																
	In these situations,		YES														
	<ul style="list-style-type: none"> juliet balconies, operable walls, enclosed wintergardens bay windows 																
	are appropriate. Other amenity benefits for occupants are provided in the apartments or in the development or both. Natural ventilation is also demonstrated																
4E-2 p93	Objective: Primary private open space & balconies are appropriately located to enhance liveability for residents		✓														
	Design Guidance		Considered														
	Primary open space & balconies are located adjacent to the living room, dining room or kitchen to extend the living space		YES														
	POS & balconies predominantly face north, east or west		YES														
	POS & balconies are orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms		YES														
4E-3 p95	Objective: Private open space & balcony design is integrated into & contributes to the overall architectural form & detail of the building		✓														
	Design Guidance		Considered														
	Solid, partially solid or transparent fences & balustrades are selected to respond to the location. They are designed to allow views & passive surveillance of the street while maintaining visual privacy & allowing for a range of uses on the balcony. Solid & partially solid balustrades are preferred		YES														
	Full width full height glass balustrades alone are generally not desirable		YES														
	Projecting balconies are integrated into the building design. The design of soffits are considered		YES														
	Operable screens, shutters, hoods & pergolas are used to control sunlight & wind		YES														
	Balustrades are set back from the building or balcony edge where overlooking or where safety is an issue		YES														
	Downpipes & balcony drainage are integrated with the overall facade & building design		YES														
	Air-conditioning units are located on roofs, in basements, or fully integrated into the building design		YES														

ADG Ref.	Item Description	Notes	Compliance
	Where clothes drying, storage or air conditioning units are located on balconies, they are screened & integrated in the building design		NA
	Ceilings of apartments below terraces are insulated to avoid heat loss		YES
	Water & gas outlets are provided for primary balconies & private open space		YES
4E-4 p95	Objective: Private open space & balcony design maximises safety		✓
	Design Guidance		Considered
	Changes in ground levels or landscaping are minimised		YES
	Balcony design & detailing avoids opportunities for climbing & falling		YES
4F	COMMON CIRCULATION & SPACES		
4F-1 p97	Objective: Common circulation spaces achieve good amenity & properly service the number of apartments		✓
	Design Criteria		
	1 The maximum number of apartments off a circulation core on a single level is eight		✓
	2 For buildings of 10 storeys & over, the maximum number of apartments sharing a single lift is 40		✓
	Design Guidance		Considered
	Greater than minimum requirements for corridor widths and/or ceiling heights allow comfortable movement & access particularly in entry lobbies, outside lifts & at apartment entry doors		YES
	Daylight & natural ventilation are provided to all common circulation spaces that are above ground		YES
	Windows are provided in common circulation spaces & are adjacent to the stair or lift core or at the ends of corridors		YES
	Longer corridors greater than 12m in length from the lift core are articulated. Design solutions include:		YES
	<ul style="list-style-type: none"> Series of foyer areas with windows & spaces for seating Wider areas at apartment entry doors & varied ceiling heights 		
	Common circulation spaces maximise opportunities for dual aspect apartments, including multiple core apartment buildings & cross over apartments		YES
	Achieving Design Criteria for the number of apartments off a circulation core may not be possible. Where development is unable to achieve this, a high level of amenity for common lobbies, corridors & apartments is demonstrated, including:		
	<ul style="list-style-type: none"> Sunlight & natural cross ventilation in apartments Access to ample daylight & natural ventilation in common circulation spaces Common areas for seating & gathering Generous corridors with greater than minimum ceiling heights Other innovative design solutions that provide high levels of amenity 		YES
	Where Design Criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level		YES
	Primary living room or bedroom windows do not open directly onto common circulation spaces, open or enclosed. Visual & acoustic privacy from common circulation spaces to any other rooms are carefully controlled		YES
4F-2 p99	Objective: Common circulation spaces promote safety & provide for social interaction between residents		✓
	Design Guidance		Considered
	Direct & legible access are provided between vertical circulation points & apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines		YES
	Tight corners & spaces are avoided		YES
	Circulation spaces are well lit at night		YES
	Legible signage are provided for apartment numbers, common areas & general wayfinding		YES

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ADG Ref.	Item Description	Notes	Compliance										
	Incidental spaces, eg space for seating in a corridor, at a stair landing, or near a window are provided		YES										
	In larger developments, community rooms for activities such as owners corporation meetings or resident use, are provided & are co-located with communal open space		NA										
	Where external galleries are provided, they are more open than closed above the balustrade along their length		NA										
4G	STORAGE												
4G-1 p101	Objective: Adequate, well designed storage is provided in each apartment		✓										
	Design Criteria												
1	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:												
	<table border="1"> <thead> <tr> <th>Apartment Type</th> <th>Storage Size Volume (cubic m)</th> </tr> </thead> <tbody> <tr> <td>Studio</td> <td>4</td> </tr> <tr> <td>1 Bedroom</td> <td>6</td> </tr> <tr> <td>2 Bedroom</td> <td>8</td> </tr> <tr> <td>3+ Bedroom</td> <td>10</td> </tr> </tbody> </table>	Apartment Type	Storage Size Volume (cubic m)	Studio	4	1 Bedroom	6	2 Bedroom	8	3+ Bedroom	10		✓
Apartment Type	Storage Size Volume (cubic m)												
Studio	4												
1 Bedroom	6												
2 Bedroom	8												
3+ Bedroom	10												
	At least 50% of the required storage is to be located within the apartment												
	Design Guidance	Considered											
	Storage is accessible from either circulation or living areas		YES										
	Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proofed & screened from view from the street		NA										
	Left over space such as under stairs is used for storage		YES										
4G-2 p101	Objective: Additional storage is conveniently located, accessible & nominated for individual apartments		✓										
	Design Guidance	Considered											
	Storage not located in apartments is secure and clearly allocated to specific apartments		YES										
	Storage is provided for larger & less frequently accessed items		YES										
	Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages, such that allocated car parking remains accessible		YES										
	If communal storage rooms are provided they are accessible from common circulation areas of the building		YES										
	Storage not located in apartment is integrated into the overall building design & not visible from public domain		YES										
4H	ACOUSTIC PRIVACY												
4H-1 p103	Objective: Noise transfer is minimised through the siting of buildings & building layout		✓										
	Design Guidance	Considered											
	Adequate building separation is provided within the development & from neighbouring buildings/adjacent uses (see 2F Building Separation & 3F Visual Privacy)		YES										
	Window & door openings are orientated away from noise sources		YES										
	Noisy areas within buildings including building entries & corridors are located next to or above each other while quieter areas are located next to or above quieter areas		YES										
	Storage, circulation areas & non-habitable rooms are located to buffer noise from external sources		YES										
	The number of party walls (shared with other apartments) are limited & are appropriately insulated		YES										
	Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces & circulation areas should be located at least 3m away from bedrooms		YES										

ADG Ref.	Item Description	Notes	Compliance
4H-2 p103	Objective: Noise impacts are mitigated within apartments through layout & acoustic treatments		✓
	Design Guidance	Considered	
	Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions:		
	<ul style="list-style-type: none"> Rooms with similar noise requirements are grouped together Doors separate different use zones Wardrobes in bedrooms are co-located to act as sound buffers 		YES
	Where physical separation cannot be achieved, noise conflicts are resolved using the following design solutions:		
	<ul style="list-style-type: none"> Double or acoustic glazing Acoustic seals Use of materials with low noise penetration properties Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements 		YES
4J	NOISE & POLLUTION		
4J-1 p105	Objective: In noisy or hostile environments impacts of external noise & pollution are minimised through careful siting & layout		✓
	Design Guidance	Considered	
	To minimise impacts the following design solutions are used:		
	<ul style="list-style-type: none"> Physical separation between buildings & the noise or pollution source Residential uses are located perpendicular to the noise source & where possible buffered by other uses Non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses & communal open spaces Non-residential uses are located at lower levels vertically separating residential component from noise or pollution source. Setbacks to the underside of residential floor levels are increased, relative to traffic volumes & other noise sources Buildings respond to both solar access & noise. Where solar access is away from noise source, non-habitable rooms will provide a buffer Where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferred Landscape design reduces the perception of noise & acts as a filter for air pollution generated by traffic & industry 		YES
	Where developments are unable to achieve Design Criteria, alternatives are considered in the following areas:		
	<ul style="list-style-type: none"> Solar & daylight access Private open space & balconies Natural cross ventilation 		
4J-2 p105	Objective: Appropriate noise shielding or attenuation techniques for building design, construction & choice of materials are used to mitigate noise transmission		✓
	Design Guidance	Considered	
	Design solutions to mitigate noise include:		
	<ul style="list-style-type: none"> Limiting the number & size of openings facing noise sources Providing seals to prevent noise transfer through gaps Using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens) Using materials with mass and/or sound insulation or absorption properties eg solid balcony balustrades, external screens & soffits 		YES
4K	APARTMENT MIX		
4K-1 p107	Objective: A range of apartment types & sizes is provided to cater for different household types now & into the future		✓
	Design Guidance	Considered	
	A variety of apartment types is provided		YES

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ADG Ref.	Item Description	Notes	Compliance
	The apartment mix is appropriate, taking into consideration:		
	<ul style="list-style-type: none"> Distance to public transport, employment & education centres Current market demands & projected future demographic trends Demand for social & affordable housing Different cultural & socioeconomic groups 		YES
	Flexible apartment configurations are provided to support diverse household types & stages of life including single person households, families, multi-generational families & group households		YES
4K-2 p107	Objective: The apartment mix is distributed to suitable locations within the building		✓
	Design Guidance		Considered
	Different apartment types are located to achieve successful facade composition & to optimise solar access		YES
	Larger apartment types are located on ground or roof level where there is potential for more open space, and on corners where more building frontage is available		NO
4L	GROUND FLOOR APARTMENTS		
4L-1 p109	Objective: Street frontage activity is maximised where ground floor apartments are located		✓
	Design Guidance		Considered
	Direct street access are provided to ground floor apartments		NA
	Activity is achieved through front gardens, terraces & the facade of the building. Design solutions include:		
	<ul style="list-style-type: none"> Both street, foyer & other common internal circulation entrances to ground floor apartments Private open space is next to the street Doors & windows face the street 		YES
	Retail or home office spaces are located along street frontages		YES
	Ground floor apartment layouts support SOHO use & provide opportunities for future conversion into commercial or retail areas. In these cases higher floor to ceiling heights & easy conversion to ground floor amenities are provided.		NA
4L-2 p109	Objective: Design of ground floor apartments delivers amenity & safety for residents		✓
	Design Guidance		Considered
	Privacy & safety are provided without obstructing casual surveillance. Design solutions include:		
	<ul style="list-style-type: none"> Elevating private gardens & terraces above the street level by 1-1.5m (see pg 109 Figure 4L.4) Landscaping & private courtyards Window sill heights minimise sight lines into apartments Integrating balustrades, safety bars or screens with exterior design 		YES
	Solar access is maximised through:		
	<ul style="list-style-type: none"> High ceilings & tall windows Trees & shrubs allow solar access in winter & shade in summer 		YES
4M	FACADES		
4M-1 p111	Objective: Building facades provide visual interest along the street while respecting the character of the local area		✓
	Design Guidance		Considered
	Design solutions for front building facades include:		
	<ul style="list-style-type: none"> Composition of varied building elements Defined base, middle & top of buildings Revealing & concealing certain elements 		YES
	Building services are integrated within the overall facade		YES

ADG Ref.	Item Description	Notes	Compliance
	Building facades are well resolved with appropriate scale & proportion to streetscape & with consideration of human scale. Solutions include:		
	<ul style="list-style-type: none"> Well composed horizontal & vertical elements Variation in floor heights to enhance the human scale Elements that are proportional & arranged in patterns Public artwork or treatments to exterior blank walls Grouping of floors or elements such as balconies & windows on taller buildings 		YES
	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights		YES
	Shadow is created on the facade throughout the day with building articulation, balconies & deeper window reveals		YES
4M-2 p111	Objective: Building functions are expressed by the facade		✓
	Design Guidance		Considered
	Building entries are clearly defined		YES
	Important corners are given visual prominence through change in articulation, materials or colour, roof expression or changes in height		YES
	Apartment layout is expressed externally through facade features such as party walls & floor slabs		YES
4N	ROOF DESIGN		
4N-1 p113	Objective: Roof treatments are integrated into the building design & positively respond to the street		✓
	Design Guidance		Considered
	Roof design relates to the street. Design solutions include:		
	<ul style="list-style-type: none"> Special roof features & strong corners Use of skillion or very low pitch hipped roofs Breaking down the massing of the roof by using smaller elements to avoid bulk Using materials or pitched form complementary to adjacent buildings 		YES
	Roof treatments are integrated with the building design. Design solutions include:		
	<ul style="list-style-type: none"> Roof design is in proportion to the overall building size, scale & form Roof materials compliment the building Service elements are integrated 		YES
4N-2 p113	Objective: Opportunities to use roof space for residential accommodation & open space are maximised		✓
	Design Guidance		Considered
	Habitable roof space are provided with good levels of amenity. Design solutions include:		
	<ul style="list-style-type: none"> Penthouse apartments Dormer or clerestory windows Openable skylights 		NO
	Open space is provided on roof tops subject to acceptable visual & acoustic privacy, comfort levels, safety & security considerations		NO
4N-3 p113	Objective: Roof design incorporates sustainability features		✓
	Design Guidance		Considered
	Roof design maximises solar access to apartments during winter & provides shade during summer. Design solutions include:		
	<ul style="list-style-type: none"> Roof lifts to the north Eaves & overhangs shade walls & windows from summer sun 		NA
	Skylights & ventilation systems are integrated into the roof design		YES
4O	LANDSCAPE DESIGN		
4O-1 p115	Objective: Landscape design is viable & sustainable		✓

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ADG Ref.	Item Description	Notes	Compliance								
	Design Guidance		Considered								
	Landscape design is environmentally sustainable & can enhance environmental performance by incorporating:										
	<ul style="list-style-type: none"> Diverse & appropriate planting Bio-filtration gardens Appropriately planted shading trees Areas for residents to plant vegetables & herbs Composting Green roofs or walls 		YES								
	Ongoing maintenance plans are prepared		YES								
	Microclimate is enhanced by:										
	<ul style="list-style-type: none"> Appropriately scaled trees near the eastern & western elevations for shade Balance of evergreen & deciduous trees to provide shading in summer & sunlight access in winter Shade structures such as pergolas for balconies & courtyards 		YES								
	Tree & shrub selection considers size at maturity & the potential for roots to compete.		YES								
40-2 p115	Objective: Landscape design contributes to streetscape & amenity		✓								
	Design Guidance		Considered								
	Landscape design responds to the existing site conditions including:										
	<ul style="list-style-type: none"> Changes of levels Views Significant landscape features including trees & rock outcrops 		YES								
	Significant landscape features are protected by:										
	<ul style="list-style-type: none"> Tree protection zones Appropriate signage & fencing during construction 		YES								
	Plants selected are endemic to region & reflect local ecology		YES								
4P	PLANTING ON STRUCTURES										
4P-1 p117	Objective: Appropriate soil profiles are provided		✓								
	Design Guidance		Considered								
	Structures are reinforced for additional saturated soil weight		YES								
	Soil volume is appropriate for plant growth, including:										
	<ul style="list-style-type: none"> Modifying depths & widths according to planting mix & irrigation frequency Free draining & long soil life span Tree anchorage 		YES								
	Minimum soil standards for plant sizes should be provided in accordance with:										
	<table border="1"> <thead> <tr> <th>Site Area (sqm)</th> <th>Recommended Tree Planting</th> </tr> </thead> <tbody> <tr> <td>Up to 850</td> <td>1 medium tree per 50sqm of deep soil zone</td> </tr> <tr> <td>850 - 1,500</td> <td>1 large tree or 2 medium trees per 90sqm of deep soil zone</td> </tr> <tr> <td>Greater than 1,500</td> <td>1 large tree or 2 medium trees per 80sqm of deep soil zone</td> </tr> </tbody> </table>	Site Area (sqm)	Recommended Tree Planting	Up to 850	1 medium tree per 50sqm of deep soil zone	850 - 1,500	1 large tree or 2 medium trees per 90sqm of deep soil zone	Greater than 1,500	1 large tree or 2 medium trees per 80sqm of deep soil zone		YES
Site Area (sqm)	Recommended Tree Planting										
Up to 850	1 medium tree per 50sqm of deep soil zone										
850 - 1,500	1 large tree or 2 medium trees per 90sqm of deep soil zone										
Greater than 1,500	1 large tree or 2 medium trees per 80sqm of deep soil zone										
4P-2 p117	Objective: Plant growth is optimised with appropriate selection & maintenance		✓								
	Design Guidance		Considered								
	Plants are suited to site conditions, considerations include:										
	<ul style="list-style-type: none"> Drought & wind tolerance Seasonal changes in solar access Modified substrate depths for a diverse range of plants Plant longevity 		YES								
	A landscape maintenance plan is prepared		NA								

ADG Ref.	Item Description	Notes	Compliance
	Irrigation & drainage systems respond to:		
	<ul style="list-style-type: none"> Changing site conditions Soil profile & planting regime Whether rainwater, stormwater or recycled grey water is used 		YES
4P-3 p117	Objective: Planting on structures contributes to the quality & amenity of communal & public open spaces		✓
	Design Guidance		Considered
	Building design incorporates opportunities for planting on structures. Design solutions include:		
	<ul style="list-style-type: none"> Green walls with specialised lighting for indoor green walls Wall design that incorporates planting Green roofs, particularly where roofs are visible from the public domain Planter boxes 		YES
	Note: structures designed to accommodate green walls should be integrated into the building facade & consider the ability of the facade to change over time		
4Q	UNIVERSAL DESIGN		
4Q-1 p119	Objective: Universal design features are included in apartment design to promote flexible housing for all community members		✓
	Design Guidance		Considered
	Developments achieve a benchmark of 100% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features		YES
4Q-2 p119	Objective: A variety of apartments with adaptable designs are provided		✓
	Design Guidance		Considered
	Adaptable housing should be provided in accordance with the relevant council policy		YES
	Design solutions for adaptable apartments include:		
	<ul style="list-style-type: none"> Convenient access to communal & public areas High level of solar access Minimal structural change & residential amenity loss when adapted Larger car parking spaces for accessibility Parking titled separately from apartments or shared car parking arrangements 		YES
4Q-3 p119	Objective: Apartment layouts are flexible & accommodate a range of lifestyle needs		✓
	Design Guidance		Considered
	Flexible design solutions include:		
	<ul style="list-style-type: none"> Rooms with multiple functions Dual master bedroom apartments with separate bathrooms Larger apartments with various living space options Open plan 'loft' style apartments with only a fixed kitchen, laundry & bathroom 		YES
4R	ADAPTIVE REUSE		
4R-1 p121	Objective: New additions to existing buildings are contemporary, complementary & enhance area's identity & sense of place		✓
	Design Guidance		Considered
	Design solutions include:		
	<ul style="list-style-type: none"> New elements align with the existing building Additions complement the existing character, siting, scale, proportion, pattern, form & detailing Contemporary & complementary materials, finishes, textures & colours 		YES
	Additions to heritage items are clearly identifiable from the original building		YES

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ADG Ref.	Item Description	Notes	Compliance
	New additions allow for interpretation & future evolution of the building		NO
4R-2 p121	Objective: Adapted buildings provide residential amenity but does not precluding future adaptive reuse		✓
	Design Guidance		Considered
	Design features are incorporated sensitively to make up for any physical limitations, to ensure residential amenity. Design solutions include:		NA
	<ul style="list-style-type: none"> Generously sized voids in deeper buildings Alternative apartment types when orientation is poor Additions to expand the existing building envelope 		NA
	Where developments are unable to achieve Design Criteria, alternatives are considered in the following areas:		
	<ul style="list-style-type: none"> Where there are existing higher ceilings, depths of habitable rooms can increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar & daylight access (see 4A & 4B) Alternatives to providing deep soil where less than the minimum requirement is currently available on the site Building & visual separation subject to demonstrating alternative design approaches to achieving privacy Common circulation Car parking Alternative approaches to private open space & balconies 		YES
4S	MIXED USE		
4S-1 p123	Objective: Mixed use developments are provided in appropriate locations & provide active street frontages that encourage pedestrian movement.		✓
	Design Guidance		Considered
	Mixed use development are concentrated around public transport & centres		NA
	Mixed use developments positively contribute to the public domain. Design solutions include:		
	<ul style="list-style-type: none"> Development addresses the street Active frontages provided Diverse activities & uses Avoiding blank walls at the ground level Live/work apartments on the ground floor level, rather than commercial 		YES
4S-2 p123	Objective: Residential levels of the building are integrated within the development. Safety & amenity is maximised.		✓
	Design Guidance		Considered
	Residential circulation areas are clearly defined. Solutions include:		
	<ul style="list-style-type: none"> Residential entries separated from commercial entries & directly accessible from the street Commercial service areas separated from residential components Residential car parking & communal facilities separated or secured Security at entries & safe pedestrian routes are provided Concealment opportunities are avoided 		YES
	Landscaped communal open space are provided at podium or roof		YES
4T	AWNING & SIGNAGE		
4T-1 p125	Objective: Awnings are well located and complement & integrate with the building design.		✓
	Design Guidance		Considered
	Awnings are located along streets with high pedestrian activity & active frontages		YES

ADG Ref.	Item Description	Notes	Compliance
	A number of the following design solutions are used:		
	<ul style="list-style-type: none"> Continuous awnings are maintained & provided in areas with an existing pattern Height, depth, material & form complements existing street character Protection from sun & rain is provided Awnings are wrapped around secondary frontages of corner sites Awnings are retractable in areas without an established pattern 		YES
	Awnings are located over building entries for building address & public domain amenity		YES
	Awnings relate to residential windows, balconies, street tree planting, power poles & street infrastructure		YES
	Gutters & down pipes are integrated and concealed		YES
	Lighting under awnings is provided for pedestrian safety		YES
4T-2 p125	Objective: Signage responds to context & desired streetscape character.		✓
	Design Guidance		Considered
	Signage is integrated into building design & respond to scale, proportion & detailing of the development		YES
	Legible & discrete way finding is provided for larger developments		YES
	Signage is limited to being on & below awnings, and single facade sign on primary street frontages		YES
4U	ENERGY EFFICIENCY		
4U-1 p127	Objective: Development incorporates passive environmental design.		✓
	Design Guidance		Considered
	Adequate natural light is provided to habitable rooms (see 4A Solar & Daylight Access)		YES
	Well located, screened outdoor areas are provided for clothes drying		YES
4U-2 p127	Objective: Passive solar design is incorporated to optimise heat storage in winter & reduce heat transfer in summer.		✓
	Design Guidance		Considered
	A number of the following design solutions are used:		
	<ul style="list-style-type: none"> Use of smart glass or other on north & west elevations Thermal mass maximised in floors & walls of north facing rooms Polished concrete floors, tiles or timber rather than carpet Insulated roofs, walls & floors. Seals on window & door openings Overhangs & shading devices such as awnings, blinds & screens 		YES
	Provision of consolidated heating & cooling infrastructure is located in a centralised location (eg basement)		YES
4U-3 p127	Objective: Adequate natural ventilation to minimise the need for mechanical ventilation.		✓
	Design Guidance		Considered
	A number of the following design solutions are used:		
	<ul style="list-style-type: none"> Rooms with similar usage are grouped together Natural cross ventilation for apartments is optimised Natural ventilation is provided to all habitable rooms & as many non-habitable rooms, common areas & circulation spaces as possible 		YES
4V	WATER MANAGEMENT & CONSERVATION		
4V-1 p129	Objective: Potable water use is minimised.		✓
	Design Guidance		Considered
	Water efficient fittings, appliances & wastewater reuse are incorporated		YES

DA DESIGN REPORT

ADG Ref.	Item Description	Notes	Compliance
	Apartments are individually metered		YES
	Rainwater is collected, stored & reused on site		NA
	Drought tolerant, low water use plants are used within landscaped areas		YES
4V-2 p129	Objective: Urban stormwater is treated on site before being discharged to receiving waters.		✓
	Design Guidance		Considered
	Water sensitive urban design systems are designed by a suitably qualified professional		NA
	A number of the following design solutions are used:		
	· Runoff is collected from roofs & balconies in water tanks and plumbed into toilets, laundry & irrigation		
	· Porous & open paving materials is maximised		NA
	· On site stormwater & infiltration, including bio-retention systems such as rain gardens or street tree pits		
4V-3 p129	Objective: Flood management systems are integrated into site.		✓
	Design Guidance		Considered
	Detention tanks are located under paved areas, driveways or in basement car parks		NA
	On large sites, parks or open spaces are designed to provide temporary on site detention basins		NA
4W	WASTE MANAGEMENT		
4W-1 p131	Objective: Waste storage facilities are designed to minimise impacts on streetscape, building entry & amenity of residents.		✓
	Design Guidance		Considered
	Adequately sized storage areas for rubbish bins are located discreetly away from the front of the development or in basement car park		YES
	Waste & recycling storage areas are well ventilated		YES
	Circulation design allows bins to be easily manoeuvred between storage & collection points		YES
	Temporary storage are provided for large bulk items such as mattresses		YES
	Waste management plan is prepared		YES
4W-2 p131	Objective: Domestic waste is minimised by providing safe & convenient source separation & recycling.		✓
	Design Guidance		Considered
	All dwellings have a waste & recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste & recycling		YES
	Communal waste & recycling rooms are in convenient & accessible locations related to each vertical core		YES
	For mixed use developments, residential waste & recycling storage areas & access is separate & secure from other uses		YES
	Alternative waste disposal methods such as composting is provided		YES
4X	BUILDING MAINTENANCE		
4X-1 p133	Objective: Building design detail provides protection from weathering.		✓
	Design Guidance		Considered
	A number of the following design solutions are used:		
	· Roof overhangs to protect walls		
	· Hoods over windows & doors to protect openings		
	· Detailing horizontal edges with drip lines to avoid staining surfaces		NA
	· Methods to eliminate or reduce planter box leaching		
	· Appropriate design & material selection for hostile locations		

ADG Ref.	Item Description	Notes	Compliance
4X-2 p133	Objective: Systems & access enable ease of maintenance.		✓
	Design Guidance		Considered
	Window design enables cleaning from the inside of the building		YES
	Building maintenance systems are incorporated & integrated into the design of the building form, roof & facade		YES
	Design does not require external scaffolding for maintenance access		NA
	Manually operated systems such as blinds, sunshades & curtains are used in preference to mechanical systems		YES
	Centralised maintenance, services & storage are provided for communal open space areas within the building		YES
4X-3 p133	Objective: Material selection reduces ongoing maintenance costs.		✓
	Design Guidance		Considered
	A number of the following design solutions are used:		
	· Sensors to control artificial lighting in common circulation & spaces		
	· Natural materials that weather well & improve with time, such as face brickwork		YES
	· Easily cleaned surfaces that are graffiti resistant		
	· Robust & durable materials & finishes in locations which receive heavy wear & tear such as common circulation areas & lift interiors		



APPENDIX F

ARCHITECTURAL

DRAWINGS



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