

TELOPEA DESIGN REPORT

FOR DEVELOPMENT APPLICATION

16/07/2021



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Project:
Telopea Stage 1A
Sturt Street NSW Telopea

Client: Frasers Australia

Architecture: Plus Architecture
Rido Pin (11286) _ Director
Amit Julka (10002) _ Director

DISCLAIMER
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INTRODUCTION

Introduction

This design statement supports the proposed residential development of 5 buildings at Stage 1A as part of the overall concept approval lodged as State Significant Development (SSD). The detailed proposal for Stage 1A is consistent with the objectives established for the overall concept approval which aims to do the following:

Establish a well-connected public domain, supported by a new link road and permeable urban fabric which breaks down the perceived building mass creating a strong sense of openness and connection to the existing natural landscape. To create range of built form which respect the character of Telopea by maintaining most of the significant trees.

Establish building expression which clearly responds to the human scale and manages the topography changes throughout the site. Create a dynamic sequence of spaces defined by both the existing trees, the built form and level changes to create a place which is connected and promotes interaction within the community.

Create a variety of architectural expression based on material and textures reflecting the character of Telopea and it’s unique Blue Gum forest. Well-crafted buildings of various scale and form which sits within the overall masterplan to create a variety of architectural expression and experience.

Create an environment and public amenity which can sustain increased density of living.

Through a process of careful consideration of these objectives, the design team has come to an outcome that is a well-balanced design solution in which both built form and the natural setting of Telopea are in harmony. The clusters of important existing trees on the site naturally define a hierarchy and sequence of space and mark the public link adjacent the new road through the heart of the site supporting a generous public park. The proposed buildings frame these spaces and allow the residents to engage with these carefully curated landscaped spaces blending existing with new. The proposal takes into consideration of current and future context and plays a role in the transition of building scale across the precinct.

This report has been prepared by Plus Architecture for Affinity Consortium.

Kind regards,



Rido Pin
NSW Reg. 11286
Director, Plus Architecture

DESIGN PROCESS

00 DESIGN STATEMENT

DESIGN STATEMENT

Teloepa Masterplan
Stage 1A Teloepa

Context

Sitting within the Central River City, Teloepa supports Greater Parramatta as the central core of the area and geographic centre of Sydney. Greater Parramatta's economy consists of world-class health, education and research institutions as well as finance, business services and administration. The area's population is set to increase 40% from 1.2 million to 1.7 million people over a 20-year period transforming areas of formerly suburban context into more urban environments.

Teloepa is located within the Parramatta Local Government Area (LGA). It is approximately 4km north-east of the Parramatta Central Business District (CBD), 6km south-west of Macquarie Park Strategic Centre, and 23km from Sydney CBD. The area also currently accommodates a range of existing community facilities including the Dundas Community Centre, Dundas Branch Library, Community Health Centre, Hope Connect church, and Teloepa Christian Centre. The immediate surrounds comprise predominantly residential properties within an established landscape setting. The broader Precinct contains the Teloepa Public School, neighbourhood centre known as the Waratah Shops, and two large Council parks known as Sturt Park and Acacia Park.

Stage 1A

The Site is located south from the proposed light rail stop which will connect Teloepa with Parramatta. Stage 1A is located at the northern end of Sturt Street and creates a connection to the light rail stop framing the future core area of the masterplan at the southern end. The site includes the proposed light rail plaza area located between Sturt Street and the light rail which will establish the arrival at Teloepa. The overall stage 1A site is 20,594 m2 and will allow for 39,930m2 of developable area. The site has a height control of 28m allowing for approx. 9 storey buildings. The current site consists of 3 storey buildings set within the existing natural landscape defined by trees and steep topography. The future context will allow for up to 22 storey buildings to the north of the site and 7 storey buildings to the south of the site, changing Teloepa into a vibrant, high density built environment while maintaining the natural character.

Through a carefully considered Urban Design response, the proposal consists of 5 individual buildings which as a collective establishes a height transition to transition from a smaller scale to the south to the much taller scale in the future core area of Teloepa. The proposal challenges the height limit to establish this transition, but creates a generous public park at the heart of the precinct and proposes to develop below the allowable GFA.

Character, Topography and trees

Teloepa has a unique character which is established through the steep topography combined with a landscaped setting defined by the existing Blue Gum Tree forest and various other existing trees. The lush tree canopies and clusters of trees create a counterpoint to the current buildings which are set freely within this landscape setting. The proposed Stage 1A proposal seeks to maintain this character and ensure the trees and topographic level changes drive the outcome of the new urban proposal.

Scale

Stage 1A is part of the overall Teloepa Masterplan and located immediately south of the future town centre. The design strategy proposes increased density supported by the improved public transport connectivity of the light rail. The proposal ensures that the planning framework is aligned with anticipated growth and meets the needs of the local community. The Stage 1A proposal is consistent with the intent of the overall masterplan concept and public domain strategy which includes providing public amenity and connectivity within the Stage 1A urban design proposal, this approach will enhance the experience of the overall Town Centre.

The Stage 1A development will sit immediately south of the Core area and future town centre. The core is the central part of the overall masterplan and is defined by public open space and podium and tower configurations up to 22 storeys creating a clear marker for Teloepa. The buildings proposed as part of Stage 1A play a role in creating a transition from the Core future height to both the existing and future scale of adjacent sites immediately south from Stage 1A. The current built context adjoining the site consists of apartment blocks and residential dwellings which range from 1 to 4 storeys. The future scale will see 7 storey buildings emerge within a 21 m height limit. The Stage 1A proposal seeks to develop 5 to 14 storey buildings which will transition in scale from noth to south. This strategy of placing the scale towards the north of the site mitigates any adverse overshadowing to the southern surrounding context. To ensure sufficient open space is created to allow the existing trees and public open space to be created, an additional 5 storeys over the 28m height limit is proposed for the northern building within the proposal. Other buildings have minor breaches within the 10% margin. This flexibility of height will help further transition the scale of the buildings towards the taller tower compositions to the north within the core. The proposed buildings are varied and have a clearly defined base with the middle and top in varying expression which will assist in establishing a proportional response to both current and future conditions.

The 2-4 storey expressed base podium responds to the pedestrian movement and human scale. This scale is sympathetic to the existing Teloepa context. The strong textural and material character will ground the buildings and will guide the public through the public pedestrian link and the new proposed road through the heart of the proposal.

The various architectural language that makes up the forms over the shared base will establish the bulk of the building, providing the scale transition between the future southern scale and the future northern towers. The mass of the buildings is in parts further reduced with the use of recessed top levels and contrasting materiality. This will assist in eroding the scale of the building and create a variety in the expression of the overall building composition.

Built form

The proposed building form and positioning within the site is based on a range of key design drivers which forms part of the general masterplan strategy. The building footprint carefully considers the location of the tree protection zones of the existing trees on the site as well as clusters of significant trees which collectively establish the character both within the site as well as providing character to the edges of the site in relation to the existing context. The proposed building footprints are divided to allow for the retention and expansion of the already existing public pedestrian link which runs through the centre of the site connecting the southern community to the light rail plaza and station at the north.

The proportions of various building forms establishes a series of zones which clearly frame the public and communal spaces created. The proposed road aligns with the existing surroundingroad network and establishes a clear relationship to the future build form to the north of Sturt Street. The length of the built form and articulation create a well-balanced composition which moves through the existing landscape and naturally defines each external open space. The various buildings are varied in their scale and form to create a natural variety of building typologies, through core configurations, form and architectural language.

Density

Density refers to a building's floor space (or dwelling numbers) relative to the site. Appropriate densities respond to the context, environmental qualities and the availability of infrastructure, including social/community infrastructure and public transport. The Stage 1A proposal challenges the allowable height to create a considered scale transition to the future scale to the north. The established yield and GFA is below the maximum area which could have been approved on the site. The yield and the GFA is the outcome of a carefully considered urban design analysis to create a urban fit for this site which includes considerations of generous public open space and a new road network. The overall strategy in its height, density and building form carefully considers the role in defining the Teloepa Community. The Site's proximity to transport infrastructure, local service and retail offerings provide a compellingopportunity for high-density residential redevelopment at this site.

The proposal can provide well-considered residential accommodation, surrounded by good amenity catering for both individual and families. Transit oriented developments are defined as highly walkable, higher density precincts centred around a transit hub. These precincts are the preferred model for both infill and new development strategies in Australia, due to their ability to achieve wider sustainability and economic benefits when compared to their suburban counterparts. The proposal provides a good balance between landscaped open spaces and built area ensuring sufficient public open space and amenity is created for the proposed community. Clearly defined communal spaces at both the ground plane as well as at the various communal rooftop areas create a variety of spaces for the community and have good solar access and amenity. The proposal will complement the dynamic character of this place defined by the town centre just north from Stage 1A which will become a dynamic and vibrant place for Teloepa.

Resource, energy and water efficiency

Environmental sustainability is more important than ever as we increase density and impact our environment. We put a focus on developing buildings which are sensitive to social, economic and environmental factors. Our approach to ESD aims to create an environment which is healthy, comfortable, social and sustainable. The ESD Strategy has informed the project's design concept and sustainability ambitions. As the global focus aims at the sustainable world and health our projects need to more than ever consider and promote essential aspects of providing a healthy and productive lifestyle, in which a community can be inspired, share and have fun. The building design and urban design infrastructure for the project embed the principles of sustainability. Given the effect to the global, state and local policy relating to amenity, climate change and biodiversity, the design is aligned with the sustainability guide lines and as outlined with the Green Star design rating.

Key design drivers are:

- a. Health & Wellbeing
- b. Social environment and inclusion
- c. Passive design principles & thermal comfort
- d. Energy
- e. Water

a. Health & Wellbeing

The proposal integrates the proposed uses with a carefully configured public realm, providing generous public open space and linkages as well as communal open spaces dedicated to the future residential community. These spaces will create activation to promote a healthy and dynamic urban lifestyle. The site is well connected to the public transport, both future bus stop and light rail and enhanced amenity is offered through its close and level access to the Teloepa town centre. The overall building composition and orientation ensures that the majority of the apartments receive good solar access and visual aspect engaging with landscaped areas which celebrate the existing trees and landscape character of the site.

b. Social Environment and Inclusion

The proposal promotes the concept of inclusion and social gathering. Human connectivity, communication and shared experience is a key aspect of learning and creating community. The ground plane, a clear link road proving access to each lobby and the shared public open space and permeability of the site will encourage natural engagement between people. The visual connectivity between the spaces will create a sense of awareness and natural engagement between both the residents of each building and the wider community. The lobbies which are accessed from the new road running through the heart of the development will allow the overall community to engage with one another on their way to and from the public transport. All building lobbies will have clear street address to allow ease of access for the residents.

The light rail plaza, neighbourhood park and communal gardens collectively create a network of spaces promoting a variety of uses which collectively will contribute to the beating heart of the wider community at Teloepa. The communal gardens and rooftop garden provides for a variety of programmed uses which includes seating configurations, BBQ areas, gathering spaces and spaces for exercise, but also spaces to meditate and relax while appreciating

good solar access and views.

c. Passive Design & Thermal Comfort

Passive design strategies are fundamental to a sustainable building design. Apartment units and the proposed façade type need to consider both the visual amenity and transparency while ensuring shading and thermal comfort. The proposed building form and proposed core locations ensure that the required solar access and cross ventilation to the apartments is achieved. The proposal includes a broad variety of façade types across the buildings which respond to various orientation, conditions, aspect, privacy requirements, required shading and solar requirements. Insulated walls and exposed thermal mass will together keep the apartments at stable internal temperature, while operable windows will enable cross ventilation passive cooling. The careful consideration of the proposed built form and urban framing of external areas, landscaped areas and balconies ensure that these spaces are usable and comfortable. External operable screening to key areas assists with this.

The balance between sun, shade, and protection from rain, wind and noise ensure the proposed apartments and balcony areas will be comfortable spaces for the residents living there. Landscape and planting at the ground level apartments will play a key role in further enhancing these principles and ensure the relationship between private and public space is considered.

d. Energy

An energy efficient building should consider ways to reduce the need for energy as a starting point. A key consideration in this is the façade design which controls the further need to deal with cooling, heating, light and air. The façade should be responsive to the uses and the needs of its occupants. The facade is designed to control solar access and provide a comfortable internal environment. Window areas are designed to minimise solar gain while maintaining views to the external environment and daylight. Naturally ventilated rooms, corridors and communal areas using cross ventilation will reduce need for AC. Motion sensors and management software can further reduce wasted energy uses for both air-conditioning and lighting. The development includes the potential to generate, store, and use power by including PV panels on the roof of the buildings occupying over 50% of the roof space. These are to be used in the car park for vehicle charging stations for shared car systems as well as to power the lighting within the public domain and communal and common spaces.

The development will endeavour to achieve a high level of sustainability through the provision of future Electric Vehicle infrastructure with EV charging stations; "GoGet" car sharing facilities; and allowance for end of trip facilities for residents.

Systems and monitoring play and active role in measuring the performance of buildings. Lower energy consumption offers benefits beyond the obvious reduction in operational cost, and present environmental benefits across several areas. The easiest way to reduce energy consumption is to use less. Intelligent BMS (Building Management Systems) will measure, manage and reduce a building's operational energy use. The building also implements passive design features in order to minimize the energy consumed by heating and cooling systems as well as the dependency on artificial lighting.

e. Water

Water is essential to life and its security is of the essence. Water sensitive design will be a key consideration to the design of the roof areas and public realm landscape, that requires substantial amounts of grey water for irrigation. Careful consideration of how to reuse water across the development will provide efficiencies combined with careful plant selection throughout the development. The project will use water-smart strategies to reduce potable water consumption through efficient fixtures.

The project considers responsible use of water by utilizing the following in their facilities. The development aims to minimise potable water consumption through efficient fixtures and fittings as well as reduction in landscape irrigation. Planting on the rooftop areas and podium levels will be drought resistant and will be coordinated with the landscape architect's specifications of planting.

Fire protection testing water is recycled into the system to avoid wastage.

Management

The effective management of building operations and the communal spaces is a key aspect of sustainable performance. This includes the provision of systems information to the residents, the ongoing monitoring of energy and water use, and the implementation of green cleaning policies and practices. In addition, the opportunity to actively assess the occupant wellbeing and interactions with their environment feedback to ensure buildings are managed successfully and performance is improved where necessary.

Indoor air quality

Indoor environment quality is a key aspect of sustainable building performance. The creation of high-quality indoor environments has been shown to increase productivity, occupant satisfaction and health. To achieve optimal thermal comfort conditions, an ideal balance must be struck between temperature, relative humidity and air speed. Air circulation or ventilation is key to improved indoor air quality. The Project's typical floors provide fresh air at lift lobbies and opportunity for cross ventilation to apartments and corridors. The building configuration with multiple cores ensures at least 60% of the apartments are cross ventilated, reducing the need for air-conditioning. The requirements for heating and air-conditioning has been minimized through passive design including glazing orientation, and natural ventilation, however, active systems will still be required. The apartments are provided with individual condenser units on their balconies.

ighting

For this project, lighting includes efficient fluorescent and led lighting and, where low voltage down lights have been used. To minimize the energy consumed by lighting when not required the following control strategies have been implemented. Stairs will be controlled via occupancy sensors as will lobbies and corridors with safety lighting via low energy led sources. External lighting to be controlled by daylight sensors. Lift cores and lobbies have the benefit of using natural light reducing the need for lighting in these areas as well as providing views.

Transport

This project is anchored by the relationship to the public transport node. The access to public transport will reduce the need for usage of cars. Car parking for residents is provided but its location and level access to the light rail stop promotes the use of the surrounding public transport infrastructure as well as sustainable modes of transport including bicycles, motorcycles and car sharing services.

The project team has made a commitment to provide a minimum of 1 bicycle space per apartment. This has been achieved through all basement levels with primary use of large storage cages to accommodate bikes. A proposed Green travel plan will outline this and other initiatives further.

Material

Building materials used within the development will be selected to minimise the environmental impact. This includes materials sourced from sustainable sources. Materials to preference local over imported materials. Material life to consider durability and design life and quality. Modular fabrication in factories to reduce wastage. Socially responsible trade labour in all cases. Global partnerships purchase goods through socially responsible partners that have ethical commitments to their workforce, material use and waste management. Waste is recycled where possible. Waste is minimized on site during construction with design adopting modularization of componentry, panelling and systems so that cutting is limited.

Landscape

This proposal integrates the architecture and landscaping into a sympathetic balance in which the existing landscape character, topography and trees help to carve and define the built form and architecture. The architecture and building composition define a network of landscaped areas which celebrate the clusters of existing trees. The neighbourhood park, new road, public link and communal open spaces are well defined by the built form and allow for a variety of uses and program. The landscape architects have provided a variety of solutions within each space to balance

the existing trees with new proposed planting, seating and gardens. The layered landscaped edges help to further define the separation between the private gardens and the communal or public areas.

Each space is intertwined with landscaped expression, punctuated and extruded to compose an environment that is open and programmed. Pedestrians move through the landscaped ground plane with ease. The most exciting part is the way the neighbourhood park feeds into the public link which connects through the heart of the development and uses some of the key existing trees to guide the public through a variety of spaces. To that extent the building form plays a role in creating a welcoming gesture when arriving from the north and framing the journey through the site.

Amenity

Good design provides amenity through the physical, spatial and environmental quality of a development. It includes considering aspects of accessibility, sunlight, ventilation, visual and acoustic privacy, the size and configuration of apartments, rooms and sequence of spaces. This project is designed with a strong emphasize on creating buildings which sit amongst the existing natural setting of the site. The alignment and orientation of the buildings has been assessed to ensure both the apartments as well as the context will maintain sufficient solar access, comfort and aspect, sharing the landscaped setting for all residents. The building configuration, core positioning and articulation facilitates sufficient natural ventilation and allows for a mix of 1, 2 and 3-bedroom apartments which share equal amenity through sensible space planning and sizing over multiple levels within the buildings. The ground floor apartments have additional amenity with private garden which enhances usable outdoor area and provides a strong connection to living within a park. The core configuration ensures views, natural light and ventilation are achieved when arriving at your level by lift, creating an understanding and relationship to existing landscaped character before entering your apartment.

The communal areas are concentrated within the shared ground plane and create a dynamic visual foreground to the apartments which overlook these areas. The spaces encourage social interaction and visual and sensory engagement with the surrounding urban context and create a strong sense of community for the occupants. The occupants will use these spaces to congregate with friends and family at all hours of the day. The thresholds and the relationship between these different spaces lead to a dynamic interplay of zones that encourage different forms of social and communal activity. The neighbourhood park invites the wider community into the site providing yet another layer of amenity at the ground plane through its shared offering. The public light rail plaza adds to further variety of spaces, becoming a meeting place for the community at the public transport interchange.

Safety and Security

The proposal creates a strong engagement with the public domain and its surroundings and is designed to create a range of open spaces within the site with the aim to allow for activation, community and public use. The buildings are designed to create a strong relationship with each space within the ground plane. Each space is naturally supervised through passive surveillance by the apartments facing each space. The ground floor apartments have generous gardens which engage with the shared ground plane and have private garden gates which will help to activate the edges of the open space. The lobbies of the buildings are clearly defined within the base of the buildings and create a welcoming gesture for its occupants accessed from the new road coming through the site. The lobbies are equally spread and will give each part along the street a sense of shared ownership, naturally supervising the immediate space.

The neighbourhood park, new road and public link are always open to the public and while being clearly framed by buildings will have lighting strategies and CCTV camera surveillance to further ensure the safety of the community. The walkways are legible and clearly defined without hidden pockets reducing risk. The communal spaces are secured, and the links proposed from the public park are secured through a gate after hours. The lobbies are generous, are well-lit and create regular moments of activation within the public domain. The lobbies will have camera security and swipe-card access to ensure the public does not access the lobbies without permission.

Social Dimensions and housing affordability

The Stage 1A proposal contains 471 market apartments. This site forms part of the overall masterplan which provides a significant amount of social and affordable housing as part of the overall strategy and offering for this precinct. The overall masterplan facilitates a connected community created through the variety of public open spaces, links and landscape pockets connecting all people within this multi-cultural community. The urban fabric which is proposed creates a shared place for all layers within the community and ensures a variety of choice within the residential offering. Stage1A fulfils part of this spectrum of living typologies for the future community of Telopea.

Aesthetics

This project is designed around the concept of framing the existing natural setting defined by the elements specific to Telopea which make this area special. The proposal uses the key drivers defined for the masterplan as well as this site to establish a vibrant and connected shared natural and built environment which maintain the character of Telopea.

The proposed form of the 5 buildings, combined with the alignments, orientation, articulation and transition of scale play as part in establishing a balanced group of buildings, with variety in expression playing an important role in the overall masterplan. The architectural expression established through the palette of materials aims to provide further depth to the notion of maintaining the character of Telopea.

The material palette for the project consists of a range of material which aim to translate the textures, warmth and depth which respond to the natural setting of Telopea. The textural quality and tonal depth of the warm toned brick is used in a variety of ways to establish the base to the project where the architecture engages with the natural setting. The depth and shadow created in the layered expression in these lower levels aim to unify the various buildings and provide human scale to the project which combined with the landscaped planters, dark metal balustrading and various screens will create a dynamic backdrop for the various landscaped gardens and parks. The podium expression changes in its detail throughout the site while maintaining a common character across the landscaped setting. Towards Sturt Street the base steps down along with the natural topography, framing the street and reflecting the core proposal of the masterplan across the road. Towards the south of the project the brick base becomes a 5 storey building expression to relate to the current residential scale within the current context.

The tallest buildings facing Sturt Street anticipate their future neighbours and represent as a pair of buildings. Surrounding the new proposed public park each building expression is different to create a well-balanced collection of buildings which share a harmony in, base, materiality and rhythm but also provide a point of difference. The façade along the east of the park guides the new road, while the southern building becomes a clear marker when transitioning through the site along the public path. The building facing the park along the west takes on a layered and dynamic approach as it provides the backdrop beyond the existing trees when arriving from the lightrail station. The alternating waving balcony zones create a dynamic rhythm when moving past the building. The composition of buildings within Stage 1A is seen as a family of buildings, creating architectural variety but also a balanced and unified experience throughout the public domain, communal areas and streets. The nuanced and strongly composed building blocks overlayed with the family of façade types provides variety to establish a sense of identity and character.

The detailed urban design response combined with the architectural expression create a unique family of buildings which celebrate the existing features of the site. The proposal shares its principles with the overall masterplan strategy to create a holistic approach with the aim to build a vibrant community for Telopea.



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Telopea Stage 1A
Lot 5-7, NSW Telopea

Client: Frasers Australia

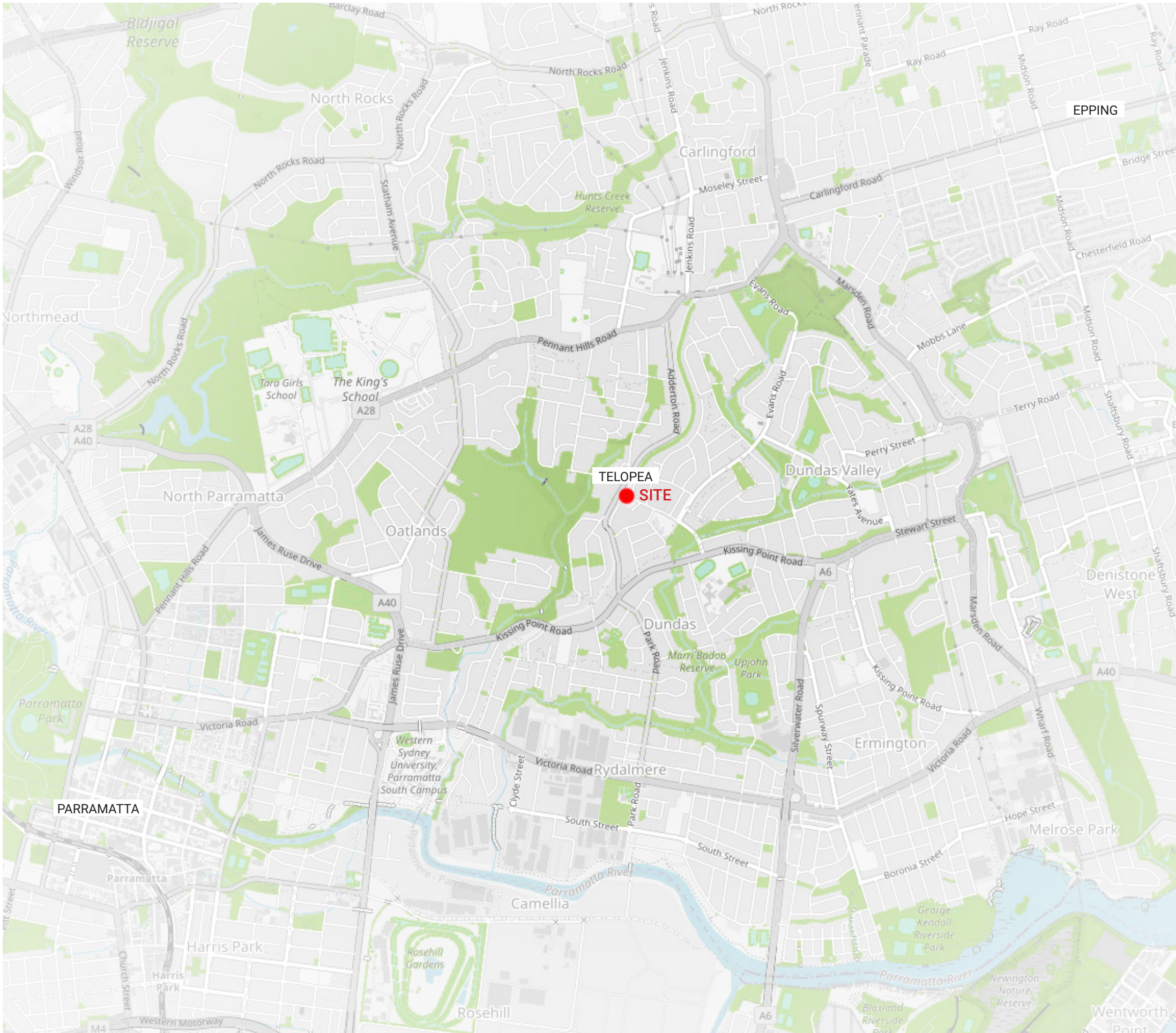
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DESIGN PROCESS

01 SITE AND CONTEXT



CONTEXT

Metropolitan Context

Sitting within the Central River City, Telopea supports Greater Parramatta as the central core of the area and geographic centre of Sydney. Greater Parramatta's economy consists of world-class health, education and research institutions as well as finance, business services and administration. The area's population is set to increase 40% from 1.2 million to 1.7 million people over a 20 year period transforming areas of formerly suburban context into more urban environments.

Regional Context

Telopea is a suburb of Greater Western Sydney, in the state of New South Wales. Telopea is located 23 kilometres north-west of the Sydney central business district, in the local government area of the City of Parramatta. The suburb is bordered by Kissing Point Road to the South and Pennant Hills Road to the north.



MASTERPLAN PRINCIPLES

A green space

The proposed masterplan and the Stage 1A site forms part of the larger development sites including school which naturally connects Sturt Park to the future plaza and light rail station. The landscape character is a key driver for the development of this site. Surrounding bushland corridors are a collection of green spaces that support social and ecological systems.

Connectivity

The Stage 1A Site will have the opportunity to create a well connected place creating a range of through site connections which will establish a connected community and will provide a sense of permeability through out the neighbourhood. Regional (light rail) and local (pedestrian/ cycle) connections run across flatter topographies, with local bus services looping the site, providing a well integrated and accessible transport system.

Trees and Character

The natural setting and character established through the existing trees are key to developing the Stage 1A proposal. The trees are a driver for the overall masterplan and drive the masterplan built form outcome. Open spaces are created around stands of existing trees. A mix of public spaces, communal gardens and generous setbacks each contribute to retaining the bushland hillside character of the Telopea Centre.

Integrated community

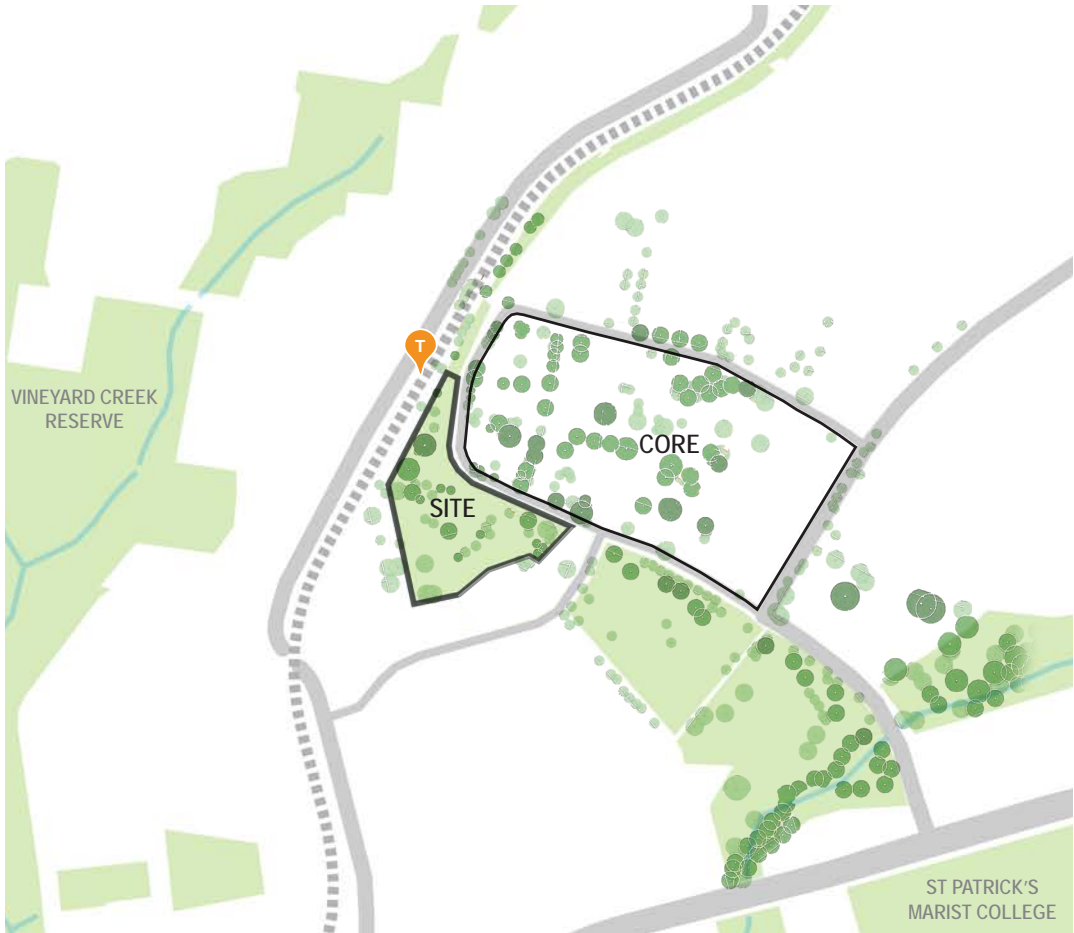
Telopea's current built form, scale and building typology will evolve as a result of the proposed masterplan proposal. The character, natural setting and opportunities to create meaningful connectivity through out the masterplan and the Stage 1A site will ensure the project will maintain a sense of place.



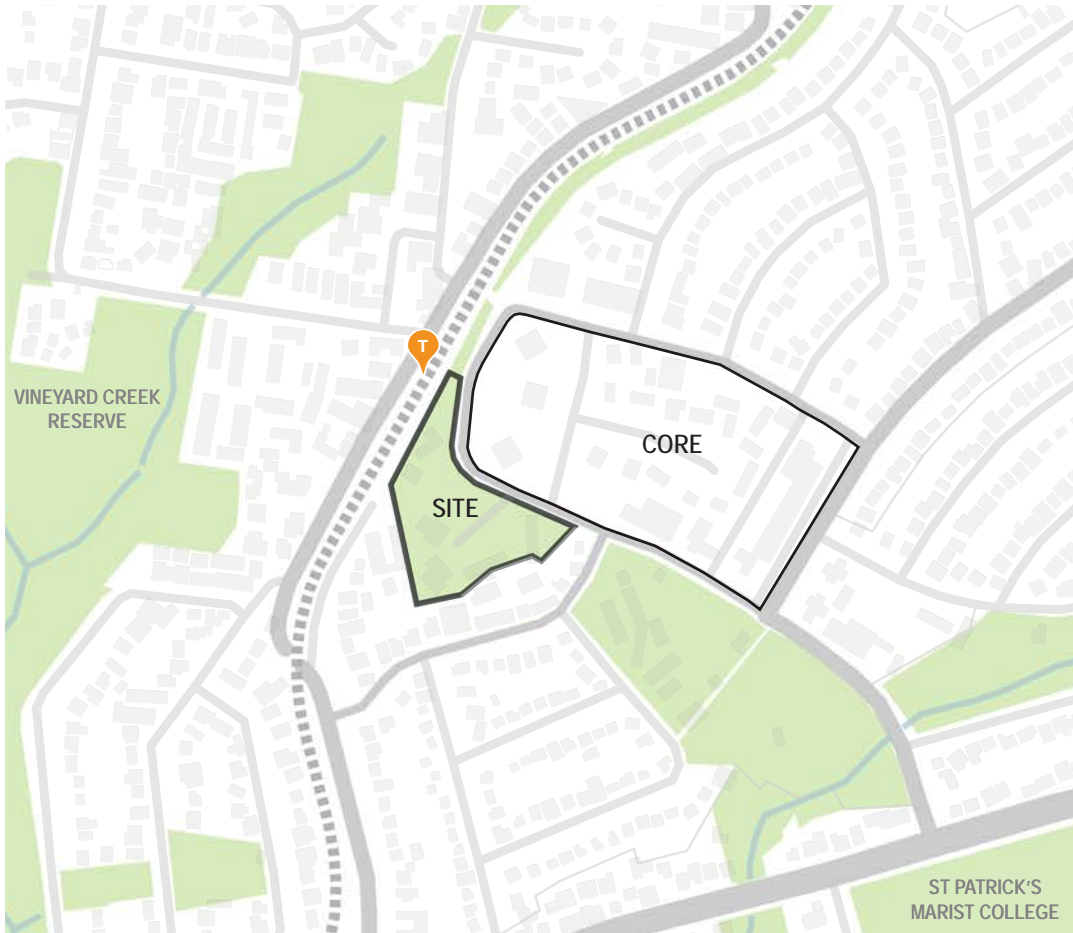
GREEN SPINE



CONNECTIVITY

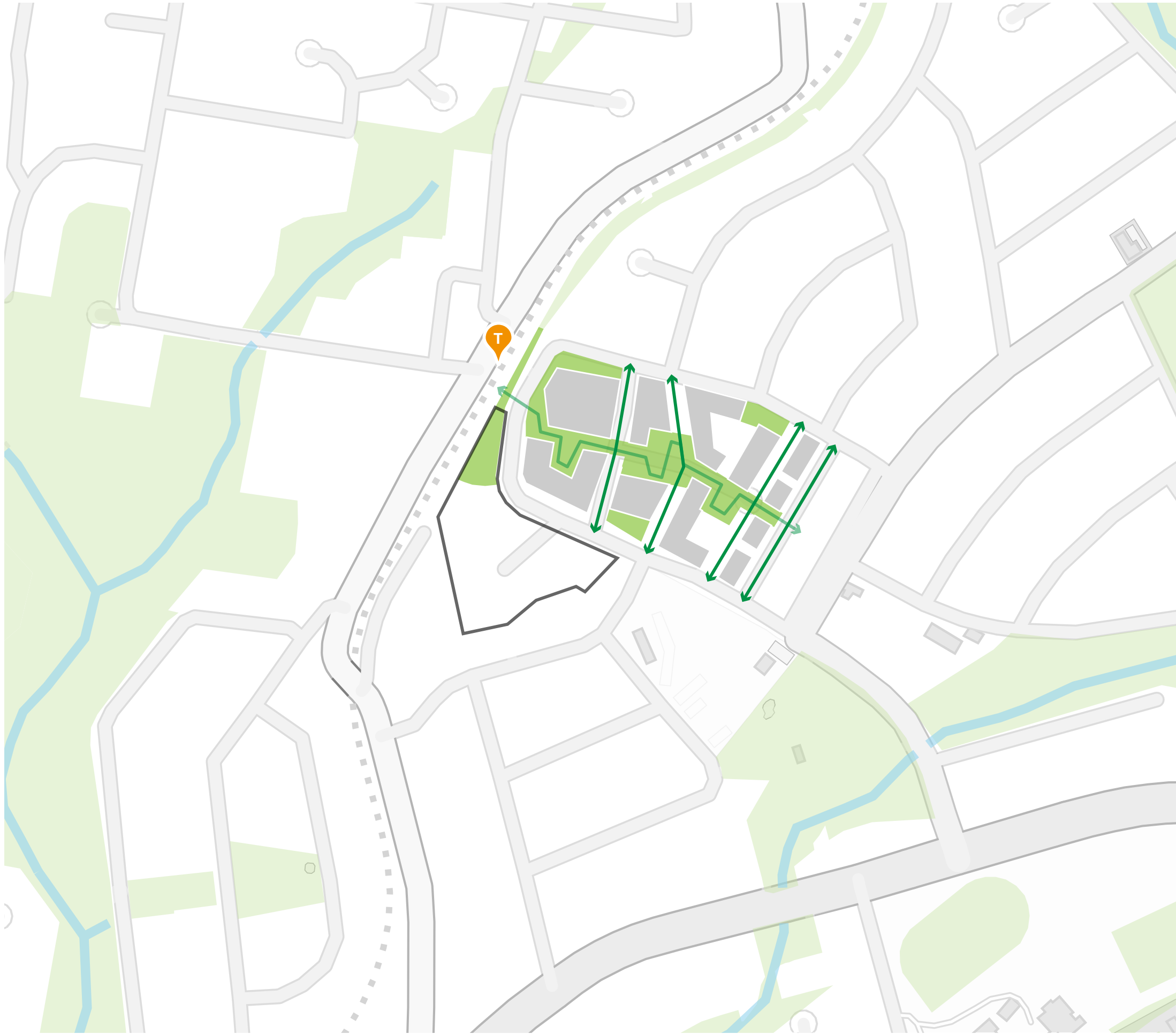


TREES AND CHARACTER



INTEGRATED COMMUNITY





LOCAL CONTEXT

Telopea Masterplan

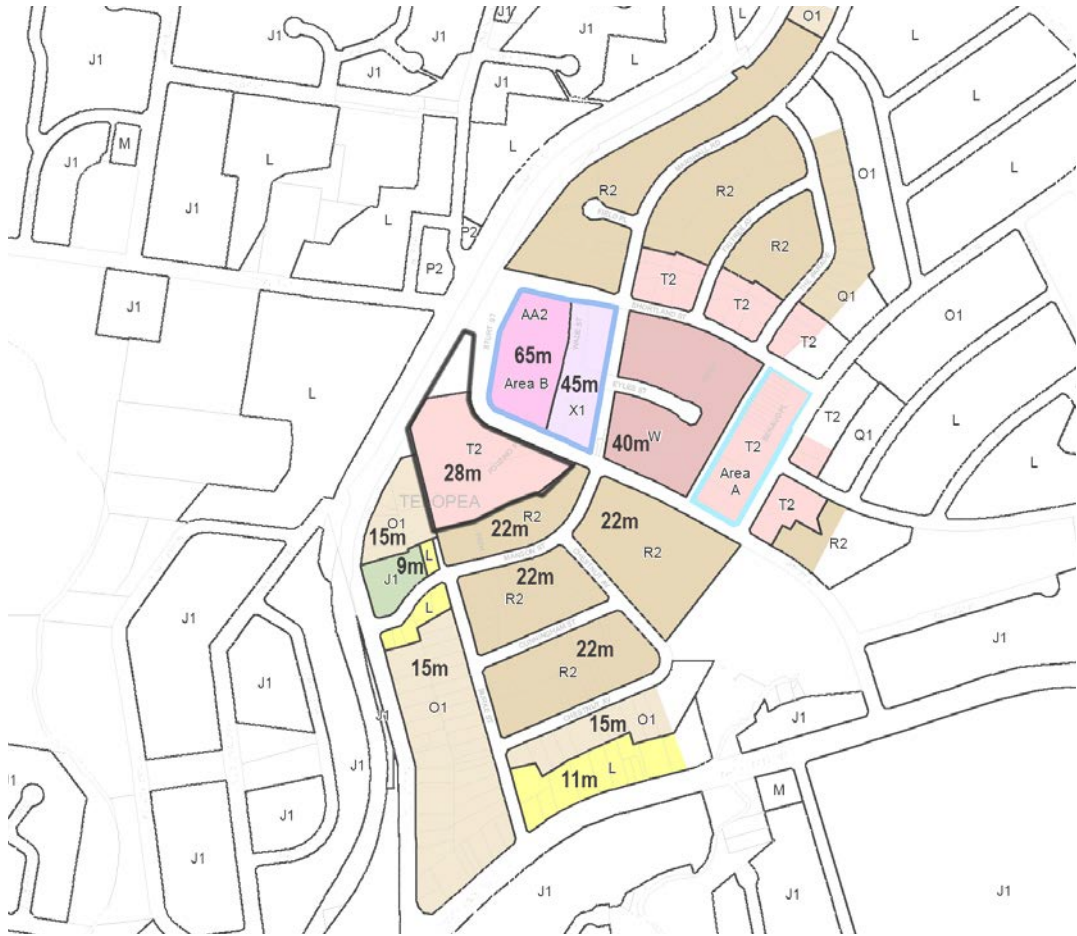
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Zoning - High Density Residential (Public Recreation to north)



Heritage - none



Height of Building - 28m



FSR - 1.7:1

LEP Stage 1A

Zoning

The site is located in the High Density Residential Zoning providing the opportunity to create medium scale apartment living typology immediately south from the core area which allows for mixed use and additional height.

Heritage

There are no Heritage Items located on the site.

Height

The site allows for 28 m height which translates to 9 storey building. The site has the opportunity to create a transition of scale between the core areas just north of the site allowing for 65m height to the southern R2 area which allows for 22m of height allowing for 7 storey buildings.

FSR

The site accomodates for an FSR of 1.7:1. The combined allowable GFA including the affordable housing bonus is 39,930m2.

Site Boundary





C. Current cluster of trees at northern part of site



D. Cluster of trees at centre of site

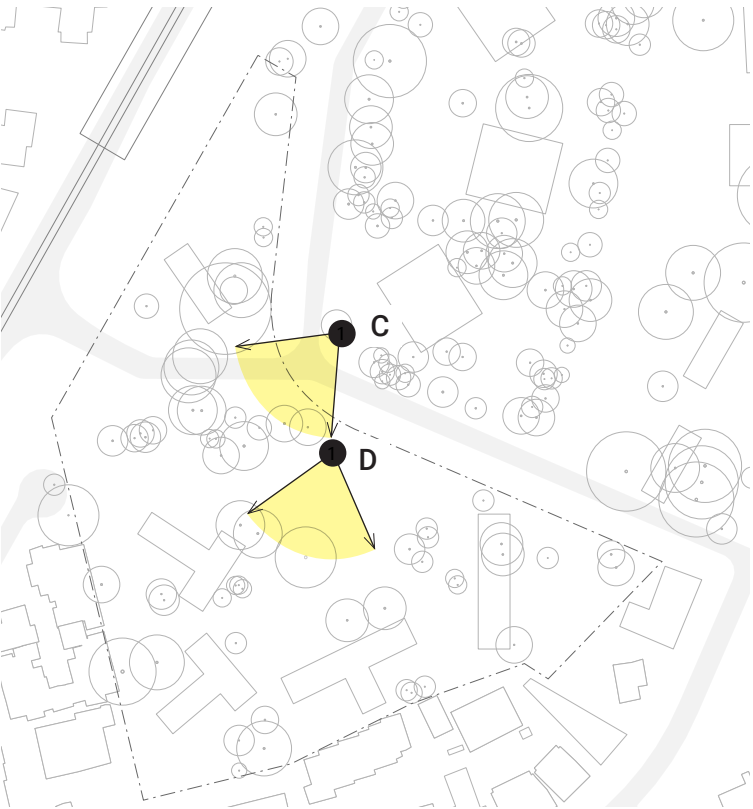
SITE PHOTOS

C. Cluster of trees northern part

The site has a range of well established tree clusters which provide a sense of place and character to the area. This cluster consists of a range of Eucalyptus trees which are important in maintaining the character of the area.

D. Cluster at centre of site

The cluster of trees at the heart of the site consist of some well established trees which create a strong focal point within the heart of the site. The cluster provides a natural guide and marker towards the public link within the site.





E. Sturt street _27 Manson Street



F. Sturt Street- 27 Manson Street

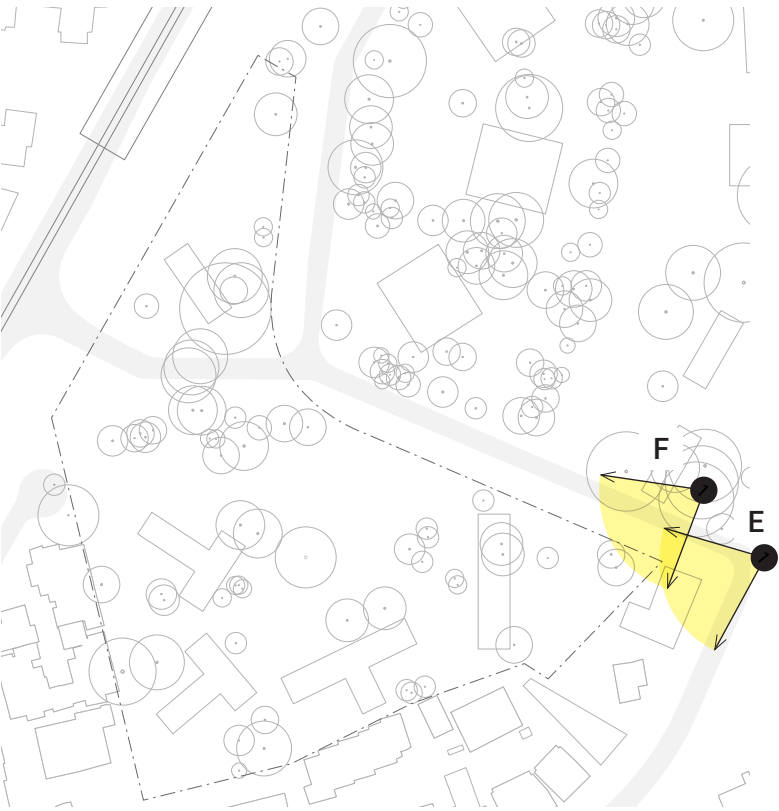
SITE PHOTOS

E. Sturt Street 27 Manson Street

Stage 1A has a strong topographical fall along Sturt Street. The property on the corner of Sturt Street and Manson Street will form the immediate context to the site along the southern boundary.

F. Sturt Street 27 Manson Street

The 3-4 storey building located at the southern end of the Stage 1A site will create the immediate context. The scale and character will be considered as part of the proposal on the Stage 1A site as well as the potential increas of scale in the future.





G. Manson Street existing street character



H. Manson Street through site link to site

TELOPEA RESIDENTIAL - STAGE 1A

RESIDENTIAL DESIGN

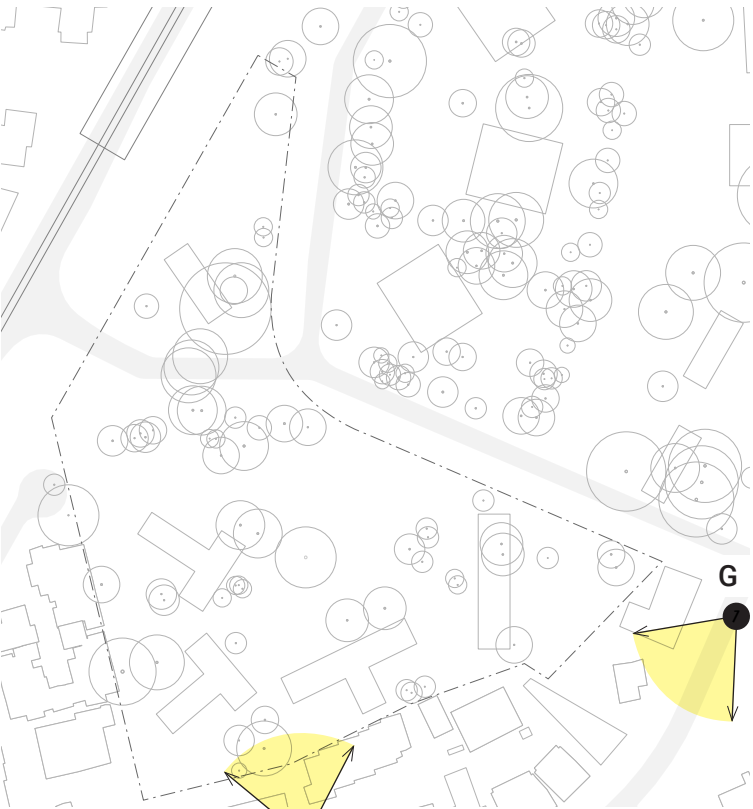
SITE PHOTOS

G. Manson Street

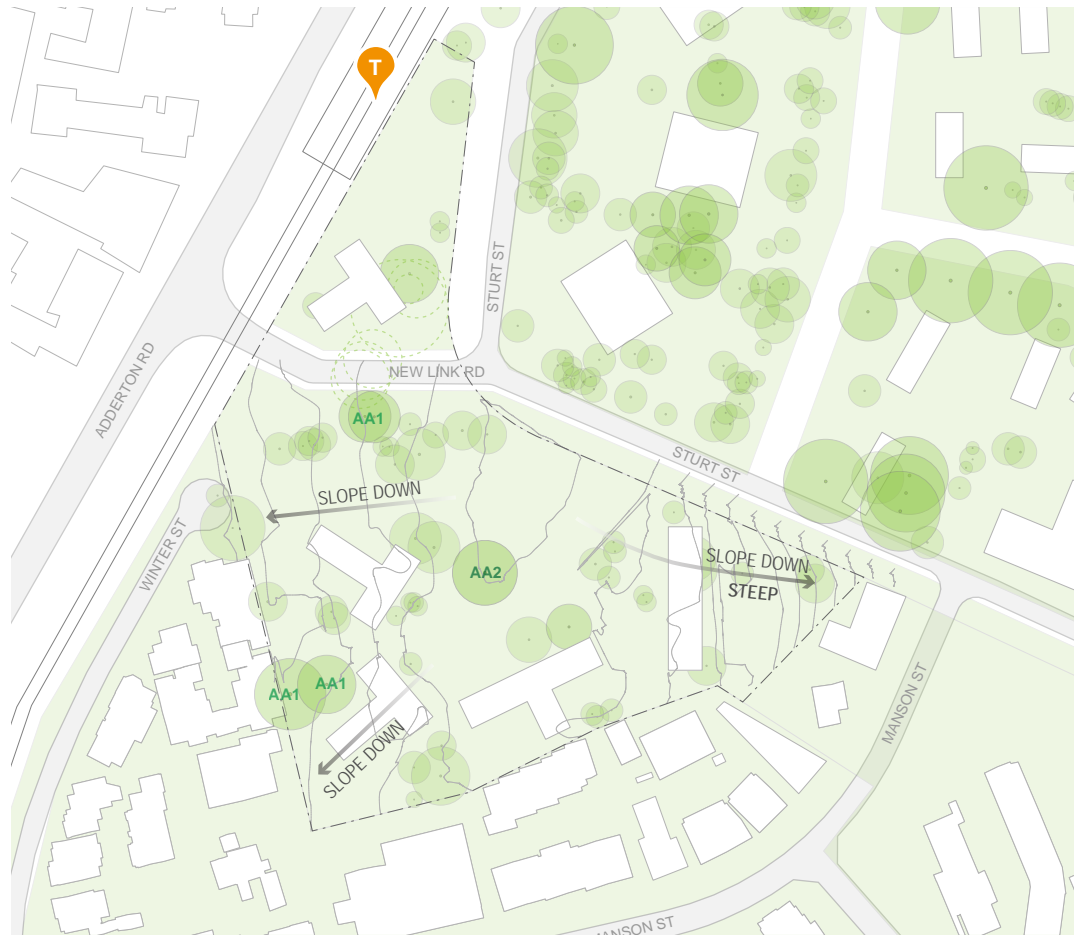
Manson Street is characterized by 2 storey buildings using warm tones of brick. Future development on this site will allow for 21m and 7 storey scale.

H. Manson Street public link

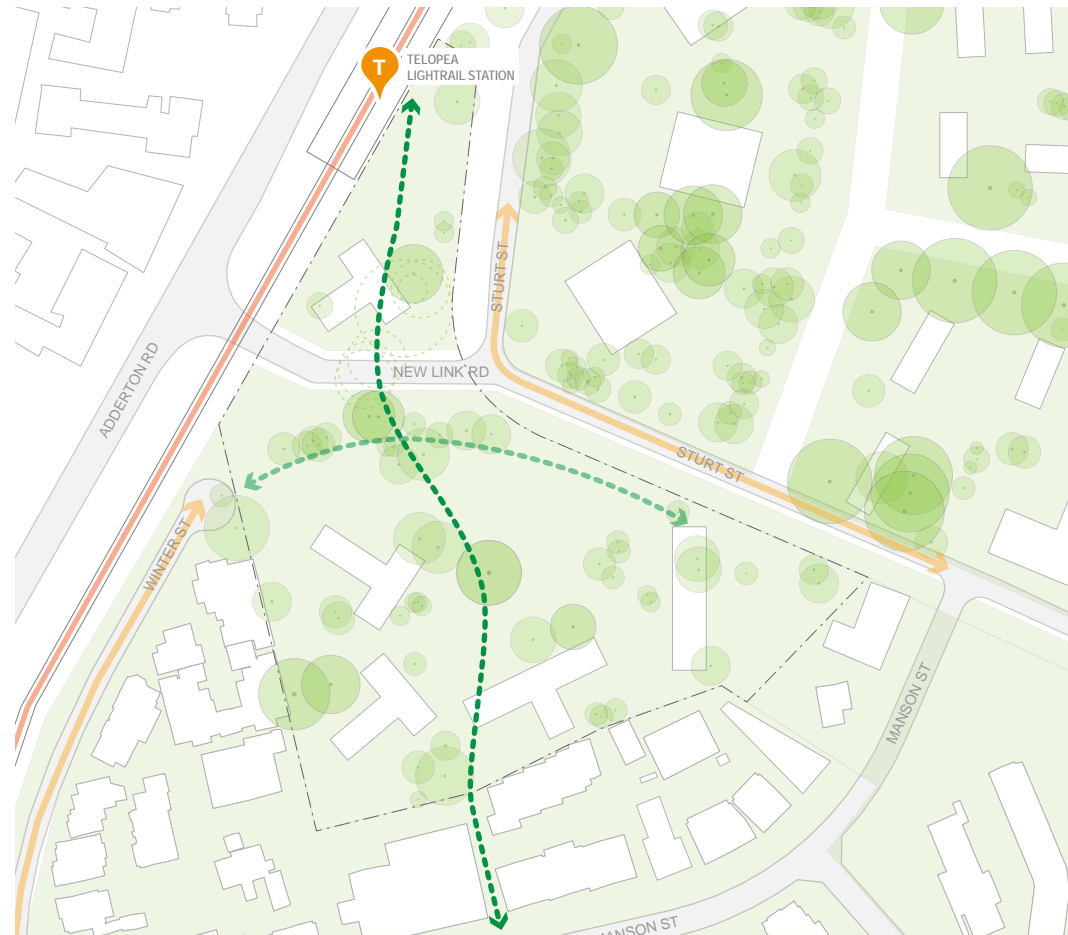
The public link which connects Manson Street to Stage 1A will require further upgrading and be considered as part of future proposals on this site. Existing trees on the site provide a marker for the journey through the site.



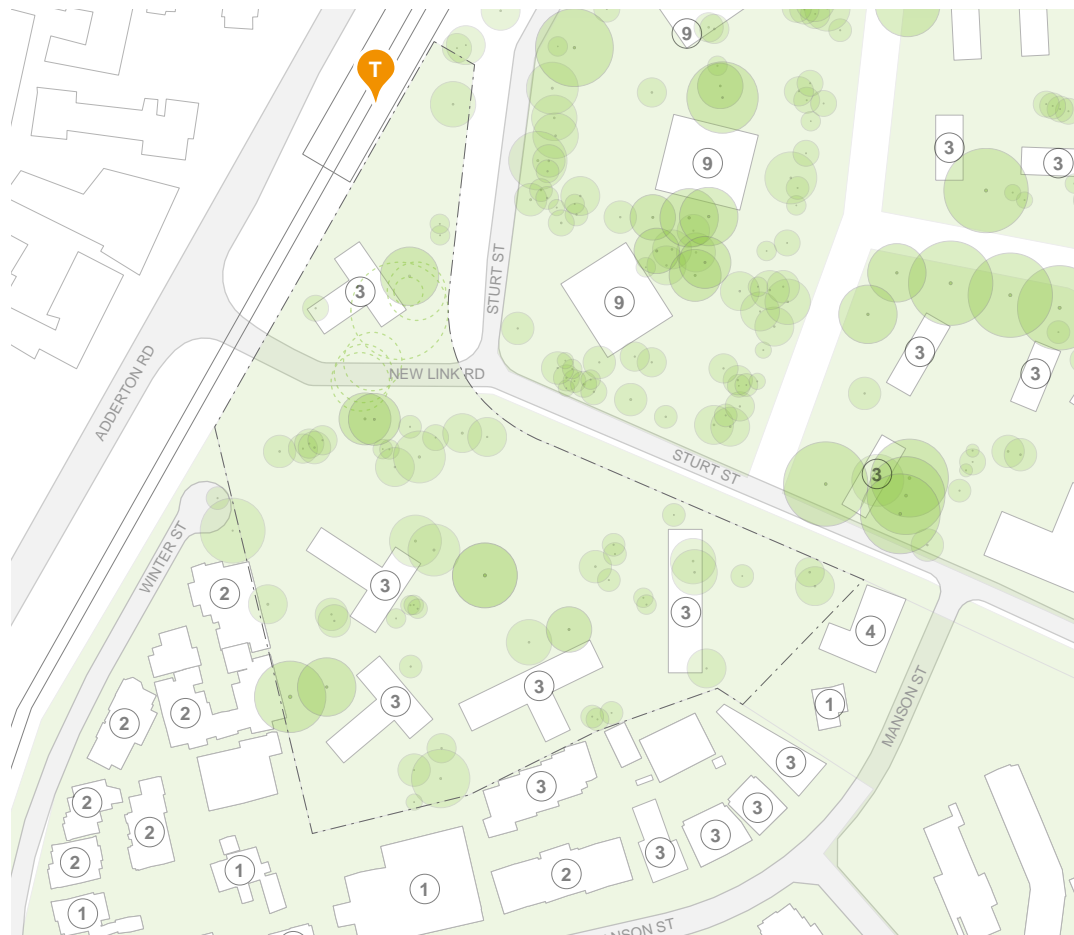
JOB NO. 20320
DATE 16/07/2021
SCALE NTS



Vegetation and topography



Access and connections



Built environment scale



Solar and aspects

SITE ANALYSIS

Vegetation and topography

The Site has a range of important tree clusters which provide a strong sense of character to the site. The centre of the site is relatively flat whilst the eastern and western edges show significant level changes which will have to be taken into consideration in the proposed design solution.

Access and connections

The Site provides an opportunity to establish a through-site connection from the southern end from Manson Street to the light rail station. This north-south connection will provide a strong desire line which is naturally reinforced by the existing tree clusters which act as markers along this journey.

Built environment scale

The site forms part of the Masterplan concept which establishes high density mixed-use developments to the north in the core area. The future southern context will be developed to the 22m height limit and will change the future context for the Site.

Solar acces

The Site is well proportioned and has good solar access and aspect taking advantage of the northern aspect, light rail corridor and Sturt Street corridor. The immediate current and future context along the southern and western boundaries of the site will have to be considered as part of the proposed building configuration to ensure the solar access for these buildings are provided.

- Future context
- 1 Number of storeys
- — — — — Pedestrian / walking link
- — — — — Transport / vehicle route
- Solar access



DESIGN PROCESS

02 DESIGN DRIVERS



Landscape framing



Built form and connectivity



Articulation and solar amenity



Building height and articulation

INITIAL DESIGN PROCESS

Landscape framing

The proposal seeks to maintain the character of the site by reinforcing key tree clusters as part of the allocation of spaces and built form across the site. The existing tree formation are used to establish the through site link and to create a natural buffer to the existing context along the southern and western perimeter of the site. Landscape pockets are being shaped to provide natural relief to the context while creating amenity for the proposed development.

Built form and connectivity

The proposed built form is naturally established through both the framing of the existing tree clusters and establishing the through-site link. This separates the project in two stages which creates a relationship to both the existing street profile along Sturt Street and southern and western boundaries, complying with ADG requirements. The built form provides relief to the trees along the boundaries, creating natural buffering to the immediate context. The built form at ground plane provides undercroft connections to link the public open space with communal areas.

Articulation and solar amenity

The proposed built form is established based on careful analysis of the solar access to both the proposed building forms as well as the immediate context for both existing and future development. The building form is articulated to create legible composition of form which frame the open space.

Building height and articulation

The proposal ranges in height to create a transition of scale which helps to transition both the current and future southern context to the core area. The buildings establish clear delineation between public and communal areas.

- Public link (Manson Street Link)
- Public open space
- Communal open space
- Future context
- 1 Number of storeys
- Pedestrian / walking link
- Transport / vehicle route
- Solar access





TREE RETENTION

Existing site conditions

The site has a vibrant character established by the natural landscaped setting and trees. A detailed analysis of the existing trees by the arborist has categorized the trees based on significance.

Proposed built form and trees

The built form is established based on the principles of maintaining the trees with the most importance and quantity. The built form reinforces the clusters of trees and the connectivity through the site while ensuring the proposed built form alignment ensures Sepp65 and ADG requirement of separation and solar access.

- Trees grade AA2 targeted to be retained = 1
- Trees grade AA1 targeted to be retained = 4
- Trees grade A1 targeted to be retained = 14
- Trees cluster targeted to be retained
- Trees removed = 33

- Future context
- 1 Number of storeys
- Pedestrian / walking link
- Transport / vehicle route
- Solar access

Proposed built form

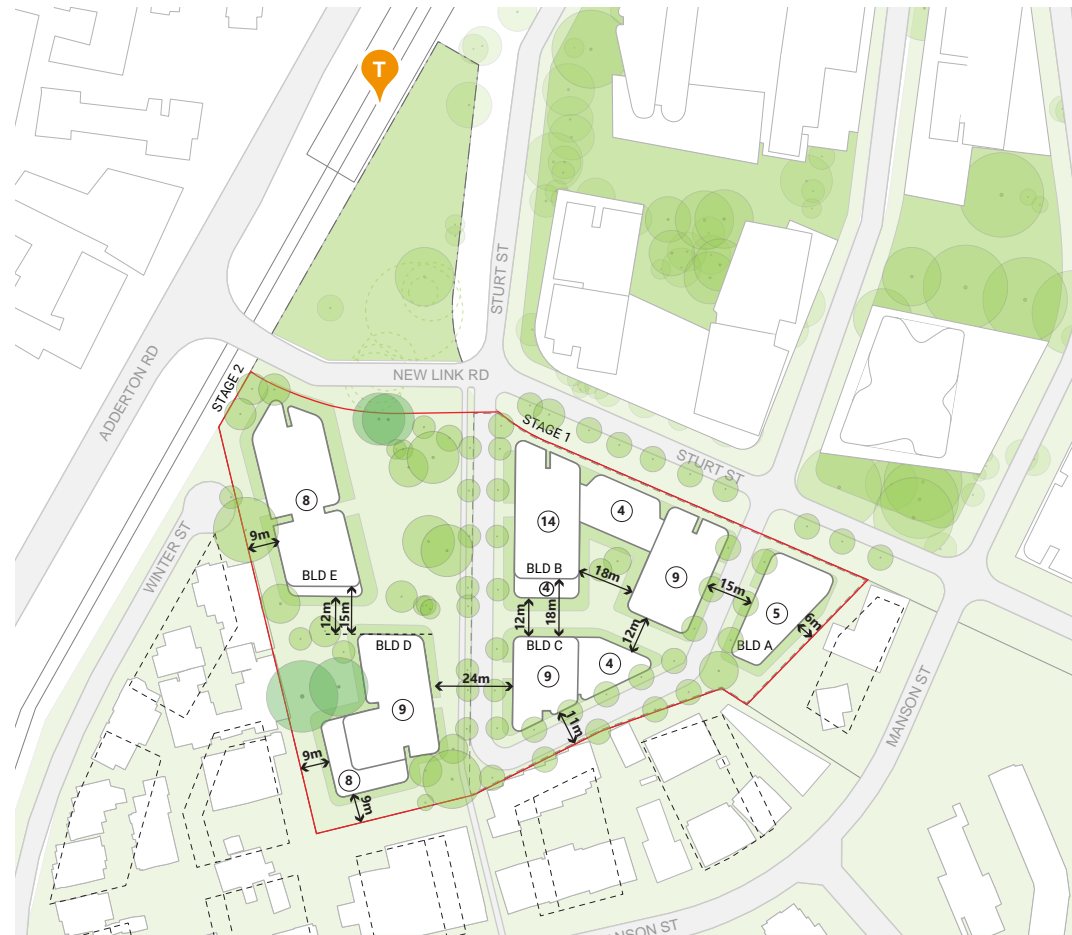
TELOPEA RESIDENTIAL - STAGE 1A
RESIDENTIAL DESIGN

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DATE 16/07/2021
SCALE NTS





Built form and contextual alignment



Building separations



Core positions and floorplate configurations



Lobbies and street presence

BUILT FORM

Built form and contextual alignment

- Alignment of the built form with core tower positions
- Variety of built form / building scale and length
- Consideration of footprint and built form connections
- Consideration of orientation and solar access

Building separation

The proposal seeks to maintain building separation for both privacy and acoustic treatment. As a result it creates generous public and communal spaces emerging between to create gathering spaces for the community.

Privacy screens have been used as required to further protect the residents to ensure privacy issues have been dealt with.

Setback to boundaries

The proposed built form is compliant with the boundary setback in accordance with the ADG. In addition to the setback, the building is articulated to create a sense of scale by breaking down the overall form with combination of contrasting material and texture.

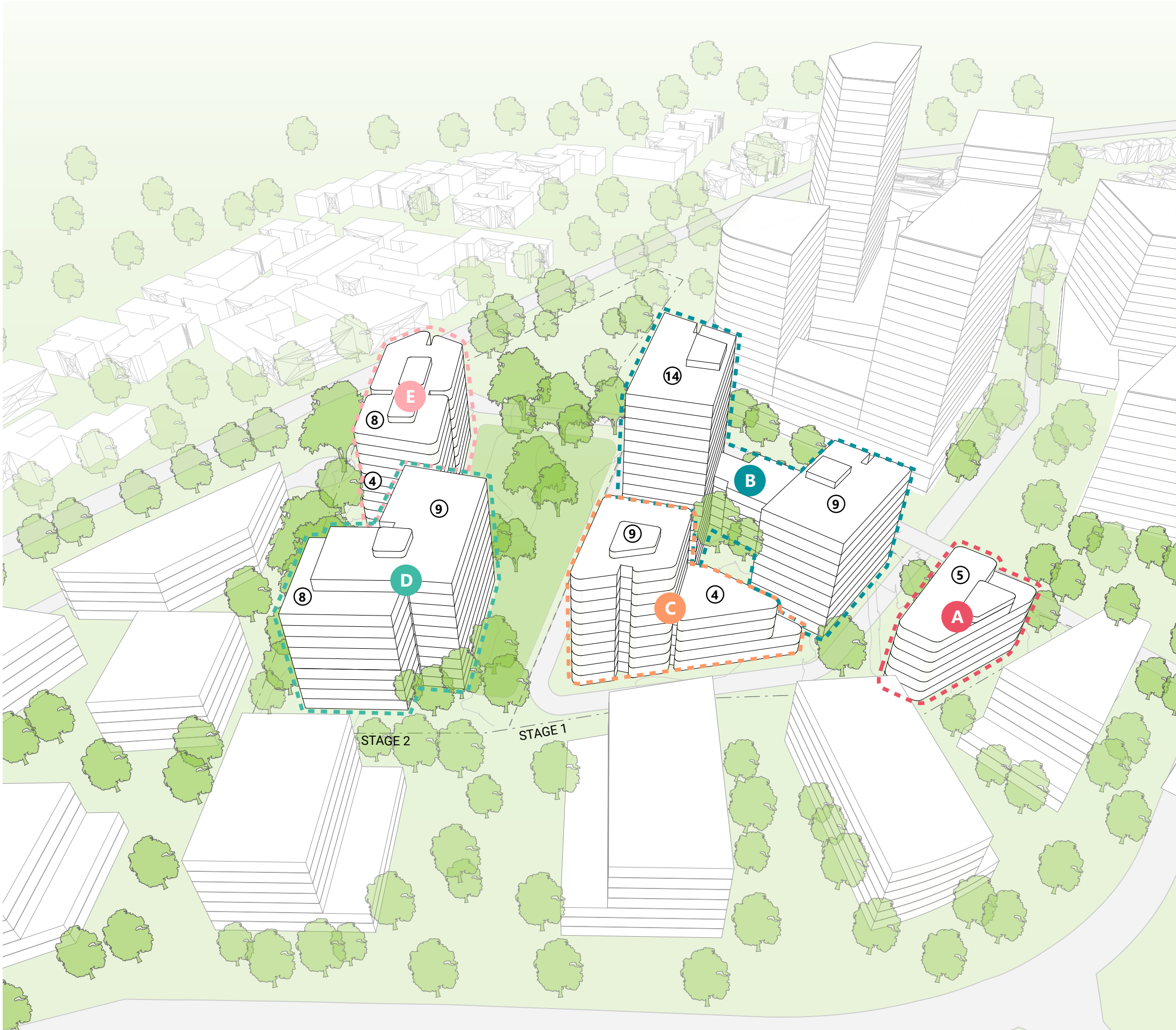
Core positions and floorplate configurations:

- Core positioning and efficiencies
- Consideration of building form and units per core
- View from corridors and daylight access

Lobbies and street presence

- Clear street address to each building
- Street Pickup and Drop Off from each building
- Reinforcement of the public domain strategy

Stage 1A Site Boundary
Site Area



DEVELOPMENT SUMMARY

BUILDING A (STAGE 1)

GFA: 1987m²
GBA: 2773m²
NSA: 1726m²
Apartments: 22
Storeys: 5
Solar Access: 55%
Cross Vent: 73%

BUILDING B (STAGE 1)

GFA: 14807m²
GBA: 19655m²
NSA: 13104m²
Apartments: 175
Storeys: 4-14
Solar Access: 74%
Cross Vent: 59%

BUILDING C (STAGE 1)

GFA: 3899m²
GBA: 5813m²
NSA: 3895m²
Apartments: 55
Storeys: 4-9
Solar Access: 65%
Cross Vent: 58%

BUILDING D (STAGE 2)

GFA: 8280m²
GBA: 10737m²
NSA: 7381m²
Apartments: 99
Storeys: 4-9
Solar Access: 68%
Cross Vent: 55%

BUILDING E (STAGE 2)

GFA: 7555m²
GBA: 10037m²
NSA: 6660m²
Apartments: 92
Storeys: 4-8
Solar Access: 97%
Cross Vent: 70%

SUMMARY (STAGE 1 & 2)

Total GFA: 36528m²
Total Apartments: 443





Proposed built form and trees



Open space area 5,612m²

COMMUNAL AND PUBLIC SPACE

Open Space

The proposed open space is 5,612 m².

Deep Soil

The proposed basement is largely contained below the proposed built form and maintains a significant amount of deepsoil area for existing and proposed planting.

Solar access to open space

The build form carefully considers the solar access to the public open space within the site. The space is positioned along the northern part of the site and 87% of the open space area receives solar access for 2 hours between 9am and 3pm in Mid Winter.



Deep Soil 19% of site area



87% of open space area receives 2hrs of solar access on June 21

Open Space Area receiving 2hr of Solar Access
Open Space Area

Stage 1A Site Boundary
Site Area





Site and existing context



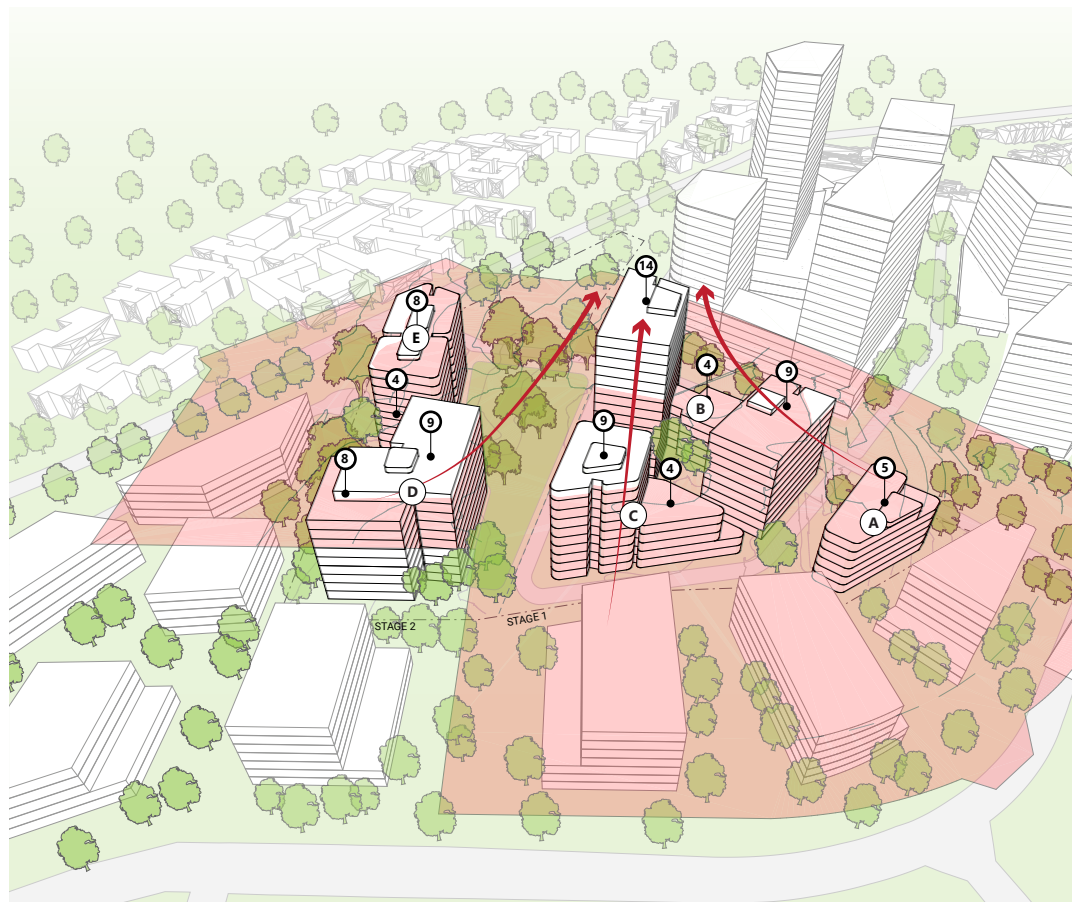
Built form in existing context

TELOPEA RESIDENTIAL - STAGE 1A

RESIDENTIAL DESIGN



Site and future context



Built form in future context

SCALE AND HEIGHT

Site and Context

Telopea will undergo a transformation of scale and density evolving into a precinct which maintains the character of place by maintaining key parts of the natural setting and trees as part of the overall masterplanning strategy.

The proposed built form at Stage 1A considers both the current and proposed context and aims to create a transition of scale and character between the southern existing and future context and the core area to the north which will be significantly taller.

The proposal provides an outcome in which the northern tower building B, closest to the station extends up to 14 stories. The height non-compliance in this location creates a scale transition to the buildings in the core. Other height non-compliances are within 10% and allow for a further variance in height and built form within the site while giving back sufficient site area to the proposed public park and road system.

The overall strategy ensures a strong urban design outcome within the future built environment of Telopea.

Maximum Height Breach (Approx.)

Building A (Stage 1) - Compliant

Building B (Stage 1) Tower 1 - 17.58m

Building B (Stage 1) Tower 2 - 2.88m

Building C (Stage 1) - 3.9m

Building D (Stage 2) - 4.12m

Building E (Stage 2) - 2.13





Stage 1 Development

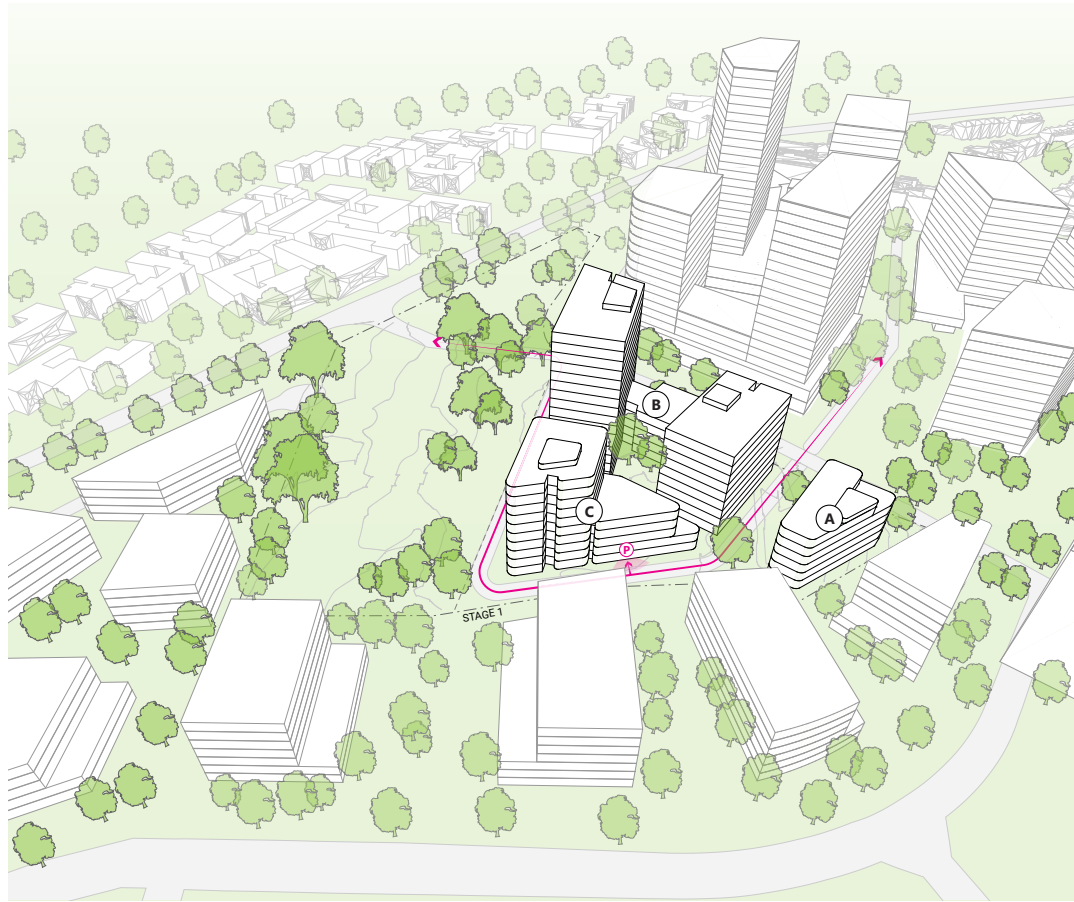


Stage 2 Development

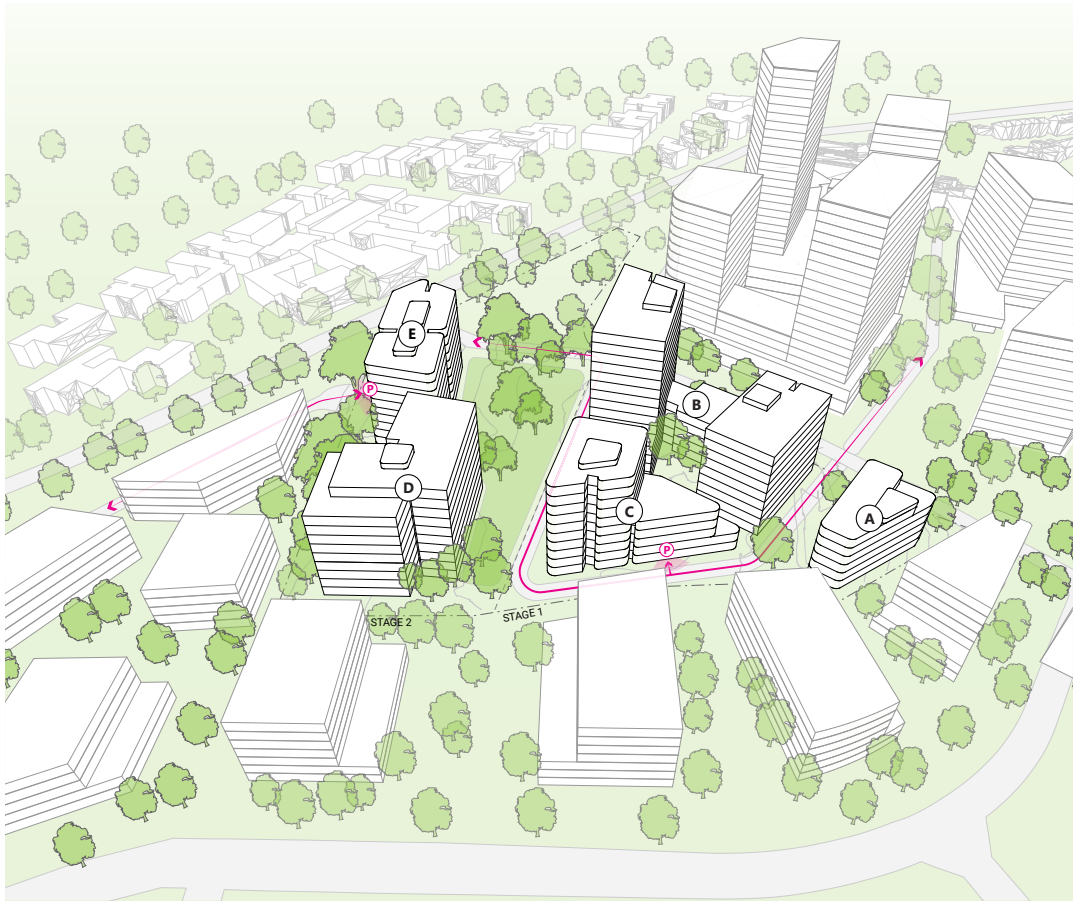
STAGING

Stage 1A is proposed to be constructed in 2 stages. Stage 1 includes building A, B and C. The first stage includes the new loop road through the site providing access to the various lobby entries. The first stage includes the main entry to basement and shared loading and services spaces across Stage 1 and 2.

Stage 2 incorporates building D and E framing the public park along the west. A second carpark entry point is proposed from Winter Street while the overall basement carpark are connected and linked underneath the pubic domain.



Built form in stage 1



Built form in stage 2





Podium expression and articulation



Architectural expression and articulation

ARCHITECTURAL EXPRESSION

Podium expression and articulation

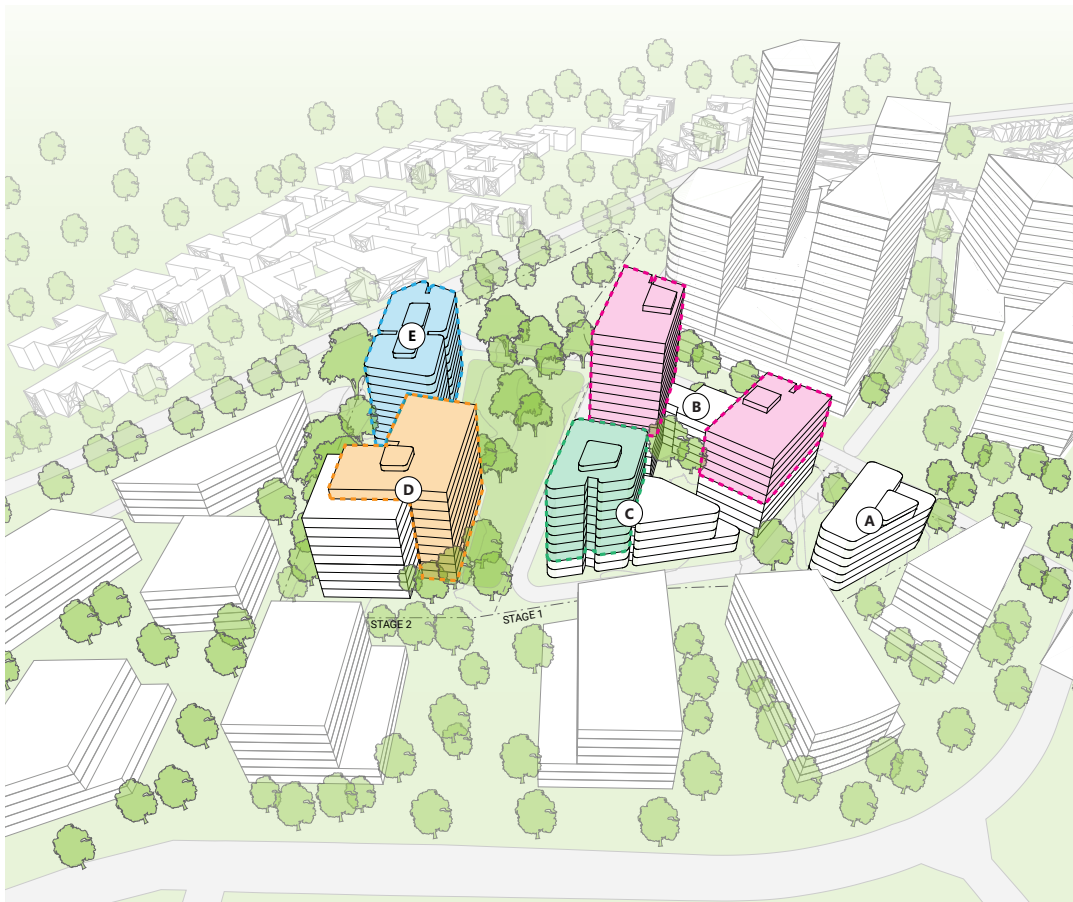
- Strategy to create material consistency while variety of expression
- Reinforce the character of the area
- Variety of scale and architectural outcome
- Express the pedestrian scale
- Warmth and textural approach to respond to landscape context
- Reinforce lobby position
- Consider the topography change through the ground plane

Architectural expression and articulation

- Variety of architectural expression for built form over podium
- Consider the orientation and relationships
- Unique building expression reinforcing the variety of form and scale across the 5 buildings proposed



Podium expression and articulation



Architectural expression and articulation





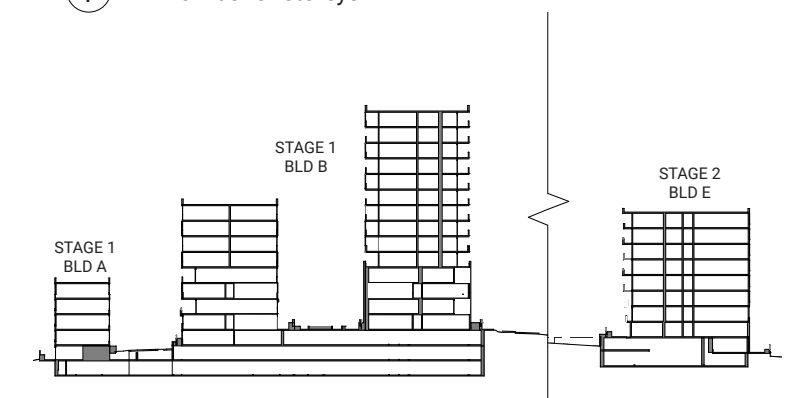
OVERALL MASTERPLAN

The key drivers for the stage 1A masterplan aim to do the following:

- Establish a well-connected and permeable public domain which creates a strong sense of place and community.
- Create an arrangement of built form which maintains the character of Telopea in which the majority of significant trees are maintained and drive the urban design outcome of the precinct.
- Establish building expression which clearly responds to the human scale and manages the topography changes throughout the precinct.
- Create a dynamic sequence of spaces defined by both the existing trees, the built form and level changes to create a well-connected place.
- Material expression and textures which reflect the character and warmth of Telopea. Create an environment and public amenity which can sustain increased density of living well-crafted buildings which within the overall masterplan create a variety of architectural expression and experience.

Through a process of careful consideration of these objectives, the outcome is a well balanced design solution in which both built form and the natural setting of the place are in harmony. The clusters of important existing trees on the site naturally define a range of spaces which setup a hierarchy of space and mark the public link through the heart of the site. The proposed buildings frame these spaces and allow the residents to engage with these pockets of landscape which also help to blend the new proposed development within its existing setting. The proposal anticipates the future context of increased density both south as well as north and aims to help transition the scale to the 22 storey towers opposite the light rail stop which will mark Telopea. The architecture creates a sense of variety and difference while being a family of buildings with shared quality and design resolution.

① Number of storeys



Masterplan

TELOPEA RESIDENTIAL - STAGE 1A
RESIDENTIAL DESIGN

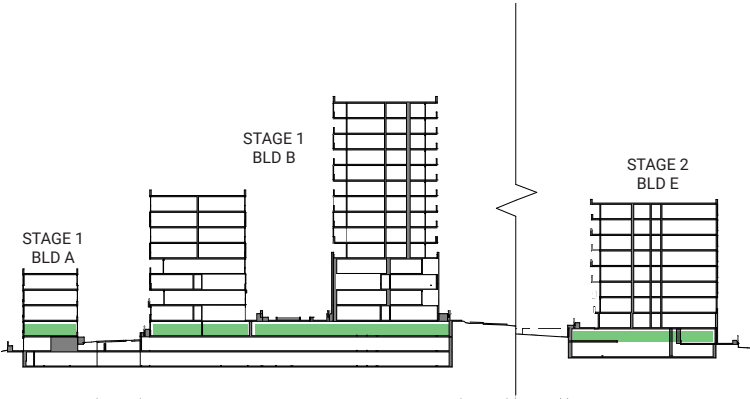
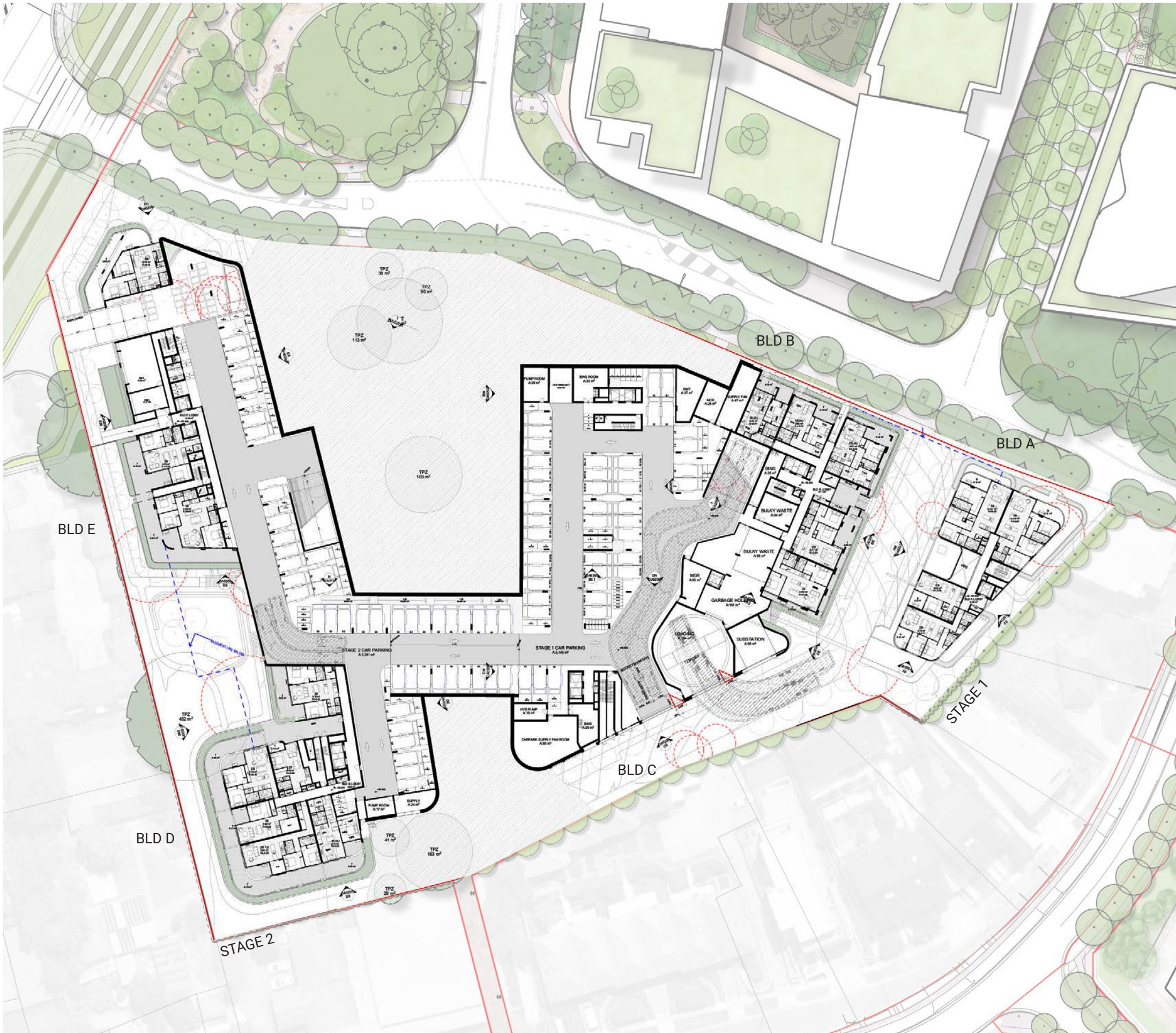
JOB NO. 20320
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plus
architecture

LOWER GROUND FLOOR PLAN



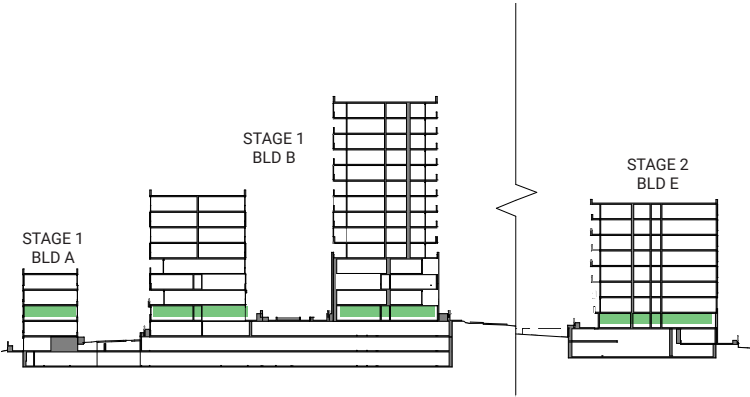
Masterplan

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RESIDENTIAL DESIGN

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DATE 16/07/2021
SCALE NTS



UPPER GROUND FLOOR PLAN



Masterplan

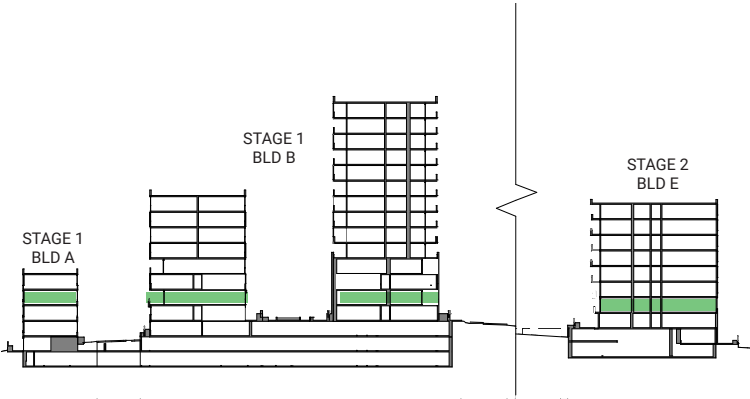
TELOPEA RESIDENTIAL - STAGE 1A
RESIDENTIAL DESIGN

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SCALE NTS





LEVEL 01 - PODIUM LEVEL



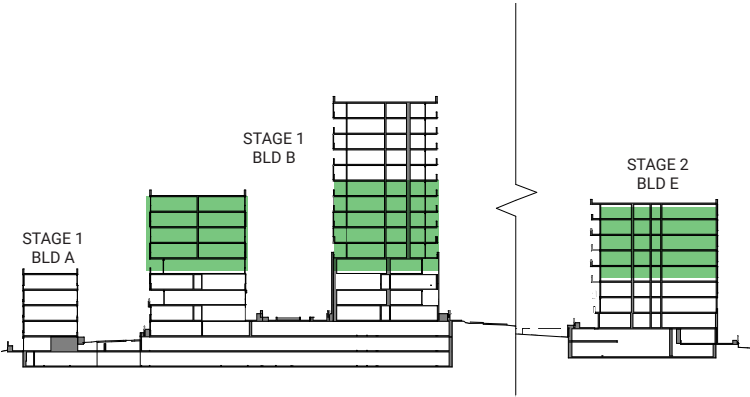
Masterplan

TELOPEA RESIDENTIAL - STAGE 1A
RESIDENTIAL DESIGN

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SCALE NTS

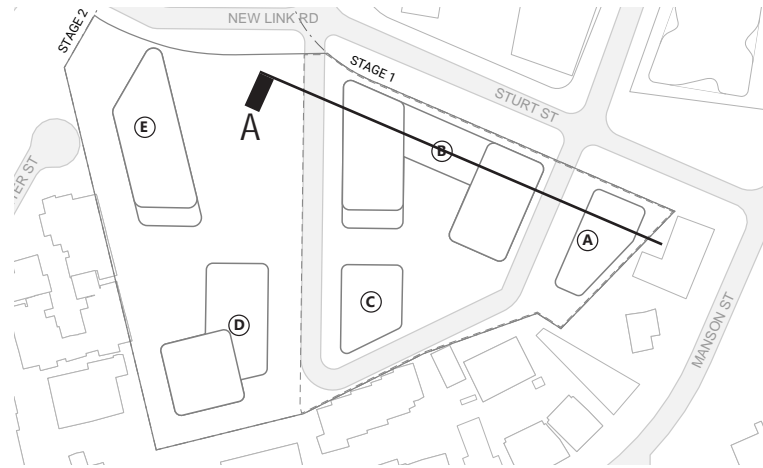


TYPICAL UPPER LEVEL PLAN



THE PROPOSAL

03 SECTIONS

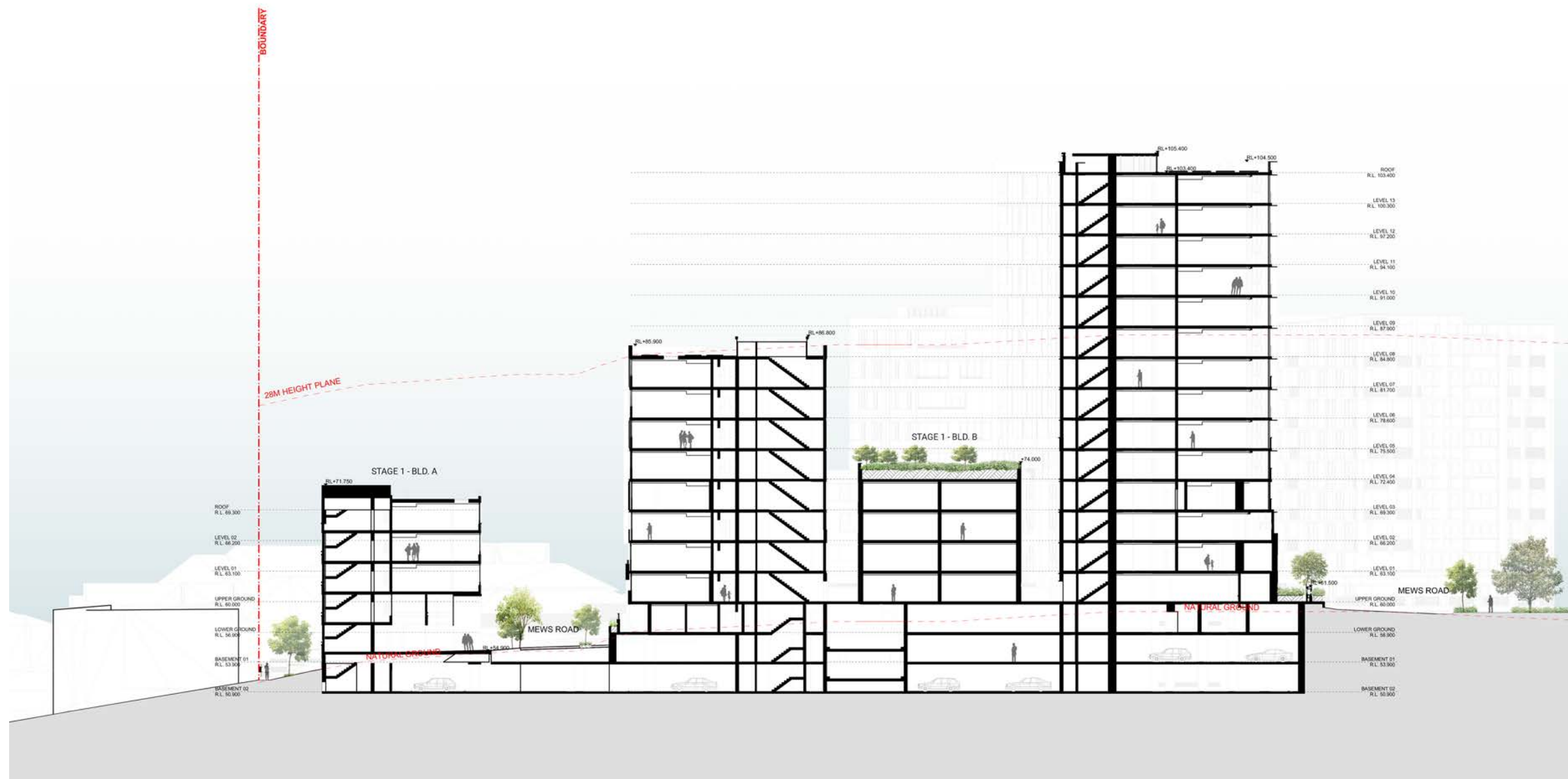


SECTION A

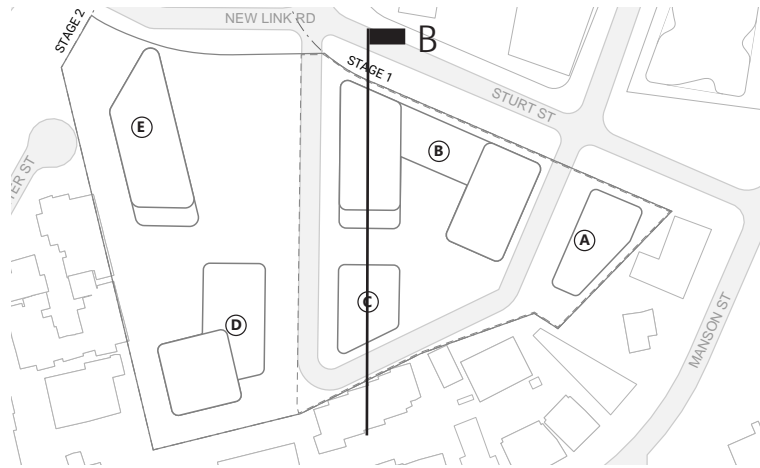
Section across Stage 1 buildings looking south.

The proposed 14-storey building establishes the scale transition from the south towards the taller towers as part of the towncentre adjacent the centre.

The variation in height is limited to specific locations within the masterplan, where impacts on adjacent properties can be minimised and provides a greater transition in scale to adjacent sites.



Section A

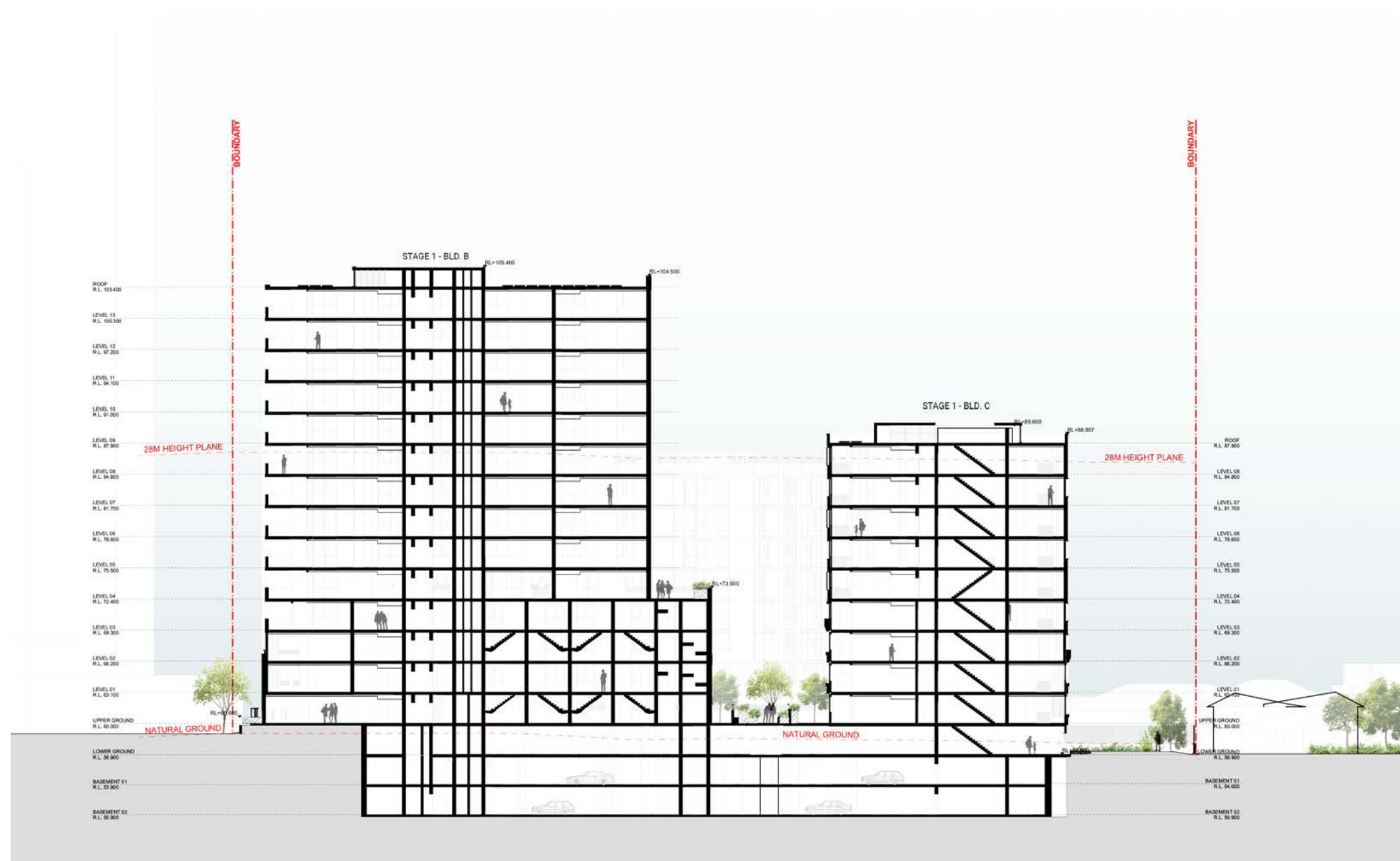


SECTION B

Section along Stage 1 building facing neighbourhood park looking east.

The proposed 14-storey building B establishes the scale transition from the south towards the taller towers as part of the towncentre adjacent the centre.

The variation in height is limited to specific locations within the masterplan, where impacts on adjacent properties can be minimised and provides a greater transition in scale to adjacent sites.



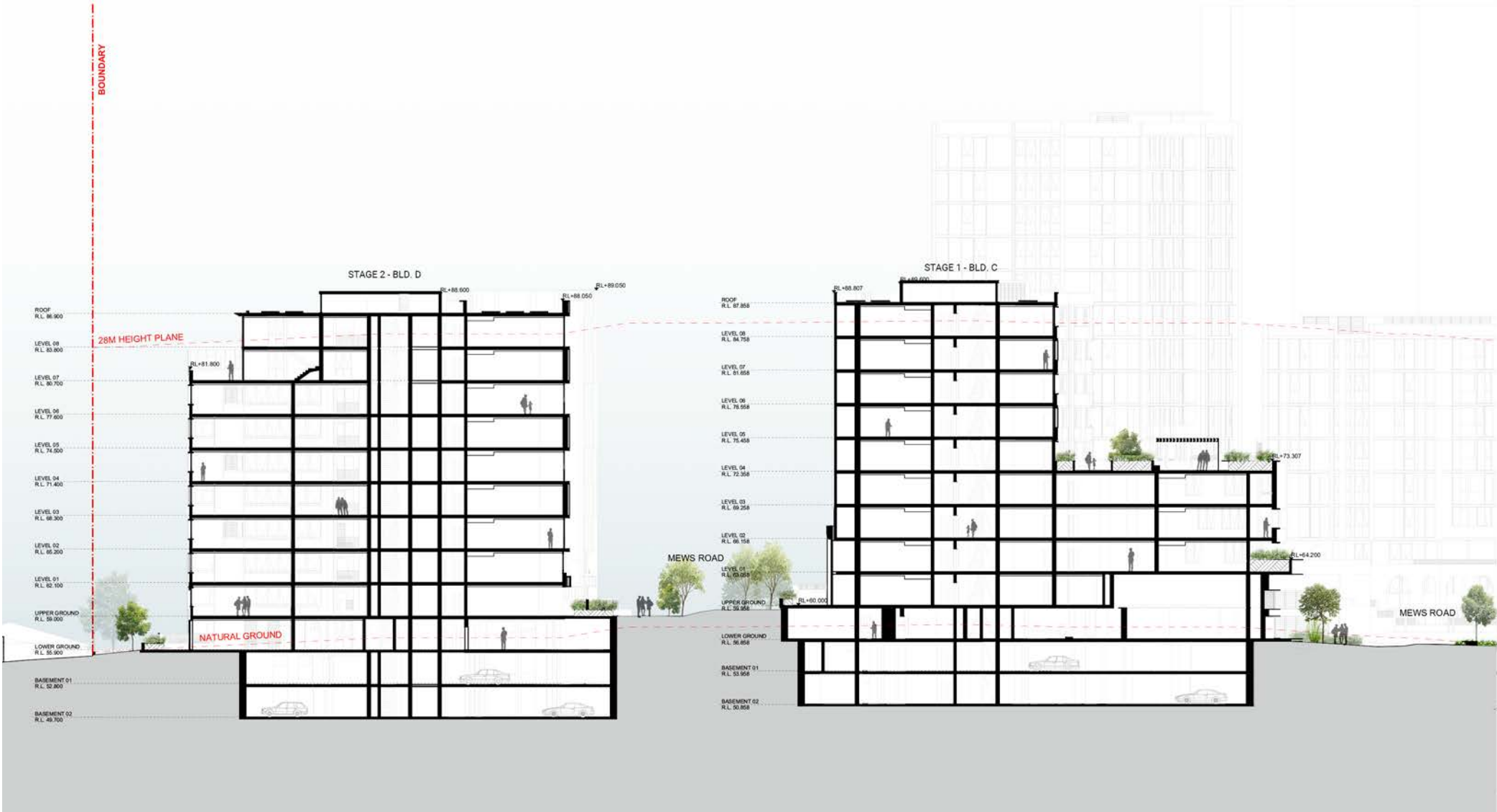
Section B



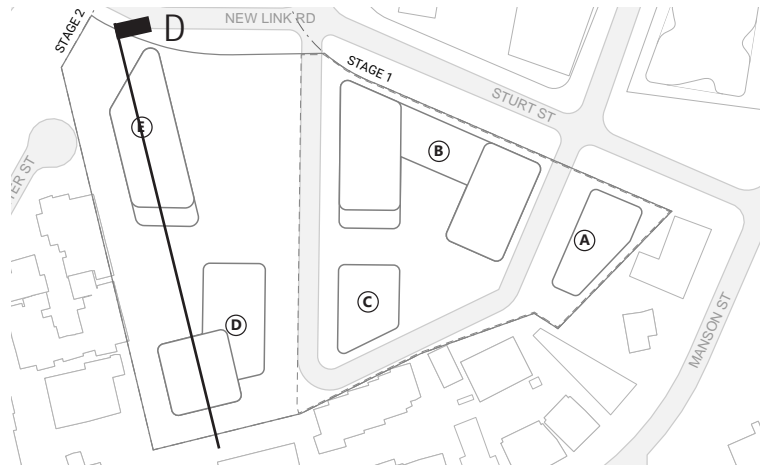
SECTION C

Section across souther buildings C and D of both Stage 1 and 2 buildings looking north.

The variation in height is limited to specific locations within the masterplan, where impacts on adjacent properties can be minimised and provides a greater transition in scale to adjacent sites.



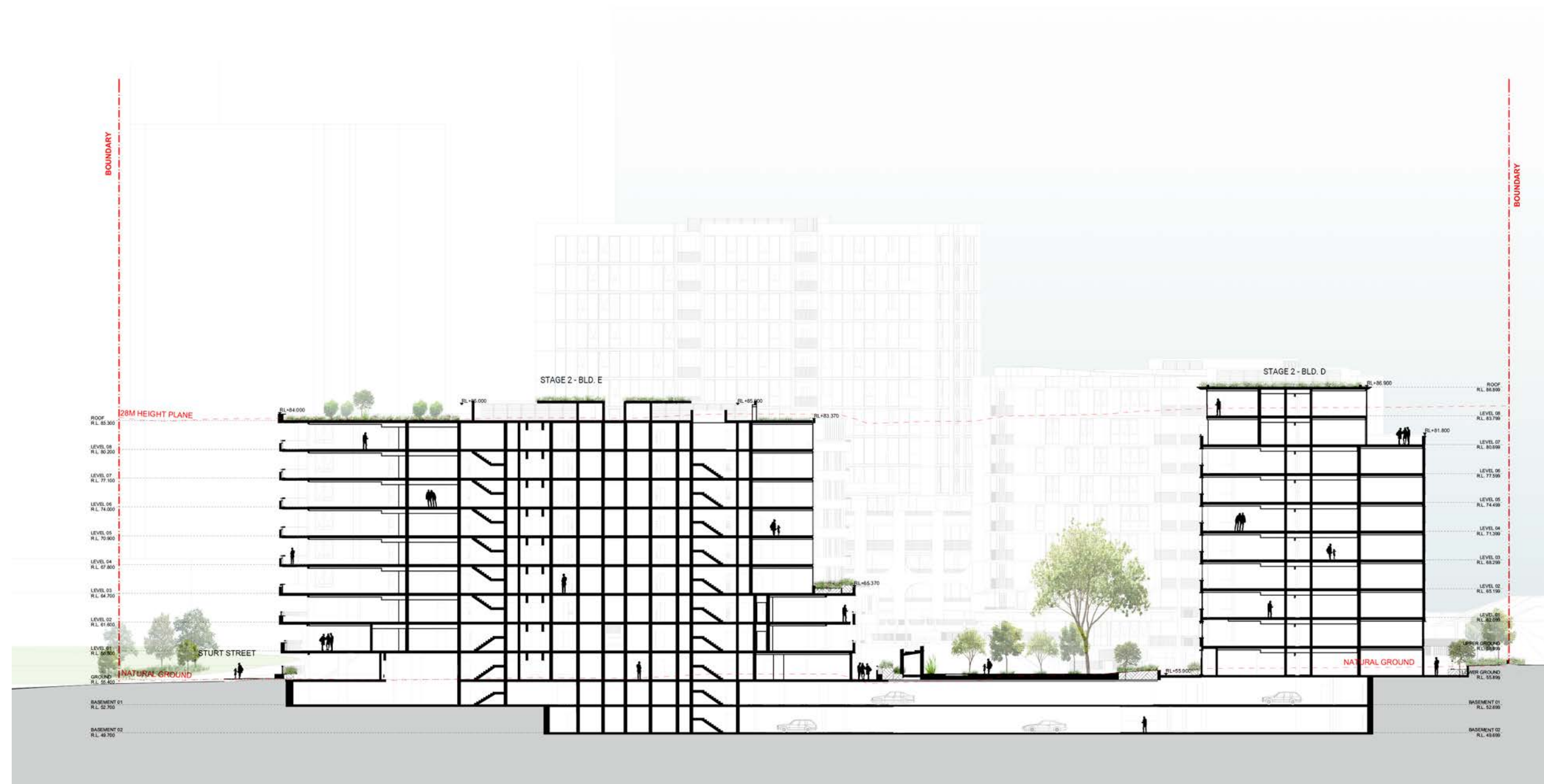
Section C



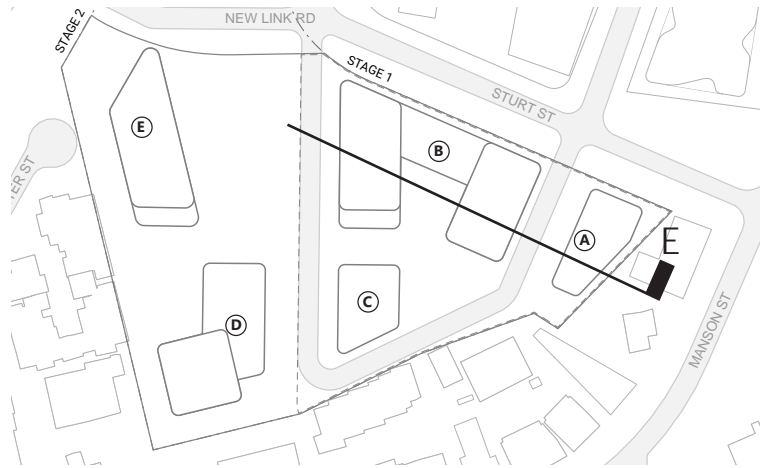
SECTION D

Section along Stage 2 building facing Winter St looking east cutting through building D and E.

The variation in height is limited to specific locations within the masterplan, where impacts on adjacent properties can be minimised and provides a greater transition in scale to adjacent sites.



Section D



SECTION E

Section along Stage 1 buildings facing Sturt St looking north.

The proposed 14-storey building establishes the scale transition from the south towards the taller towers as part of the towncentre adjacent the centre.

The variation in height is limited to specific locations within the masterplan, where impacts on adjacent properties can be minimised and provides a greater transition in scale to adjacent sites.



Section E

DESIGN PROCESS

04 MATERIALS AND CHARACTER

EXISTING SITE CHARACTER

The concept of the project aims to build on the warmth, texture and character which defines Telopea and the Site. The Sydney Blue Gum forest and textures of the Eucalyptus trees is brought into the proposed built form to establish harmony between nature and built environment.



GROUND PLANE SETTING

The proposal is set within a lush landscape setting. The lower levels of the development create the opportunity to add to the dynamic and natural environment using textures, warmth and landscape planters to conceptually extend the natural environment into the built form.



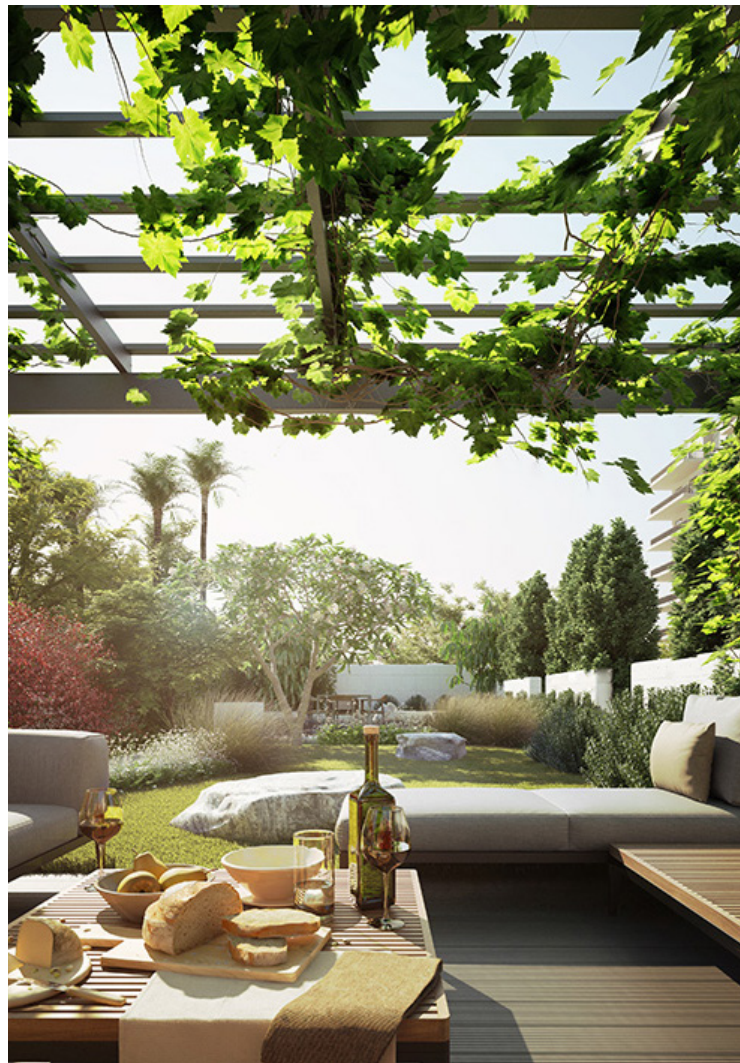
Architect: David Chipperfield
Project: Georg-Knorr-Park



Architect: Faulkner Architects
Project: Miner Road House Lionized



Architect: DKO Architects
Project: Balwyn Park



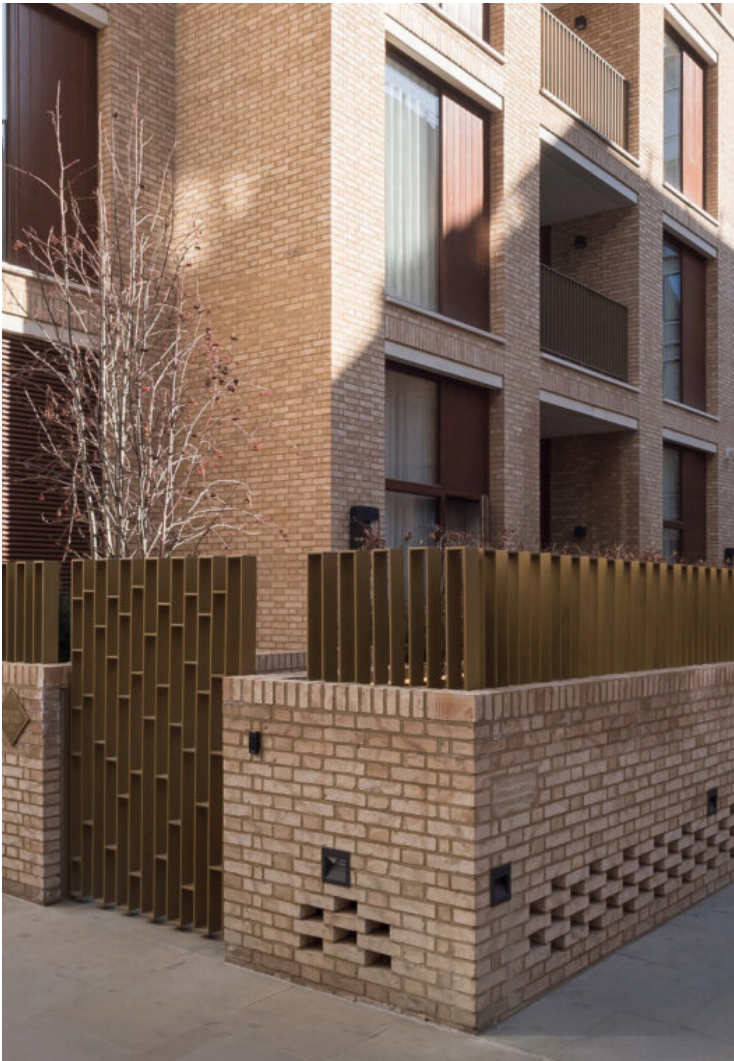
Architect: Urban Den
Project: Estelle

BRICK BASE EXPRESSION

The proposal proposes a brick base which changes in its expression across the site to support the variety of buildings proposed. The rhythm, detailing and expression changes to create sufficient variety as part of the public experience while passing through the site.



Sculptural Brickwork



Variety in Brick



Brick rhythm



Texture and variance

FACADE EXPRESSION

The proposal creates a variety of architectural expression across the 5 proposed buildings. While the buildings share some of the materials, they are all unique and different while being part of a family with a shared base and ground plane. The variety of and articulation of the architecture will help establish a sense of orientation and creates interest as a backdrop to the public domain.



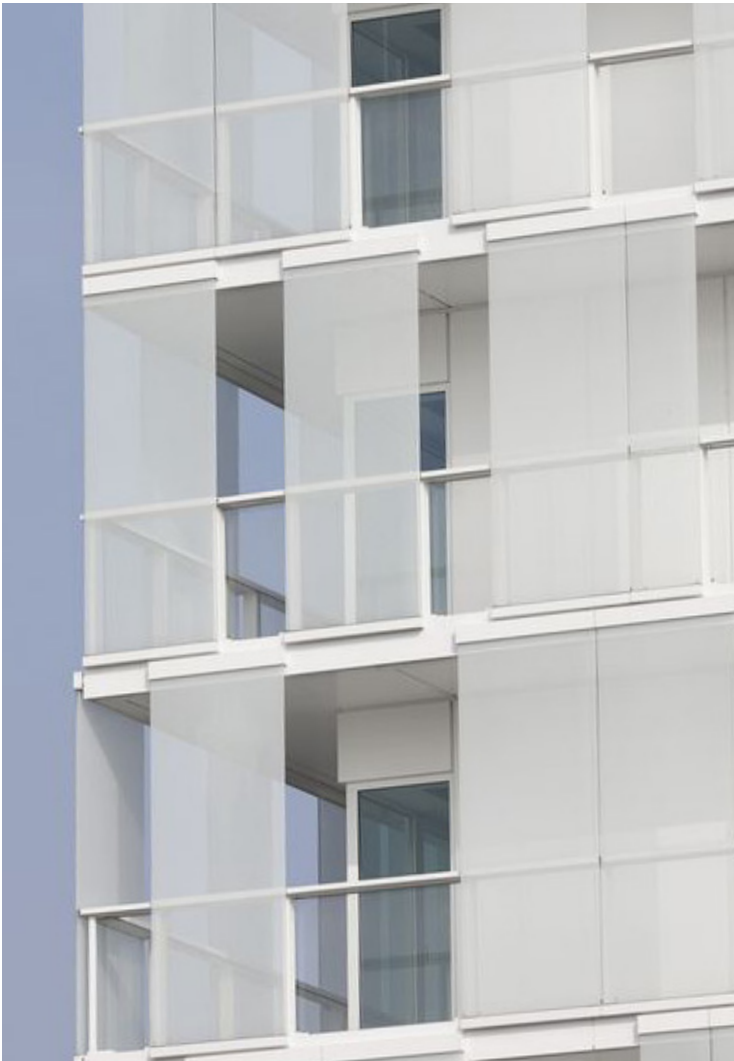
Sculptural Brickwork



Variation of rhythm and depth



Concrete Expressions

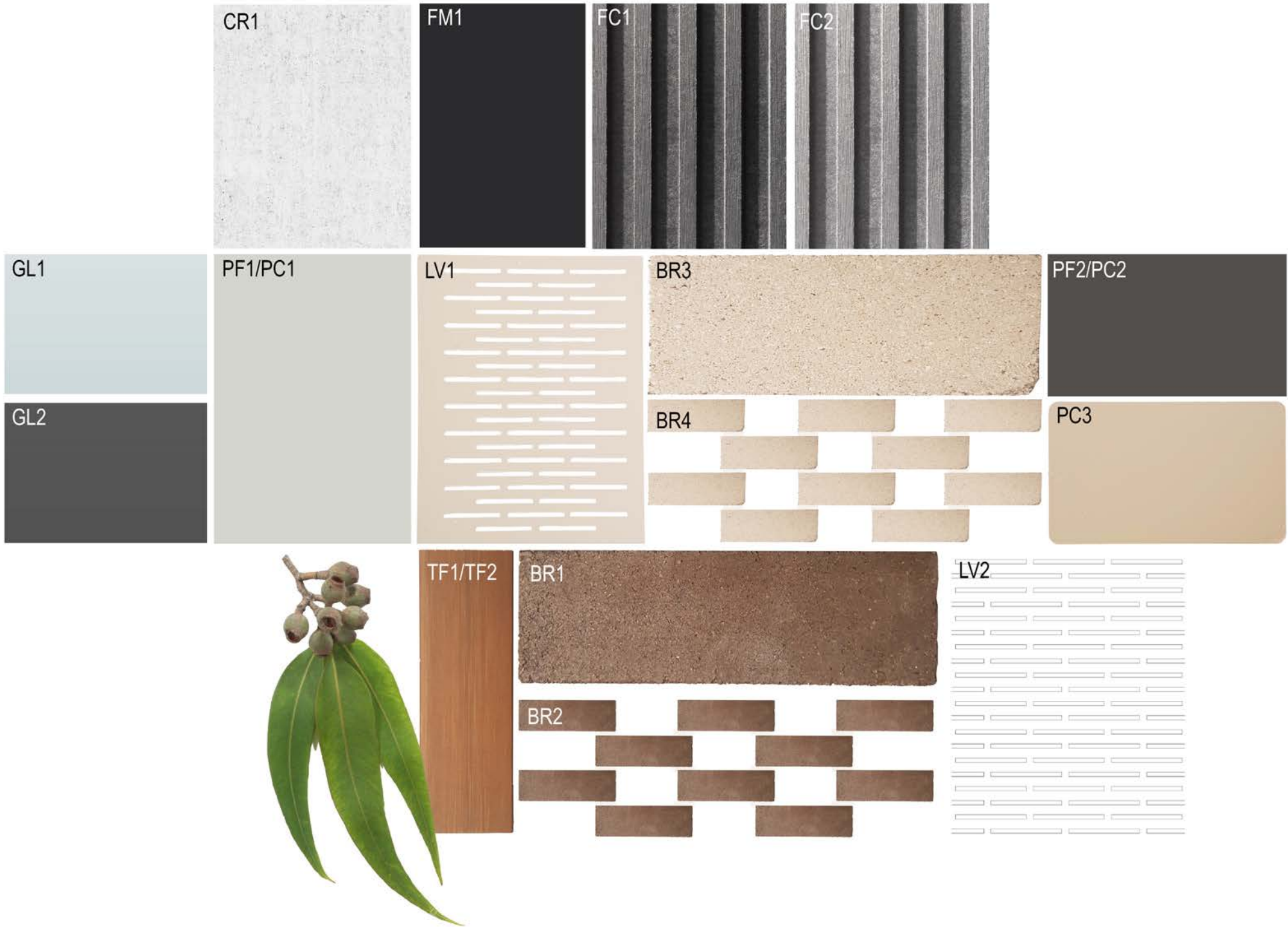


Light-weight Cladding

MATERIAL BOARD

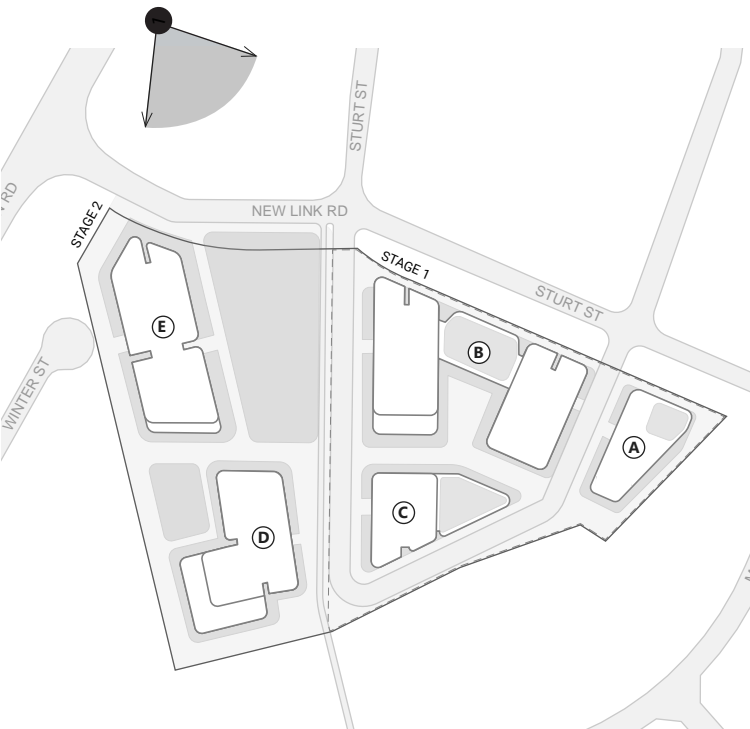
The material palette uses a range of materials which are textural, warm and provide depth to the overall composition of buildings. The warm brick tones ground the building within the natural setting which is enhanced by the contrasting metal balustrades.

The variety of buldings expression use a combination of coloured concrete expression, lightweighth profiled cladding and screening options. The overall palette for the buildings sitting over the base is lighter, but with the aim to create a clear and legible architectural language for each building. The facades use articlation and depth to create play of shadows and contrast to create intesest to the buildings amongst the rich landscaped public domain.



- FINISHES LEGEND:**
- PF1** OFF-WHITE PAINT FINISH
 - PF2** DARK COLOUR 'MONUMENT' PAINT FINISH
 - BR1** DARK RED/BROWN TONE BRICK
 - BR2** DARK RED/BROWN TONE BRICK PERFORATION EXPRESSED
 - BR3** OFF-WHITE TONE BRICK
 - BR4** OFF-WHITE TONE BRICK PERFORATION EXPRESSED
 - CR1** PRECAST CONCRETE WITH NAWKAW OFF-WHITE PENETRATING PAINT
 - FC1** EQUITONE LINES DARK
 - FC2** EQUITONE LINES LIGHT
 - FM1** FLAT MATT BLACK METAL FENCE / BALLUSTRADE
 - GL1** CLEAR GLASS
 - GL2** DARK GREY COLOURBACK GLASS
 - LV1** OFF-WHITE POWDERCOATED ALUMINIUM LOUVRES
 - LV2** OFF WHITE PERFORATED SCREEN
 - PC1** OFF-WHITE POWDERCOATED ALUMINIUM
 - PC2** FLAT MATT BLACK POWDERCOATED ALUMINIUM
 - PC3** BRONZE COLOUR POWDERCOATED ALUMINIUM
 - TF1** TIMBERLOOK FINISH BATTEN SCREEN (INTERIORS LOBBY)
 - TF2** TIMBERLOOK FINISH PANEL (ENTRY LOBBY)

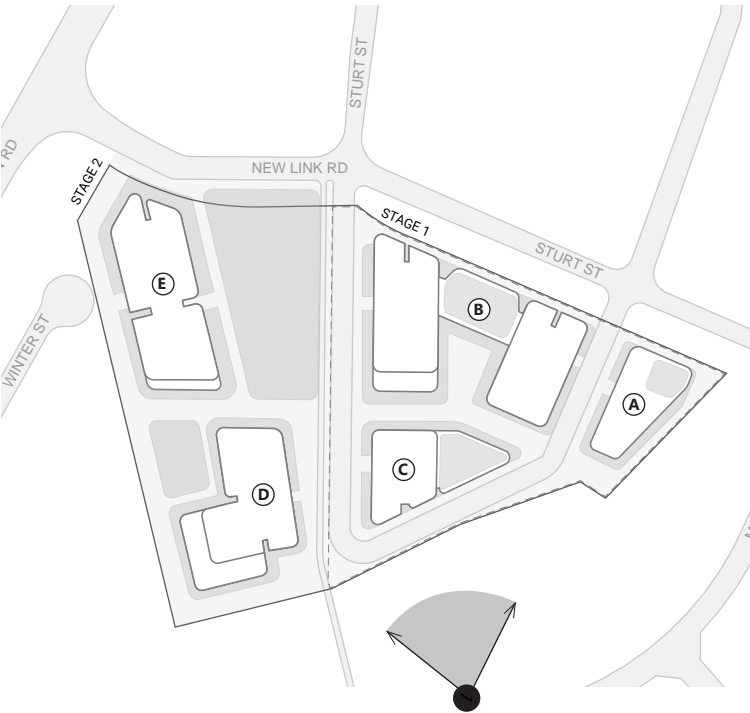
OVERVIEW NORTH



OVERVIEW SOUTH

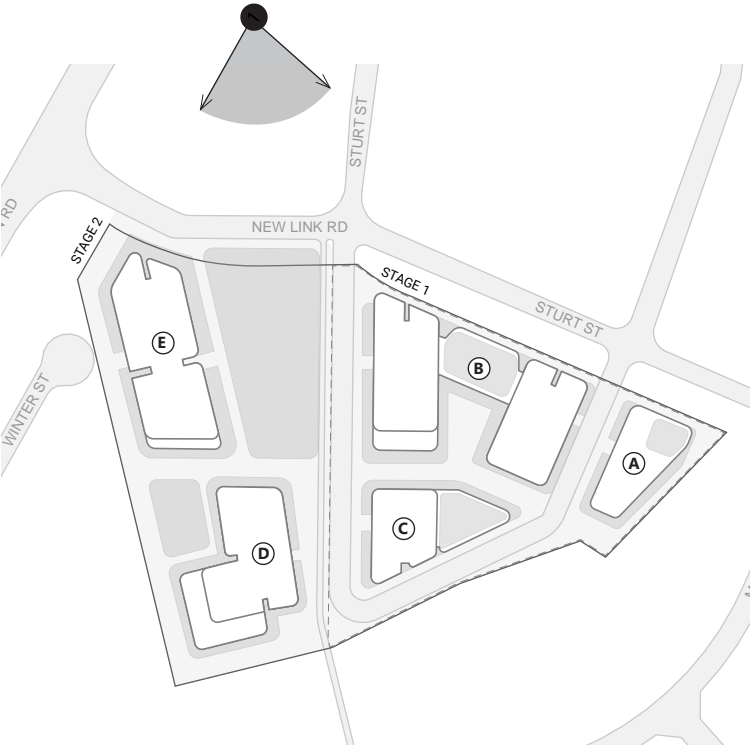


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RESIDENTIAL DESIGN

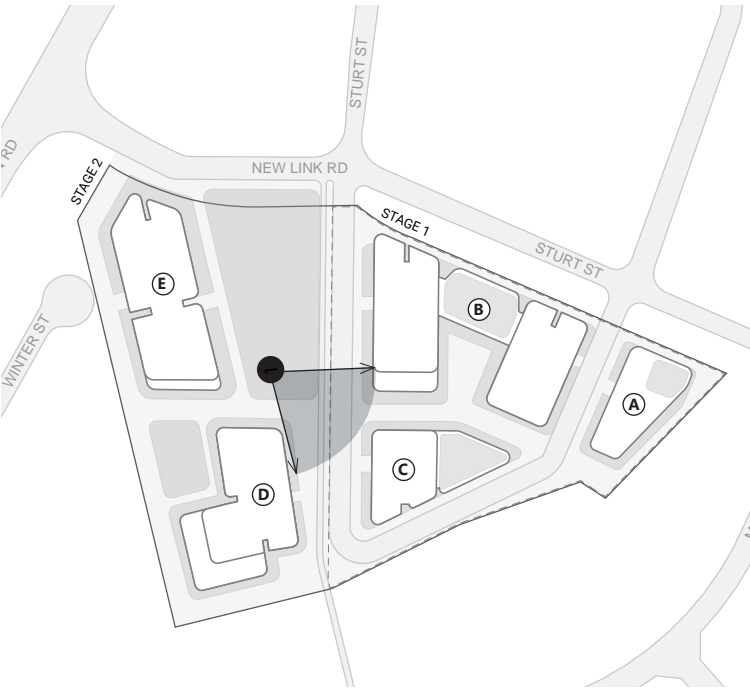


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SCALE NTS

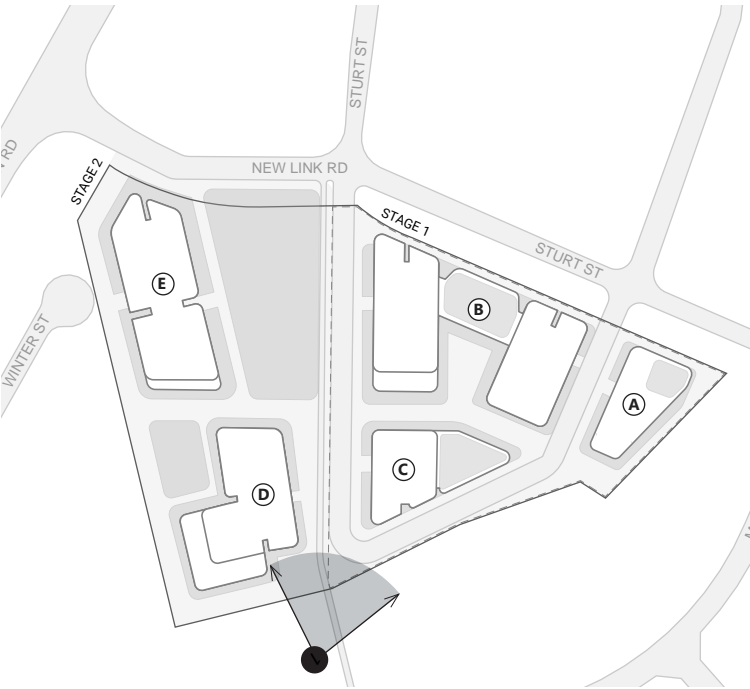
PARK VIEW



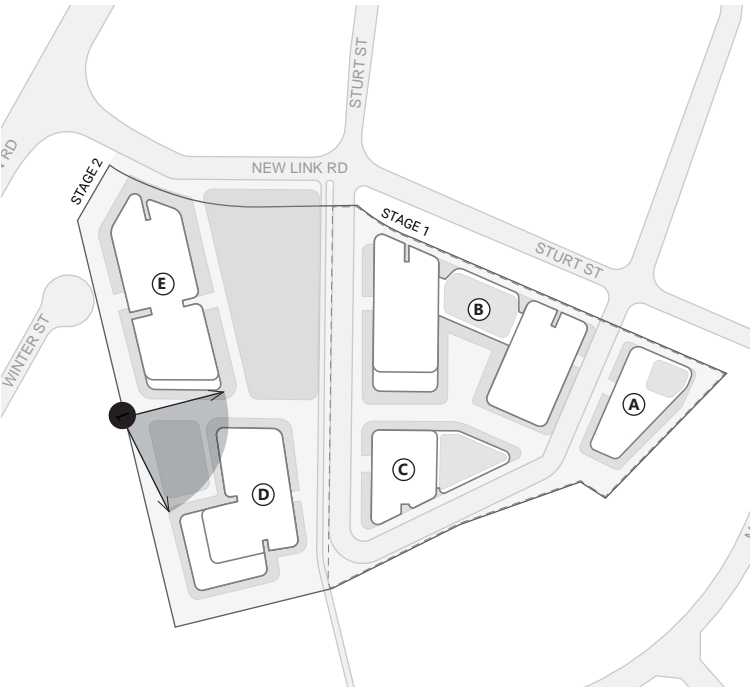
PUBLIC PARK VIEW



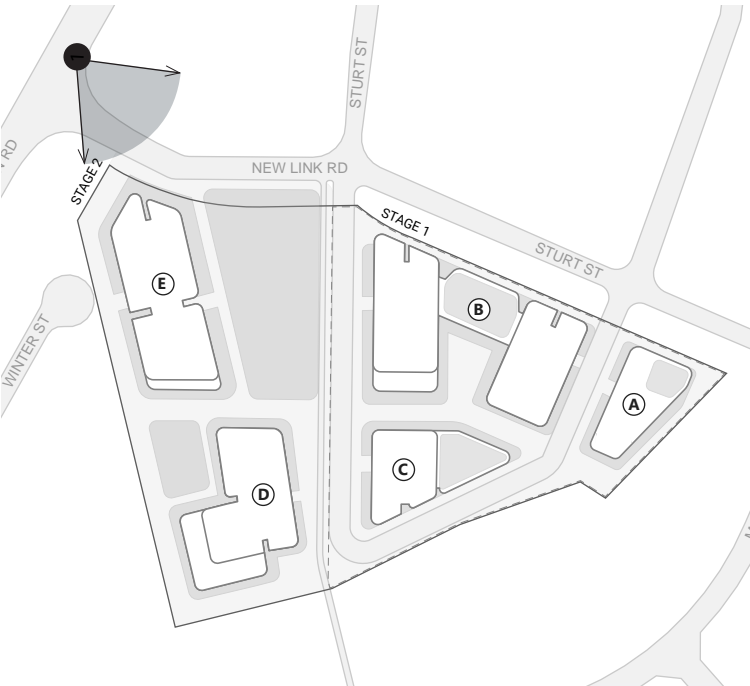
PEDESTRIAN LINK VIEW



COMMUNAL AREA VIEW

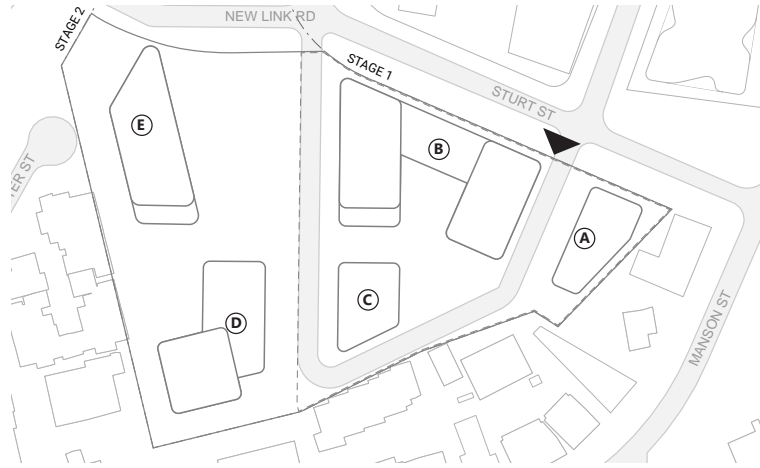


STURT STREET VIEW WEST



THE PROPOSAL

05 ELEVATIONS



STURT STREET ELEVATION

The building composition along Sturt Street is strongly articulated and composed to express a range of separate building forms which step down the relatively steep topography. The brick base plays a key role in achieving this. The deep recess in the elevation of the various buildings helps to reduce the length of the building, create a stepping effect when seen from the street. The façade expression of the buildings along Sturt Street defines the urban character along the street.

FINISHES LEGEND:

- PF1** OFF-WHITE PAINT FINISH
- PF2** DARK COLOUR 'MONUMENT' PAINT FINISH
- BR1** DARK RED/BROWN TONE BRICK
- BR2** DARK RED/BROWN TONE BRICK PERFORATION EXPRESSED
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- BR4** OFF-WHITE TONE BRICK PERFORATION EXPRESSED

- CR1** PRECAST CONCRETE WITH NAWKAW OFF-WHITE PENETRATING PAINT

- FC1** EQUITONE LINES DARK
- FC2** EQUITONE LINES LIGHT
- FM1** FLAT MATT BLACK METAL FENCE / BALLUSTRADE

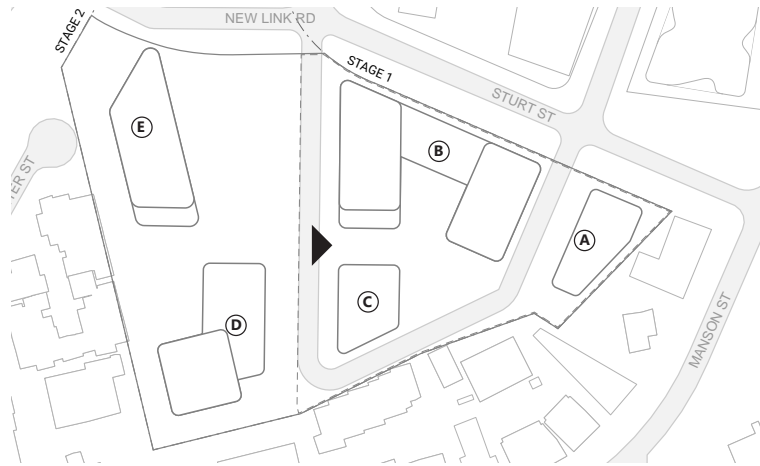
- GL1** CLEAR GLASS
- GL2** DARK GREY COLOURBACK GLASS

- LV1** OFF-WHITE POWDERCOATED ALUMINIUM LOUVRES
- LV2** OFF WHITE PERFORATED SCREEN

- PC1** OFF-WHITE POWDERCOATED ALUMINIUM
- PC2** FLAT MATT BLACK POWDERCOATED ALUMINIUM
- PC3** BRONZE COLOUR POWDERCOATED ALUMINIUM

- TF1** TIMBERLOOK FINISH BATTEN SCREEN (INTERIORS LOBBY)
- TF2** TIMBERLOOK FINISH PANEL (ENTRY LOBBY)





STAGE 1 WEST ELEVATION

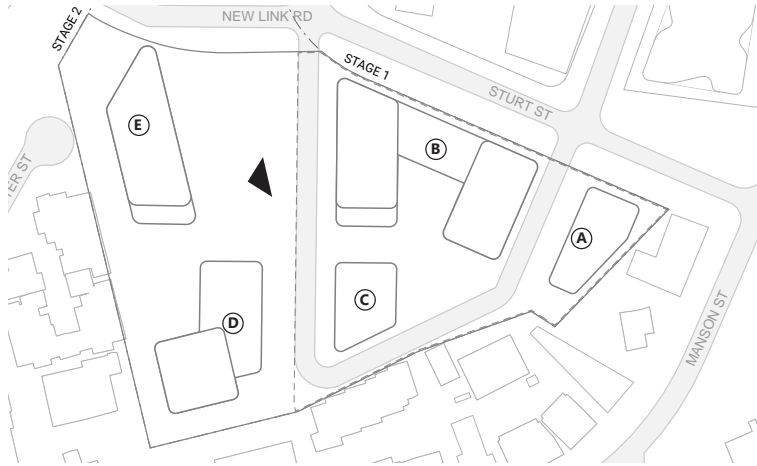
The building façades of building B and C frame the eastern edge of the public link and new road which express the transition from north to south. The northern building façade frames the public park and faces west. The brick base carries the built form over using a variety of form and expression to create a dynamic response to the natural settings defined by the trees. The perforated screens to the building help to filter the views and ensure privacy whilst dealing with the western sun.

Along the south the proportions of the building and material expression change to respond to the change of scale and character as well as the closer proximity to adjacent building form. The brick base of the building changes in its expression to relate to the immediate context and respond to the reduced scale of the space. The buildings over are sculptural brick with a patterning of windows and balcony zones with hit and miss brick screens to control the residents in relation to privacy and sun control.



FINISHES LEGEND:

- PF1** OFF-WHITE PAINT FINISH
- PF2** DARK COLOUR 'MONUMENT' PAINT FINISH
- BR1** DARK RED/BROWN TONE BRICK
- BR2** DARK RED/BROWN TONE BRICK PERFORATION EXPRESSED
- BR3** OFF-WHITE TONE BRICK
- BR4** OFF-WHITE TONE BRICK PERFORATION EXPRESSED
- CR1** PRECAST CONCRETE WITH NAWKAW OFF-WHITE PENETRATING PAINT
- FC1** EQUITONE LINES DARK
- FC2** EQUITONE LINES LIGHT
- FM1** FLAT MATT BLACK METAL FENCE / BALLUSTRADE
- GL1** CLEAR GLASS
- GL2** DARK GREY COLOURBACK GLASS
- LV1** OFF-WHITE POWDERCOATED ALUMINIUM LOUVRES
- LV2** OFF WHITE PERFORATED SCREEN
- PC1** OFF-WHITE POWDERCOATED ALUMINIUM
- PC2** FLAT MATT BLACK POWDERCOATED ALUMINIUM
- PC3** BRONZE COLOUR POWDERCOATED ALUMINIUM
- TF1** TIMBERLOOK FINISH BATTEN SCREEN (INTERIORS LOBBY)
- TF2** TIMBERLOOK FINISH PANEL (ENTRY LOBBY)



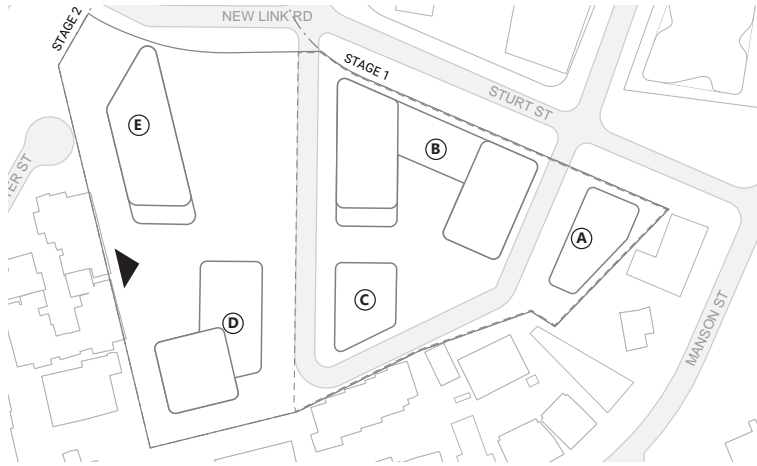
STAGE 2 EAST ELEVATION

The building façade which frames the western edge of the public lpark has a very different expression through its horizontals alternate layering of balustrading. The building form creates a dynamic change in orientation along this edge following the position of existing trees and the natural desire line of the public link through the site. The northern building façade frames the public park and faces north. The two storey brick base carries the built form over which creates a dynamic response to the natural settings defined by the trees.

Along the south the proportions of the building and material expression change to respond to the the public link passing through as well as the closer proximity to adjacent building form. The southern building D stands conceptually within the park and becomes a key focal point when passing through the site. The strongly expressed vertical blades reflect the layering of the trees and float over the landscape layers.



- FINISHES LEGEND:**
- PF1 OFF-WHITE PAINT FINISH
 - PF2 DARK COLOUR 'MONUMENT' PAINT FINISH
 - BR1 DARK RED/BROWN TONE BRICK
 - BR2 DARK RED/BROWN TONE BRICK PERFORATION EXPRESSED
 - BR3 OFF-WHITE TONE BRICK
 - BR4 OFF-WHITE TONE BRICK PERFORATION EXPRESSED
 - CR1 PRECAST CONCRETE WITH NAWKAW OFF-WHITE PENETRATING PAINT
 - FC1 EQUITONE LINES DARK
 - FC2 EQUITONE LINES LIGHT
 - FM1 FLAT MATT BLACK METAL FENCE / BALLUSTRADE
 - GL1 CLEAR GLASS
 - GL2 DARK GREY COLOURBACK GLASS
 - LV1 OFF-WHITE POWDERCOATED ALUMINIUM LOUVRES
 - LV2 OFF WHITE PERFORATED SCREEN
 - PC1 OFF-WHITE POWDERCOATED ALUMINIUM
 - PC2 FLAT MATT BLACK POWDERCOATED ALUMINIUM
 - PC3 BRONZE COLOUR POWDERCOATED ALUMINIUM
 - TF1 TIMBERLOOK FINISH BATTEN SCREEN (INTERIORS LOBBY)
 - TF2 TIMBERLOOK FINISH PANEL (ENTRY LOBBY)

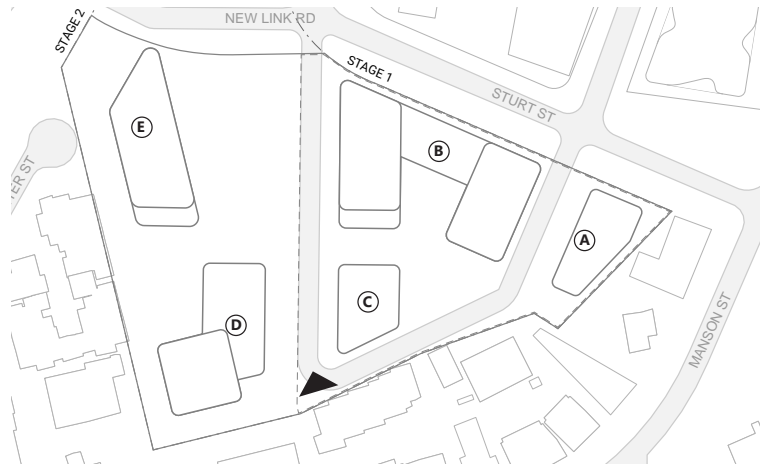


STAGE 2 WEST ELEVATION

The buildings along the western edge of the site step in and out to ensure some of the important trees along this perimeter are maintained and become part of the communal areas. The trees help to buffer the proposed scale of the development to the existing small grain urban context and to create a shared amenity between the buildings. The buildings use a strongly expressed brick base to create a scale relationship to the existing context and through angles within the plan, combined with the articulation within the buildings and the roofscape, create a dynamic overall composition of form and expression. There is a strong variety of buliding expression between building D and E to ensure visual relieve within the overall composition.



- FINISHES LEGEND:**
- PF1** OFF-WHITE PAINT FINISH
 - PF2** DARK COLOUR 'MONUMENT' PAINT FINISH
 - BR1** DARK RED/BROWN TONE BRICK
 - BR2** DARK RED/BROWN TONE BRICK PERFORATION EXPRESSED
 - BR3** OFF-WHITE TONE BRICK
 - BR4** OFF-WHITE TONE BRICK PERFORATION EXPRESSED
 - CR1** PRECAST CONCRETE WITH NAWKAW OFF-WHITE PENETRATING PAINT
 - FC1** EQUITONE LINES DARK
 - FC2** EQUITONE LINES LIGHT
 - FM1** FLAT MATT BLACK METAL FENCE / BALLUSTRADE
 - GL1** CLEAR GLASS
 - GL2** DARK GREY COLOURBACK GLASS
 - LV1** OFF-WHITE POWDERCOATED ALUMINIUM LOUVRES
 - LV2** OFF WHITE PERFORATED SCREEN
 - PC1** OFF-WHITE POWDRECOATED ALUMINIUM
 - PC2** FLAT MATT BLACK POWDERCOATED ALUMINIUM
 - PC3** BRONZE COLOUR POWDERCOATED ALUMINIUM
 - TF1** TIMBERLOOK FINISH BATTEN SCREEN (INTERIORS LOBBY)
 - TF2** TIMBERLOOK FINISH PANEL (ENTRY LOBBY)



STAGE 2 SOUTH ELEVATION

The buildings along the western edge of the site step in and out to ensure some of the important trees along this perimeter are maintained and become part of the communal areas. The trees help to buffer the proposed scale of the development to the existing small grain urban context and to create a shared amenity between the buildings. The buildings use a strongly expressed brick base to create a scale relationship to the existing context and through angles within the plan, combined with the articulation within the buildings and the roofscape, create a dynamic overall composition of form and expression. Although there is variety of architectural expression, the facade materiality across the overall composition brings these elevations in balance.



- FINISHES LEGEND:**
- PF1** OFF-WHITE PAINT FINISH
 - PF2** DARK COLOUR 'MONUMENT' PAINT FINISH
 - BR1** DARK RED/BROWN TONE BRICK
 - BR2** DARK RED/BROWN TONE BRICK PERFORATION EXPRESSED
 - BR3** OFF-WHITE TONE BRICK
 - BR4** OFF-WHITE TONE BRICK PERFORATION EXPRESSED
 - CR1** PRECAST CONCRETE WITH NAWKAW OFF-WHITE PENETRATING PAINT
 - FC1** EQUITONE LINES DARK
 - FC2** EQUITONE LINES LIGHT
 - FM1** FLAT MATT BLACK METAL FENCE / BALLUSTRADE
 - GL1** CLEAR GLASS
 - GL2** DARK GREY COLOURBACK GLASS
 - LV1** OFF-WHITE POWDERCOATED ALUMINIUM LOUVRES
 - LV2** OFF WHITE PERFORATED SCREEN
 - PC1** OFF-WHITE POWDERCOATED ALUMINIUM
 - PC2** FLAT MATT BLACK POWDERCOATED ALUMINIUM
 - PC3** BRONZE COLOUR POWDERCOATED ALUMINIUM
 - TF1** TIMBERLOOK FINISH BATTEN SCREEN (INTERIORS LOBBY)
 - TF2** TIMBERLOOK FINISH PANEL (ENTRY LOBBY)











APPENDIX

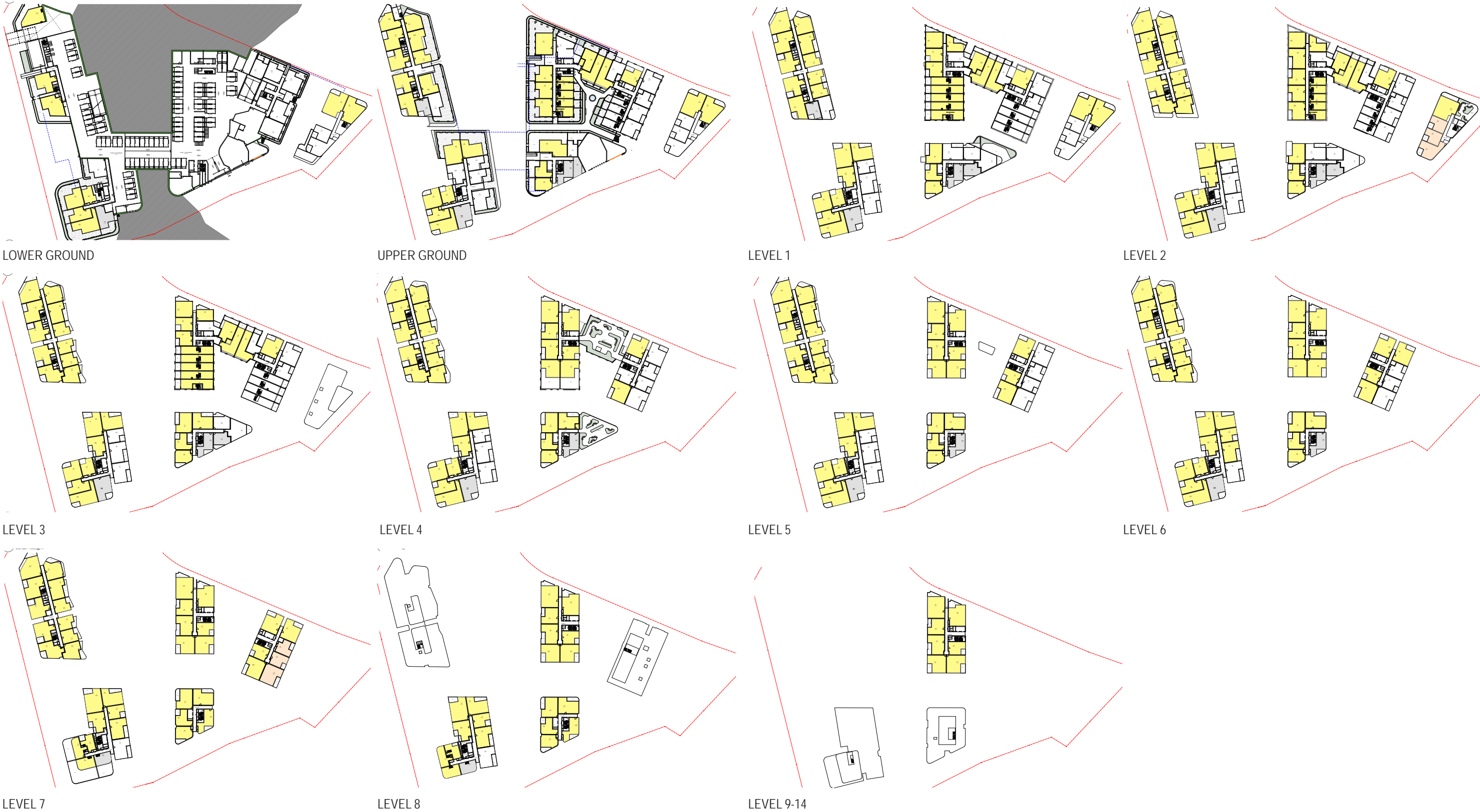
06 COMPLIANCE DIAGRAMS

SOLAR ACCESS - JUNE 21

- >2h SOLAR ACCESS (8AM - 4PM)
- >2h SOLAR ACCESS (8AM - 4PM) WITH SKYLIGHT

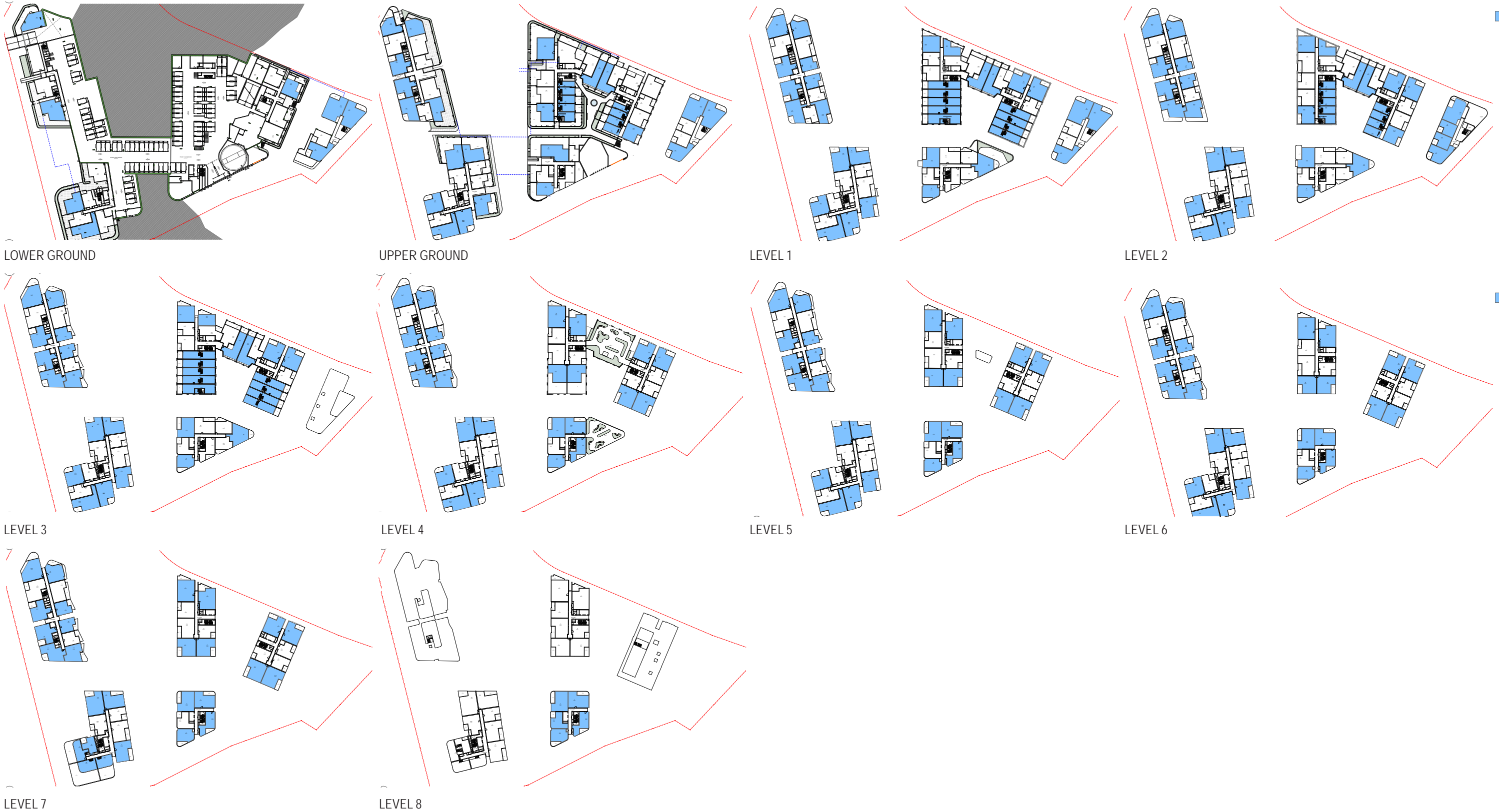
>2H Solar Access:
STAGE 1: 71%
STAGE 2: 82%
TOTAL: 75%

No Solar Access:
STAGE 1: 5%
STAGE 2: 6%
TOTAL: 5%



CROSS VENTILATION

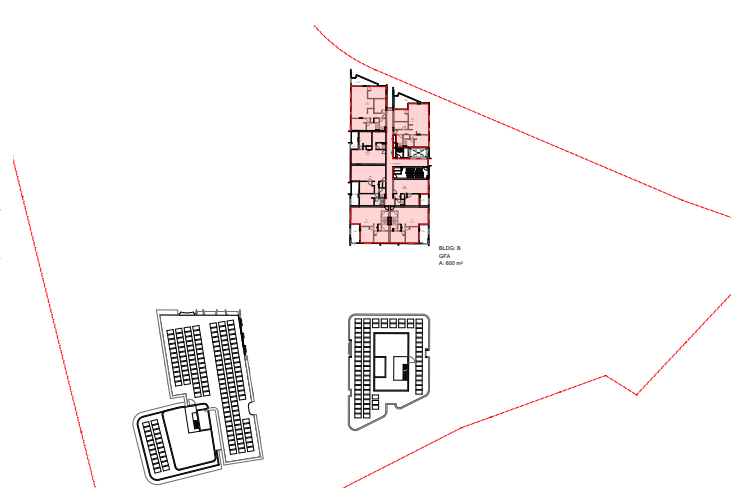
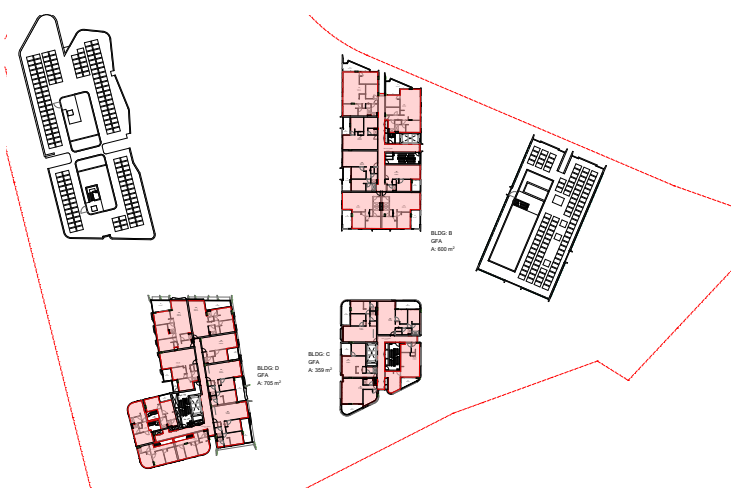
STAGE 1: 60%
STAGE 2: 62%
TOTAL: 61%



GROSS FLOOR AREA

Maximum allowable GFA: 39800m²

Total GFA achieved: 36528m²



SHADOW ANALYSIS - JUNE 21

- SHADOW OF CONTEXT BUILDINGS
- COMPLIANT HEIGHT SHADOW
- BUILDING ABOVE HEIGHT PLANE SHADOW

9AM - 12PM



9AM

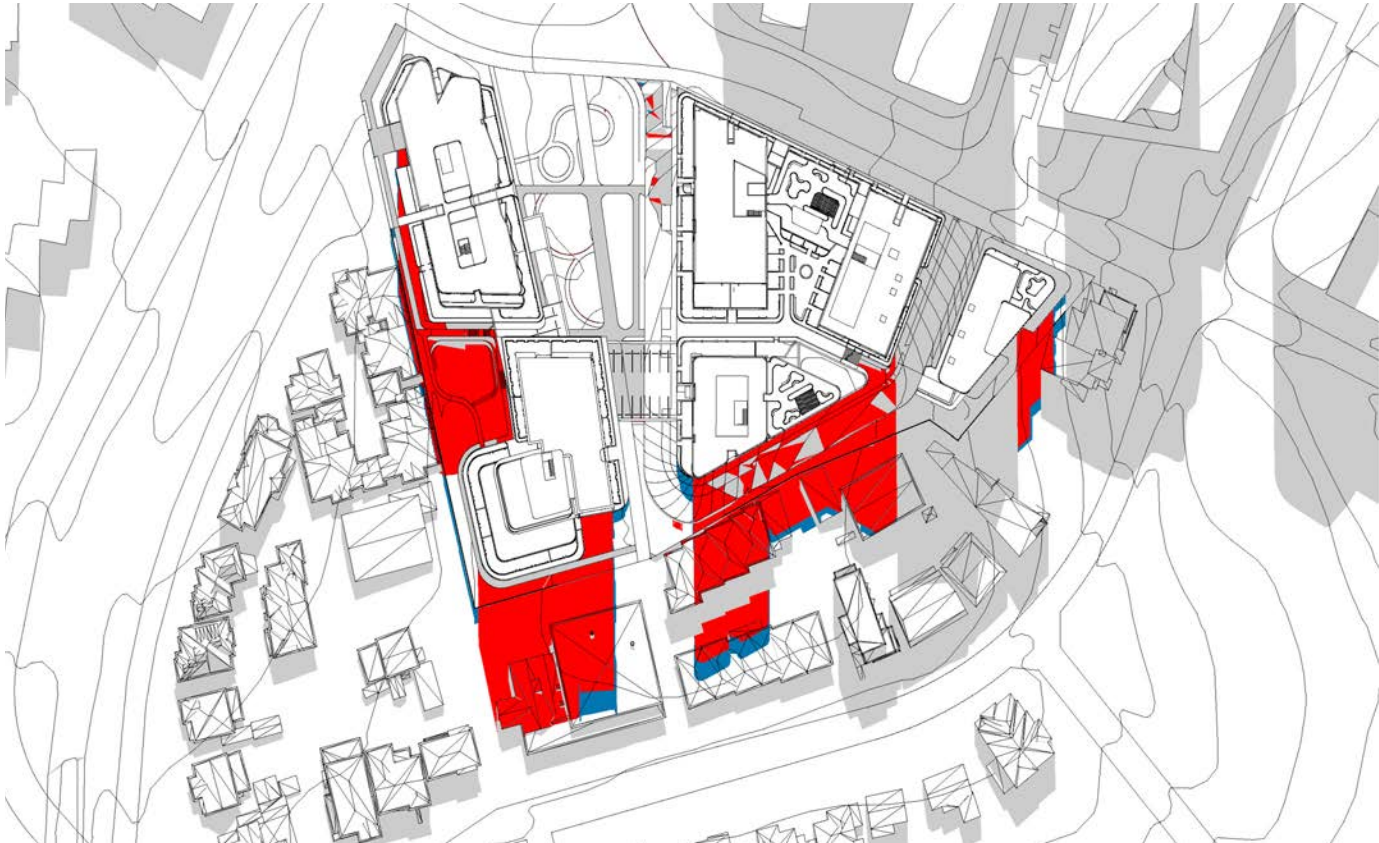


10AM



11AM

TELOPEA RESIDENTIAL - STAGE 1A
RESIDENTIAL DESIGN



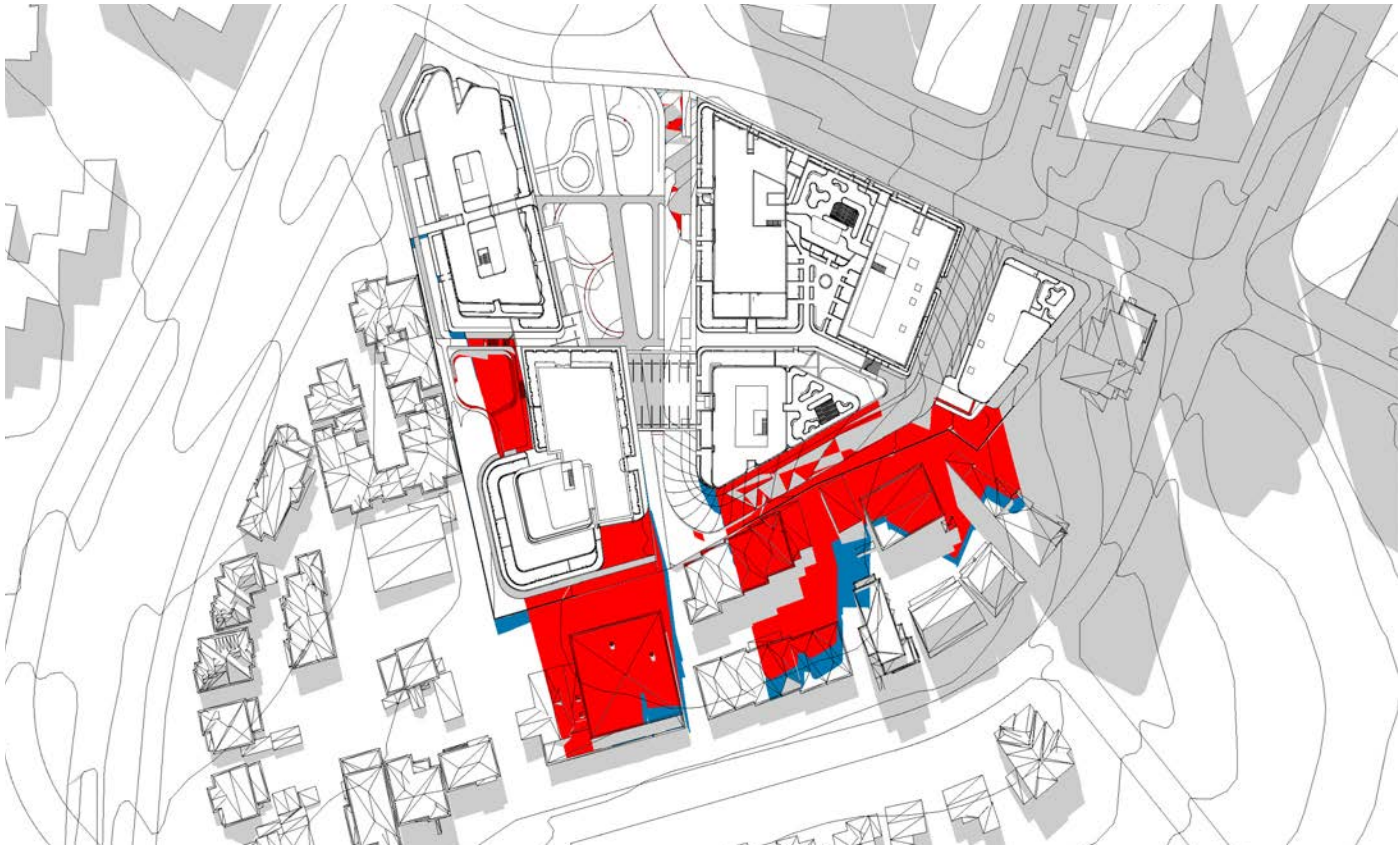
12PM

JOB NO. 20320
DATE 16/07/2021
SCALE NTS



SHADOW ANALYSIS - JUNE 21

- SHADOW OF CONTEXT BUILDINGS
- COMPLIANT HEIGHT SHADOW
- BUILDING ABOVE HEIGHT PLANE SHADOW



1PM



2PM



3PM





9AM



10AM



11AM

TELOPEA RESIDENTIAL - STAGE 1A
RESIDENTIAL DESIGN



12PM



1PM



2PM



3PM

HEIGHT PLANE

Maximum Height Breach (Approx.)

Building A (Stage 1) - Compliant

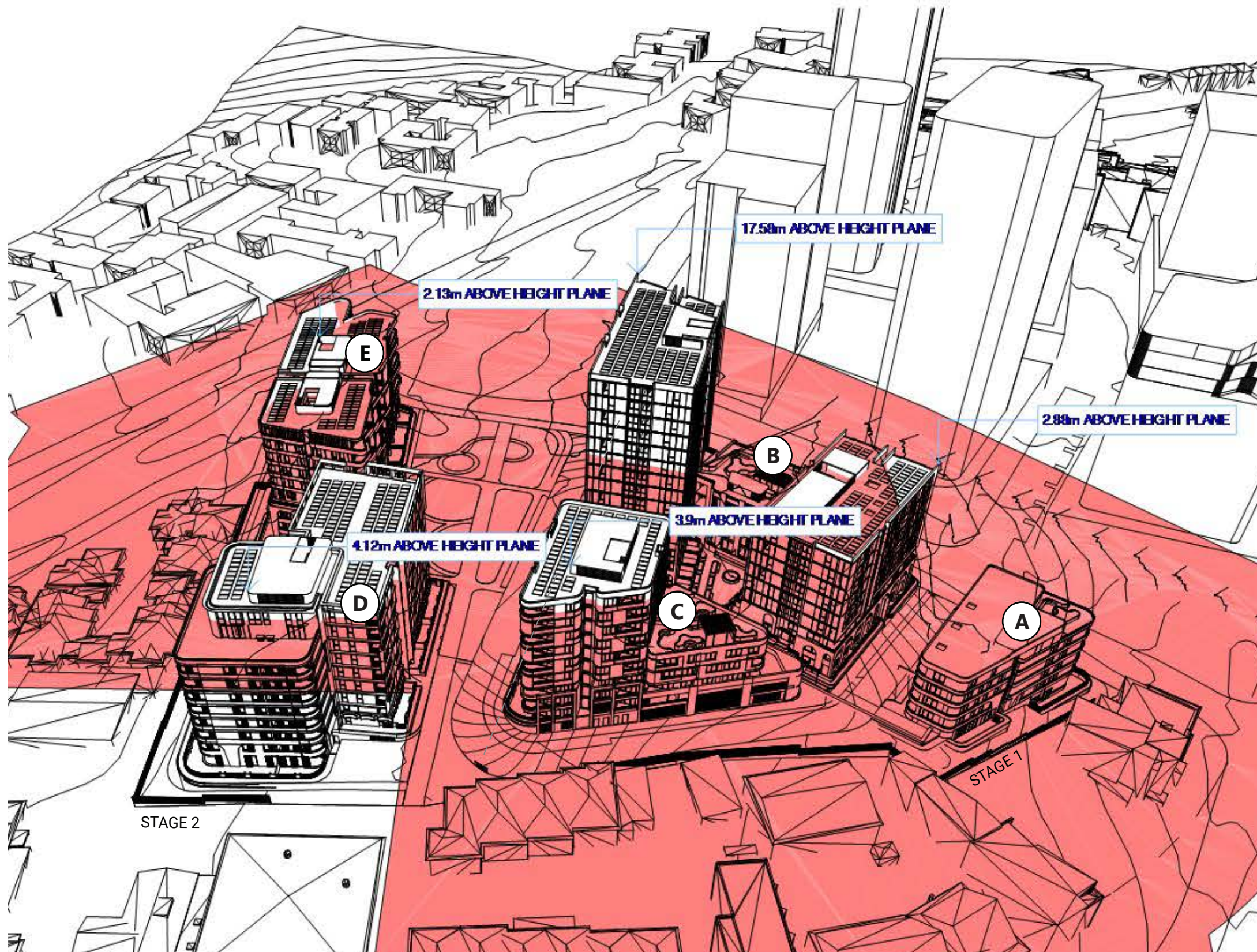
Building B (Stage 1) Tower 1 - 17.58m

Building B (Stage 1) Tower 2 - 2.88m

Building C (Stage 1) - 3.9m

Building D (Stage 2) - 4.12m

Building E (Stage 2) - 2.13m



APPENDIX

07 SCHEDULES



TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

OVERALL

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
48400		LO															
46500	1900	ROOF															
43400	3100	L13	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
40300	3100	L12	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
37200	3100	L11	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
34100	3100	L10	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
31000	3100	L09	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
27900	3100	L08	2190	1665	0	1665	1461	0	6	0	1	9	0	2	18	17	5
24800	3100	L07	4325	3121	0	3121	2805	0	12	0	2	18	3	5	40	38	27
21700	3100	L06	4318	3297	0	3297	2980	0	14	0	2	19	3	3	41	36	26
18600	3100	L05	4311	3297	0	3297	2980	0	14	0	2	19	3	3	41	32	26
15500	3100	L04	5131	3305	12	3293	2974	0	14	0	3	18	3	3	41	31	26
12400	3100	L03	5090	3856	0	3856	3436	0	17	1	3	18	1	2	42	35	23
9300	3100	L02	5735	4307	6	4301	3765	0	20	2	4	29	1	3	59	35	38
6200	3100	L01	5824	4351	0	4351	3879	0	20	1	3	19	1	4	48	35	26
3100	3100	UG	5522	4272	0	4272	3625	2	18	1	4	24	1	6	56	29	32
0	3100	LG	7458	1617	0	1617	1379	1	5	0	0	7	1	4	18	9	9
	3000	B01	8981	311	0	311	239	0	0	1	1	0	0	1	3	2	2
	3000	B02	8617	129	0	129	102	0	0	0	0	0	0	1	1	0	1
TOTALS			71367	36528	18	36510	32260	3	150	6	25	200	17	42	443	334	241
%								0.7%	33.9%	1.4%	5.6%	45.1%	3.8%	9.5%		75.4%	61.0%
Targeted								3%	35%		52%			10%	From 8 am to 4pm		

SITE AREA	20594 m²
FSR ALLOWED	1.70 :1
FSR	1.77 :1
HOB ALLOWED	28.00 m
HOB	45.58 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	2	90	4	23	180	15	59	44	1 per 1 unit + 1 per 15 visitor	1 per 5 car spces
TOTAL	416								473	83

DEFINITIONS

GFA GROSS FLOOR AREA AS DEFINED BY COUNCIL FOR THE PURPOSES OF DERIVING A FLOOR SPACE RATIO. TYPICALLY DEFINED AS THE SUM OF THE FLOOR AREA OF A BUILDING MEASURED FROM THE INTERNAL FACE OF EXTERNAL WALLS OR FROM THE INTERNAL FACE OF WALLS SEPARATING THE BUILDING FROM ANY OTHER BUILDING, **AND INCLUDES:**

- *THE AREA OF A MEZZANINE
- *HABITABLE ROOMS IN A BASEMENT OR ATTIC
- *ANY SHOP, AUDITORIUM, CINEMA, AND THE LIKE IN A BASEMENT OR ATTIC

BUT EXCLUDES:

- *ANY AREA FOR COMMON VERTICAL CIRCULATION INCLUDING LIFTS AND STAIRS
- *ANY BASEMENT STORAGE, VEHICULAR ACCESS, LOADING AREA, GARBAGE AND SERVICES
- *PLANT ROOMS, LIFT TOWERS, AND OTHER AREAS USED EXCLUSIVELY FOR MECHANICAL SERVICES OR DUCTING
- *CARPARKING TO MEET THE REQUIREMENTS OF THE CONSENT AUTHORITY (INCLUDING ACCESS TO THAT PARKING)
- *ANY SPACE USED FOR THE LOADING AND UNLOADING OF GOODS (INCLUDING ACCESS TO IT)
- *TERRACES AND BALCONIES WITH OUTER WALLS LESS THAN 1.4M HIGH
- *VOIDS ABOVE A FLOOR AT THE LEVEL OF A STOREY OR STORE ABOVE

GBA DEFINED AS THE SUM OF THE AREA OF EACH FLOORPLATE, MEASURED TO THE EXTERNAL FACE OF FAÇADE WALLS INCLUSIVE OF BALCONIES



TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

STAGE 1

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
48400		LO															
46500	1900	ROOF															
43400	3100	L13	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
40300	3100	L12	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
37200	3100	L11	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
34100	3100	L10	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
31000	3100	L09	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
27900	3100	L08	1260	960	0	960	841	0	5	0	0	6	0	1	12	12	5
24800	3100	L07	1972	1500	0	1500	1369	0	8	0	0	8	2	1	19	19	12
21700	3100	L06	1972	1500	0	1500	1369	0	8	0	0	8	2	1	19	16	12
18600	3100	L05	1972	1500	0	1500	1369	0	8	0	0	8	2	1	19	14	12
15500	3100	L04	2785	1508	12	1496	1363	0	8	0	1	7	2	1	19	13	12
12400	3100	L03	2751	2059	0	2059	1825	0	11	1	1	7	0	0	20	17	9
9300	3100	L02	3308	2510	6	2504	2154	0	14	2	2	18	0	1	37	17	24
6200	3100	L01	3432	2494	0	2494	2212	0	13	1	1	8	0	2	25	18	12
3100	3100	UG	3232	2401	0	2401	2033	2	12	1	1	13	0	5	34	13	20
0	3100	LG	4271	821	0	821	708	0	3	0	0	4	0	2	9	2	5
	3000	B01	4749	311	0	311	239	0	0	1	1	0	0	1	3	2	2
	3000	B02	4832	129	0	129	102	0	0	0	0	0	0	1	1	0	1
TOTALS			40401	20693	18	20675	18219	2	100	6	7	107	8	22	252	178	126
%								0.8%	39.7%	2.4%	2.8%	42.5%	3.2%	8.7%		70.6%	60.0%
Targeted								3%	35%		52%			10%	From 8 am to 4pm		

SITE AREA	20594 m²
FSR ALLOWED	1.70 :1
FSR	1.00 :1
HOB ALLOWED	28.00 m
HOB	45.58 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	1	60	4	6	96	7	31	25	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	231								269	15

DEFINITIONS

GFA GROSS FLOOR AREA AS DEFINED BY COUNCIL FOR THE PURPOSES OF DERIVING A FLOOR SPACE RATIO. TYPICALLY DEFINED AS THE SUM OF THE FLOOR AREA OF A BUILDING MEASURED FROM THE INTERNAL FACE OF EXTERNAL WALLS OR FROM THE INTERNAL FACE OF WALLS SEPARATING THE BUILDING FROM ANY OTHER BUILDING, **AND INCLUDES:**

- *THE AREA OF A MEZZANINE
- *HABITABLE ROOMS IN A BASEMENT OR ATTIC
- *ANY SHOP, AUDITORIUM, CINEMA, AND THE LIKE IN A BASEMENT OR ATTIC

BUT EXCLUDES:

- *ANY AREA FOR COMMON VERTICAL CIRCULATION INCLUDING LIFTS AND STAIRS
- *ANY BASEMENT STORAGE, VEHICULAR ACCESS, LOADING AREA, GARBAGE AND SERVICES
- *PLANT ROOMS, LIFT TOWERS, AND OTHER AREAS USED EXCLUSIVELY FOR MECHANICAL SERVICES OR DUCTING
- *CARPARKING TO MEET THE REQUIREMENTS OF THE CONSENT AUTHORITY (INCLUDING ACCESS TO THAT PARKING)
- *ANY SPACE USED FOR THE LOADING AND UNLOADING OF GOODS (INCLUDING ACCESS TO IT)
- *TERRACES AND BALCONIES WITH OUTER WALLS LESS THAN 1.4M HIGH
- *VOIDS ABOVE A FLOOR AT THE LEVEL OF A STOREY OR STORE ABOVE

GBA DEFINED AS THE SUM OF THE AREA OF EACH FLOORPLATE, MEASURED TO THE EXTERNAL FACE OF FAÇADE WALLS INCLUSIVE OF BALCONIES



TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

STAGE 2

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation	
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed				
33000		LO																
31000	2000	ROOF																
27900	3100	L08	930	705	0	705	620	0	1	0	1	3	0	1	6	5	0	
24800	3100	L07	2353	1621	0	1621	1436	0	4	0	2	10	1	4	21	19	15	
21700	3100	L06	2346	1797	0	1797	1611	0	6	0	2	11	1	2	22	20	14	
18600	3100	L05	2339	1797	0	1797	1611	0	6	0	2	11	1	2	22	18	14	
15500	3100	L04	2346	1797	0	1797	1611	0	6	0	2	11	1	2	22	18	14	
12400	3100	L03	2339	1797	0	1797	1611	0	6	0	2	11	1	2	22	18	14	
9300	3100	L02	2427	1797	0	1797	1611	0	6	0	2	11	1	2	22	18	14	
6200	3100	L01	2392	1857	0	1857	1667	0	7	0	2	11	1	2	23	17	14	
3100	3100	UG	2290	1871	0	1871	1592	0	6	0	3	11	1	1	22	16	12	
0	3100	LG	3293	796	0	796	671	1	2	0	0	3	1	2	9	7	4	
	3000	B01	4035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3000	B02	3231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTALS			30321	15835	0	15835	14041	1	50	0	18	93	9	20	191	156	115	
%								0.5%	26.2%	0.0%	9.4%	48.7%	4.7%	10.5%		81.7%	62.2%	
Targeted								3%	35%			52%			10%			

SITE AREA	20594 m²
FSR ALLOWED	1.70 :1
FSR	0.77 :1
HOB ALLOWED	28.00 m
HOB	32.12 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	1	30	0	16	84	8	28	19	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	186								204	12

DEFINITIONS

GFA GROSS FLOOR AREA AS DEFINED BY COUNCIL FOR THE PURPOSES OF DERIVING A FLOOR SPACE RATIO. TYPICALLY DEFINED AS THE SUM OF THE FLOOR AREA OF A BUILDING MEASURED FROM THE INTERNAL FACE OF EXTERNAL WALLS OR FROM THE INTERNAL FACE OF WALLS SEPARATING THE BUILDING FROM ANY OTHER BUILDING, **AND INCLUDES:**

- *THE AREA OF A MEZZANINE
- *HABITABLE ROOMS IN A BASEMENT OR ATTIC
- *ANY SHOP, AUDITORIUM, CINEMA, AND THE LIKE IN A BASEMENT OR ATTIC

BUT EXCLUDES:

- *ANY AREA FOR COMMON VERTICAL CIRCULATION INCLUDING LIFTS AND STAIRS
- *ANY BASEMENT STORAGE, VEHICULAR ACCESS, LOADING AREA, GARBAGE AND SERVICES
- *PLANT ROOMS, LIFT TOWERS, AND OTHER AREAS USED EXCLUSIVELY FOR MECHANICAL SERVICES OR DUCTING
- *CARPARKING TO MEET THE REQUIREMENTS OF THE CONSENT AUTHORITY (INCLUDING ACCESS TO THAT PARKING)
- *ANY SPACE USED FOR THE LOADING AND UNLOADING OF GOODS (INCLUDING ACCESS TO IT)
- *TERRACES AND BALCONIES WITH OUTER WALLS LESS THAN 1.4M HIGH
- *VOIDS ABOVE A FLOOR AT THE LEVEL OF A STOREY OR STORE ABOVE

GBA DEFINED AS THE SUM OF THE AREA OF EACH FLOORPLATE, MEASURED TO THE EXTERNAL FACE OF FAÇADE WALLS INCLUSIVE OF BALCONIES



TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

BUILDING A

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
21460		LO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19460	2000	ROOF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16300	3160	L02	552	323	6	317	280	0	2	0	0	1	0	1	4	4	4
13200	3100	L01	548	426	0	426	385	0	2	0	0	1	0	2	5	2	3
10100	3100	UG	548	426	0	426	385	0	2	0	0	1	0	2	5	2	3
7000	3100	LG	513	372	0	372	335	0	1	0	0	1	0	2	4	2	3
4000	3000	B01	431	311	0	311	239	0	0	1	1	0	0	1	3	2	2
0	4000	B02	181	129	0	129	102	0	0	0	0	0	0	1	1	0	1
TOTALS			2773	1987	6	1981	1726	0	7	1	1	4	0	9	22	12	16
%								0.0%	31.8%	4.5%	4.5%	18.2%	0.0%	40.9%		55%	73%

SITE AREA	20594 m ²
FSR ALLOWED	1.70 :1
FSR	0.10 :1
HOB ALLOWED	28.00 m
HOB	20.58 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	0	4	1	1	4	0	13	2	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	24								23	2

DEFINITIONS

GFA GROSS FLOOR AREA AS DEFINED BY COUNCIL FOR THE PURPOSES OF DERIVING A FLOOR SPACE RATIO. TYPICALLY DEFINED AS THE SUM OF THE FLOOR AREA OF A BUILDING MEASURED FROM THE INTERNAL FACE OF EXTERNAL WALLS OR FROM THE INTERNAL FACE OF WALLS SEPARATING THE BUILDING FROM ANY OTHER BUILDING, **AND INCLUDES:**

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- *HABITABLE ROOMS IN A BASEMENT OR ATTIC
- *ANY SHOP, AUDITORIUM, CINEMA, AND THE LIKE IN A BASEMENT OR ATTIC

BUT EXCLUDES:

- *ANY AREA FOR COMMON VERTICAL CIRCULATION INCLUDING LIFTS AND STAIRS
- *ANY BASEMENT STORAGE, VEHICULAR ACCESS, LOADING AREA, GARBAGE AND SERVICES
- *PLANT ROOMS, LIFT TOWERS, AND OTHER AREAS USED EXCLUSIVELY FOR MECHANICAL SERVICES OR DUCTING
- *CARPARKING TO MEET THE REQUIREMENTS OF THE CONSENT AUTHORITY (INCLUDING ACCESS TO THAT PARKING)
- *ANY SPACE USED FOR THE LOADING AND UNLOADING OF GOODS (INCLUDING ACCESS TO IT)
- *TERRACES AND BALCONIES WITH OUTER WALLS LESS THAN 1.4M HIGH
- *VOIDS ABOVE A FLOOR AT THE LEVEL OF A STOREY OR STORE ABOVE

GBA DEFINED AS THE SUM OF THE AREA OF EACH FLOORPLATE, MEASURED TO THE EXTERNAL FACE OF FAÇADE WALLS INCLUSIVE OF BALCONIES



TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

BUILDING B

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
48400		LO															
46500	1900	ROOF															
43400	3100	L13	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
40300	3100	L12	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
37200	3100	L11	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
34100	3100	L10	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
31000	3100	L09	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
27900	3100	L08	773	600	0	600	527	0	2	0	0	4	0	1	7	7	0
24800	3100	L07	1485	1140	0	1140	1055	0	5	0	0	6	2	1	14	14	8
21700	3100	L06	1485	1140	0	1140	1055	0	5	0	0	6	2	1	14	11	8
18600	3100	L05	1485	1140	0	1140	1055	0	5	0	0	6	2	1	14	10	8
15500	3100	L04	2036	1148	8	1140	1055	0	5	0	0	6	2	1	14	9	8
12400	3100	L03	2026	1497	0	1497	1329	0	6	1	1	4	0	0	12	13	6
9300	3100	L02	2031	1625	0	1625	1378	0	7	2	2	14	0	0	25	10	17
6200	3100	L01	2020	1506	0	1506	1331	0	6	1	1	4	0	0	12	13	6
3100	3100	UG	1882	1562	0	1562	1311	0	7	1	1	12	0	2	23	8	15
0	3100	LG	567	449	0	449	373	0	2	0	0	3	0	0	5	0	2
	3000	B01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3000	B02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS			19655	14807	8	14799	13104	0	60	5	5	85	8	12	175	130	78
%								0.0%	34.3%	2.9%	2.9%	48.6%	4.6%	6.9%		74.3%	58.6%

SITE AREA	20594 m ²
FSR ALLOWED	1.70 :1
FSR	0.72 :1
HOB ALLOWED	28.00 m
HOB	45.58 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	0	36	3	5	77	7	17	18	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	162								187	11

DEFINITIONS

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- *ANY SPACE USED FOR THE LOADING AND UNLOADING OF GOODS (INCLUDING ACCESS TO IT)
- *TERRACES AND BALCONIES WITH OUTER WALLS LESS THAN 1.4M HIGH
- *VOIDS ABOVE A FLOOR AT THE LEVEL OF A STOREY OR STORE ABOVE

GBA DEFINED AS THE SUM OF THE AREA OF EACH FLOORPLATE, MEASURED TO THE EXTERNAL FACE OF FAÇADE WALLS INCLUSIVE OF BALCONIES



TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

BUILDING C

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
29900		LO															
27900	2000	ROOF															
24800	3100	L08	487	360	0	360	314	0	3	0	0	2	0	0	5	5	5
21700	3100	L07	487	360	0	360	314	0	3	0	0	2	0	0	5	5	4
18600	3100	L06	487	360	0	360	314	0	3	0	0	2	0	0	5	5	4
15500	3100	L05	487	360	0	360	314	0	3	0	0	2	0	0	5	4	4
12400	3100	L04	749	360	4	356	308	0	3	0	1	1	0	0	5	4	4
9300	3100	L03	725	562	0	562	496	0	5	0	0	3	0	0	8	4	3
6200	3100	L02	725	562	0	562	496	0	5	0	0	3	0	0	8	3	3
3100	3100	L01	864	562	0	562	496	0	5	0	0	3	0	0	8	3	3
0	3100	UG	802	413	0	413	337	2	3	0	0	0	0	1	6	3	2
	3100	LG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3000	B01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3000	B02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS			5813	3899	4	3895	3389	2	33	0	1	18	0	1	55	36	32
%								3.6%	60.0%	0.0%	1.8%	32.7%	0.0%	1.8%		65%	58%

SITE AREA	20594 m ²
FSR ALLOWED	1.70 :1
FSR	0.19 :1
HOB ALLOWED	28.00 m
HOB	31.90 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	1	20	0	1	16	0	1	6	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	45								59	3

DEFINITIONS

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TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

BUILDING D

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
33000		LO															
31000	2000	ROOF															
27900	3100	L08	930	705	0	705	620	0	1	0	1	3	0	1	6	5	0
24800	3100	L07	1168	731	0	731	645	0	1	0	1	4	1	3	10	8	7
21700	3100	L06	1154	907	0	907	820	0	3	0	1	5	1	1	11	9	6
18600	3100	L05	1154	907	0	907	820	0	3	0	1	5	1	1	11	7	6
15500	3100	L04	1154	907	0	907	820	0	3	0	1	5	1	1	11	7	6
12400	3100	L03	1154	907	0	907	820	0	3	0	1	5	1	1	11	7	6
9300	3100	L02	1154	907	0	907	820	0	3	0	1	5	1	1	11	7	6
6200	3100	L01	1154	907	0	907	820	0	3	0	1	5	1	1	11	7	6
3100	3100	UG	1090	902	0	902	784	0	4	0	1	4	1	1	11	6	6
0	3100	LG	625	500	0	500	412	1	2	0	0	2	1	0	6	4	2
	3000	B01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3000	B02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS			10737	8280	0	8280	7381	1	26	0	9	43	9	11	99	67	51
%								1.0%	26.3%	0.0%	9.1%	43.4%	9.1%	11.1%		68%	55%

SITE AREA	20594 m ²
FSR ALLOWED	1.70 :1
FSR	0.40 :1
HOB ALLOWED	28.00 m
HOB	32.12 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	1	16	0	8	39	8	15	10	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	96								106	6

DEFINITIONS

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TELOPEA
DEVELOPMENT SCHEDULE

JOB NO. 20320
CLIENT FRASERS PROPERTY
DATE 16/07/2021

SCHEDULE

BUILDING E

HEIGHT (m)	FTF (m)	LEVEL	G.B.A. (m²)	TOTAL G.F.A. (m²)	COMMUNAL G.F.A. (m²)	RESIDENTIAL G.F.A. (m²)	N.S.A. (m²)	Apartment Mix							No. of Aparments	Solar access	Ventilation
								Studio	1 Bed	1 Bed + S	2B 1B	2 Bed	2 Bed + S	3 Bed			
30000		LO															
27900	2100	ROOF															
24800	3100	L07	1185	890	0	890	791	0	3	0	1	6	0	1	11	11	8
21700	3100	L06	1192	890	0	890	791	0	3	0	1	6	0	1	11	11	8
18600	3100	L05	1185	890	0	890	791	0	3	0	1	6	0	1	11	11	8
15500	3100	L04	1192	890	0	890	791	0	3	0	1	6	0	1	11	11	8
12400	3100	L03	1185	890	0	890	791	0	3	0	1	6	0	1	11	11	8
9300	3100	L02	1273	890	0	890	791	0	3	0	1	6	0	1	11	11	8
6200	3100	L01	1238	950	0	950	847	0	4	0	1	6	0	1	12	10	8
3100	3100	UG	1200	969	0	969	808	0	2	0	2	7	0	0	11	10	6
0	3100	LG	387	296	0	296	259	0	0	0	0	1	0	2	3	3	2
	3000	B01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3000	B02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS			10037	7555	0	7555	6660	0	24	0	9	50	0	9	92	89	64
%								0.0%	26.1%	0.0%	9.8%	54.3%	0.0%	9.8%		97%	70%

SITE AREA	20594 m ²
FSR ALLOWED	1.70 :1
FSR	0.37 :1
HOB ALLOWED	28.00 m
HOB	30.13 m

Car Rate	0.6	0.6	0.6	0.9	0.9	0.9	1.4	1 per 10 units	Bike	Motor Bike
Required	0	14	0	8	45	0	13	9	1 per 1 unit + 1 per 15 visitor	1 per 15 car spces
TOTAL	89								98	6

DEFINITIONS

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APPENDIX

08 ADG COMPLIANCE

TELOPEA MASTERPLAN - STAGE 1A RESIDENTIAL
REVISED DA DEVELOPMENT SCHEDULE



Job No 20320
 Date 8/07/2021

ADG Ref.	Item Description	Compliance	Notes
PART3	SITING THE DEVELOPMENT		
3A	SITE ANALYSIS		
3A-1	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	The Development has been designed to respond to the site analysis undertaken in relation to orientation, views, internal apartment amenity and both the current surrounding context as well as the projected future context for the area, particularly in relation to the vision for the Telopea Masterplan.
	Each element in the Site Analysis Checklist is addressed.	YES	
3B	ORIENTATION		
3B-1	Objective: Building types & layouts respond to the streetscape & site while optimising solar access within the development		
	Design Guidance	CONSIDERED	The alignment and orientation of the buildings have been assessed to ensure both the apartments as well as the context will maintain sufficient solar access.
	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	N/A	
	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	YES	
3B-2	Objective: Overshadowing of neighbouring properties is minimised during mid winter.		
	Design Guidance	CONSIDERED	The proposal has been designed to minimise both overshadowing of communal areas within the site and potential overshadowing to neighbouring sites. The site orientation allows the northern public communal landscape zones to receive generous solar access during the day. The proposal also has a limited impact on the adjacent development to the south.
	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	YES	

	Overshadowing is minimised to the south or downhill by increased upper level setbacks	YES	The roof top expression is setback to further reduce the bulk and scale
	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	YES	
	A minimum of 4 hours of solar access is retained to solar collectors on neighbouring buildings	YES	
3C	PUBLIC DOMAIN INTERFACE		
3C-1	Objective: Transition between private & public domain is achieved without compromising safety & security.		
	Design Guidance	CONSIDERED	The lobby on ground floor will present as a clearly defined and legible entry point to the development and mediating the transition between public street and private development.
	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	
	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: Architectural detailing; Changes in materials; Plant Species; Colours; Opportunities for people to be concealed are minimised	YES	
3C-2	Objective: Amenity of the public domain is retained & enhanced.		
	Design Guidance	CONSIDERED	The architecture and building composition define a network of landscaped areas which celebrate the clusters of existing trees. The neighbourhood park, public link and communal open spaces are well defined by the built form and allow for a variety of uses and program.
	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	YES	
	Substations, pump rooms, garbage storage areas & other service requirements are located in basement car parks or out of view	YES	
	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	YES	
	Where development adjoins public parks, open space or bushland, the design positively addresses this interface & uses the following design solutions: 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	
3D	COMMUNAL & PUBLIC OPEN SPACE		

3D-1	Objective: An adequate area of communal open space is provided to enhance residential amenity & to provide opportunities for landscaping.	
	Design Criteria	CONSIDERED
	1 Communal open space has a minimum area equal to 25% of the site	YES
	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)	YES
	Design Guidance	CONSIDERED
		The proposal achieves greater than 25% of the site area as communal open space
		The proposed communal open spaces will receive more than 50% of direct sunlight for a minimum of 2 hours on 21 June. The proposed new public park to north will enhance the solar amenity for the development.
	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	YES
	Communal open space are co-located with deep soil areas	YES
3D-2	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
	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: 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	N/A
	Objective: Communal open space is designed to allow for a range of activities, respond to site conditions & be attractive and inviting	
	Design Guidance	CONSIDERED
		The communal open space proposed is intended to be an activated, inviting space that can be used for a variety of functions. The proposed roof level communal space will allow for diversity in use and it is proposed to provide shading structures and seating arrangements with generous soft landscaping to encourage sustained use.
	Facilities are provided within communal open spaces & common spaces for a range of age groups (see 4F Common Circulation & Spaces), incorporating the following: 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
	Objective: Communal open space is designed to maximise safety.	
3D-3	Design Guidance	CONSIDERED
		The communal open space are largely overlooked by adjacent apartments, encouraging passive surveillance. They will be well lit, encouraging use to enhance safety
	Communal open space & public domain should be readily visible from habitable rooms & private open space areas while maintaining visual privacy. Design solutions include: 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	Objective: Public open space, where provided, responds to the existing pattern & uses of the neighbourhood.	

	Design Guidance	CONSIDERED	The development provides public open space at ground level and has direct connection to the light rail plaza to north encouraging natural pedestrian movement through the site.												
	Public open space is well connected with public streets along at least one edge	YES													
	POS is connected with nearby parks & other landscape elements	YES													
	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 all ages	YES													
	Positive street address & active street frontages are provided adjacent to POS	YES													
	Boundaries are clearly defined between POS & private areas	YES													
3E	DEEP SOIL ZONES														
3E- 1	Objective: Deep soil zones are suitable for healthy plant & tree growth, improve residential amenity and promote management of water and air quality.														
	Design Criteria	CONSIDERED													
	1 Deep soil zones are to meet the following minimum requirements:	YES													
	<table><tr><td>Site Area (sqm)</td><td>Minimum Dim (m)</td><td>Deep Soil Zone (% of site area)</td></tr><tr><td>less than 650</td><td>-</td><td>7</td></tr><tr><td>650-1500</td><td>3</td><td></td></tr><tr><td>greater than 1500</td><td>6</td><td></td></tr></table>	Site Area (sqm)	Minimum Dim (m)	Deep Soil Zone (% of site area)	less than 650	-	7	650-1500	3		greater than 1500	6			
Site Area (sqm)	Minimum Dim (m)	Deep Soil Zone (% of site area)													
less than 650	-	7													
650-1500	3														
greater than 1500	6														
	Design Guidance	CONSIDERED	The Public open space is intended to support large scale planting, providing for a deep soil zone within the site.												
	On some sites it may be possible to provide larger deep soil zones, depending on the site area & context: 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: 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: 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	Objective: Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external & internal visual privacy.														
	Design Criteria	CONSIDERED													
	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:	YES													
	<table><tr><td>Building Height (m)</td><td>Habitable Rooms & Balconies. (m)</td><td>Non-Habitable Rooms (m)</td></tr><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></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													

	Design Guidance	CONSIDERED	The proposal seeks to maintain building separation for both privacy and acoustic purpose.
	Generally as the height increases, one step in the built form is desirable due to building separations. Any additional steps do not cause a 'ziggurat' appearance	YES	
	For residential buildings next to commercial buildings, separation distances are measured as follows: Retail, office spaces & commercial balconies use the habitable room distances; Service & plant areas use the non-habitable room distances	N/A	
	New development are located & oriented to maximise visual privacy between buildings on site & for neighbouring buildings. Design solutions include: 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	In locations where ADG building separation could not be met, privacy screens have been used through to further protect the residents to ensure privacy is maintained.
	Apartment buildings have an increased separation distance of 3m (in addition to 3F-1 Design Criteria) when adjacent to a different zone that permits	N/A	
	lower density residential development, to provide for a transition in scale & increased landscaping (pg 63 figure 3F.5)		
	Direct lines of sight are avoided for windows & balconies across corners	YES	
	No separation is required between blank walls	YES	
3F-2	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	The communal open space proposed on the ground level, as well as the roof level communal space, common areas and access paths have been designed to be screened from apartments through the use of privacy screen.
	Communal open space, common areas & access paths are separated from private open space & windows to apartments, particularly habitable room windows. Design solutions include: 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	Objective: Building entries & pedestrian access connects to and addresses the public domain.		
	Design Guidance	CONSIDERED	The building has been designed to clearly define entry points and to ensure each lobby has direct street address. The private road to along the southern boundary of the site has been introduced to ensure all entries have direct street access.
	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	Objective: Access, entries & pathways are accessible & easy to identify.		
	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	YES	
	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	Objective: Large sites provide pedestrian links for access to streets & connection to destinations.		
	Design Guidance	CONSIDERED	An internal through-site link has been provided as a connection between light rail plaza and Manson Street.
	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	Objective: Vehicle access points are designed & located to achieve safety, minimise conflicts between pedestrians & vehicles and create high quality streetscapes.		
	Design Guidance	CONSIDERED	Vehicle access points have been carefully considered. Due to the natural sloping topography of the site, the entry points have been provided at two ends of the site at its lowest point to minimise carpark ramp being exposed onto the street front.
	Car park access is integrated with the building's overall facade. Design solutions include: 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: Changes in surface materials; Level changes; Landscaping for separation	YES	
3J	BICYCLE & CAR PARKING		
3J-1	Objective: Car parking is provided based on proximity to public transport in metropolitan Sydney & centres in regional areas.		
	Design Criteria	CONSIDERED	

1 For development in the following locations: 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

YES

CONSIDERED

A Draft Telopea CPA DCP is currently under review by CoP; the minimum parking rates proposed in the Draft Telopea CPA DCP provide for a general overview of future parking requirements within the Telopea CPA.

Car parking will be provided as follows:

0.6 per 1 bedroom apartment (minimum provision)

0.9 per 2 bedroom apartment (minimum provision)

1.4 per 3 bedroom apartment (minimum provision)

1 visitor per 10 apartments (DCP control)

Also included in the proposal will be:

A minimum of 1 car share space for developments with 50 or more dwellings, to be located on-street where practicable

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 Objective: Parking & facilities are provided for other modes of transport.

Design Guidance

CONSIDERED

The proposed carpark will provide secure undercover bicycle and motorbike parking spaces for residents and visitors

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

YES

3J-3 Objective: Car park design & access is safe and secure.

Design Guidance

CONSIDERED

The Basement has been designed to maximise efficiency within the floorplate while maintaining site lines where possible. Storage cages and bicycle parking will be accessed from dedicated pedestrian areas. Pedestrian paths through the carpark will be clearly delineated through signposting and line marking, with adequate lighting throughout

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 Objective: Visual & environmental impacts of underground car parking are minimised.

Design Guidance

CONSIDERED

The extent of excavation required to the basement levels has been minimised as much as possible. This has been achieved through an efficient carpark layout with double loaded corridors throughout. Whilst the site itself slopes significantly, the design of the basement carpark allows for it to be entirely submerged The basement carpark will be mechanically ventilated to allow for fresh air supply.

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	Objective: Visual & environmental impacts of on-grade car parking are minimised.		
	Design Guidance	CONSIDERED	The number of on grade parking is minimised. On grade parking has a maximum gradient of 1:50.
	Parking is located on the side or rear of the lot away from the primary street frontage	YES	
	Cars are screened from view of streets, buildings, communal and private open space areas	YES	
	Safe and direct access to building entry points is provided	YES	
	Parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space	YES	
	Stormwater run-off is managed appropriately from car parking surfaces	YES	
	Bio-swales, rain gardens or on site detention tanks are provided, where appropriate	YES	
	Light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving	YES	
3J-6	Objective: Visual & environmental impacts of above ground enclosed car parking are minimised.		
	Design Guidance	YES	Above ground parking will be provided on site
	Exposed parking should not be located along primary street frontages	YES	
	Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include:	YES	
	- Car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a 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 (see figure 3J.9)		
	- Positive street address and active frontages should be provided at ground level		

PART4

DESIGNING THE BUILDING

4A	SOLAR & DAYLIGHT ACCESS		
4A-1	Objective: To optimise number of apartments receiving sunlight to habitable rooms, primary windows & private open space.		
	Design Criteria	CONSIDERED	
	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	YES	
	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	N/A	
	3 A maximum of 15% of apartments in a building receive no direct sunlight between 9 am - 3 pm at mid winter	YES	
	Design Guidance	CONSIDERED	The development proposes a total of 443 new apartments. Of these, 334 receive a minimum of 2 hours sunlight (75.4%).
			There are number of apartments receiving sunlight from 8am-9am and 3pm - 4pm based on the current and potential future development of the adjacent sites.
			There are less than 15% of total apartments proposed with south facing aspect receiving no solar access.
	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: Dual aspect apartments, Shallow apartment layouts, Two storey & mezzanine level apartments, Bay windows

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

Achieving the design criteria may not be possible where: 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

Design drawings need to demonstrate how site constraints & orientation preclude meeting Design Criteria & how the development meets the objective.

YES

YES

YES

4A-2 Objective: Daylight access is maximised where sunlight is limited.

Design Guidance

CONSIDERED Skylight has been proposed to the apartments with limited solar access to ensure living spaces are well lit throughout the day.

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: Use is restricted to kitchens, bathrooms & service areas; 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: 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 Objective: Design incorporates shading & glare control, particularly for warmer months.

Design Guidance

CONSIDERED The proposed design incorporates overhangs to balconies to allow shading from summer sun as well as fixed and sliding louvre screens for additional layer of glare control.

A number of the following design features are used: 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 Objective: All habitable rooms are naturally ventilated.

Design Guidance

YES

CONSIDERED The development proposes a total of 443 apartments up to 14 storeys. Of these, 238 are naturally cross ventilated (61.5%).

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

Doors & openable windows maximise natural ventilation opportunities by using the following design solutions:

YES

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

4B-2 Objective: The layout & design of single aspect apartments maximises natural ventilation.

Design Guidance

CONSIDERED Single aspect apartments have been designed to have limited depth in order to facilitate airflow within the apartment.

Apartment depths limited to maximise ventilation & airflow

YES

	Natural ventilation to single aspect apartments is achieved with the following design solutions: 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	Capable of complying
4B-3	Objective: Number of apartments with natural cross vent is maximised to create comfortable indoor environments for residents.		
	Design Criteria	CONSIDERED	
	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	YES	
	2 Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	YES	
	Design Guidance	YES	
	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	Objective: Ceiling height achieves sufficient natural ventilation & daylight access.		
	Design Criteria	CONSIDERED	The minimum ceiling heights have been accommodated with 2.7m for habitable rooms and 2.4m for non-habitable rooms.
	1 Measured from finished floor level to finished ceiling level, minimum ceiling heights are:	YES	
	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 area 3.3 for ground and first floor to promote future flexibility of use		
	These minimums do not preclude higher ceilings if desired		
4C-2	Objective: Ceiling height increases the sense of space in apartments & provides for well proportioned rooms.		
	Design Guidance	CONSIDERED	The hierarchy of rooms within apartments will be emphasised by providing 2.7m ceiling heights for habitable rooms such as bedrooms and living areas, with 2.4m ceilings to service zones such as bathrooms.
	A number of the following design solutions are used: 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	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	YES	
4D	APARTMENT SIZE & LAYOUT		

4D-1	Objective: The layout of rooms within apartment is functional, well organised & provides a high standard of amenity.		
	Design Criteria	CONSIDERED	All of the apartment internal areas are greater than the required minimum sizes, including the provision of 5sqm for additional bathrooms.
			All habitable rooms have windows.
	1 Apartments have the following minimum internal areas:	YES	
	Apartment Type Minimum Internal Area (sqm)	YES	
	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.	YES	
4D-2	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	YES	
	Design Guidance	CONSIDERED	
	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	PARTIAL	
	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	
	Design Criteria	CONSIDERED	
	1 Habitable room depths are limited to a maximum of 2.5 x the ceiling height	PARTIAL	
	2 In open plan layouts (living, dining & kitchen are combined) maximum habitable room depth is 8m from a window	PARTIAL	
	Design Guidance		
4D-3	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: bathrooms & laundries have external openable window; main living spaces are oriented toward the primary outlook & aspect and away from noise sources	YES	
	Objective: Apartment layouts are designed to accommodate a variety of household activities & needs.		
	Design Criteria	CONSIDERED	
	1 Master bedrooms have a minimum area of 10sqm & other bedrooms 9sqm (excluding wardrobe space)	YES	
	2 Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	YES	
	3 Living rooms or combined living/dining rooms have a minimum width of:	YES	
	– 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	YES	
	Design Guidance	CONSIDERED	The habitable rooms within the development has been designed in accordance to the ADG.
	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	YES	

Apartment layouts allow flexibility over time, design solutions include: 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 Objective: Apartments provide appropriately sized private open space & balconies to enhance residential amenity.
Design Criteria

CONSIDERED

1 All apartments are required to have primary balconies as follows:

YES

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

YES

Design Guidance

CONSIDERED

The balconies within the development has been designed in accordance to the ADG.

Increased communal open space are provided where the number or size of balconies are reduced

YES

Storage areas on balconies is additional to the minimum balcony size

YES

Balcony use may be limited in some proposals where: 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

YES

In these situations Juliet balconies, operable walls, enclosed wintergardens, and 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 Objective: Primary private open space & balconies are appropriately located to enhance liveability for residents

Design Guidance

CONSIDERED

Ground level apartments have extended generous front garden which have direct access to the private communal spaces. Privacy screen has been used throughout the ground floor apartment to ensure privacy is maintained.

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 Objective: Private open space & balcony design is integrated into & contributes to the overall architectural form & detail of the building

Design Guidance

CONSIDERED

The design of the ground level extended gardens are an integral part of the overall articulation of the proposal. Their extents define the overall form of the tower elements and their generous sizing, as well as their relationship to internal spaces encourage sustained use.

	Solid, partially solid or transparent fences & balustrades are selected	YES	
	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		
	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 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	
	Where clothes drying, storage or air conditioning units are located on balconies, they are screened & integrated in the building design	YES	
	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	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	Objective: Common circulation spaces achieve good amenity & properly service the number of apartments		
	Design Criteria	CONSIDERED	
	1 The maximum number of apartments off a circulation core on a single level is eight	PARTIAL	Some floor plates provide upto 12 apartment per circulation core
	2 For buildings of 10 storeys & over, the maximum number of apartments sharing a single lift is 40	YES	
	Design Guidance	CONSIDERED	The proposal does not strictly comply with the design criteria as it has between 8 and 12 apartments per level and a single core. It does comply with the design guidance providing 12 or less apartments per core. The core is adjacent to an opening in the building floorplate, which allows for the provision of natural daylight creating an inviting circulation space.
	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: Series of foyer areas with windows & spaces for seating; Wider areas at apartment entry doors & varied ceiling heights	N/A	
	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: 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	Objective: Common circulation spaces promote safety & provide for social interaction between residents		

Design Guidance	
Direct & legible access are provided between vertical circulation points & apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines	
Tight corners & spaces are avoided	
Circulation spaces are well lit at night	
Legible signage are provided for apartment numbers, common areas & general wayfinding	
Incidental spaces, eg space for seating in a corridor, at a stair landing, or near a window are provided	
In larger developments, community rooms for activities such as owners corporation meetings or resident use, are provided & are co-located with communal open space	

CONSIDERED

The proposal incorporates a clear and legible entry procession from the entrance to each apartment door.

Corridors will have ample daylight and be clearly lit at night.

YES

YES

YES

YES

YES

YES

4G

STORAGE

4G-1

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:

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

YES

CONSIDERED

The proposal will accommodate the recommended amount of storage per apartment. 50% or greater of the required area being accessible from within the apartment living areas.

Apartment storage allocation at this stage is as follows:

studio apartments: 4m3

1 bedroom 6m3

2 bedroom 8m3

3 bedroom 10m3

YES

YES

YES

4G-2

Objective: Additional storage is conveniently located, accessible & nominated for individual apartments

Design Guidance

CONSIDERED

Additional storage not located in apartments will be located in carpark levels in secure storage 'cages'. These stores will be clearly allocated to specific apartments and be readily accessible from common aisles or from adjacent allocated car spaces.

Storage not located in apartments is secure and clearly allocated to specific apartments

Storage is provided for larger & less frequently accessed items

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

If communal storage rooms are provided they are accessible from common circulation areas of the building

Storage not located in apartment is integrated into the overall building design & not visible from public domain

YES

YES

YES

YES

YES

4H

ACOUSTIC PRIVACY

4H-1	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	
4H-2	Objective: Noise impacts are mitigated within apartments through layout & acoustic treatments		
	Design Guidance	CONSIDERED	Will comply in accordance with acoustic report recommendations.
	Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: 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: 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	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: 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: Solar & daylight access, Private open space & balconies, Natural cross ventilation	YES	
4J-2	Objective: Appropriate noise shielding or attenuation techniques for building design, construction & choice of materials are used to mitigate noise transmission		
	Design Guidance	CONSIDERED	Will comply in accordance with acoustic report recommendations.
	Design solutions to mitigate noise include: 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	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 are proposed ranging from Studio, 1B, 1B+Study, 2B, 2B+Study, 3B and 3B+Study apartments.
	A variety of apartment types is provided	YES	

	The apartment mix is appropriate, taking into consideration: 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	Objective: The apartment mix is distributed to suitable locations within the building		
	Design Guidance	CONSIDERED	The apartment mix is distributed throughout the building. There are larger apartments on both lower and upper levels and each level accommodates a diversity of apartment types.
	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	YES	
4L	GROUND FLOOR APARTMENTS		
4L-1	Objective: Street frontage activity is maximised where ground floor apartments are located		
	Design Guidance	CONSIDERED	Ground floor apartment with extended front garden helps to activate the open communal spaces.
	Direct street access are provided to ground floor apartments	YES	
	Activity is achieved through front gardens, terraces & the facade of the building. Design solutions include: 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.	N/A	
4L-2	Objective: Design of ground floor apartments delivers amenity & safety for residents		
	Design Guidance	CONSIDERED	1800mm fencing has been proposed throughout on the ground level apartments to ensure privacy is maintained.
	Privacy & safety are provided without obstructing casual surveillance. Design solutions include: 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: High ceilings & tall windows, Trees & shrubs allow solar access in winter & shade in summer	YES	
4M	FACADES		
4M-1	Objective: Building facades provide visual interest along the street while respecting the character of the local area		
	Design Guidance	CONSIDERED	The buildings are composed to be clearly legible and to clearly establish a base, middle and top. Warm shades of brick are used to differentiate the base from the middle and bronze perforated metal screens and create a break through the building form to provide further contrast and warmth within the overall composition
	Design solutions for front building facades include: Composition of varied building elements, Defined base, middle & top of buildings, Revealing & concealing certain elements	YES	
	Building services are integrated within the overall façade	YES	
	Building facades are well resolved with appropriate scale & proportion to streetscape & with consideration of human scale. Solutions include: 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	Objective: Building functions are expressed by the façade		
	Design Guidance	CONSIDERED	The built form is clearly defined into 3 distinct elements; ground level, main form and top expression. Ground level entry has also been clearly defined through articulation of the portal expression.
	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	Objective: Roof treatments are integrated into the building design & positively respond to the street	YES	
	Design Guidance	CONSIDERED	The proposal allows for roof terraces which are a mix of private and communal spaces, allowing for an activated, landscaped space.
	Roof design relates to the street. Design solutions include: 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: Roof design is in proportion to the overall building size, scale & form, Roof materials compliment the building, Service elements are integrated	YES	
4N-2	Objective: Opportunities to use roof space for residential accommodation & open space are maximised		
	Design Guidance	CONSIDERED	See response to Objective 4N-1
	Habitable roof space are provided with good levels of amenity. Design solutions include: Penthouse apartments, Dormer or clerestory windows, Openable skylights	YES	
	Open space is provided on roof tops subject to acceptable visual & acoustic privacy, comfort levels, safety & security considerations	YES	
4N-3	Objective: Roof design incorporates sustainability features		
	Design Guidance	CONSIDERED	The facade element of roof has a vertical perforated shading device to minimise impact of harsh solar into the living room.
	Roof design maximises solar access to apartments during winter & provides shade during summer. Design solutions include: Roof lifts to the north, Eaves & overhangs shade walls & windows from summer sun	YES	
	Skylights & ventilation systems are integrated into the roof design	YES	
4O	LANDSCAPE DESIGN		
4O-1	Objective: Landscape design is viable & sustainable		
	Design Guidance	CONSIDERED	
	Landscape design is environmentally sustainable & can enhance environmental performance by incorporating: 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: 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	
4O-2	Objective: Landscape design contributes to streetscape & amenity		
	Design Guidance	CONSIDERED	
	Landscape design responds to the existing site conditions including: Changes of levels, Views, Significant landscape features including trees & rock outcrops	YES	
	Significant landscape features are protected by: 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	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: 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:	YES		
	Site Area (sqm)	Recommended Tree Planting		
	Up to 850	1 medium tree per 50sqm of deep soil zone		
	850 - 1500	1 large tree or 2 medium trees per 90sqm of deep soil zone		
	Greater than 1500	1 large tree or 2 medium trees per 80sqm of deep soil zone		
4P-2	Objective: Plant growth is optimised with appropriate selection & maintenance			
	Design Guidance	CONSIDERED	Appropriate selection of planting is used to ensure planters are well maintained.	
	Plants are suited to site conditions, considerations include: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	YES		
	Irrigation & drainage systems respond to: Changing site conditions, Soil profile & planting regime, Whether rainwater, stormwater or recycled grey water is used	YES		
4P-3	Objective: Planting on structures contributes to the quality & amenity of communal & public open spaces			
	Design Guidance	CONSIDERED	Landscape elements has been used throughout to create an inviting and pleasant environment.	
	Building design incorporates opportunities for planting on structures. Design solutions include: 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	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 15% of the total apartments incorporating the Livable Housing Guideline’s silver level universal design features	YES	Capable of complying	
4Q-2	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: 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	Objective: Apartment layouts are flexible & accommodate a range of lifestyle needs			
	Design Guidance	CONSIDERED		
	Flexible design solutions include: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	Objective: New additions to existing buildings are contemporary, complementary & enhance area’s identity & sense of place			
4R-2	Objective: Adapted buildings provide residential amenity but does not precluding future adaptive reuse			
4S	MIXED USE			

4S-1	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	YES
	Mixed use developments positively contribute to the public domain. Design solutions include: 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	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: 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	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
	A number of the following design solutions are used: 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 address & public domain amenity Capable of complying.	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	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	Objective: Development incorporates passive environmental design.	
	Design Guidance	CONSIDERED
	Adequate natural light is provided to habitable rooms	YES
	Well located, screened outdoor areas are provided for clothes drying	YES
4U-2	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: 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	Objective: Adequate natural ventilation to minimise the need for mechanical ventilation.	
	Design Guidance	CONSIDERED
	A number of the following design solutions are used:, 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	Objective: Potable water use is minimised.	

	Design Guidance	CONSIDERED	
	Water efficient fittings, appliances & wastewater reuse are incorporated	YES	
	Apartments are individually metered	YES	
	Rainwater is collected, stored & reused on site	YES	
	Drought tolerant, low water use plants are used within landscaped areas	YES	
4V-2	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	YES	
	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, On site stormwater & infiltration, including bio-retention systems such as rain gardens or street tree pits	YES	
4V-3	Objective: Flood management systems are integrated into site.		
	Design Guidance	CONSIDERED	
	Detention tanks are located under paved areas, driveways or in basements	YES	
	On large sites, parks or open spaces are designed to provide temporary on site detention basins	YES	
4W	WASTE MANAGEMENT		
4W-1	Objective: Waste storage facilities are designed to minimise impacts on streetscape, building entry & amenity of residents.		
	Design Guidance	CONSIDERED	The waste storage system is proposed on the basement level with common waste holding areas. Refer to waste management report for more details.
	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	Objective: Domestic waste is minimised by providing safe & convenient source separation & recycling.		
	Design Guidance	CONSIDERED	Each floor will have a single waste chute system for either general waste or recycling, with the provision of a diverter system at the base.
	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	Objective: Building design detail provides protection from weathering.		
	Design Guidance	CONSIDERED	The building in its articulation and detailing is intended to be robust and low maintenance. A limited material palette is proposed - material choices have been carefully considered in relation to durability in environments close to water bodies.
	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, Methods to eliminate or reduce planter box leaching, Appropriate design & material selection for hostile locations	YES	
4X-2	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	YES	
	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	Objective: Material selection reduces ongoing maintenance costs.		
	Design Guidance	CONSIDERED	The building façade is intended to be robust and hard-wearing. Materials such as bricks and metal panelling systems are proposed. Internally, common areas will be resilient in order to accommodate high traffic patterns, particularly around the lift lobby. Common areas will also have lighting that is triggered by motion detectors.
	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, 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	YES	

APPENDIX

9 WELLS COMMUNITIES

For insertion in TELOPEA URBAN RENEAL – URBAN DESIGN CONCEPT PLAN
APPENDIX A: SUSTAINABILITY

4. Silver WELL Communities certification
- An initial Pre-Certification process covering the whole precinct, and individual final Certifications for each development phase will be pursued as follows:
- Stage 1 – Core, Stage 1A and Eastern Phase;
 - Stage 2 – Southern Precinct Phase; and
 - Stage 3 – Northern Precinct Phase.

- The WELL Communities certification will encompass baseline initiatives such as:
- The project will certify one building under the WELL Buildings rating;
 - AIR: Employing strategies for the reduction of ambient air pollution;
 - WATER: Providing healthy drinking water without high pollutants concentrations or risk factors for bacteria;
 - NOURISHMENT: Improving community nutritional status by enabling equitable access to grocery stores and supermarkets;
 - LIGHT: Promoting an overarching plan for light across the whole community prior to development, in order to determine appropriate limitations on planned or existing lighting that may not be easily changed;
 - MOVEMENT: Encouraging a high degree of and proximity to mixed-uses with the goal of creating a more compact, connected and active community;
 - THERMAL COMFORT: Protecting community members against indoor and outdoor impacts of extreme temperatures by communicating extreme weather warnings and health-relevant advice in a timely manner;
 - SOUND: Prioritising the assessment and management of environmental noise in project planning and design development;
 - MATERIALS: Supporting waste management and sanitation practices that consider hazardous waste streams and reduce the risk of environmental contamination and health hazards;
 - MIND: Improving availability of and access to community-based mental health support and care; and
 - COMMUNITY: Collaboratively develop a shared vision, measurements and activities for community design and development.

For insertion in TELOPEA URBAN RENEAL – URBAN DESIGN CONCEPT PLAN
APPENDIX K: DESIGN GUIDELINES – 4. SUSTAINABILITY

4. Achieve a minimum Silver level WELL rated community, encompassing provisions to comply with the following WELL Pre-conditions:
- AQU: Fundamental Air Quality
 - WQT: Drinking Water Quality
 - SUP: Supermarket Access
 - LMP: Lighting Master Plan
 - MIX: Mixed-use Development
 - EXT: Extreme Weather Warnings
 - SOU: Sound Planning
 - HWM: Hazardous Waste Management
 - AMH: Access to Mental Health Services
 - VIS: Community Visioning
 - GND: Green Rating Systems

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