IVANHOE

LOT A1

DEVELOPMENT APPLICATION
DESIGN REPORT
PREPARED FOR ASPIRE CONSORTIUM
DOCUMENT NO. S12067A-001

REVISION F
04 OCT 2018

CLIENT

Aspire Consortium
Frasers Property Australia and Mission Australia Housing

CONSULTANTS

Architects	Bates Smart
Planner	Ethos Urban
Structure	Enstruct
Landscape	Hassell
Civil	ADWJ
Services	WSP
Vertical Transportation	WSP
Accessibility	Morris Goding
Waste Management	Elephant's Foot
Wind	CPP
Traffic	Ason Group
Acoustic	Acoustic Logic
Geotech	Douglas Partners

PROJECT NUMBER

S12067.A

BATESSMART.

ARCHITECTURE
INTERIOR DESIGN
URBAN DESIGN
STRATEGY

MELBOURNE

1 Nicholson Street Melbourne
Victoria 3000 Australia
T +61 3 8664 6200
F +61 3 8664 6300

SYDNEY

43 Brisbane Street
Surry Hills New South Wales
2010 Australia
T +61 2 8354 5100
F +61 2 8354 5199

WWW.BATESSMART.COM

ABN 68 094 740 986

DISCLAIMER

Note: All area calculations are advisory only and all figures should be checked and verified by a licensed surveyor.

CONTENTS

1.0 INTRODUCTION

This Design Report has been prepared by Bates Smart for The Aspire Consortium on behalf of NSW Land and Housing Corporation and forms part of a Development Application to the NSW Department of Planning and Environment.

It describes the proposed design and architectural response for a site known as Lot A1 within Stage 1 of Masterplan State Significant Development Application (SSD8707). It is to be read in conjunction with a separate document prepared by Hassell Studio - Landscape & Public Domain Report, under which application for relevant roads and public domain around the site are also proposed. This proposal has been developed with careful consideration to the building envelope and Design Guidelines defined in the Ivanhoe Estate Masterplan State Significant Development Application.

In summary the development proposes:

/ A twenty-five storey tower consisting of 23 residential floors,

/ A single storey childcare centre occupying the upper ground floor,

/ Four below ground basement floors containing off street parking for residents, visitors and child care centre staff and visitors.

/ Landscaped spaces including landscaped setbacks to streets at ground level, a landscaped external play area for the childcare centre on the upper ground floor, and a rooftop containing private landscaped terraces further described within the public domain design report prepared by Hassell Studio.

We confirm that Guy Lake of Bates Smart directed the design of the enclosed Development Application and that Mr Lake is registered as an architect in accordance with the Architects Act 1921.

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

DEVELOPMENT SUMMARY:

Floor Space	
Lot Area:	3,116 sqm
Total Floor Space:	21,729 sqm GFA
Residential Mix	
Dwellings:	269 Apartments
	7 studio apartments
	111 one bedroom apartments
	141 two bedroom apartments
	10 three bedroom apartments
Parking	
Car Spaces:	233 Spaces total
	208 residents spaces
	13 visitor spaces
	15 Child care centre spaces (12 in basement and 3 on street)
Bicycle Spaces:	269 Spaces

Our vision has been to deliver a new gateway building consisting of warm, textured materials and expressing a fine grain human scale. Earthy precast concrete combined with Sydney sandstone create a rich, warm and uniquely Sydney palette. Bronze aluminium fins shimmer downwards through vertical gardens and wrap around the base of the tower expressing the smooth flowing lines of the floorplate. Ivanhoe Lot A1 intentionally presents a strong, slender, and organic presence to Herring Road, seeking to stand as both a benchmark and icon identifying a warm and vibrant future residential community within.

2.0
SITE + CONTEXT

2.1 SITE LOCATION

The site is Lot A1 within Stage 1 of the Masterplan Development Application submitted to the Department of Planning and Environment in February of 2018 known as the Ivanhoe Masterplan. It is located near the corner of Epping Road and Herring Road within the Ryde Local Government Area (LGA) and falls within the Macquarie University Station (Herring Road) Priority Precinct, a planning initiative undertaken by the Department of Planning and Environment to transform the area into a vibrant centre that benefits from the available transport infrastructure and the precinct's proximity to jobs, retail and education opportunities within the Macquarie Park Corridor.

Lot A1 is located at the northernmost point of the masterplan and has three road frontages comprising Herring Road to the North West, a proposed new entrance road with a steep gradient into the Masterplan from Herring Road to the South East, and a new neighbourhood street within the masterplan to the South.

2.2 EXISTING SURROUNDING CONTEXT

Immediately to the North East of the site are a series of four storey residential apartment buildings. Immediately to the West of the site, four former student accommodation buildings are located on a lot which is subject to a future redevelopment from an approved DA, while to the North on the opposite side of Herring Road, Morling College, an education facility consisting of a two storey and seven storey building, is flanked on both east and west sides by several 13-23 storey residential buildings, some currently under construction. Macquarie University Railway Station and Macquarie Park Shopping Centre are located 430 metres to the North West.

2.3 FUTURE MASTERPLAN CONTEXT

Lot A1 acts as the interfacing development between the currently evolving context along Herring Road and the proposed future Ivanhoe Masterplan to the south. The proposed development will be:

/ the first development undertaken within the proposed Ivanhoe precinct,

/ the only development which interfaces with an existing road frontage, and

/ is positioned at the primary vehicular entrance and exit point and links to the new 'Main Street' within the masterplan.

As such it is considered the 'gateway' site to the future Ivanhoe precinct.

The masterplan will be developed in stages and when completed will accommodate around 3,400 residential apartments in a mixed tenure of both market, social and affordable dwellings. Dwellings will be provided in a 'tenure blind' manner such that market, social and affordable dwellings are indistinguishable from each other.

At the Southern interface of Lot A1, a proposed new 'Main Street' connects through the future precinct linking Herring Road via a new bridge over Shrimptons Creek to Lyonpark Road and the employment district to the South.

Lot A1 will consist of 269 residential market apartments and a childcare centre for 75 children.

2.4 PLANNING CONTEXT

The Ivanhoe SSDA Masterplan defines building envelopes for Lot A1 which envisages a 75 metre height limit.

The proposed development is compliant with the height, GFA and use controls.

In addition, the Masterplan adopts a series of Development Design Guidelines against which any individual lot application is to be assessed. A summary of responses to the development control guidelines is contained within chapter 7 of this report.

LEGEND:

- Macquarie University Train Station
- Camera Location (Refer to Adjacent Page)
- Lot A1
- Future New Road
- Future Bridge Connection to Lyonpark Rd

Principle 1: Context and neighbourhood character

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

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.


1.


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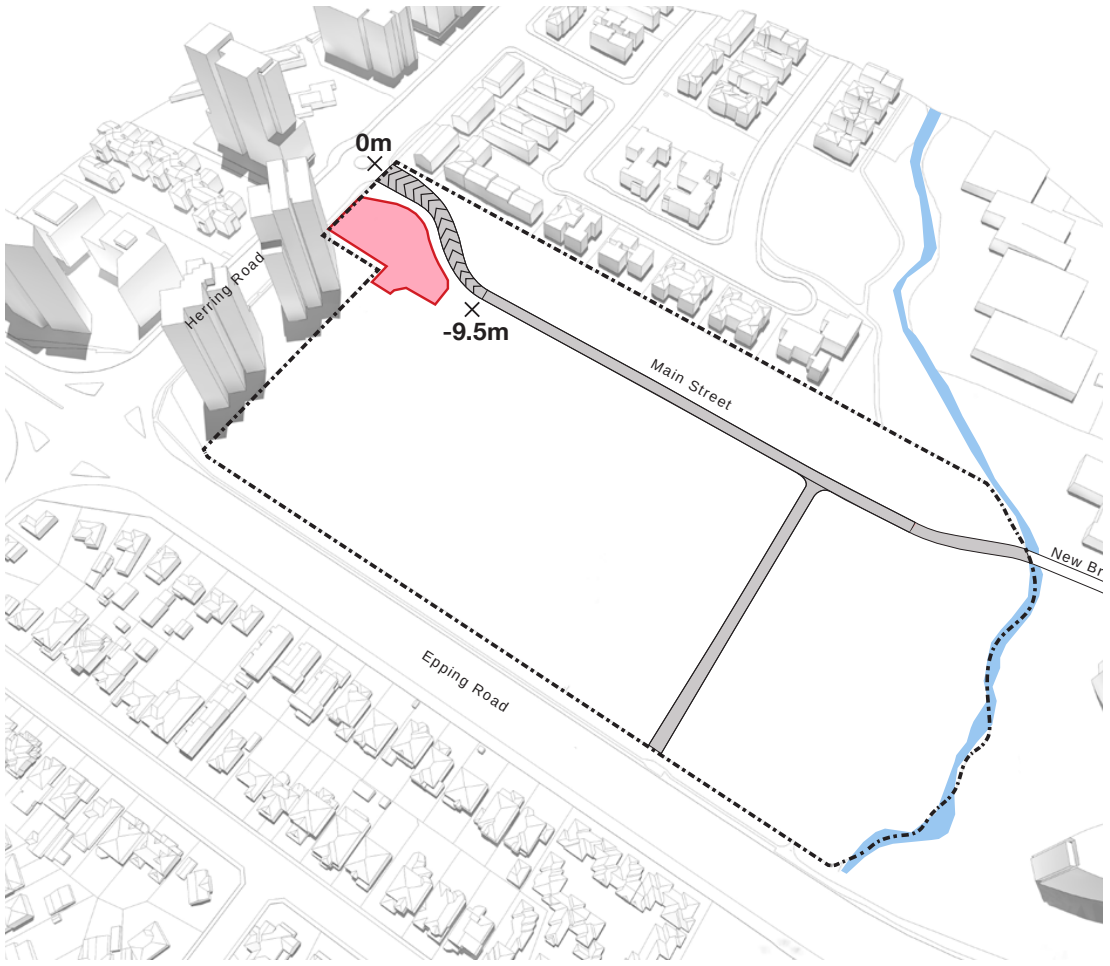
PICTURED
1/ Student Accommodation immediately adjacent to the West.
2/ Existing Buildings on Lot A1 from the South
3/ View West along Herring Road showing residential development to the North
4/ Lot A1 from Herring Road.
5/ Concept imagery of future developments within the Masterplan
6/ Concept imagery of future developments within the Masterplan

2.5 THE SITE

Lot A1 is located to the North East of the Ivanhoe Masterplan fronting Herring Road. It is 3,116 square metres in area. A steep existing grade falls away from Herring Road, creating a height difference of 9.5 metres along the length of Lot A1. An upgraded intersection and new two-way entry road will connect Herring Road with the proposed new Main Street.



2.6 FUTURE MASTERPLAN CONTEXT

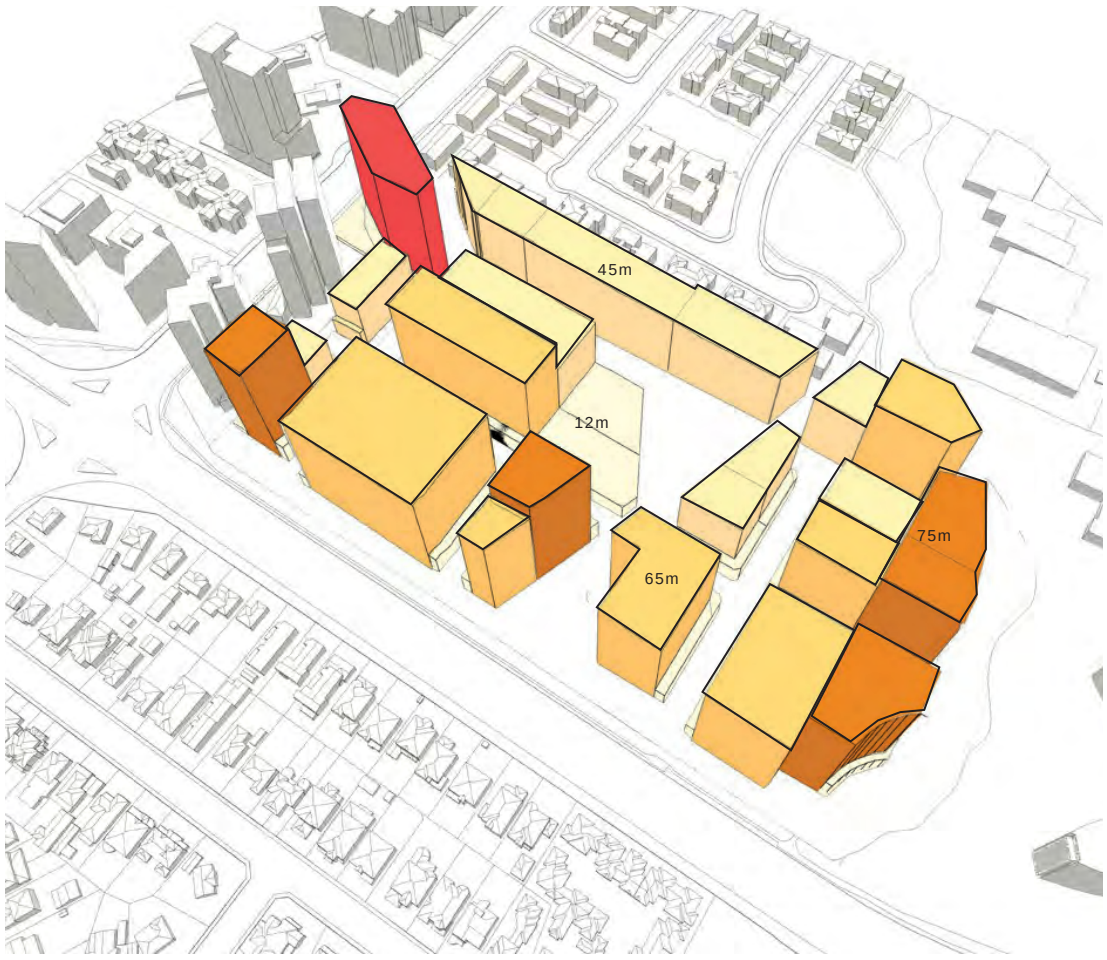
The future masterplan consists of a series of Neighbourhood Streets accessed via Main Street. Neighbourhood Streets consist almost exclusively of residential uses and are more intimate in scale, whereas Main Street consists mostly of non residential uses at ground floor and is therefore more civic in scale. Lot A1 sits on axis with Main Street.

Main Street

Neighbouring Streets

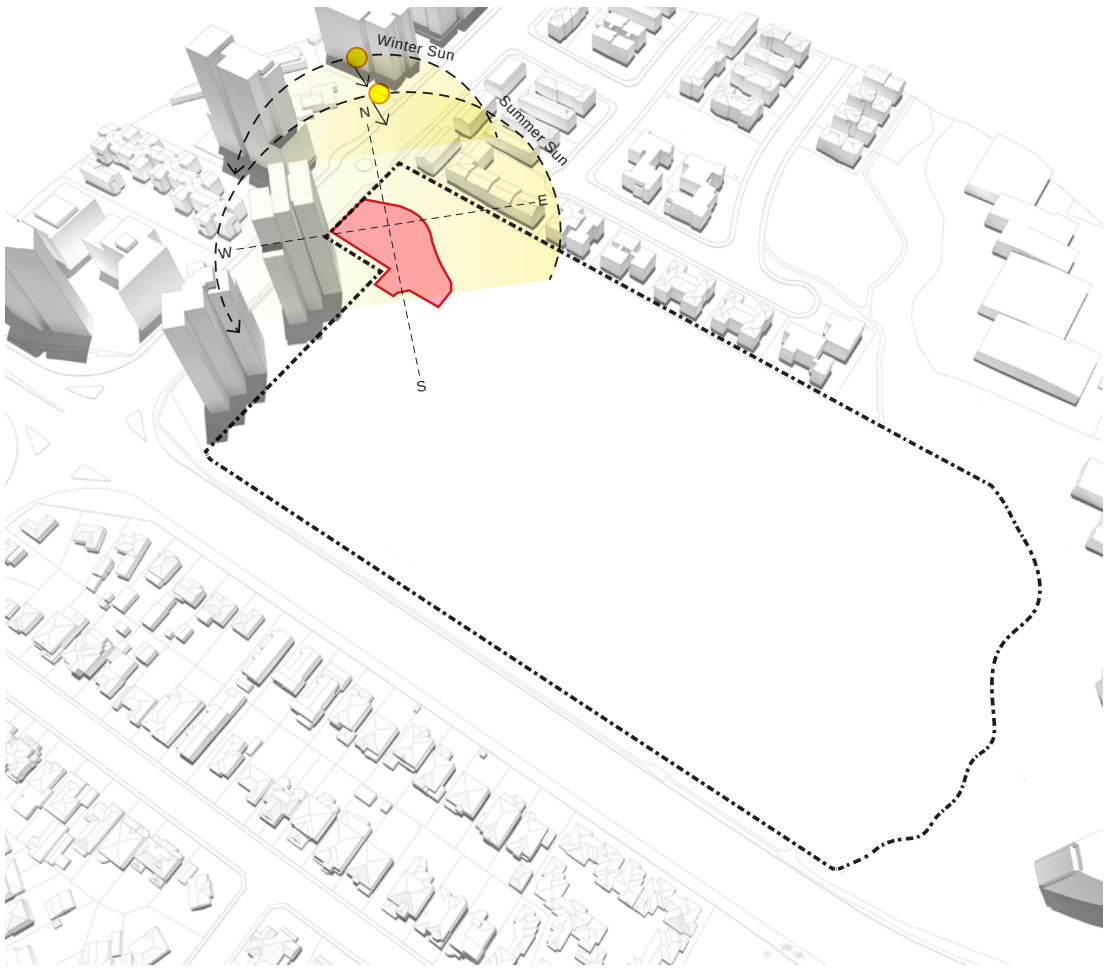
2.7 MASTERPLAN ENVELOPES

Three height limits apply across the masterplan precinct, 75 metres, 65 metres and 45 metres. Lot A1 is located in the zone with a 75 metre height limit and is consistent with that of existing and proposed residential buildings on the northern side of Herring Road.



2.6 SOLAR ACCESS + VIEWS

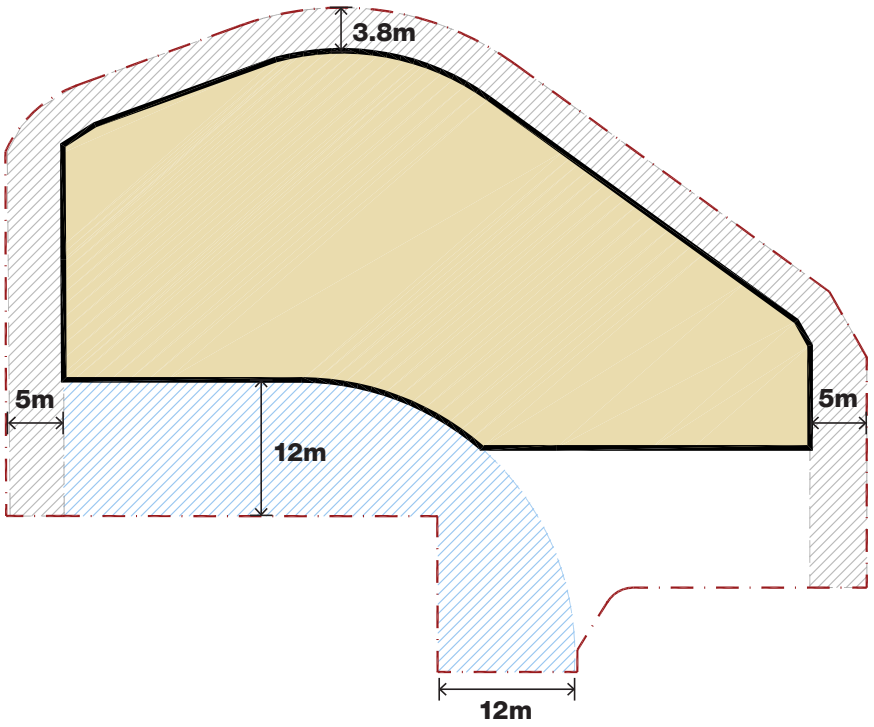
The site enjoys excellent opportunity for solar access with frontages of approximately 75 metres facing east and west, and a frontage of 33 metres facing north. At upper levels, high levels of residential amenity can be achieved through views East and South East towards Sydney and the CBD skyline, while district views are available to the West.



3.0
DESIGN CONCEPT

3.1 SITE SETBACKS

The SSDA masterplan requires a setback of 5 metres from Herring Road. A setback of 3.8m metres applies from the lot boundary fronting the new entry road. A setback of 5metres is required on the southern frontage to Neighbourhood Street. A building separation of 12m is required from western site boundary in accordance with ADG requirements for a compliant building of 8 or more storeys located on the adjacent site.

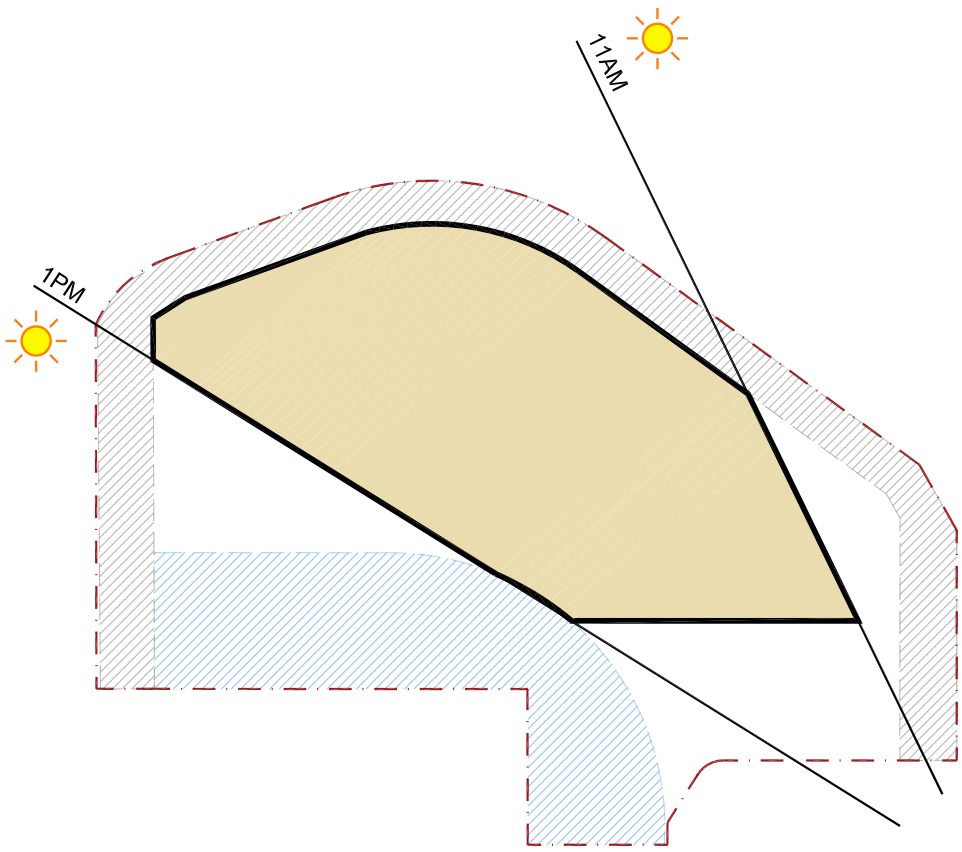


3.2 SOLAR ACCESS ALIGNMENTS

Two solar access alignments have been applied to the remaining permissible envelope:

/ A line representing the angle of the sun at 11am on the 21st June, applied to the eastern side to ensure 2 hours of solar access can be achieved to the adjacent future development on lot C1, and

/ A line representing the angle of the sun at 1pm on the 21st June, applied to the western side of the envelope to ensure apartments facing this orientation are able to achieve 2 hours of solar access during midwinter.



Principle 2: Built form and scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

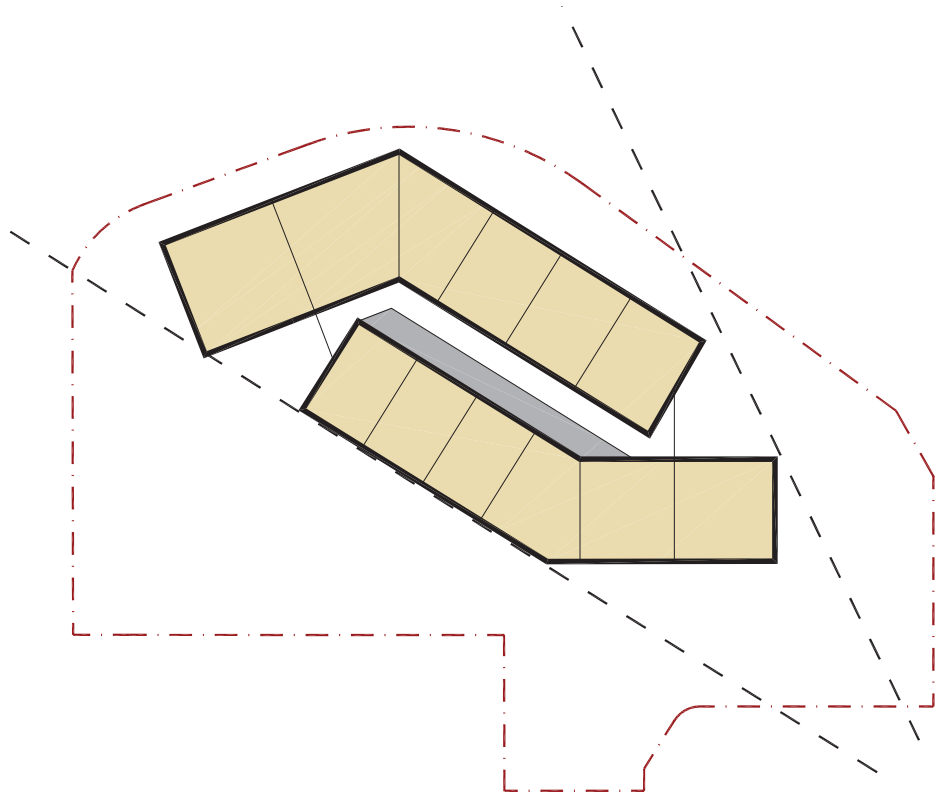
Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

3.3 INTERLOCKING FORMS

Two linear 'bars' of residential apartments 9.2 metres deep are arranged around a central core and lift lobby containing 3 residential lifts. The internal circulation corridor forms the space between both 'bars' and is left open at both ends, flaring open to achieve expansive views out as well as daylight and natural ventilation into the common areas.

The two 'bars' create a dynamic and symmetrical form to
/ present a slender vertical form to Herring Road at the entry to the masterplan
/ present a slender vertical form when viewed on axis from Main Street
/ Offer multiple unique viewpoints when viewed 'in the round' from the adjacent street network and context,
/ Reduce perceptions of building bulk through shortening the length of each facade into a series of shorter elements.

Our intention has been to design a unique and distinctive form which has no 'front' or 'back', but rather four unique sides which can be read 'in the round' given its prominent location and three street frontages.



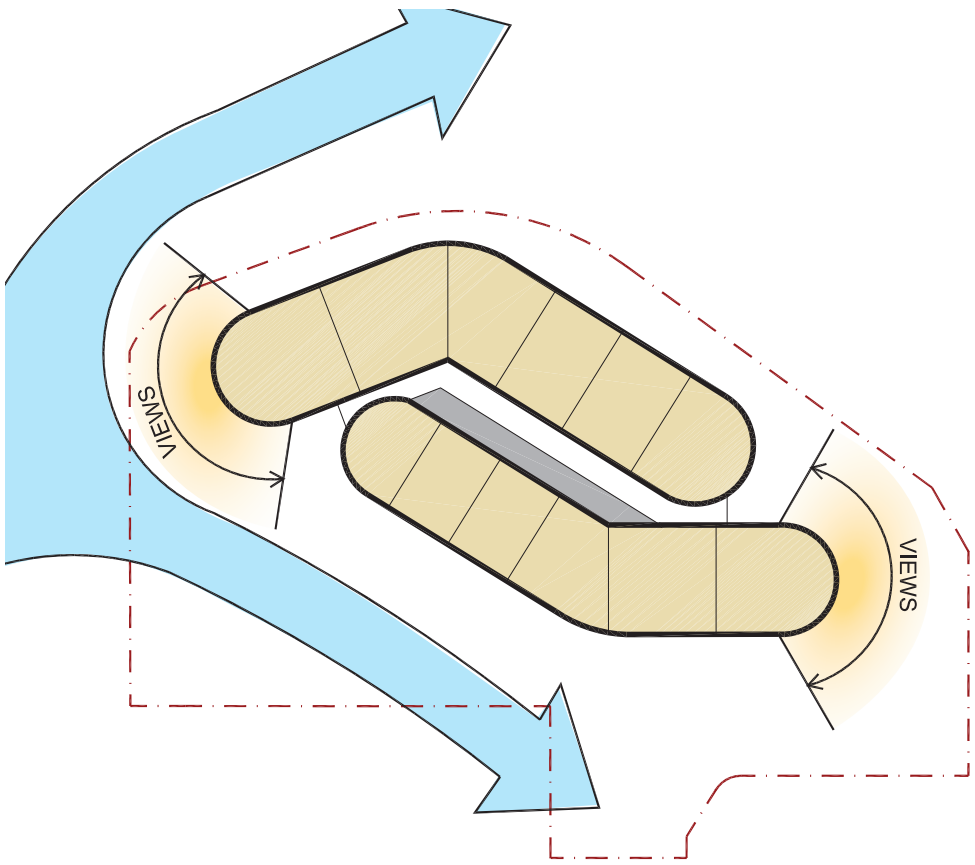
3.4 CURVED ENDS

The ends of each residential 'bar' are curved to:

/ Maximise resident amenity to end apartments by offering panoramic views out,

/ Reduce high level wind speeds, improving environmental conditions on both residential balconies as well as at ground level.

/ Create a soft organic form which contrasts from the prevailing rectangular forms nearby reinforcing the proposed development as a visual marker and 'gateway' to a new precinct rather than an extension of the residential developments on the Northern side of Herring Road.



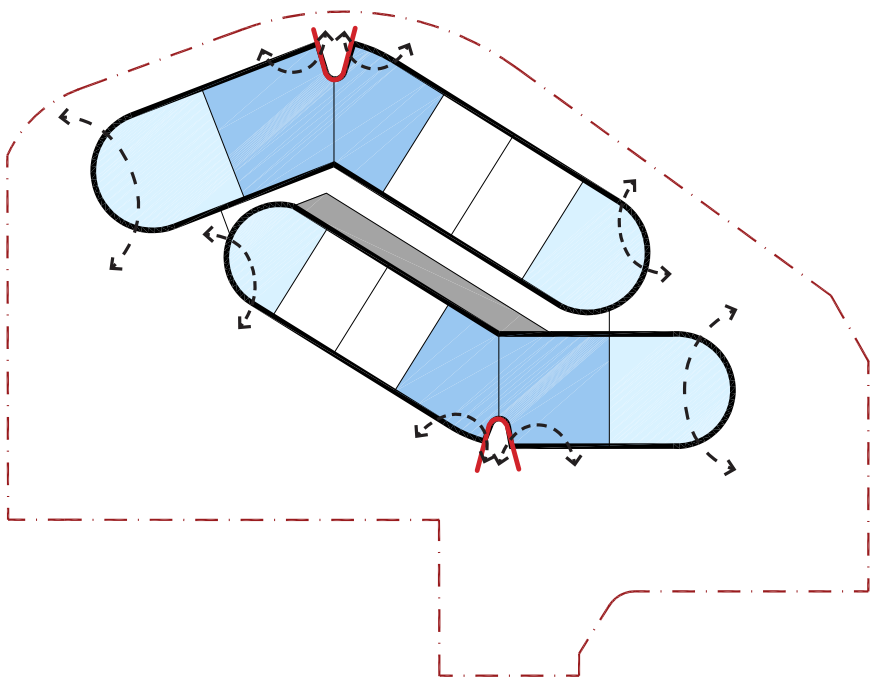
3.5 CREASES

Vertical “creases” are introduced at the geometric fold within each residential ‘bar’. The creases:

/ Enable crossflow ventilation to be achieved to 60% of apartments up to the first 9 storeys in accordance with ADG requirements,

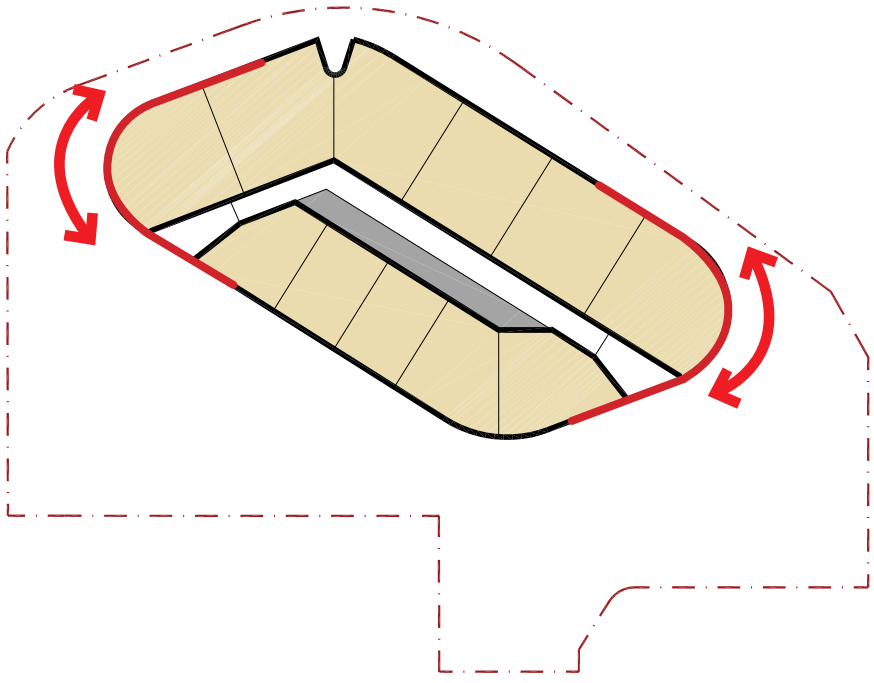
/ Bring light deeper into the plan through providing additional windows into bedrooms which also offer filtered views out,

/ Create a deep shadow articulation in the building form which breaks it into visually smaller vertical elements.



3.6 SINGULAR FORM

The form is further refined to create a ‘singular’ object which reads as a stronger and more unified single element.



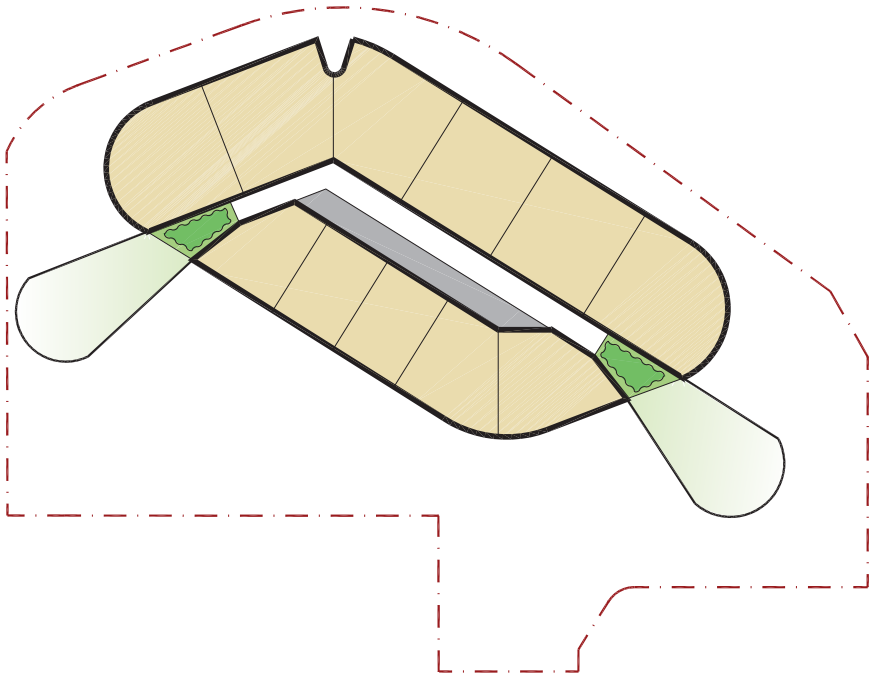
3.7 GARDENS

At each end of the internal circulation corridor, two storey voids are created to maximise daylight penetration into the circulation space. At the base of each void, external landscaped planters contain low level planting to provide a pleasant landscaped ‘sky garden’ outlook. ADG requirements stipulate that excellent amenity must be provided to internal circulation spaces in order to achieve 12 residential apartments per floor. The proposed development contains 13 apartments on low rise floors and 11 apartments on high rise floors, representing an average of 12 apartments per floor. Excellent amenity is achieved through:

/ Two storey voids located at the end of each corridor to bring natural light deep into the building,

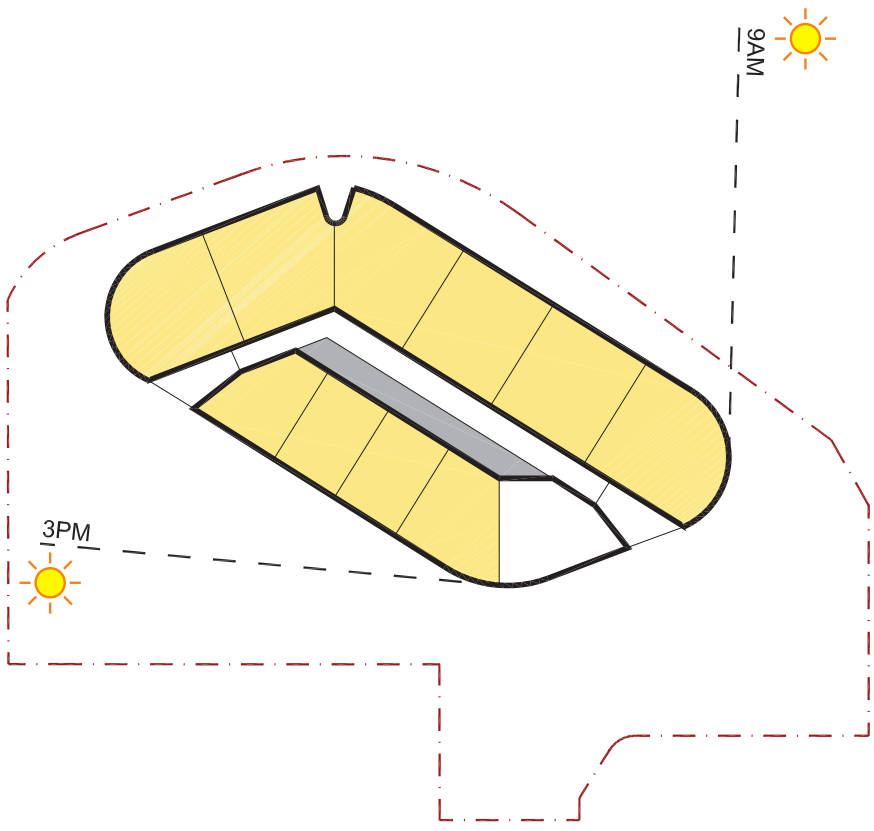
/ Operable louvres at the end of each corridor provide natural crossflow ventilation,

/ Views out are provided on all floors, with alternating gardens ensuring each floor receives one garden outlook.



3.8 SOLAR ACCESS

The resulting floorplate achieves excellent amenity with 12 out of 13 apartments receiving a minimum of 2 hours solar access between 9am and 3pm during the winter solstice on mid rise floors (92%), and 10 out of 11 apartments achieving a minimum of 2 hours solar access between 9am and 3pm on high rise floors (91%).



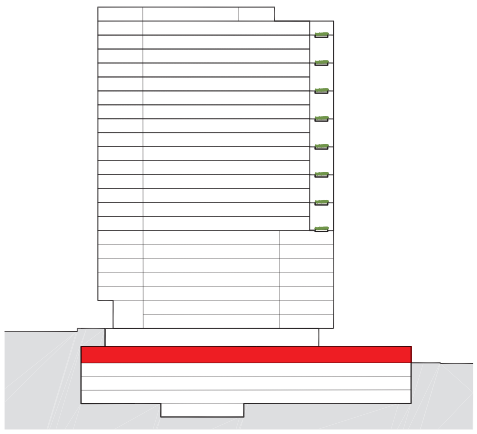
4.0 PROJECT DESCRIPTION

4.1 OVERVIEW

The proposed building is comprised of two elements:

/ A two storey base which steps in elevation to follow the natural gradient of the site and contains a childcare centre with outdoor play area for 75 children, two residential entrance lobbies, and a main vehicular entry point into the development.

/ A 23 storey tower consisting of 22 floorplates of approximately 1228 square metres gross building area each, with a 23rd rooftop penthouse floor of 495 square metres gross building area, set back from the floorplates below and with generous rooftop terraces.



4.2.1 LOWER GROUND INTERFACE (LEVEL LG)

The lowest point of Lot A1 occurs at RL 58 which also forms the northernmost end of Main Street. At this point, Lot A1 is on axis with Main Street and will form the visual termination of Main Street when future masterplan stages are complete.

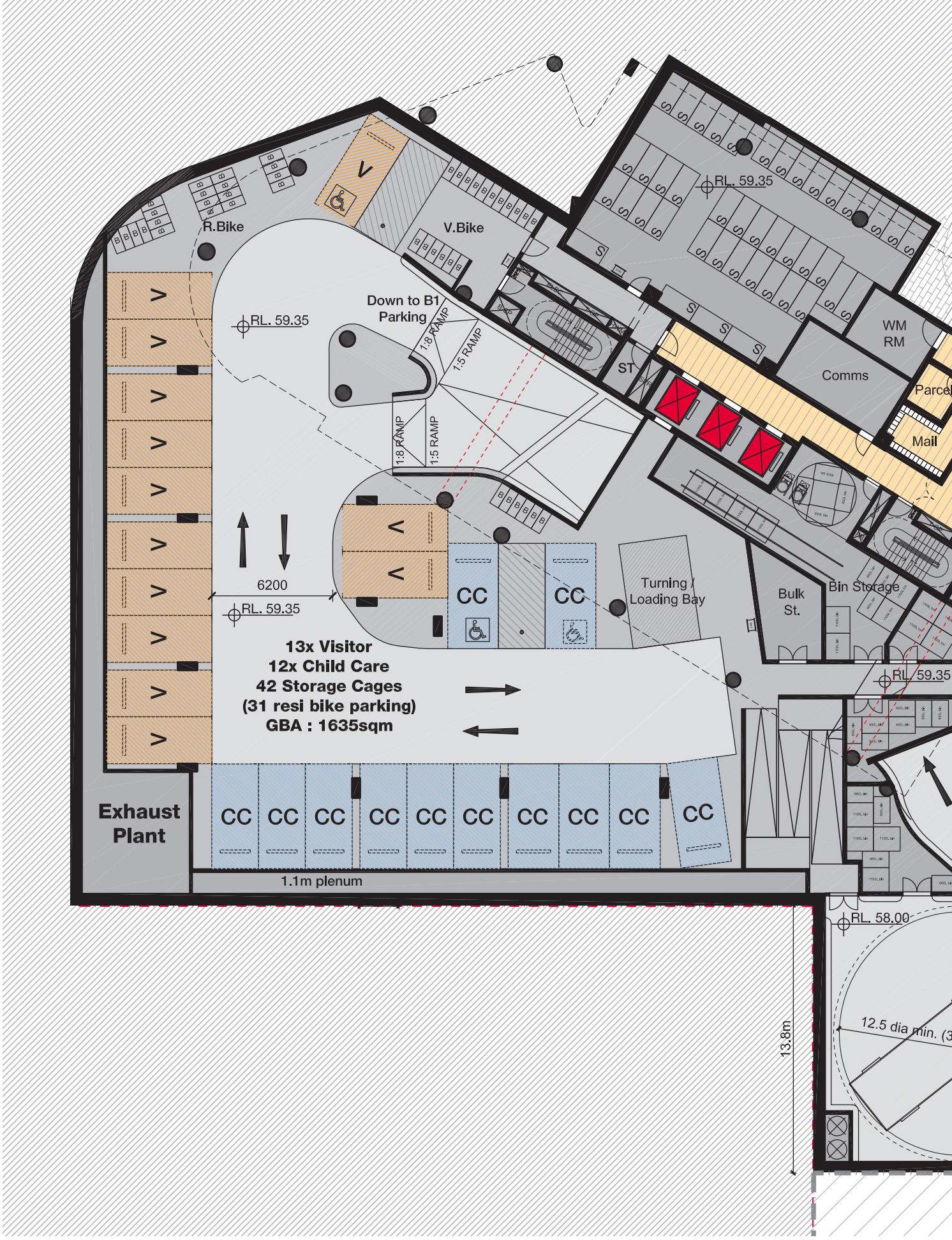
The proposed building seeks to address this key alignment via a landscaped public forecourt of approximately 340 square metres. Approximately 75 percent of the plaza is open to the sky and receives morning sun, while approximately 25 percent is sheltered by the lowest floor of the residential tower which soars 9 metres above.

Stairs gently rise by 1.35 metres within the forecourt to interface with the lower ground floor level at RL 59.35. To the north, a single storey glazed residential lobby provides access to the main residential lift bank, allowing convenient, accessible and direct future access to Main Street for residents. A second glazed entrance lobby containing lift and stair also provides access to the childcare centre located on the upper ground floor. The childcare centre entrance has been carefully located so as to ensure maximum visibility from Main Street, reinforcing its future civic character.

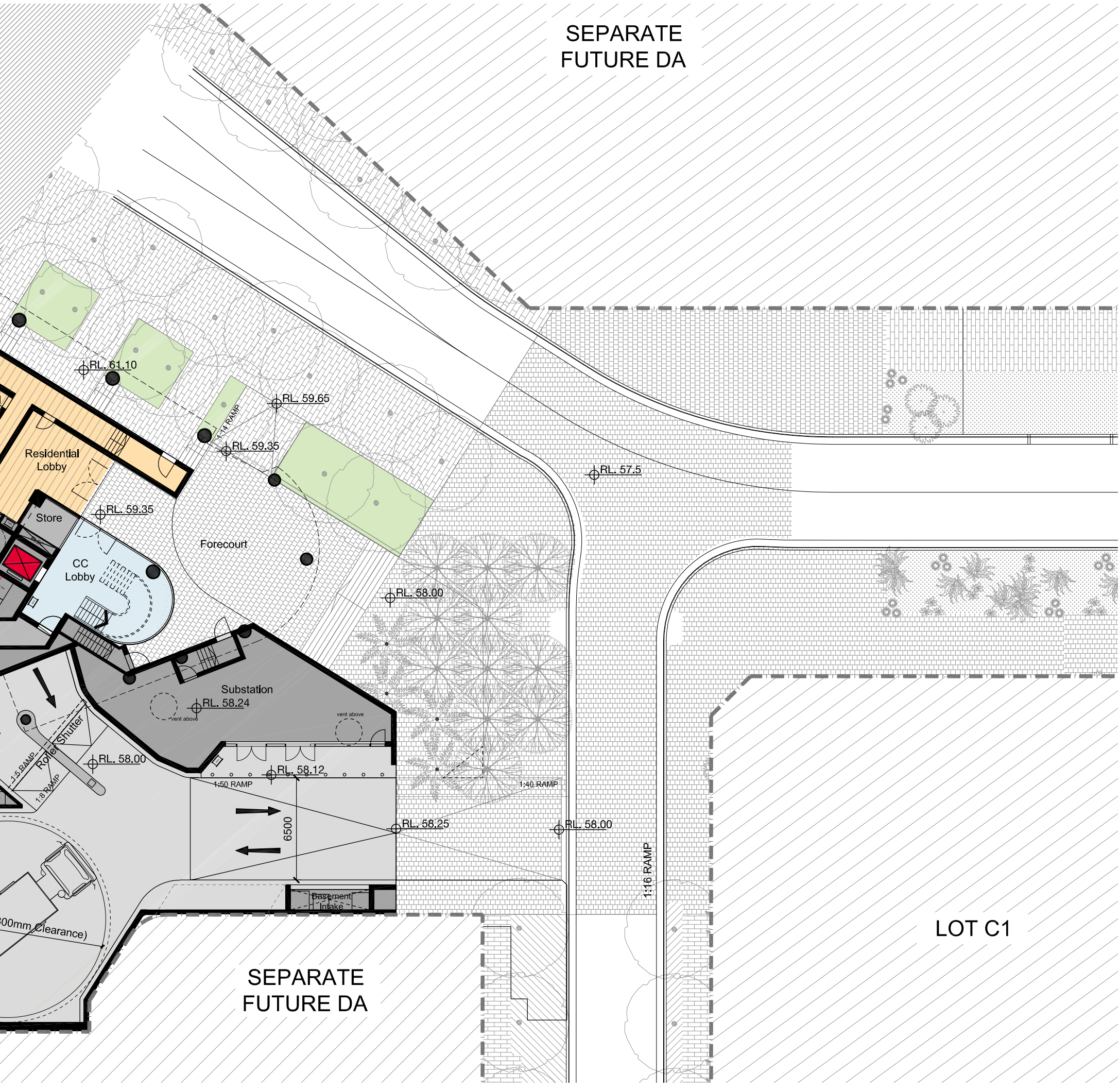
A colonnade of 2.0 metres in width, set back from the tower above, fronts East towards the new entrance road. The colonnade enables additional footpath width to be achieved within the public domain, within which a series of gentle steps are proposed to facilitate pedestrian movement along the area with steepest gradient. The two storey colonnade gradually tapers back in height from two storeys at the intersection between main street and neighbourhood street to 2.7 metres in height as the footpath rises towards Herring Road.

At the lowest point of the site and in the most discreet possible location, a basement entry ramp provides access to the below ground loading dock and carpark. The lower ground floor accommodates all waste and loading facilities for the proposed development in addition to 13 visitor parking spaces and 15 parking spaces for childcare centre use, of which 12 are located within the A1 basement and 3 are located on street level. Visitor and childcare car parking spaces are intentionally located on this level to enable separation of public and resident parking, while also provides convenient level access for both visitors and childcare centre users to the residential and childcare lobbies respectively.

The below ground loading dock contains a 12.5m diameter turntable and has been designed to also serve as the future loading dock for building A2, thus minimising vehicle entry points from the streetscape in accordance with masterplan design guidelines.



Our intention has been to achieve a two storey interface with Main Street in accordance with masterplan design guidelines while also creating a strong civic marker at the termination of its axis. The floorplate geometry presents as a soft, slender vertical form to Main Street, while the residential tower has been lifted 9 metres above ground enabling public domain to flow into the site and create a public landscaped plaza at street level.




NSW 22A

4.2.2 UPPER GROUND LEVEL

Located one floor above Main Street and one floor below Herring Road, the upper ground floor contains a dedicated childcare centre for 75 children. Whilst the internal design of the childcare centre will be subject to a separate future DA once an operator is secured, the concept plan allows for a total of 580 sqm of internal area which consists of 375 sqm of unencumbered internal play area and 780 square metres of unencumbered external play area on a landscaped terrace.

Internal spaces are able to be configured in up to 5 separate play areas of different age groups, while external play areas are located on both eastern and western sides to achieve solar access in both mornings and afternoons. The main external area, located to the west of the building and open to the sky, consists of approximately 650 square metres and achieves both privacy and visual separation from Herring Road through a level change of approximately 4.5 metres. The perimeter retaining walls are both landscaped and stepped, intentionally stepping down to the scale of the children envisaged to use the space.

The large outdoor play area is designed to house separate pergolas for different ages groups in order to provide adequate shading area and to also create a visual barrier for privacy to the lower level residents in A1. Screen planting is also provided on the south-west of the outdoor play space to provide visual privacy from future low level apartments on site A2.

The childcare centre is accessed via a lift and stair connecting to both Main Street and the centre carpark via a childcare entrance lobby on the lower ground floor.

Within the childcare centre, internal circulation is direct and linear, with play spaces arranged east and west of the main circulation spine where they achieve maximum frontage to the outdoor play areas. The western facade is set back 2.5 metres to provide protection to the play rooms from the afternoon sun.

At the northern end of the plan, a two storey external void with landscaped garden at the base brings natural light and ventilation deep into the plan from above, while also creating pleasant landscaped views out from within the childcare centre at the location most likely to be used for communal and staff / office uses.