

**URBAN DESIGN REPORT
FOR A RESIDENTIAL DEVELOPMENT
400-404 CABRAMATTA RD WEST
CABRAMATTA**

**FOR TCON CONSTRUCTIONS
FEBRUARY 2016**

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This Urban Design report has been prepared by Aleksandar Design Group on behalf of TCON Constructions as part of a Planning Proposal that seeks to review the key controls for 400-404 Cabramatta Rd West, Cabramatta.

TCON Constructions have expressed a desire to develop the site into a multi-residential development. The proposal seeks a change to the sites zoning, and an increase to both the height limit and FSR. The proposal seeks to deliver high density housing in an appropriate location.

This urban design report examines:

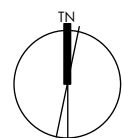
- The position of the surrounding buildings, their height limits and FSR, whether those buildings are likely to be redeveloped and their potential height etc at a micro context. The analysis also consider the proximity of adjoining buildings to the subject site, and whether specific setbacks should be applied.
- Building envelope testing (height, setbacks, floor plate, efficiencies, bulk, mass and overshadowing, Apartment Design Guide amenity/ building separations).
- 3D modelling of the built form proposed on the subject site and on adjacent properties is provided to demonstrate impact as well as contextual fit.
- The impact of the redevelopment on neighbouring sites.

In thoroughly examining these issues this report identifies a preferred built form that satisfies the above objectives.

The site is located on the corner of Cabramatta Road West and Cumberland Highway, Cabramatta and is known as 400-404 Cabramatta Road West, Cabramatta. It is located to the west of Cabramatta Town Centre and adjacent to Cabramatta Golf Course.

The site is defined by the following factors:

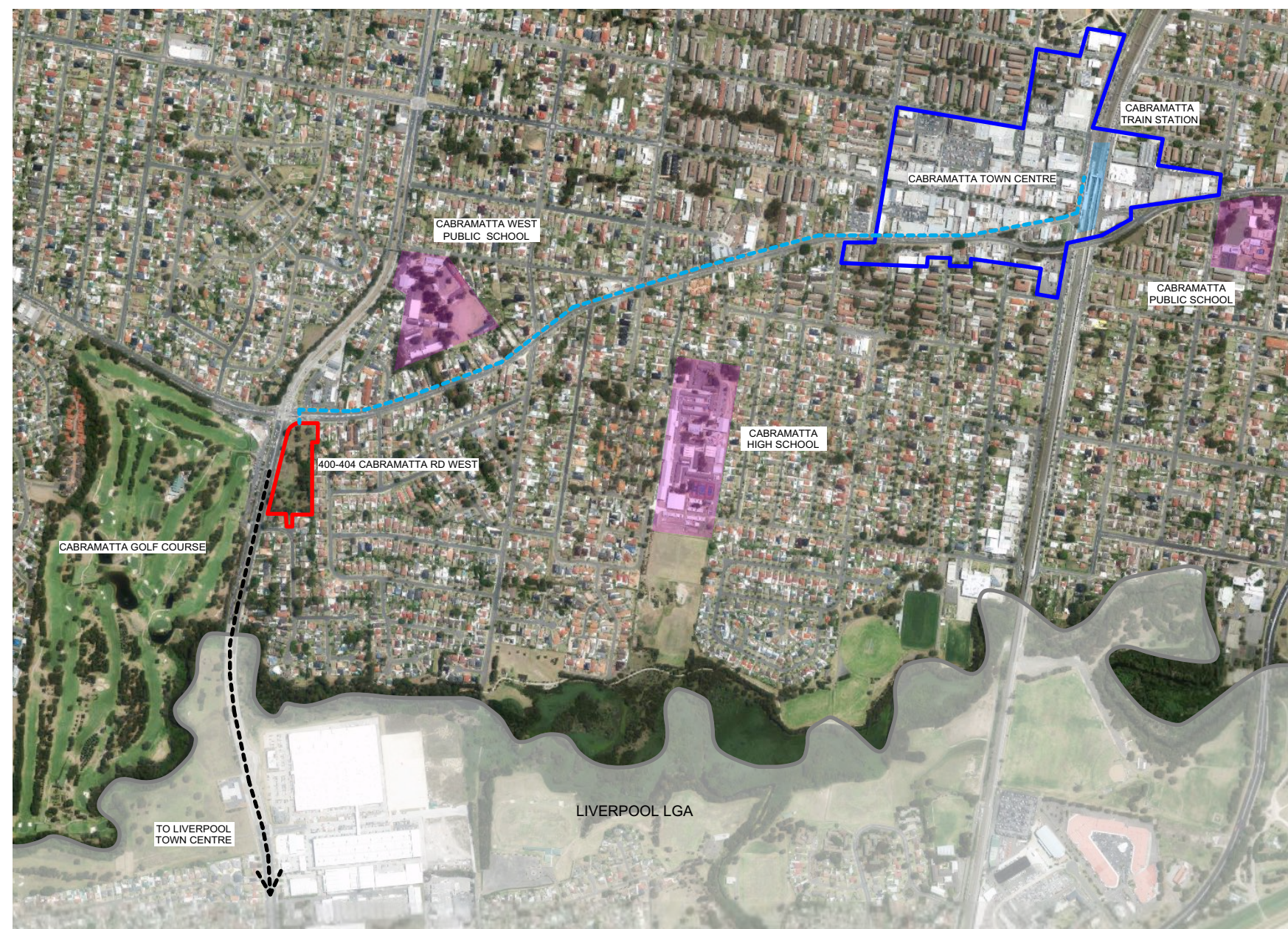
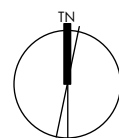
- Large raw site, 15349m² site area
- Significant street frontage to Cabramatta Road West and Cumberland Highway
- Close proximity to key transport infrastructure and town centres
- Close proximity to key leisure, retail and commercial areas



The site is defined by its proximity to key areas and infrastructure including:

- Cabramatta Town Centre
- Liverpool Town Centre
- Cabramatta Train Station
- Cabramatta Golf Course
- Local schools
- Local Commercial + Retail precincts

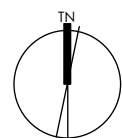
-  Site
-  Train station distance 1.9 km, 22 min walk or 2 min drive.
-  Drive to Liverpool Town Centre 5 min or 3.1 km.



The western side of Cabramatta is predominantly characterised by a mix of low-density and multi-dwelling housing.

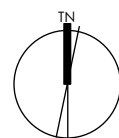
The subject site is currently undeveloped. It is approximately 210m long x 74m wide at the centre, with a site area of 15349m². The site runs along a north-south axis with the long boundary to Cumberland Highway facing west and the short side to Cabramatta Road West facing north. The site is surrounded by low-density residential housing to the east and south.

The site is defined by its proximity to Cabramatta and Liverpool Town Centre's, key transport infrastructure as well as key leisure, retail and commercial areas.



The site is subject to a number of opportunities and constraints including:

- Open views to the west over Cabramatta Golf Course
- Ideal solar orientation along a north-south axis
- Generous street frontage
- Potential noise from Cumberland HWY and Cabramatta Rd West



The Site sits within the Fairfield City Council local government area. The Fairfield Local Environmental Plan 2013 is the key planning instrument for the Site.

The key controls that affect development on the Site are:

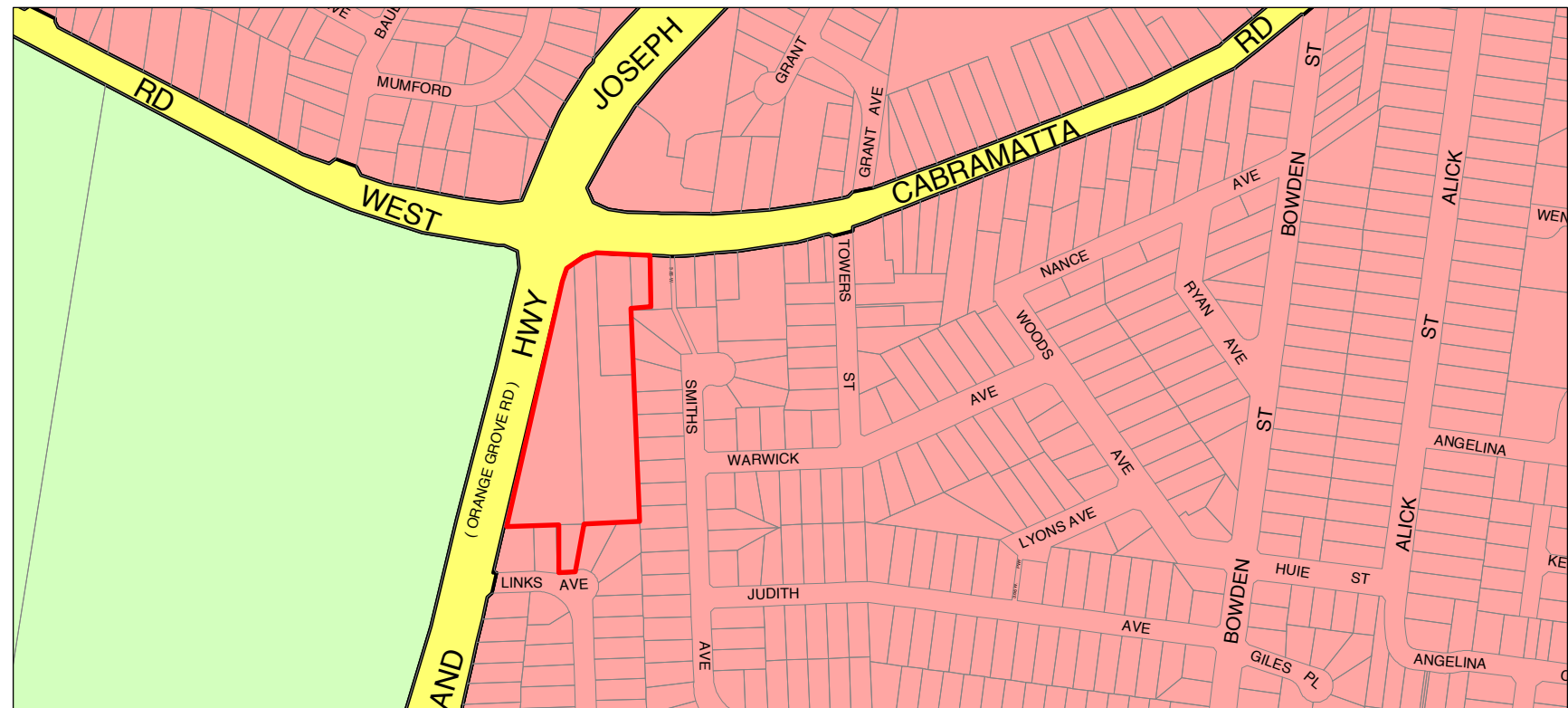
- Land zoning;
- Floor space ratio;
- Height of buildings;
- Key Site controls

Land Zoning

The site is zoned R2 Low Density Residential.

Zone

B1 Neighbourhood Centre	R3 Medium Density Residential
B2 Local Centre	R4 High Density Residential
B3 Commercial Core	RE1 Public Recreation
B4 Mixed Use	RE2 Private Recreation
B5 Business Development	RU1 Primary Production
B6 Enterprise Corridor	RU2 Rural Landscape
E2 Environmental Conservation	RU4 Primary Production Small Lots
E3 Environmental Management	RU5 Village
IN1 General Industrial	SP1 Special Activities
IN2 Light Industrial	SP2 Infrastructure
R1 General Residential	SP3 Tourist
R2 Low Density Residential	W2 Recreational Waterways

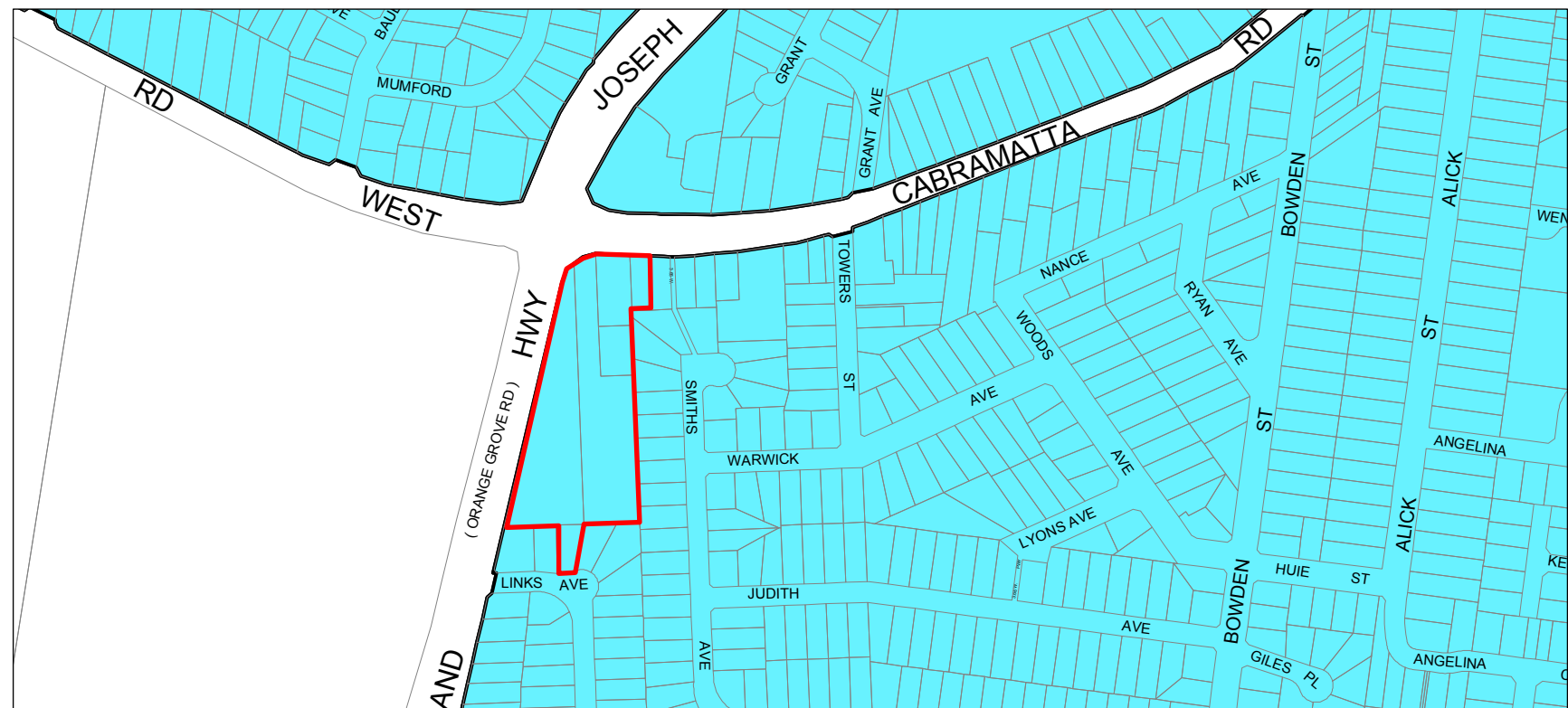


Floor Space Ratio

The site is permitted to have a floor space ratio of 0.45:1 (C). With a site area of 15,349 sqm, the maximum floor space permitted is 6,907 sqm.

Maximum Floor Space Ratio (n:1)

A1	0.1
A2	0.33
C	0.45
E	0.57
J	0.8
N	1
R	1.45
S	1.5
T	2
U	2.5
V	3
W	3.5
X	4



Height of Buildings

The site is permitted to have a building height of 9m (J).

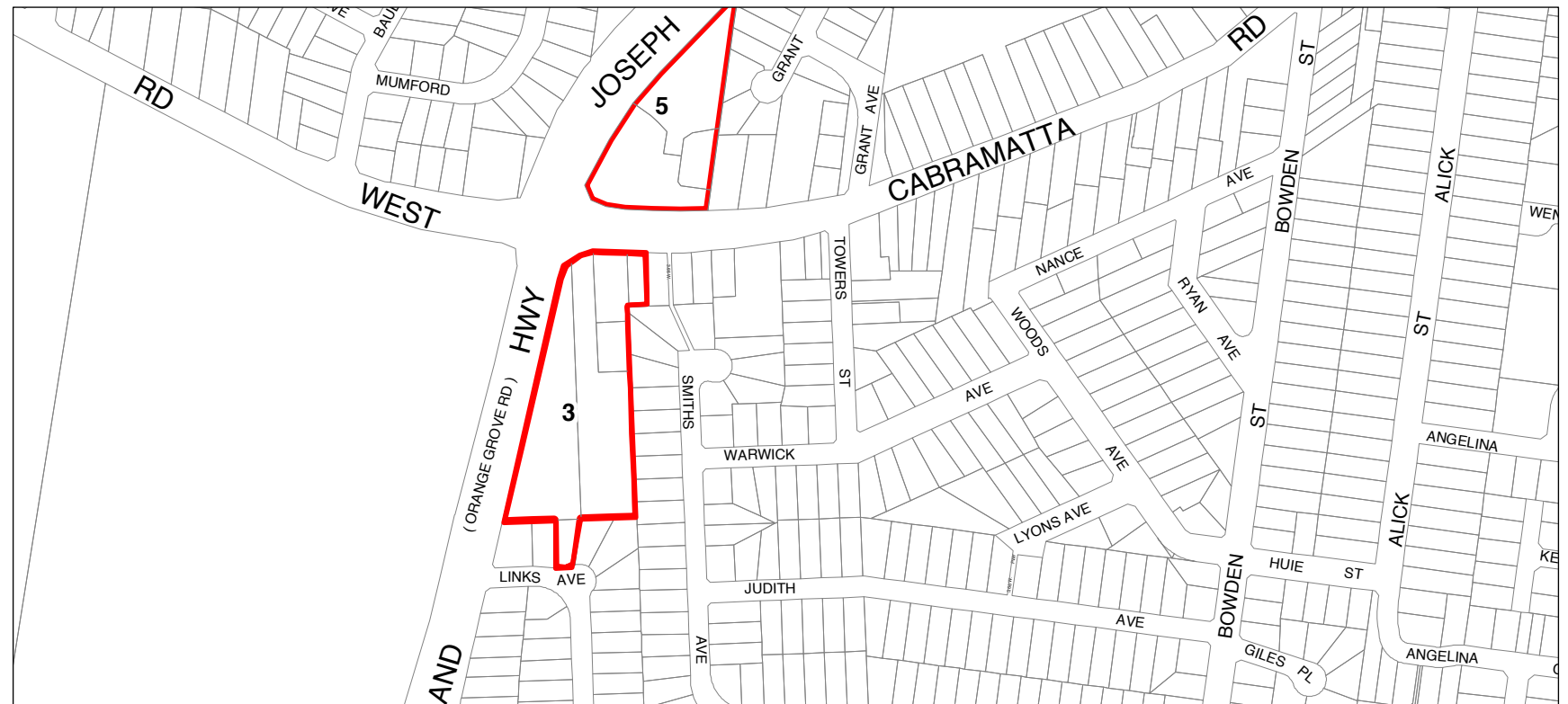
Maximum Building Height (m)

G	7	Q	20
H	7.5	R	21
I	8	S	23
J	9	T1	25
K	10	T2	26
L	11	T3	27
M	12	T4	29
N1	13	U1	30
N2	14	U2	33
O1	15	V1	38
O2	16	V2	39
P1	17	W	42
P2	18	AA	66



Key Sites Map

The site is nominated as a key site.



Building Envelope Testing

In order to identify the key opportunities and constraints of the site, the proposed building envelopes have been tested against a set of objectives.

These objective include:

- allow solar access to surrounding buildings/key sites
- allow view corridors
- provide a logical transition of building heights and scale with surrounding areas
- define the street edge
- creates a clear transition between public and private space
- allows for the creation of mid-block connections and laneways
- contributes positively to the urban environment

In order to do this, future building forms were projected for the neighbouring sites to the east and south of the subject site. These forms have been derived with reference to the relevant planning controls, including the current LEP height control of 9m. It is envisaged that these neighbouring sites might be amalgamated and developed in the future.

Proposed Building Envelopes

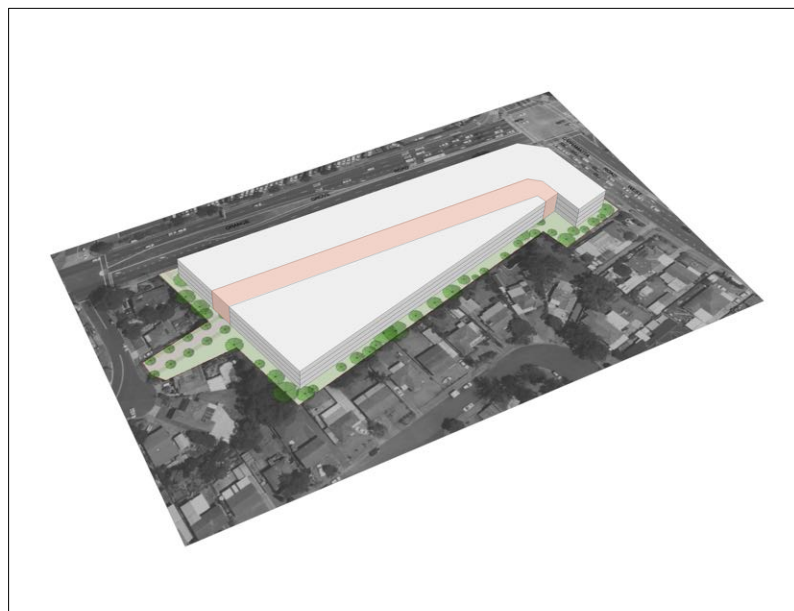
The proposed buildings vary in height from 4 storeys to 8 storeys. The tallest buildings are positioned towards the street to define the street edge. The smaller buildings are positioned to the east of the site, creating a logical transition of scale from the street to the lower density residential zone behind.

The buildings along the street are defined by a 4 storey podium level with 4 storey massing above. The podium has been designed to split the horizontal massing into two distinct volumes. The street edge is further articulated by generous open spaces between the buildings.

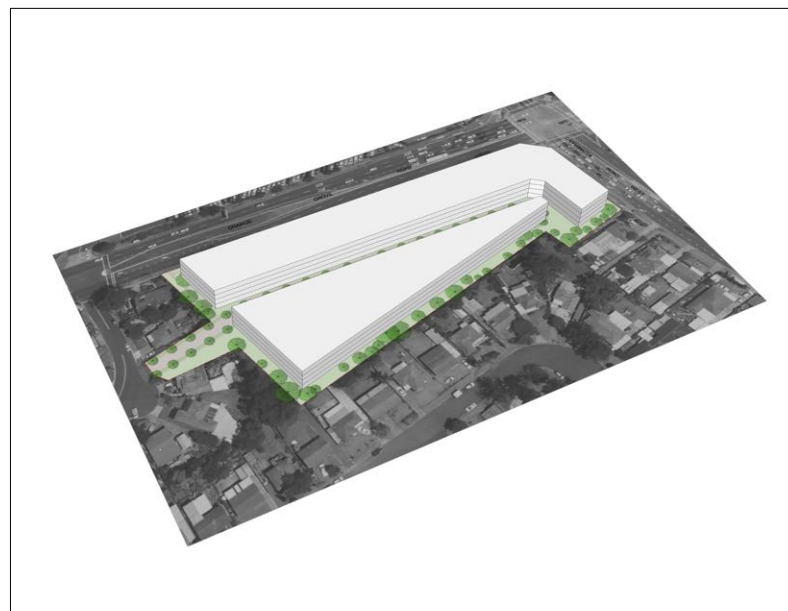
The smaller buildings to the east are defined by highly articulated facades. These buildings are also separated by generous communal open spaces that create a landscape buffer between the buildings and the neighbouring sites.

Future Development Envelopes

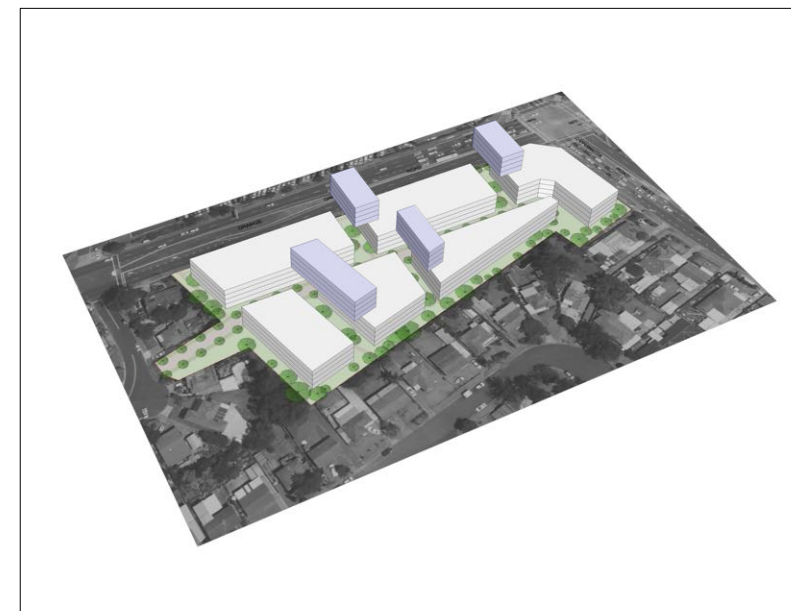
It is envisaged that the neighbouring sites to the south-west and east of the site will be amalgamated and redeveloped in the future. Future development envelopes have been proposed for the neighbouring sites immediately to the south-west. These envelopes have been developed with reference to the DCP and Apartment Design Guide. It is envisaged that access to these sites will be via the proposed laneway.



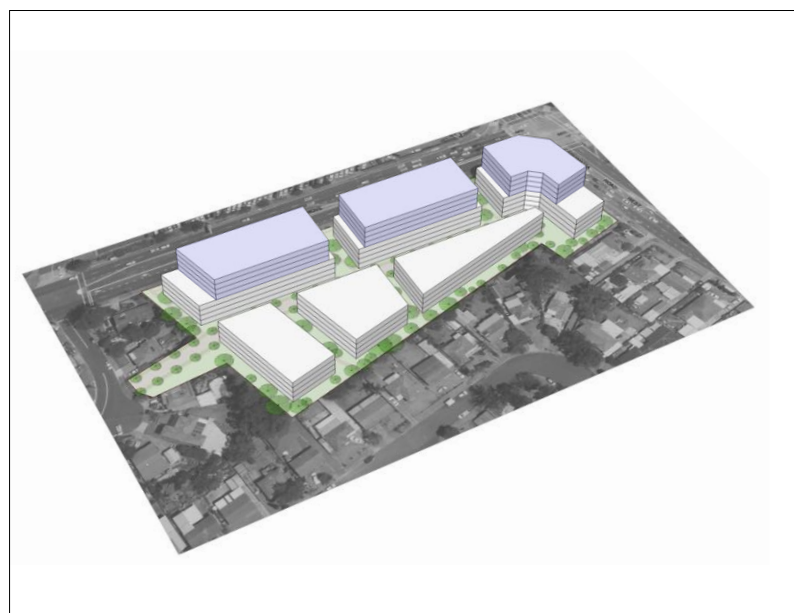
1. 4 STOREY MASSING EXTRUDED WITH REFERENCE TO DCP SETBACKS.



2. MIDDLE MASSING REMOVED TO PROVIDE INTERNAL CIRCULATION.



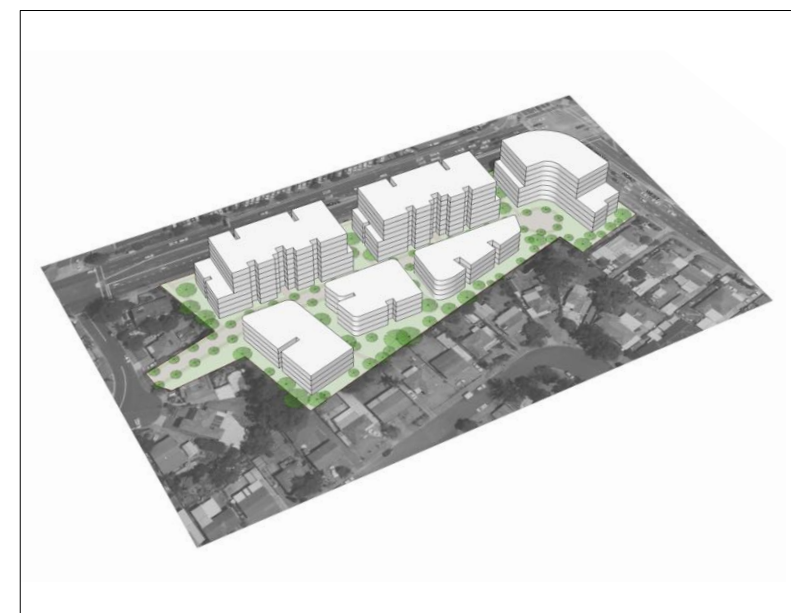
3. FURTHER MASSING REMOVED TO DEFINE INDIVIDUAL BUILDINGS.



4. MASSING RELOCATED TO STREET FRONT TO DEFINE STREET EDGE.



5. BUILDING FACADE ARTICULATE TO PROVIDE SOLAR ACCESS + NATURAL VENTILATION.



6. PROPOSED MASSING DEFINED.



SITE PERMEABILITY



VEHICULAR CIRCULATION



LANDSCAPE AREA vs BUILT-ON AREA
6412m² or 42% 8937m² or 58%



HEIGHT OF BUILDINGS



GROUND FLOOR PLAN



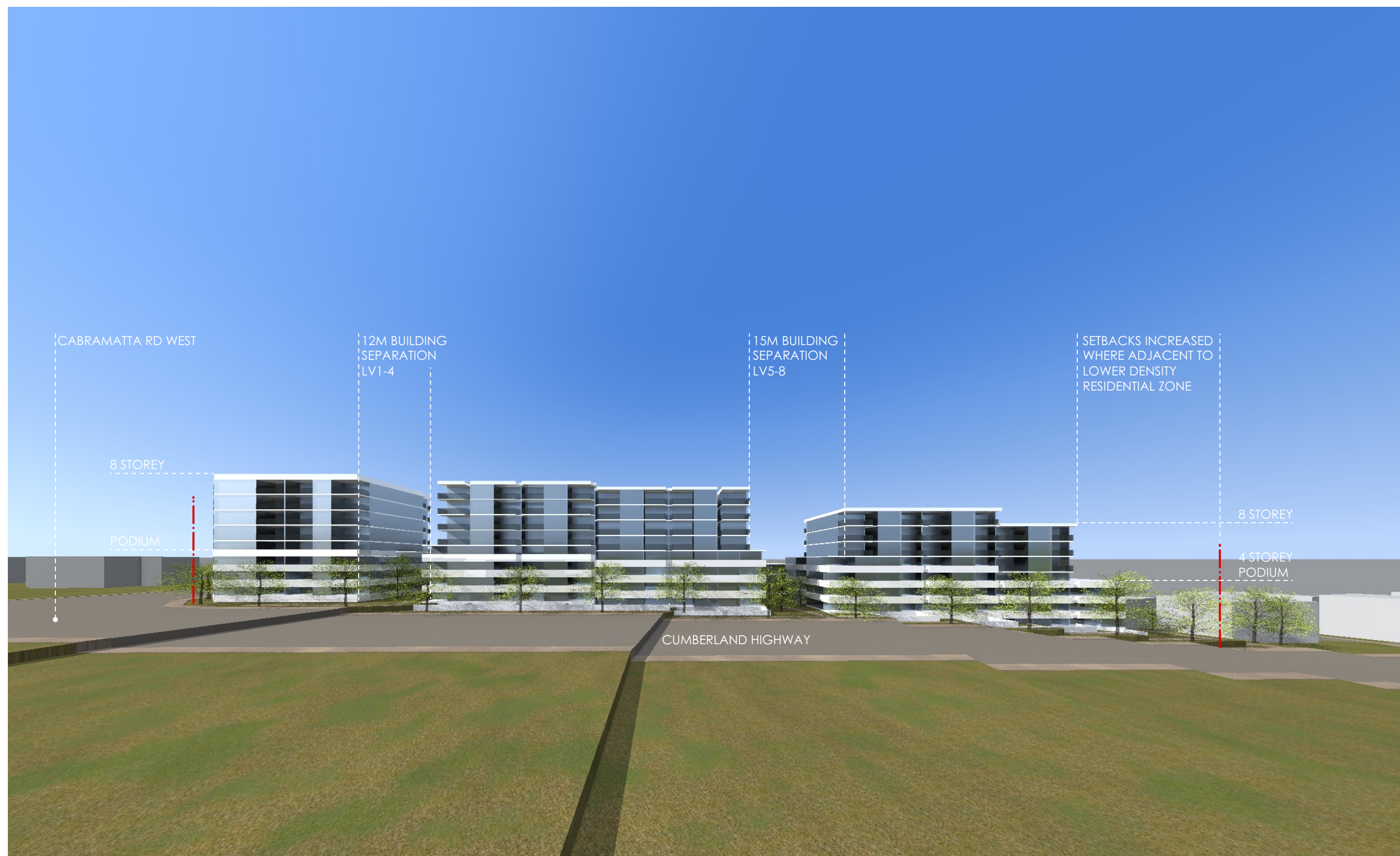
■ TYPICAL LEVEL 2 - 4



■ TYPICAL LEVEL 5 - 8



■ TYPICAL BASEMENT LEVEL



VIEW LOOKING EAST FROM CABRAMATTA GOLF COURSE



VIEW LOOKING EAST FROM CABRAMATTA GOLF COURSE



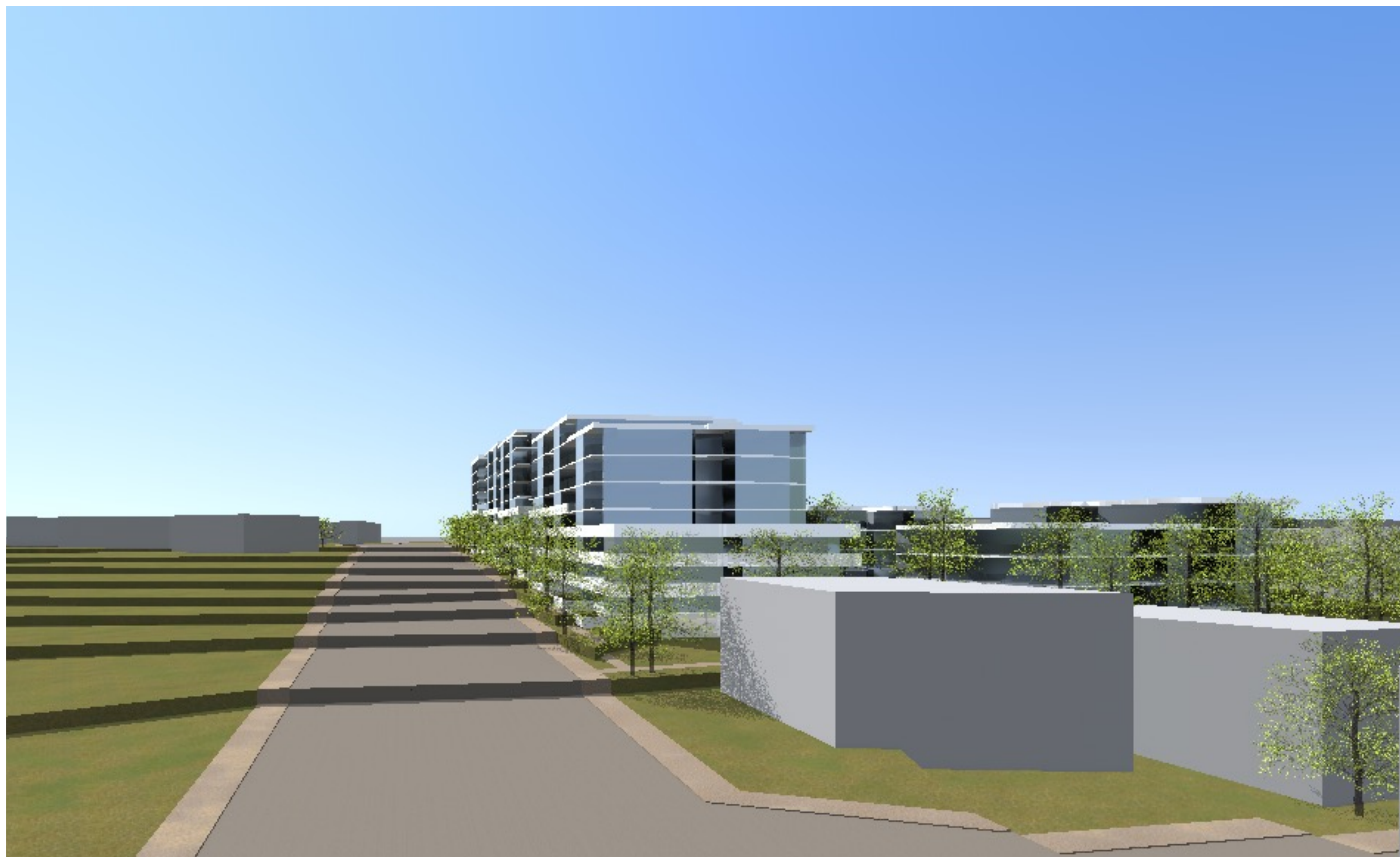
VIEW LOOKING TOWARDS CUMBERLAND HWY FROM EAST BOUNDARY



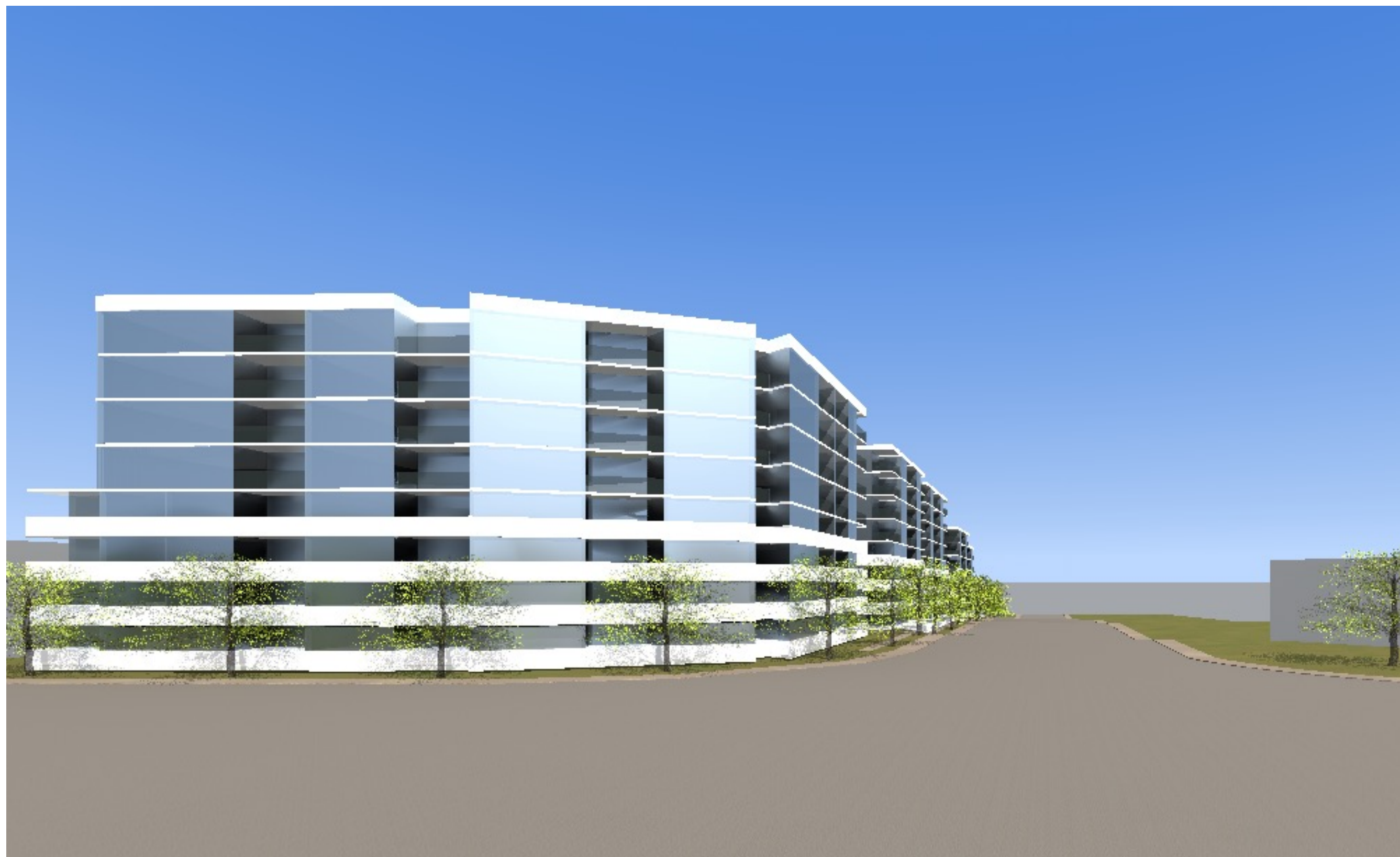
VIEW LOOKING TOWARDS CUMBERLAND HWY FROM EAST BOUNDARY



VIEW LOOKING TOWARDS CABRAMATTA RD WEST FROM SOUTH BOUNDARY



VIEW LOOKING NORTH ALONG CUMBERLAND HWY



VIEW LOOKING SOUTH ALONG CUMBERLAND HWY

Shadow Testing

The overshadowing impacts of the proposed design were tested for the 21st June mid-winter. In order to test potential impacts, the existing built forms were projected for the neighbouring sites. The testing indicated that the proposed massing did not prevent the neighbouring sites from receiving solar access to their private open space or living areas during mid-winter. The two neighbouring sites to the south-west did receive some overshadowing, however they were still able to receive 2hrs solar access. It is envisaged that the proposed massing to the south-west can be revised in order to ensure minimal overshadowing.



WINTER SOLSTICE 21st OF JUNE 9AM



WINTER SOLSTICE 21st OF JUNE 10AM



WINTER SOLSTICE 21st OF JUNE 11AM



WINTER SOLSTICE 21st OF JUNE 12PM



WINTER SOLSTICE 21st OF JUNE 1PM



WINTER SOLSTICE 21st OF JUNE 2PM



WINTER SOLSTICE 21st OF JUNE 3PM

Shadow Testing

The overshadowing impacts of the proposed design were also tested for the 21st December. Again the testing indicated that the proposed massing did not prevent the neighbouring sites from receiving solar access to their private open space or living areas. The majority of the overshadowing occurred to the west of the site at 9am, only affecting the Cumberland Hwy.



SUMMER EQUINOX 21st OF DECEMBER 9AM



SUMMER EQUINOX 21st OF DECEMBER 10AM



SUMMER EQUINOX 21st OF DECEMBER 11AM



SUMMER EQUINOX 21st OF DECEMBER 12PM



SUMMER EQUINOX 21st OF DECEMBER 1PM



SUMMER EQUINOX 21st OF DECEMBER 2PM



SUMMER EQUINOX 21st OF DECEMBER 3PM

Solar Access to Apartments

The building envelopes have been designed to maximise solar access, with buildings orientated along a north-south axis. 71% of units achieve 2hrs of solar access between 9am - 3pm 21st June, satisfying the minimum requirement of the Apartment Design Guide. The adjacent diagram indicatively shows those apartments which receive 2hrs of solar access.

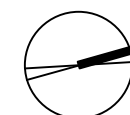


■ TYPICAL LEVEL 5-8



■ TYPICAL LEVEL 1-4

■ 2 HRS DAYLIGHT ACCESS



Cross Ventilated Apartments

The building facade is articulated to enable cross ventilation. 68% of units are cross ventilated, satisfying the minimum requirement of the Apartment Design Guide. The adjacent diagram indicatively shows those apartments which are cross ventilated.



■ TYPICAL LEVEL 5-8



■ TYPICAL LEVEL 1-4

■ CROSS VENTILATED UNIT



ADG Building Separation

The proposed building separations comply with the Apartment Design Guide minimum separation distances of:

Up to four storeys (approximately 12m):

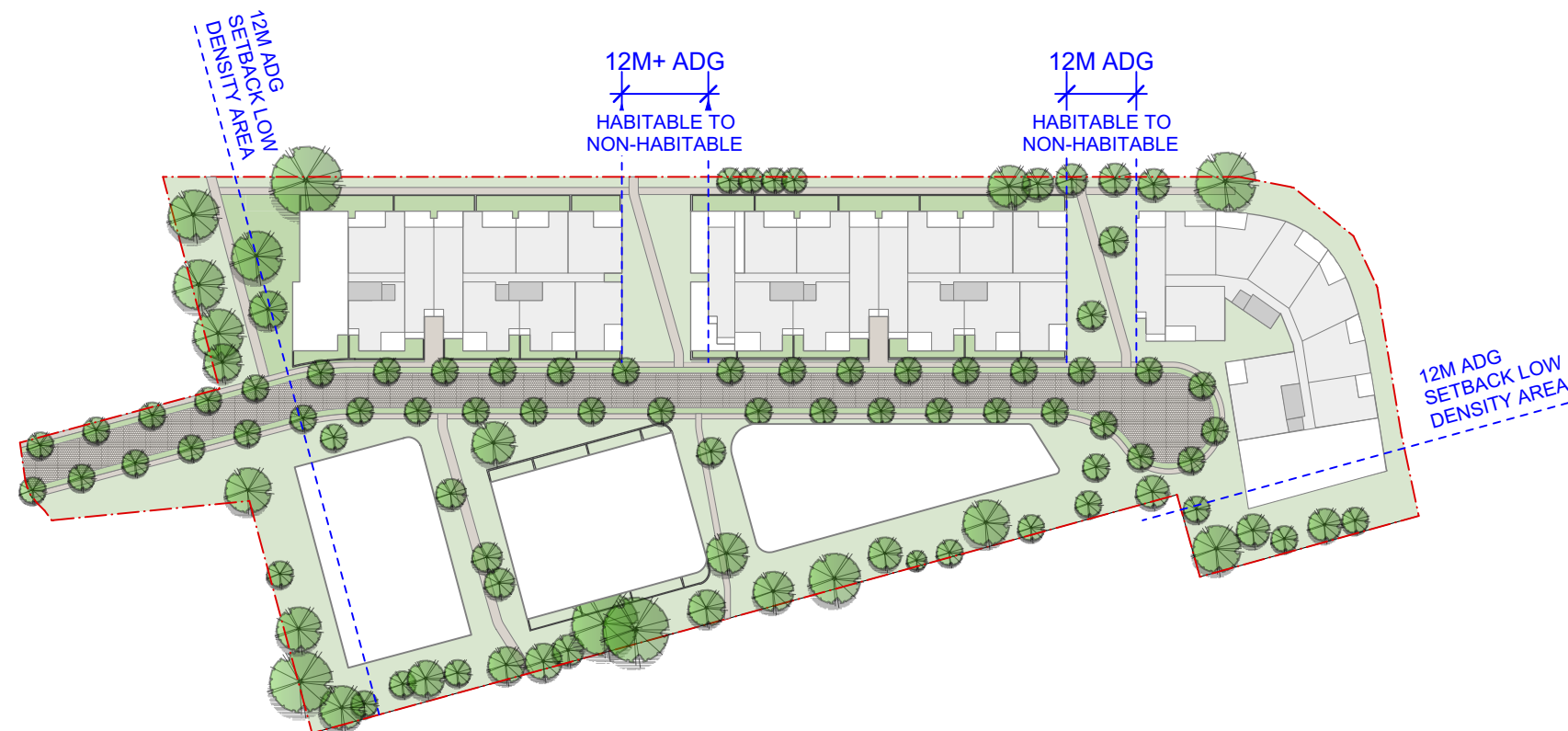
- 12m between habitable rooms/balconies
- 9m between habitable and non-habitable rooms
- 6m between non-habitable rooms

Five to eight storeys (approximately 25m):

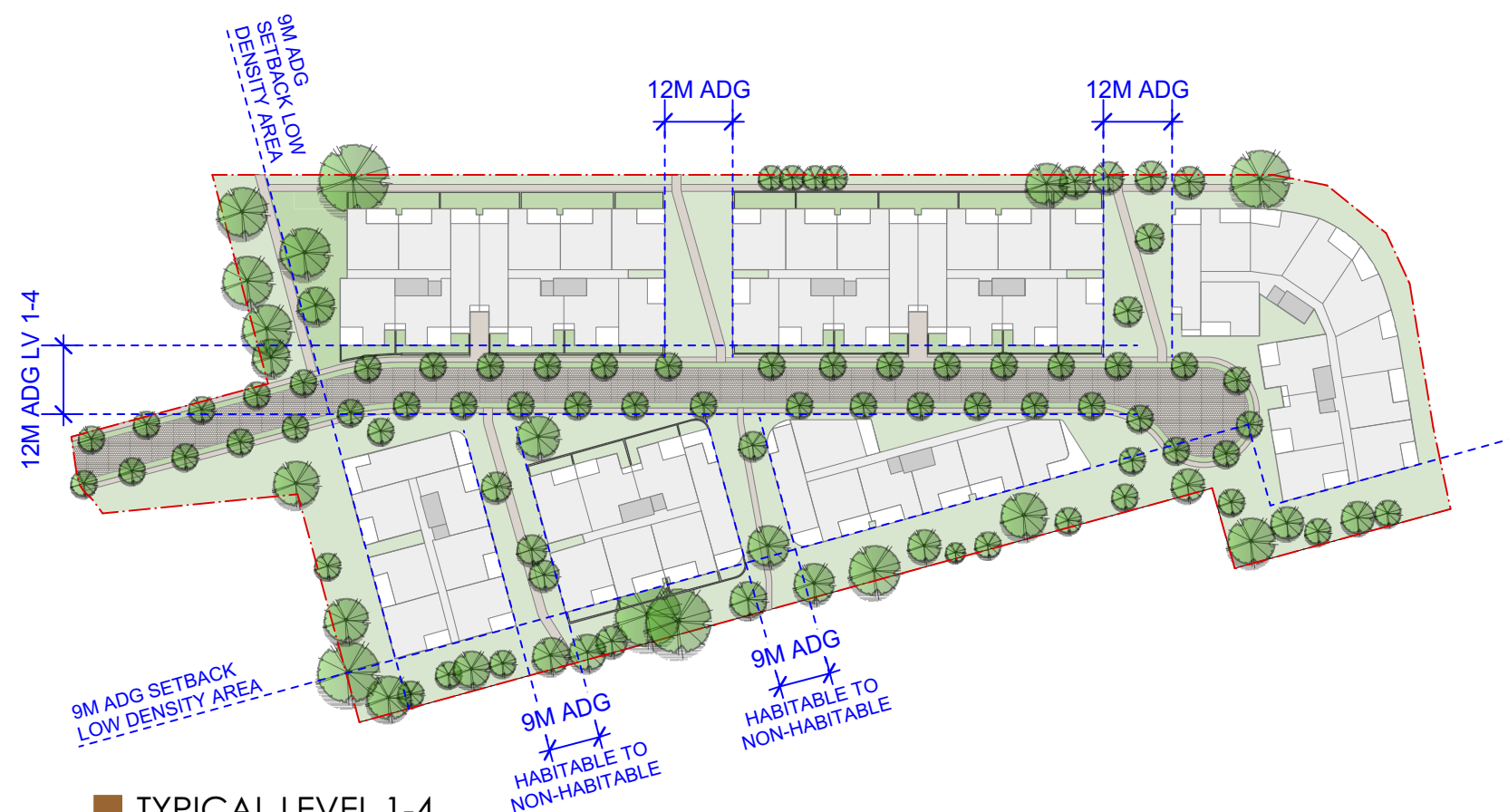
- 18m between habitable rooms/balconies
- 12m between habitable and non-habitable rooms
- 9m between non-habitable rooms

Nine storeys and above (over 25m):

- 24m between habitable rooms/balconies
- 18m between habitable and non-habitable rooms
- 12m between non-habitable rooms



■ TYPICAL LEVEL 5-8



■ TYPICAL LEVEL 1-4

