

CASTLE TOWERS SITE B

230096 | 6-14 CASTLE STREET, CASTLE HILL NSW 2154

ARCHITECTURAL STATEMENT

Revision M | 26 FEBRUARY 2025

PREPARED BY

ClarkeHopkinsClarke

FOR

QIC

HATCH | RobertsDay

QIC

Stantec

ASPECT Studios

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INTRODUCTION

This report has been prepared on behalf of the Queensland Investment Corporation (QIC) (the Proponent) to support a Planning Proposal (PP) to amend The Hills Local Environmental Plan 2019 in relation to the site generally bounded by Showground Road, Kentwell Avenue, Castle Street and Pennant Street, Castle Hill, known as Site B.

The PP will facilitate the development of the Site to accommodate a well-designed, mixed-use neighbourhood that contributes positively to the Castle Hill Strategic Centre. It will deliver a public benefit to the community through the provision of high-quality and diverse housing within walking distance of amenities, the Castle Towers Shopping Centre and the Castle Hill Metro Station. It will also provide the growing community with a new public open space integrated with the surrounding pedestrian network.

The PP will complement the transforming urban environment of Castle Hill, spurred by the nearby Castle Hill Metro Station, the Pennant Street Target Area and the vision for the Castle Hill North Precinct.

PROJECT CONTACT

Jordan Curran
Partner

jordan.curran@chc.com.au
0413 863 166

3/78 Campbell Street
Surry Hills NSW 2010
02 9221 9200

01.01 ARCHITECTURAL STATEMENT

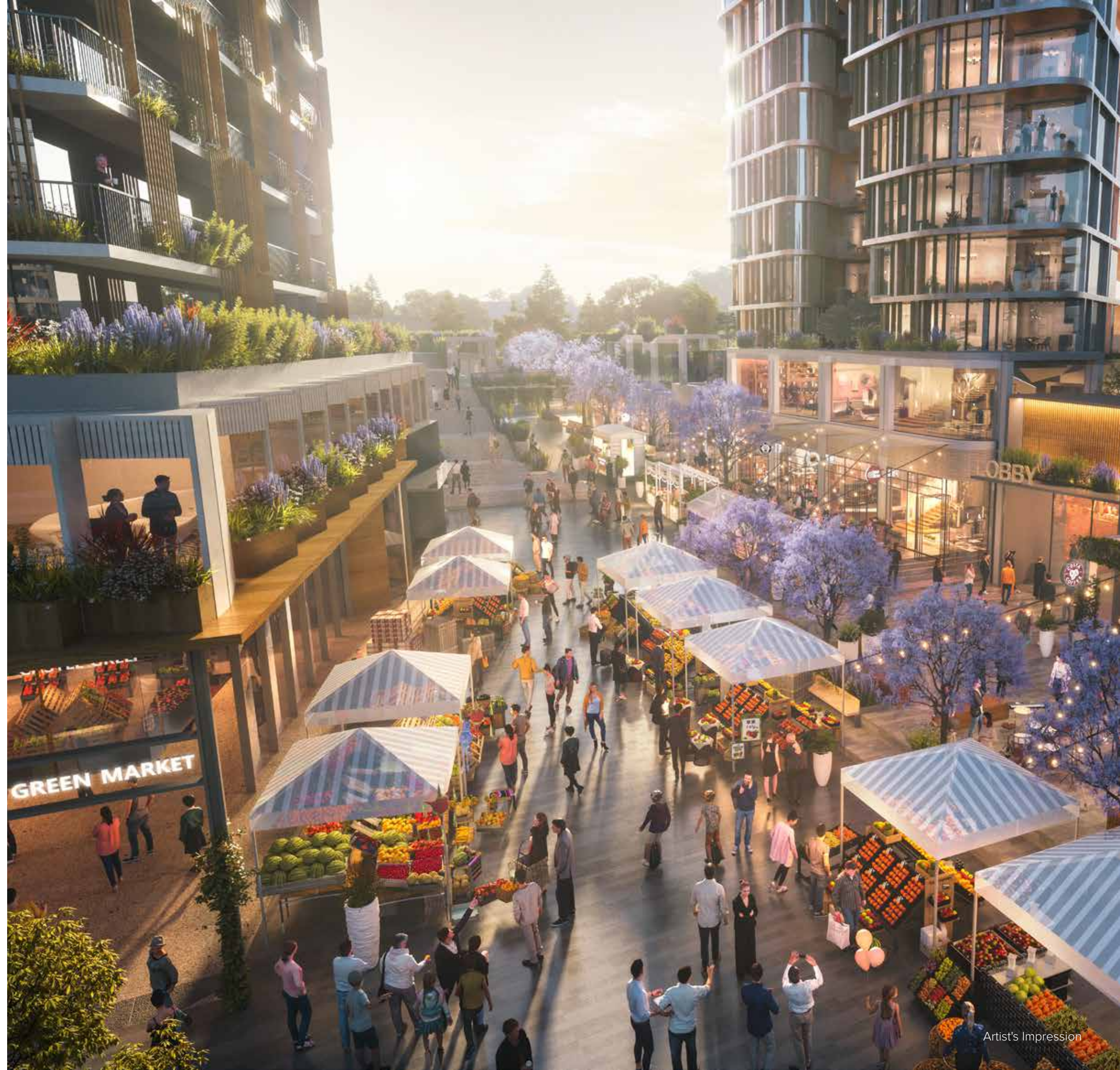
ARCHITECTURAL STATEMENT

Site B is located in the Castle Hill Strategic Centre in close proximity to the recently completed Castle Hill Metro and adjacent to the Castle Towers Shopping Centre. The precinct is undergoing a process of transformation with high density residential delivered to the north and east of the metro station and upgrades planned for the shopping centre.

The site fronts Castle Street to the north, Showground Road to the south, Kentwell Avenue to the west and Pennant Street to the east.

The site has a significant level change of approximately 12 metres across the entire site with the lowest point located on the northwest corner (intersection of Castle Street and Kentwell Avenue).

The site presents an unprecedented opportunity to deliver mixed uses including commercial, retail, diverse housing types and higher densities, whilst also providing community infrastructure. It is perfectly positioned to provide an appropriate harmonisation and transition between the shopping centre and the existing residential community, promoting a more walkable environment.



02.01 MASTERPLAN

MASTERPLAN

The masterplan envisions a diverse mixed-use urban community organised around a large public park that will be the civic heart of the new and existing community. The proposed public space and new streets will stitch into the existing context connecting the missing links and providing new places for people to engage, interact and socialise.

The proposed movement network, including vehicular, bicycle and pedestrian connection will promote and prioritise walkability and active transport modes. The site will be organised into super-lots, breaking up the built form and providing the site with fine grain permeability. Additionally, traffic-calming is envisioned to reduce vehicle speeds and discourage traffic from major roads to cut through the site.



- 1 Central Park
- 2 Library & Theatre
Existing - Council owned.
- 3 The Steps
- 4 Residential Uses
- 5 Urban Laneway
- 6 Ground Floor Retail Uses
- 7 Mixed Use (residential & ground level retail
and community uses in podium)
- 8 Mixed Use Development
- 9 Potential future connection (not part of this PP)

03.01 Site B VISION

VISION

Site B will be a high-amenity mixed-use urban precinct that will support a healthy and active residential community with a large central park and diverse housing options.

The vision for Site B sees the creation of a vibrant and active neighborhood with abundant green space for the new and existing community to come together.

This vision is achieved by a series of key design moves:

- 1- Create a large public park locating it away from main roads and surrounding it with residential interfaces and traffic-calmed local streets.
- 2- Provide pedestrian focused internal streets by protecting the footpaths with nature strips and widened footpaths.
- 3- Stepping the built form down based on the site context, with the highest points of the proposed built form located nearer to the Castle Hill urban core, which will contain taller buildings in the future, and stepping down appropriately to lower scale residential development in the wider context.



04.01 BUILT FORM

BUILT FORM

The built-form has been carefully considered to respond to multiple criteria including existing context and future development, the Housing SEPP's Apartment Design Guidelines (ADG), The Hills LEP Family apartment provisions.

The key urban generator of the masterplan is the central, open space which provides the opportunity for higher built-form to be located within the site confines away from the lower, peripheral residential interfaces, allowing built-form to:

- > Integrate height variation and create visual interest in response to the urban context
- > Transition downwards at the northwest corner (corner of Kentwell Avenue and Castle Street) to the adjacent, lower-scale residential uses
- > Transition upwards the southeast corner (corner of Pennant Street and Showground Road) responding to this major intersection, interfacing with the future Main Street Precinct

At ground floor terraces and live-work residential typologies with direct access from the street will improve passive surveillance and potential convenience, retail, and food and beverage tenancies will support local needs and provide significant activation.

A key consideration of the built form is the existing building on the corner of Castle St. and Pennant St. The proposed built form maintains significant building separation to the existing building.

To achieve the masterplan vision and enable the delivery of significant community infrastructure, the masterplan proposes a suitable amount of gross floor area (GFA) and heights that are balanced out by generous setbacks and the large central open space.



04.02 BUILT FORM
MASSING

The proposed built form is a combination of podium and tower forms of different heights dependent on their contextual position

These podium forms address the proposed and existing street network by:

- > Creating a lower street wall and placing active street frontages with residential terraces in the lower levels
- > Providing setbacks to improve human-scale
- > Anchoring further setbacks for the tower forms to reduce visual impact at street level
- > Accommodating ‘buffering’ commercial office and showrooms uses on busier road frontages (Pennant Street and Showground Road & Showground Road and Kentwell Ave)
- > Creating a more conducive environment with activation and passive surveillance

The building envelope proposed supports an estimated 1500 total dwellings (terrace type, SoHo type and apartments)

The proposed GFA is approximately 172,000m² achieving a 4.1 : 1 FSR across the entirety of the site.

Realising this bonus GFA is subject to satisfying the family apartments requirements under the Hills LEP.

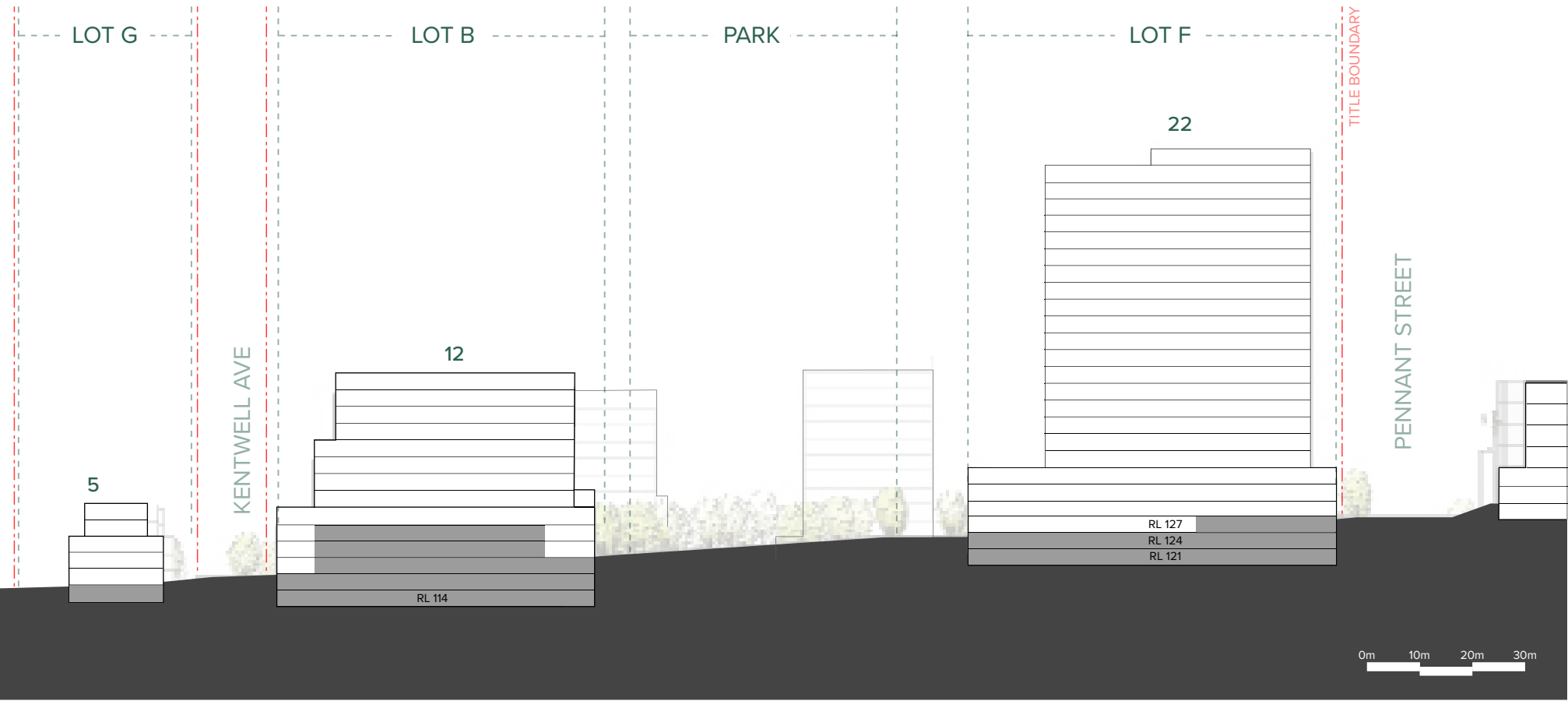
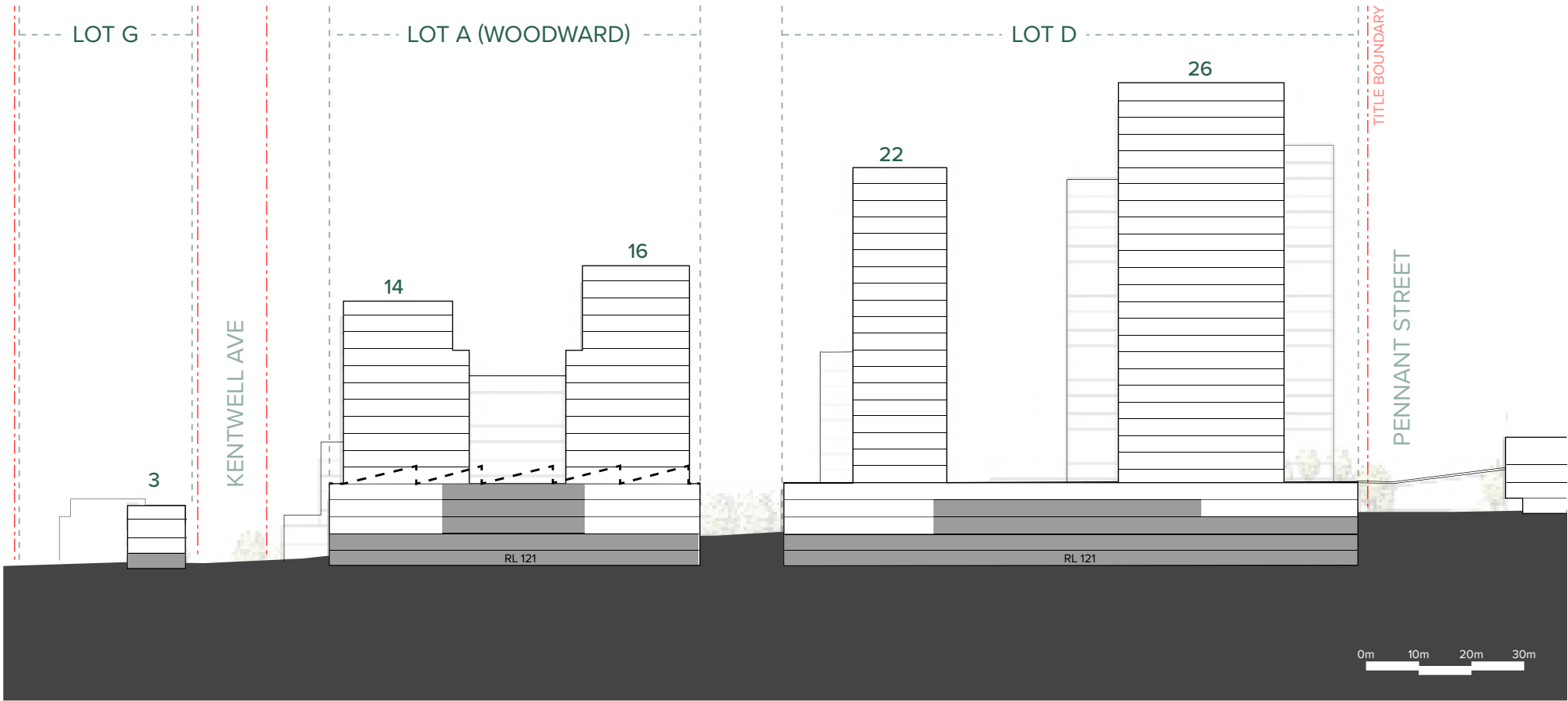
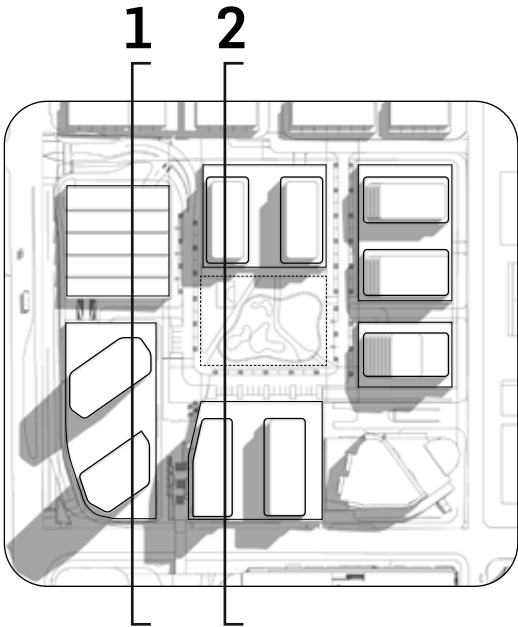
Other potential uses include, retail, F&B, small supermarket, commercial office, showroom and childcare.



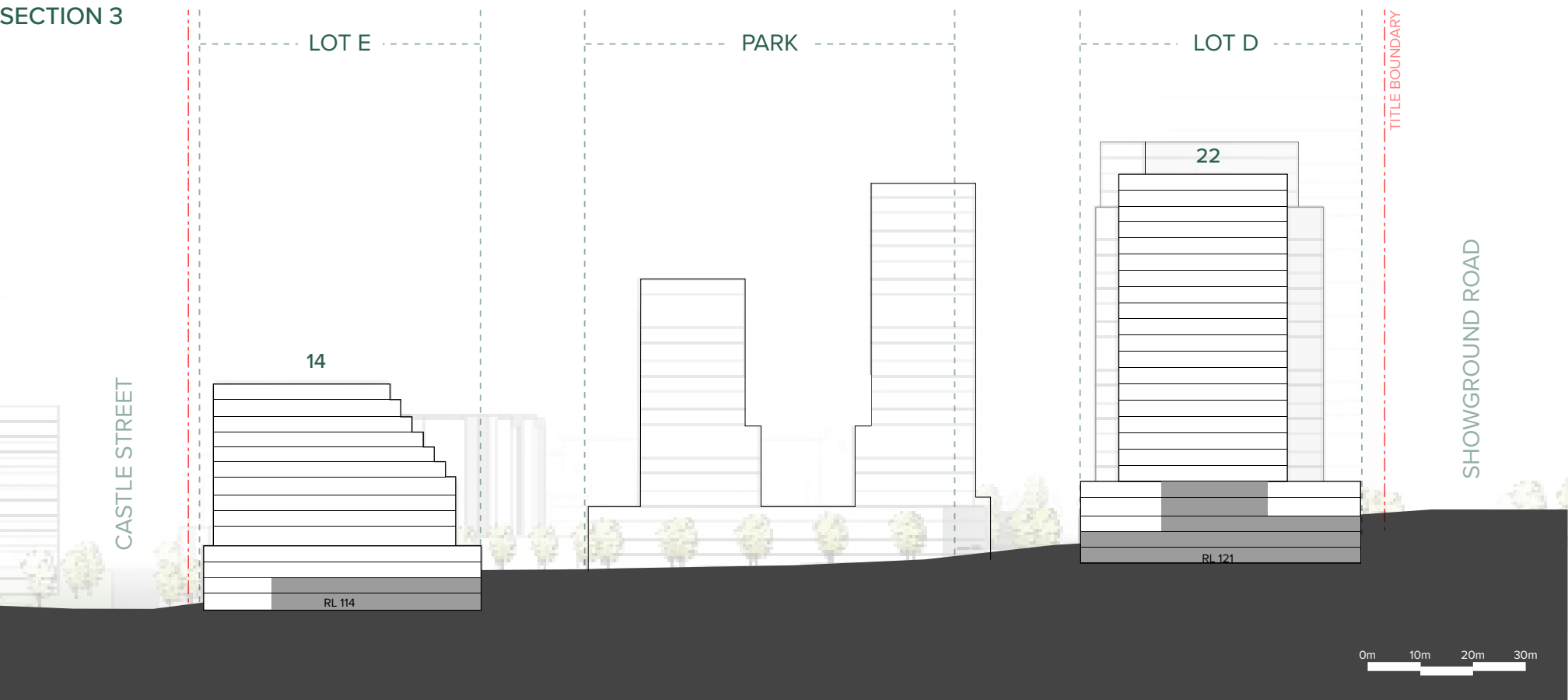
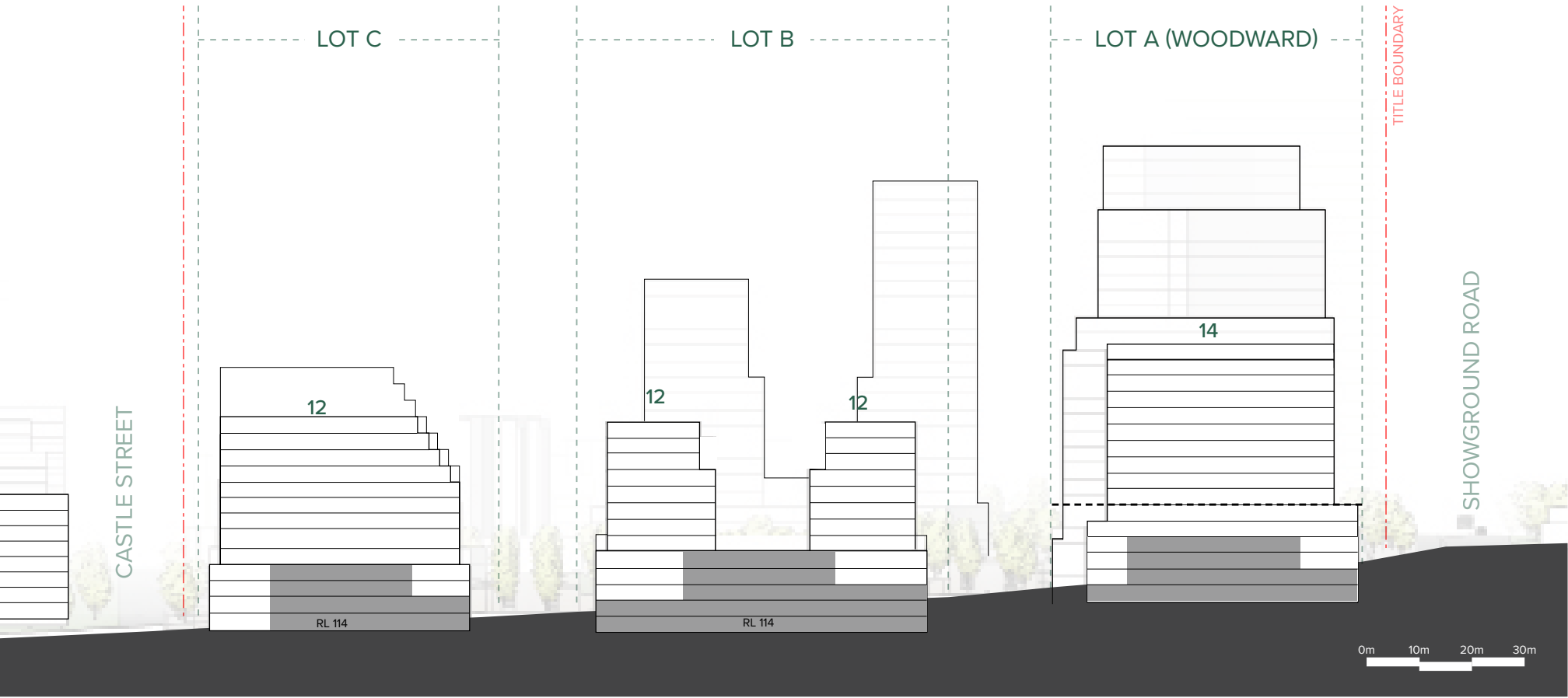
04.03 BUILT FORM

SECTION DIAGRAMS

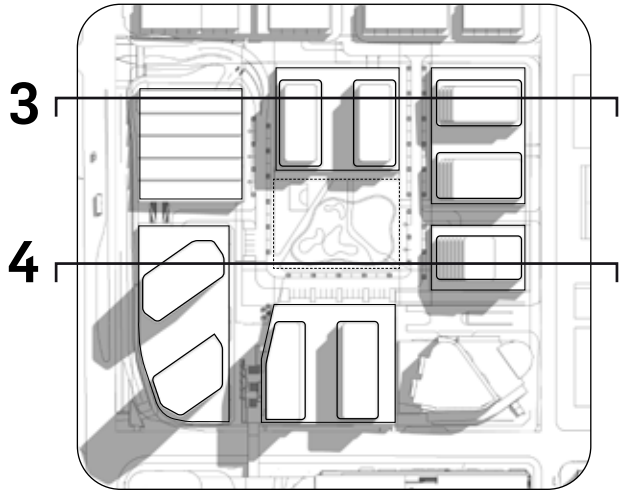
The section diagrams illustrate the relationship between the buildings, the streets, the central park and the considerable fall of the site. They show the step-down of forms toward Kentwell Avenue and Castle Street and they indicate the proposed basement carpark levels.



04.03 BUILT FORM
SECTION
DIAGRAMS



SECTION 4



05.01 BUILDING DESIGN

BUILDING DESIGN

Buildings within Site B will help achieve the vision of a high quality urban living environment that supports quality of life, community, health and social connection.



05.01 BUILDING DESIGN

BUILDING DESIGN

Design Excellence

Site B aspires to embed design excellence within buildings and landscape to achieve the vision for a high-quality urban living environment that supports quality of life, community health and social connection.

Materiality

Buildings are envisioned with a harmonious range of quality materials to create a sense of place. Material choice will reference those extant within the immediate environment to further integrate the development into its existing context.

Building articulation

Buildings will be articulated vertically and horizontally, breaking up the built-form and improving the sense of scale. Building articulation will provide visual interest and opportunities for increased cross-ventilation to central apartments.

Sustainable Design

The masterplan has the potential to exemplify the integration of sustainable design principles including sustainable transport modes in priority, precinct-wide water sustainable design, best practice energy efficiency and consideration of low carbon materials.



Artist's Impression



APPENDIX A - PLANNING PROPOSAL

A.01 PLANNING PROPOSAL

PANEL RESPONSE



01

‘Maximum residential tower floor plate of 750m² GFA (the development concept has a maximum residential floor plate of 1,150m²)

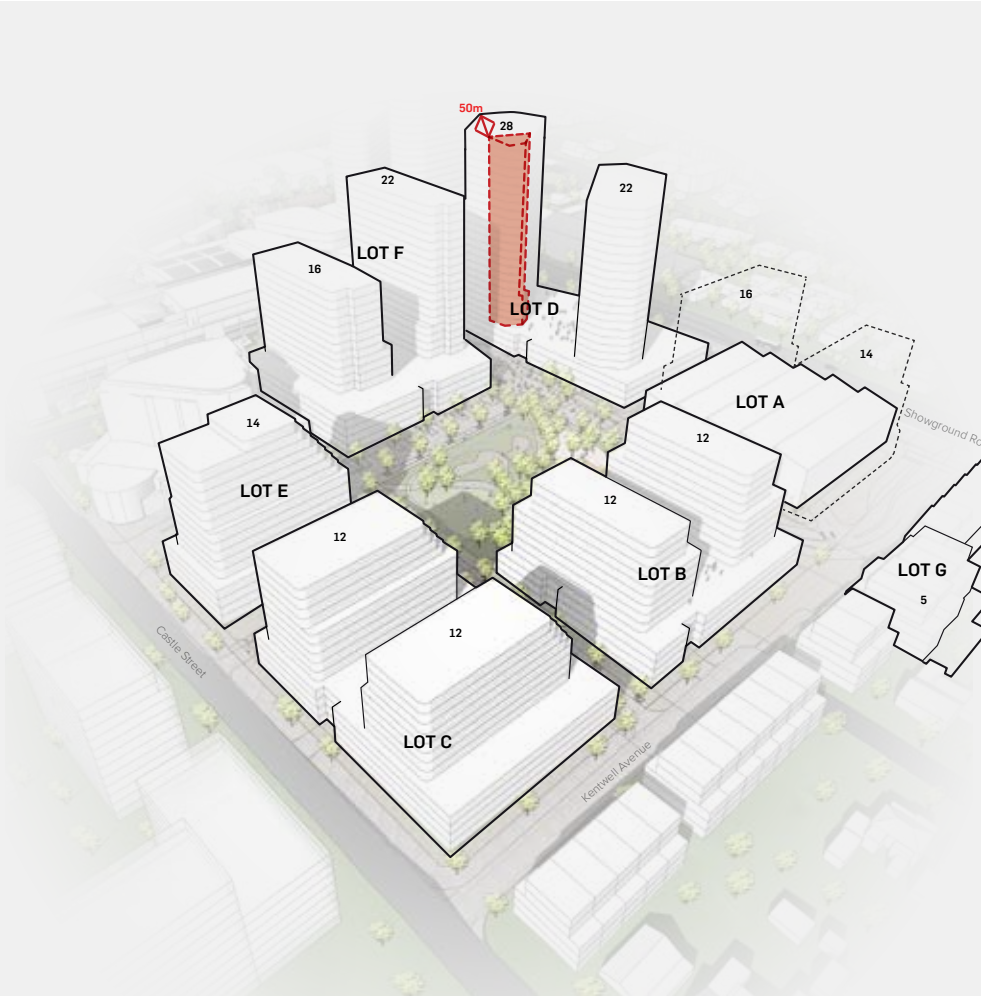
Response: Largest floor plate: reduced to 990sq/m



02

‘Maximum podium building length of 50-65m (the development concept has a maximum podium building length of 107m);

Response: 5m x 5m podium setback to residential. 3m x 10m setback to commercial.



03

- Maximum tower length of 40-65m (the development concept has a maximum tower building length of 56m);

Response: maximum tower length reduced to 50m

A.01 PLANNING PROPOSAL

PANEL RESPONSE



04

Setback to terrace style units of 3m (the development concept has a front setback of 0m)

Response: 3m setback to garden terraces of larger lots (A,B,C). Balconies above hang over into setback for articulation.



05

Minimum residential tower setback of 5m (the development concept has a minimum residential tower setback of 2m).

Response: Minimum setback of 5m from the boundary included and a range of 2-4m setback residential tower from the podium.



06

‘Increased rear side setbacks to the adjacent heritage building (the development concept had a minimum rear and side setback of 3m)

Response: Increased to 5m (from 4m) to Northern and Eastern edges of Lot G.

A.02 PLANNING PROPOSAL

PANEL RESPONSE



07

Removal of 2 storeys in Lot D tower.

Response: Reduced storeys from 28 to 26.



08

Provision of Commerical use in Lot A.

Response: North tower of Lot A converted to commerical/office use.

A.01 PLANNING PROPOSAL

PANEL RESPONSE



Previous proposal



Updated proposal



APPENDIX B - REFERENCE DESIGN SCHEME

B.01 REFERENCE DESIGN SCHEME

DEVELOPMENT SCHEDULE

Site Area	41,890 m ²
FSR	4.10 : 1

	No.							MAX PLANNING ENVELOPE				
								RESIDENTIAL MAX. PLANNING ENVELOPE	GFA @ 75% efficiency	COMMERCIAL MAX. PLANNING ENVELOPE	GFA @ 85% efficiency	TOTAL GFA
	Number of 1 Bed	Number of 2 Bed	Number of 2 Bed Family	Number of 3 Bed	Number of 3 Bed Family	Total Apartments	Carparks Required					
Lot A	38	43	46	21	17	165	203	21131	15848	18653	15855	31703
Lot B	45	83	2	19	26	175	220	23377	17533	0	0	17533
Lot C	45	106	5	7	35	198	240	26654	19991	0	0	19991
Lot D	133	92	130	45	20	420	485	56158	42119	8917	7579	49698
Lot E	18	40	47	9	10	124	143	16379	12284	0	0	12284
Lot F	66	105	84	55	12	322	389	41292	30969	6538	5557	36526
Lot G	5	9	0	8	5	27	40	5133	3850	0	0	3850
Total	350	478	314	164	125	1431	1720	190124	142593	34108	28992	171585

FSR4.10

Reference Design Scheme Apartment Mix & Commerical Uses

Total Apartments	No.	%	40% of 2 Beds 43% of 3 Beds	Commercial Area	Area (m ²)
No. 1 Bed	350	24%		Commercial/Office	19184
No. 2 Bed	478	33%		Retail	1639
No. 2 Bed Family (>110sqm)	314	22%		F&B	980
No. 3 Bed	164	11%		Supermarket	2210
No. 3 Bed Family (>135sqm)	125	9%		Showroom	1011
TOTAL	1431 Dwellings			Childcare	2850
				Total	27874

Definitions:

GFA for FSR calculation includes NSA, NLA, common spaces, corridors and terraces where walls are above 1.4m in height.

GFA for FSR calculation excludes external wall thickness, services and carparking.

Refer to The Hills LEP for FSR defintions - <https://legislation.nsw.gov.au/view/html/inforce/current/epi-2019-0596#dict>

NSA includes apartment area and external walls - refer to the PCA Method of calculation for Residential Property, also known as Residential Property Area (RPA).

Carparking area calculated at an approximate rate of 35m²/car space

Dwellings include Apartments, 2 level Soho's and 2 level Terraces
Podium includes 2 level Soho's and Terraces that count toward 3bed family

Carparking Rates: Commercial 2 cars/100m2 - Retail 3.5 cars/100m2 - Showroom 2 cars/100m2 - Supermarket 3.5 cars/100m2 - Childcare 0.2 cars/child - "as advised by Stantec (traffic engineer)"
Carparking area required assumes 35m2 per car
This scheme has been produced without planning advice or preliminary meetings with the responsible authorities and as such may not comply with building or other statutory regulations. It represents a possible development that may be achieved with full consultation and liaison with state government and other relevant authorities, however no warranty is given that the yield or layouts will be acceptable to the authorities or other interested parties. Hence ClarkeHopkinsClarke presents this information as a possible solution only, subject to council and other authorities approval.
This scheme and schedule have been prepared for masterplanning purposes only. The information herein is based on the limited information available at the time of preparation and is believed to be correct at the time of preparation however is not guaranteed.

BLUE LINE INDICATE
SECOND RAIL RESERVE

MAGENTA LINES INDICATE
FIRST RAIL RESERVE

SHOWGROUND ROAD

16 STOREY BUILDING OUTLINE

22 STOREY BUILDING OUTLINE

26 STOREY BUILDING OUTLINE



NOTE:
BUILDING GROUND FLOORS ARE AT
DIFFERENT LEVELS. THIS MASTERPLAN
IS FOR DIAGRAMATIC PURPOSES ONLY.

- LEGEND
- 1 BED
 - 2 BED
 - 3 BED
 - AMENITIES
 - BALC
 - CARPARK
 - CIRCULATION
 - COMMERCIAL LOBBY
 - COS
 - F&B
 - MAJOR RETAIL
 - POS
 - SERVICES
 - TOWNHOUSE TYPE 7
 - TOWNHOUSE TYPE 8

BLUE LINE INDICATE
SECOND RAIL RESERVE

MAGENTA LINES INDICATE
FIRST RAIL RESERVE

SHOWGROUND ROAD

SHOWGROUND ROAD

KENTWELL AVENUE

WORTHING AVE

KENTWELL AVE

CASTLE STREET

PENNANT STREET

LOT A

LOT D

LOT F

LOT B
CARPARK
RL 114.0
BASEMENT 1

LOT C
CARPARK
RL 114.0
TOWER GROUND FLOOR

LOT E
CARPARK
RL 114.0
BASEMENT 1

- LEGEND
- AMENITIES
 - CARPARK
 - CIRCULATION
 - SERVICES
 - TOWNHOUSE TYPE 7
 - TOWNHOUSE TYPE 8

BLUE LINE INDICATE
SECOND RAIL RESERVE

MAGENTA LINES INDICATE
FIRST RAIL RESERVE

SHOWGROUND ROAD

TO
OVERTON
AVENUE

SHOWGROUND ROAD

SHOWGROUND ROAD

LOT D CAR PARK
ENVELOPE ABOVE

LOT A CAR PARK
ENVELOPE ABOVE

LOT F CAR PARK
ENVELOPE ABOVE

LOT B
CARPARK
RL 117.0
GROUND

PENNANT STREET

WORTHING AVE

KENTWELL AVE

CASTLE STREET

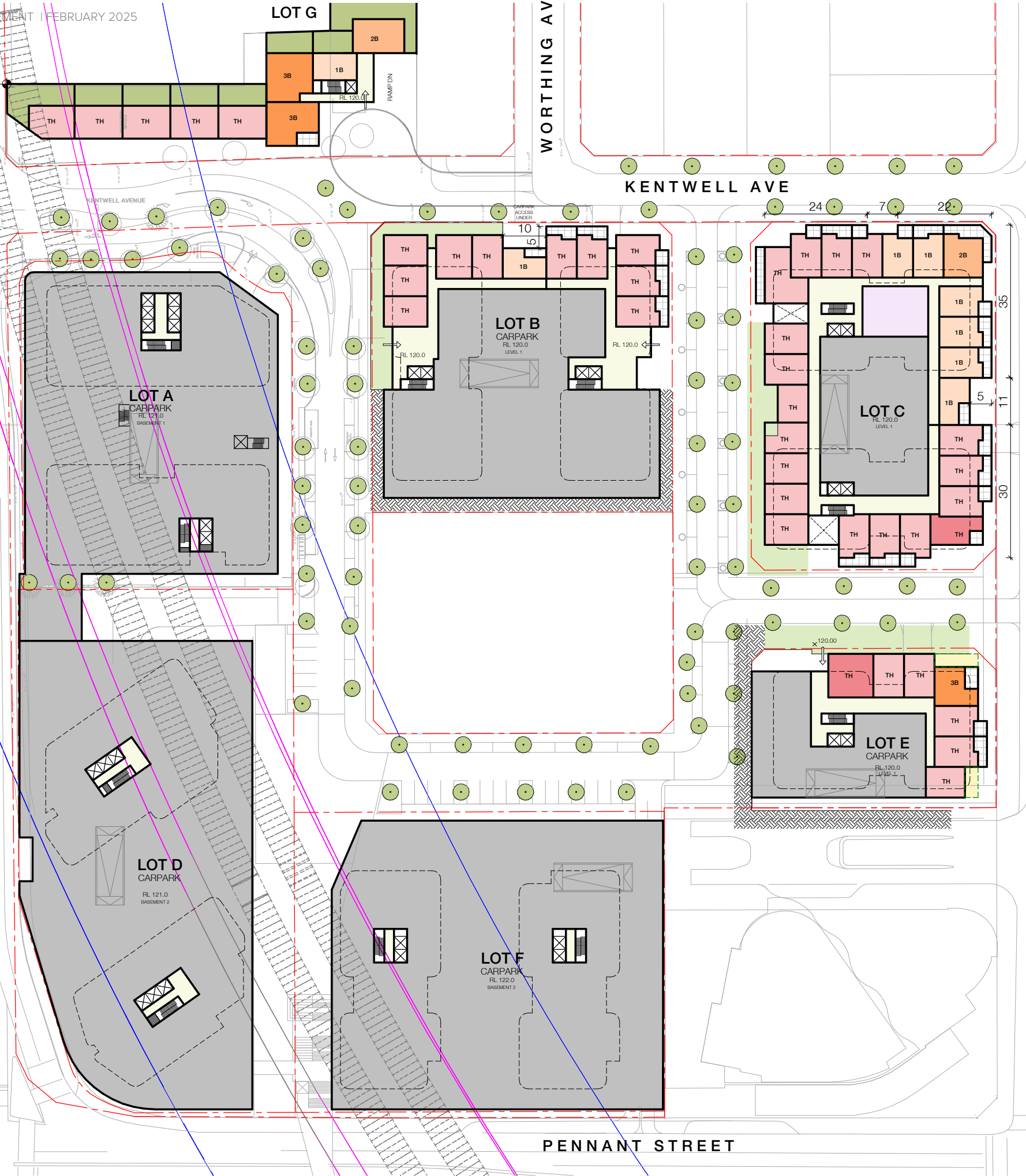
- LEGEND
- AMENITIES
 - BALC
 - CARPARK
 - CIRCULATION
 - F&B
 - SERVICES
 - TOWNHOUSE TYPE 7
 - TOWNHOUSE TYPE 8

BLUE LINE INDICATE
SECOND RAIL RESERVE

MAGENTA LINES INDICATE
FIRST RAIL RESERVE

SHOWGROUND ROAD

SHOWGROUND ROAD



LEGEND

- 1 BED
- 2 BED
- 3 BED
- AMENITIES
- BALC
- CARPARK
- CIRCULATION
- POS
- TOWNHOUSE TYPE 7
- TOWNHOUSE TYPE 8

BLUE LINE INDICATE
SECOND RAIL RESERVE

MAGENTA LINES INDICATE
FIRST RAIL RESERVE

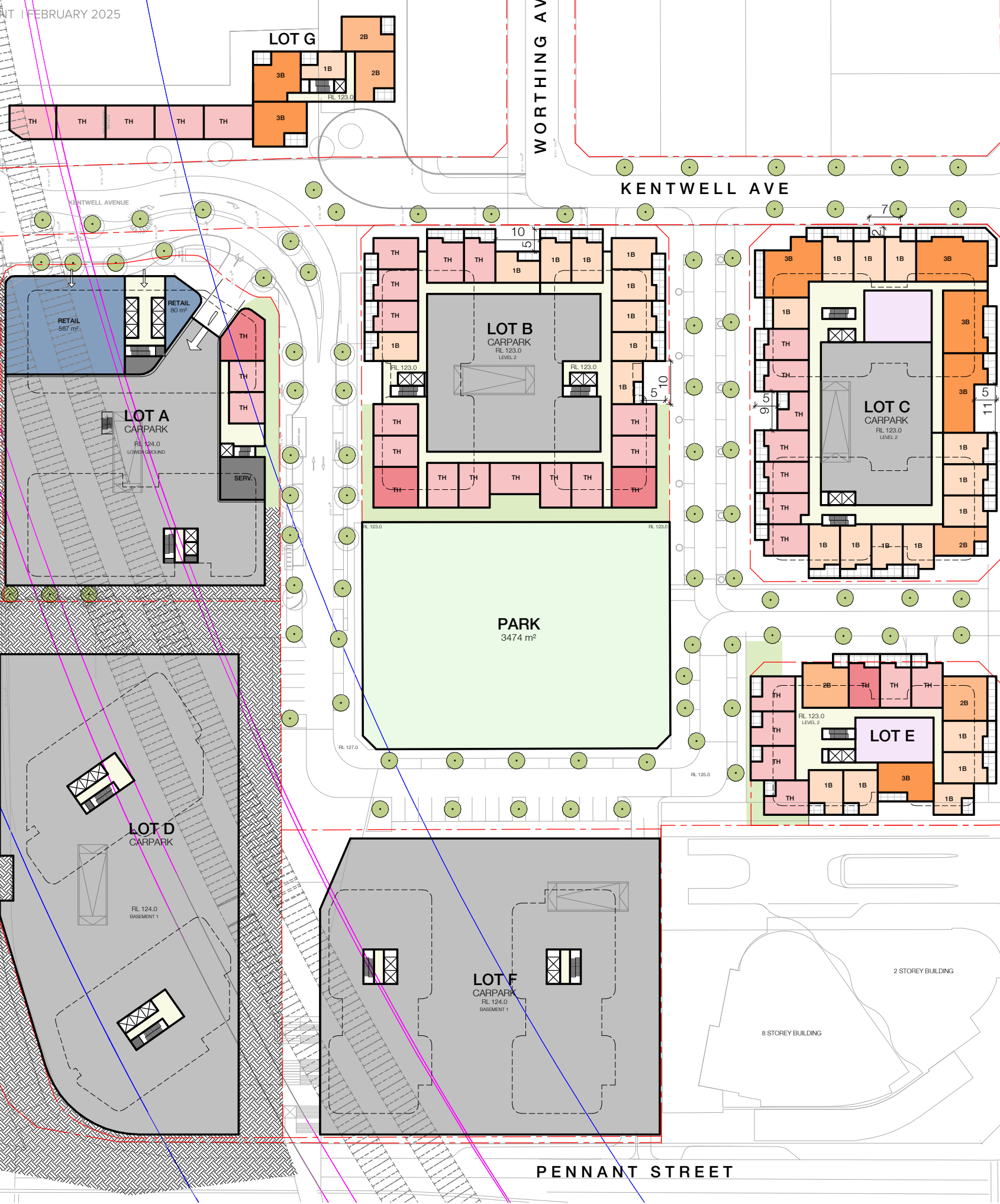
SHOWGROUND ROAD

WORTHING AVE

KENTWELL AVE

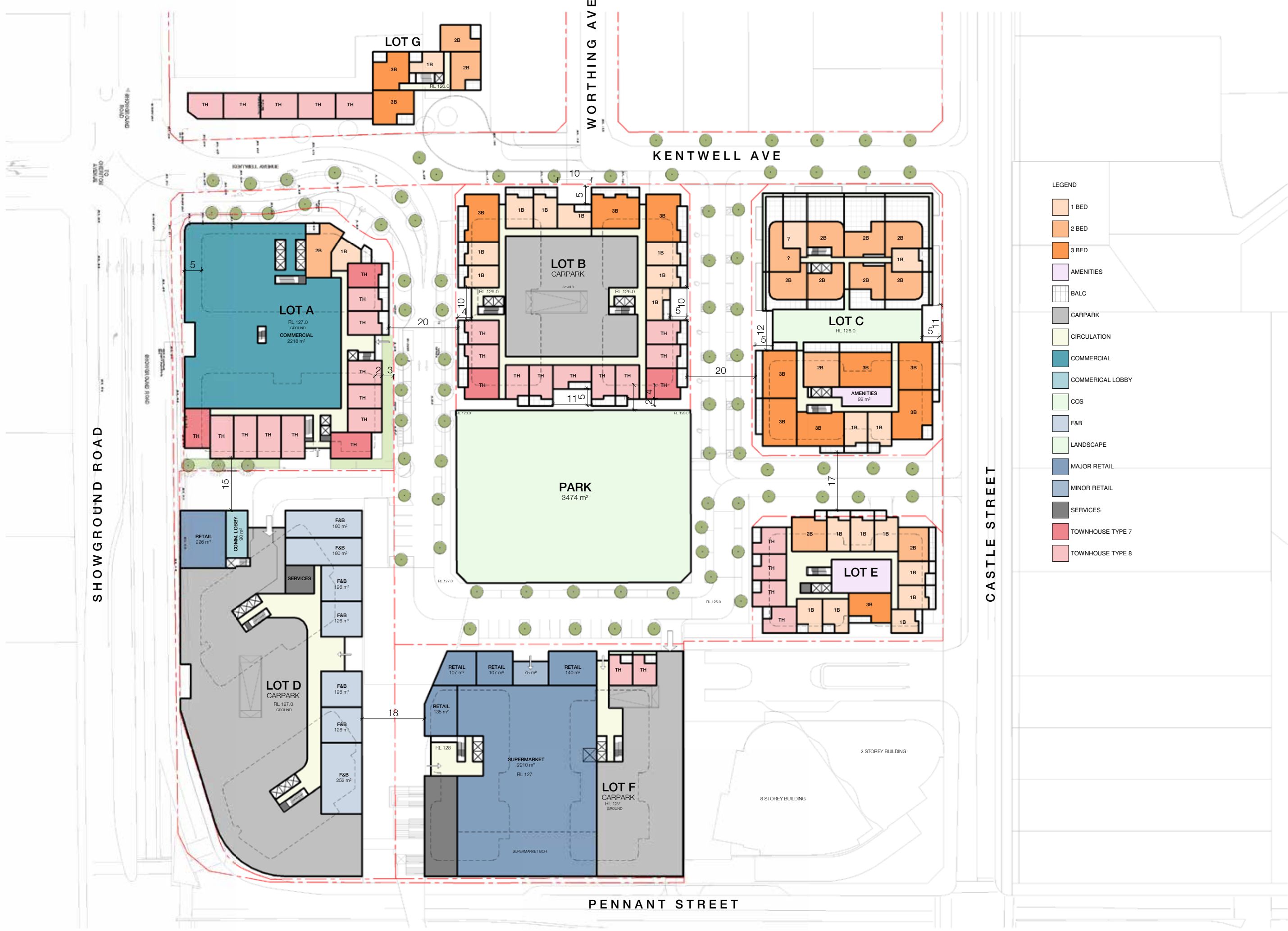
CASTLE STREET

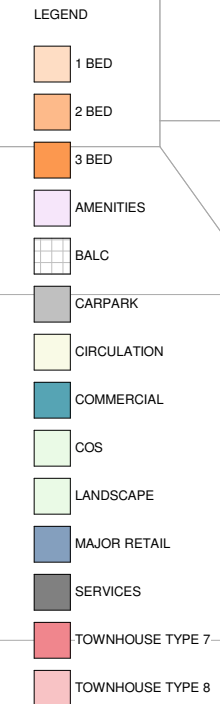
PENNANT STREET

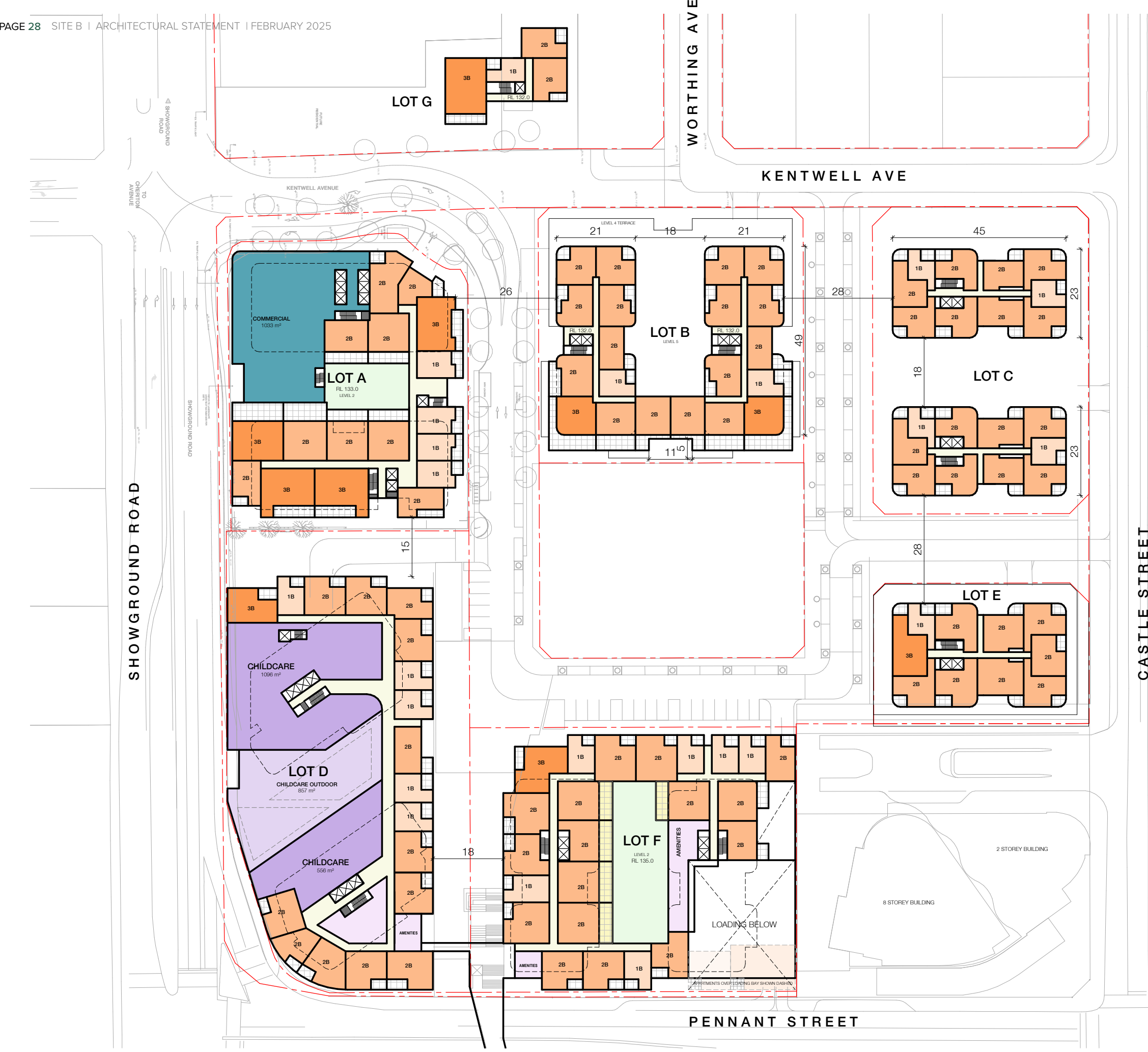


LEGEND

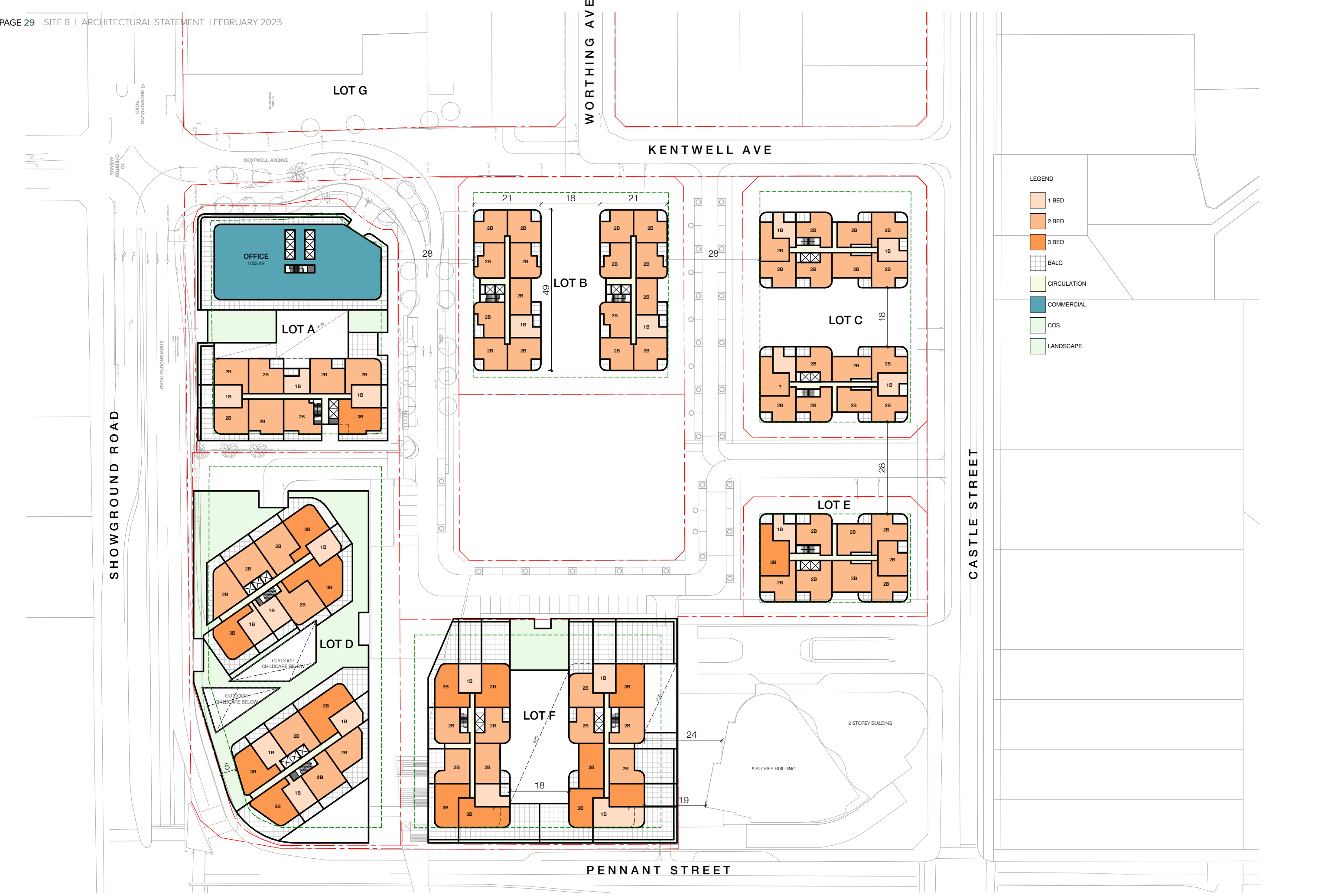
- 1 BED
- 2 BED
- 3 BED
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- CARPARK
- CIRCULATION
- COS
- MAJOR RETAIL
- SERVICES
- TOWNHOUSE TYPE 7
- TOWNHOUSE TYPE 8



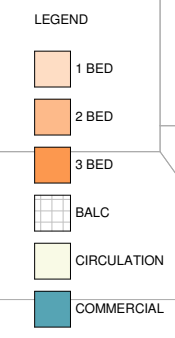




- LEGEND
- 1 BED
 - 2 BED
 - 3 BED
 - AMENITIES
 - BALC
 - CHILDCARE
 - CHILDCARE OUTDOOR
 - CIRCULATION
 - COMMERCIAL
 - COS







B.03 PRELIMINARY ADG REVIEW

Criteria	Requirement	Compliant	Response
2 DEVELOPING THE CONTROLS			
2A PRIMARY CONTROLS	<p>1. Retention of Trees</p> <p>2. Minimum Setbacks</p> <p>3. Deep Soil zones and basement levels</p> <p>4. Building Separation and depth</p> <p>5. Building Performance and orientation</p> <p>6. Three-dimensional building envelope</p>	Y	The primary controls have been considered in producing the building envelopes. A new public park and numerous street trees have been proposed to replace any existing to be removed. The minimum setbacks have been adhered to with an increased setback to the upper tower levels along Kentwell avenue. Deep soil zones have been provided in the central park space and along boundary edges with basement edges mostly limited to podium footprints. Adequate separation has been provided between buildings to increase solar amenity into units and reduce privacy concerns. Building orientation has been developed to provide adequate solar access to the newly proposed central park and apartment living areas.
2B BUILDING ENVELOPES	<p>Building envelopes set the appropriate scale of future development in terms of bulk and height relative to the streetscape, public and private open spaces, and block and lot sizes in a particular location [...]. A building envelope should be 15-30% greater than the achievable floor area to allow for building components that do not count as floor space but contribute to building design and articulation such as balconies, lifts, stairs and open circulation space.</p>	Y	Building envelopes are 15% greater than the achievable floor area in the towers and 20% greater in the podiums to allow for non-GFA uses such as car parking.
2C BUILDING HEIGHT	<p>Building height helps shape the desired future character of a place relative to its setting and topography. It defines the proportion and scale of streets and public spaces and has a relationship to the physical and visual amenity of both the public and private realms. Height controls should be informed by decisions about daylight and solar access, roof design and use, wind protection, residential amenity and in response to landform and heritage.</p>	Y	The building height varies across the development. Consideration has been made to the existing topography of the site, existing and potential development of the surrounding context and to ensure the amenity of surrounding developments is maintained. Towers have been setback from the edges of the site that front developments lower in height. The podium height relates to the adjacent built-form, with taller buildings at the busy intersection of Showground Road and Pennant Street, adjacent to the retail precinct. Lower building heights have been proposed towards the north of the site, nearer to the existing lower-density uses to the north.
2D FLOOR SPACE RATIO	<p>Floor space ratio (FSR) is the relationship of the total gross floor area (GFA) of a building relative to the total site area it is built on. It indicates the intended density. FSR is a widely used method for estimating the development potential of a site.</p> <p>Test the desired built form outcome against the proposed FSR to ensure it is coordinated with the building</p>	Y	The proposed FSR is 4.1:1. A variety of building heights and uses have been proposed in the development to provide public benefit to the surrounding community through the introduction of a new public park, the potential for a childcare centre, a retail precinct, indoor gym and pools.
2E BUILDING DEPTH	<p>Building depth influences building circulation and configuration and has a direct relationship to internal residential amenity by determining room depths, which in turn influences access to light and air.</p> <p>Use a range of appropriate maximum apartment depths of 12-18m from glass line to glass line when precinct planning and testing development controls.</p>	Y	A variety of building depths have been proposed throughout the development. The depth of the towers on the upper levels are reduced while, while apartments on the lower levels increase in depth. Where deeper apartment depths are proposed, bathrooms, laundries and rooms requiring less natural light are to be incorporated. Apartments sleeve carparking on podium levels to reduce the resulting apartment depth.

B.03 PRELIMINARY ADG REVIEW

2G STREET SETBACKS	<i>Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street. Combined with building height and road reservation, street setbacks define the proportion and scale of the street and contribute to the character of the public domain.</i>	Y	Podiums are setback from streets. Where residential apartments have been proposed on the ground floor, buildings have been setback from the street to provide a landscape buffer and increase private open space areas.
2H SIDE AND REAR SETBACKS	<i>Setbacks vary according to the building’s context and type. Larger setbacks can be expected in suburban contexts in comparison to higher density urban settings. Setbacks provide transition between different land uses and building typologies. Side and rear setbacks can also be used to create useable land for common open space, tree planting and landscaping.</i>	Y	Side and rear setbacks vary depending on the use. Retail uses have shallower setbacks.
Criteria	Requirement	Compliant	Response
3 SITING THE DEVELOPMENT			
3A SITE ANALYSIS	<i>Site analysis is an important part of the design process and should be undertaken at the outset of a project to inform the design principles. Development proposals need to illustrate that design decisions are based on careful analysis of the site conditions and relationship to the surrounding context.</i>	Y	A site analysis was carried out to determine topographical elements on the site, surrounding developments, and peripheral pedestrian links. This informed the central park proposal and through site links to neighbouring site.
3B ORIENTATION	<i>Orientation is the position of a building and its internal spaces in relation to its site, the street, the subdivision and neighbouring buildings. Building orientation influences the urban form of the street and building address. Building orientation directly affects residential amenity including solar access and influences other matters including visual and acoustic privacy to both the development and neighbouring sites.</i>	Y	Taller towers sit above podium levels with townhouses facing the street and towards the central park. Buildings have been orientated to increase solar access into living spaces.
3C PUBLIC DOMAIN INTERFACE	<i>Key components to consider when designing the interface include entries, private terraces or balconies, fences and walls, changes in level, services locations and planting. The design of these elements can influence the real or perceived safety and security of residents, opportunities for social interaction and the identity of the development when viewed from the public domain.</i>	Y	Ground floor townhouses and apartments provide passive surveillance with raised living spaces and bedrooms overlooking the internal streets and central park. Retail tenancies along the through-site link and the central park provide opportunities for social interaction. Rooftop and podium level communal spaces provide semi-public space for residents. Landscape buffers are provided to apartments on the ground floor and podium levels to provide privacy to their internal space and private open spaces while also improving the interface to Kentwell Avenue and Castle Street.
3D COMMUNAL OPEN SPACE	<i>Communal open space is an important environmental resource that provides outdoor recreation opportunities for residents, connection to the natural environment and valuable ‘breathing space’ between apartment buildings. It also contributes to the appeal of a development and the wellbeing of residents. Some communal open space is accessible and usable by the general public</i>	Y	Communal open spaces have been provided in addition to the public central park areas. Communal open space is to be located on podium levels and rooftops. Additional amenities are provided throughout the development, including a gym and indoor pool.

B.03 PRELIMINARY ADG REVIEW

3E DEEP SOIL ZONES	<i>Deep soil zones are areas of soil not covered by buildings or structures within a development. They exclude basement car parks, services, swimming pools, tennis courts and impervious surfaces including car parks, driveways and roof areas.</i>	Y	A large deep soil area is to be provided in the central park space with additional deep soil along the front, rear and side setbacks of the building podiums
3F VISUAL PRIVACY	<i>Visual privacy allows residents within an apartment development and on adjacent properties to use their private spaces without being overlooked. It balances the need for views and outlook with the need for privacy. In higher density developments it also assists to increase overall amenity. Visual privacy balances site and context specific design solutions with views, outlook, ventilation and solar access. The adjacent context, site configuration, topography, the scale of the development and the apartment layout all need to be considered</i>	Y	Visual privacy has been provided through increased building separation and by introducing the central park spacing in the development.
3G PEDESTRAIN ENTRIES	<i>Good pedestrian access delivers high quality, equitable, safe and pleasant walking environments along the street, into the development and to individual apartments. Pedestrian access and entries must be priorities over vehicle access.</i>	Y	Pedestrian access has been provided on the ground floor with large lobby spaces that prioritise pedestrians over vehicular access.
3H VEHICLE ACCESS	<i>The location, type and design of vehicle access points have significant impacts on the streetscape, the site layout and the building facade design. It is important that vehicle access is integrated with site planning from an early stage to balance any potential conflicts with traffic patterns, streetscape elements and safe pedestrian access.</i>	Y	Vehicular access points are behind the building-line. Where practical, they have been located at the lowest point of the site. Secondary lanes have been introduced to provide access to parking basements where practical.

B.03 PRELIMINARY ADG REVIEW

ADG ASSESSMENT

This following assessment aims to illustrate that the reference design establishes a foundation for design development and to assess if the proposed urban structure precludes future design developing ADG compliant proposals.

In summary, the key principles have been assessed and achieved via appropriate site and building orientation, steps in the facade to create edges and regular sized floor plates and apartments for future design and development flexibility -

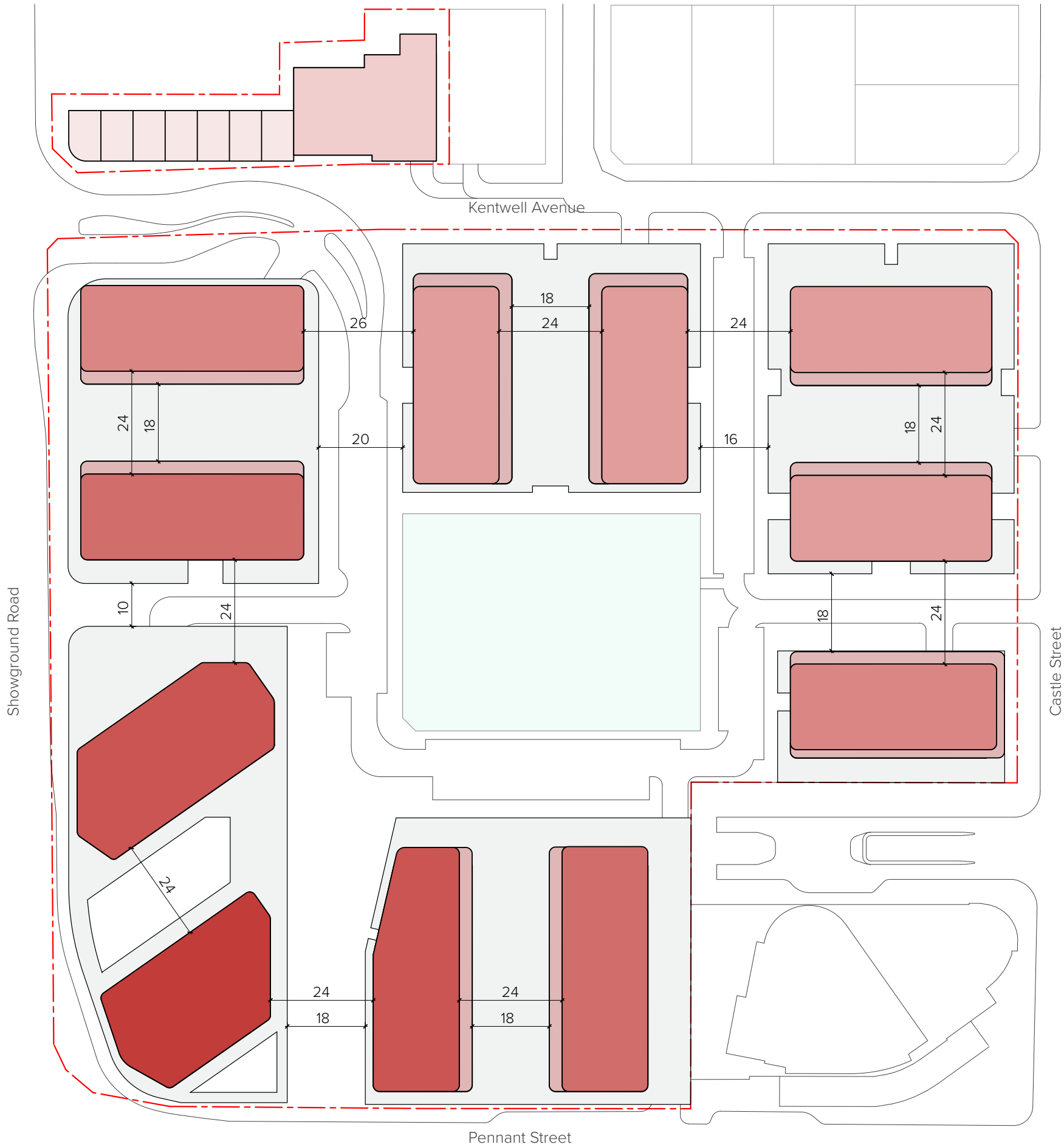
- Appropriate building separation according to building heights
- Sufficient solar access to common, public and shared spaces.
- Solar access to at least 70% of the typical residential levels for the development.
- Cross ventilation to at least 60% of the residential dwellings for the first nine storeys of each residential lot.
- Sample apartment floor plans to illustrate appropriate apartment sizing and layouts.



B.04 PRELIMINARY ADG REVIEW

BUILDING SEPARATION

The building envelope plan on this page shows the proposed building separation ranging from 10m to 20m for the lower 4 storeys, minimum 18m separation from 5 to 8 stories and minimum 24m separation for nine storeys and above.

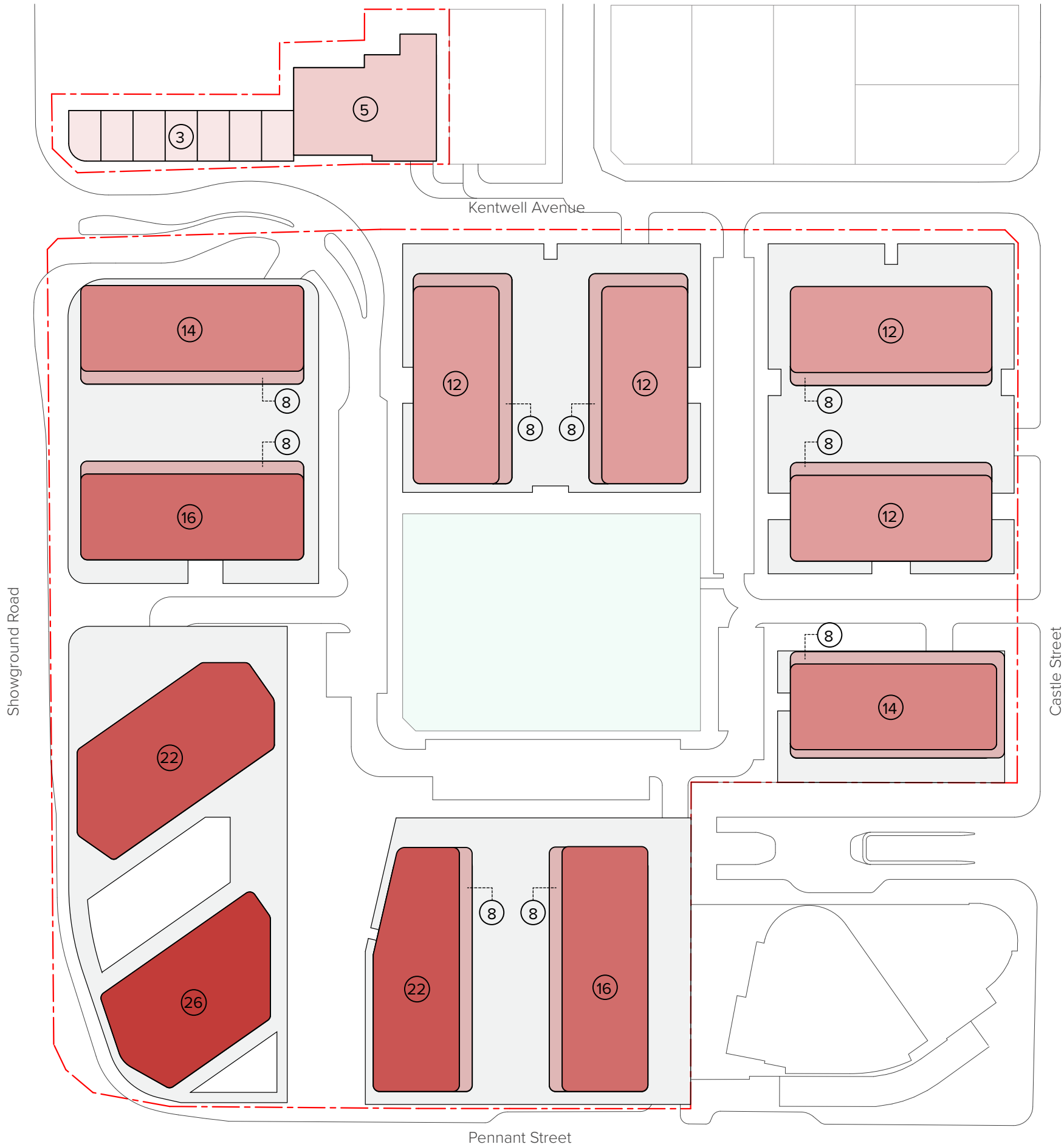
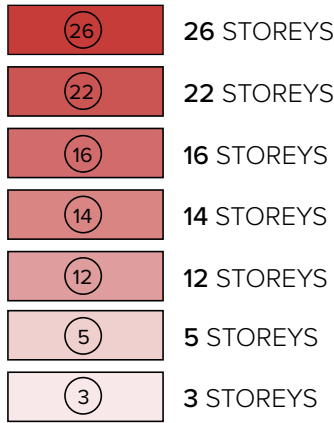


B.05 PRELIMINARY ADG REVIEW

BUILDING HEIGHT

The building envelope plan in this page show the proposed heights ranging from 3 storeys on the lower end to 26 storeys on the corner of Showground Rd and Pennant St.

Building Height



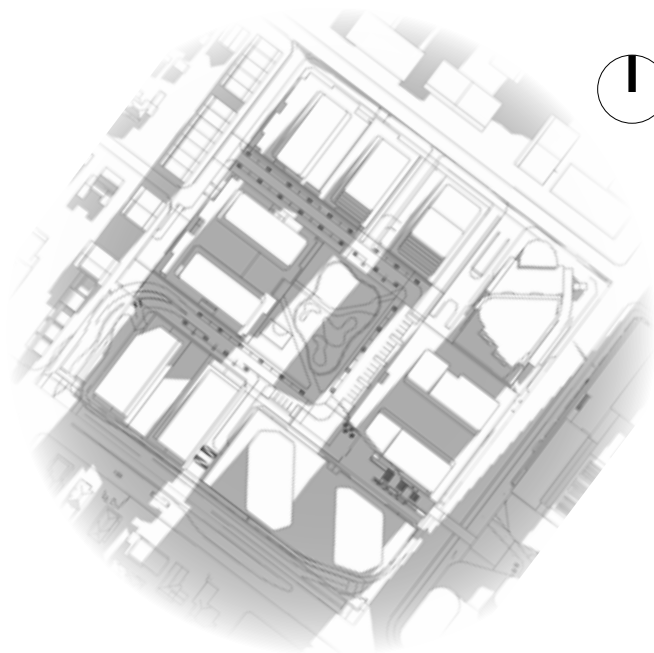
B.06 PRELIMINARY ADG REVIEW

SHADOW
DIAGRAMS

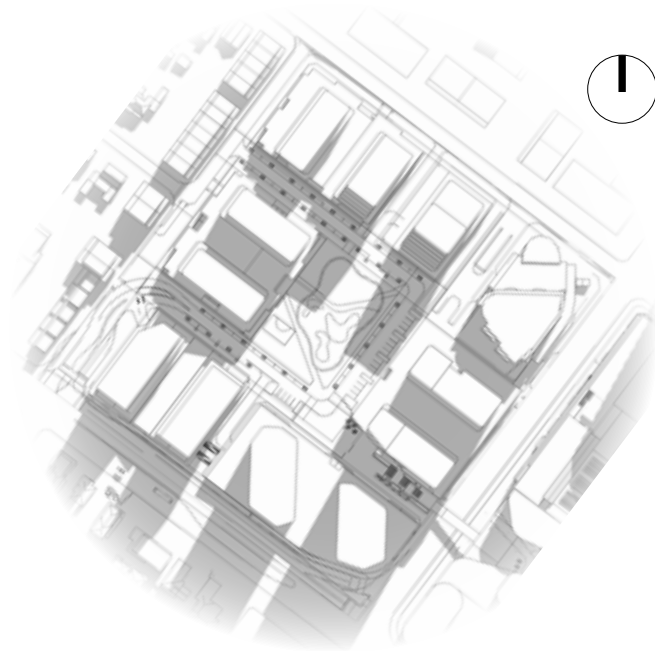
The shadow diagrams depict the resulting shadow impact of the proposed development during winter solstice between 9am and 2pm.

Lower-lying residential land-uses are located to the north of the site and are thus not negatively impacted by the proposal in terms of solar access.

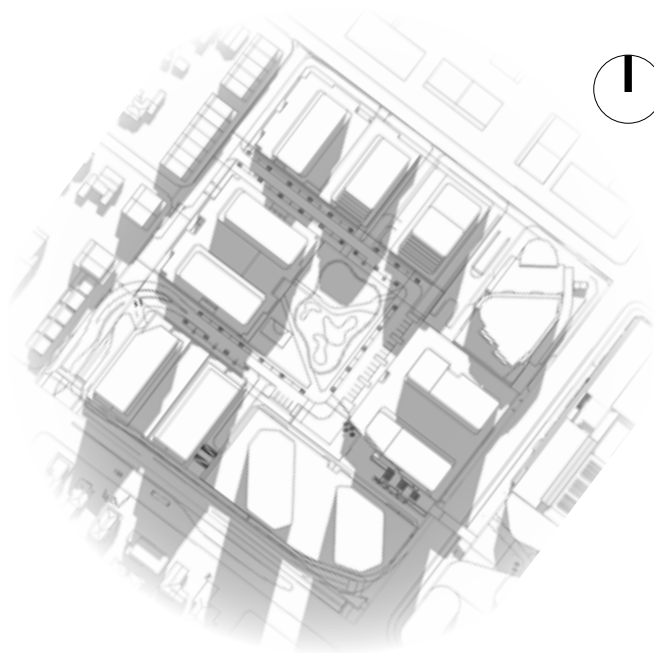
The primary shadow impact is to south of the development, with shadows falling mainly on the wide roadways and towards the Castle Hill urban core, with only minor impact to the residential areas to the west of the site.



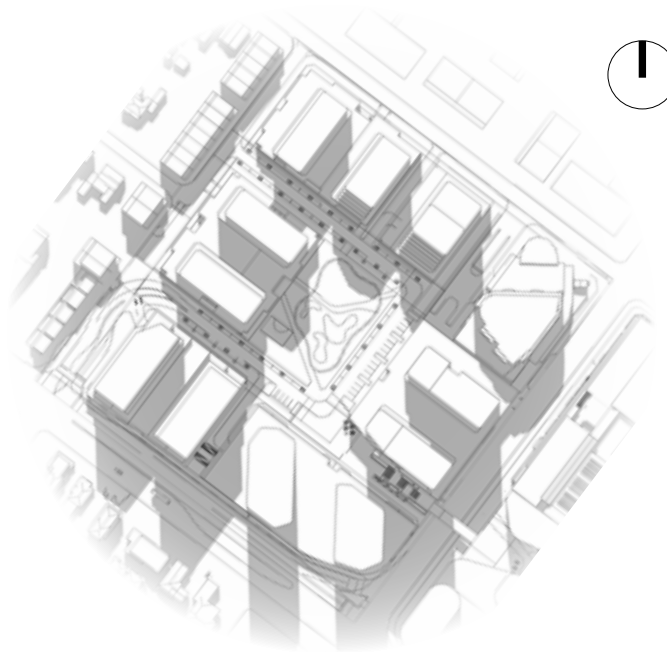
WINTER SOLSTICE | JUNE 21 | 09:00 AM



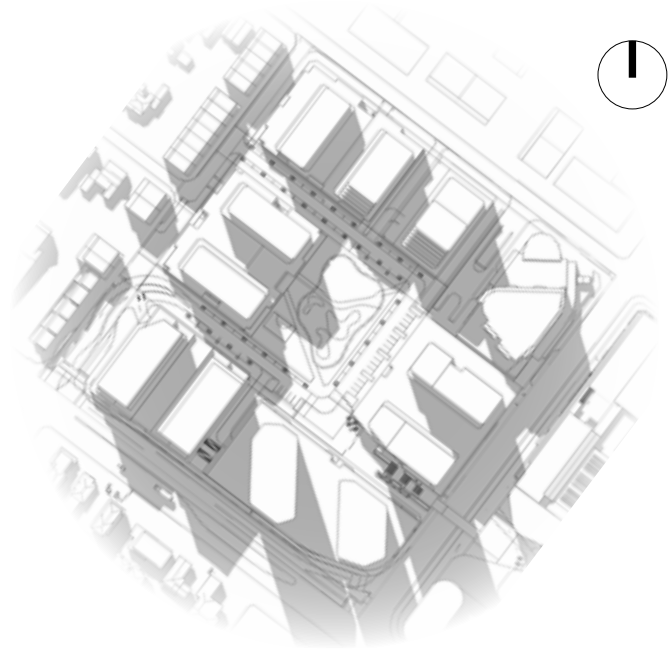
WINTER SOLSTICE | JUNE 21 | 10:00 AM



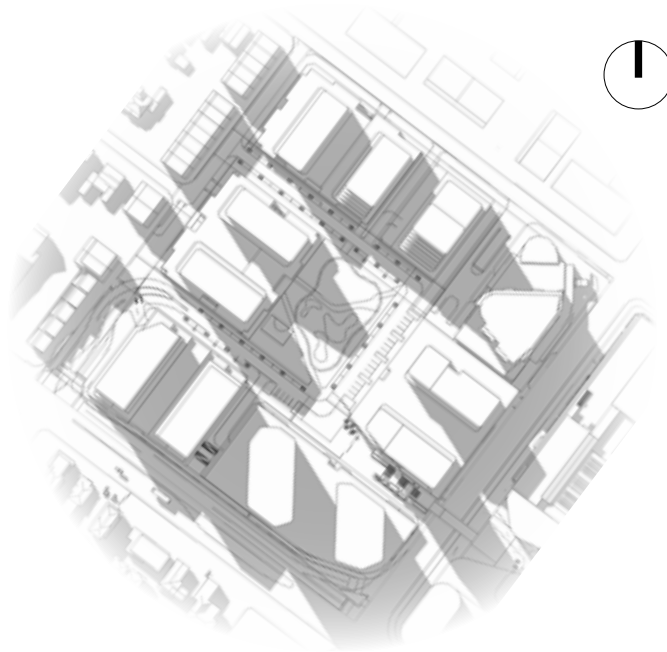
WINTER SOLSTICE | JUNE 21 | 11:00 AM



WINTER SOLSTICE | JUNE 21 | 12:00 PM



WINTER SOLSTICE | JUNE 21 | 1:00 PM



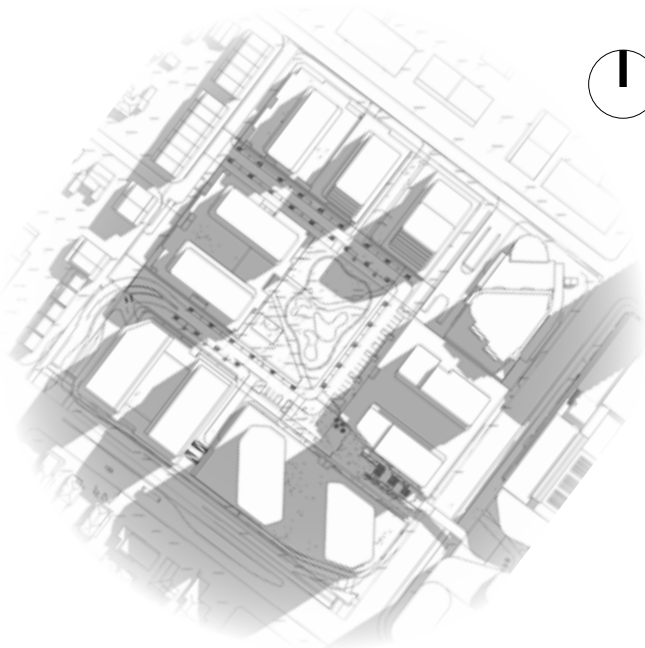
WINTER SOLSTICE | JUNE 21 | 2:00 PM

B.06 PRELIMINARY ADG REVIEW

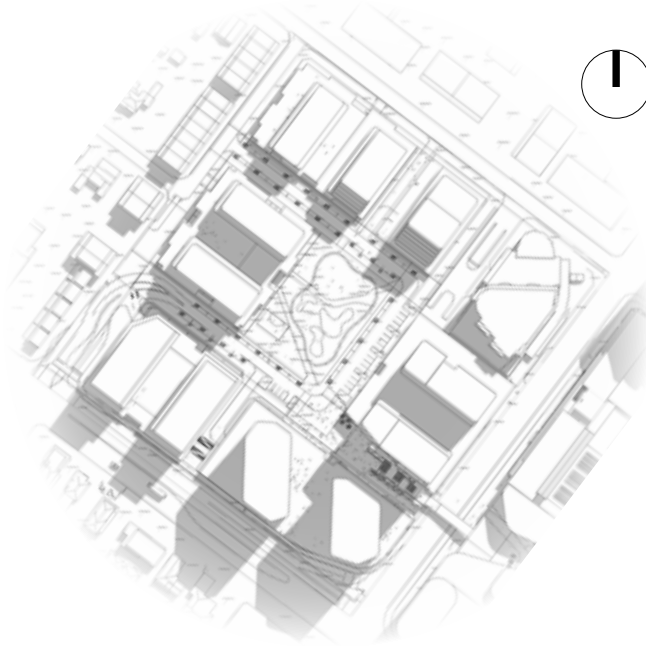
SHADOW
DIAGRAMS

The shadow diagrams depict the resulting shadow impact of the proposed development during the equinox between 9am and 2pm.

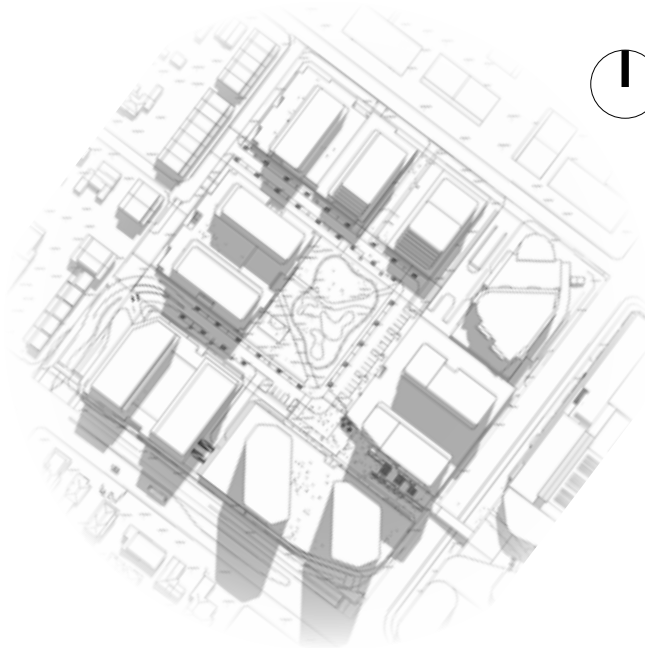
Shadows fall to on the wide roadway to the west and south of the site, but stay clear of the neighbouring residential developments.



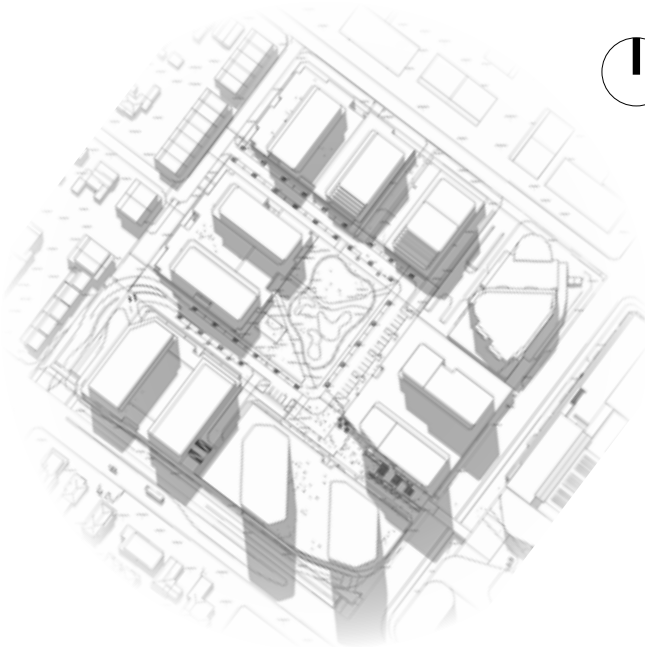
EQUINOX | SEPTEMBER 23 | 09:00 AM



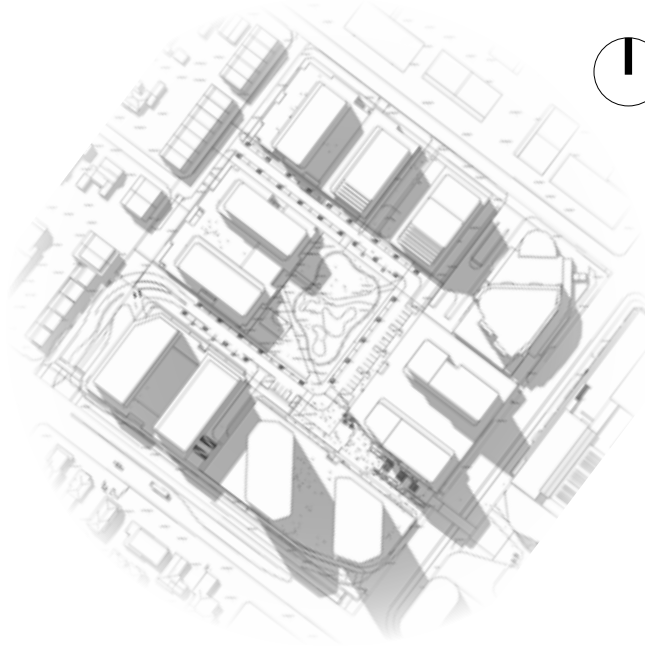
EQUINOX | SEPTEMBER 23 | 10:00 AM



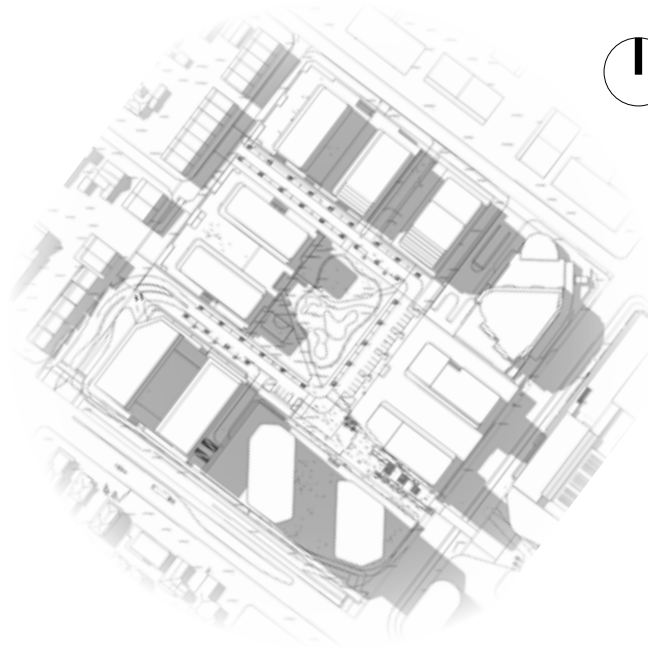
EQUINOX | SEPTEMBER 23 | 11:00 AM



EQUINOX | SEPTEMBER 23 | 12:00 PM



EQUINOX | SEPTEMBER 23 | 1:00 PM



EQUINOX | SEPTEMBER 23 | 2:00 PM

B.07 PRELIMINARY ADG REVIEW

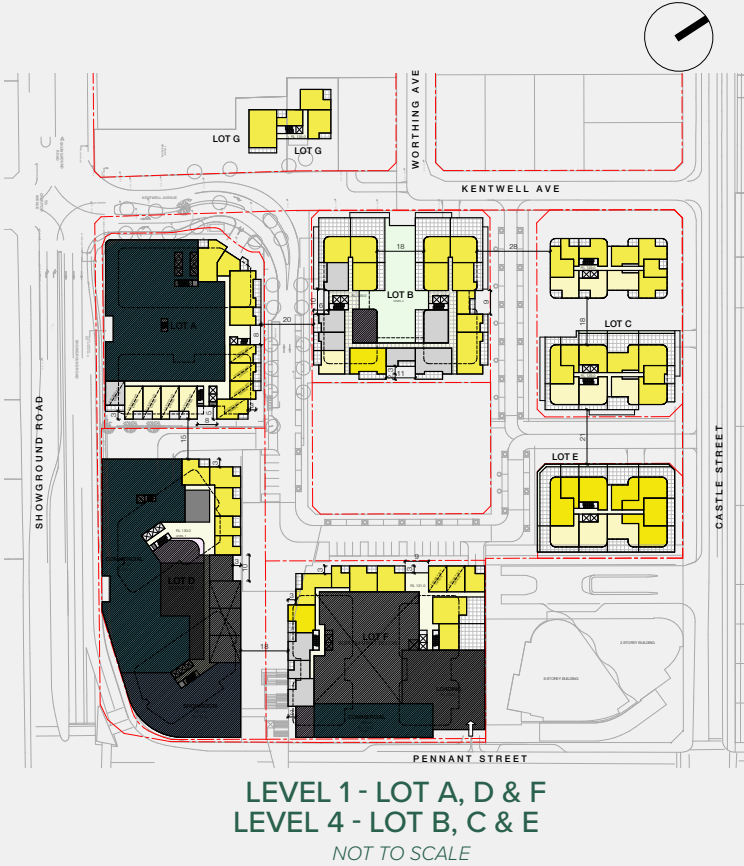
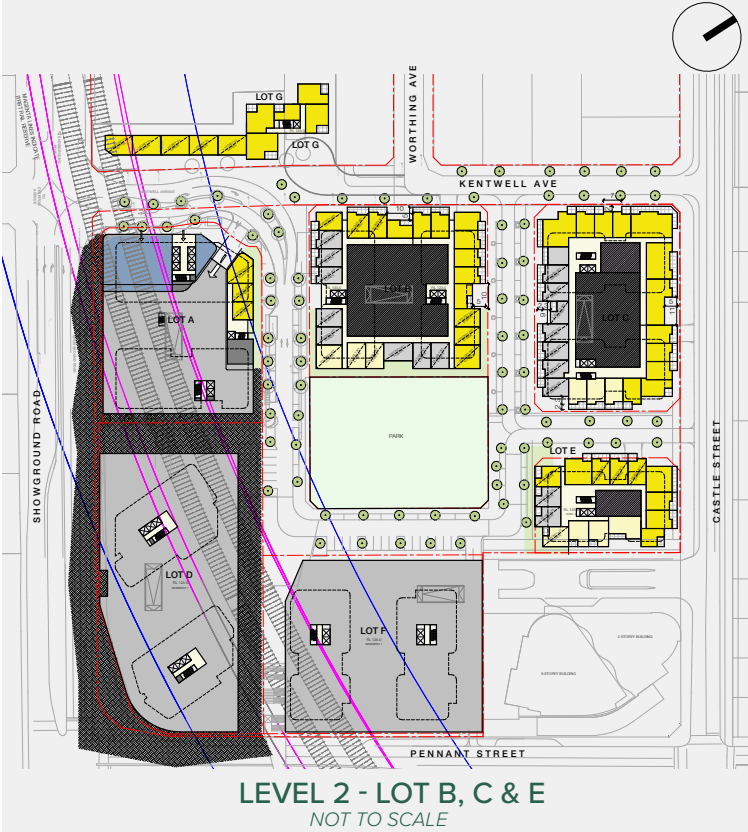
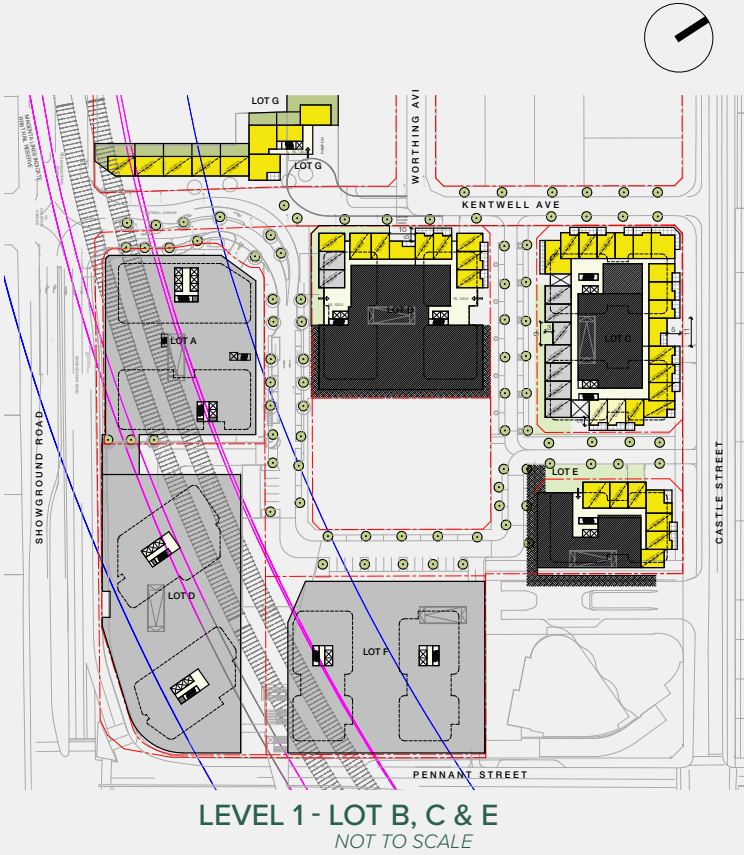
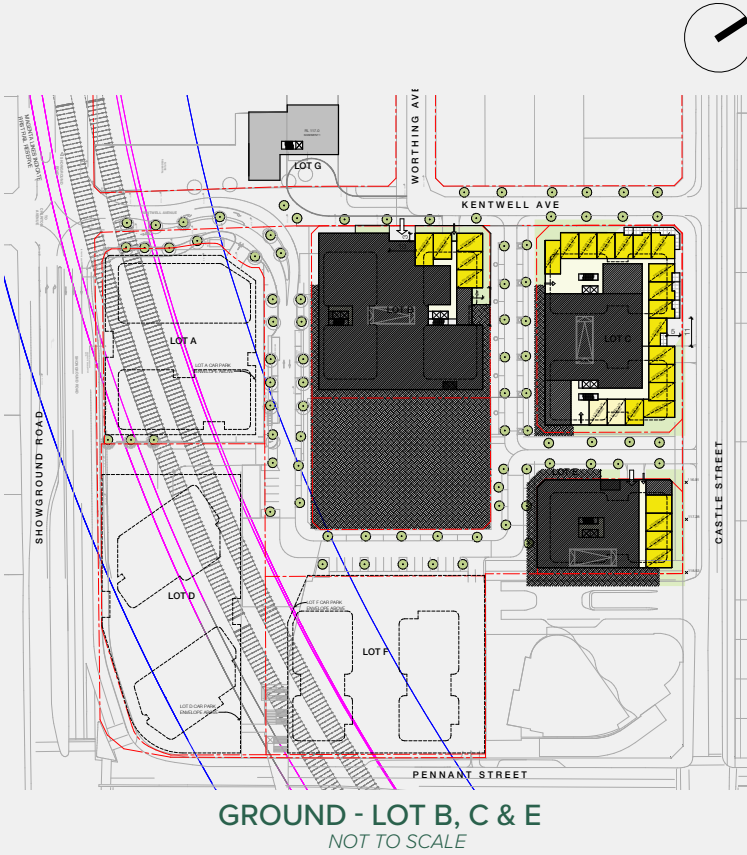
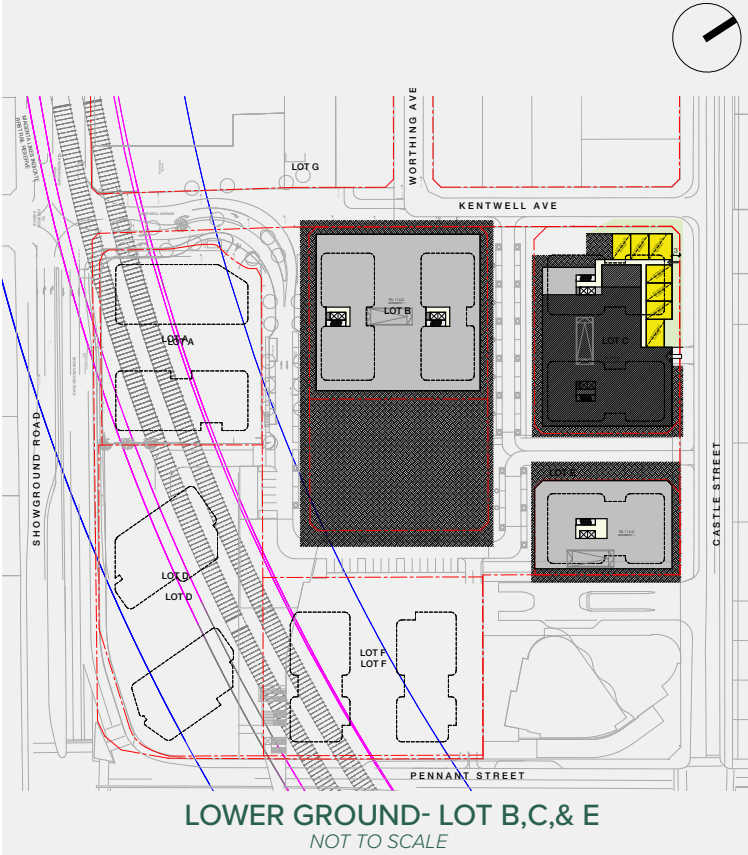
SOLAR ACCESS

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to its living space between 9am and 3pm on 21st June.

The adjacent plans and solar assessment summary table of the reference design scheme illustrates that at least 70% of the apartments within each lot receives a minimum of 2hrs solar access on 21st June. and no more than 15% of apartments recieve no sunlight on 21st June.

Narrow floor plates with compliant building separation as illustrated by this reference design scheme will further ensure for adequate solar access into apartments and their living spaces. Buildings floor plates and apartments are also to be orientated appropriately to ensure maximum solar gain where possible.

LEGEND



B.07 PRELIMINARY ADG REVIEW

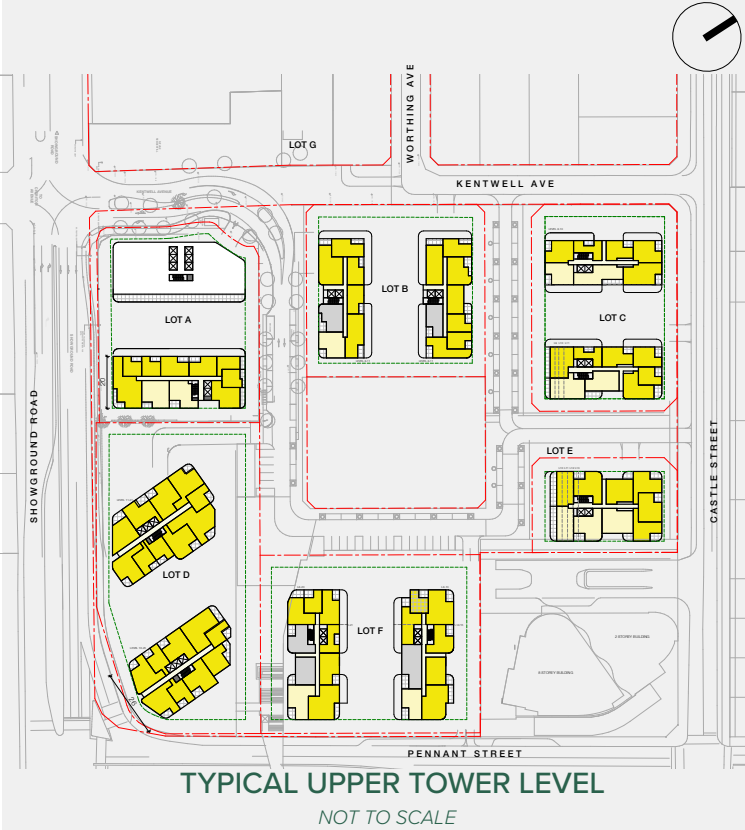
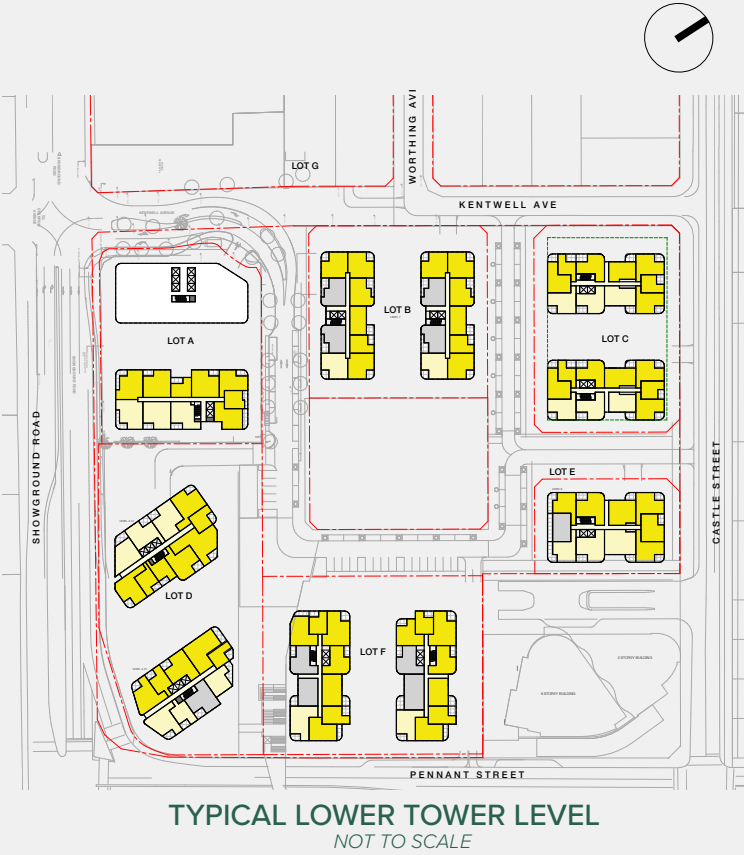
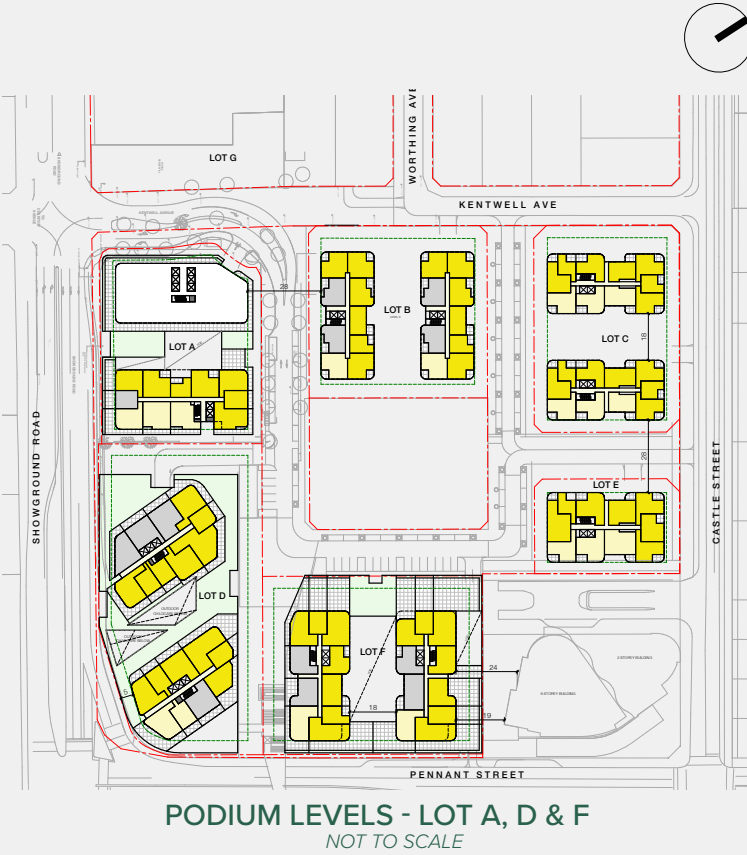
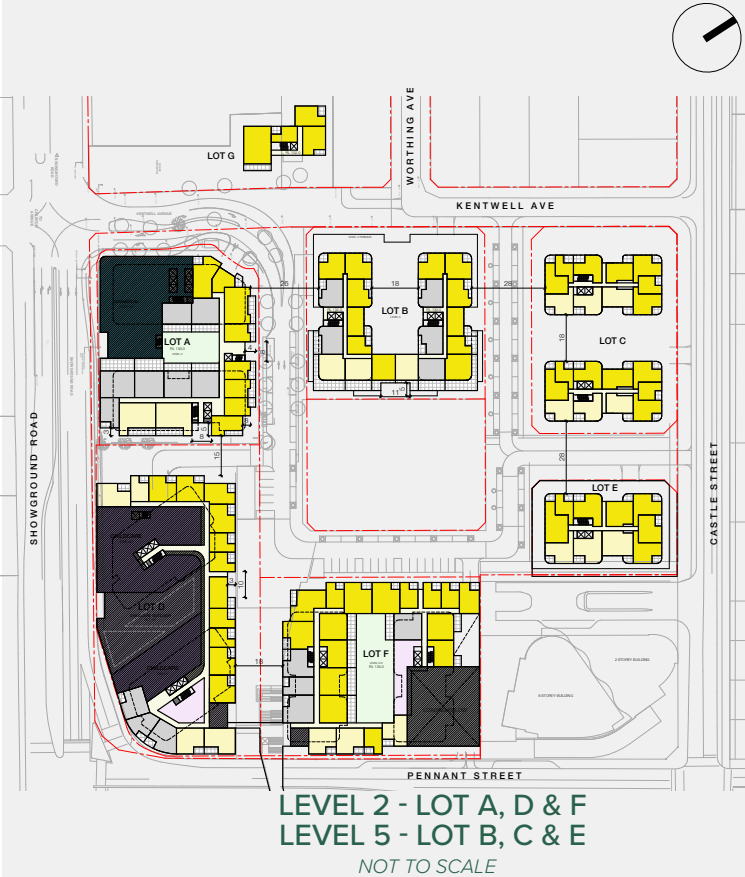
SOLAR ACCESS

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to its living space between 9am and 3pm on 21st June.

The adjacent plans and solar assessment summary table of the reference design scheme illustrates that at least 70% of the apartments within each lot receives a minimum of 2hrs solar access on 21st June. and no more than 15% of apartments recieve no sunlight on 21st June.

Narrow floor plates with compliant building separation as illustrated by this reference design scheme will further ensure for adequate solar access into apartments and their living spaces. Buildings floor plates and apartments are also to be orientated appropriately to ensure maximum solar gain where possible.

LEGEND



B.07 PRELIMINARY ADG REVIEW

SOLAR ACCESS

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to its living space between 9am and 3pm on 21st June.

The adjacent plans and solar assessment summary table of the reference design scheme illustrates that at least 70% of the apartments within each lot receives a minimum of 2hrs solar access on 21st June. and no more than 15% of apartments recieve no sunlight on 21st June.

Furthermore, a 3D solar analysis of the sun's eye indicates where apartments recieve a minimum of 2 hours of the day between 9am and 3pm on 21st June, has been included to provide an additional level of assessment.

The 3D solar analysis illustrates a substantial amount of morning and afternoon sunlight access and solar gain to a range of the apartment building facades, and consideration of appropriate design and shading should be given when detailing and designing the architectural facades.

Narrow floor plates with compliant building separation as illustrated by this reference design scheme will further ensure for adequate solar access into apartments and their living spaces. Buildings floor plates and apartments are also to be orientated appropriately to ensure maximum solar gain where possible.

ADG SOLAR ACCESS SUMMARY

LOT	NO. OF APTS PER LOT	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
A	166	117	70%	40	24%	9	5%
B	175	124	71%	15	9%	36	21%
C	195	140	72%	47	24%	8	4%
D	420	322	77%	85	20%	19	5%
E	122	85	70%	35	29%	2	2%
F	322	224	70%	36	11%	62	19%
G	27	27	100%	0	0%	0	0%
TOTAL	1427	1039	73%	258	18%	136	10%

LOT A

LEVEL	NO. OF APT PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Lower Ground	3	3	100%	0	0%	0	0%
Ground	11	6	100%	4	0%	1	0%
Level 1	4	4	100%	0	0%	0	0%
Level 2	17	8	47%	2	12%	7	41%
Level 3 (Podium)	11	7	60%	3	30%	1	10%
Level 4-10	10	7	70%	3	30%	0	0%
Level 11-15	10	8	80%	2	30%	0	0%
TOTAL	166	117	70%	40	24%	9	5%

LOT B

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	5	5	100%	0	0%	0	0%
Level 1	6	4	67%	0	0%	2	33%
Level 2	20	11	55%	3	15%	6	30%
Level 3	10	9	90%	0	0%	1	10%
L 4 - Podium	18	11	61%	1	6%	6	33%
Level 5	20	12	60%	3	15%	5	25%
Level 6	18	12	67%	2	11%	4	22%
Level 7	18	12	67%	2	11%	4	22%
Level 8	15	12	80%	1	7%	2	13%
Level 9	15	12	80%	1	7%	2	13%
Level 10	15	12	80%	1	7%	2	13%
Level 11	15	12	80%	1	7%	2	13%
TOTAL	175	124	71%	15	9%	36	21%

LOT C

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Lower Ground	7	7	100%	0	0%	0	0%
Ground	11	9	82%	2	18%	0	0%
Level 1	14	7	50%	0	0%	7	50%
Level 2	16	12	75%	3	19%	1	6%
Podium	20	13	65%	7	35%	0	0%
Level 4	20	14	70%	6	30%	0	0%
Level 5	20	14	70%	6	30%	0	0%
Level 6	20	14	70%	6	30%	0	0%
Level 7	20	14	70%	6	30%	0	0%
Level 8	15	11	73%	4	27%	0	0%
Level 9	15	11	73%	4	27%	0	0%
Level 10	13	11	85%	2	15%	0	0%
Level 11	4	3	75%	1	25%	0	0%
TOTAL	195	140	72%	47	24%	8	4%

LOT D

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Level 1	5	5	100%	0	0%	0	0%
Level 2	18	11	61%	4	22%	3	17%
Level 3 (Podium)	19	12	68%	4	21%	4	21%
Level 4-10	19	12	63%	6	32%	1	5%
Level 11-15	19	12	63%	3	16%	1	5%
Level 16-21	19	19	100%	2	11%	0	0%
Level 22-25	9	9	100%	2	22%	0	0%
TOTAL	420	322	77%	85	20%	19	5%

LOT E

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	4	4	100%	0	0%	0	0%
Level 1	4	4	100%	0	0%	0	0%
Level 2	12	6	47%	4	33%	2	20%
Level 3	11	8	73%	3	27%	0	0%
Level 4	10	7	70%	3	30%	0	0%
Level 5	10	7	70%	3	30%	0	0%
Level 6	10	7	70%	3	30%	0	0%
Level 7	10	7	70%	3	30%	0	0%
Level 8	10	7	70%	3	30%	0	0%
Level 9	9	6	67%	3	33%	0	0%
Level 10	9	6	67%	3	33%	0	0%
Level 11	9	6	67%	3	33%	0	0%
Level 12	7	5	71%	2	29%	0	0%
Level 13	7	5	71%	2	29%	0	0%
TOTAL	122	85	70%	35	29%	2	2%

LOT F

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	2	2	0%	0	0%	0	0%
Level 1	11	8	73%	0	0%	3	27%
Level 2-3	23	16	70%	3	13%	4	17%
Level 4-7	20	14	70%	2	10%	4	20%
Level 8-13	17	12	71%	2	12%	3	18%
Level 14-15	15	10	67%	2	13%	3	20%
Level 16-20	9	6	67%	1	11%	2	22%
Level 21	6	4	67%	1	17%	1	17%
TOTAL	322	224	70%	36	11%	62	19%

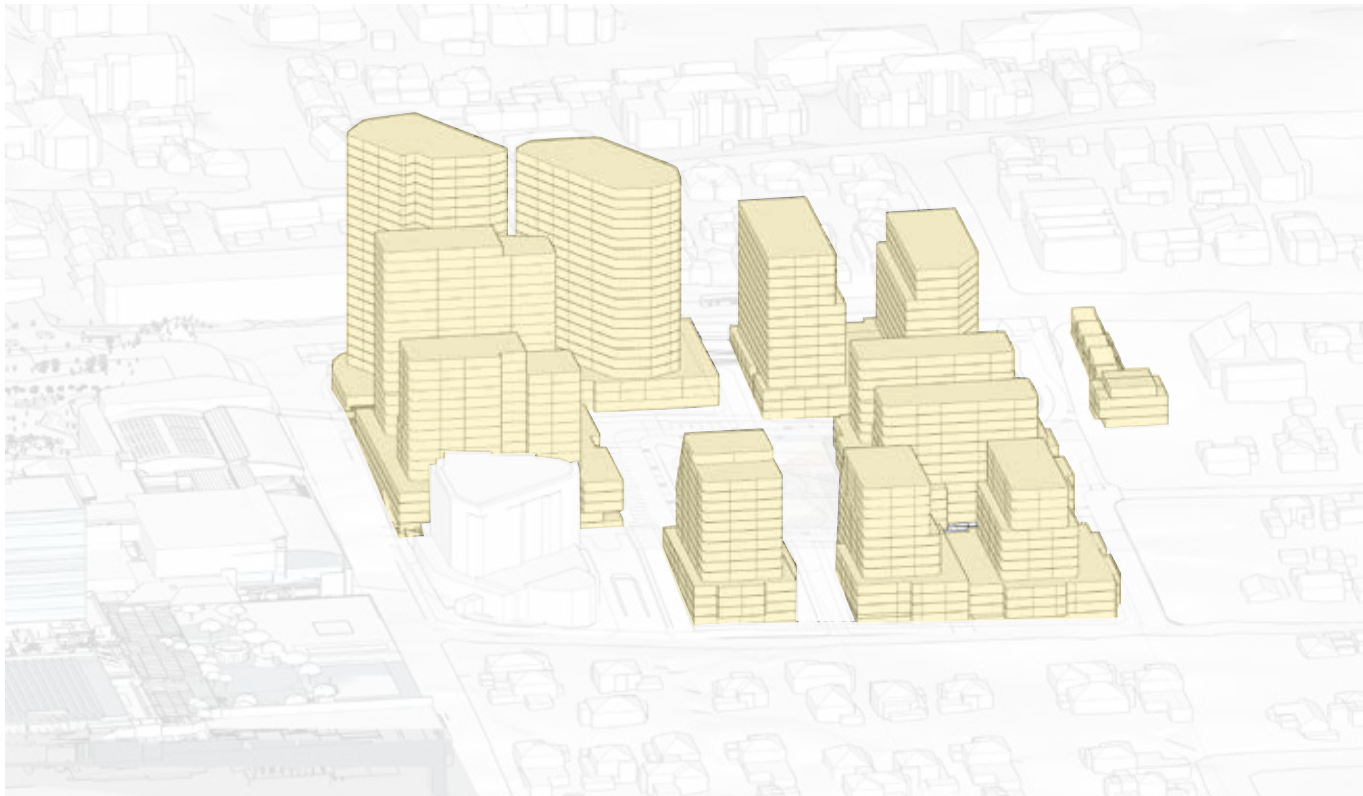
LOT G

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	4	4	100%	0	0%	0	0%
Level 1	5	5	100%	0	0%	0	0%
Level 2	5	5	100%	0	0%	0	0%
Level 3	4	4	100%	0	0%	0	0%
Level 4	4	4	100%	0	0%	0	0%
Townhouses	5	5	100%	0	0%	0	0%
TOTAL	27	27	100%	0	0%	0	0%

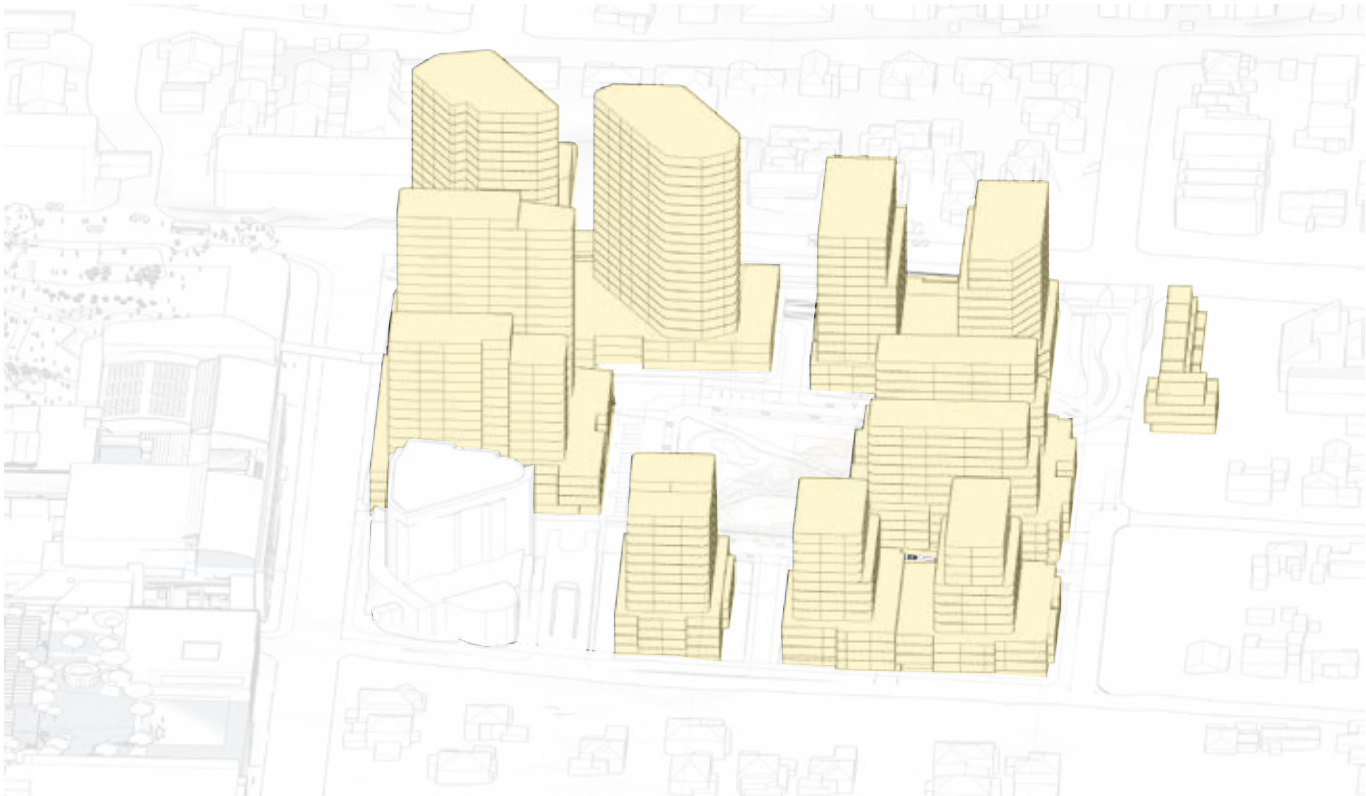
B.07 PRELIMINARY ADG REVIEW

SOLAR ACCESS - SUN'S EYE

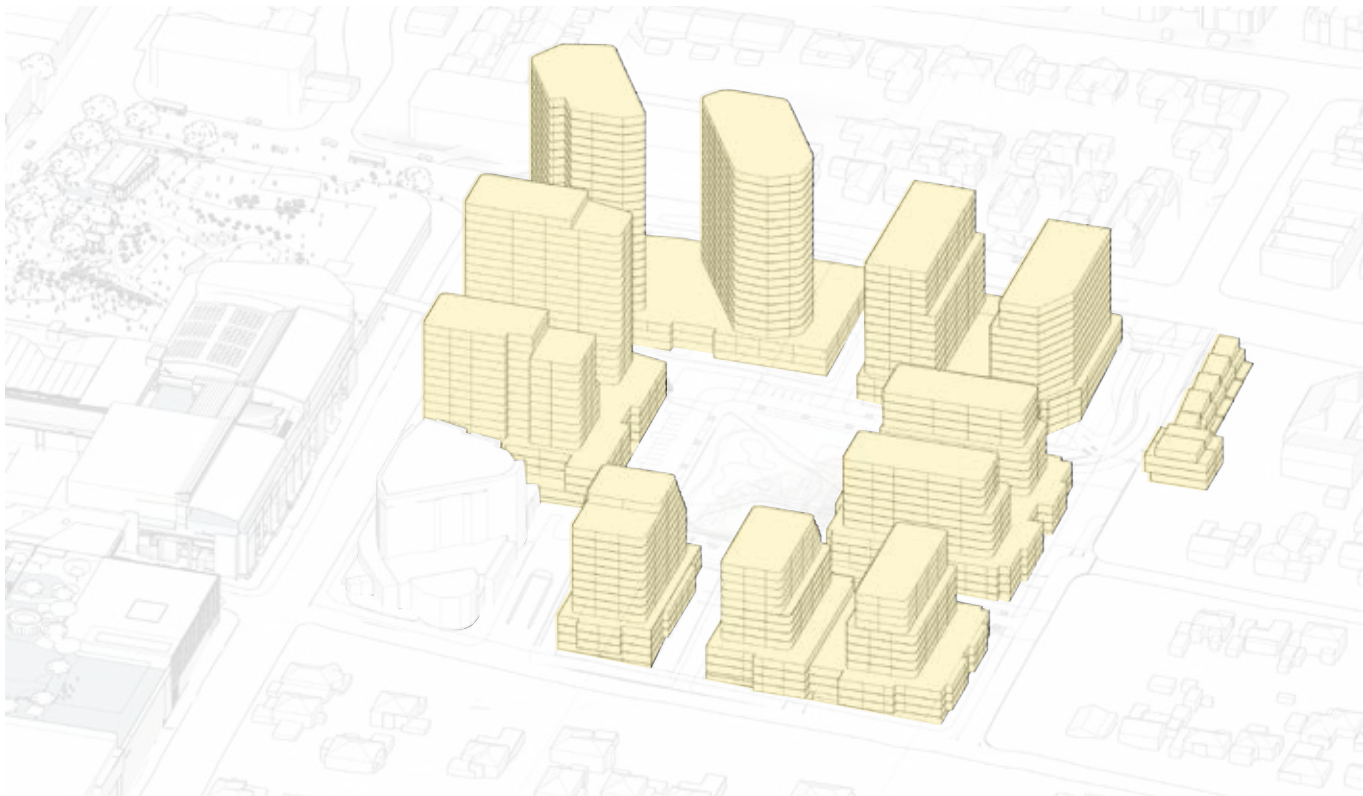
APARTMENT VISIBLE TO THE SUN & RECEIVING SOLAR



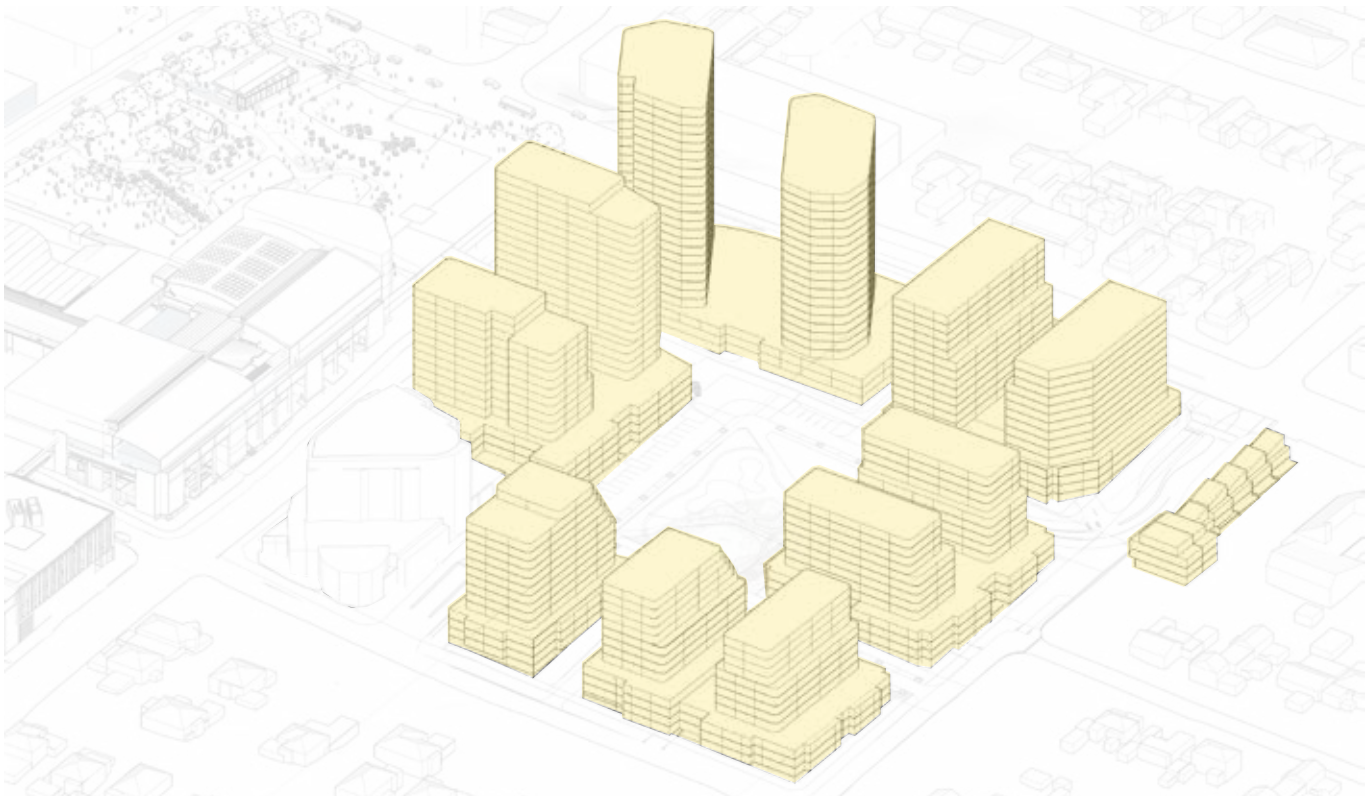
9AM - JUNE 21



10AM - JUNE 21



11AM - JUNE 21

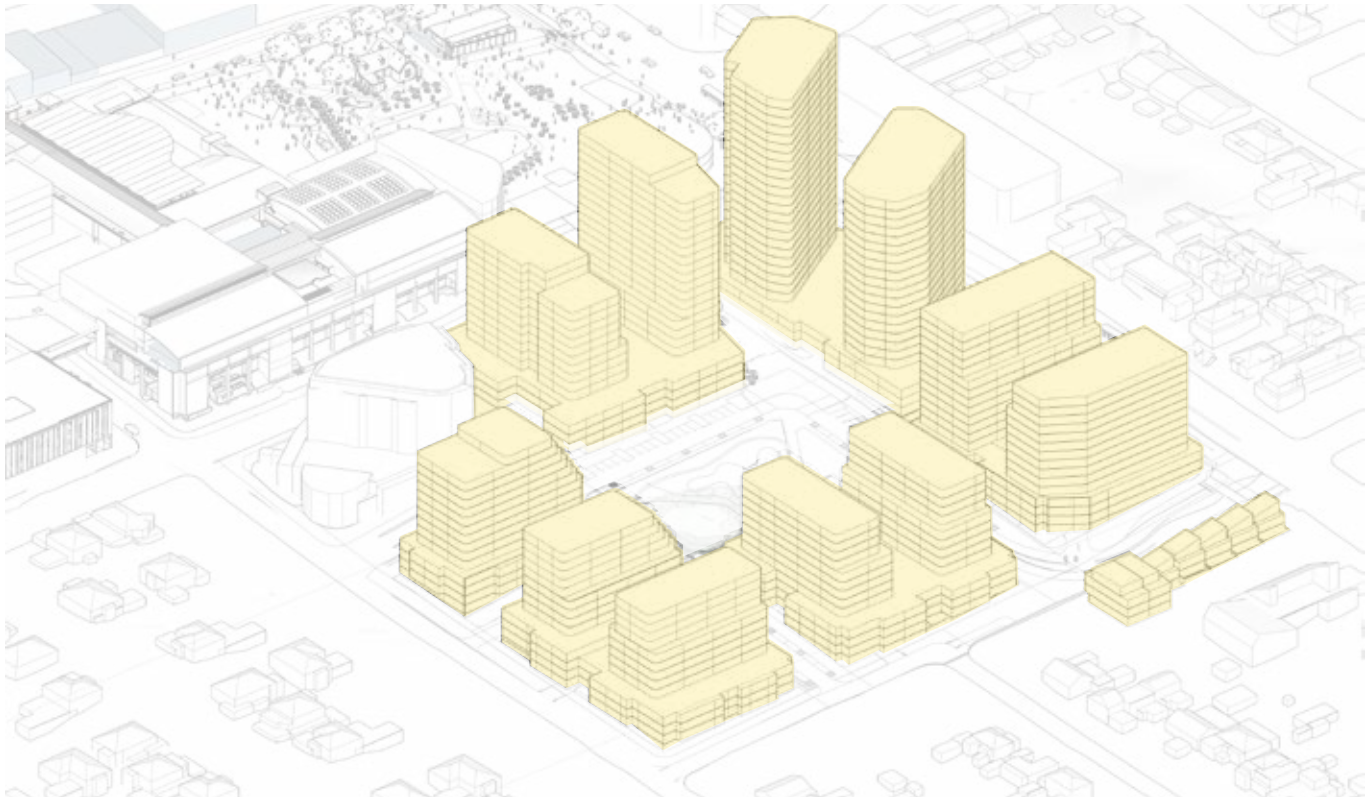


12PM - JUNE 21

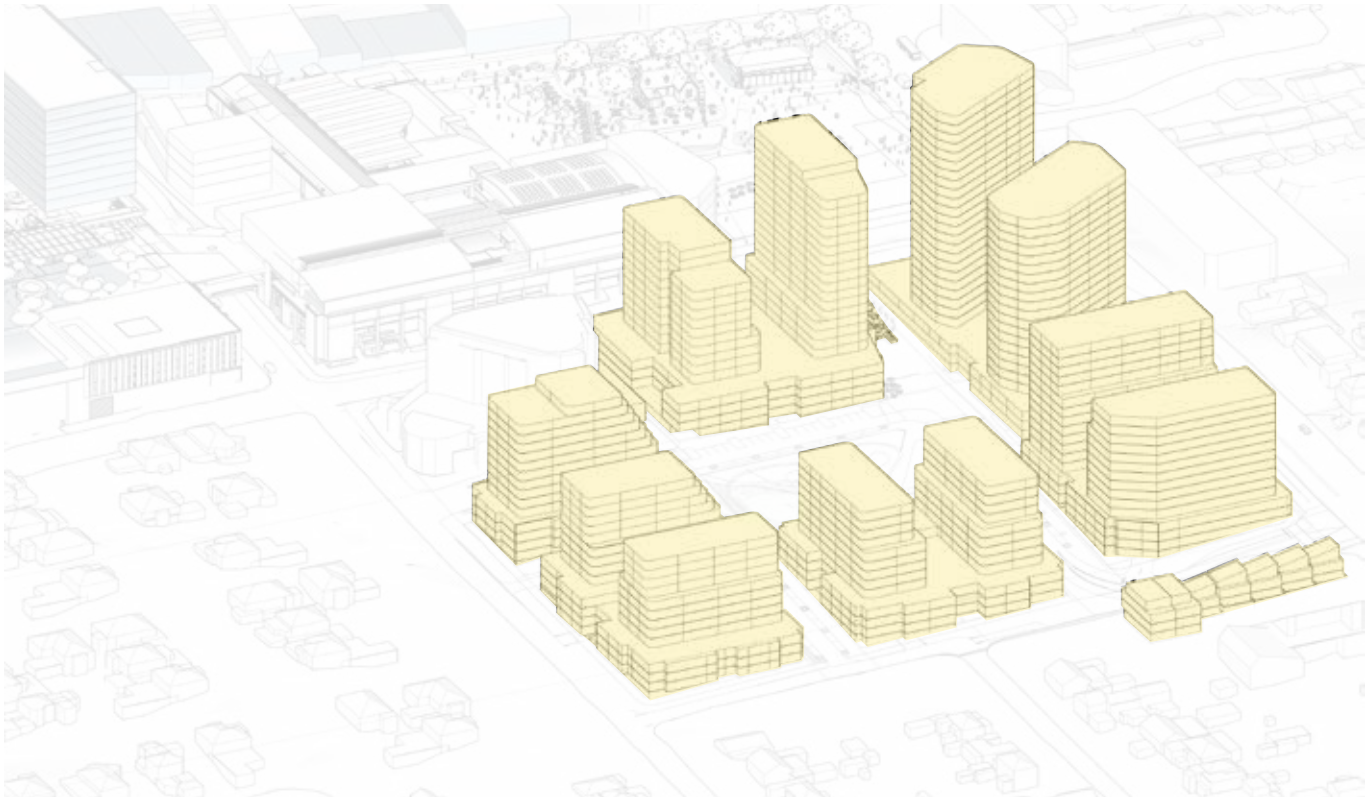
B.07 PRELIMINARY ADG REVIEW

SOLAR ACCESS - SUN'S EYE

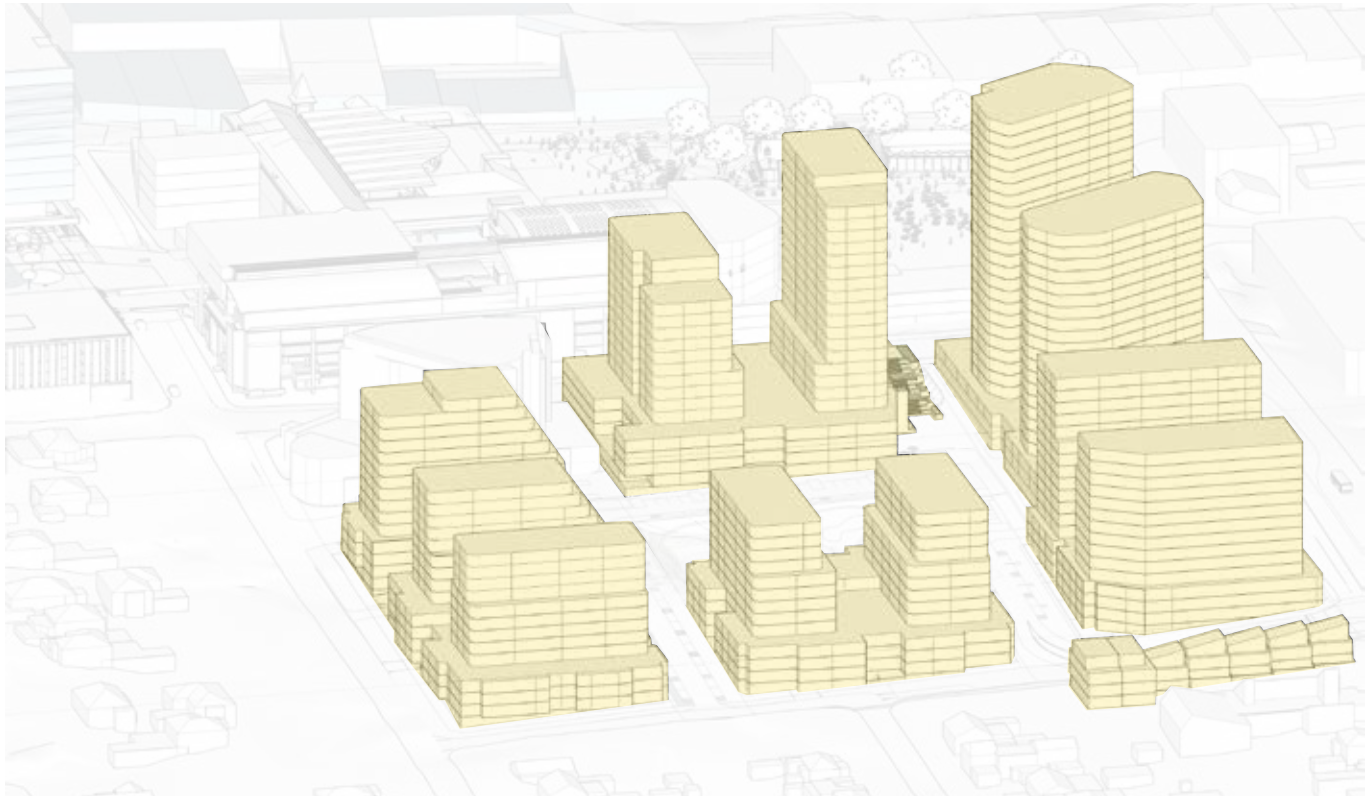
APARTMENT VISIBLE TO THE SUN & RECEIVING SOLAR



1PM - JUNE 21



2PM - JUNE 21



3PM - JUNE 21

B.08 PRELIMINARY ADG REVIEW

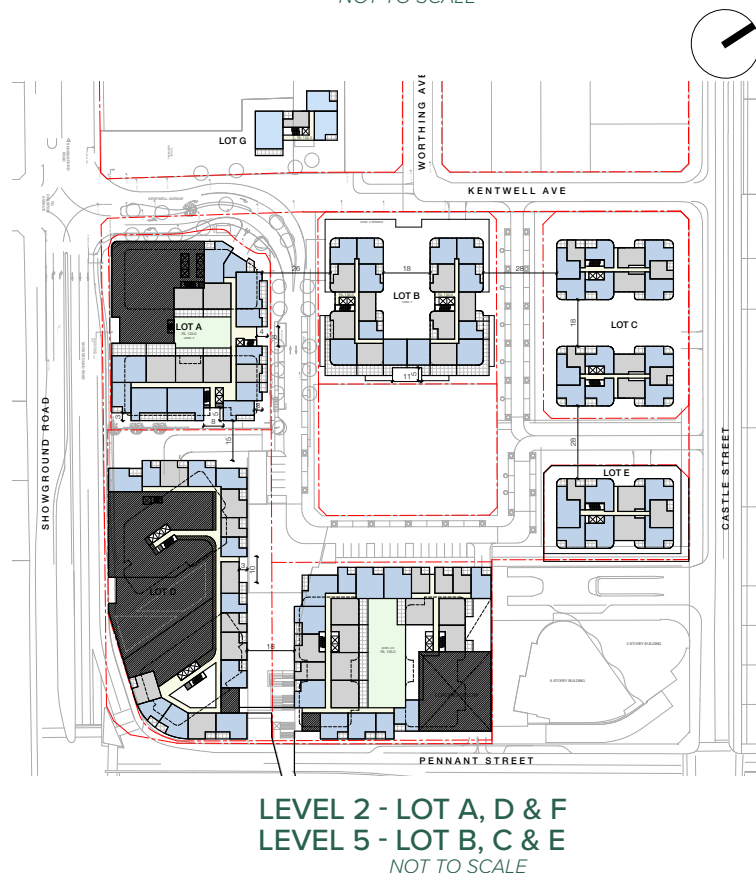
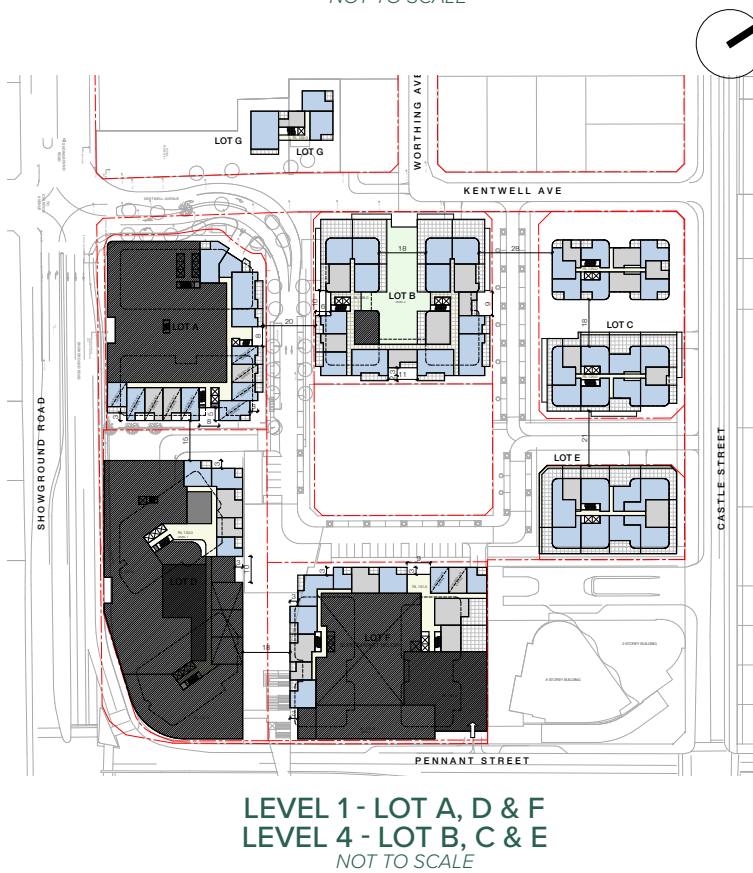
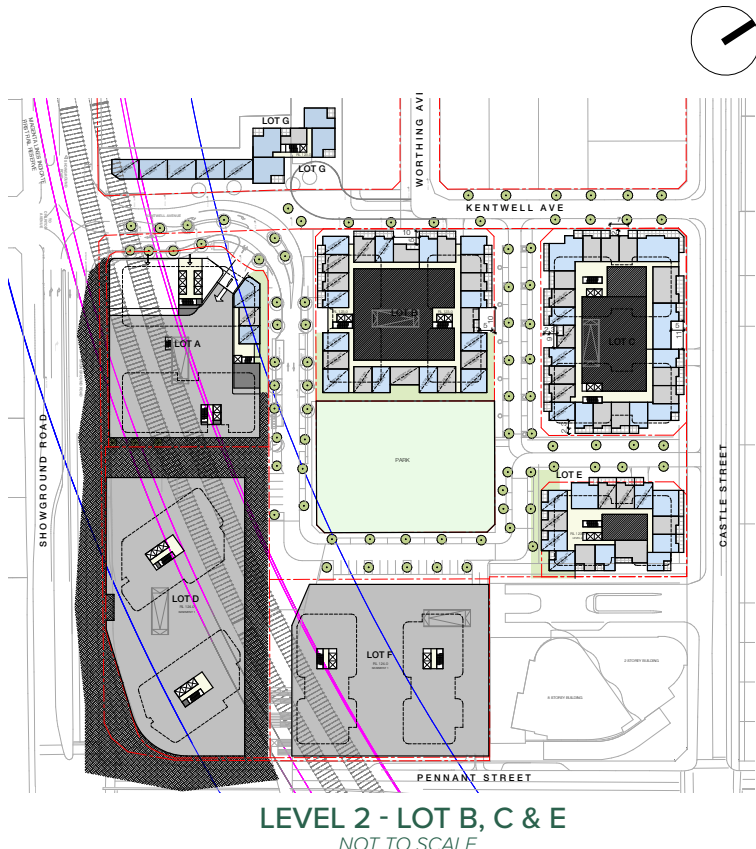
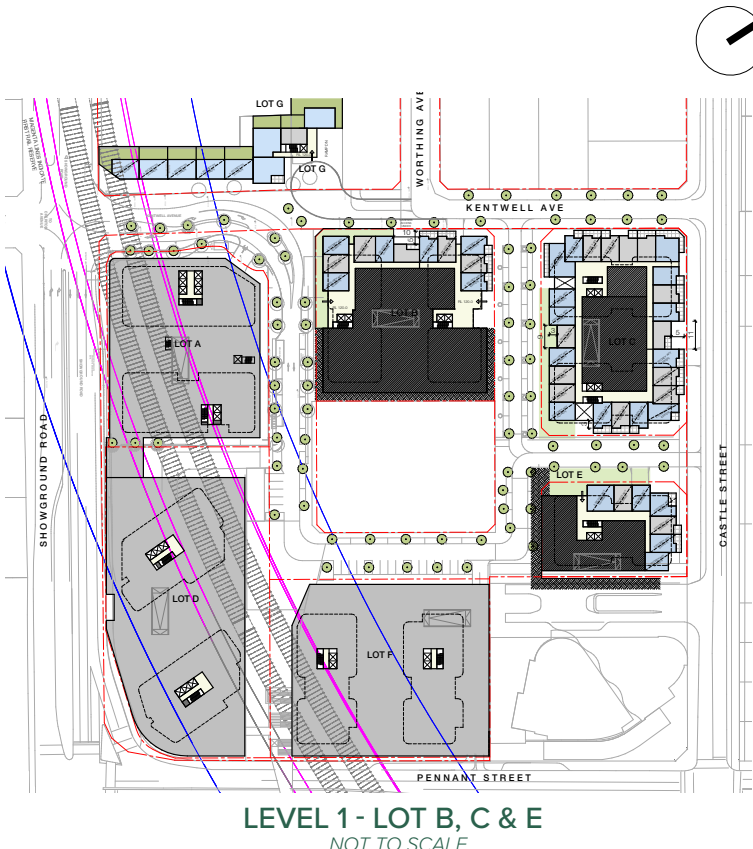
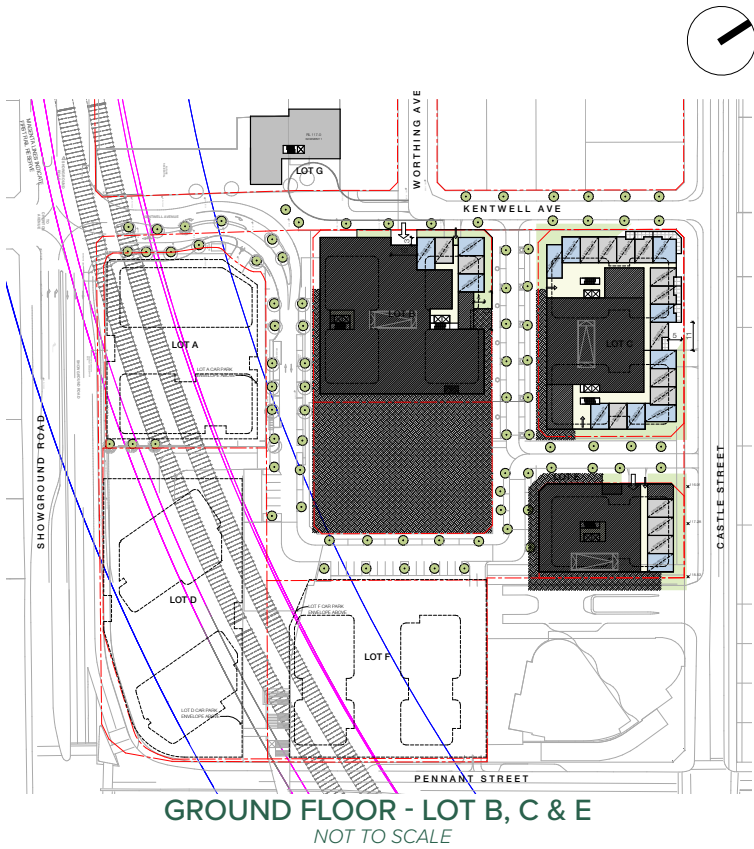
CROSS - VENTILATION ASSESSMENT

The ADG requires at least 60% of apartments to be naturally cross ventilated in the first nine storeys of a building.

The adjacent plans illustrate the cross-ventilated apartments of Lot A to Lot G of the first five storeys and a typical tower level of the next four storeys, making up the first nine storeys of each Lot.

As an indicative development proposal, the table below also illustrates that the development, as a whole, achieves >60% for the first nine storeys.

The buildings consideration for substantial cross-ventilation – as shown in the accompanying diagrams – should be detailed and design accordingly to achieve this desired outcome.



B.08 PRELIMINARY ADG REVIEW

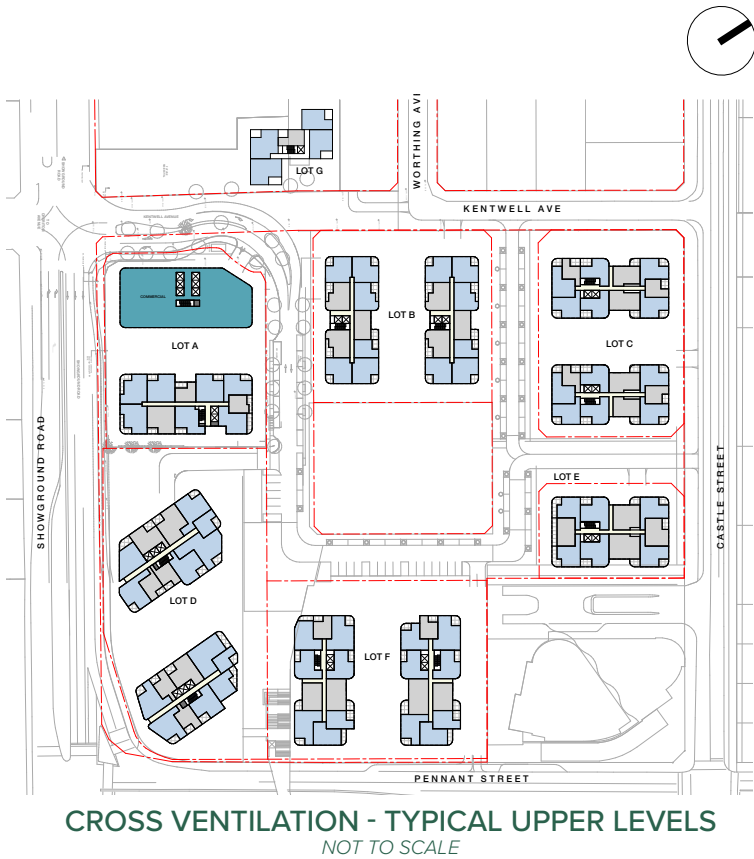
CROSS - VENTILATION ASSESSMENT

The ADG requires at least 60% of apartments to be naturally cross ventilated in the first nine storeys of a building.

The adjacent plans illustrate the cross-ventilated apartments of Lot A to Lot G of the first five storeys and a typical tower level of the next four storeys, making up the first nine storeys of each Lot.

As an indicative development proposal, the table below also illustrates that the development, as a whole, achieves >60% for the first nine storeys.

The buildings consideration for substantial cross-ventilation – as shown in the accompanying diagrams – should be detailed and design accordingly to achieve this desired outcome.



ADG CROSS VENTILATION SUMMARY

LOT	NO. OF APTS (9 STOREYS)	NO. CROSS-VENT APT. %	
A	95	67	71%
B	130	82	63%
C	163	97	63%
D	137	85	62%
E	80	51	64%
F	154	99	64%
G	27	22	81%
TOTAL	786	503	64%

LOT A

LEVEL	NO. OF APT	NO. CROSS-VENT APT. %	
Lower Ground	3	2	67%
Ground	11	8	73%
Level 1	4	4	100%
Level 2	17	11	65%
Level 3 (Podium)	10	7	70%
Level 4	10	7	70%
Level 5	10	7	70%
Level 6	10	7	70%
Level 7	10	7	70%
Level 8	10	7	70%
TOTAL	95	67	71%

LOT B

LEVEL	NO. OF APT	NO. CROSS-VENT APT. %	
Ground	5	3	60%
Level 1	6	3	50%
Level 2	20	10	50%
Level 3	10	5	50%
L 4 - Podium	18	12	67%
Level 5	20	12	60%
Level 6	18	12	67%
Level 7	18	12	67%
Level 8	15	13	87%
TOTAL	130	82	63%

LOT C

LEVEL	NO. OF APT	NO. CROSS-VENT APT. %	
Lower Ground	7	3	43%
Ground	11	7	64%
Level 1	14	8	57%
Level 2	16	8	50%
Podium	20	13	65%
Level 4	20	14	70%
Level 5	20	12	60%
Level 6	20	12	60%
Level 7	20	12	60%
Level 8	15	8	53%
TOTAL	163	97	60%

LOT D

LEVEL	NO. OF APT	NO. CROSS-VENT APT. %	
Level 1	5	3	60%
Level 2	18	10	56%
Level 3 (Podium)	19	12	63%
Level 4	19	12	63%
Level 5	19	12	63%
Level 6	19	12	63%
Level 7	19	12	63%
Level 8	19	12	63%
TOTAL	137	85	62%

LOT E

LEVEL	NO. OF APT	NO. CROSS-VENT APT. %	
Ground	4	3	75%
Level 1	3	2	67%
Level 2	12	8	67%
Level 3	11	6	55%
Level 4	10	8	80%
Level 5	10	6	60%
Level 6	10	6	60%
Level 7	10	6	60%
Level 8	10	6	60%
TOTAL	80	51	64%

LOT F

LEVEL	NO. OF APT	NO. CROSS -VENT APT %	
Ground	2	1	50%
Level 1	9	6	67%
Level 2	23	11	48%
Level 3	23	11	48%
Level 4	20	14	70%
Level 5	20	14	70%
Level 6	20	14	70%
Level 7	20	14	70%
Level 8	17	14	82%
TOTAL	154	99	64%

LOT G

LEVEL	NO. OF APT	NO. CROSS VENT APT %	
Ground	4	3	75%
Level 1	5	4	80%
Level 2	5	4	80%
Level 3	4	3	75%
Level 4	4	3	75%
Townhouses	5	5	100%
TOTAL	27	22	81%

B.09 PRELIMINARY ADG REVIEW

FLOOR PLATE TEST

LOT A

Solar Access

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.

It also requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

Narrow floorplates with compliant building separation allow for adequate solar access into apartments. Buildings are orientated to ensure no living rooms face south and thus no apartments in a typical tower level in Lot A receive no direct sunlight.

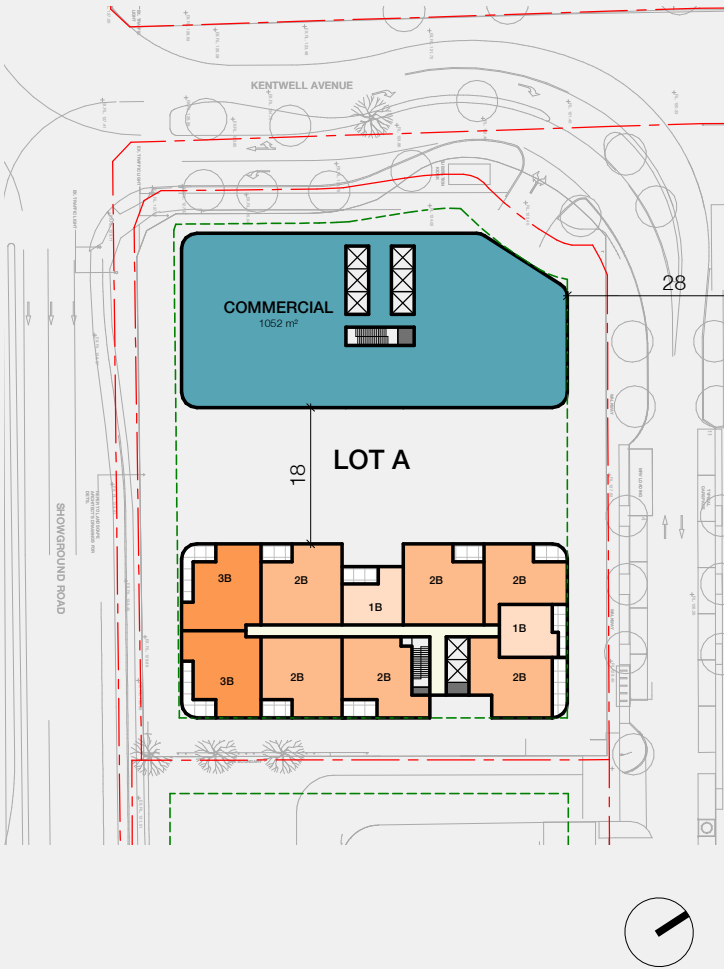
Cross-Vent

The ADG requires 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.

60% cross-ventilation achieved by limiting the number of apartments per floor plate by introducing cut-outs in the facade.

Apartments

A mix of 1 bedroom, 2 bedroom and 3 bedroom apartments have been proposed. Family-sized 2-bedroom and 3-bedroom apartments have also been proposed on the lower levels of the towers and in the podium. These units provide additional space, in the form of larger bathrooms, a study area and additional storage.



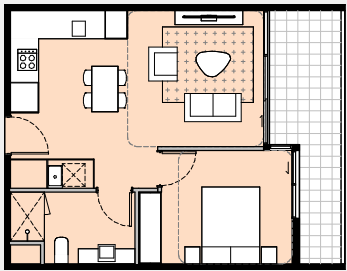
CROSS VENTILATION DIAGRAM LOT A

- ACHIEVES CROSS-VENT
- NOT CROSS-VENTED
- NOT PART OF ASSESSMENT

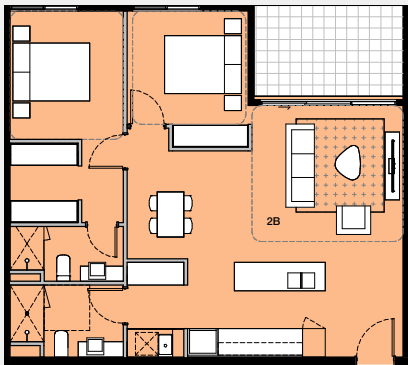


SOLAR ACCESS DIAGRAM LOT A

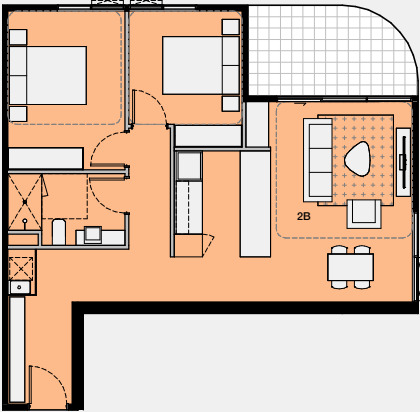
- 2 HRS OR MORE SOLAR ACCESS
- LESS THAN 2 HRS SOLAR ACCESS
- 0 HRS SOLAR ACCESS



LOT A - TYPICAL TYPE 1A
1 BEDROOM APARTMENT - 51m²



LOT A - TYPICAL TYPE 2A
2 BEDROOM FAMILY APARTMENT - 104m²



LOT A - TYPICAL TYPE 2B
2 BEDROOM APARTMENT - 80m²

B.10 PRELIMINARY ADG REVIEW

FLOOR PLATE TEST

LOT B

Solar Access

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.

It also requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

Narrow floorplates with compliant building separation allow for adequate solar access into apartments. Buildings are orientated to ensure living rooms face north where possible and thus only 4 apartments out of 18 apartments in a typical level in Lot B receive no direct sunlight.

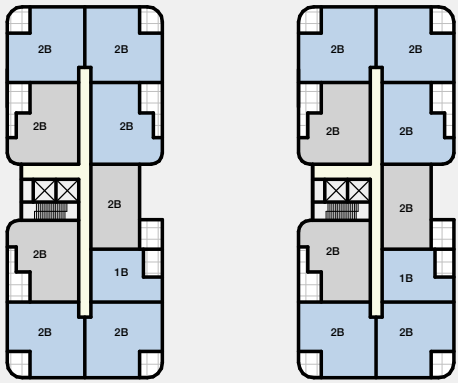
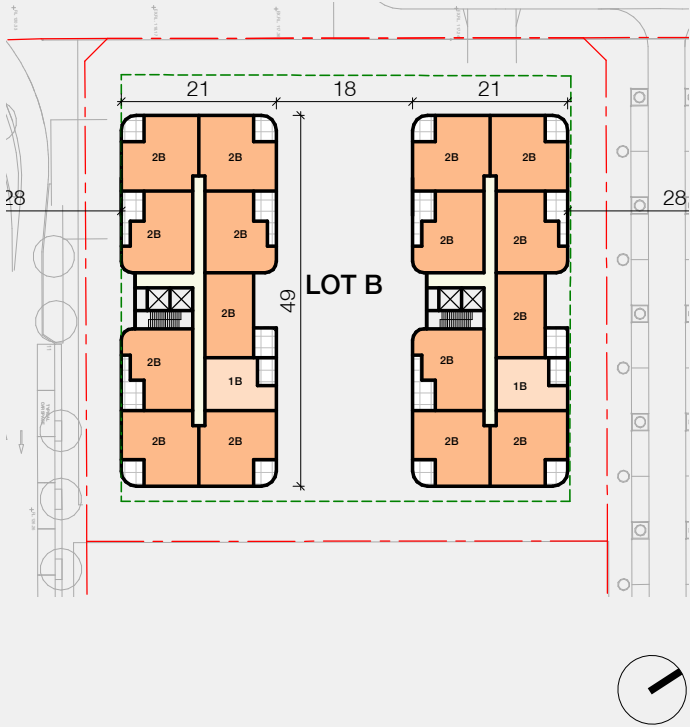
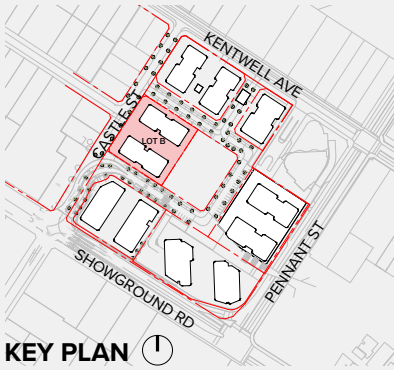
Cross-Vent

The ADG requires 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.

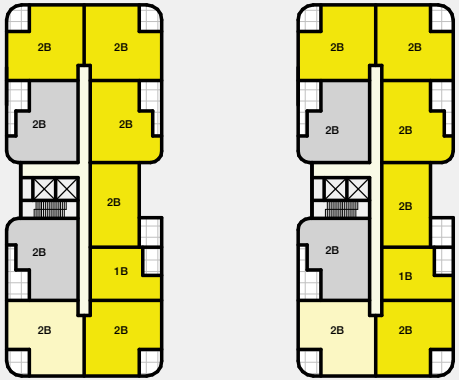
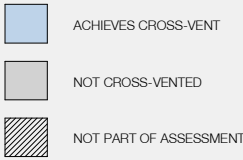
60% cross-ventilation achieved by limiting the number of apartments per floor plate by introducing cut-outs in the facade.

Apartments

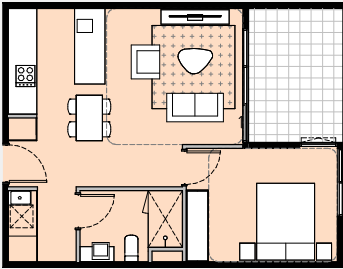
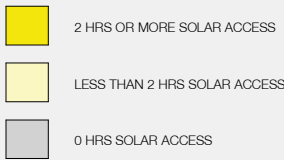
A mix of 1 bedroom, 2 bedroom and 3 bedroom apartments have been proposed. Family-sized 2-bedroom and 3-bedroom apartments have also been proposed on the lower levels of the towers and in the podium. These units provide additional space, in the form of larger bathrooms, a study area and additional storage.



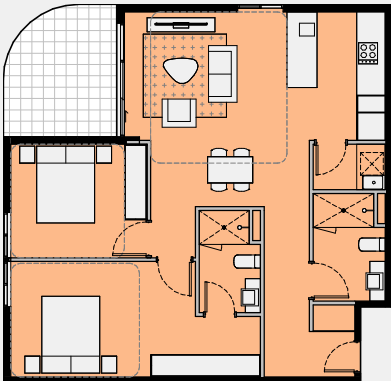
CROSS VENTILATION DIAGRAM Lot B



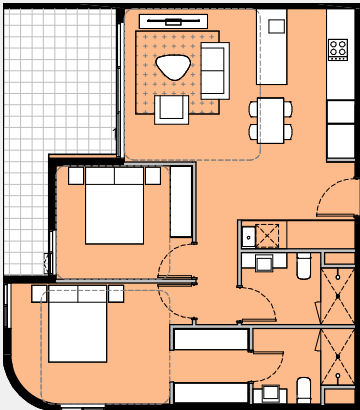
SOLAR ACCESS DIAGRAM Lot B



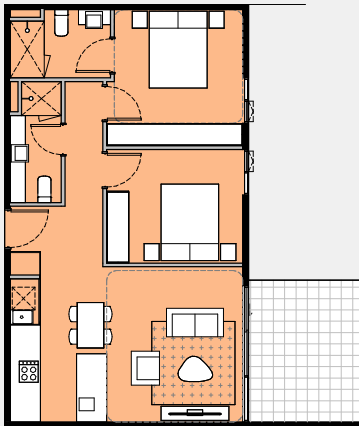
LOT B - TYPICAL TYPE 1A
1 BEDROOM APARTMENT - 55m²



LOT B - TYPICAL TYPE 2A
2 BEDROOM APARTMENT - 90m²



LOT B - TYPICAL TYPE 2B
2 BEDROOM APARTMENT - 85m²



LOT B - TYPICAL TYPE 2C
2 BEDROOM APARTMENT - 72m²

B.11 PRELIMINARY ADG REVIEW

FLOOR PLATE TEST

LOT C

Solar Access

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.

It also requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

Narrow floorplates with compliant building separation allow for adequate solar access into apartments. Buildings are orientated to ensure living rooms face north where possible and thus only 2 apartments out of 20 apartments in a typical level in Lot C receive no direct sunlight.

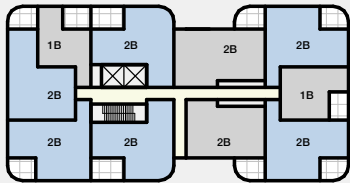
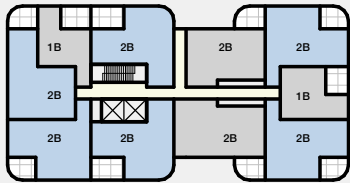
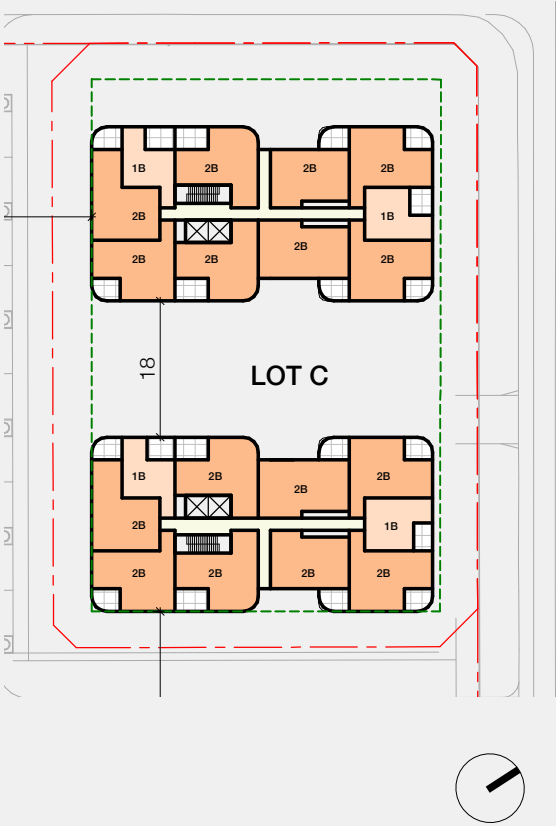
Cross-Vent

The ADG requires 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.

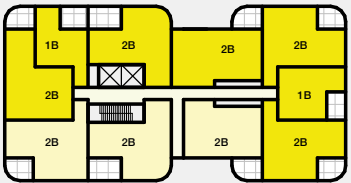
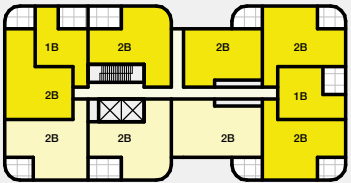
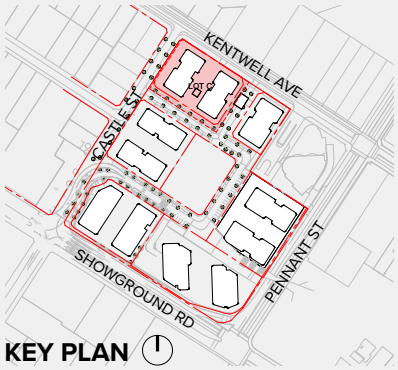
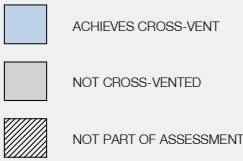
60% cross-ventilation achieved by limiting the number of apartments per floor plate by introducing cut-outs in the facade.

Apartments

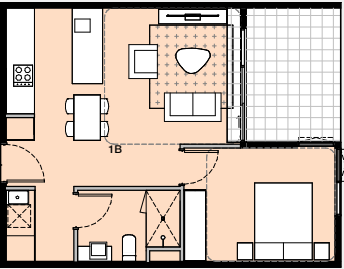
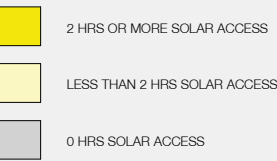
A mix of 1 bedroom, 2 bedroom and 3 bedroom apartments have been proposed. Family-sized 2-bedroom and 3-bedroom apartments have also been proposed on the lower levels of the towers and in the podium. These units provide additional space, in the form of larger bathrooms, a study area and additional storage.



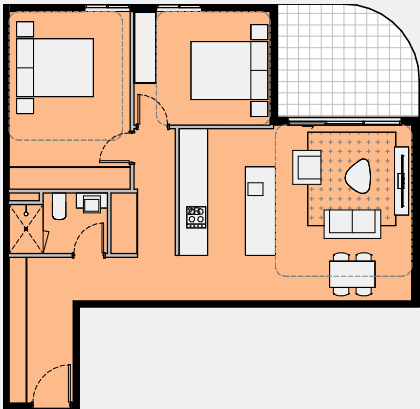
CROSS VENTILATION DIAGRAM Lot C



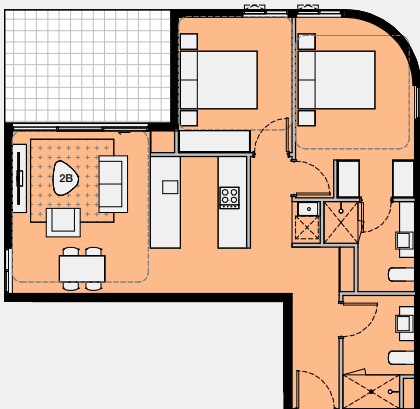
SOLAR ACCESS DIAGRAM Lot C



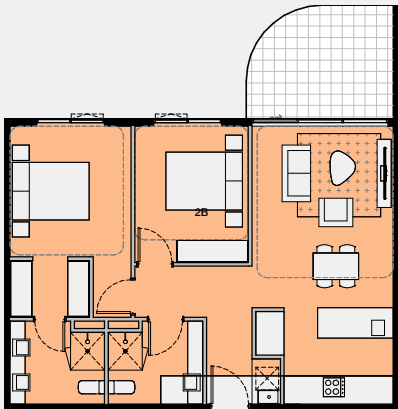
LOT C - TYPICAL TYPE 1A
1 BEDROOM APARTMENT - 53m²



LOT C - TYPICAL TYPE 2A
2 BEDROOM APARTMENT - 82m²



LOT C - TYPICAL TYPE 2B
2 BEDROOM APARTMENT - 82m²



LOT C - TYPICAL TYPE 2C
2 BEDROOM APARTMENT - 80m²

B.12 PRELIMINARY ADG REVIEW

FLOOR PLATE TEST

LOT D

Solar Access

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.

It also requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

The floorplates for Lot D have been orientated along the North-South Access to improve solar access into the units.

Only one unit per floor plate receives no direct sunlight, with the remainder of the apartments receiving more than 2 hours.

Cross-Vent

The ADG requires at least 60% of apartments are naturally cross ventilated in the first nine storeys of the building.

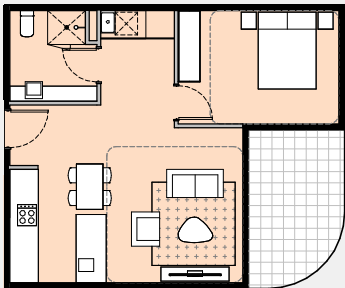
Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.

60% cross-ventilation is achieved through the articulation in the facade and by creating indents/ setbacks where required.

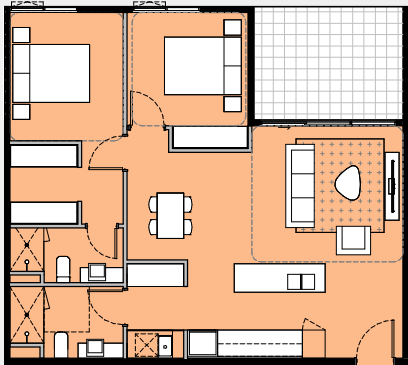
Apartments

A mix of 1 bedroom, 2 bedroom and 3 bedroom apartments have been proposed. Family-sized 2-bedroom and 3-bedroom apartments have also been proposed throughout the building.

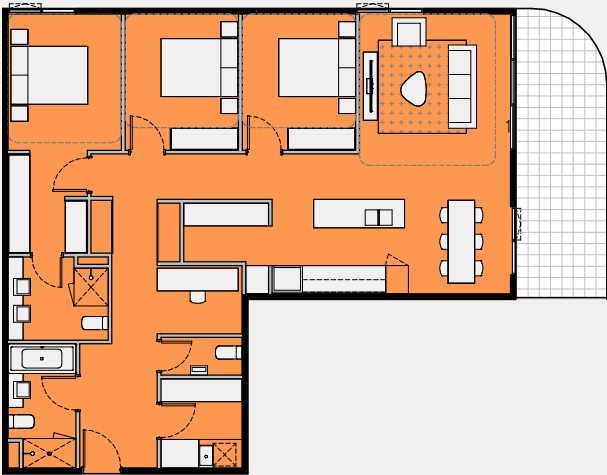
These units provide additional space, in the form of larger bathrooms, a study area and additional storage.



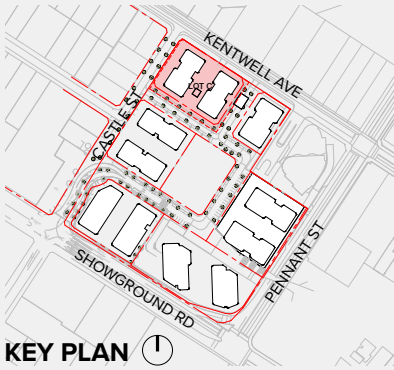
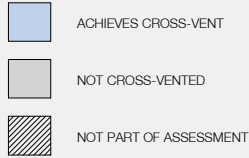
LOT D - TYPICAL TYPE 1A
1 BEDROOM APARTMENT - 55m²



LOT D - TYPICAL TYPE 2A
2 BEDROOM APARTMENT - 95m²



LOT D - TYPICAL TYPE 3A
3 BEDROOM FAMILY APARTMENT - 135m²



B.13 PRELIMINARY ADG REVIEW

FLOOR PLATE TEST

LOT E

Solar Access

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.

It also requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

The floorplates for Lot E have been orientated along the North-South Access to improve solar access into the units. Only one unit per floor plate receives no direct sunlight, with the remainder of the apartments receiving more than 2 hours.

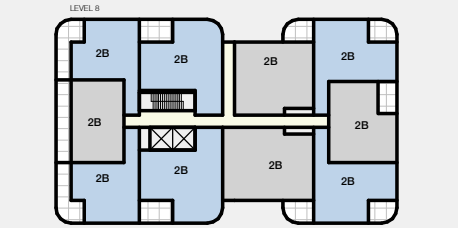
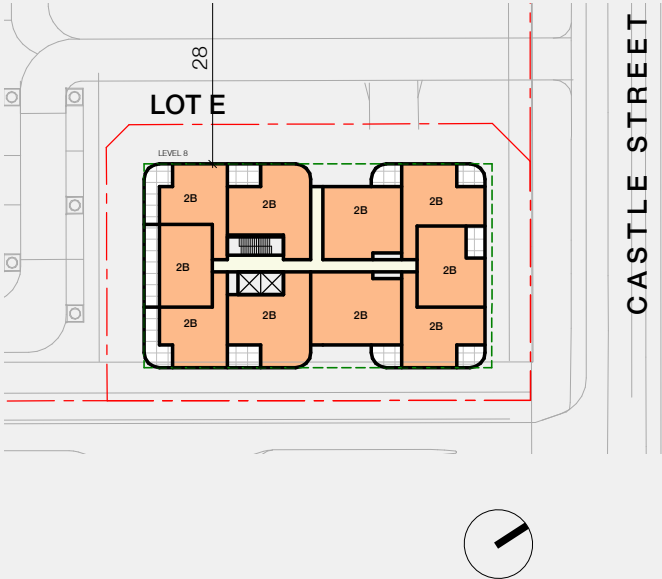
Cross-Vent

The ADG requires 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.

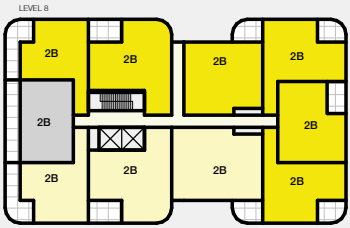
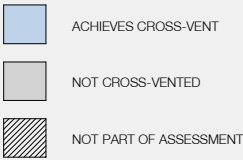
60% cross-ventilation is achieved through the articulation in the facade and by creating indents/ setbacks where required.

Apartments

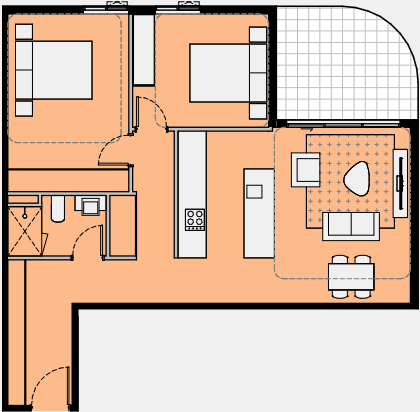
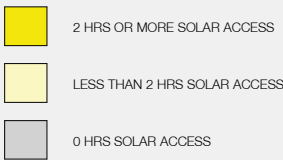
A mix of 1 bedroom, 2 bedroom and 3 bedroom apartments have been proposed. Family-sized 2-bedroom apartments have also been proposed throughout the building and family-sized 3-bedrooms on lower levels with access to front yards and large terraces. These units provide additional space, in the form of larger bathrooms, a study area and additional



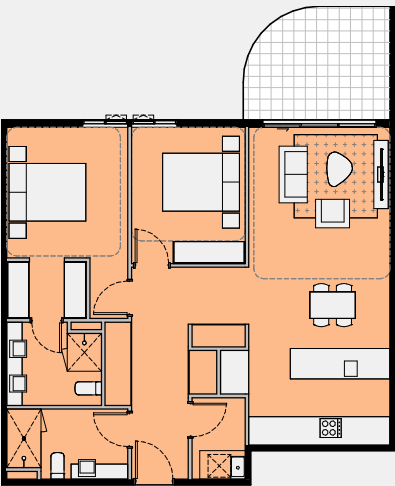
CROSS VENTILATION DIAGRAM Lot E



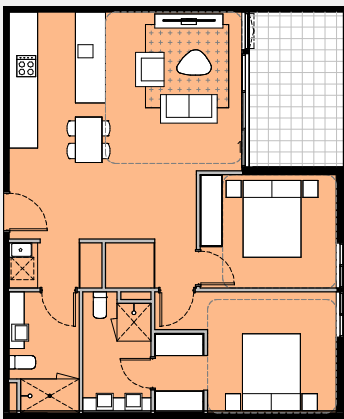
SOLAR ACCESS DIAGRAM Lot E



LOT E - TYPICAL TYPE 2A
2 BEDROOM APARTMENT - 88m²



LOT E - TYPICAL TYPE 2B
2 BEDROOM APARTMENT - 97m²



LOT E - TYPICAL TYPE 2C
2 BEDROOM APARTMENT - 85m²

B.14 PRELIMINARY ADG REVIEW

FLOOR PLATE TEST

LOT F

Solar Access

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.

It also requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

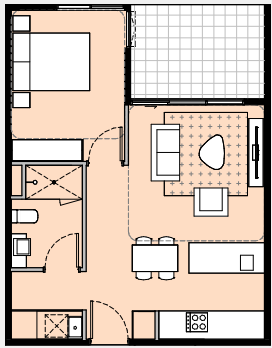
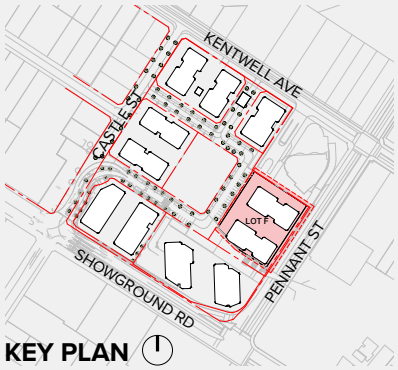
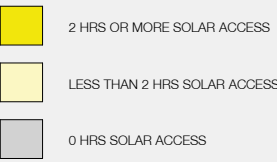
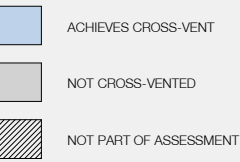
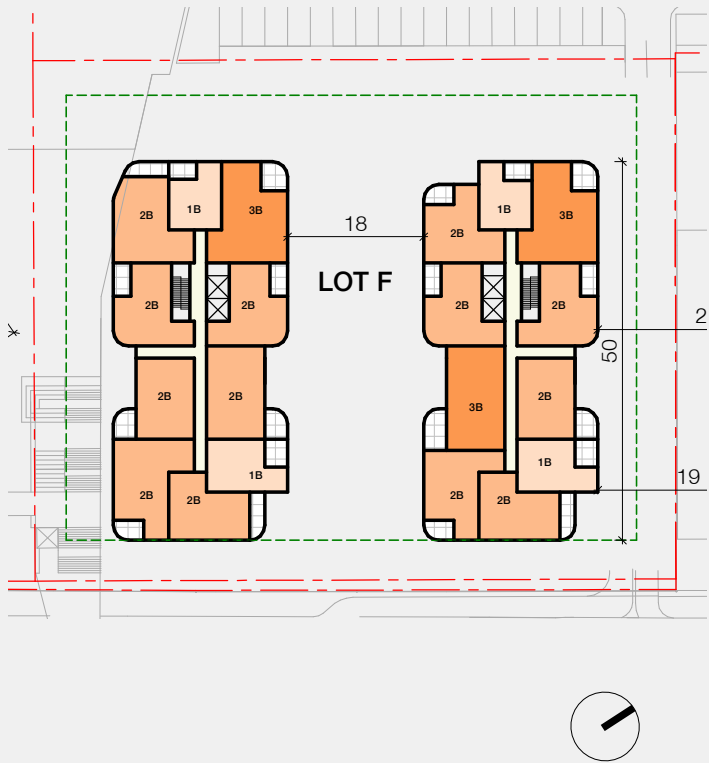
Narrow floorplates with compliant building separation promote solar access into apartments. Buildings are orientated to ensure living rooms face north where possible and thus only 4 apartments out of 20 apartments in a typical level in Lot F receive no direct sunlight.

Cross-Vent

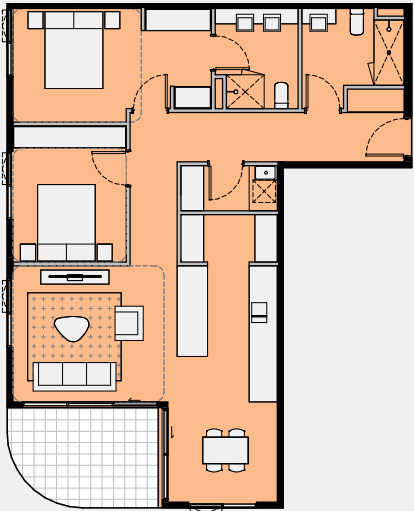
The ADG requires at least 60% of apartments are naturally cross ventilated in the first nine storeys of the building.

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.

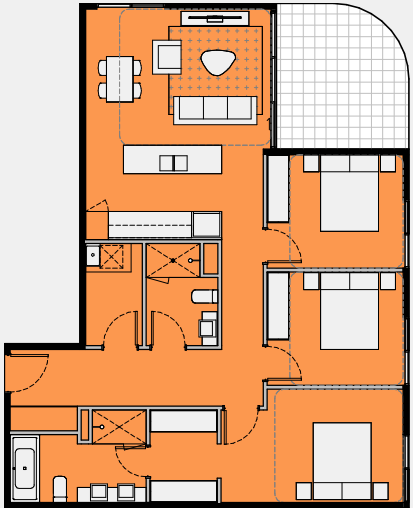
60% cross-ventilation is achieved through the articulation in the facade and by limiting the number of apartments per floor plate.



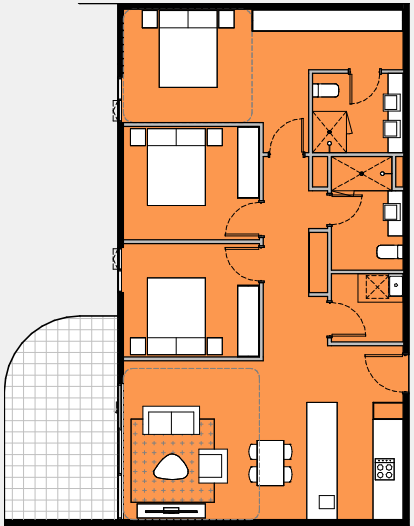
LOT F - TYPICAL TYPE 1A
1 BEDROOM APARTMENT - 52m²



LOT F - TYPICAL TYPE 2A
2 BEDROOM FAMILY APARTMENT - 101m²



LOT F - TYPICAL TYPE 3A
3 BEDROOM APARTMENT - 110m²



LOT F - TYPICAL TYPE 3B
3 BEDROOM APARTMENT - 105m²

An architectural rendering of a modern urban development. The scene features several multi-story buildings with a mix of brick and light-colored panels. The buildings have numerous balconies, many of which are covered with lush green plants and vines, creating a vertical garden effect. In the foreground, there is a large, open public space with a paved walkway, grassy areas, and several mature trees. People are depicted in various activities: walking, sitting on benches, playing in a small park area, and using a bicycle. The overall atmosphere is one of a vibrant, green, and walkable community.

ClarkeHopkinsClarke