

# Caloundra City

Design Concept Report

Thomson Adsett

Issue B, XX/02/16

## Contents

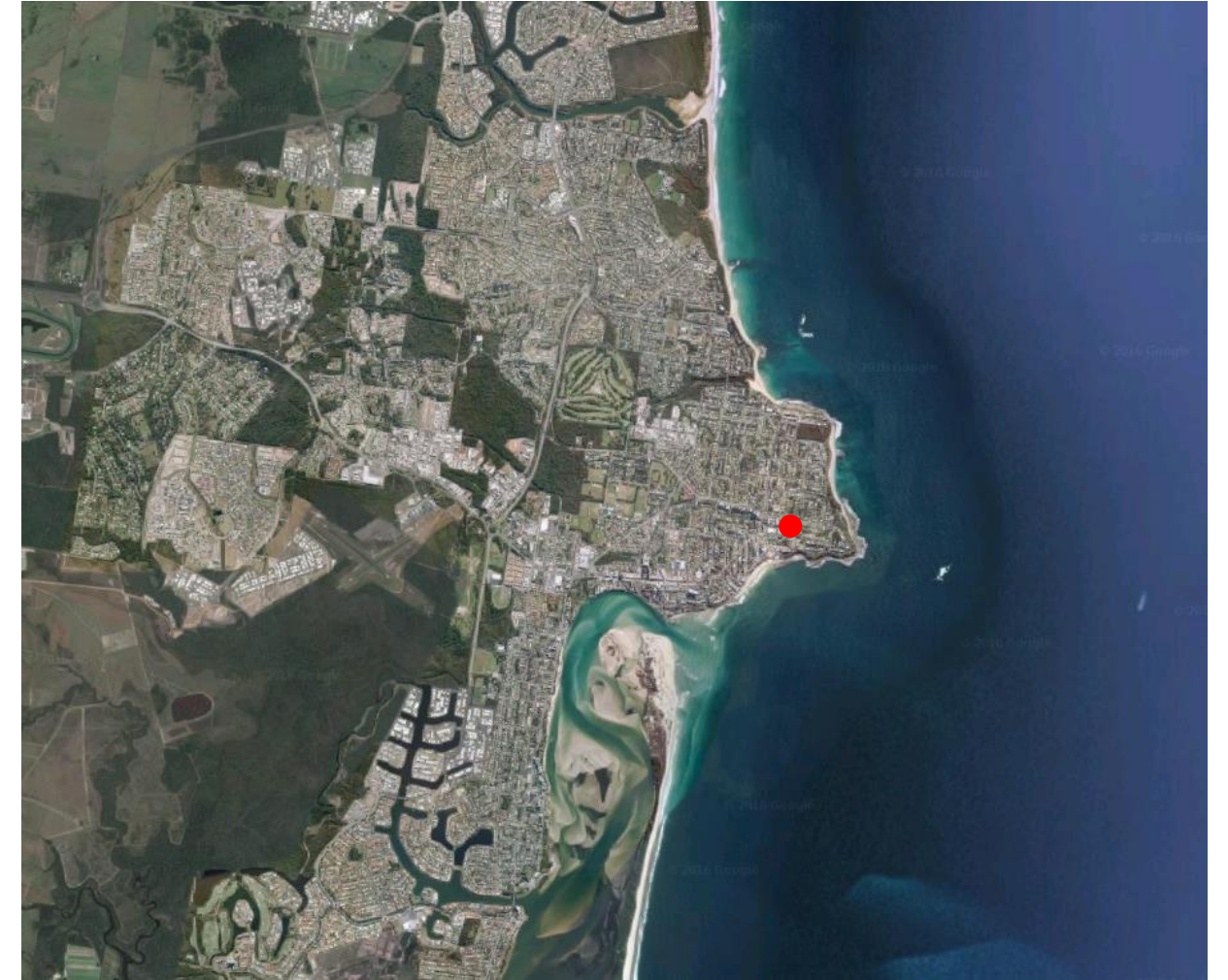
MACRO ANALYSIS.....	3	SITE ANALYSIS .....	12
LOCATION.....	3	HEIGHT CONTROL .....	13
SITE ACCESS.....	3	SITE LEVELS .....	13
TOPOGRAPHY.....	4	SITE ACCESS.....	14
GEOLOGICAL .....	4	VIEWS.....	14
ORIENTATION.....	4	SOLAR.....	15
CONTEXT .....	5	BREEZES.....	15
WIND.....	5	JETA GARDENS .....	16
TEMPERATURE .....	6	PRECEDENT .....	16
RAINFALL.....	6	JETA GARDENS MASTERPLAN .....	17
MARKET.....	7	AMPANG .....	17
CARE ARRANGEMENT .....	7	MASSING.....	18
STATUTORY REQUIREMENTS .....	8	MASS OPTION STUDIES.....	26
INFRASTRUCTURE .....	9	DESIGN STRATEGIES.....	31
TRANSPORT.....	9	Stacking form .....	31
LOCALITY ACCESS .....	10	Varied Façade Treatments .....	31
LOCALITY FACILITIES.....	10	Activated plaza spaces .....	32
VALUE PROPOSITION .....	11	Integrated Vegetation.....	32
DESIGN OPPORTUNITY.....	11	Articulated Pedestrianised Arrivals.....	33
MASS .....	12	Activated Laneways & Internal Streets.....	33
		Green Roofs .....	34
		Rooftop Edge Pool .....	34
		Community Ownership .....	35
		Urban Grain.....	35



## MACRO ANALYSIS

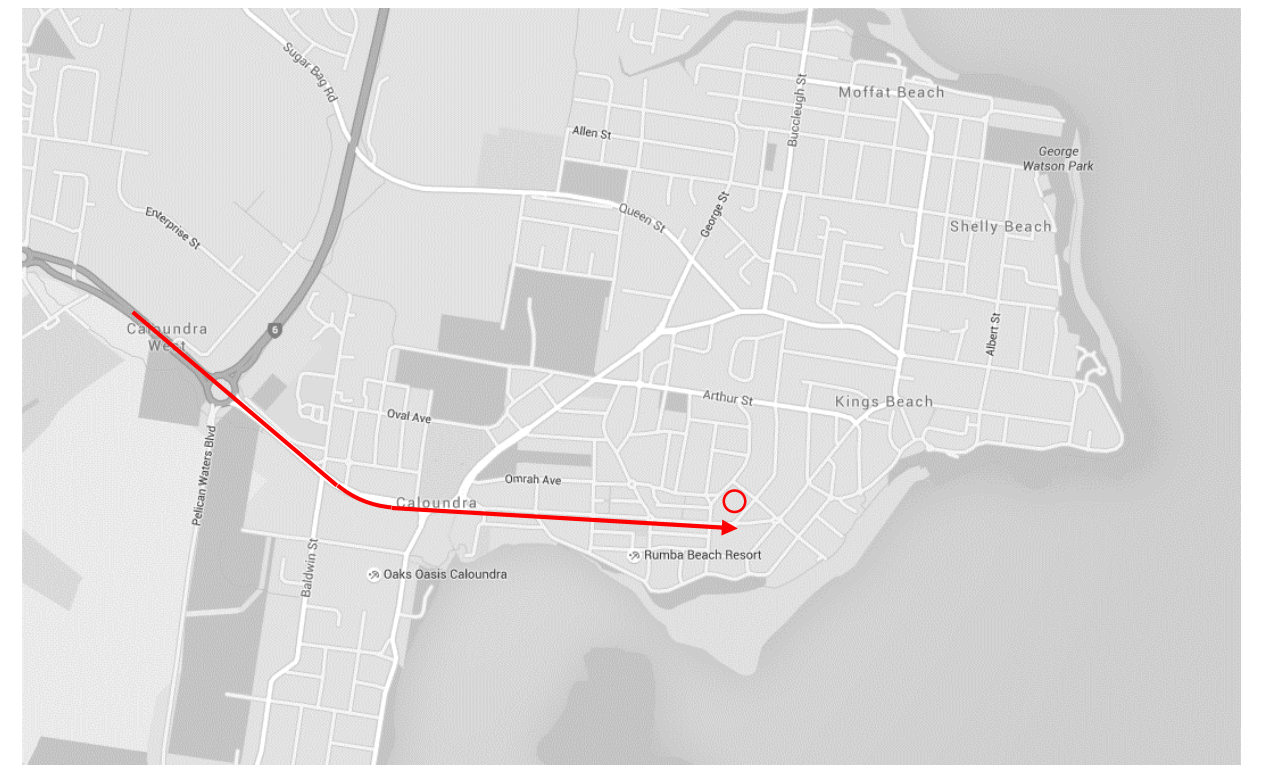
### LOCATION

The Site is located in close proximity to Kings Beach, and the Bribie Island Passage. The Site sits near the top of the Caloundra Headland, affording quality views in all directions, beaches to the north and east, the Broadwater to the South, and Hinterland views to the West.



### SITE ACCESS

Access to the site is generally arriving from south or north along Sunshine Coast motorway, then turning East along the Route 6 Caloundra Road, then continuing on through Bulcock Street, turning Left at Canberra Avenue to arrive at the site on the left. For local trips, residents may head north from the site along Canberra Terrace, then Maltman Street, onwards to Dicky Beach, from where access to Nicklin Way is available.





## TOPOGRAPHY

INSERT

The site is situated near the top of the Caloundra Headland promontory. As a consequence the site is overlooking most of the surrounding area. The site itself is highest at its most northern point, on Dingle Avenue, falling to south east along Dingle Avenue to Canberra Terrace and Dingle Avenue intersection, the falling along Canberra Terrace towards south west. Overall there is a level change of over 6 metres across the site from its highest to lowest. The site appears to fall away from Canberra Terrace in a westerly direction, meaning the westernmost corner is the lowest point of the site.

Existing topography creates a not insignificant rise from either the Beach or the local shopping district along Bulcock Road. This will need to be considered in terms of providing adequate connectivity and amenity for Residents.

A site survey showing contours and spot levels is required.

## GEOLOGICAL

INSERT

Geotechnical studies are required for the Site.

## ORIENTATION

The Site is oriented approximately 45deg to north, meaning that the site frontages orient to north east, south east, south west and north west. The site runs continuously along Dingle Avenue on its norther east frontage, of length about 35 metres, and along Canberra Terrace of length about 62 metres. The site is more or less rectilinear with a portion of the northern corner taken up by a road easement which does not appear to be supporting any Council or resident function.



CONTEXT

There is a fine grain of shopping tenancies along Canberra Terrace to the West, and the site could integrate with this shopping destination. There are a range of medium height residential structures immediately surrounding the site, of height up to 8 – 10 storeys that form something of a visual barrier to onward intermediate and distant views. The site context is defined as a beachside community with a range of lifestyle options.

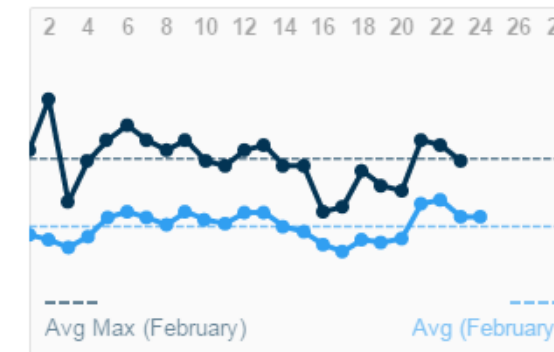


WIND

Winds arrive predominantly from the east, south and north, and are stronger during summer.

Caloundra Wind Statistics

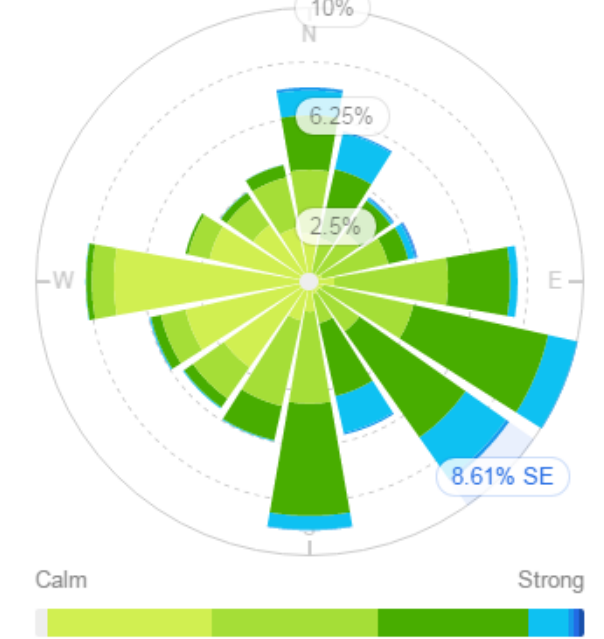
February Wind  
MAROOCHYDORE AERO (23km)



2016 January February

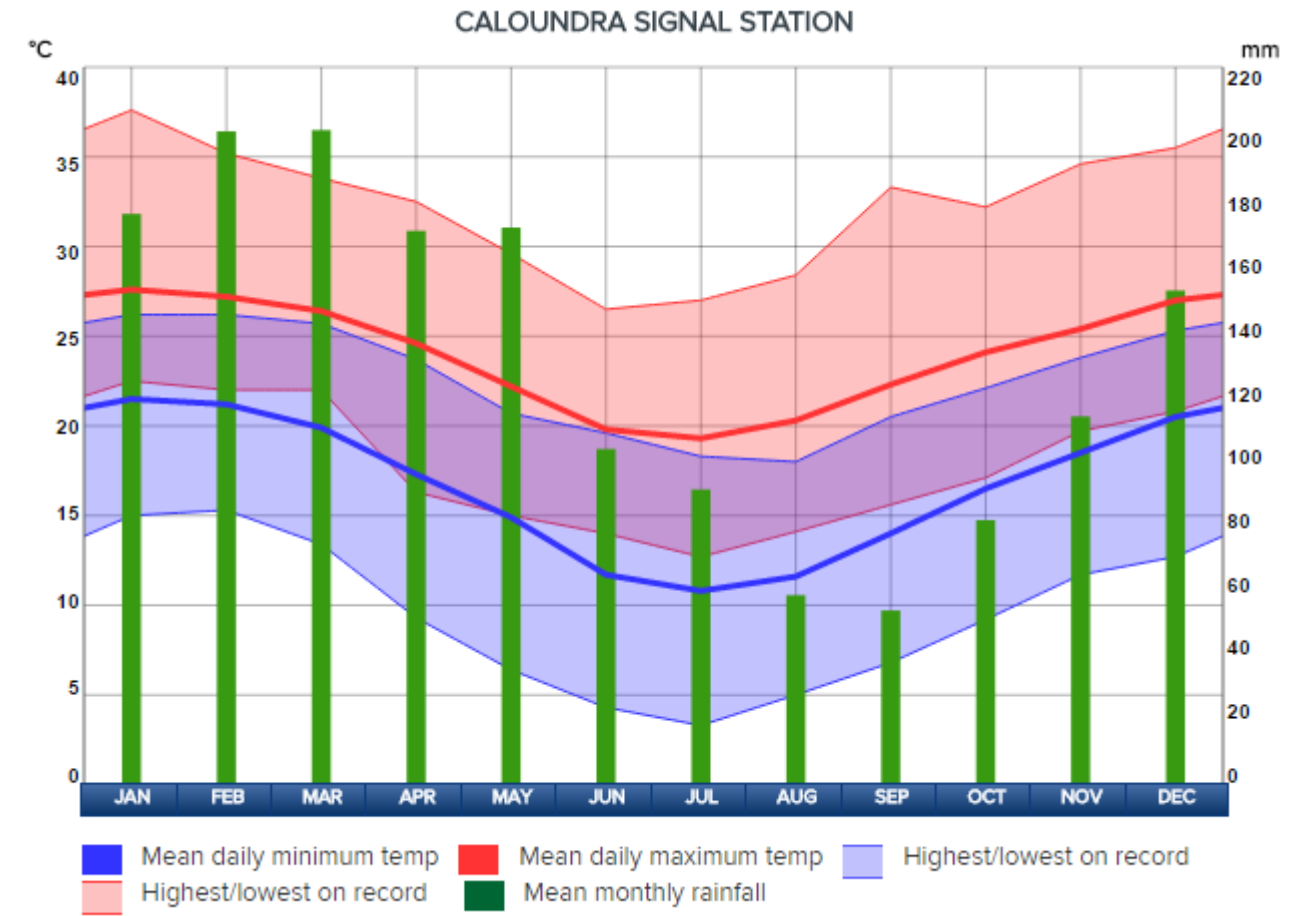
- Strongest 2 February, 2016  
66.6km/h NNW
- Average February  
20.8km/h

Wind Rose  
Annual (5 Year Average)



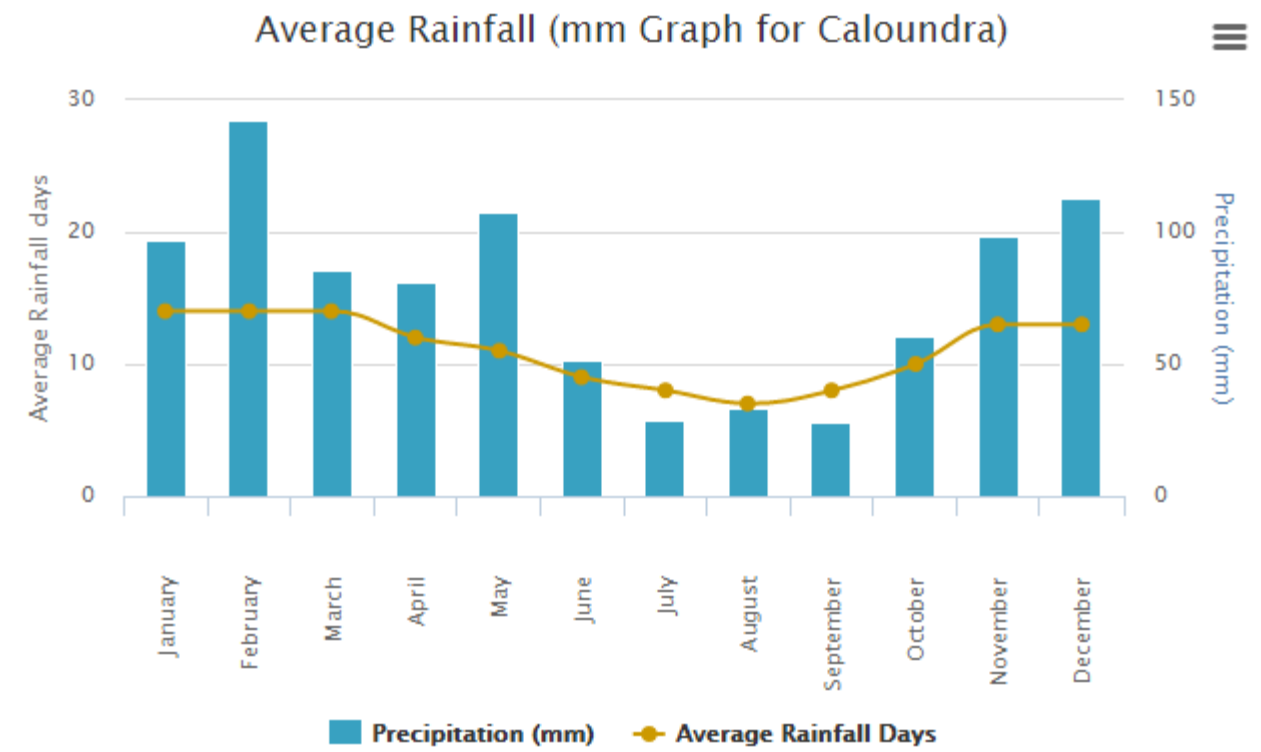
TEMPERATURE

Outside temperatures are comfortable year round in Caloundra.



RAINFALL

Rainfall is highest in the month of February and combines with seasonal storms. Rainfall is lowest through winter and autumn.

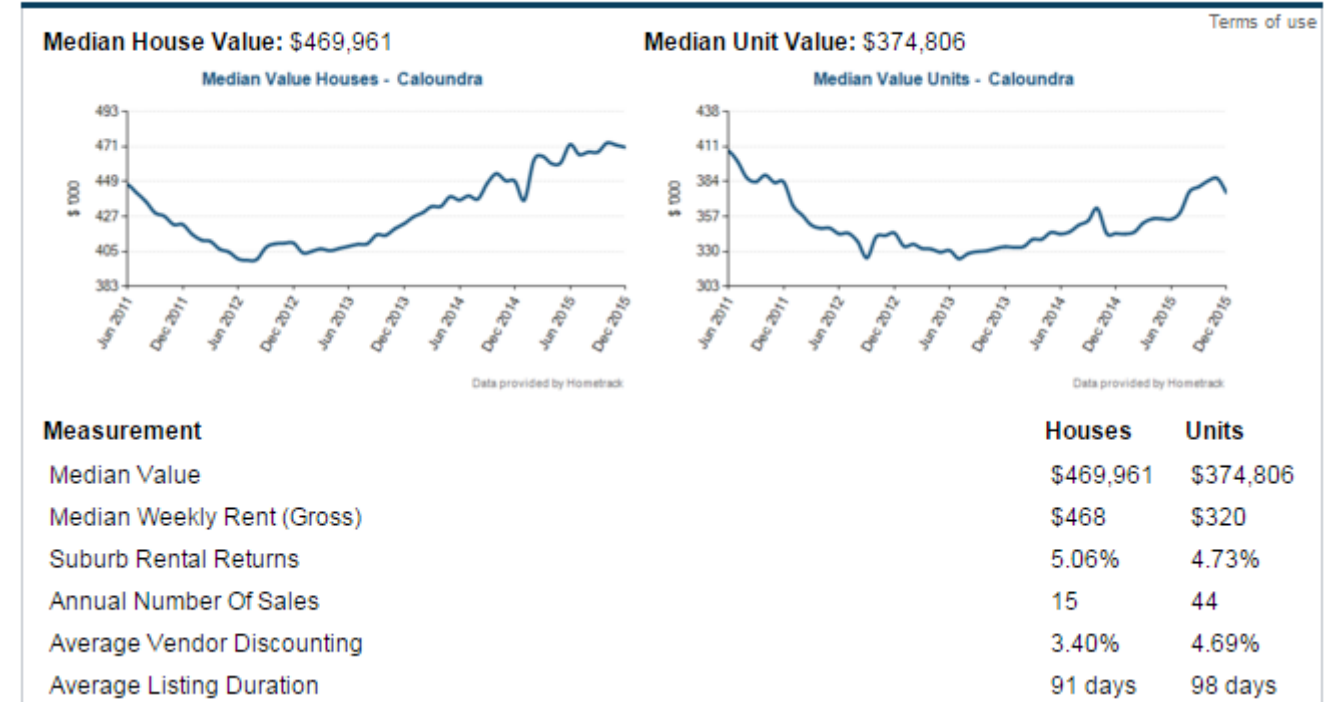


MARKET

It is anticipated that purchasers for the proposed Development will comprise of medium to medium – high income retirees who are seeking a location in reasonably close proximity to Brisbane without being exposed to higher real estate prices at sites further north in Sunshine Coast. As such it is believed that the Occupant will desire for opportunities to interact with family in a comfortable and welcome setting. It is also anticipated that the Occupant will enjoy the beach lifestyle and be seeking to engage with the local 'grain' of cafes, restaurants, and other beachside activities. The occupant might be a surfer and as such may require additional storage for watersports equipment. Views to the water are seen as paramount in terms of the Market offer, and there is substantial opportunity for this aspect for this Site.

Caloundra achieved the lowest occupancy rate in the Nation in terms of rental properties in October 2015.

Suburb Statistics for Caloundra



CARE ARRANGEMENT

Section by Wayne



## STATUTORY REQUIREMENTS

The site registered under Lot Plan RP10RP893841 of site area 3221 sqm. The Site is currently occupied by a government facility of height approximately 2 storeys. The site is zoned as Major Centre Zone, with other Major Centre zone sites to the West, and High Density Residential sites to the East. A maximum height of 25 metres is scheduled for the site.

### LAP

The site is located in CAL Lpp-1 which is designated 'Major Centre Zone'. The Local Area plan references a Medical Hub at West Terrace and Bowman Road. Continuity of streetscapes is considered. Through block pedestrian linkages are encouraged. Vibrant Streetscapes and beachside character are encouraged. Car parking must be located in a basement or sleeved behind activated frontage. Access and car parking arrangements are consolidated to reduce number of crossovers along the footpath (**Note adjacent development needs to relocate driveway entry**). Fine grain uses are proscribed along streetfronts, with larger tenancies sleeved behind. The LAP is silent on density, height and setback.

### Major Centre Zone Code

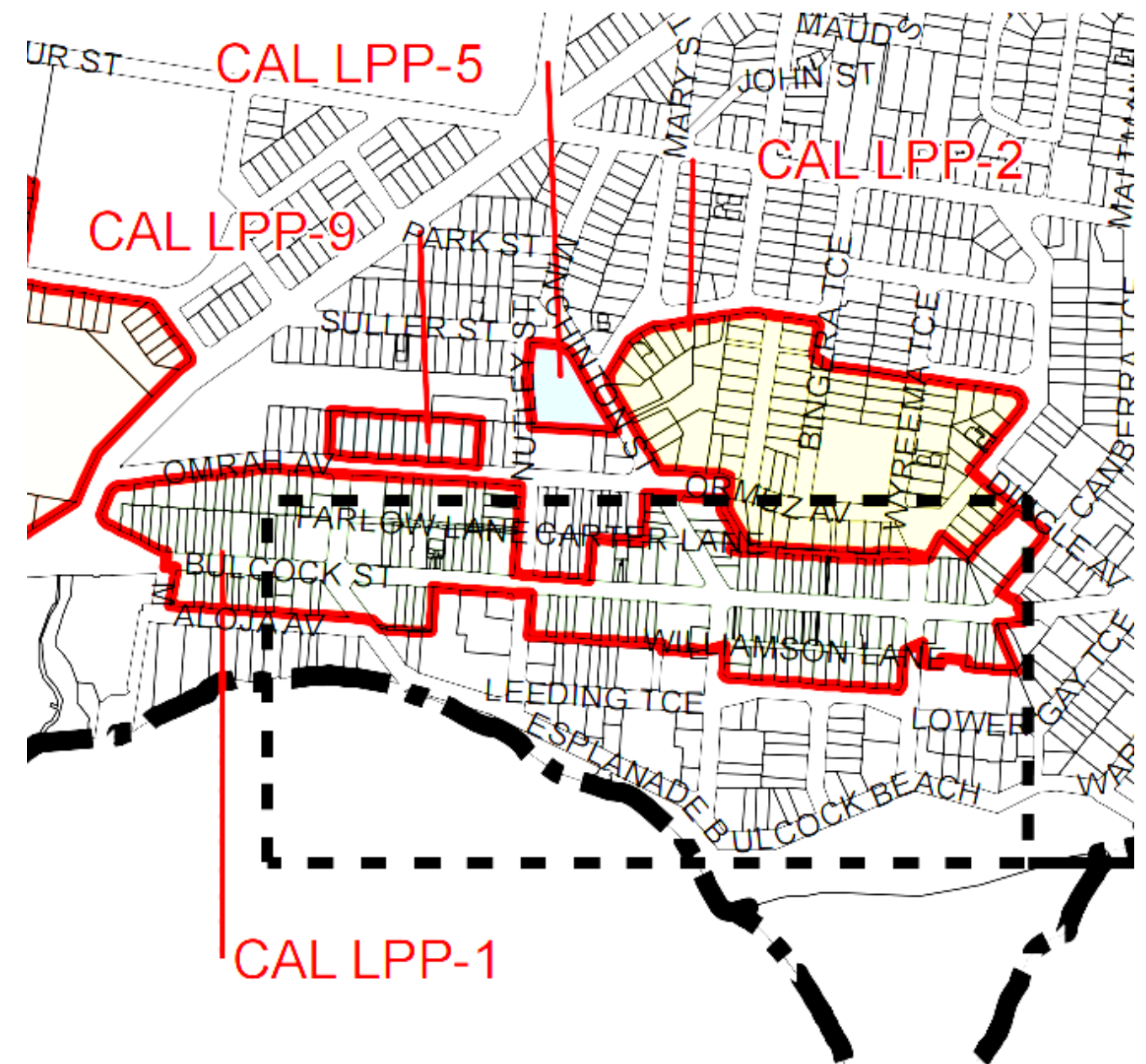
Are defined by the Code as 'vibrant, mixed use' places, allowing higher order retailing, entertainment & catering, commercial, administrative and government services, and community & cultural facilities. Higher densities are considerable where there is good access to public transport infrastructure (Refer 'Transport' below). The Code is silent on density, height and setback.

### Business Use and Centre Design Code

Anticipates 2 storey podiums, 10% of site area as deep planting, awnings to footpaths, 70% site cover for podiums, 50% site cover for levels above 2 storeys, 6 metre setbacks for parts of buildings over 2 storeys in height, storeys above L2 have a maximum area of 1000sqm and max horizontal façade length of 45 mtrs, Outdoor areas are 50% roofed.

### Multi-Unit Residential Design Code

Buildings are not wider than they are high. Building breaks required every 15 metres. Site cover is limited to 40 storeys. Setbacks are referenced to the Business Use and Centre Design Code. Balconies min 12sqm and 3mtrs deep in one direction. Separate entrances for residents.



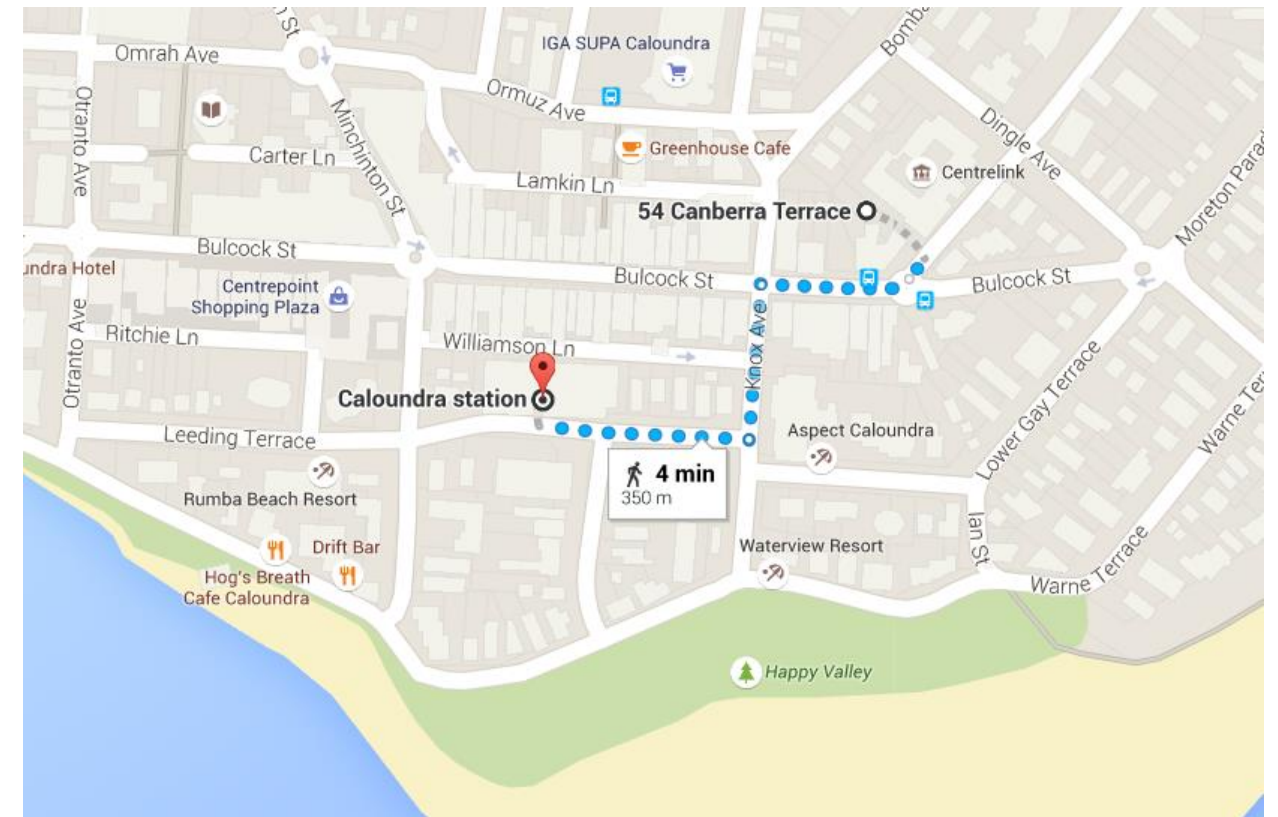


## INFRASTRUCTURE

Report by Services Engineers.

## TRANSPORT

It is noted that the Major Centre that higher densities are preferred in locations with good proximity to public transport. The Site is located within 350 metres of the Caloundra Station, a regional hub for bus transport. There are no train stations nearby.



LOCALITY ACCESS

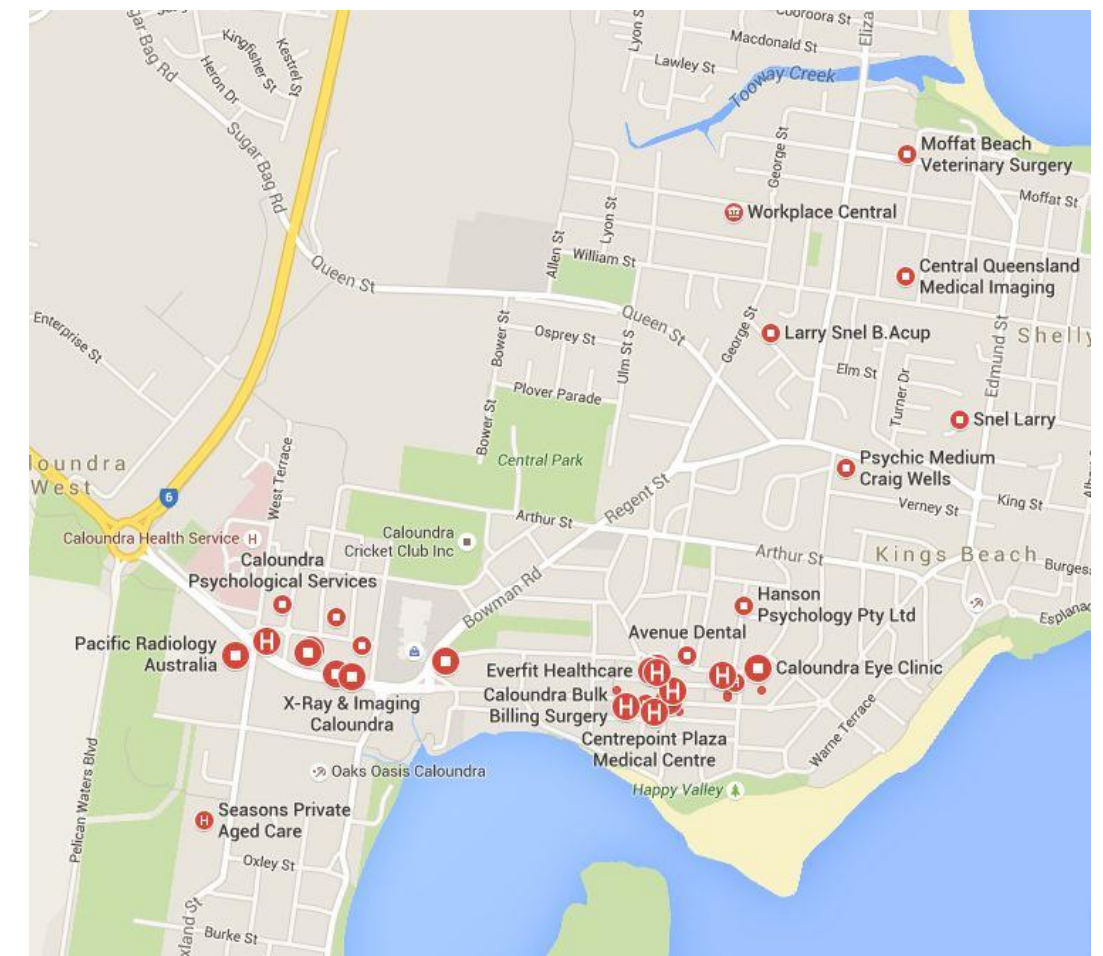
The Site has good access to a number of key tourist and resident destinations, however some of the roadways linking to these sites are quite steep and might present as an obstacle to a more elderly building occupant.

As such it might be considerable to provide a transport option for occupants to be transported to these locations without needing to rely on a vehicle. This would provide the additional benefit of assisting to diminish overall total car spaces provided as part of the development. This could take the form of a small mini van on a circular route and running continuously, or possibly road registered golf carts on a booking system for occupant use.



LOCALITY FACILITIES

Aside from major public and private hospitals at Noosa, Nambour, Kawana and Mooloolaba, a range of medical support services are available with easy access from the project site.



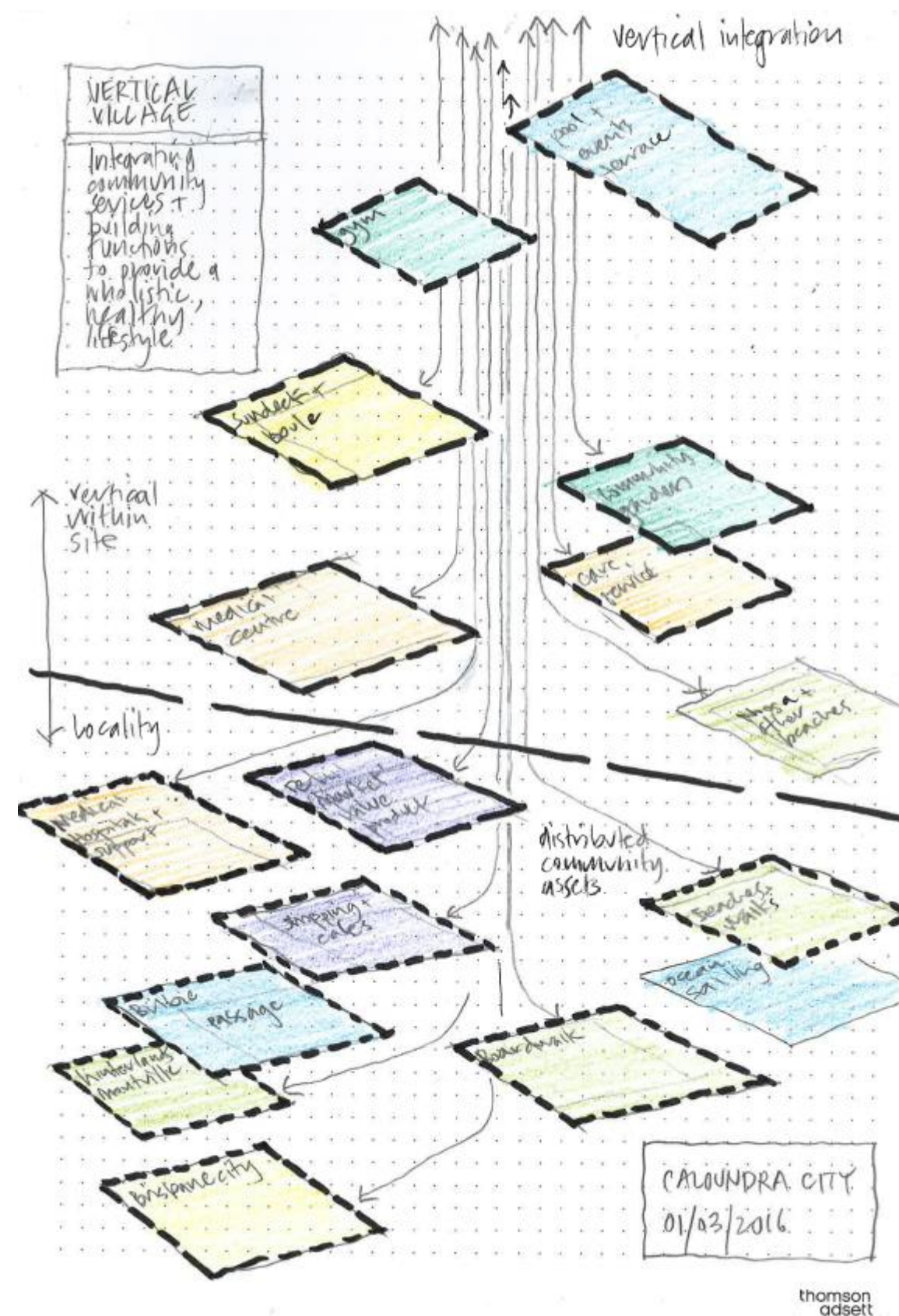


DESIGN OPPORTUNITY

VALUE PROPOSITION

*'A new solution for Aged Care Living, integrating with the Community and providing new visual amenity for Caloundra'*

*'A vertically integrated urban village linking on site health and lifestyle services with surrounding community assets, to provide a holistic and complete lifestyle solution for seniors living'*

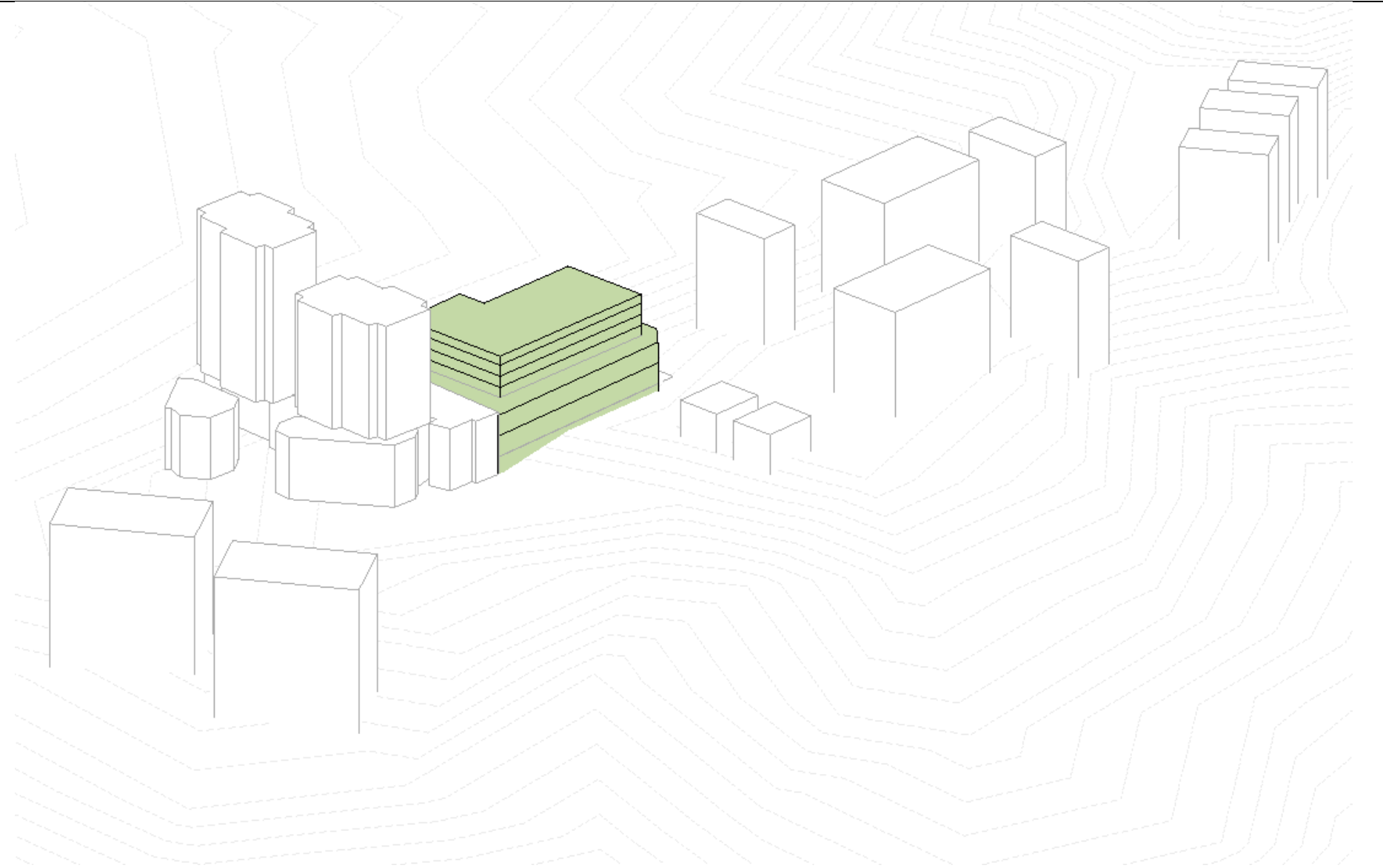


## SITE ANALYSIS

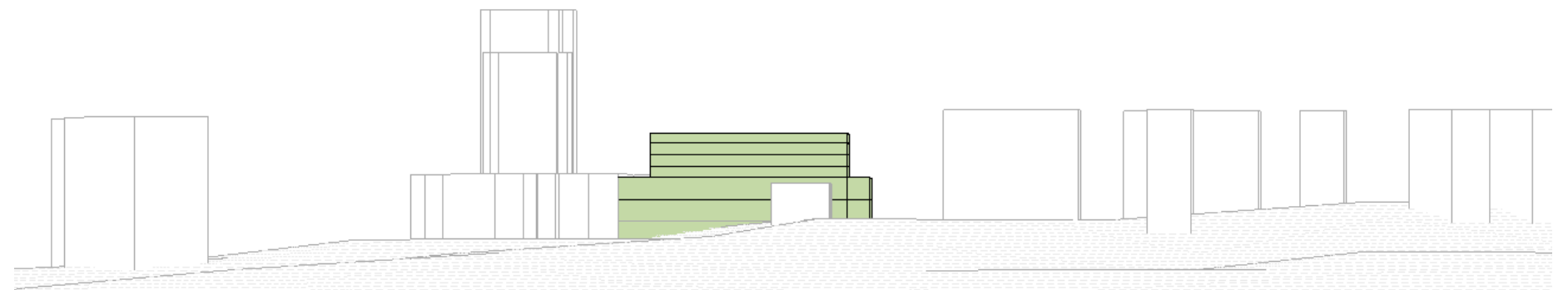
## MASS

SCCC Height of Buildings and Structures Overlay describes the allowable height of a building at this site as being 25 mtrs. The Diagram at right presents a building mass in conformance with current Council planning controls.

Building masses surrounding show approximated heights of existing buildings, as well as height of proposed towers on site immediately adjacent the southern boundary of the subject site.



AXONOMETRIC SHOWING SURROUNDING BUILDING MASS AND CONFORMING SCHEME



ELEVATION FROM SOUTH EAST SHOWING EXISTING BUILDING MASS AND CONFORMING SCHEME



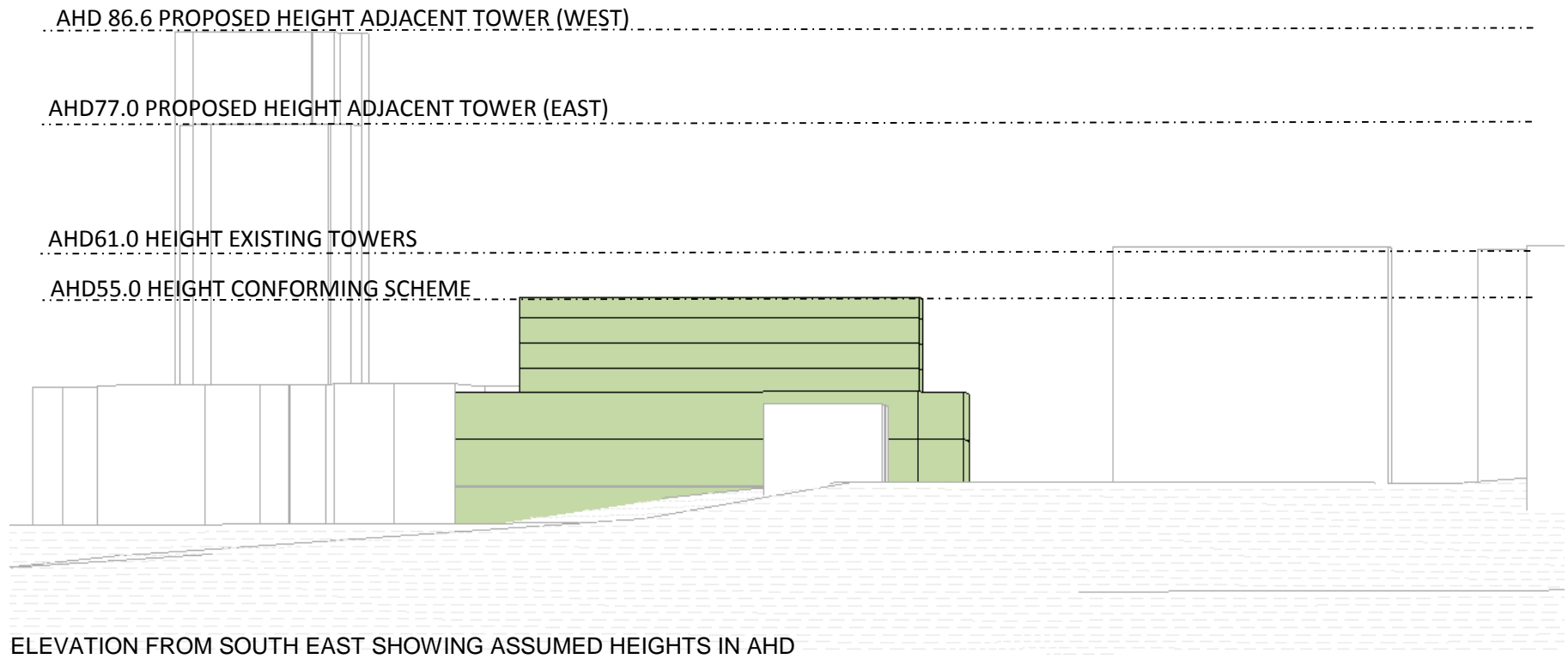
**HEIGHT CONTROL**

Existing Buildings along Canberra Terrace are the predominant tall built forms in the Caloundra area. These are typically 9 – 11 stories in height, or approximately 30mtrs above ground level. Canberra Terrace rises up to the north, so that the effective heights of these existing buildings increases moving up and along Canberra Terrace, away from the project Site.

The effective height of the parapets of these adjacent existing buildings is estimated at AHD

The effective height of the conforming scheme is estimated at

The effective height of the two proposed Towers on the adjacent southerly site is AHD for Tower 1 (West) and AHD for Tower 2 (east).



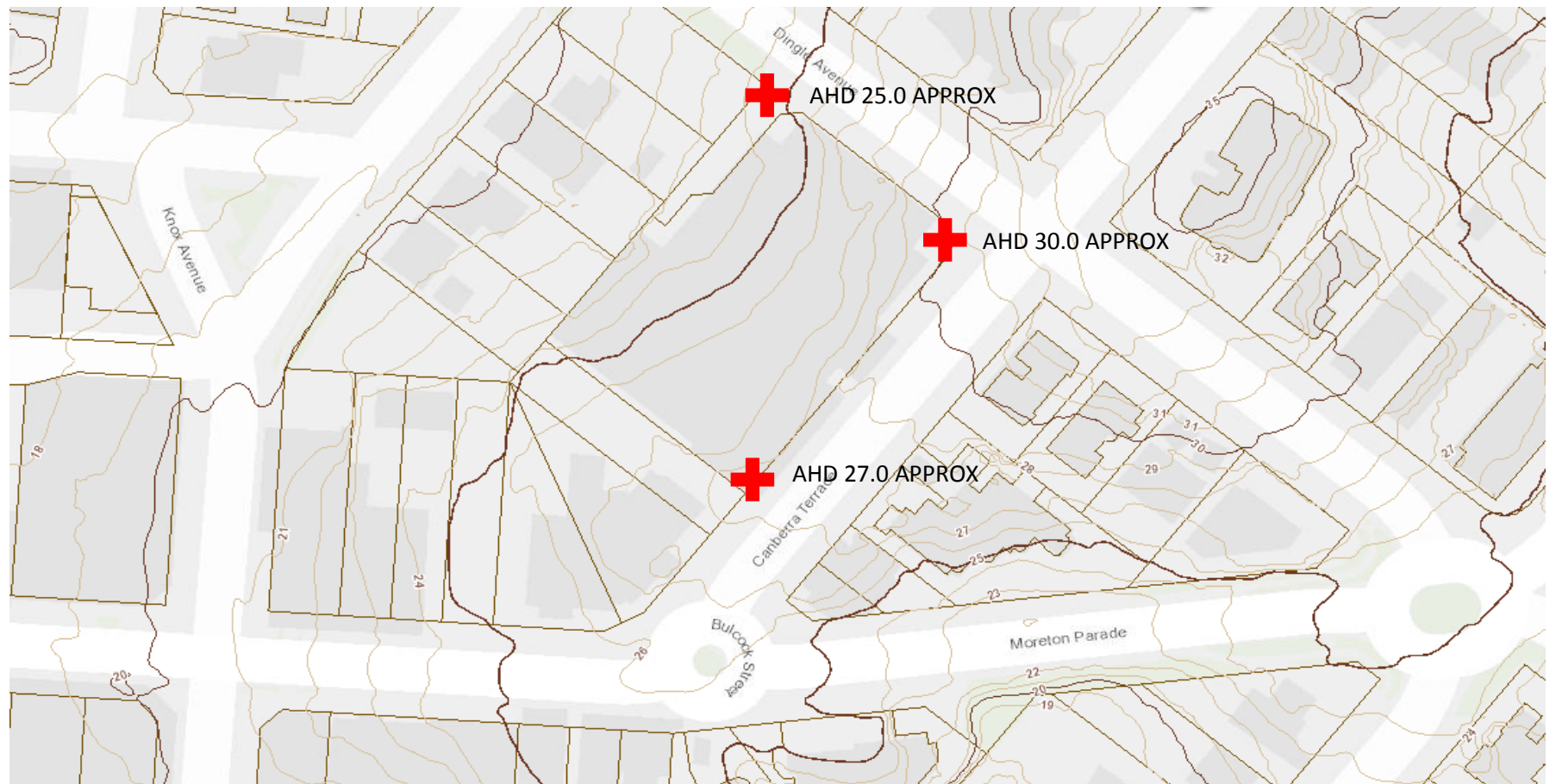
**SITE LEVELS**

There is a level change along Canberra Terrace of about 3 metres, rising up from the southern side to the Canberra Terrace / Dingle Avenue corner.


It seems sensible to make use of the existing road easement to the northwest of the site, as the preferred location for vehicle access.

This will better preserve the streetscape amenity at the southern corner.


(Note: The adjacent development should be encouraged to relocate its vehicle access away from Bulcock Street / Canberra Terrace for this same reason).




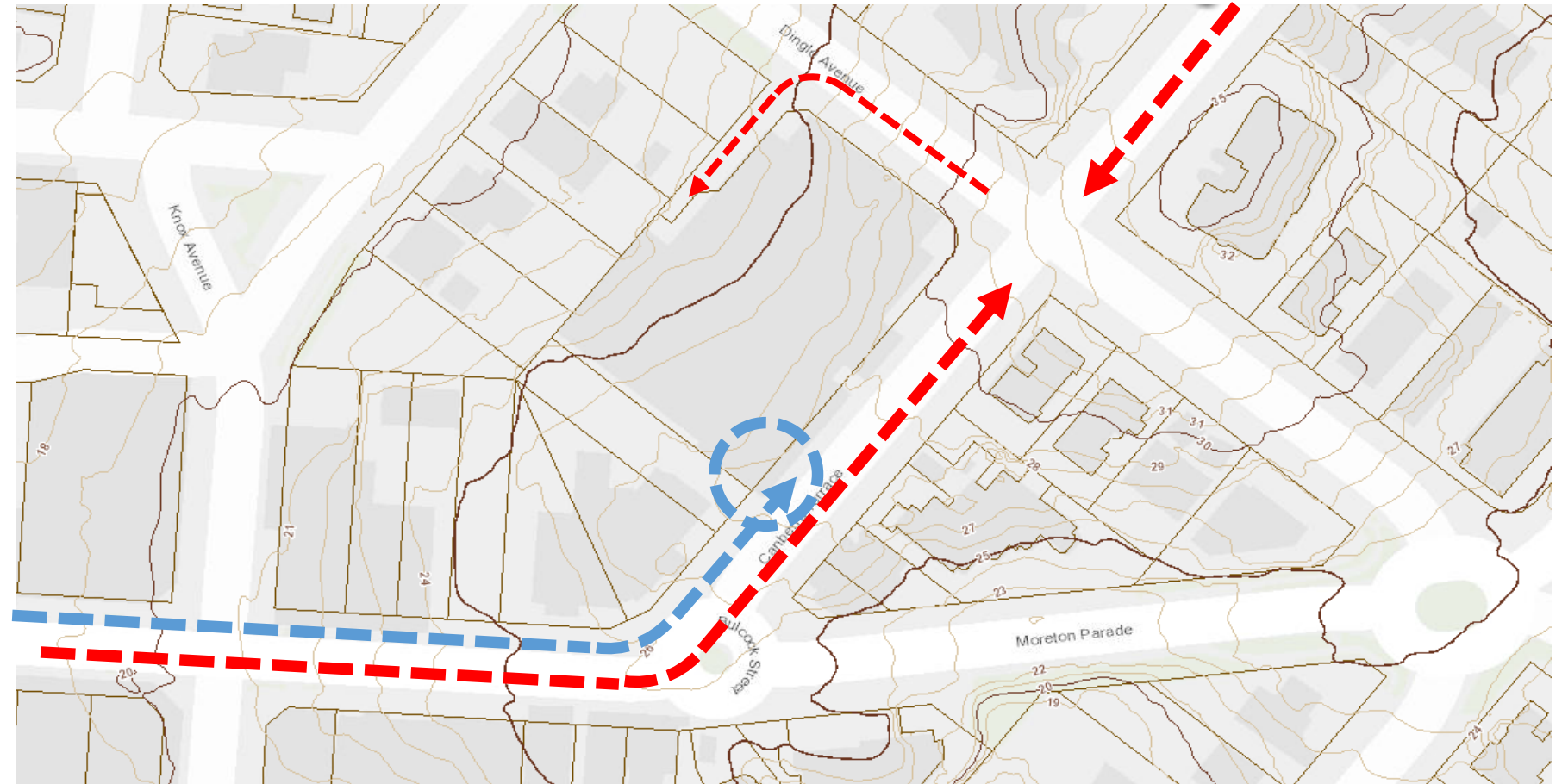
SITE ACCESS

 Main Pedestrian Route arriving from Bulcock Shops

 Main Pedestrian Arrival Point

 Main Vehicular Connector arriving from Sunshine Coast Motorway (North and South) and Dicky Beach

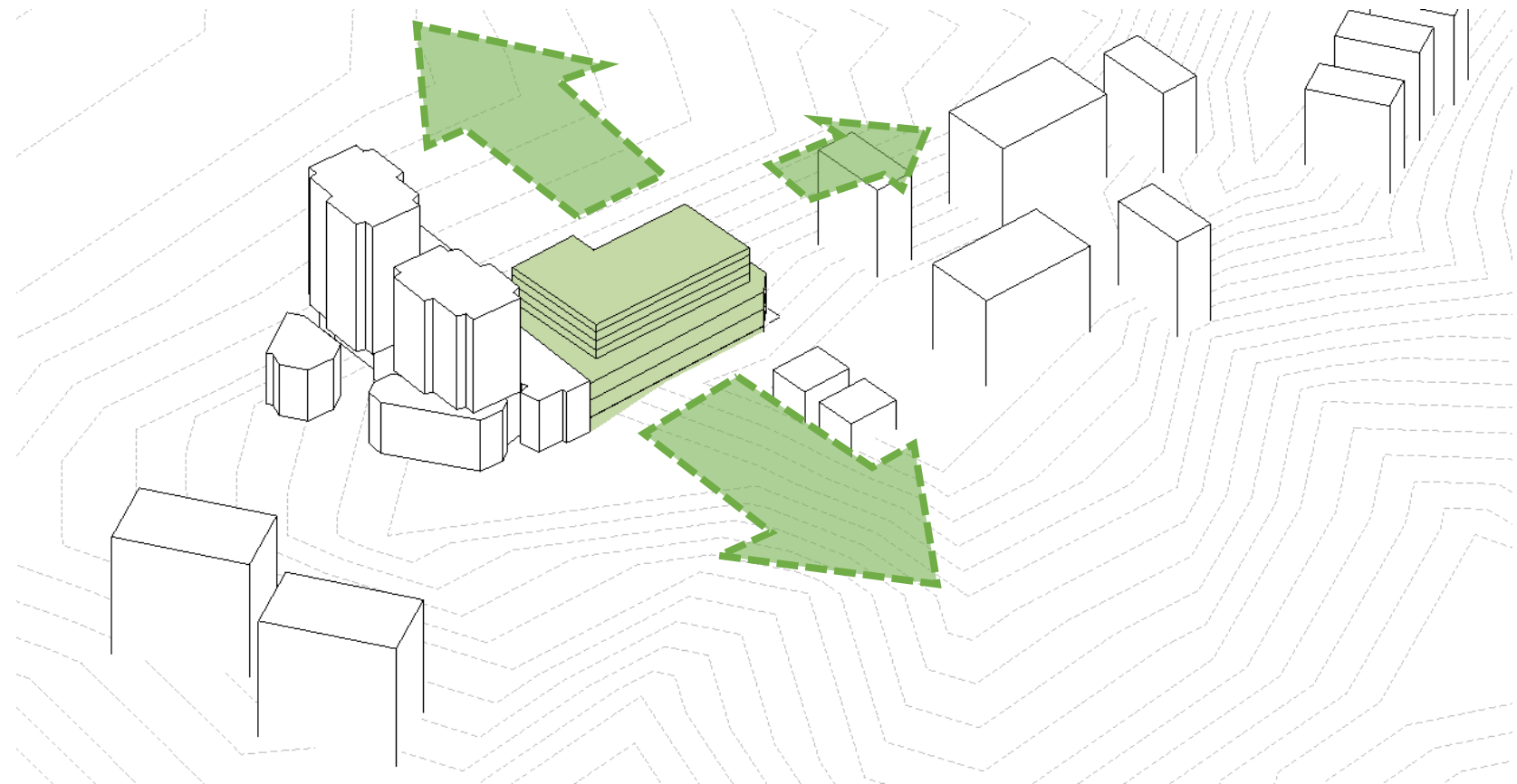
 Possible Vehicular Access Point utilising existing unallocated Road zone



VIEWS

Because of the adjacent proposed towers to the South, and existing apartment blocks extending along Canberra terrace to the North, predominant views are oriented perpendicular to the south east (towards ocean) and north west (towards hinterland) frontages.

For sections of the tower above level 9, there may be northern and eastern views.





SOLAR



Summer Sun Path



Winter Sun Path

It appears there will be reasonably good morning sun in both summer and winter arriving from the east.

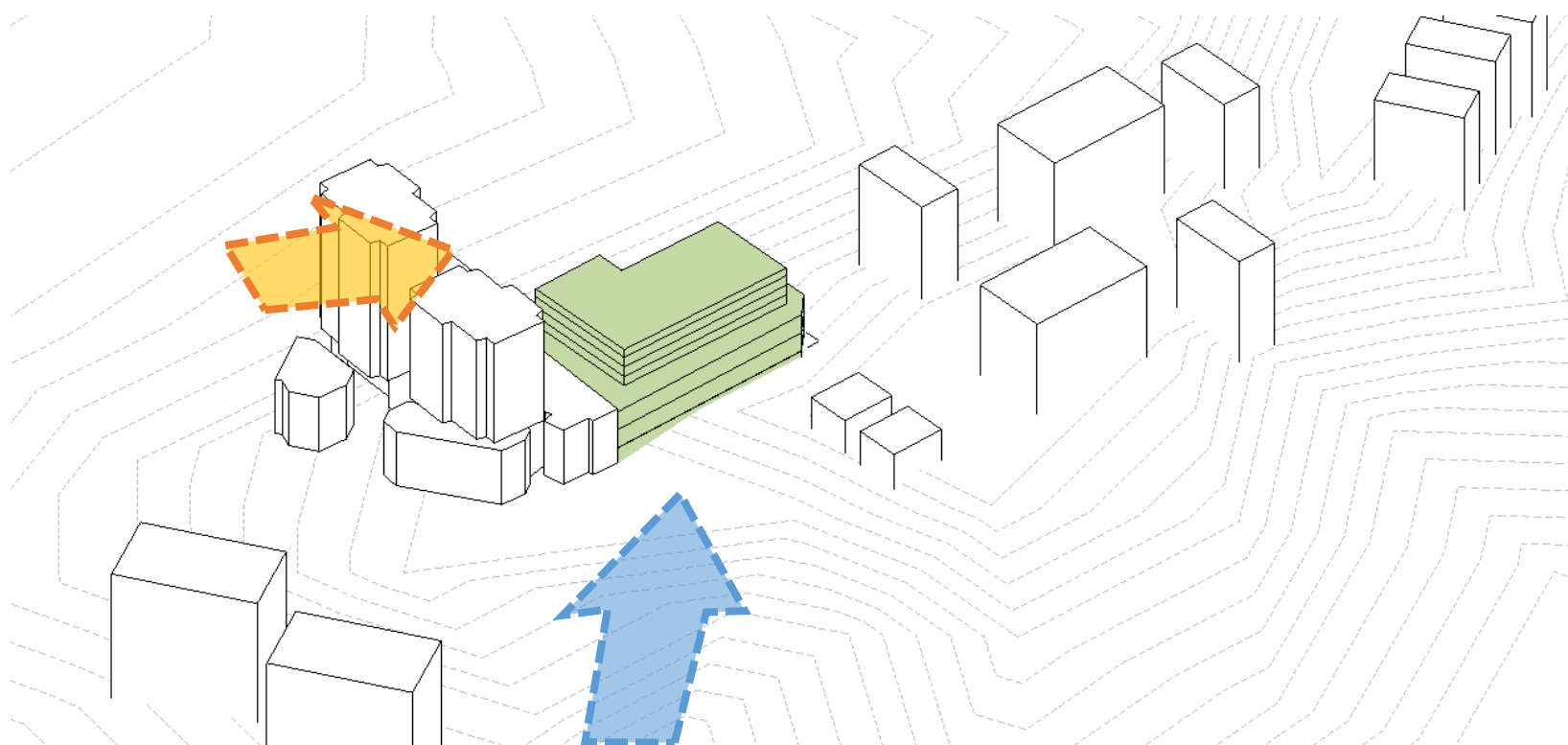
There will be high exposure of the western façade to summer sun.



BREEZES

Desirable cool breezes are ocean breezes arriving predominantly from the south east, east and north east.

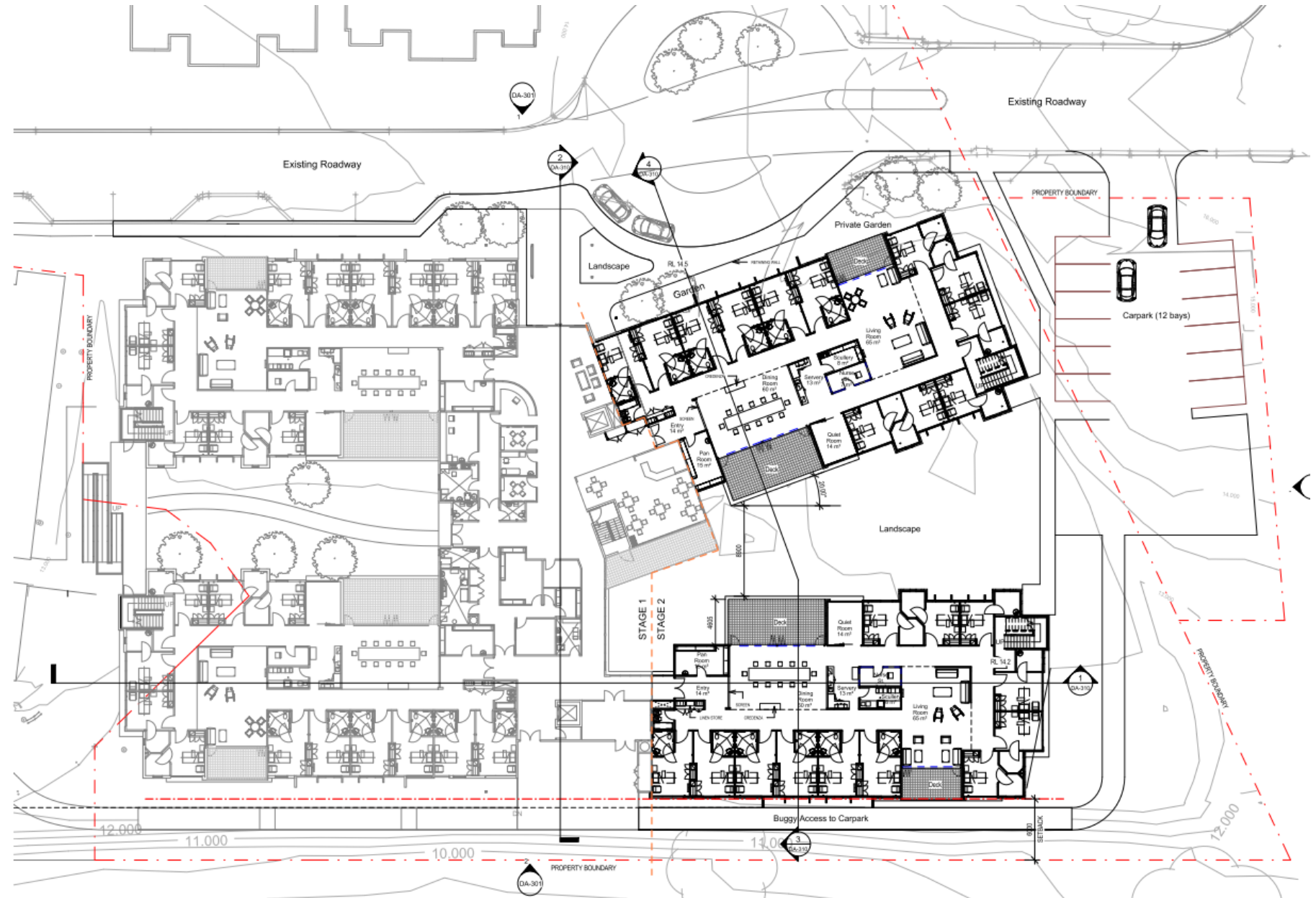
Undesirable warm breezes arrive from the west.



PRECEDENT

JETA GARDENS

DESCRIPTION TBC





JETA GARDENS  
MASTERPLAN

DESCRIPTION TBC



AMPANG

No drawings available

DESCRIPTION TBC

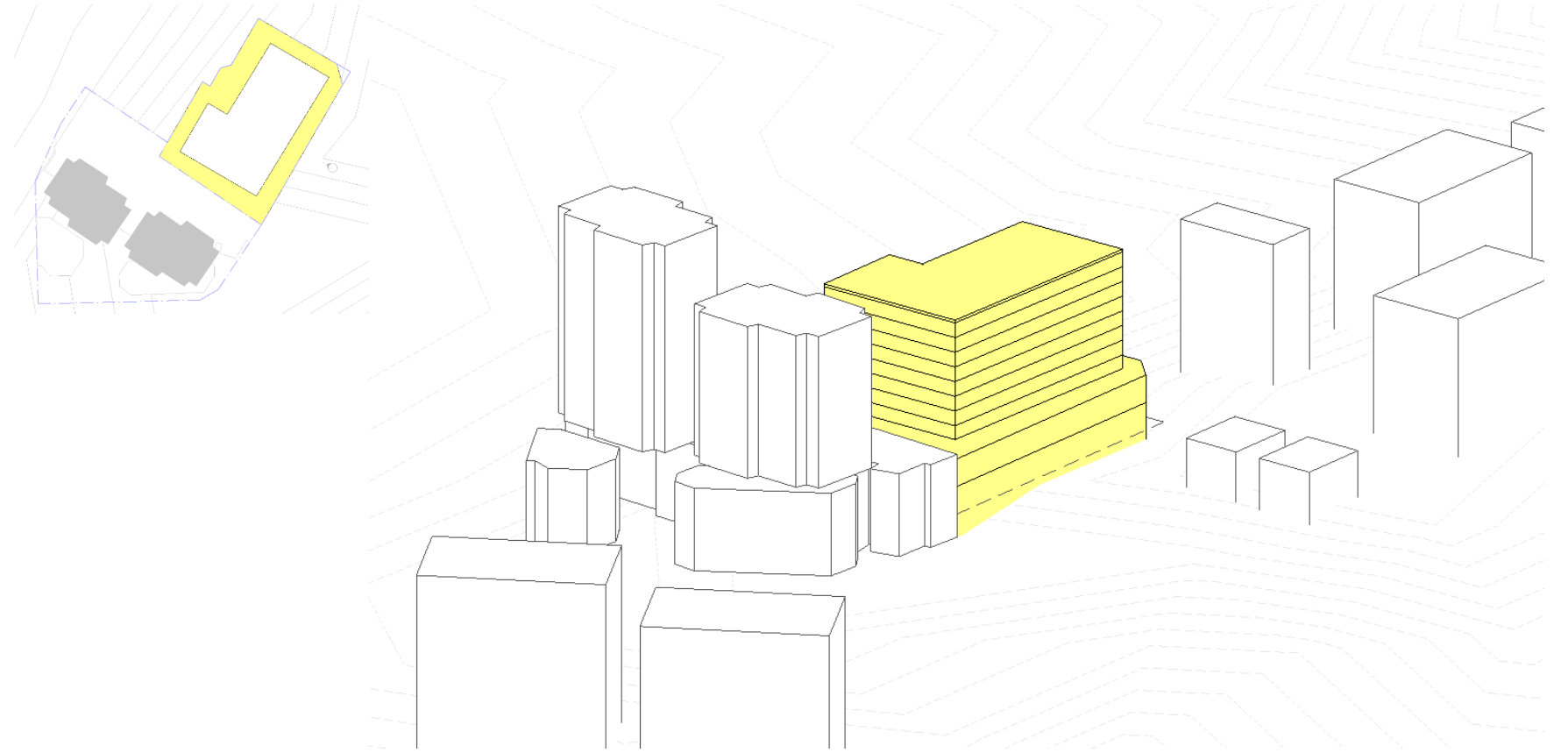
MASSING

OPTION 1: BLOCK

This option works with statutory constraints to provide for a 2 level podium and 8 storey above podium tower,

1572sqm GFA tower plate  
 15232sqm GFA Total  
 4.72 Plot  
 48% Site Cover for Tower  
 AHD70 Effective Height  
 (40mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

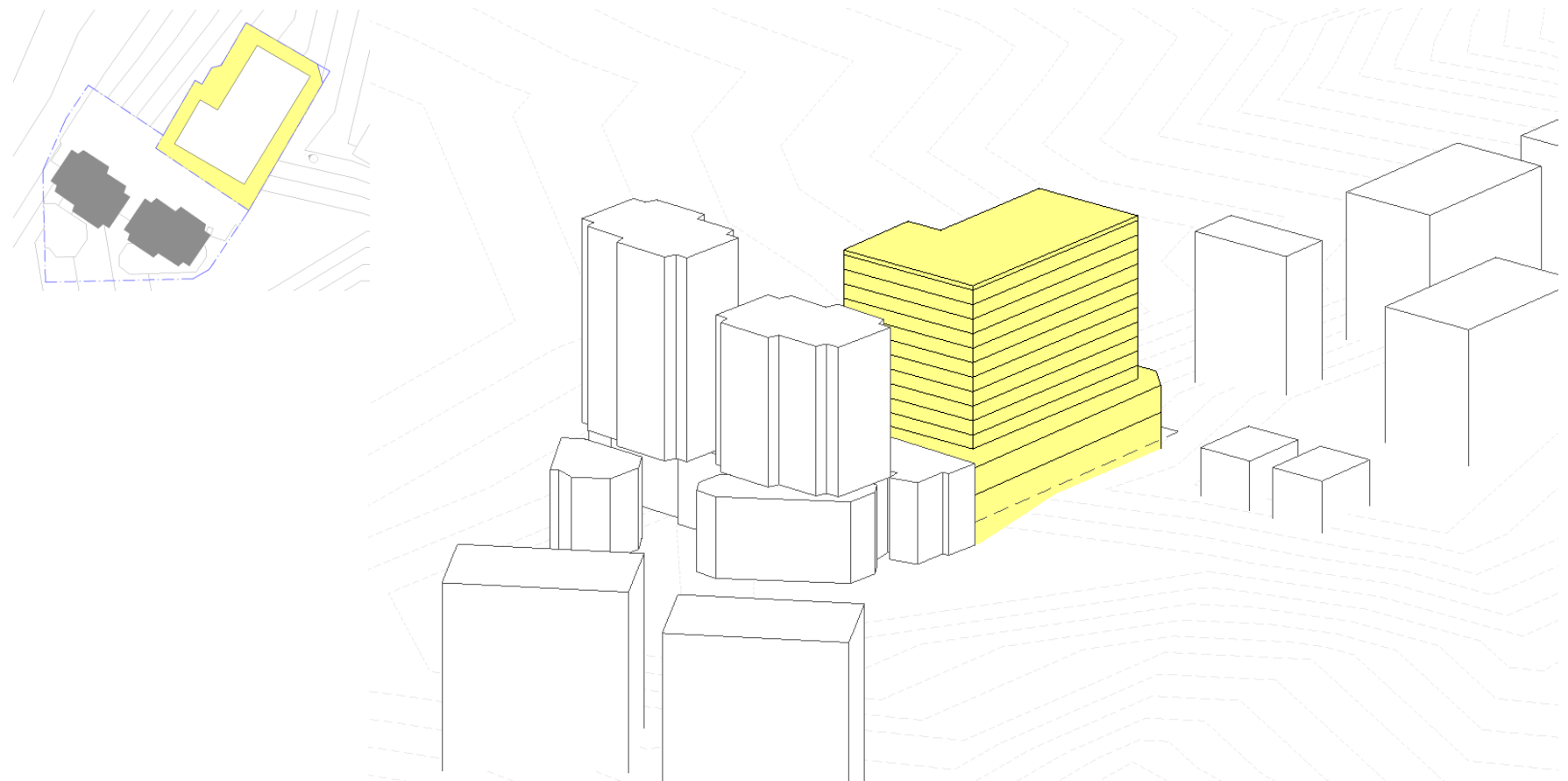


OPTION 2: BLOCK

This option works with statutory constraints to provide for a 2 level podium and 11 storey above podium tower.

1572sqm GFA Tower Plate  
 19948sqm GFA Total  
 6.2 Plot  
 48% Site Cover for Tower  
 AHD80 Effective Height  
 (50mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.





**OPTION 3: TWIN TOWERS**

This option works with statutory constraints to provide for a 2 level podium and 11 storey above podium tower,

702sqm GFA Tower Plate x2  
 18100 sqm GFA Total  
 5.6 Plot  
 43% Site Cover for Tower  
 AHD80 Effective Height  
 (50mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

The scheme proposes to relax the setback requirement from the north west boundary at its northern side.



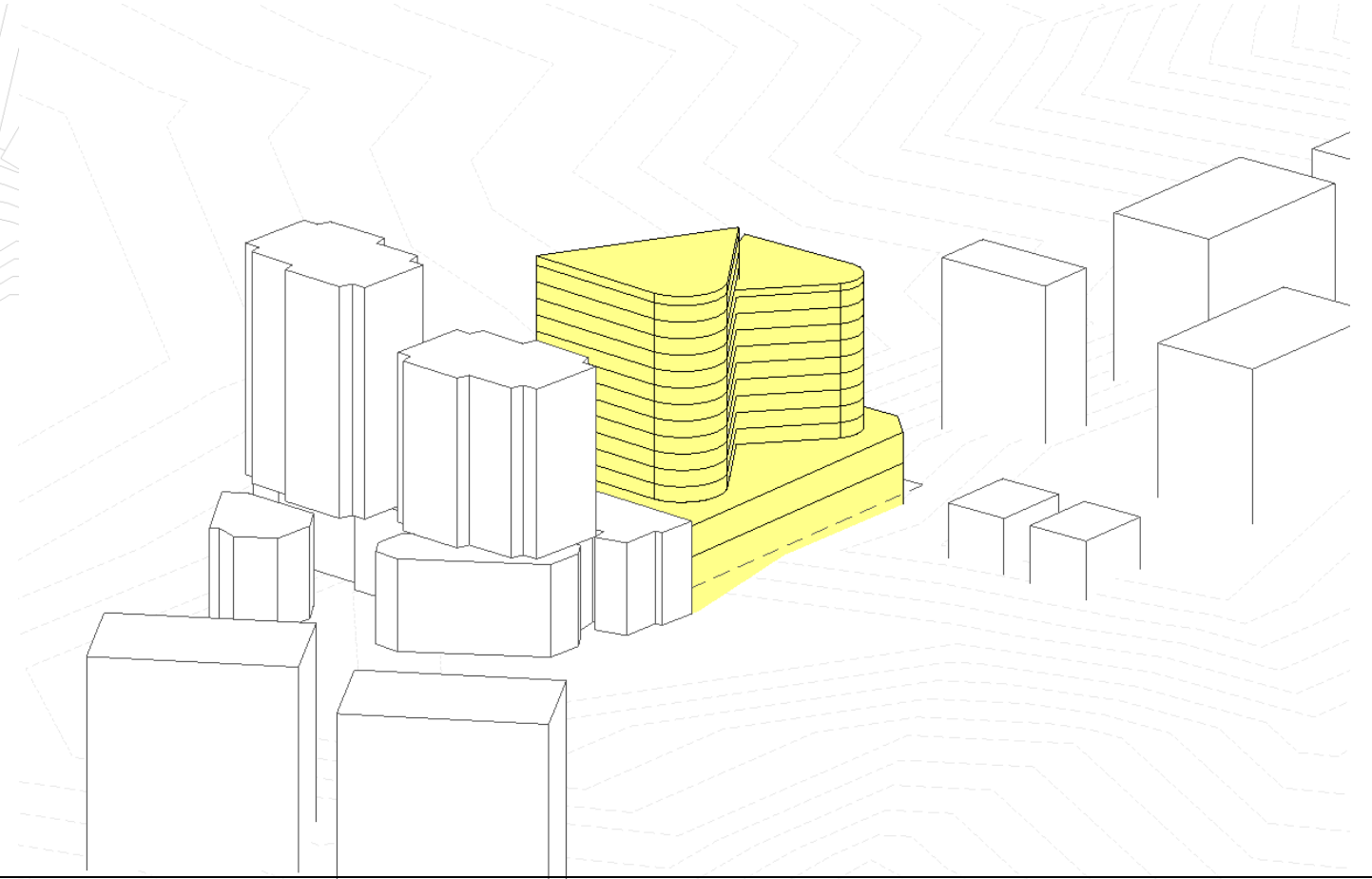
**OPTION 4:  
 BOAT 'PROW' SCHEME**

This option works with statutory constraints to provide for a 2 level podium and 10 and 12 storey (above podium) tower,

1220sqm GFA Tower Plate  
 17216 sqm GFA Total  
 5.4 Plot  
 37% Site Cover for Tower  
 AHD82 Effective Height  
 (52mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

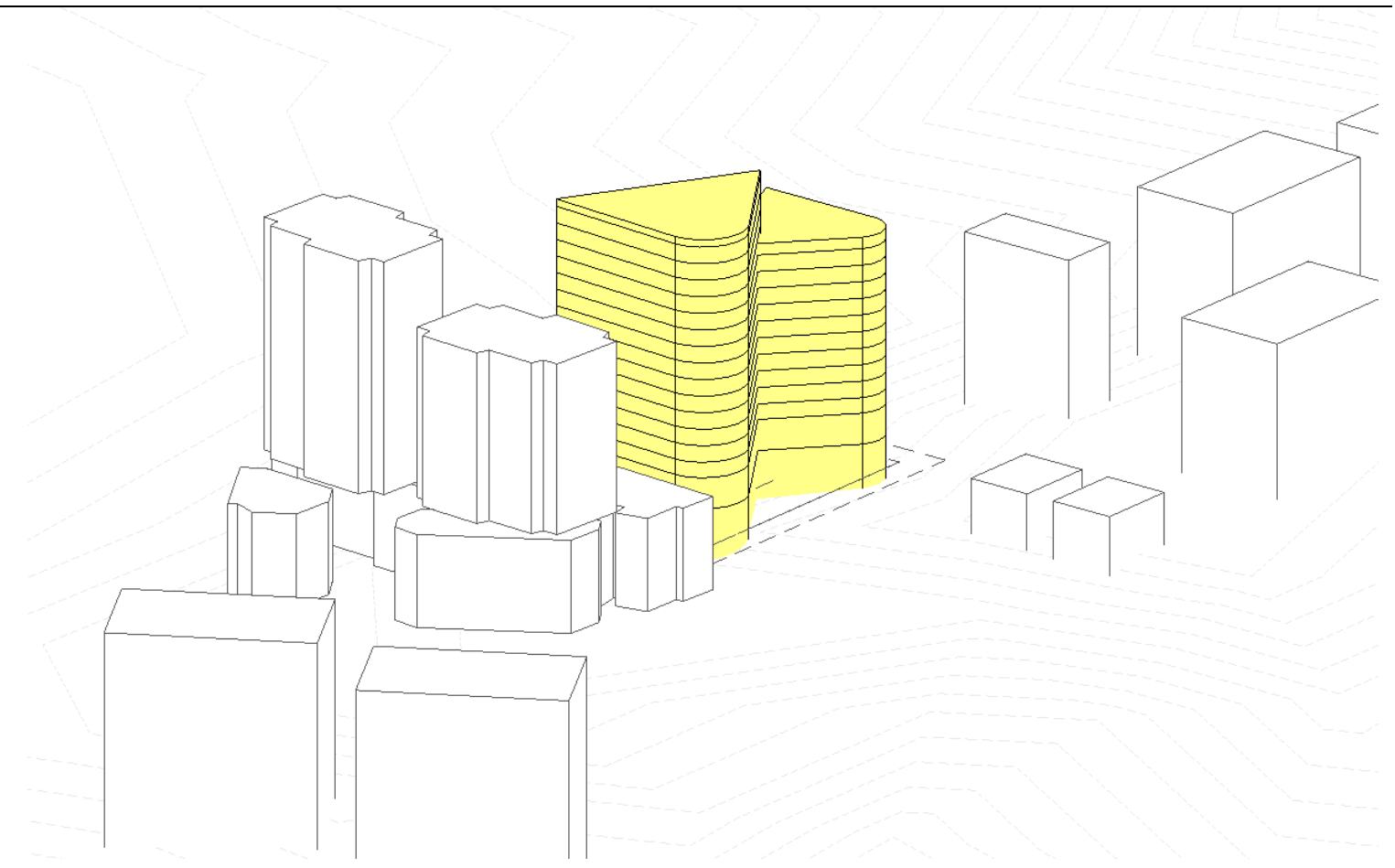
Scheme can work for single core or dual core arrangement.



**OPTION 4A:  
BOAT 'PROW' SCHEME,  
NO PODIUM**

This option works as per Option 4, however podium levels are contained within the umbrage of the towers above, allowing the towers to stand well within the property boundary.

1220sqm GFA Tower Plate  
17080 sqm GFA Total  
5.3 Plot  
37% Site Cover for all levels  
AHD82 Effective Height  
(52mtrs above ground)



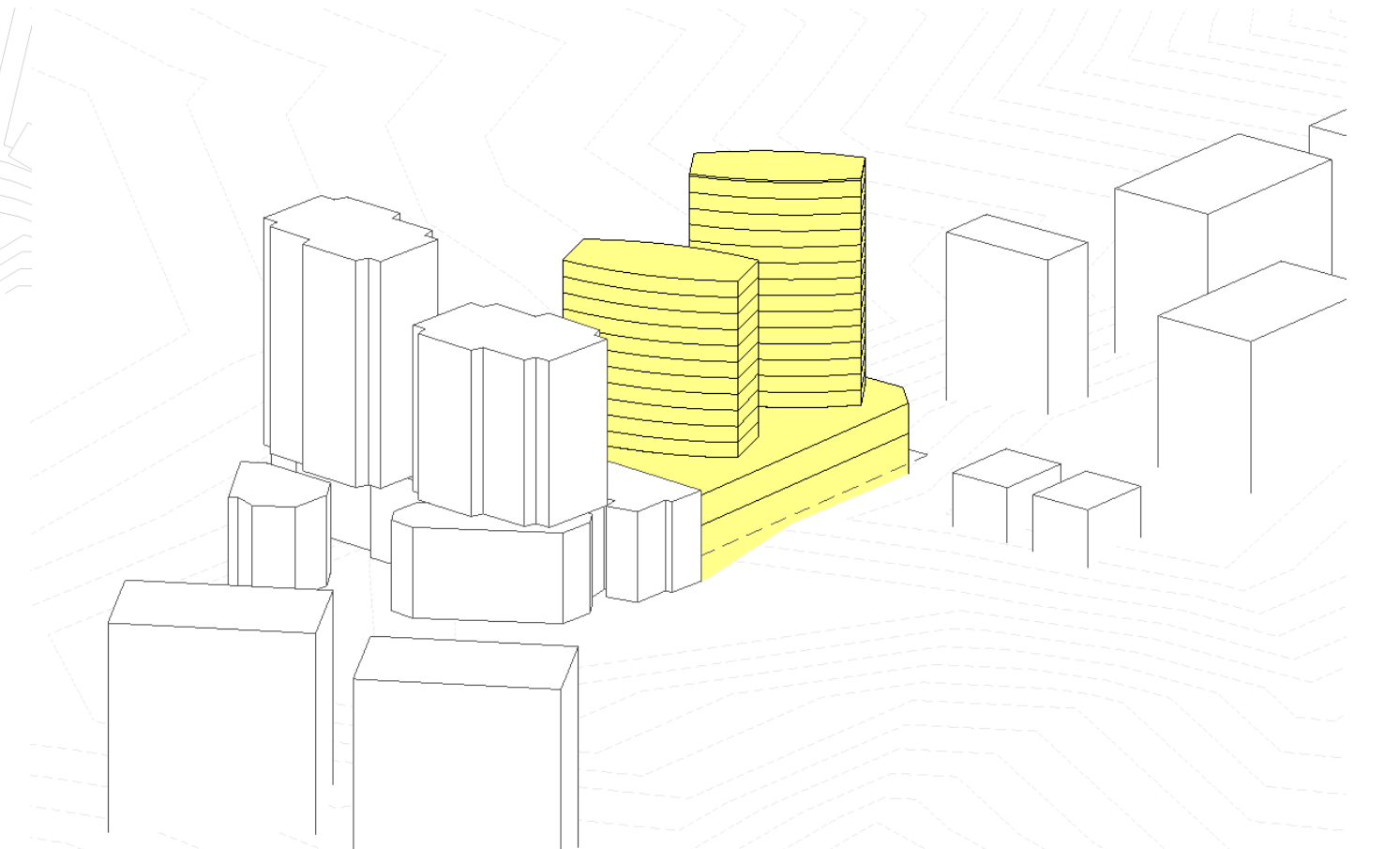
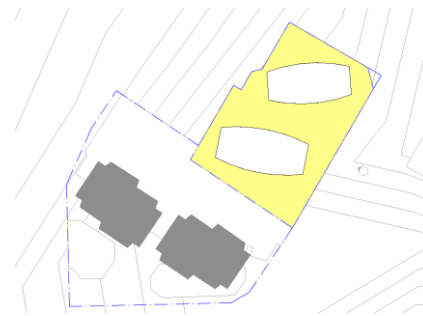
**OPTION 5:  
PIRELLI TOWERS**

This pair of towers stand to an equivalent height as has been proposed on the adjacent, southern site, being 11 storeys above podium and 14 storeys above podium.

450sqm GFA Tower Plate #1  
525sqm GFA Tower Plate #2  
14551 sqm GFA Total  
4.5 Plot  
30% Site Cover for Tower  
AHD86 Effective Height  
(56mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

Tower plates resulting for this scheme are seen as being too small to warrant this option being carried forward.



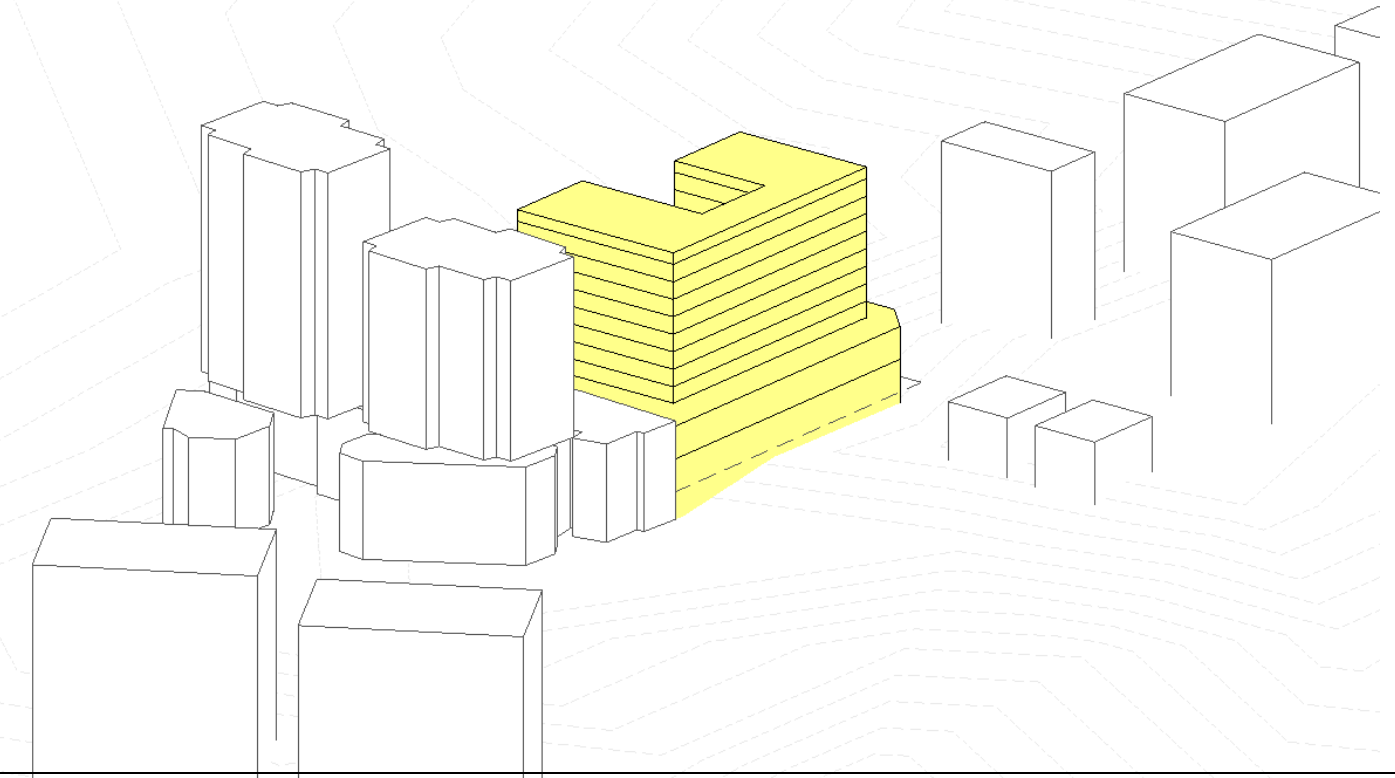
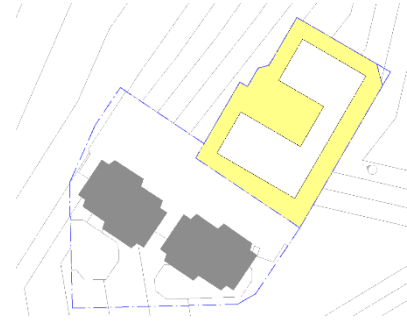


**OPTION 6:  
ERODED BLOCK**

This scheme is similar to the Conforming Statutory Scheme, except that the block for resulting is eroded slightly by locating a courtyard and opening central to the north western façade, providing 9 levels above podium.

1252sqm GFA Tower Plate  
13844 sqm GFA Total  
4.3 Plot  
40% Site Cover for Tower  
AHD70 Effective Height  
(40mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.



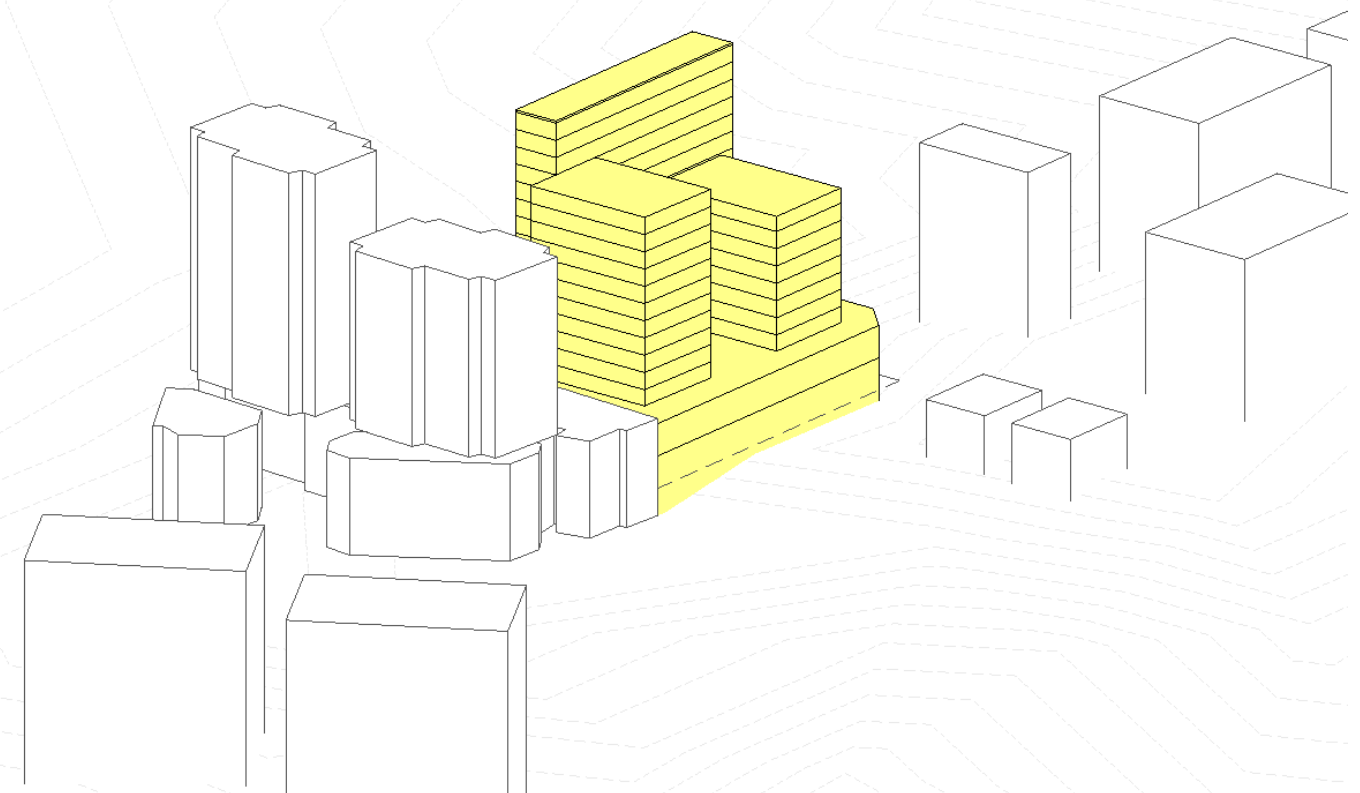
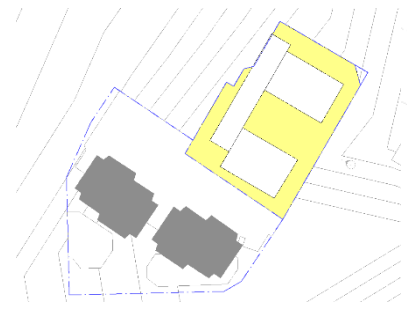
**OPTION 7:  
STACKED SCHEME V1**

This scheme utilises stacking slab blocks, either single or double loaded corridors, at varying heights 8 – 14 storeys above podium to create an interesting building shape as well as mitigate against the mass effect of whole of site block schemes.

1374sqm GFA Tower Plate  
17768sqm GFA Total  
5.5 Plot  
42% Site Cover for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

The scheme proposes to relax the setback requirement from the north west boundary at its northern side.

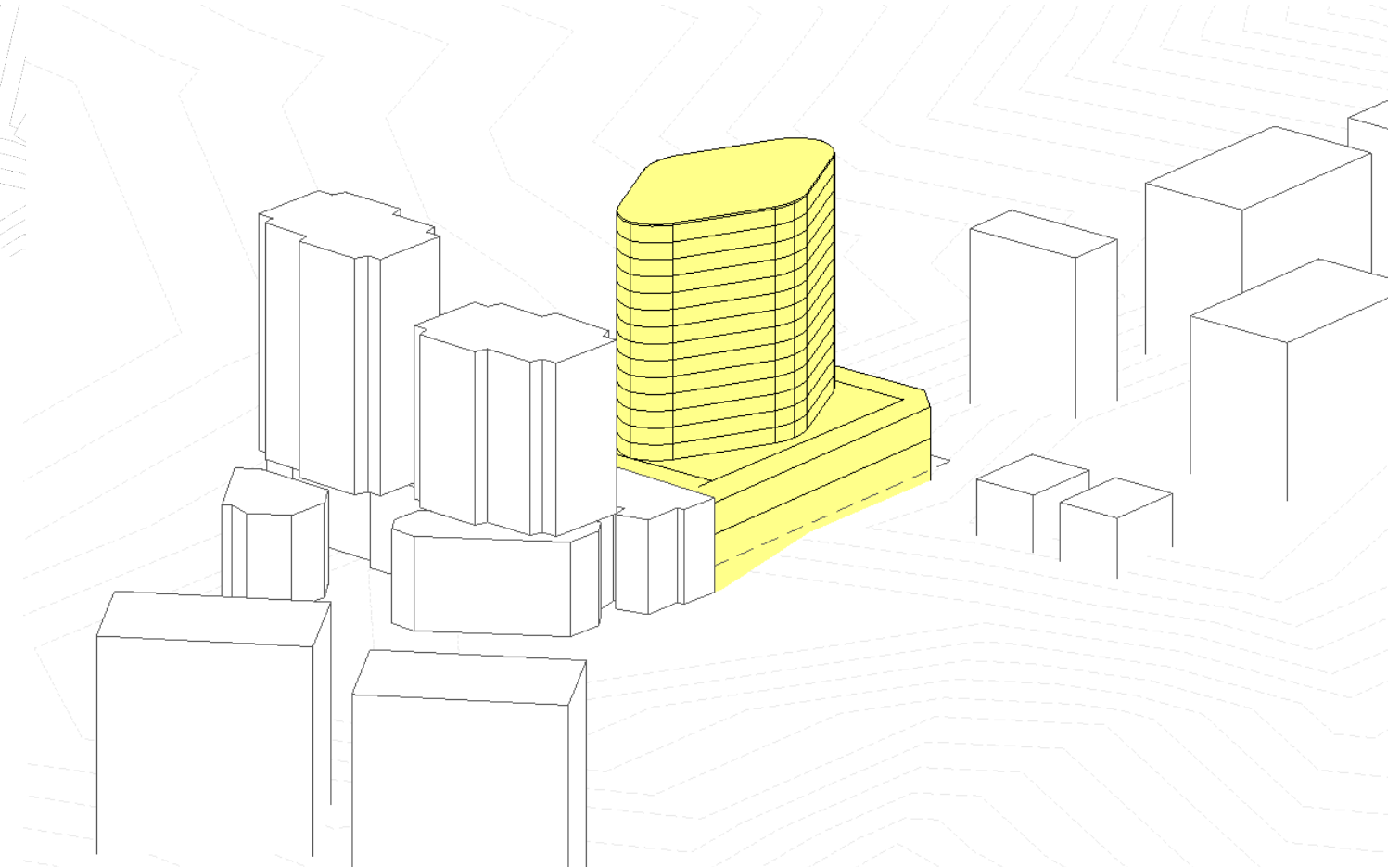
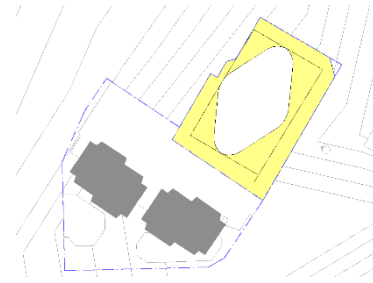


**OPTION 8:  
SUPER PLATE V1**

This option utilises a graceful building profile enlarged to fill the site, rising up to 14 storeys above podium.

1374sqm GFA Tower Plate  
18396sqm GFA Total  
5.7 Plot  
35% Site Cover for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

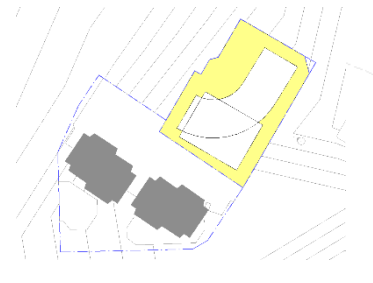


**OPTION 9:  
'J' SHAPE**

The building curves to address key viewlines as well as staggering the building mass down to the street, rising to 14 storeys above podium.

1062sqm Upper Plate GFA  
32% Site Cover  
1397sqm Lower Plate GFA  
19454sqm GFA Total  
6.0 Plot  
37% Site Cover (Average) for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.



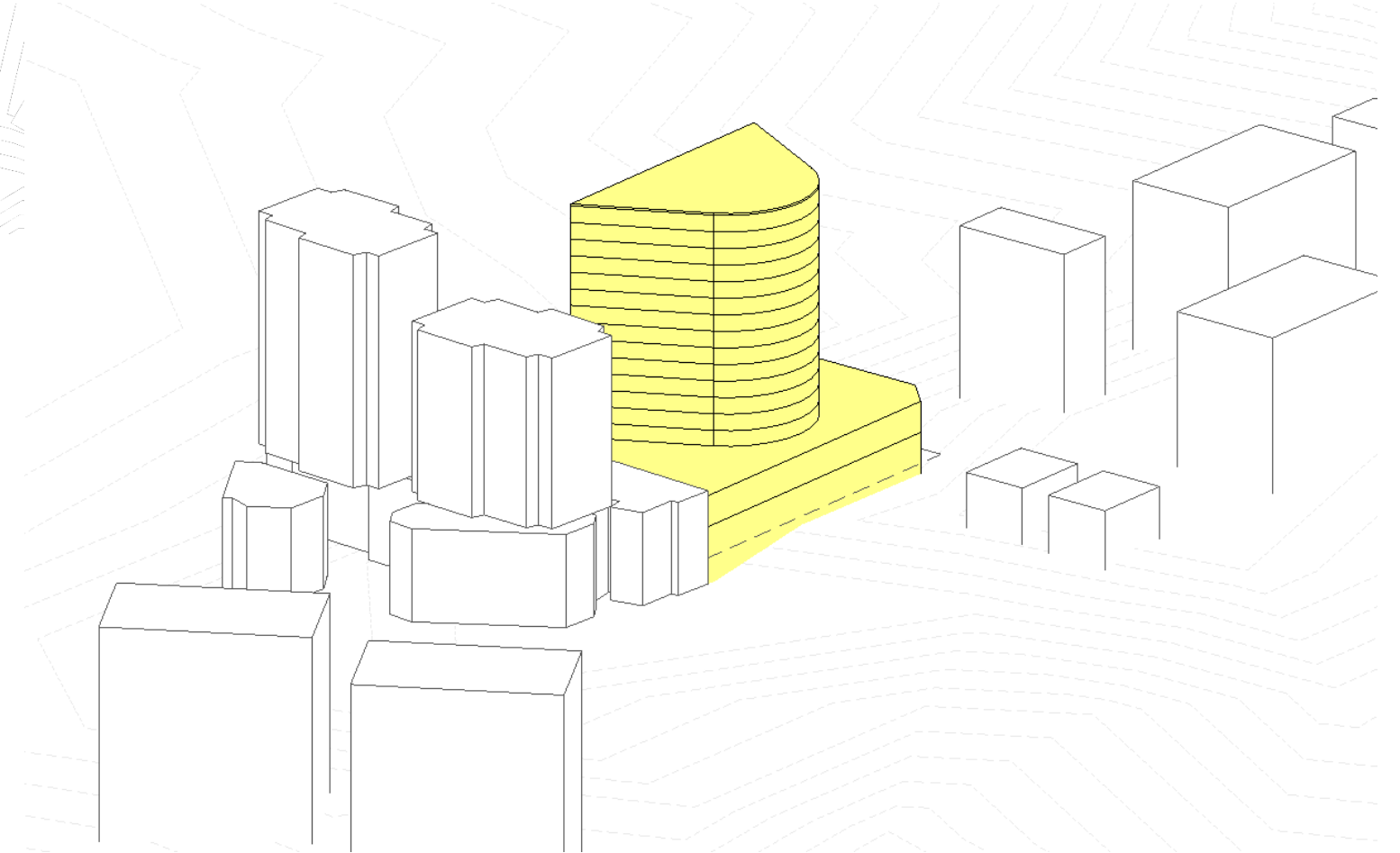
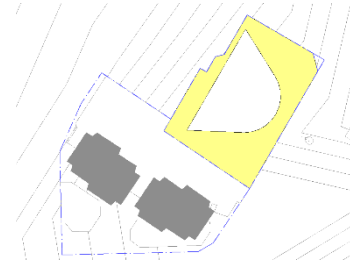


**OPTION 10:  
SUPER PLATE V2**

A single, large floor plate addressing key view lines from the site to east and south, rising to 14 storeys above podium.

1130sqm Tower Plate GFA  
118296sqm GFA Total  
6.0 Plot  
35% Site Cover (Average) for Tower  
AHD84 Effective Height (54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

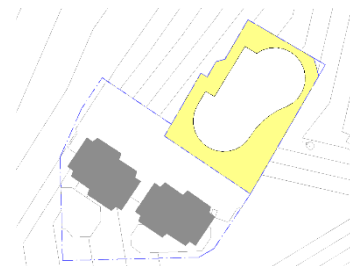


**OPTION 11:  
ORGANIC**

A single, large floor plate that is curvaceous and flowing across the site, rising to 14 storeys above podium.

1470sqm Tower Plate GFA  
23156sqm GFA Total  
7.2 Plot  
45% Site Cover (Average) for Tower  
AHD84 Effective Height (54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.



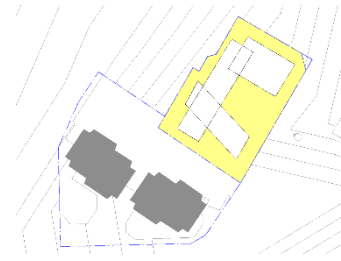
**OPTION 12:  
STACKED SCHEME V2**

Similar to Option 7, this scheme utilises stacking slab blocks, either single or double loaded corridors, at varying heights 8 – 14 storeys above podium.

1374sqm GFA Tower Plate  
17768sqm GFA Total  
5.5 Plot  
42% Site Cover for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

The scheme proposes to relax the setback requirement from the north west boundary at its northern side.

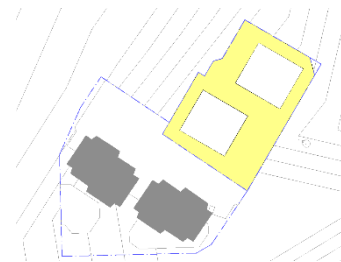


**OPTION 13:  
SQUARE TOWERS**

This scheme locates two square shaped towers quite close together, probably with linked cores. One tower steps back to reveal views to the other.

600sqm GFA Tower Plate x2  
17576sqm GFA Total  
5.45 Plot  
37% Site Cover for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.



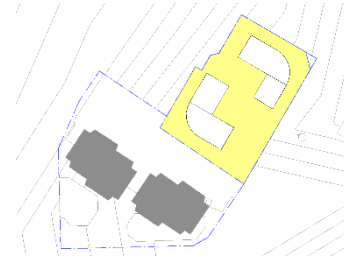


**OPTION 14:  
CORNER TOWERS**

This scheme locates two towers on opposite corners of the site, assuming that there may be a courtyard located between at podium level.

600sqm GFA Tower Plate x2  
17576sqm GFA Total  
5.45 Plot  
37% Site Cover for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.

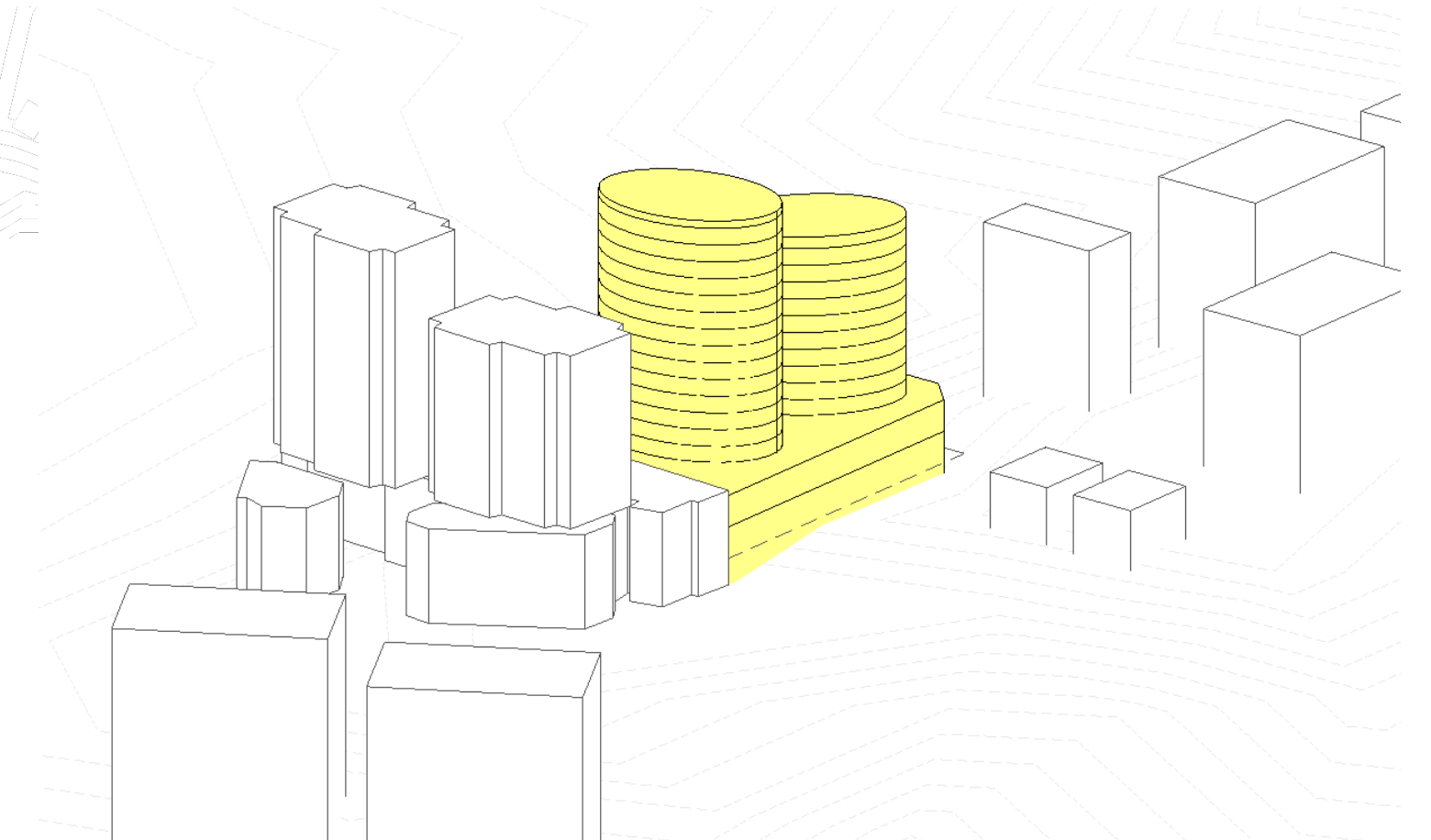
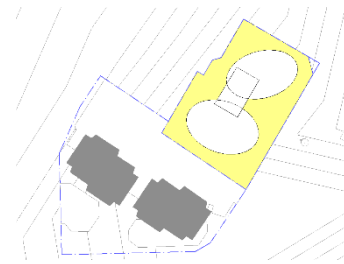


**OPTION 15:  
VOID TOWERS**

This scheme locates two ovoid towers in close proximity but staggered slightly to make available the view to each tower, rising to 11 and 14 storeys above podium.

700sqm Upper Plate GFA  
1250sqm Lower Plate GFA  
18310sqm GFA Total  
5.7 Plot  
37% Site Cover (Average) for Tower  
AHD84 Effective Height  
(54mtrs above ground)

6mtr floor to floor shown in podiums can be reduced to 4.5mtrs to yield an extra residential floor.



MASS OPTION STUDIES

OPTION 7  
STACKED SCHEME  
BLOCK AND STACK

YIELD CALCS

B2 providing 69 Cars for residents

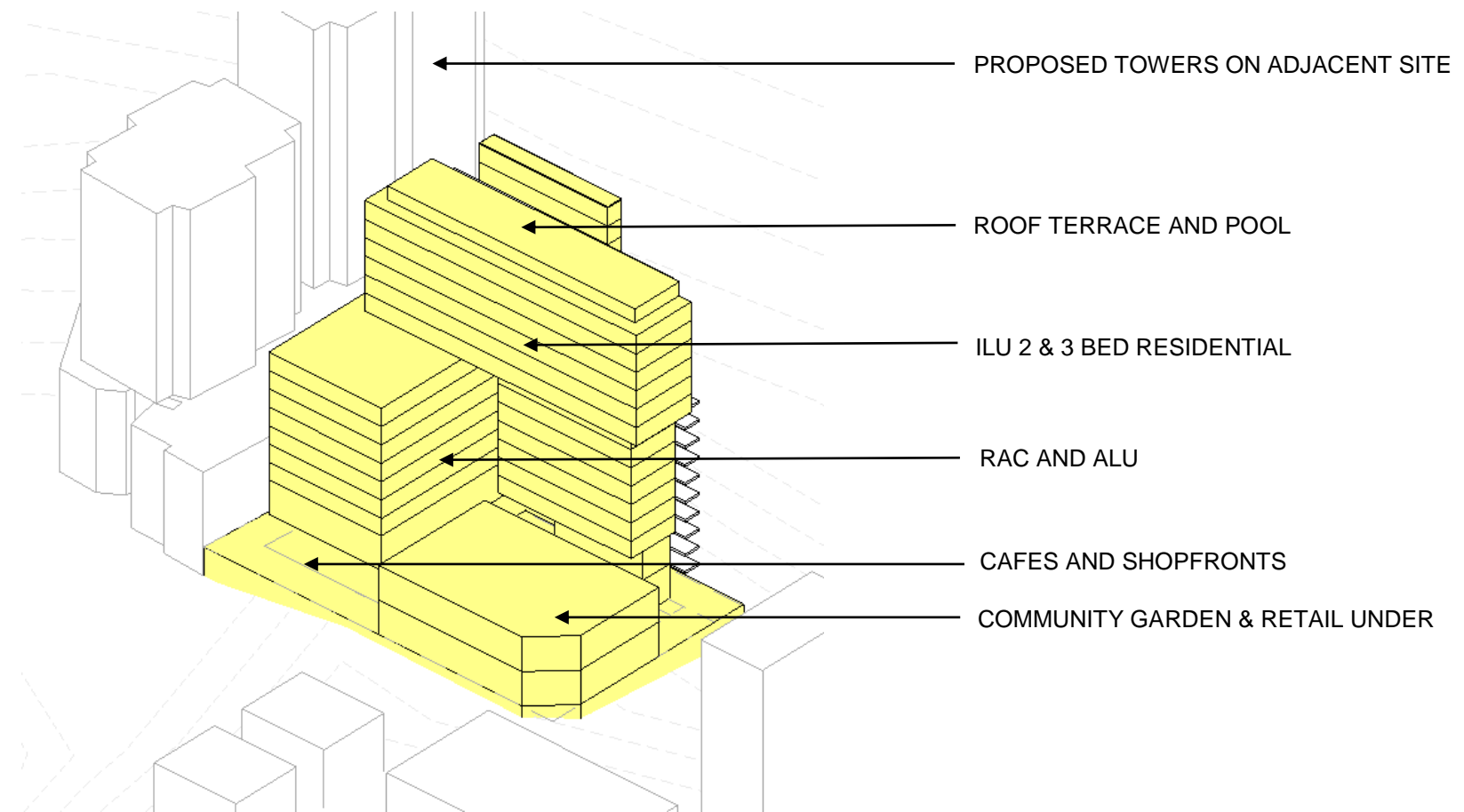
B1 providing 50 cars overall, 38 for retail and staff parking, 12 for resident visitors

LG 1550sqm retail (requiring 30 cars), roadside drop off (note awnings can extend to kerb)

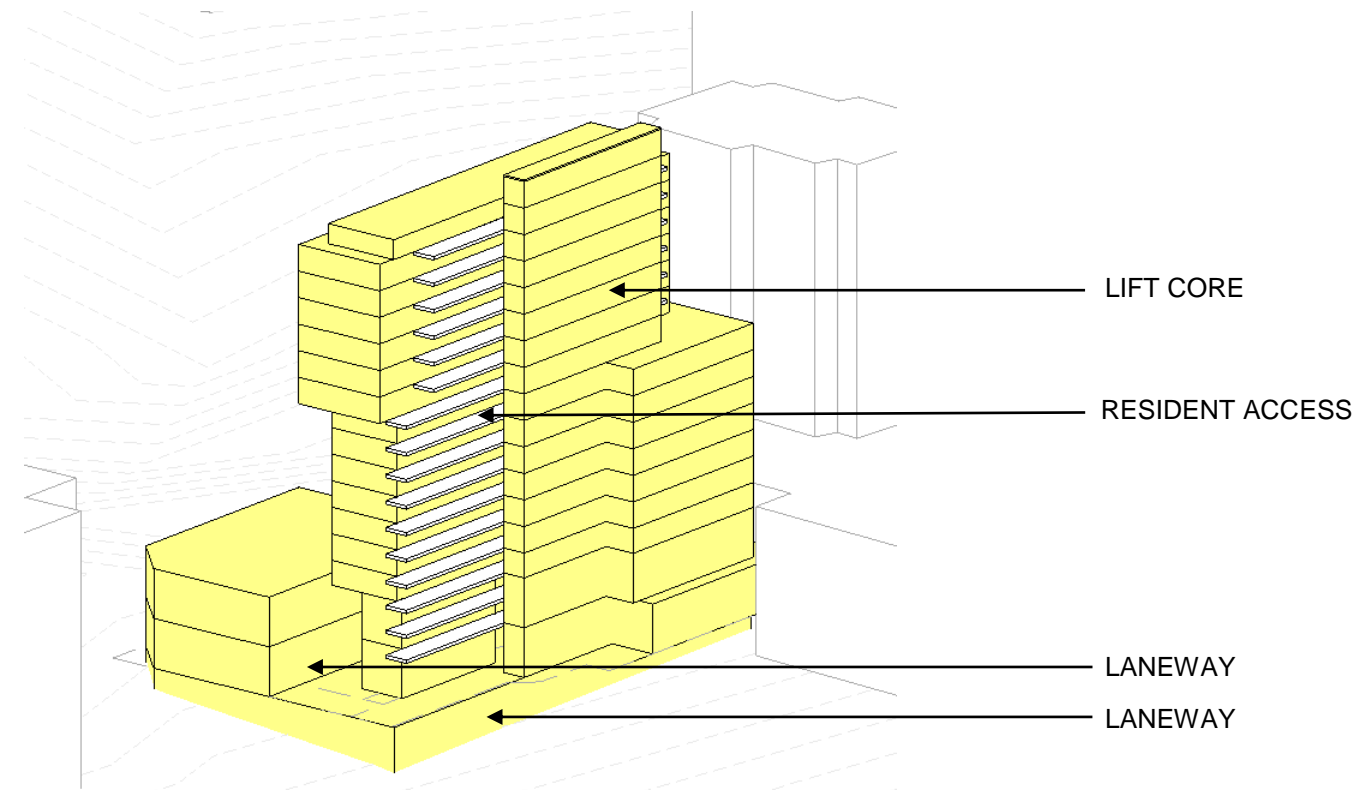
L1 – 8 168 40sqm 1 bed units @ 21 units / floor (84 RAC / 84 ALU) (requiring 32 cars)

L9 – L14 23 ILU total, 2x 3bed 110sqm and 2x 2bed 80sqm per floor over 5 floors (option to add two storeys for +8 units) (requiring 30 cars)

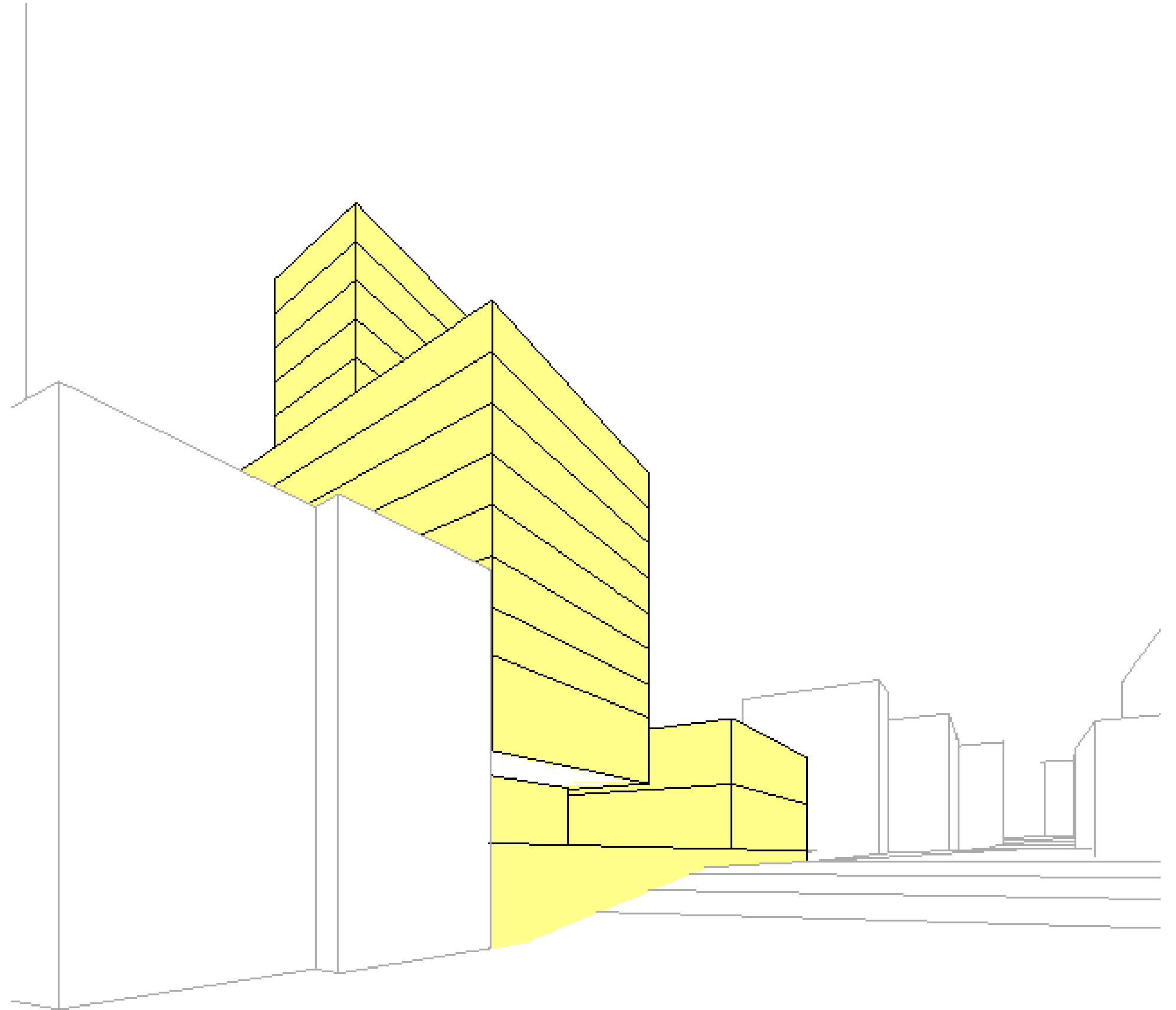
187 Units overall



AXONOMETRIC FROM NORTH EAST

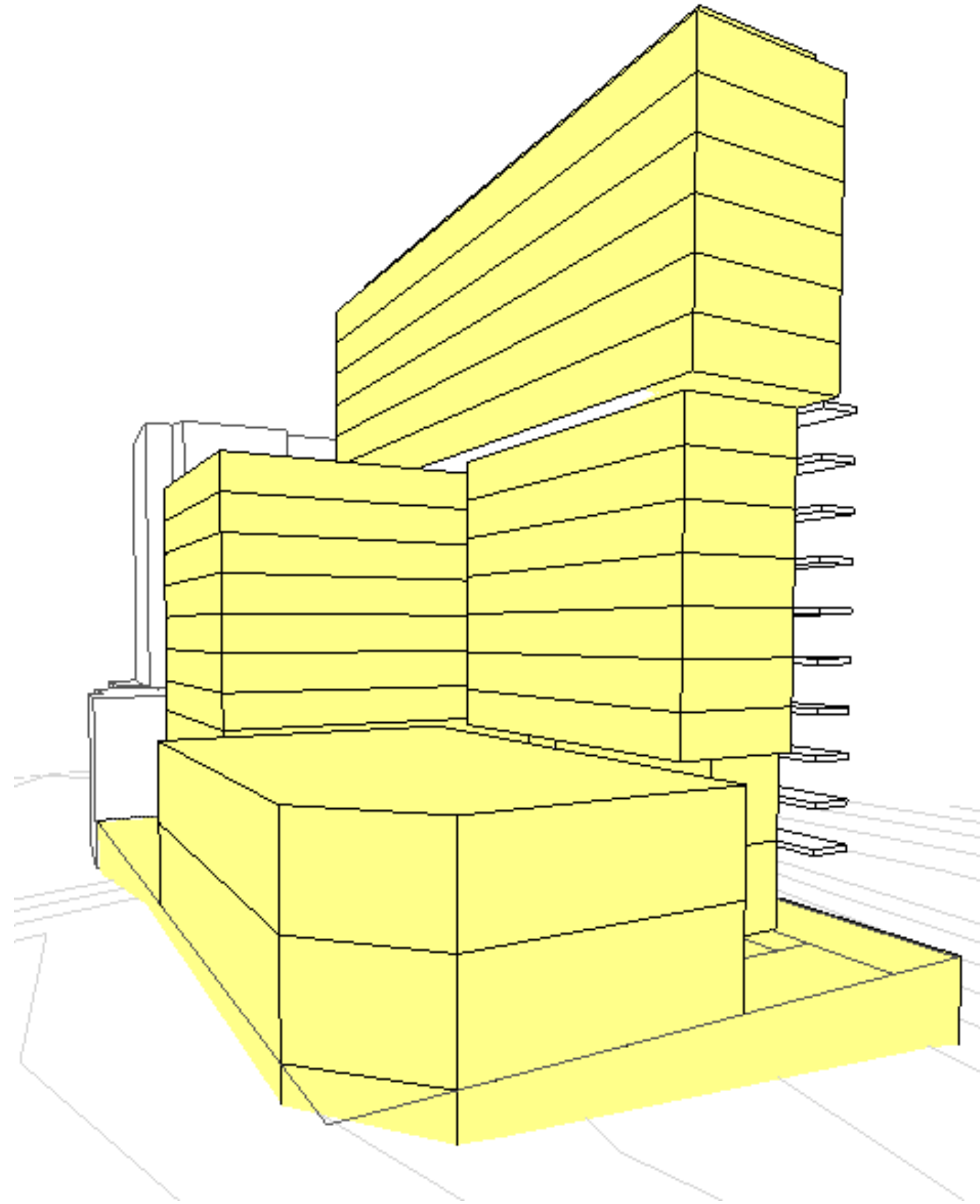


AXONOMETRIC FROM NORTH WEST

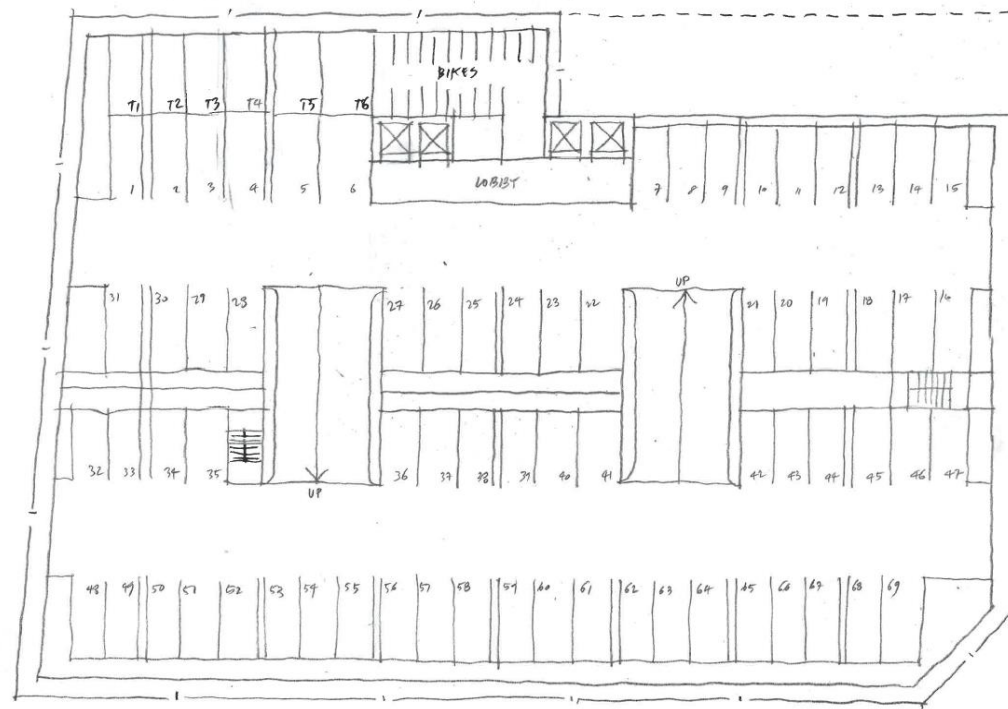


PERSPECTIVE VIEW LOOKING NORTH ALONG CANBERRA TERRACE

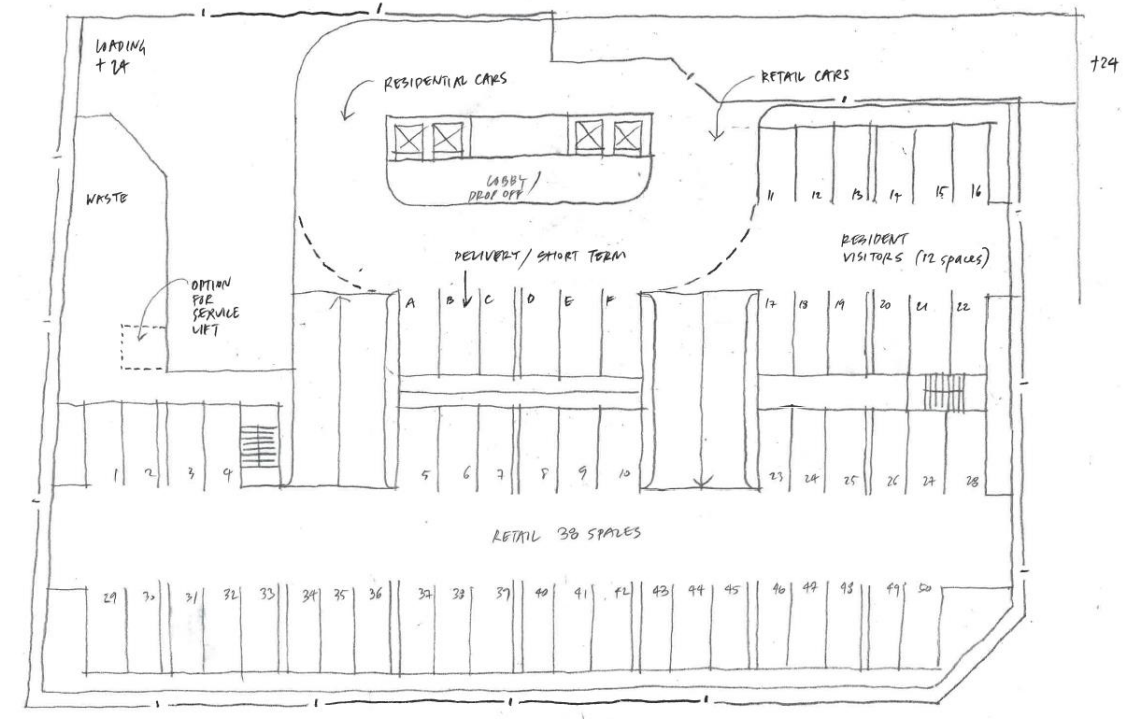




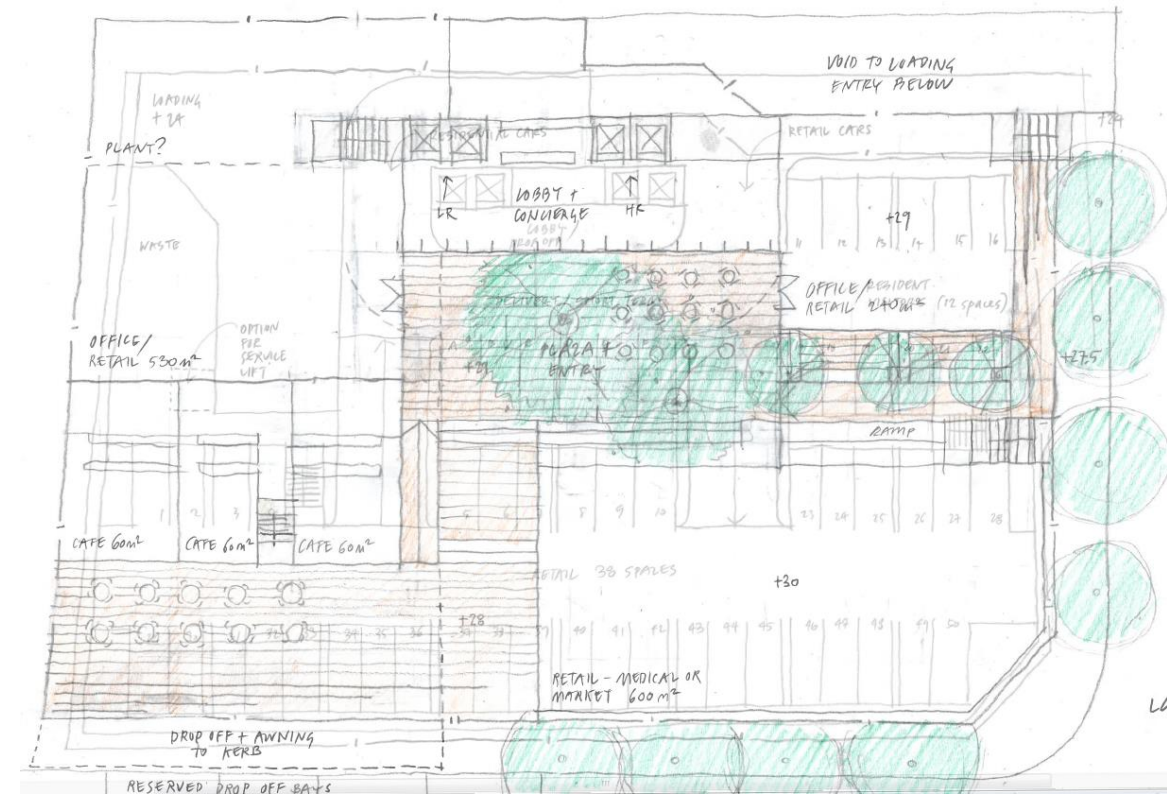
PERSPECTIVE VIEW LOOKING SOUTH WEST FROM NORTH EAST



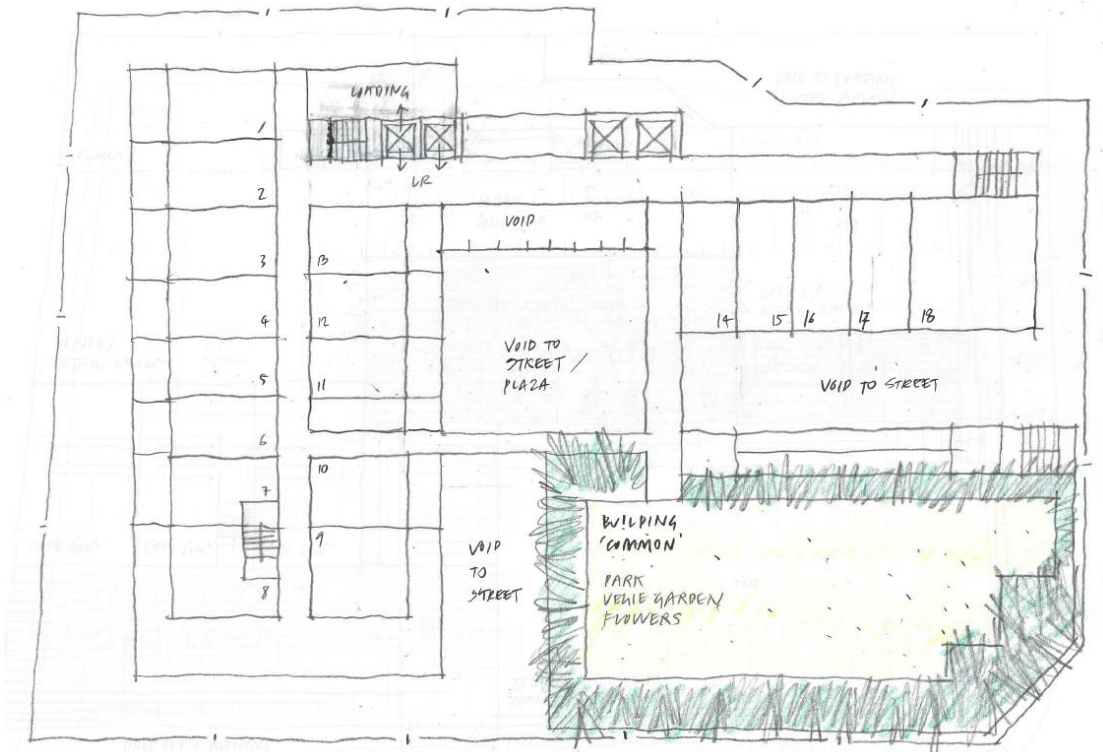
Basement 2 Plan NTS



Basement 1 Plan NTS

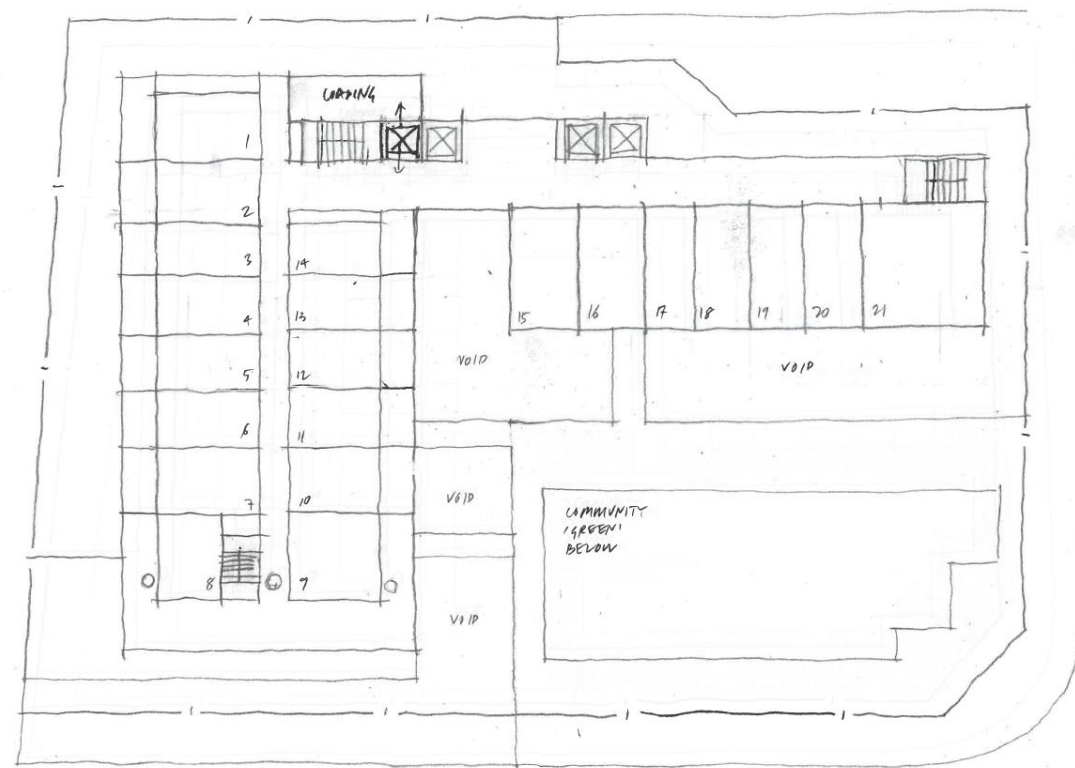


Ground Floor NTS

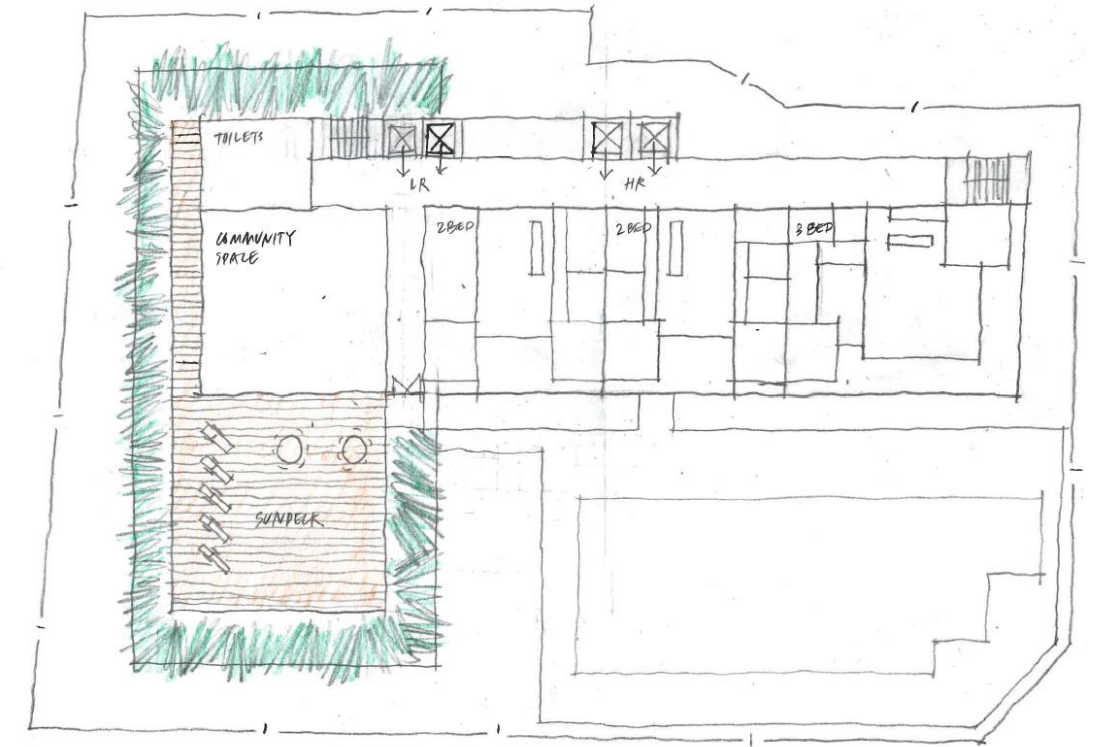


Level 1 NTS

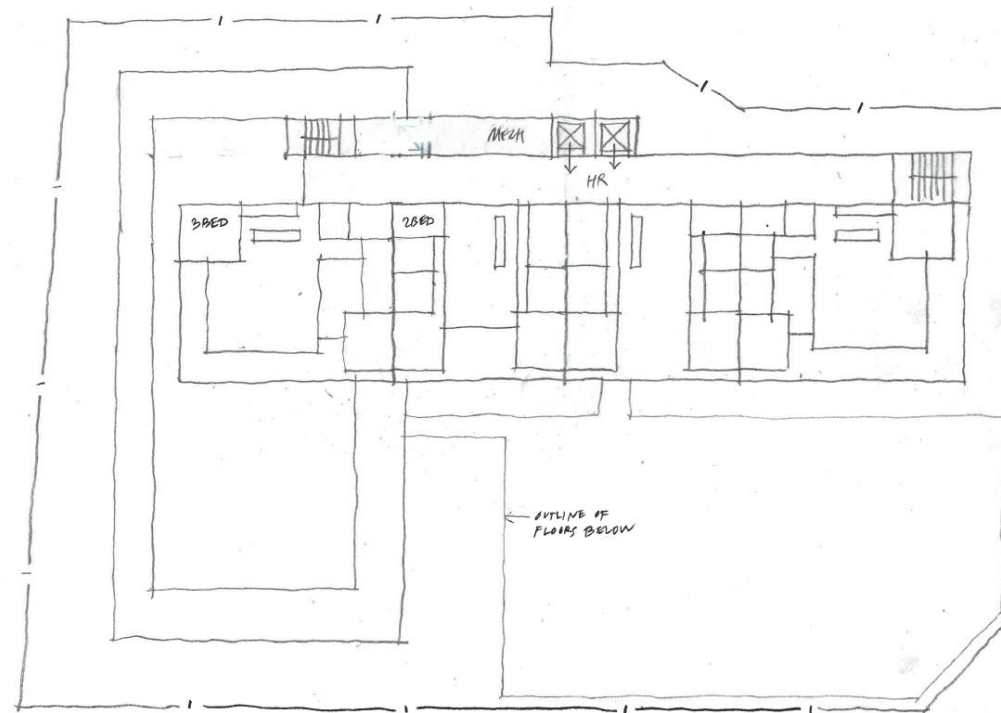




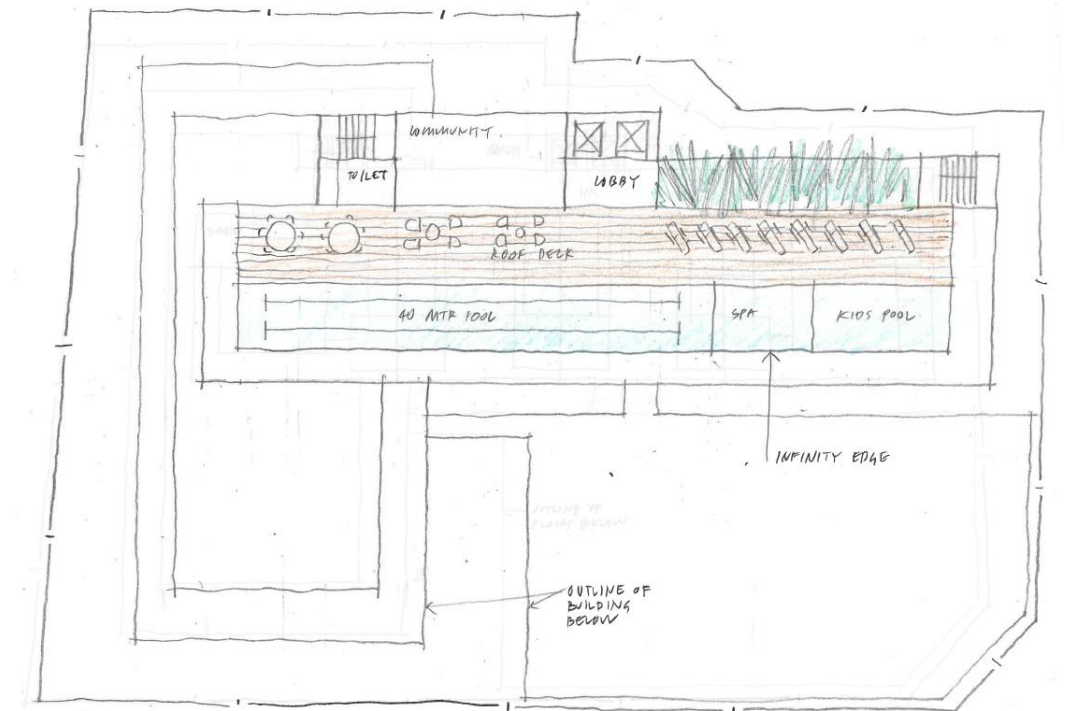
Level 2 – 8 NTS



Level 9 NTS



Level 10 – 14 NTS



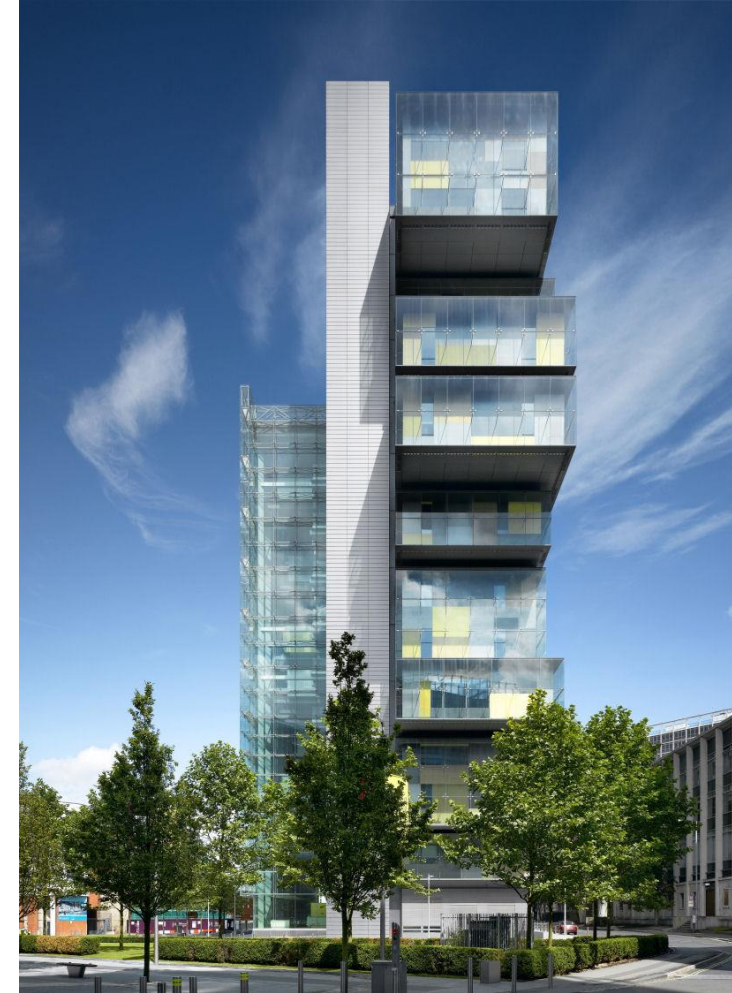
Roof Level NTS



## DESIGN STRATEGIES

## Stacking form

Articulating the mass of the building into various sections, each of which are elegantly composed, diminishes bulk and mass impacts.



## Varied Façade Treatments

Providing for two or three complementary façade systems provides for further individuation of the building elements and diminishment of bulk and mass impacts.

Sun shading plays an important role in façade articulation.





### Activated plaza spaces

Providing discreet open areas for public use, encourages casual interaction and participation in local social groups, as well as providing interesting and unique spaces for surrounding tenancies to open into.

These spaces become defining places for the project, something that is memorable and tangible as a symbol of 'community'.



### Integrated Vegetation

Including consideration of vegetation strategies, in the design process, improves the quality of the resulting spaces.

Architectural lighting can also be considered in early stages to enhance the visual amenity offered by the building, during sunrise and sunset, and through the night.





### Articulated Pedestrianised Arrivals

Providing clear and elegantly design arrival points provides a sense of occasion and meaning. Integrating entries with pedestrianised circulation environments enhances these spaces as an opportunity for informal gathering and interaction of building occupants.



### Activated Laneways & Internal Streets

A pedestrianised internal environment provides many discreet spaces for engagement and interaction with other community members, as well as improving opportunities for walking, strolling, and 'people watching'.

Laneways provide a further layering to the retail strategy, offering more frontages that open to a comfortable and inviting pedestrian 'domain'.





### Green Roofs

Green roofs assist with controlling heat loads to buildings, as well they provide quality outdoor spaces for occupants to enjoy, usually with enjoyable, long range views. As a place for contemplation and response, their contribution to lifestyle amenity can be significant.

Providing edible plants further enhances the garden experience and offers another option for a healthy, activated lifestyle.



### Rooftop Edge Pool

Perhaps nothing exceeds a beautiful rooftop pool as both a pleasurable sensory experience and a memorable and notable location. UP above it all, it's a chance to dream, relax and recuperate.





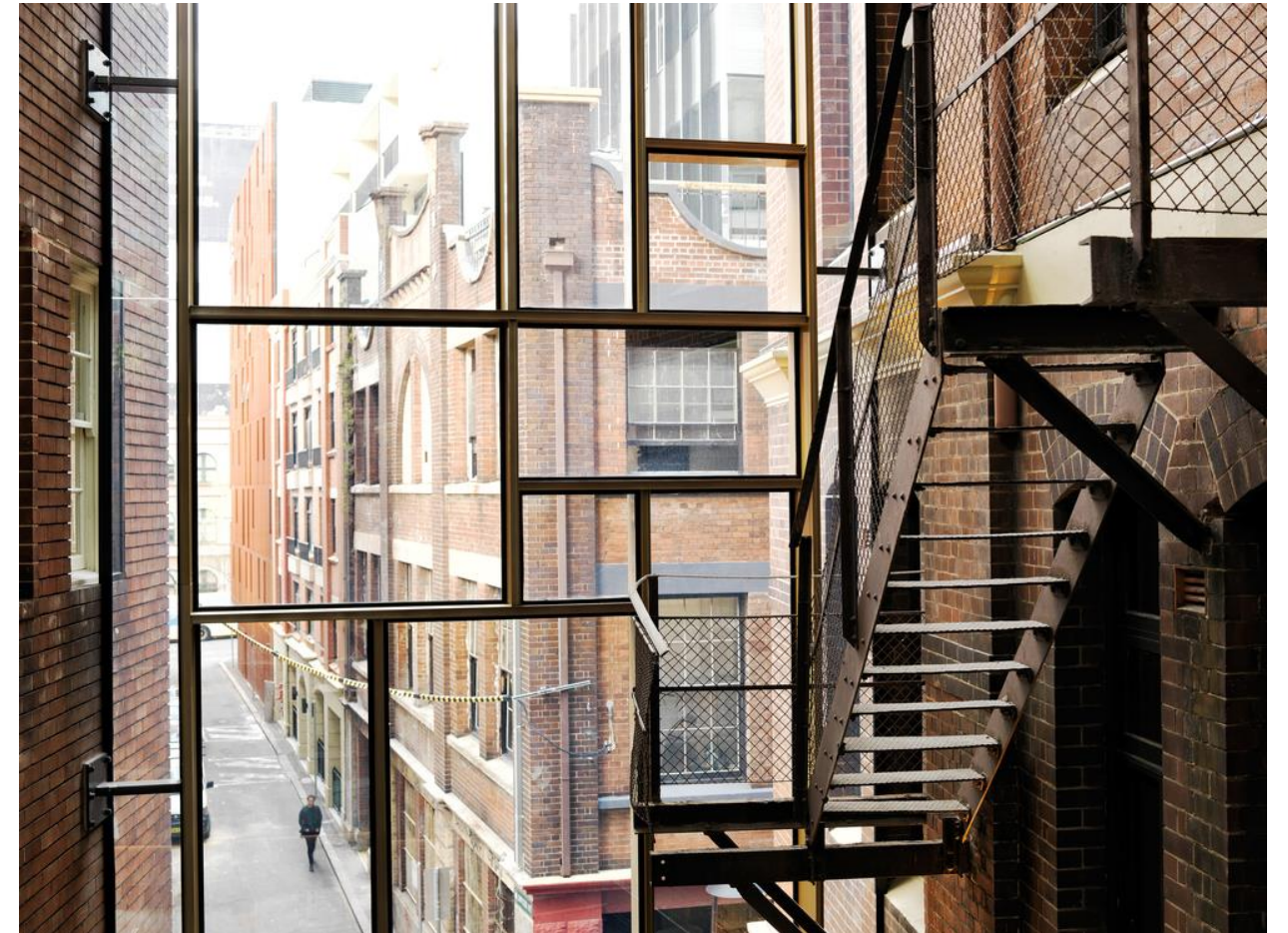
### Community Ownership

A 'soft' management strategy that facilitates collective projects that can change and alter the building, encourages the building occupants to feel a part of the building community, as well as owners or caretakers for common spaces.



### Urban Grain

Providing interesting and layered spaces, with interesting and varied outlooks, inter-relationships and materials, provides a more interesting and intimate built environment.



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