



KAMIRA AVENUE VILLAWOOD

RFI - URBAN DESIGN REPORT

JULY 2023

SITE ANALYSIS

**KAMIRA AVENUE
VILLAWOOD STAGE 02**

SITE ANALYSIS

SITE ANALYSIS

Council Comments

Accordingly, the 3D modelling shall be updated to include a schematic/concept-built form of the R4 residential precincts to the west and south. The current UDR presents these sites as single storey dwellings. It would also be beneficial to understand what is happening north of Villawood Road adjacent the rail line on the mixed-use site to better understand the character of Villawood Road and the gateway when arriving from the west and east.

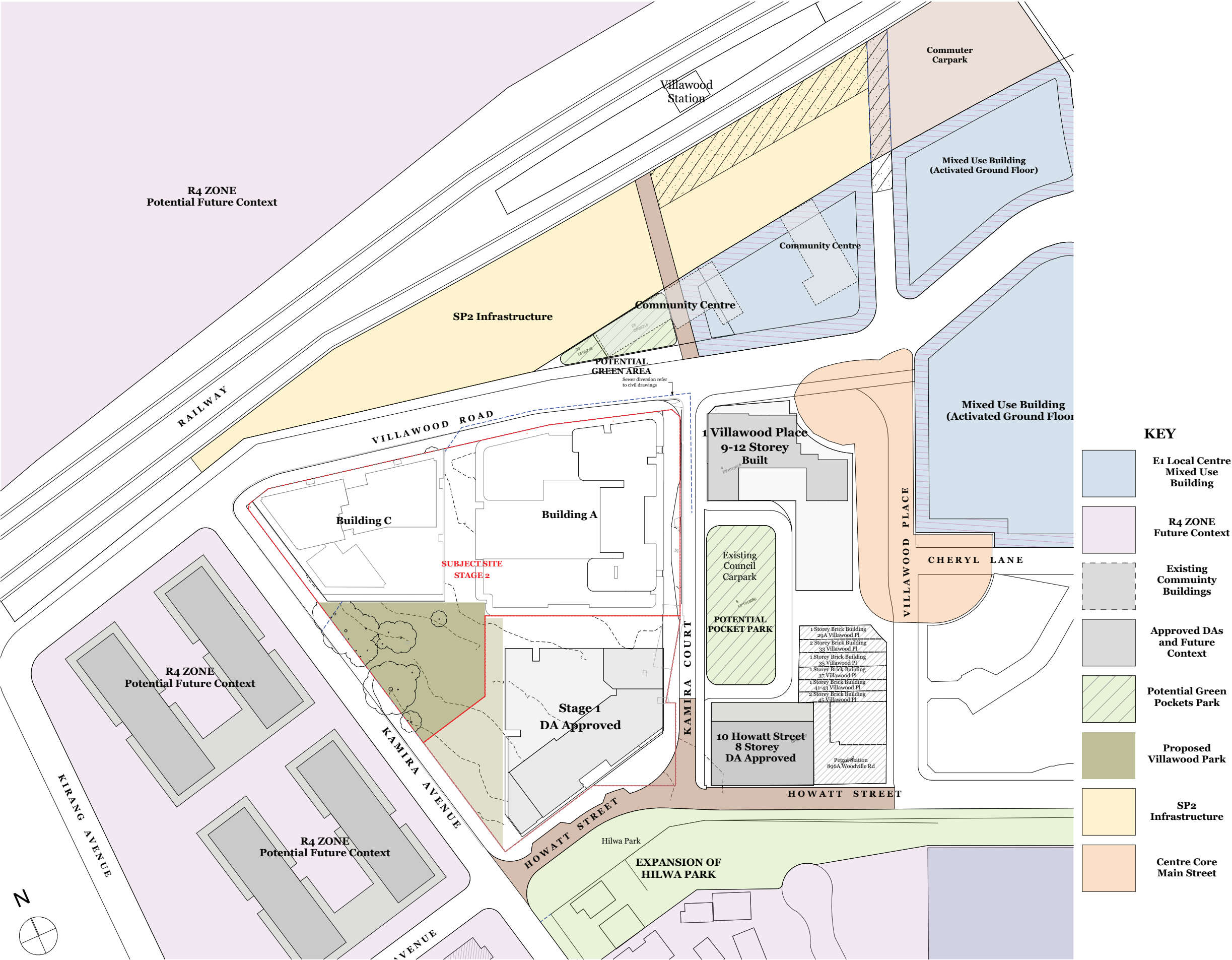
The site analysis shall be updated to indicate the current Development Applications for adjacent buildings and the potential massing of the R4 sites to west and south.

The analysis plans shall include all public parks and street verges/public domain, major infrastructure such as substations etc in adjacent sites including Hilwa Park to provide a comprehensive analysis of the context of the town centre.

Response

Site Analysis includes the contextual analysis of surrounding sites DAs approved adjacent to the site including 8 Howatt street and current built site 1 Villawood Place Future development to the south and west of site zoned as R4.

Site plan identifies key park expansions proposed within the DCP.



OVERSHADOWING

Council Comments

The urban design approach and the solar assessment of Stage 2 must include more detailed description of the impacts on all neighbours including Stage 1 development, as well as existing and approved buildings/DAs on neighbouring properties such as Villawood Place and Pedestrian Mall.

Response

1 Villawood Place

Receives solar from 9am to 1pm

South and West Future R4 Zone

Receives solar from 11am to 3pm

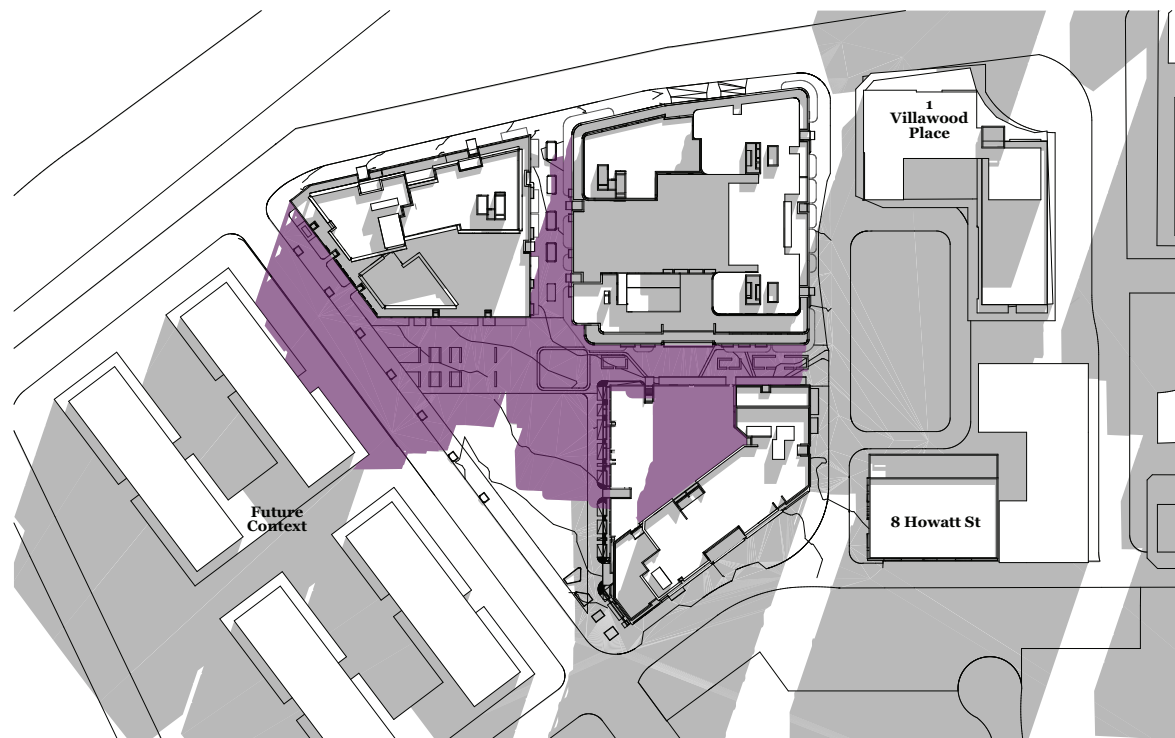
8 Howatt street

Receives solar from 9am to 12pm

Stage 1

Receives solar from 12pm to 3pm

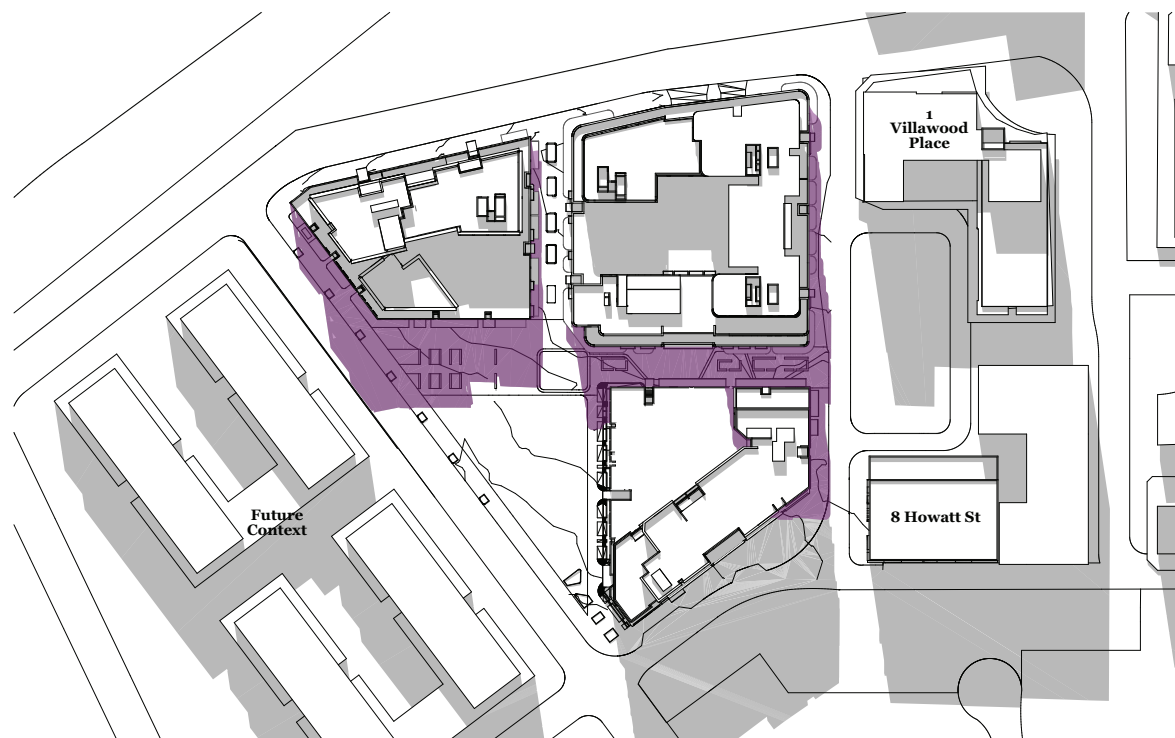
The requirement for all the apartments is to receive 2 hours of solar between 9am to 3pm



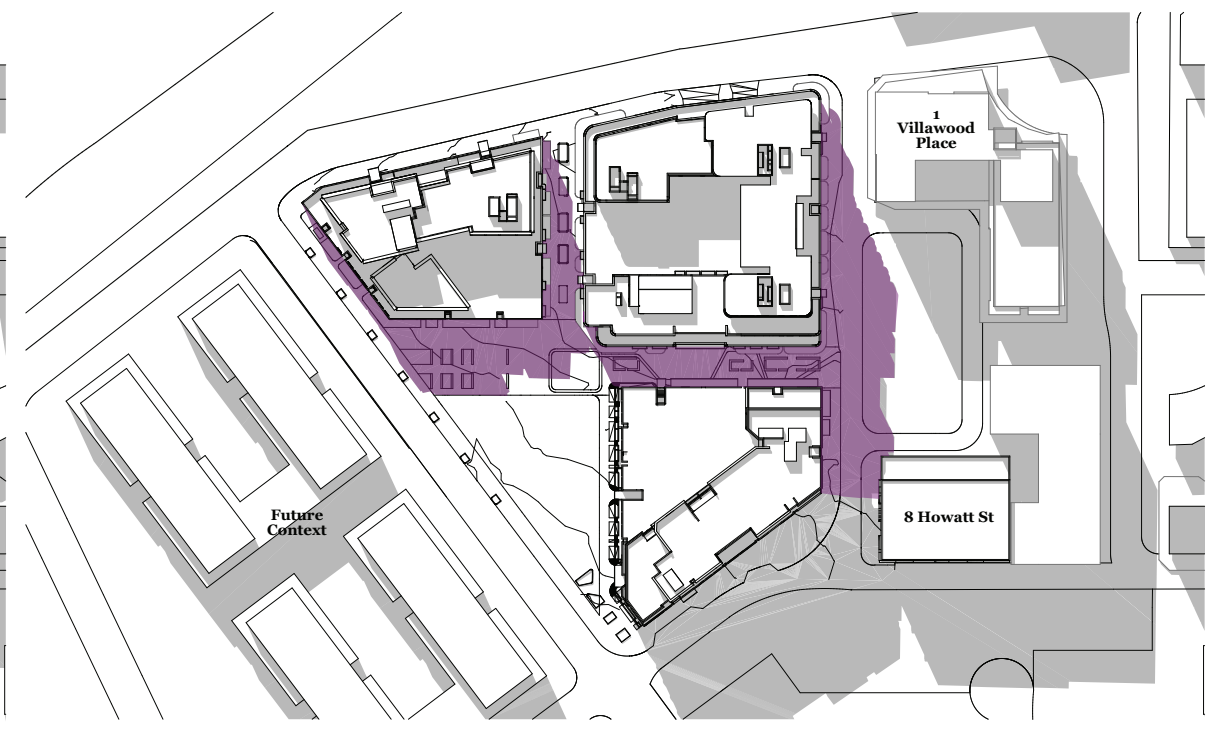
9am - June 21



10am - June 21



11am - June 21



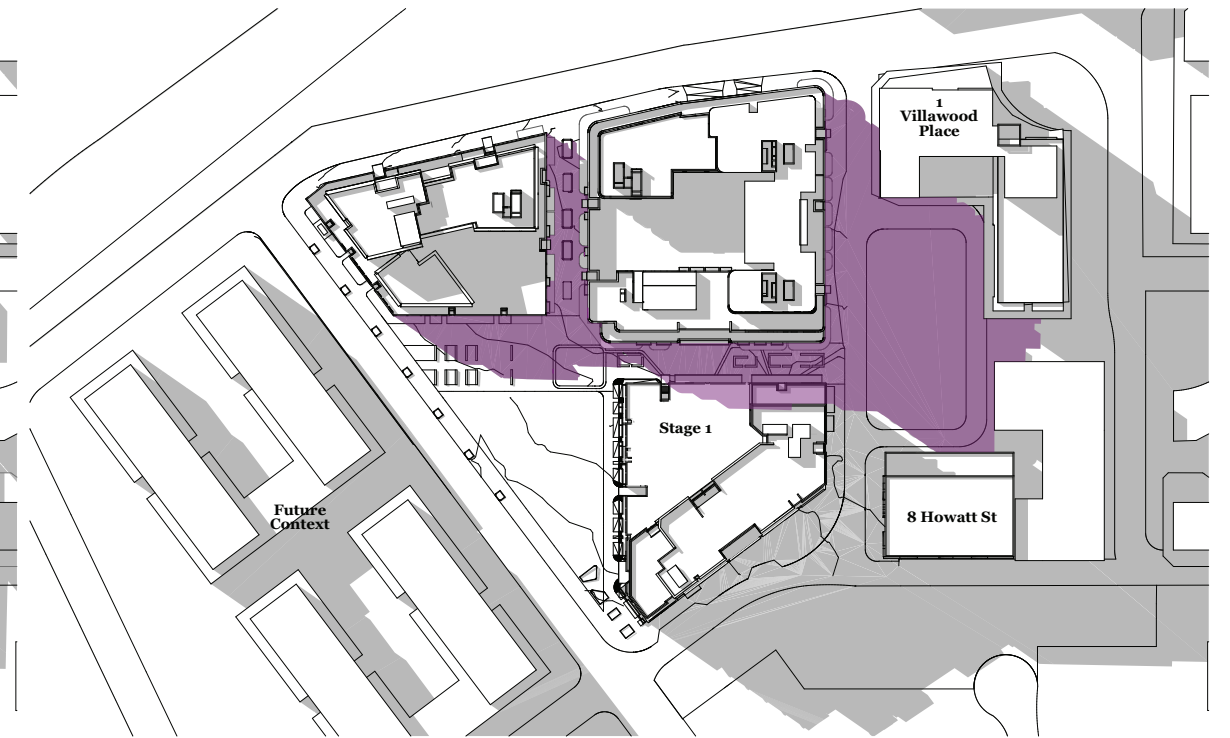
12pm - June 21

Shadow Analysis

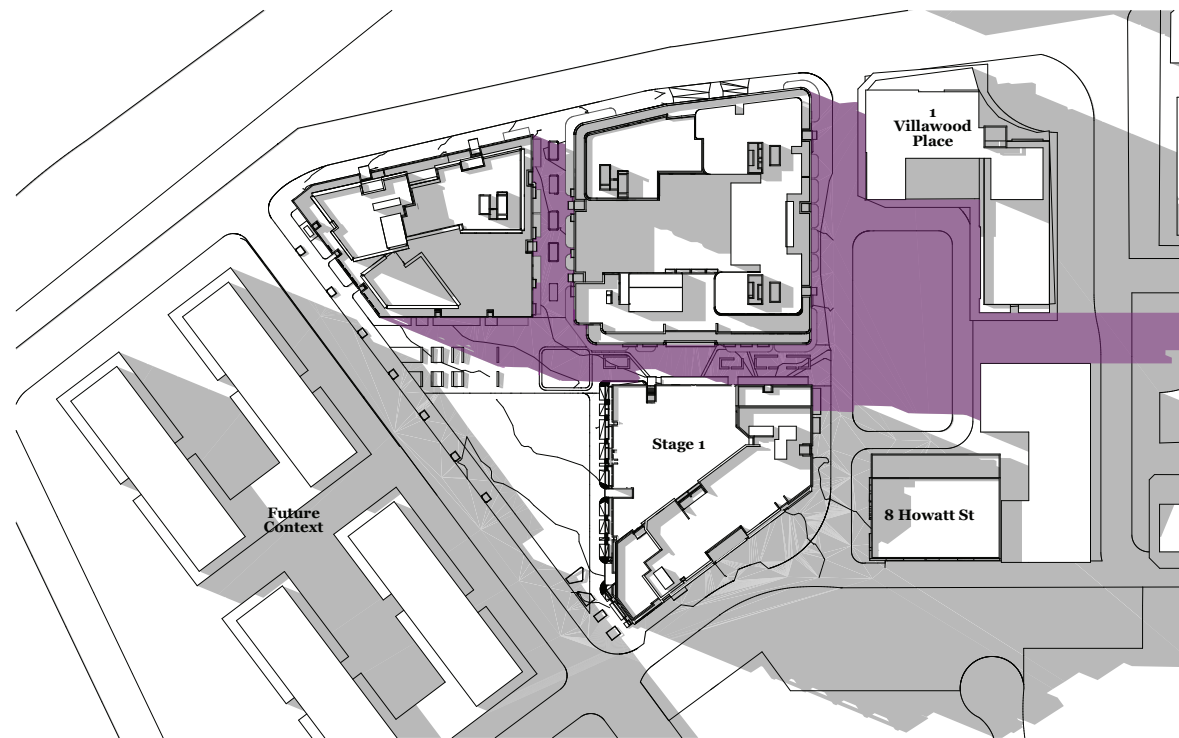
Building A & C Shadows



1pm - June 21



2pm - June 21



3pm - June 21

Shadow Analysis

Building A & C Shadows



GROUND LEVEL AMENDMENTS

KAMIRA AVENUE
VILLAWOOD

GROUND LEVEL AMENDMENTS
GROUND LEVEL



SUBMITTED DA



REVISED

- Medical Centre Relocated
- 6 Residential Units facing Kamira Ave and Pedestrian Link
- 2 New Residential lobby entrances from Villawood Road
- Child care centre removed

GROUND LEVEL AMENDMENTS

NEW LOBBY ENTRIES

Council Comments

Clause 4.14 (Active Street Frontages) of the DCP requires active frontages and pedestrian links to be provided to encourage pedestrian activity to interact with the active shop fronts to create a positive, usable and attractive space.

The provision of the back of house areas, a substation and extensively screened facades along the childcare centre elevations on the ground floor results in loss of opportunity for street activation and connectivity to the proposed public park.

Accordingly, it is considered that this arrangement is not consistent with the objectives of the DCP. The applicant shall consider relocating the back of house areas into the basement and reconsider the location and design of the childcare centre in order to provide active uses on the ground level. Furthermore, the substation shall be provided within the building to reduce the visual impact of this structure.

Response

New lobby entries have been introduced to Villawood road to provide a street address and reduce the back of house visual impacts. The removal of the child care centre provides improved activated edge to pedestrian link and Kamira Ave.

Further, a green buffer in street landscaping has been provided along the Villawood Road building frontage to mitigate the visual impact of the back of house as it presents to the street. See page 18 and also annexed landscape architect plans showing this detail.

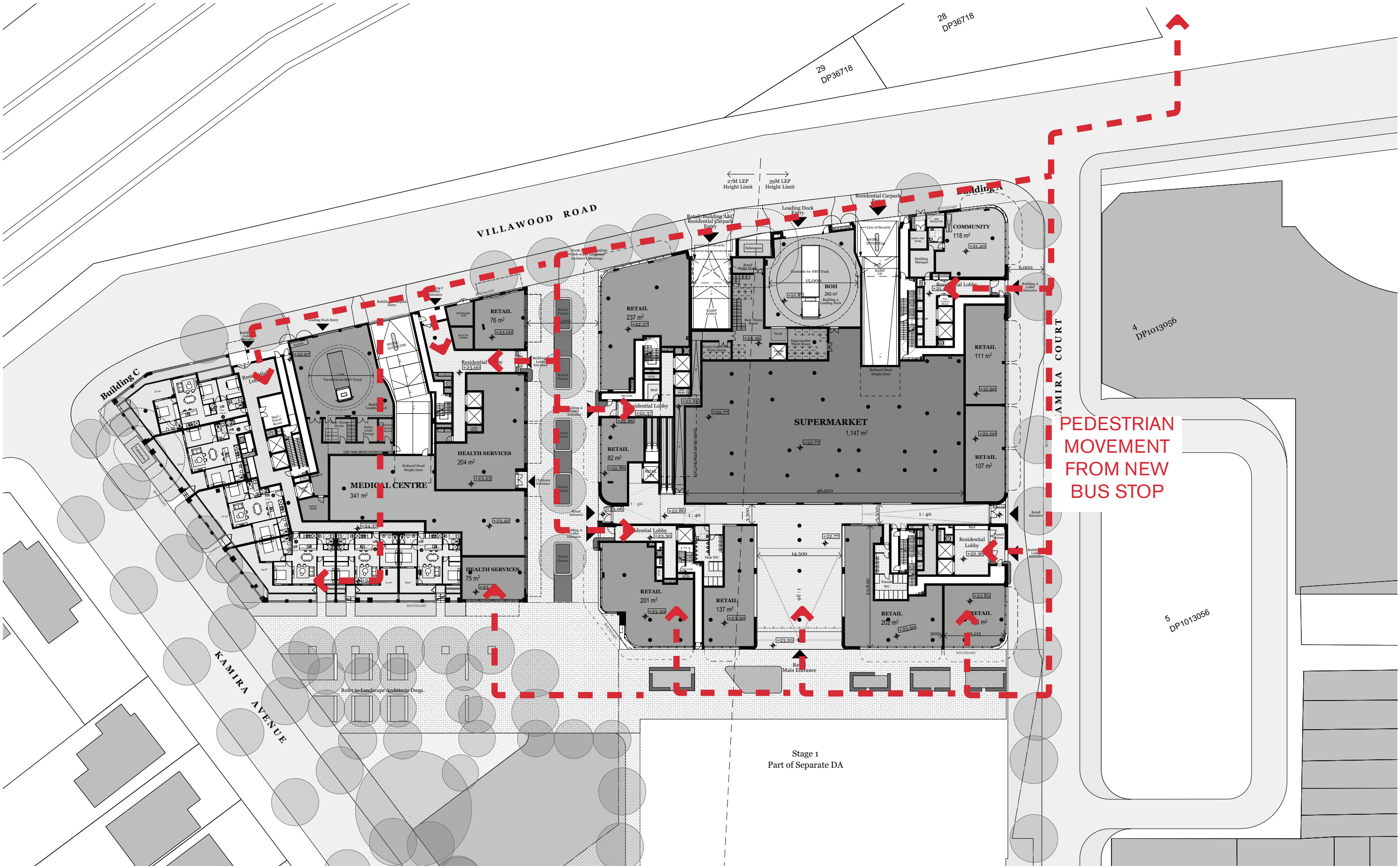


CONNECTIVITY

KAMIRA AVENUE
VILLAWOOD

CONNECTIVITY
RESIDENTIAL PEDESTRIAN MOVEMENT

PEDESTRIAN MOVEMENT
FROM VILLAWOOD
TRAIN STATION



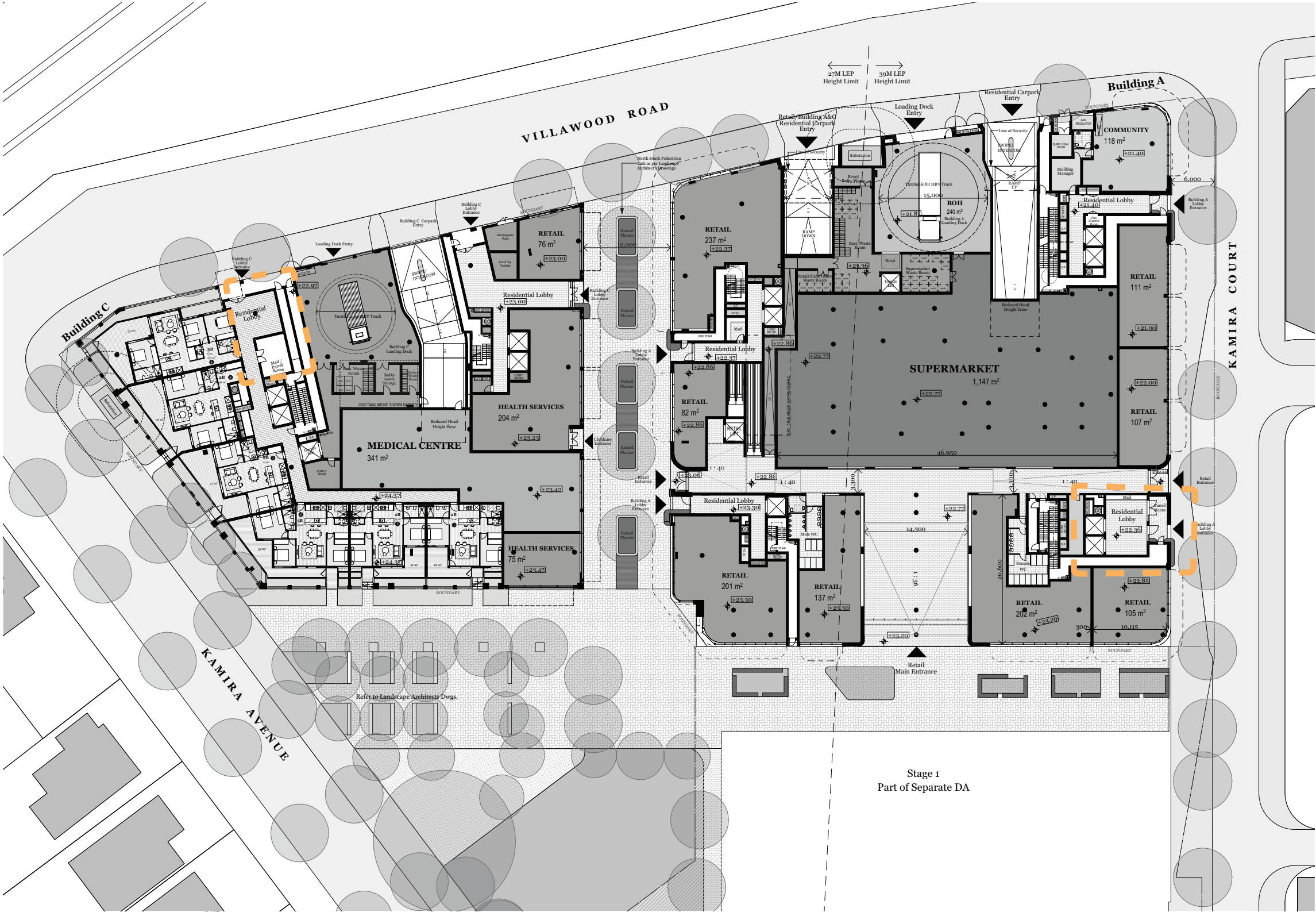
RESIDENTIAL PEDESTRIAN MOVEMENT

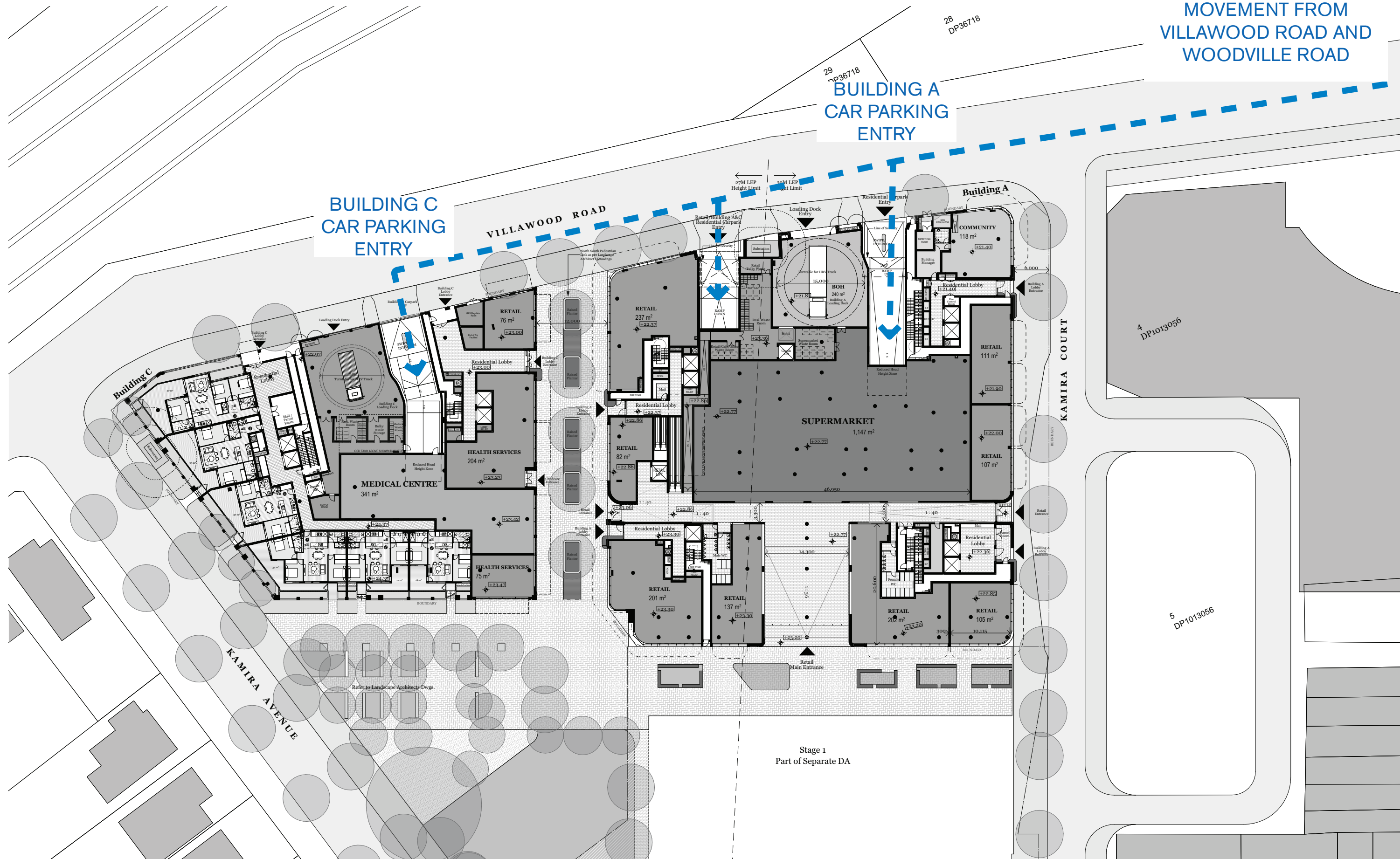
Council Comments

Wayfinding plans shall be submitted to show how different entries can be Accessed and the route to the mailboxes.

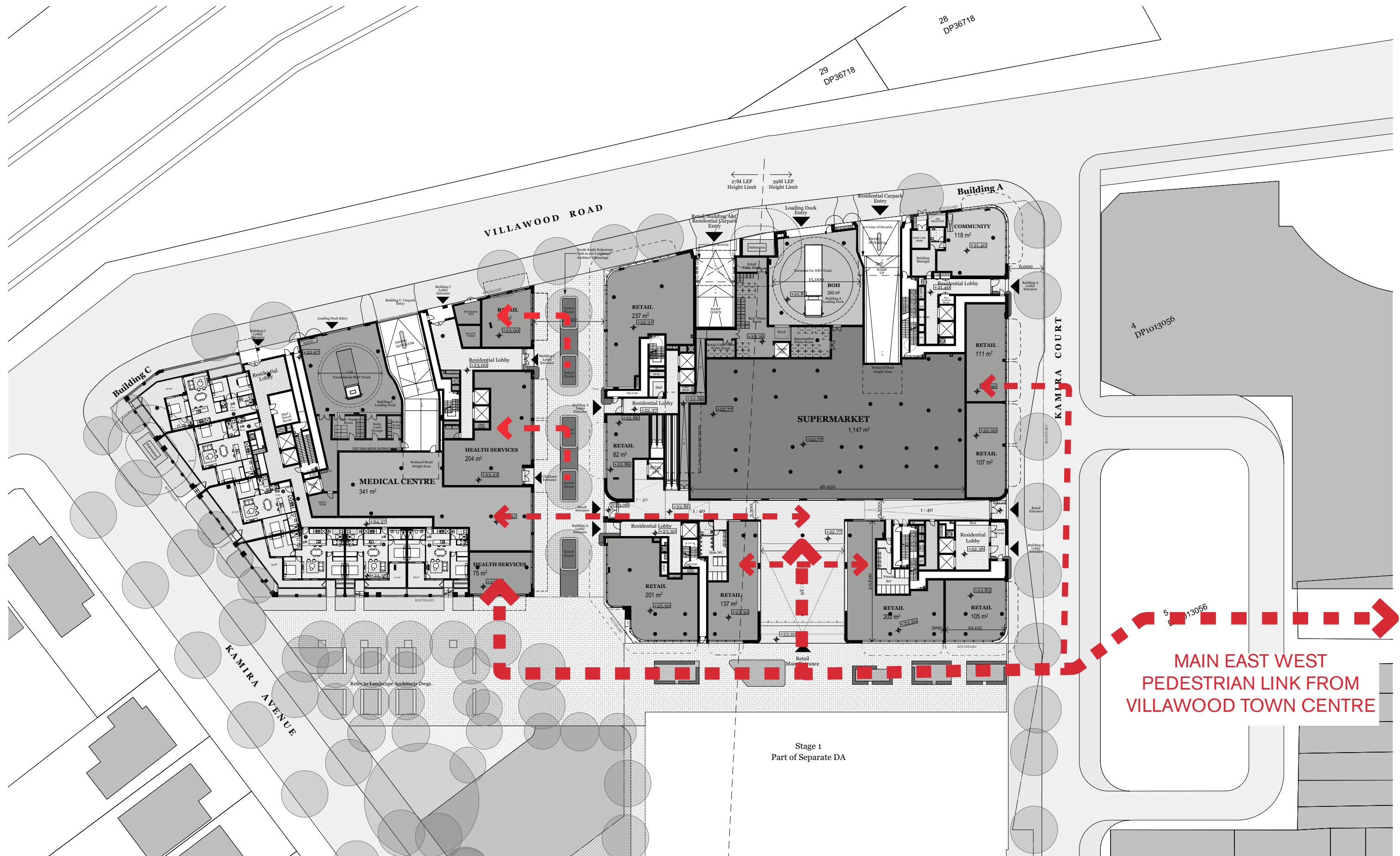
Response

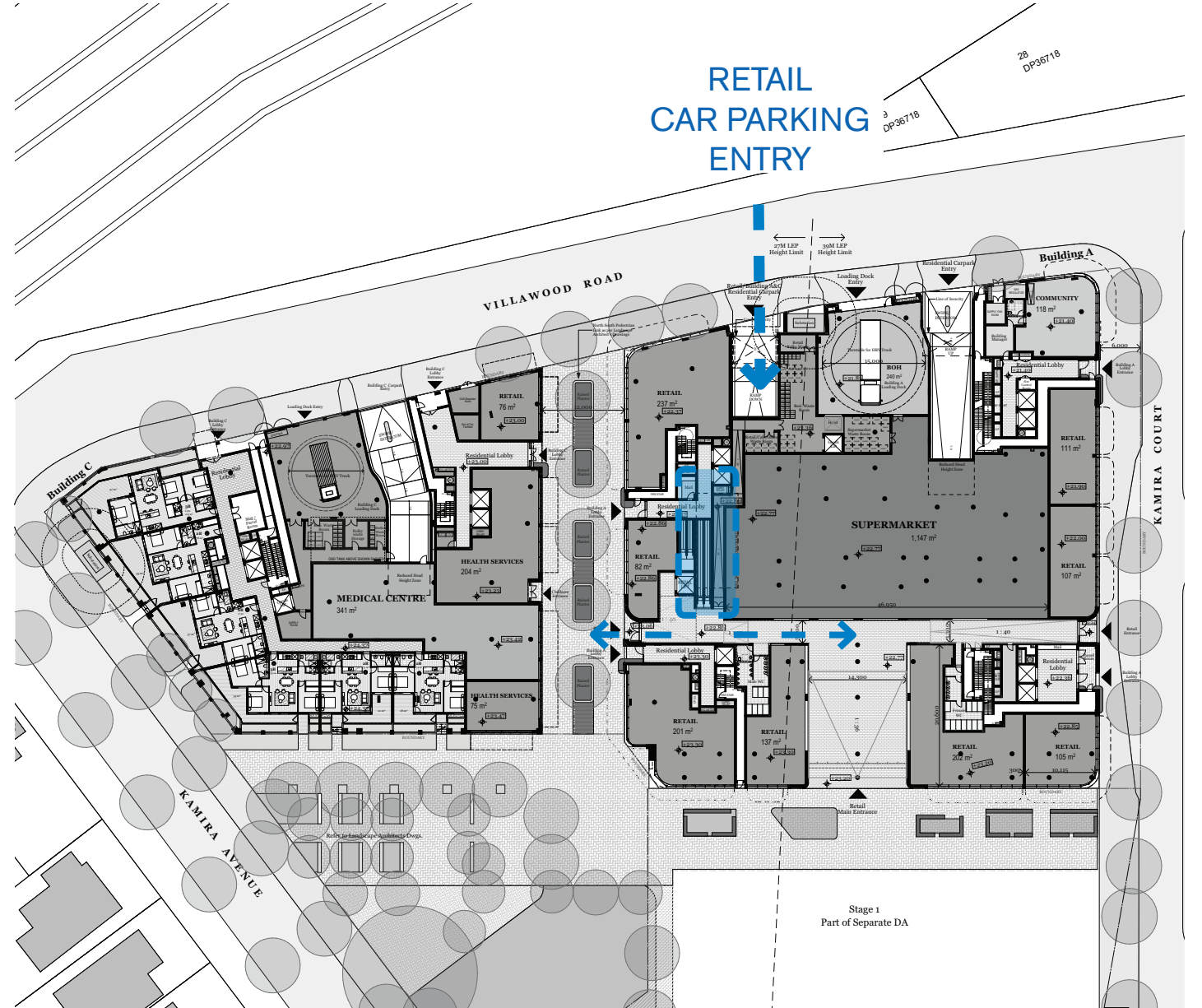
Locations are compliant with Australian Post Standards. The mailboxes are preferred to be located the mailbox in one main lobby which has been indicated.





CONNECTIVITY
RETAIL PEDESTRIAN MOVEMENT

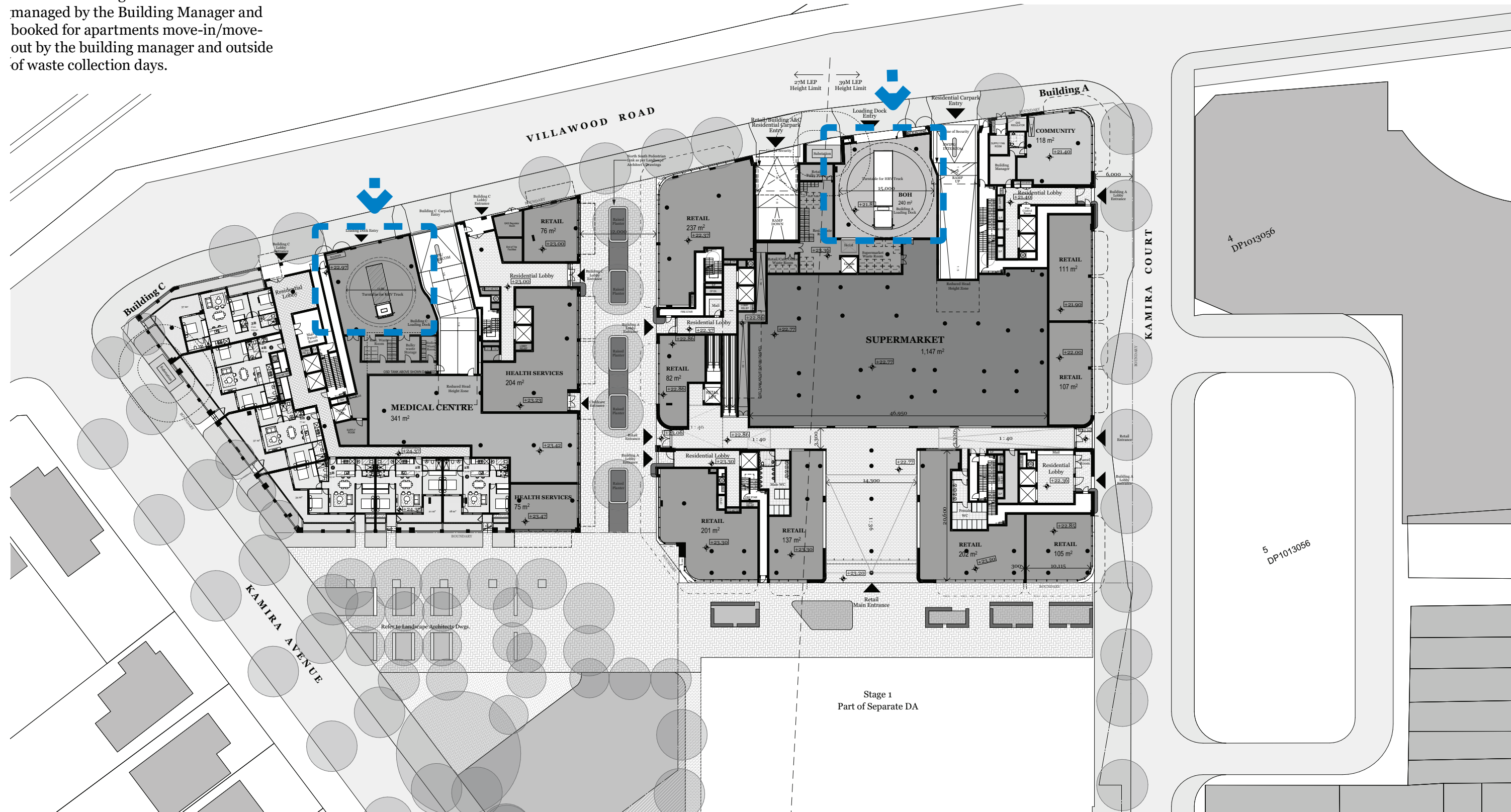




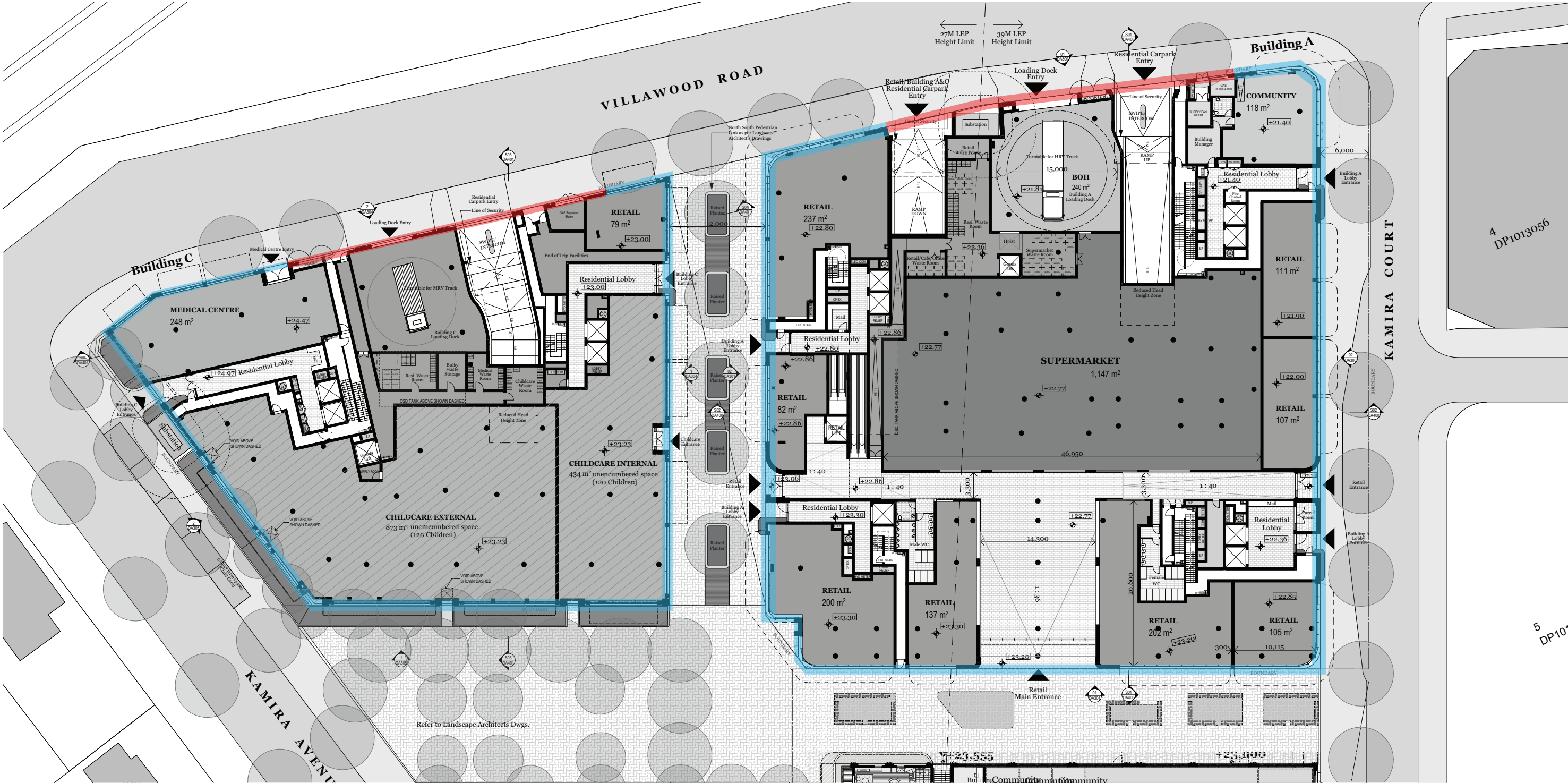
CONNECTIVITY REMOVALIST AND LOADING ZONES

Response

Building clearances suit for removalist vehicles as well as waste vehicles.
The truck loading areas will be managed by the Building Manager and booked for apartments move-in/move-out by the building manager and outside of waste collection days.



STREET ACTIVATION
ACTIVE STREET FRONTAGE DA



Building C

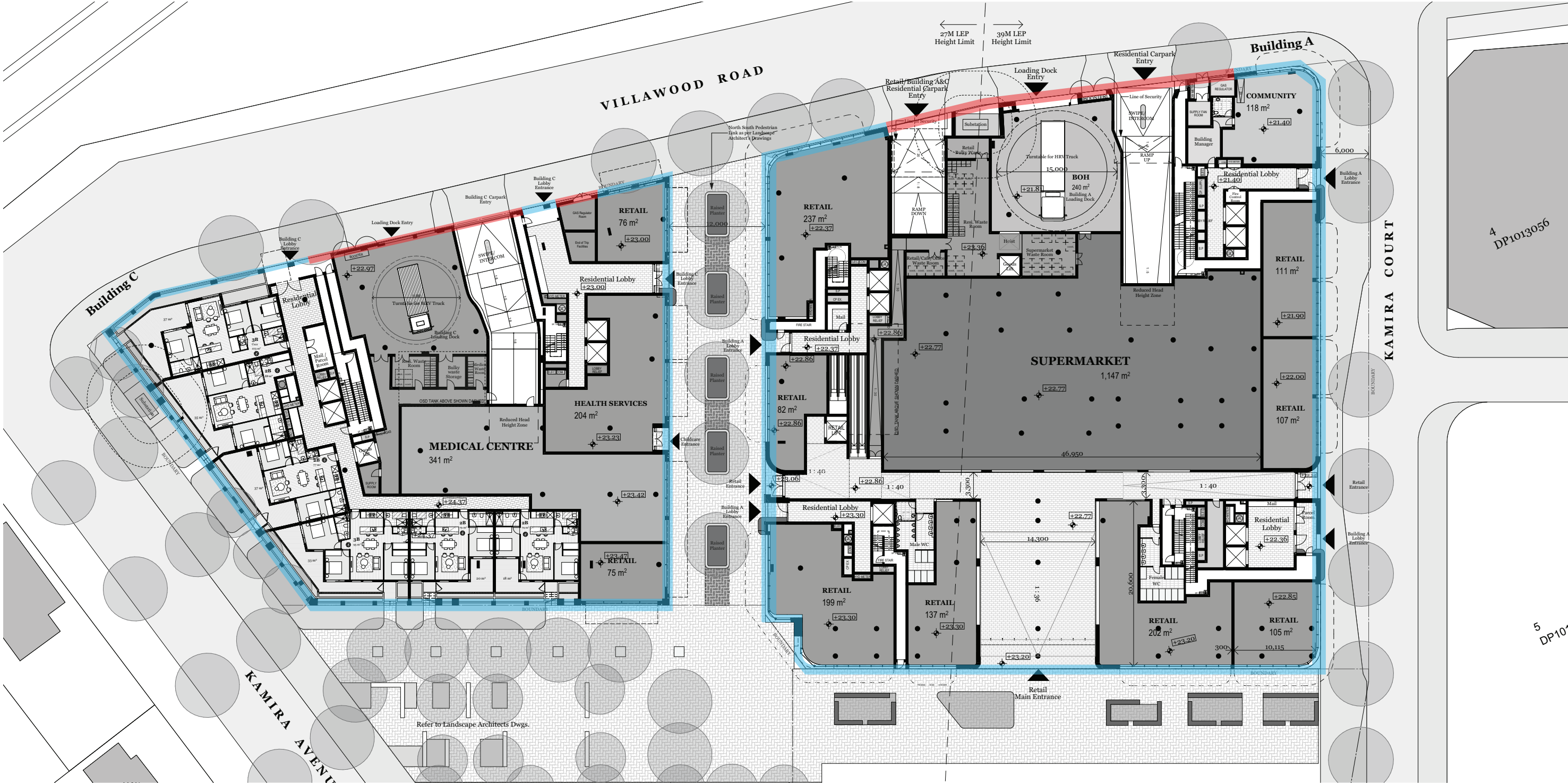
Active Edges	81%
Operational Back of House Areas	19%

Building A

Active Edges	84%
Operational Back of House Areas	16%



STREET ACTIVATION
ACTIVE STREET FRONTAGE REVISED



Building C

Active Edges	84%	+3%
Operational Back of House Areas	16%	-3%

Building A

Active Edges	84%
Operational Back of House Areas	16%



Response

[illegible]

BUILDING DESIGN

KAMIRA AVENUE
VILLAWOOD

BUILDING C SOUTH ELEVATION**Council Comments**

Building C (Western Block) could be improved to incorporate more grounded deep soil central zones to provide more access to light, ventilation and open space.

Remove the podium car park to provide greater landscaped areas, internal courtyard areas and reduce the bulk and scale/visual impacts from the extent of the podiums and add variety to design including definitive corner residential units with well-articulated corner, especially for Block C where the car park is located on south and western elevations.

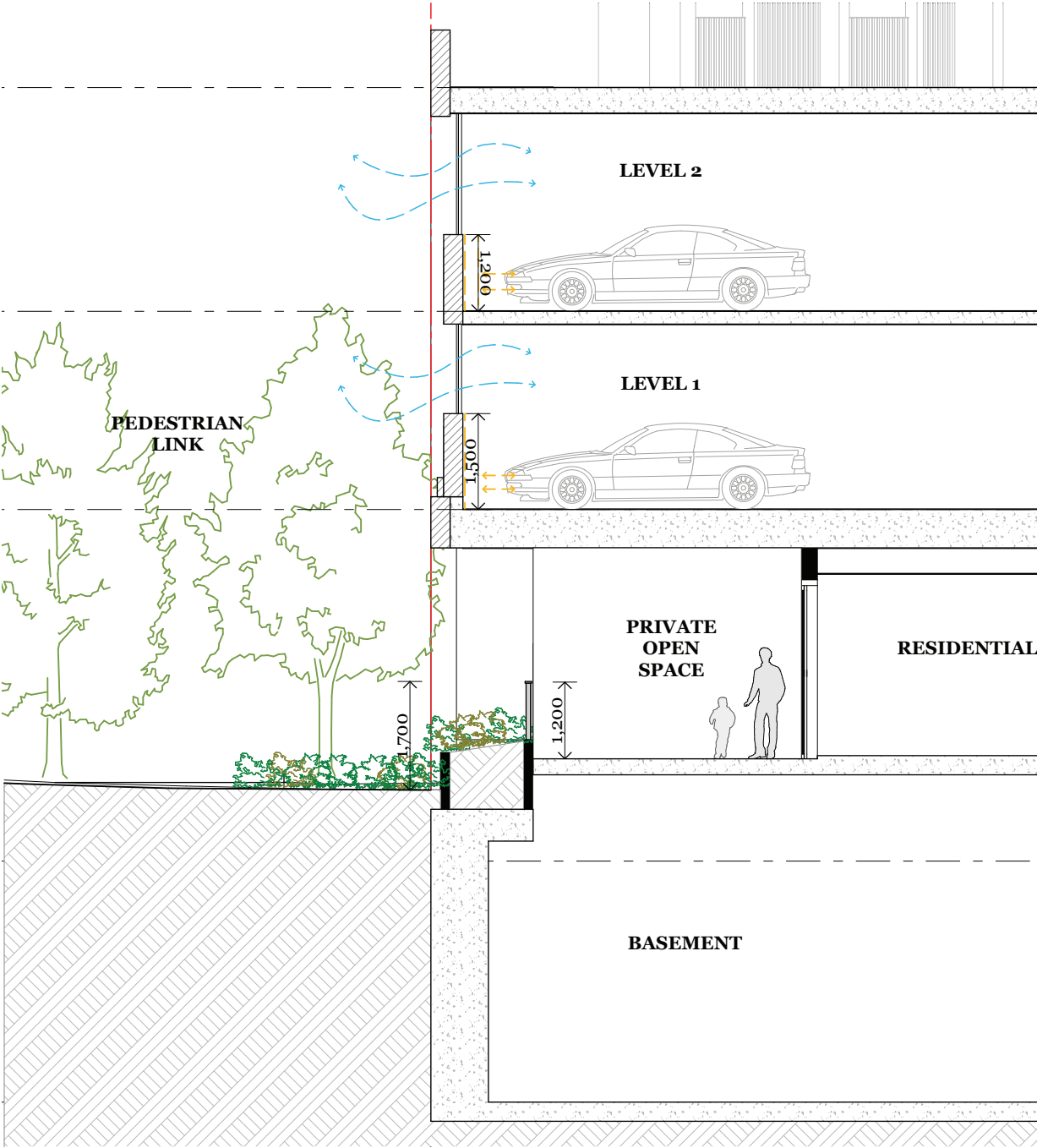
Response

Building C (Western Block) allows for deep planting zones with trees surrounded on western and south edge.

Introduction of residential units to the ground level provides activation to the main pedestrian links and Kamira ave and raked planters that provide visual softening the facade and privacy buffer to residents.









BUILDING DESIGN
SIGNATURE BUILDING - KEY CORNER





Council Comments

Create a signature building with more character onto the park corner at building B (Perspective 2) this could include the upper levels which are currently shown as dark recessive as same material and incorporate curves in plane and /or elevation to deliver a destination building visible across the park.



Response

The dark recessive elements have been removed and further curves have been incorporated within the upper levels to create a signature building with character on the corner of the park. Delivering key destination with in the master plan precinct of all three buildings.





Council Comments

Create additional breaks in buildings to reduce the monolithic appearance and provide a clearer picture of individual buildings rather than one.



Response

The main entrance to the east west link from Villawood town centre and has been emphasised through the change in height in podium expression. Additional breaks within the podium have been added



Council Comments

Façade to be improved by providing defined lobbies, roof and additional use of bricks in upper levels, particularly the NE elevation of Block A.

Provide some buildings with sense of being grounded on the site with Identifiable destinations and lobbies.



Response

Each residential unit is identifiable through the curved entry feature and brick detailing on each side.

The retail stores around the ground plane have been framed with white portal frame and awnings within the glazing.

BUILDING DESIGN
MAIN SUPER MARKET ENTRY



Council Comments

Provide some buildings with sense of being grounded on the site with Identifiable destinations and lobbies.

Response

The supermarket's main entrance has a signify an identifiable facade language within the white brick podium base. The dark finished elements and trellis with a green wall designed with the landscape architects stands out from the cream brick finish to clearly indicate the main entrance



BUILDING SEPARATION DISTANCES

KAMIRA AVENUE
VILLAWOOD

BUILDING SEPARATION NORTH SOUTH PEDESTRIAN LANE WAY

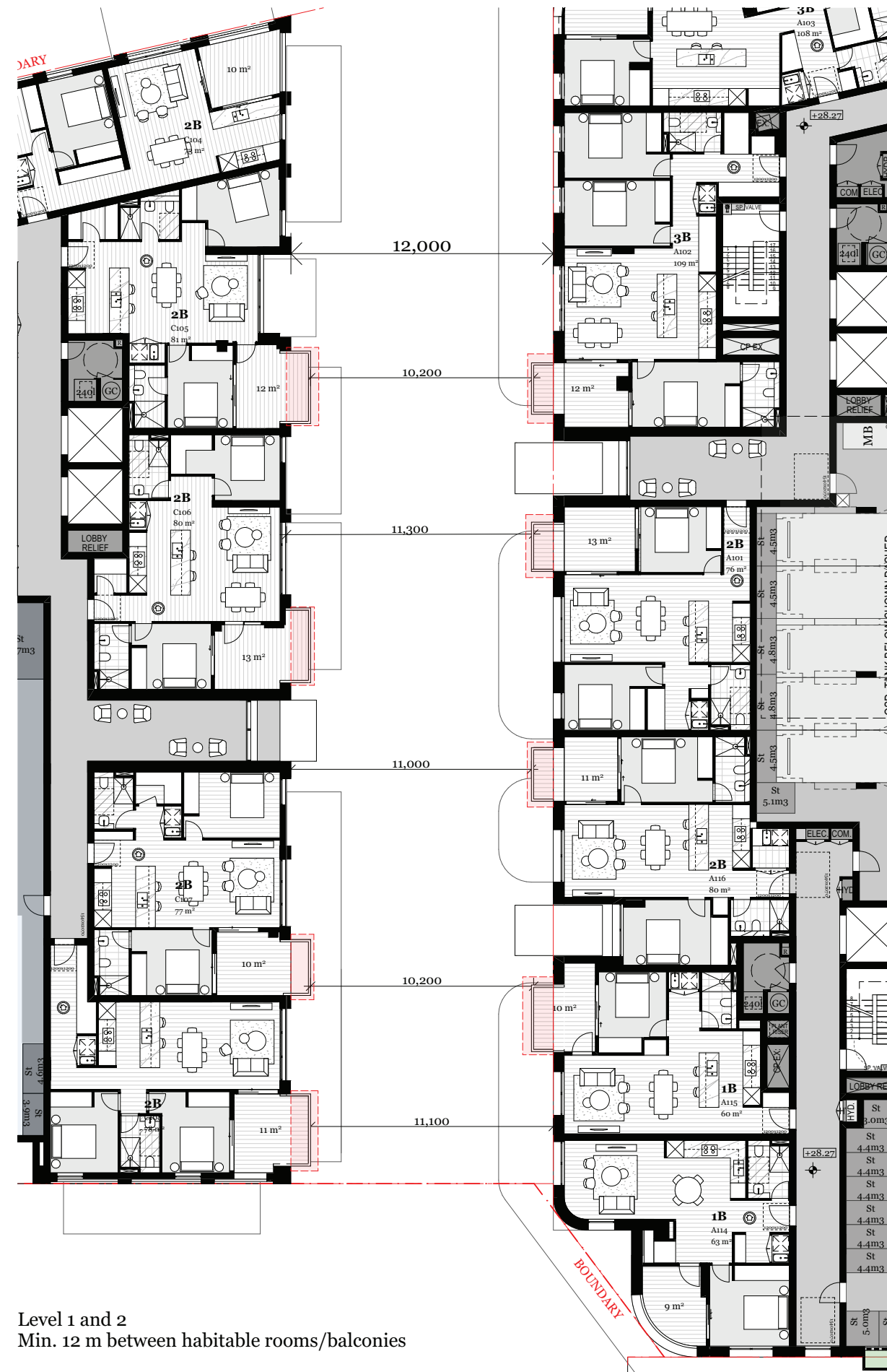
Council Comments

Building Separation Distances

The proposed building separation distances do not comply with the ADG requirements: Across the new north-south pedestrian laneway balconies and windows for levels 1 and 2 face each other with less than the required 12 metres.

Response

The balconies are a minor non compliance and have been staggered within the pedestrian link to minimise this non compliance. It also provides articulation and passive surveillance to the lane way. See THINK Planners covering letter for further planning context and justification.



Level 1 and 2
Min. 12 m between habitable rooms/balconies



BUILDING SEPARATION
STAGE 01 - 02 SETBACK

Considerations in setting building separation controls

Design and test building separation controls in plan and section

Test building separation controls for sunlight and daylight access to buildings and open spaces

Minimum separation distances for buildings are:

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

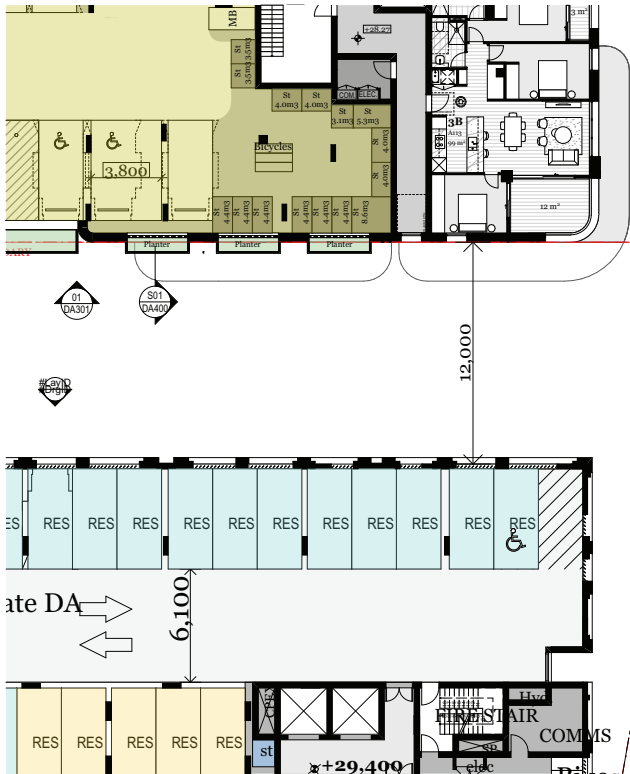
Building separation may need to be increased to achieve adequate sunlight access and enough open space on the site, for example on slopes

Increase building separation proportionally to the building height to achieve amenity and privacy for building occupants and a desirable urban form

At the boundary between a change in zone from apartment buildings to a lower density area, increase the building setback from the boundary by 3m

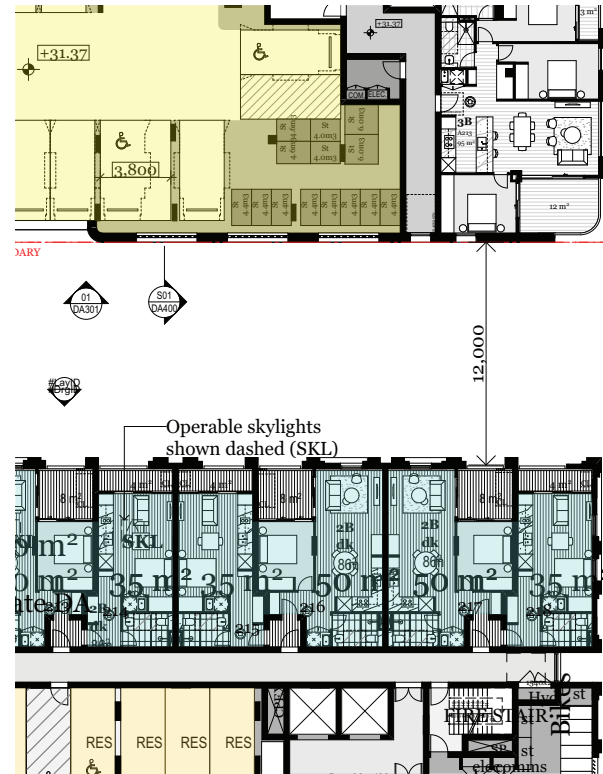
No building separation is necessary where building types incorporate blank party walls. Typically this occurs along a main street or at podium levels within centres

Required setbacks may be greater than required building separations to achieve better amenity outcomes



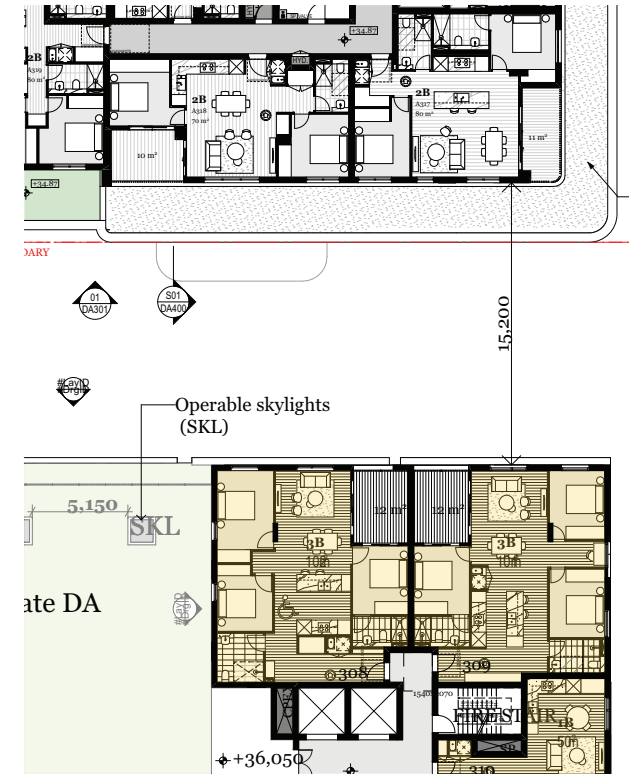
Level 1 (2nd Storey)
Min. 9m between habitable rooms/balconies

Compliant



Level 2 (3rd Storey)
Min. 12m between habitable rooms/balconies

Compliant



Level 3 (4th Storey)
Min. 12m between habitable rooms/balconies

Compliant



BUILDING SEPARATION
STAGE 01 - 02 SETBACK

Considerations in setting building separation controls

Design and test building separation controls in plan and section

Test building separation controls for sunlight and daylight access to buildings and open spaces

Minimum separation distances for buildings are:

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

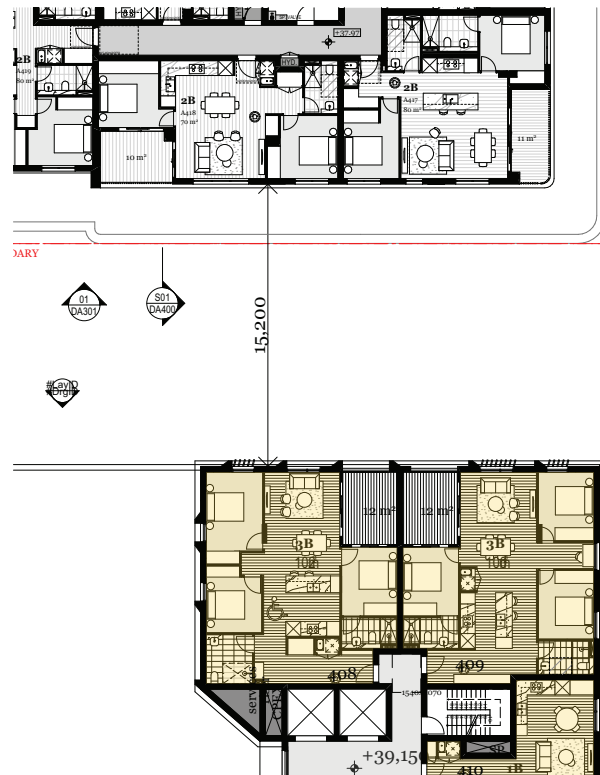
Building separation may need to be increased to achieve adequate sunlight access and enough open space on the site, for example on slopes

Increase building separation proportionally to the building height to achieve amenity and privacy for building occupants and a desirable urban form

At the boundary between a change in zone from apartment buildings to a lower density area, increase the building setback from the boundary by 3m

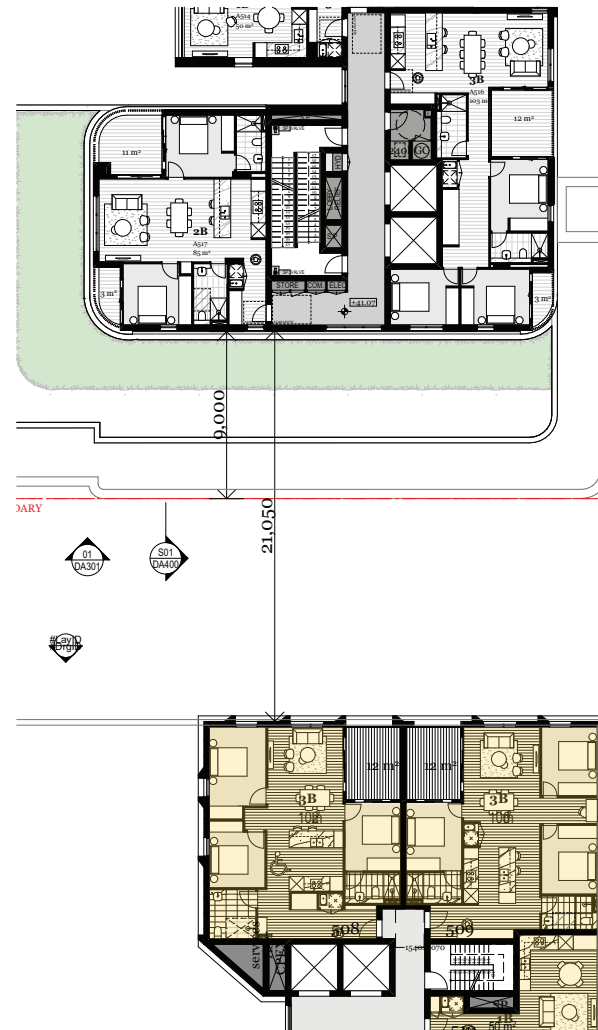
No building separation is necessary where building types incorporate blank party walls. Typically this occurs along a main street or at podium levels within centres

Required setbacks may be greater than required building separations to achieve better amenity outcomes



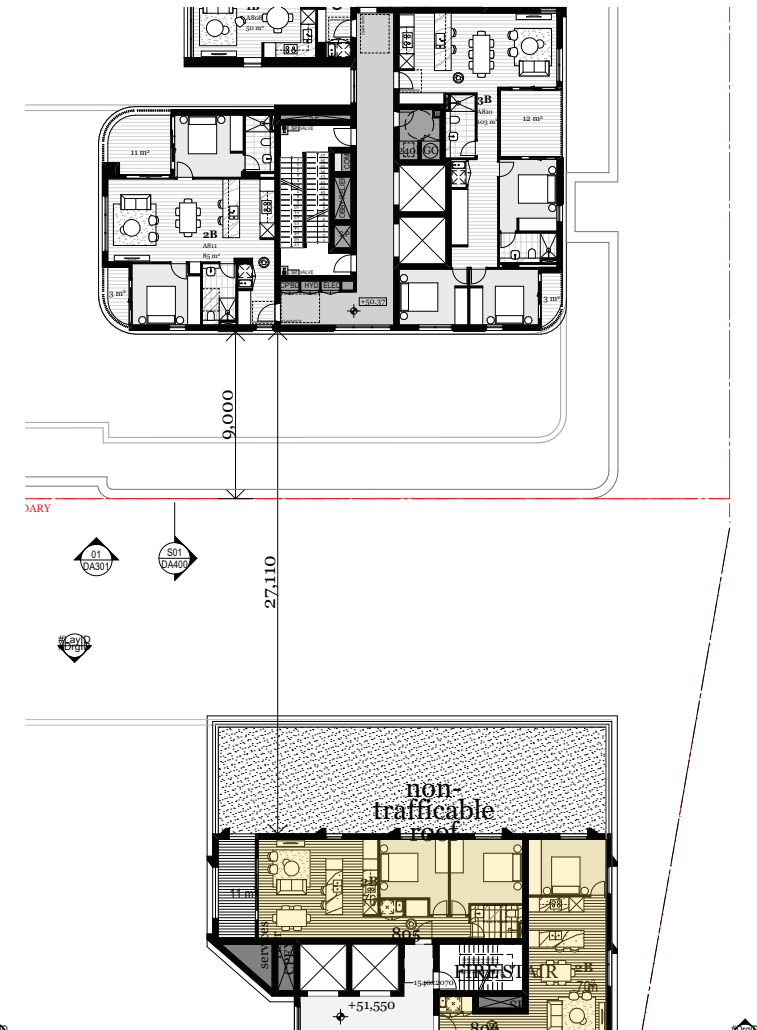
Level 4 (5th Storey)
Min. 18m between habitable rooms/balconies

Privacy Screens Provided



Level 5 - 7 (6 - 8 Storeys)
Min. 18m between habitable rooms/balconies

Compliant



Level 8 - 9 (9 -10 Storeys)
Min. 24m between habitable rooms/balconies

Compliant



BUILDING SEPARATION
BUILDING A

HIGH LEVEL
WINDOW

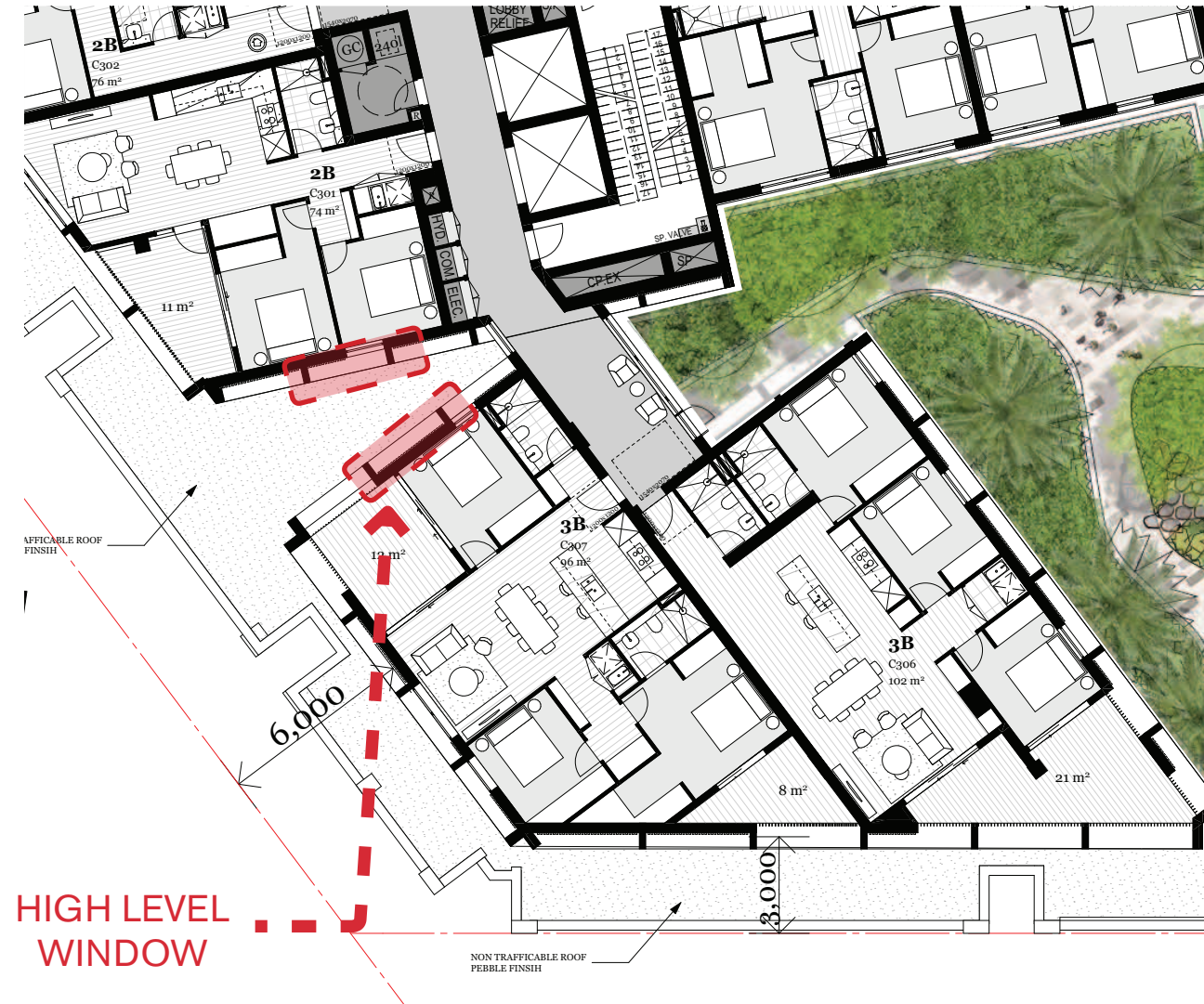
HIGH LEVEL
WINDOW



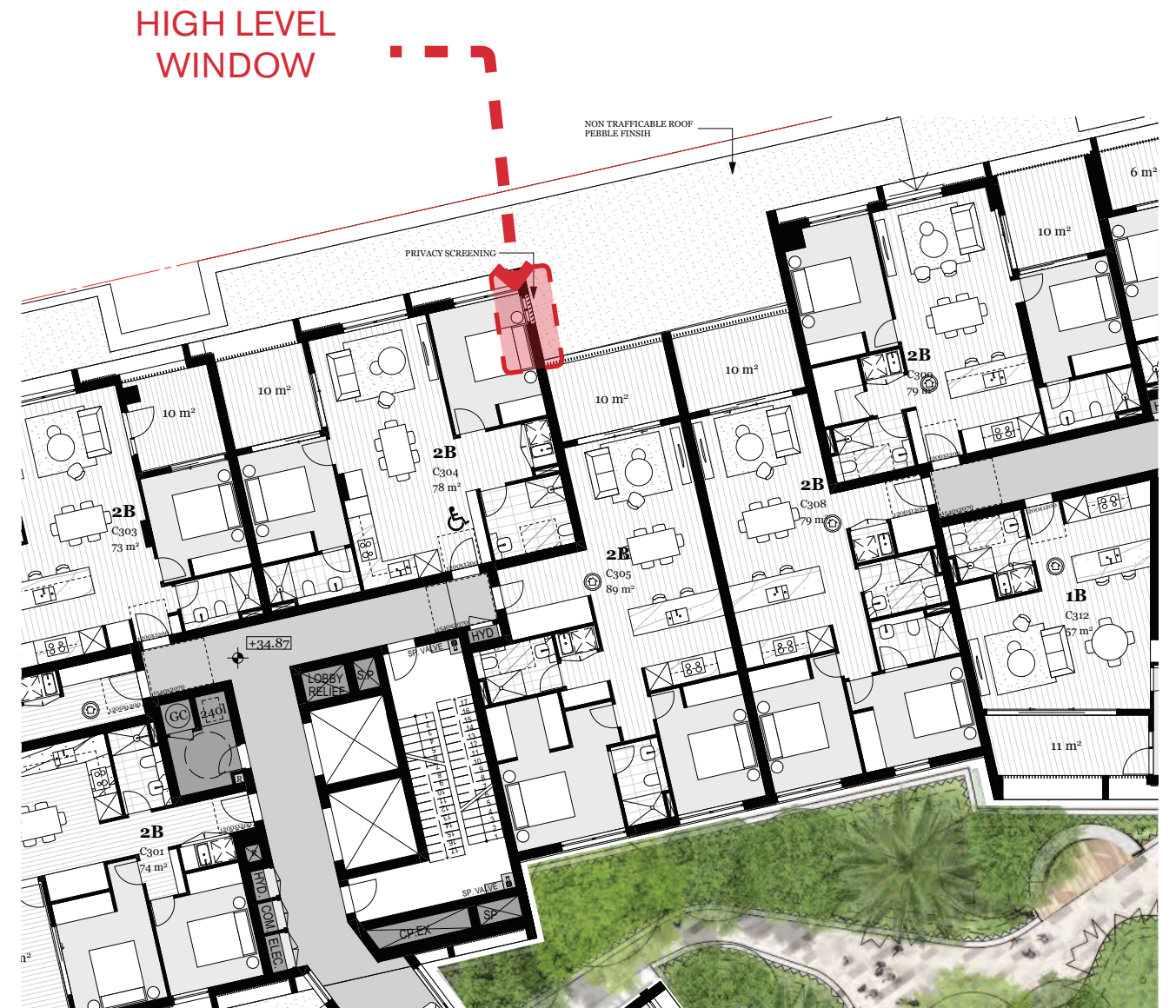
Level 3 Typical



BUILDING SEPARATION
BUILDING C



Level 3 Typical



Level 3 Typical



PRIVATE OPEN SPACE

KAMIRA AVENUE
VILLAWOOD

PRIVATE OPEN SPACE
LEVEL 3 PODIUM



Council Comments

The plans shall be updated to clearly indicate the dimensions of the private open spaces (balconies) provided for the residential units. Any obstructions such as air conditioning units shall be indicated on the plans and shall be excluded from the POS area calculation as these structures reduce the usable area of the POS. Furthermore, the ADGs require all POS located on podiums to be at least 15m² in area.

Response

The plans are updated to indicate the ADGs POS located on podiums to be at least 15m² in area.



UNIT/ROOM SIZE AND DIMENSIONS

KAMIRA AVENUE
VILLAWOOD

UNIT/ ROOM SIZES AND DIMENSIONS

EXAMPLE UNITS

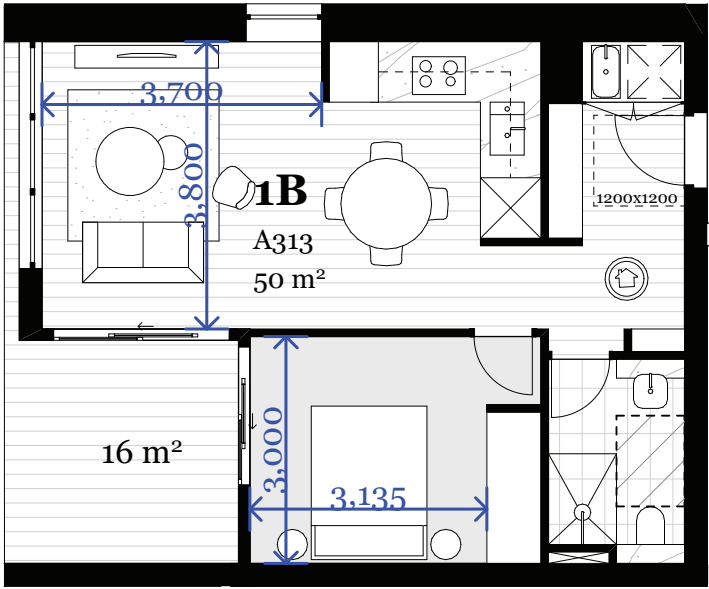
Council Comments

The plans shall be fully dimensioned to enable assessment of unit and room size and dimensions against the ADGs. The applicant shall ensure that all units and rooms comply with the ADGs.

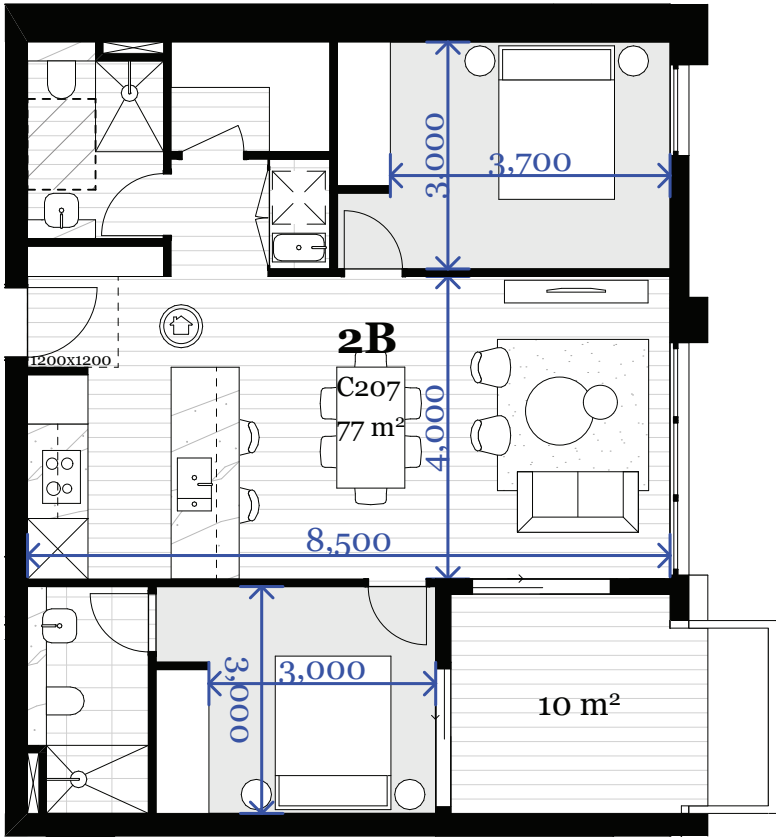
Response

Example units are provided to demonstrate the units do comply with the required minimum ADG room and unit sizes.

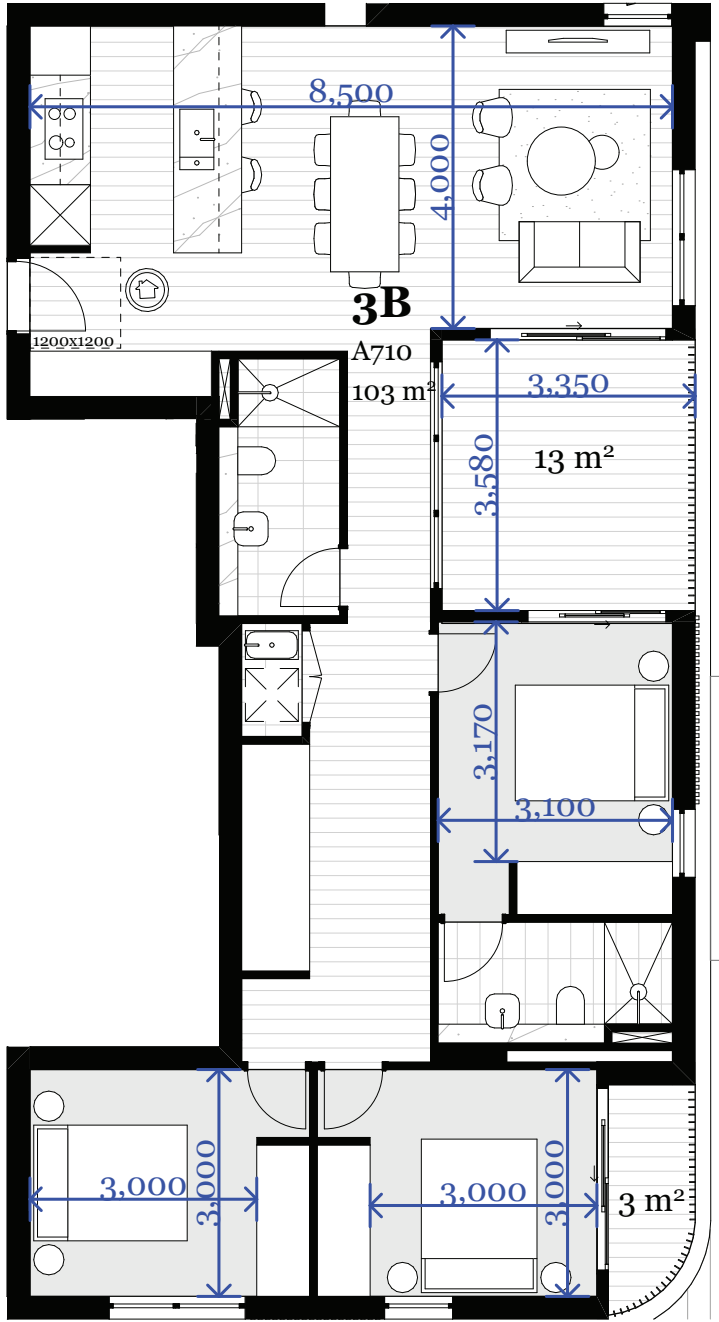
These apartments are the most common and typical layouts of both building stacks to demonstrate this compliance.



1 BED



2 BED



3 BED

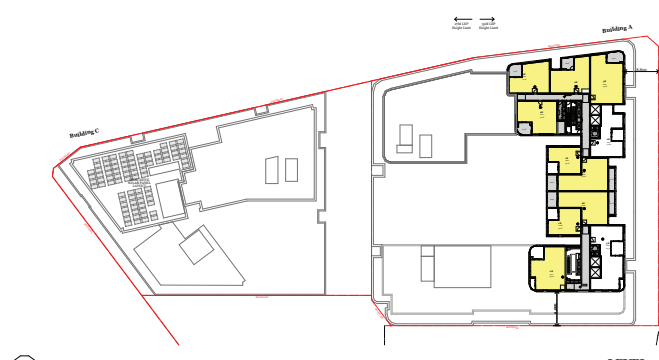
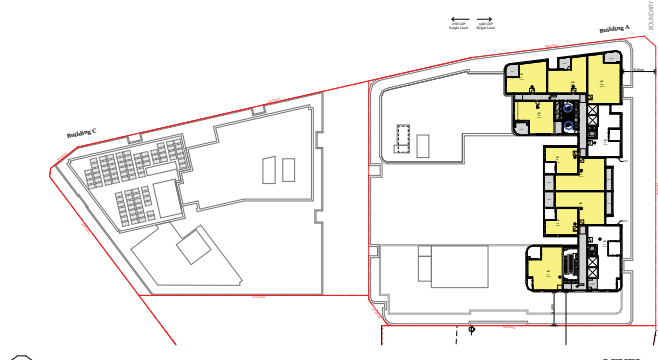
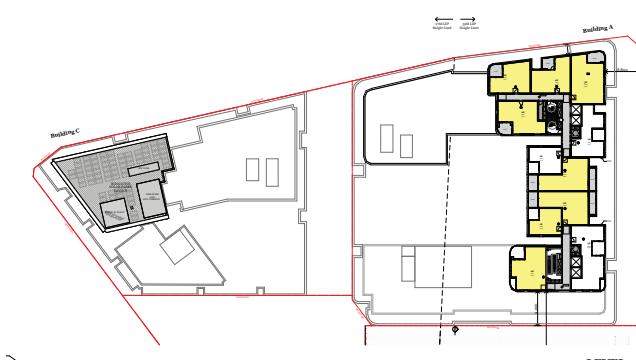
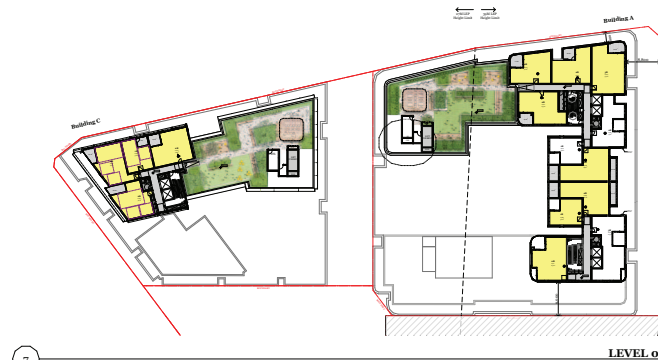
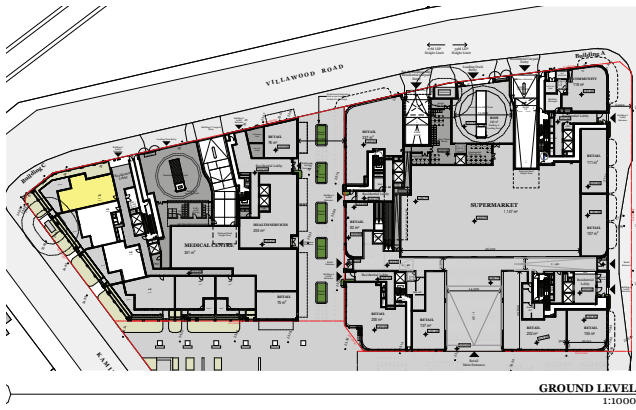


SOLAR ACCESS



**KAMIRA AVENUE
VILLAWOOD**

SOLAR ACCESS

SOLAR COMPLIANCE DIAGRAMS



Solar Analysis

Solar access to units (min. 2 hours) 
No solar access to units 

Solar Building A
110/158
70%

Solar Building C
49/70
70%

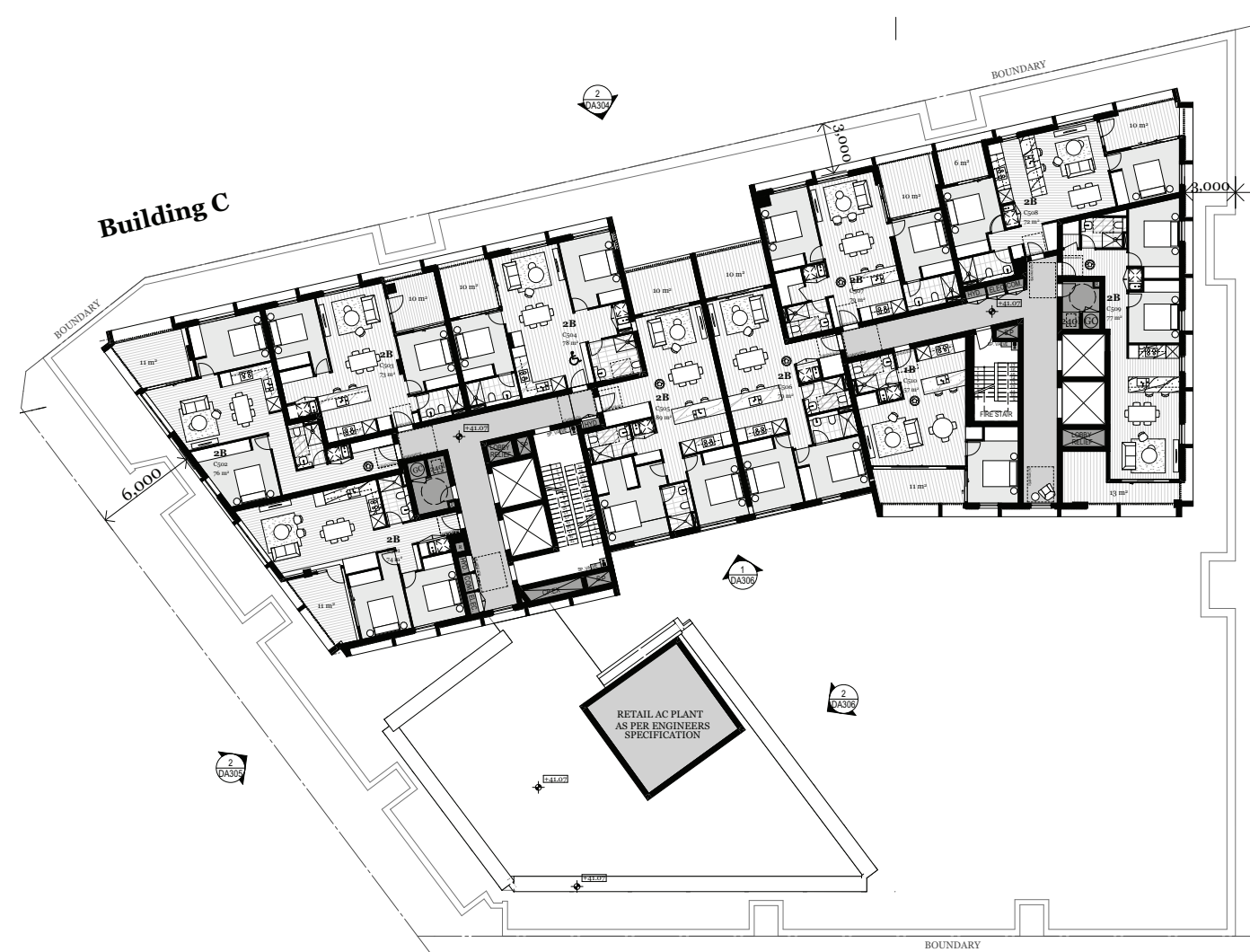
Total Solar
159/228
70%

Total No Solar
Building A No Solar: 13/158 (8%)
Building C No Solar: 7/70 (10%)

Total No Solar: 20/228
10%



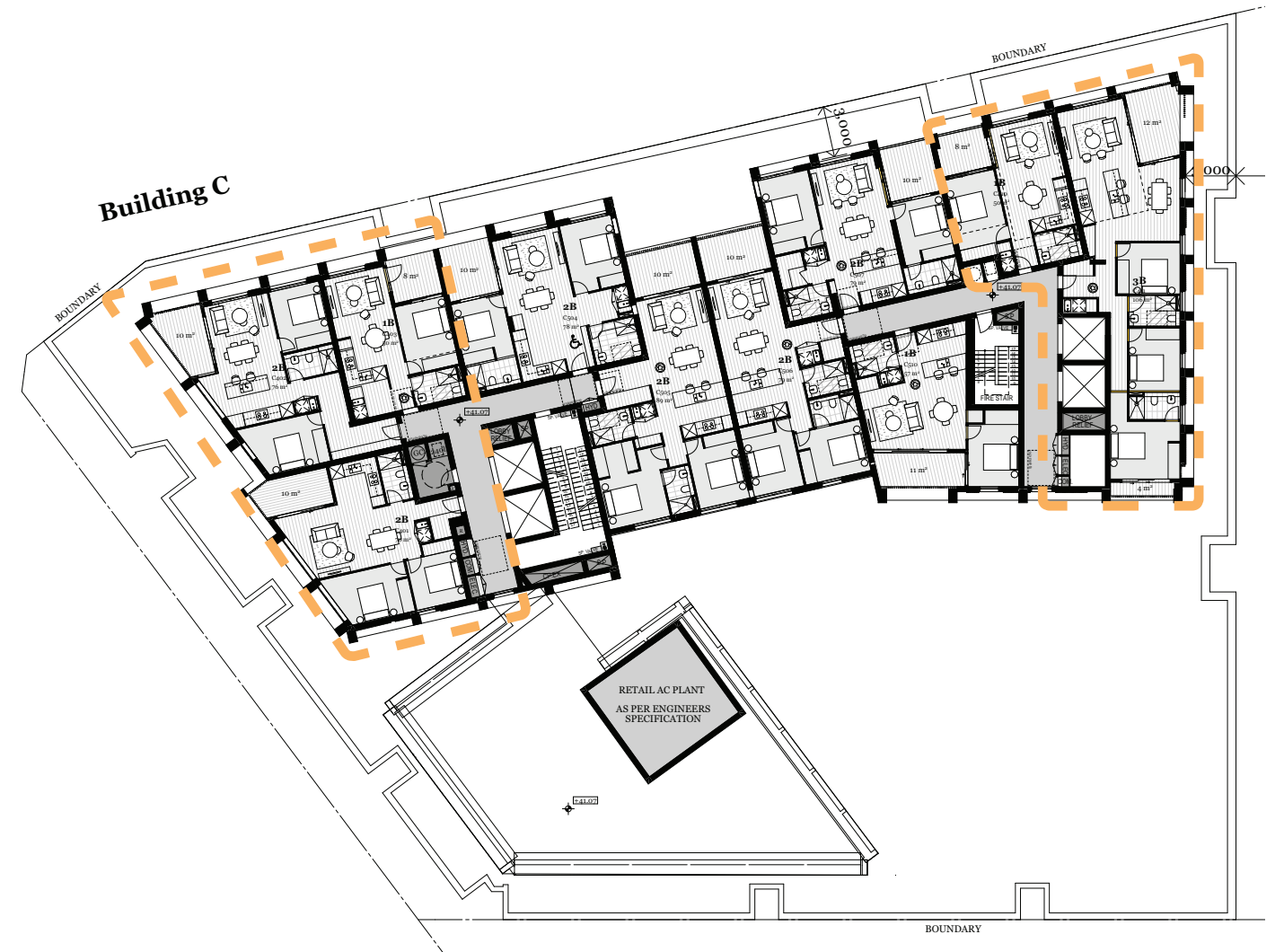
SOLAR ACCESS AMENDED UNIT LAYOUTS



SUBMITTED DA

Council Comments

Solar access requires further review and clarification as some units are restricted by location, penetration size and balcony depths.



REVISED

Response

The highlighted plans are updated floor plans to achieve the required 2 hours of solar access to both the POS and living areas in accordance with ADG guidelines.



CROSS VENTILATION

KAMIRA AVENUE
VILLAWOOD

Council Comments

The development relies on the use of a number of return wall windows on the same façade to achieve cross ventilation. This arrangement relies on the pressure difference created by the building design rather than wind direction and therefore shall be verified by a wind engineer. These windows include C304, C404, C504, C604, A311, A411, A511, A611, A705, A805, A316 A416. In the event that the wind engineering report does not confirm that these windows comply, they shall be redesigned to facilitate cross ventilation.

Response

See report from wind engineer SLR for further detail to confirm the ADG Cross Ventilation compliance.

EXECUTIVE SUMMARY

SLR Consulting Pty Ltd (SLR) has been engaged by Traders in Purple to assess the natural ventilation of the proposed residential at Villawood, Stage 2 development. This report will a qualitative review to assess the natural ventilation under the Apartment Design Guide (ADG). This report will form part of the development application to Fairfield City Council.

The State Environmental Planning Policy (SEPP) 65 supported by the Australian Design Guide is relevant to the assessment of the natural ventilation through residential components of proposed development. Section 4B-3 of the Australian Design Guide states that:

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.

The proposed development implements a number of the ADG recommendations to maximize the natural cross ventilation throughout the development.

- The proposed development has been provided with openings on multiple sides of the apartments for the majority of proposed floor plans, allowing it to make use of wind-induced natural ventilation throughout the year and thereby minimising energy costs.
- In general the overall depth of cross-over or cross-through units does not exceed 18 m as per the Design Criteria of Objective 4B-3.

Natural cross ventilation to many single aspect apartments is achieved via building indentations. This is anticipated within ADG Section 4B which states in its opening paragraph that “*Natural cross ventilation is achieved by apartments having more than one aspect with direct exposure to the prevailing winds, or windows located in significant different pressure regions, rather than relying on purely wind driven air*”.

The following conclusions have been reached based on a qualitative review of the floorplans of the ADG complaint dual aspect units and quantitative numerical modelling of non-dual aspect units:

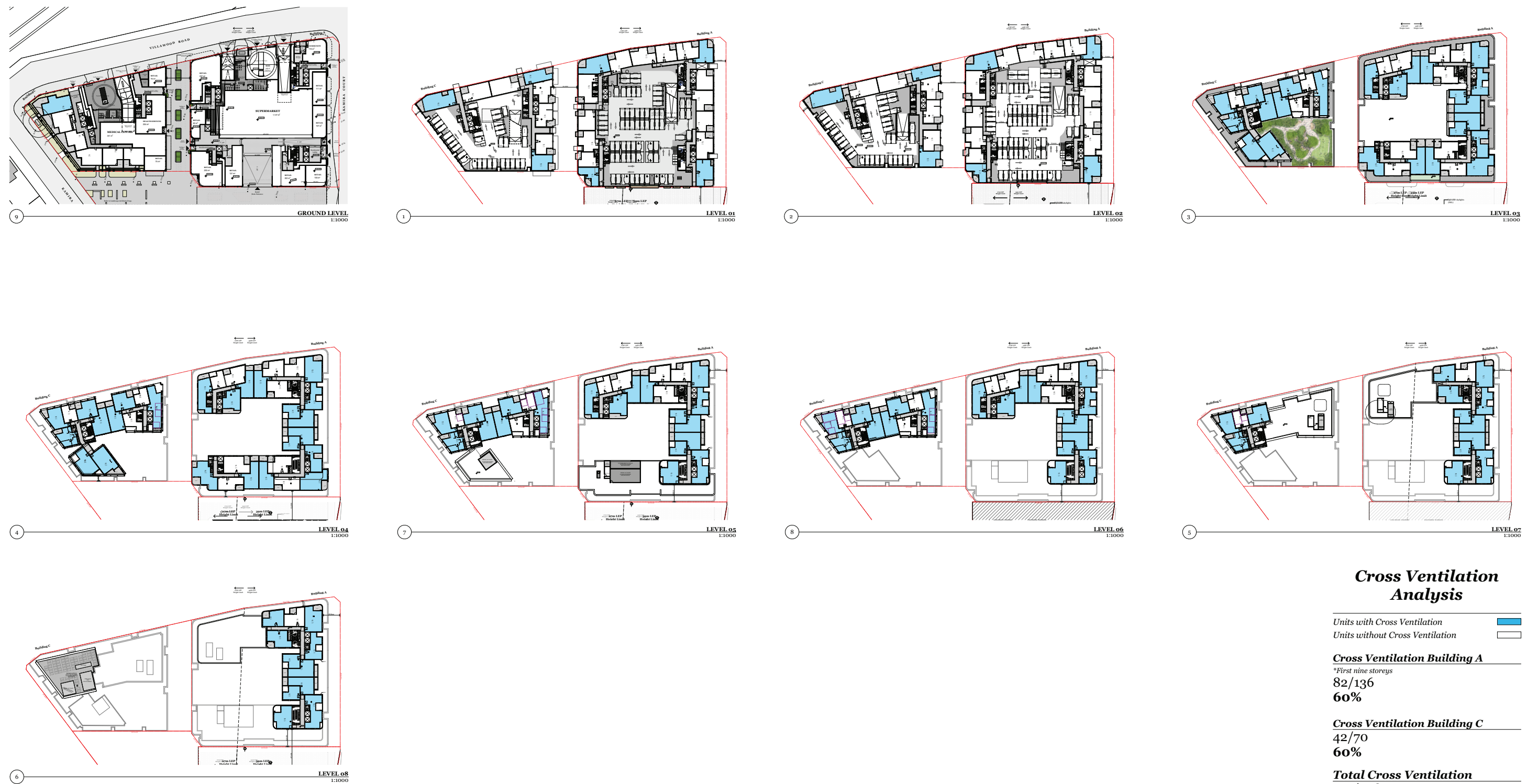
- In Building A, 60% (82 out of 136) of the apartments will be naturally cross ventilated, recommendations have been given to meet the ADG.
- In Building C, 61% (43 out of 70) of the apartments will be naturally cross ventilated, recommendations have been given to meet the ADG.
- SLR recommend an effective opening of all windows to be equivalent to 5% of the floor area served as per the ADG guideline. A minimum effective open area of 1.5% of the apartment floor area served on any facade aspect is recommended.

The above analysis has been made on the basis of our best engineering judgment and on the experience gained from computational fluid dynamics analysis of a range of developments. The conclusions of this SLR report can be quantified using computational fluid dynamics analysis if required.



CROSS VENTILATION

CROSS VENTILATION COMPLIANCE DIAGRAMS



Cross Ventilation Analysis	
Units with Cross Ventilation	<div></div>
Units without Cross Ventilation	<div></div>
Cross Ventilation Building A	
<i>*First nine storeys</i>	
82/136	
60%	
Cross Ventilation Building C	
42/70	
60%	
Total Cross Ventilation	
124/228	
60%	



AWNING

KAMIRA AVENUE
VILLAWOOD

Council Comments

The awning over the ground floor retail areas should provide at least one side of the pedestrian areas with consistent rain protected access through the site. The current awning arrangement appears to be broken and may not have a sufficient width to provide adequate weather protection. Accordingly, a continuous awning path shall be provided and the height to width ratios need to be checked against rain and human scale.

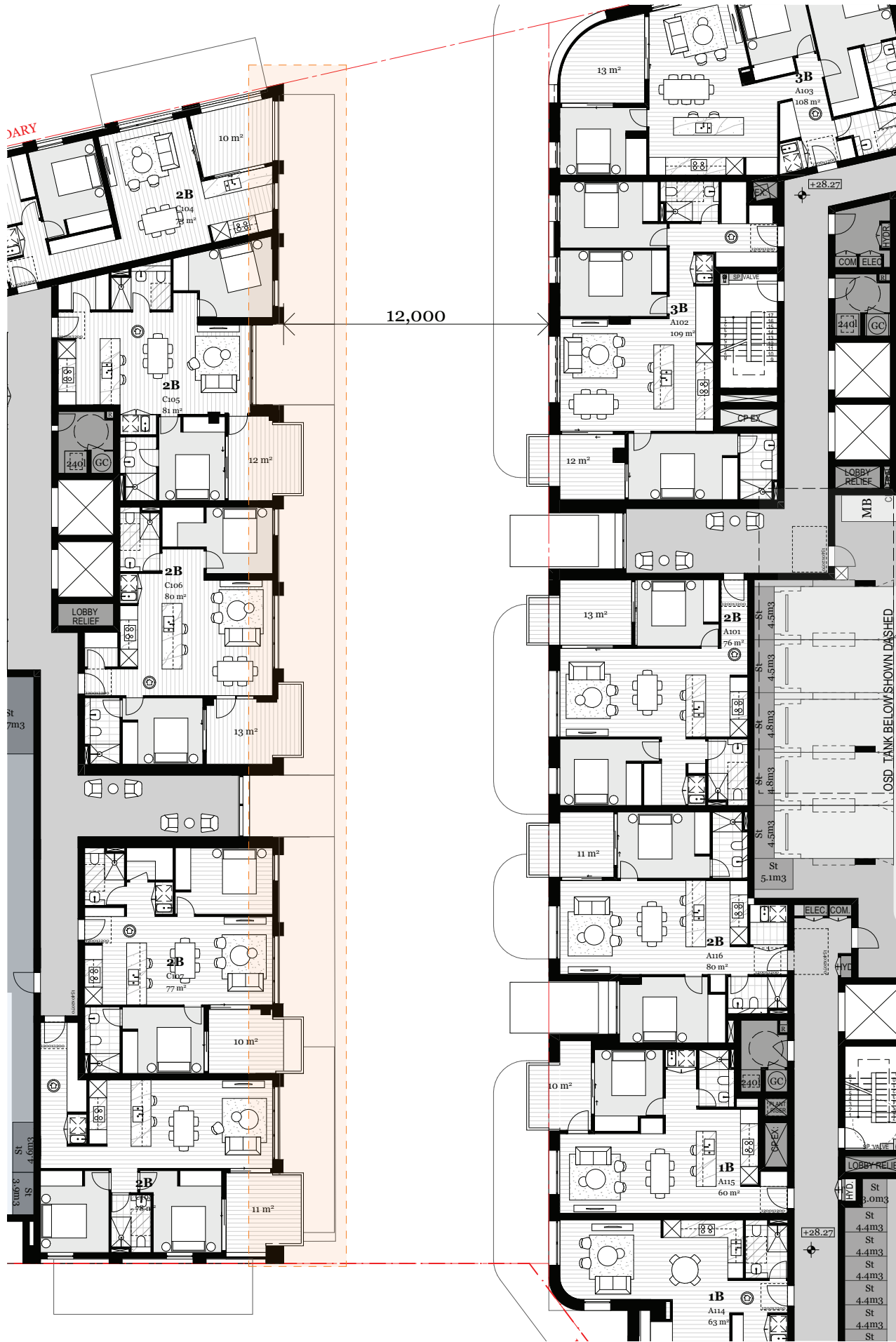
Response

A continuous Awning has been provided on one side within Building C.

The awning expression throughout the podium building is a way finding strategy. All the retail awnings are contained within the white portal frame.

These awnings are 2500mm wide which provide enough cover against rain

The residential lobbies have a different awning expression which induces a break in the continuous awning, but provides a feature entry piece which assists in way finding and the hierarchy of entries to the building. Further clarification is provided in the THINK Planners covering letter.



CAR PARKING

**KAMIRA AVENUE
VILLAWOOD**

CAR PARKING

CAR PARKING RATES

DCP Rates			
Building C			
Apartments	Qty	Rates	Total Car Spaces Req
1 Bed	13	1	13
2 Bed	41	1	41
3 Bed	16	1	16
Sub Total	70		70
Visitor	1 per 4	18	18
Total Required			88

RMS Rates			
Building C			
Apartments	Qty	Rates	Total Car Spaces Req
1 Bed	13	0.4	5.2
2 Bed	41	0.7	28.7
3 Bed	16	1.2	19.2
Sub Total	70		53.1
Visitor	1 per 7	10	10
Total Required			63

Proposed	
Building C	
Level	Car Spaces
Basement	27
Level 01	36
Level 02	32
Total Proposed	95
Visitors	10
Subtotal	85

DCP Rates			
Building A			
Apartments	Qty	Rates	Total Car Spaces Req
1 Bed	24	1	24
2 Bed	108	1	108
3 Bed	26	1	26
Sub Total	158		158
Visitor	1 per 4	40	40
Total Required			198

RMS Rates			
Building A			
Apartments	Qty	Rates	Total Car Spaces Req
1 Bed	24	0.4	9.6
2 Bed	108	0.7	75.6
3 Bed	26	1.2	31.2
Sub Total	158		116.4
Visitor	1 per 7	23	23
Total Required			139

Proposed	
Building A	
Level	Car Spaces
Basement	64
Level 01	68
Level 02	75
Total Proposed	207
Visitors	23
Subtotal	184

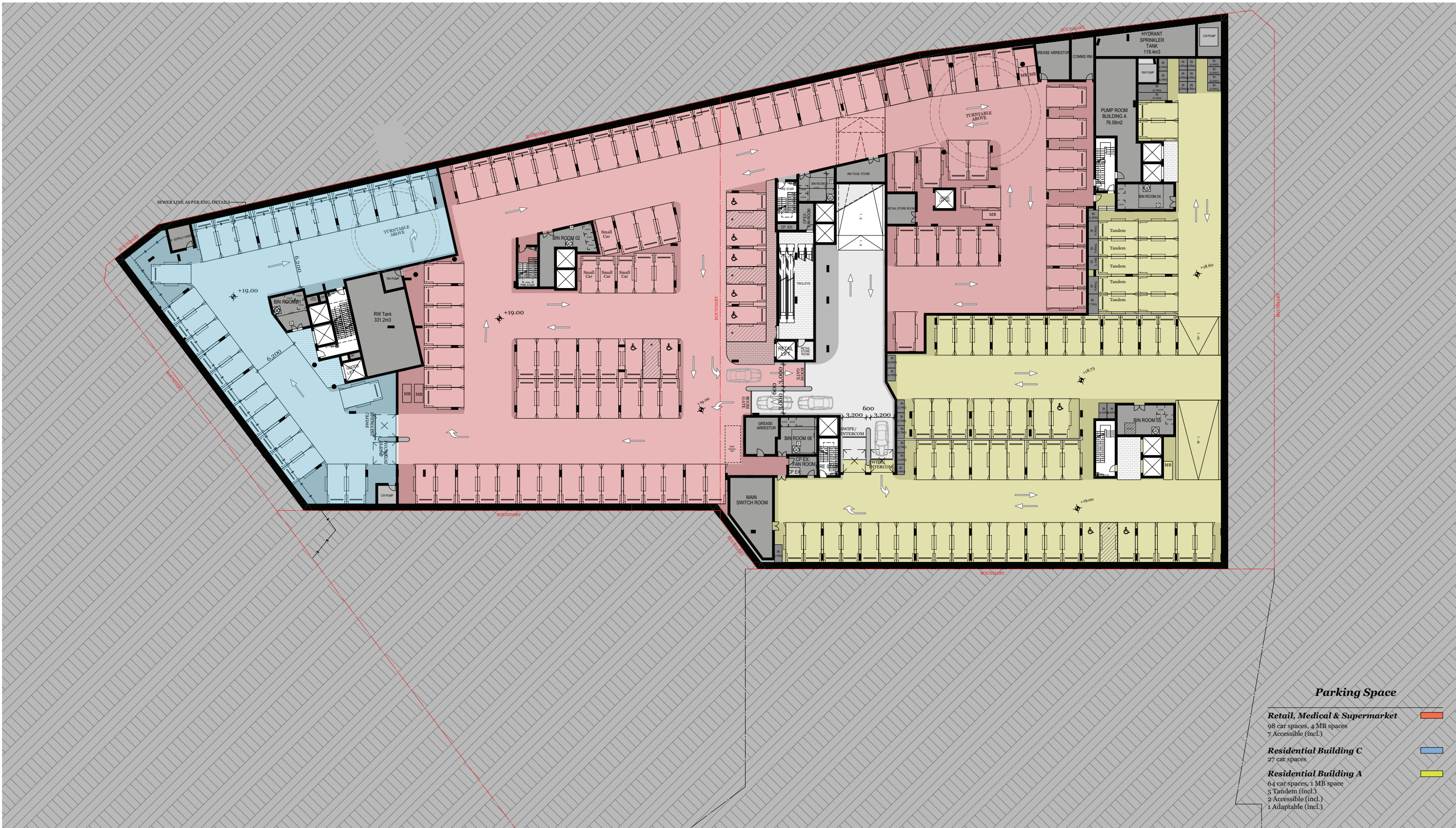
DCP Rates			
Non Residential Use			
	SQM	Rates per Sqm	Total Car Spaces Req
Medical + Health Related Services	531		24
Retail / Neighbourhood Shops	143	1 per 40 sqm	4
Supermarket	1147	1 per 40 sqm	29
Café/ Restaurant	519	1 per 25 sqm	21
Speciality Reatil	662	1 per 40 sqm	17
Community	118	1 per 40 sqm	3
Total Required			98

Proposed	
Non Residential Use	
Level	Car Spaces
Basement	98
Total	98

400



CAR PARKING BASEMENT PLAN



COMMUNAL OPEN SPACE

KAMIRA AVENUE
VILLAWOOD

COMMUNAL OPEN SPACE
CALCULATIONS

Council Comments

Clause 4.18.2 of the DCP requires the development to provide a communal open space with an area equivalent to 30% of the site area or 200m2 (whichever is the greater) on the podium level in one contiguous area. Assessment of the application revealed that the total COS area equates to 25% of the site area. Consideration shall be given to providing additional communal open space to facilitate a wide range of outdoor recreational uses and provide a high level of amenity for residents. Furthermore, additional deep soil zones shall be provided on the podium COS as well as terraces, vistas into courtyards from the public domain to provide further variety.

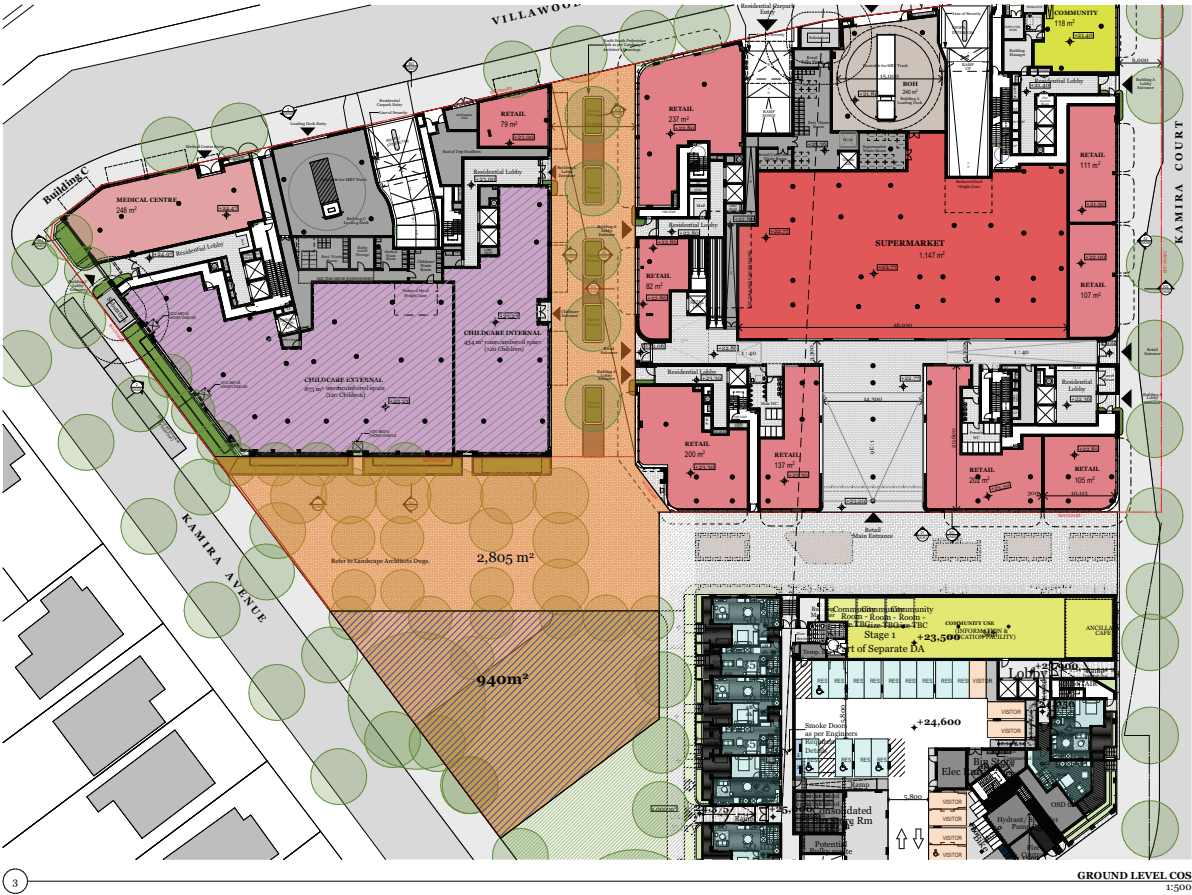
Response

Communal Open space has been recalculated to equate to 30% which exceeds the minimum ADG requirement of 25%. As per the ADG the public land use within the site can be counted towards communal open space.

The useable part of the communal open space area may be supplemented by:

- additional landscape area, circulation space and areas for passive use and outlook
- public land used for open space and vested in or under the control of a public authority.

High quality open space is particularly important and beneficial in higher density developments (for private open space requirements see section 4E Private open space and balconies).



Communal Open Space
& Deep Soil Area

Communal Open Space
Deep Soil Area

Site Area: 10958 m²
Required COS: 3288m² (30 %) - DCP
Required Deep Soil: 767m² (7%)

Ground Level Communal Open Space
2805m²

Building A Communal Open Space
L3 1067m² L7 515m² 1582m²

Building C Communal Open Space
L3 666m² L7 496m² 1162m²

Overall Communal Open Space
50% 5549m²

Deep Soil Area
Deep Soil Coverage of whole site
9% 940m²



FLOOR SPACE RATIO

KAMIRA AVENUE
VILLAWOOD

FLOOR SPACE RATIO
GFA CALCULATIONS



Ground Floor
GFA: 5225m²



Level 1-2
GFA: 2547m²



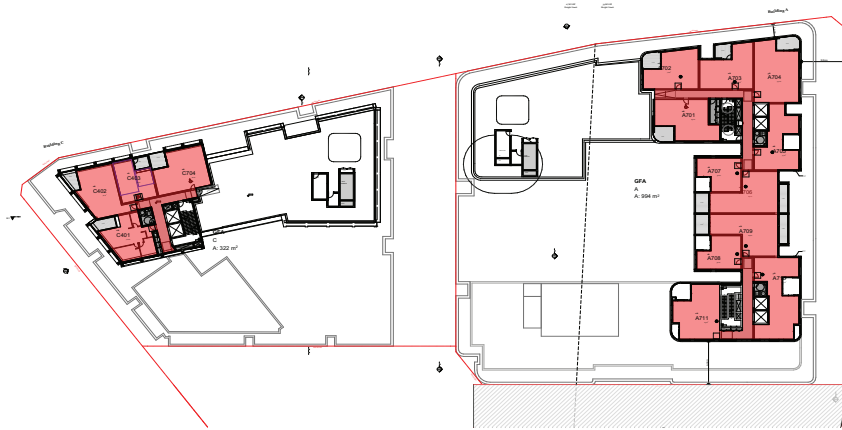
Level 1-2
GFA: 2547m²



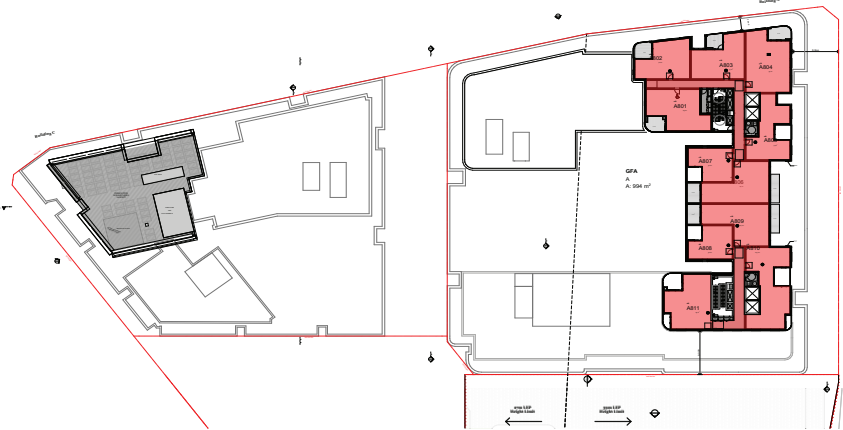
Level 3-4
GFA: 3253m²



Level 5-6
GFA: 2387m²



Level 7
GFA: 1319m²



Level 8-10
GFA: 994m²

Council Comments

The submitted GFA Calculations plan indicates that the horizontal circulation areas and waste storage areas on the ground floor have not been included in the FSR calculation such areas are defined as GFA. The applicant shall ensure that the FSR calculation includes all areas that constitute as gross floor area as defined in the FLEP 2013. Accordingly, amended GFA plans shall be submitted to demonstrate that the horizontal circulation areas and waste storage areas on the ground floor have been included in the calculation. The applicant shall ensure that the total GFA complies with the maximum FSR permitted on site.

Response

Waste areas and service corridors have been included in the latest GFA Calculations. This results in the GFA and FSR fully compliant and well under the permissible for the site.

GFA Calculations

AREAS COUNTED TOWARDS GFA	
Ground	5277m²
Level 1	2545m²
Level 2	2545m²
Level 3	3226m²
Level 4	3226m²
Level 5	2358m²
Level 6	2358m²
Level 7	1316m²
Level 8	994m²
Level 9	994m²
Level 10	994m²
TOTAL GFA	25833m²
SITE AREA	10958m²
Allowable FSR	2.5:1
Proposed FSR	2.36:1



WASTE

KAMIRA AVENUE
VILLAWOOD

LOADING AREAS AND WASTE BINS - BUILDING A

Council Comments

As FCC does not support the use of 1,100L bins, the revised 660L bins will need to be rotated a minimum 2x daily for each respective core (West & East).

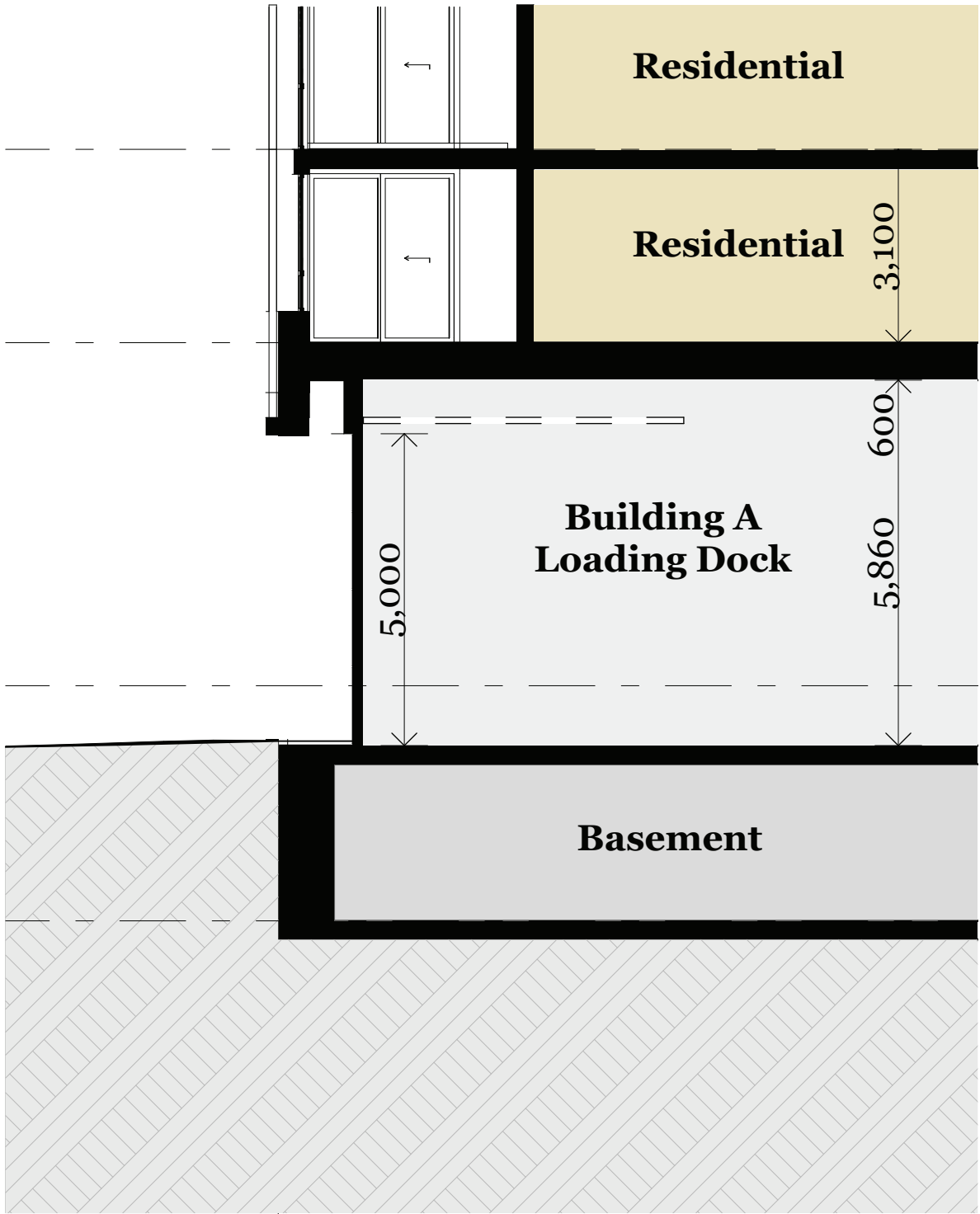
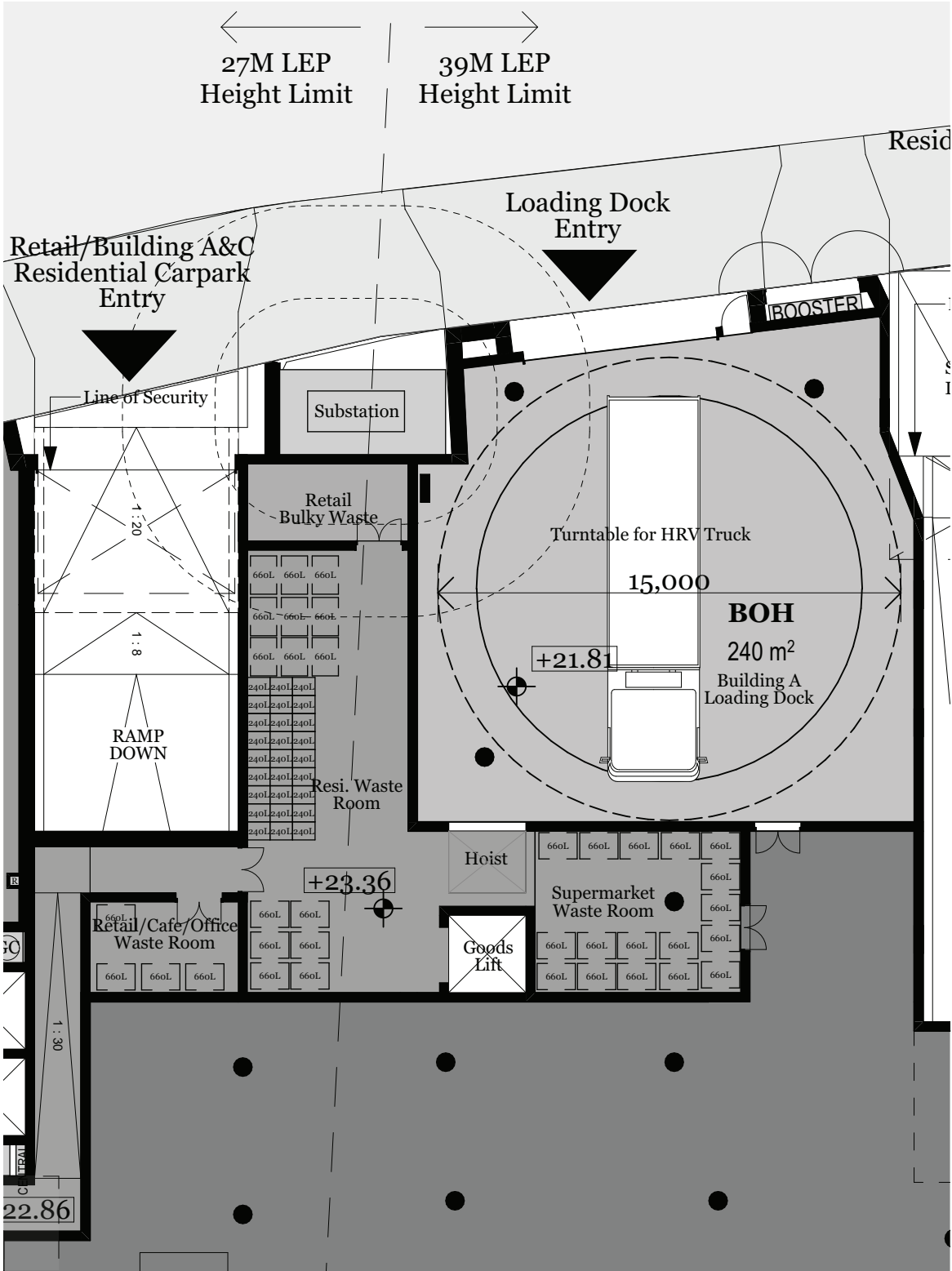
The architectural plans and on-site loading bay infrastructure shall be updated to accommodate Council's standard HRV in accordance with the height clearance, dimensions, width etc responsive to AS 2890.1.

The current architectural plans do not provide a detailed elevation of the integrated on-site loading bays (Building A & C). The elevation will enable a detailed review by Council to ensure unobstructed height clearances (4.5m) are provided responsive to AS 2890.1 to support scheduled collections

Response

Section has been provided to demonstrate the 4.5 m height clearance to loading dock.

Bins have been updated from 1100L to 660L



WASTE LOADING AREAS AND WASTE BINS

Council Comments

As FCC does not support the use of 1,100L bins, the revised 660L bins will need to be rotated a minimum 2x daily for each respective core (West & East).

The FCC standard waste collection vehicle is a 10.5m HRV used to service residential waste streams (Garbage & Recycling). The current design proposes an 8.8m MRV which will inhibit the provision of a safe and efficient waste collection service.

The architectural plans and on-site loading bay infrastructure shall be updated to accommodate Council's standard HRV in accordance with the height clearance, dimensions, width etc responsive to AS 2890.1.

The current architectural plans do not provide a detailed elevation of the integrated on-site loading bays (Building A & C). The elevation will enable a detailed review by Council to ensure unobstructed height clearances (4.5m) are provided responsive to AS 2890.1 to support scheduled collections

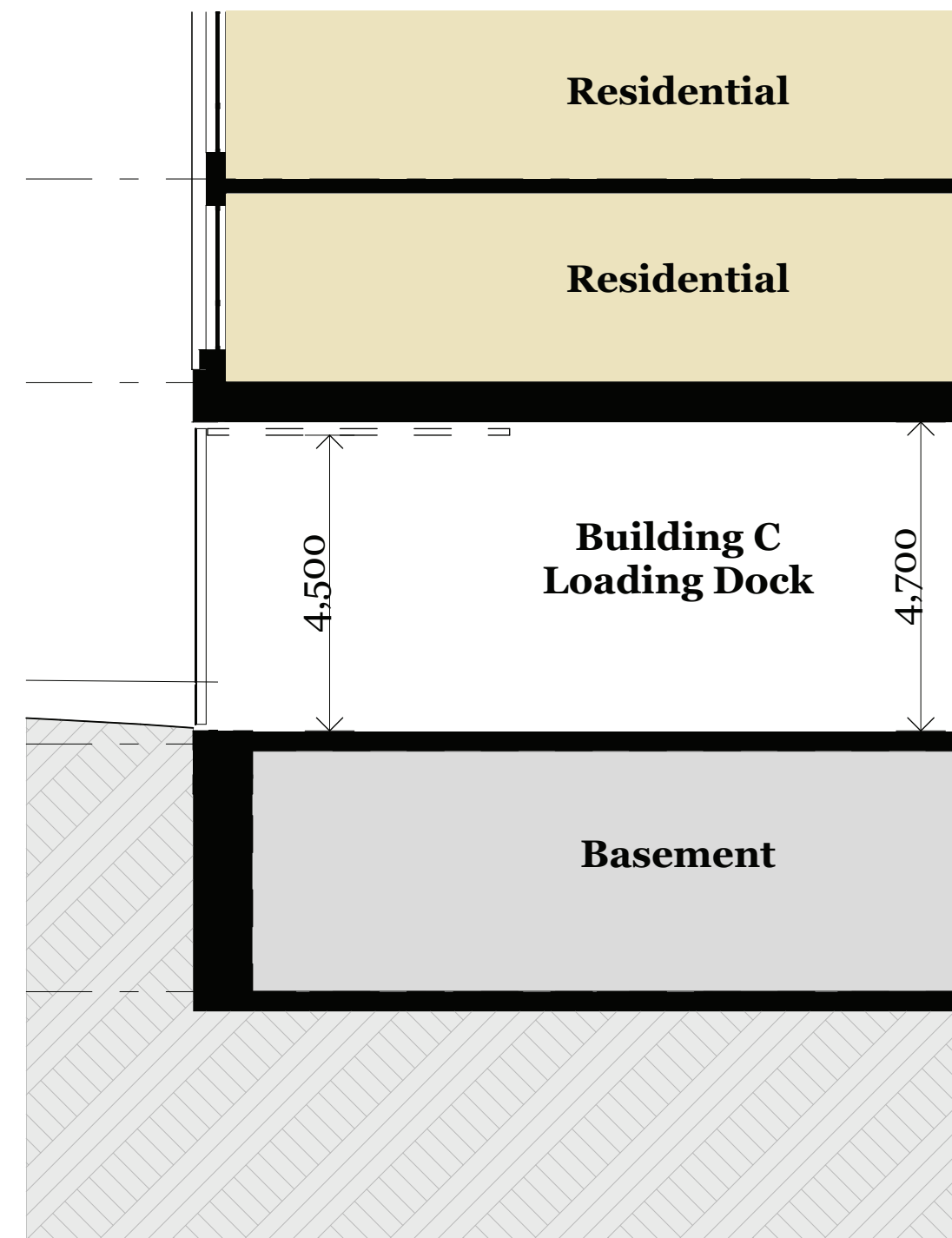
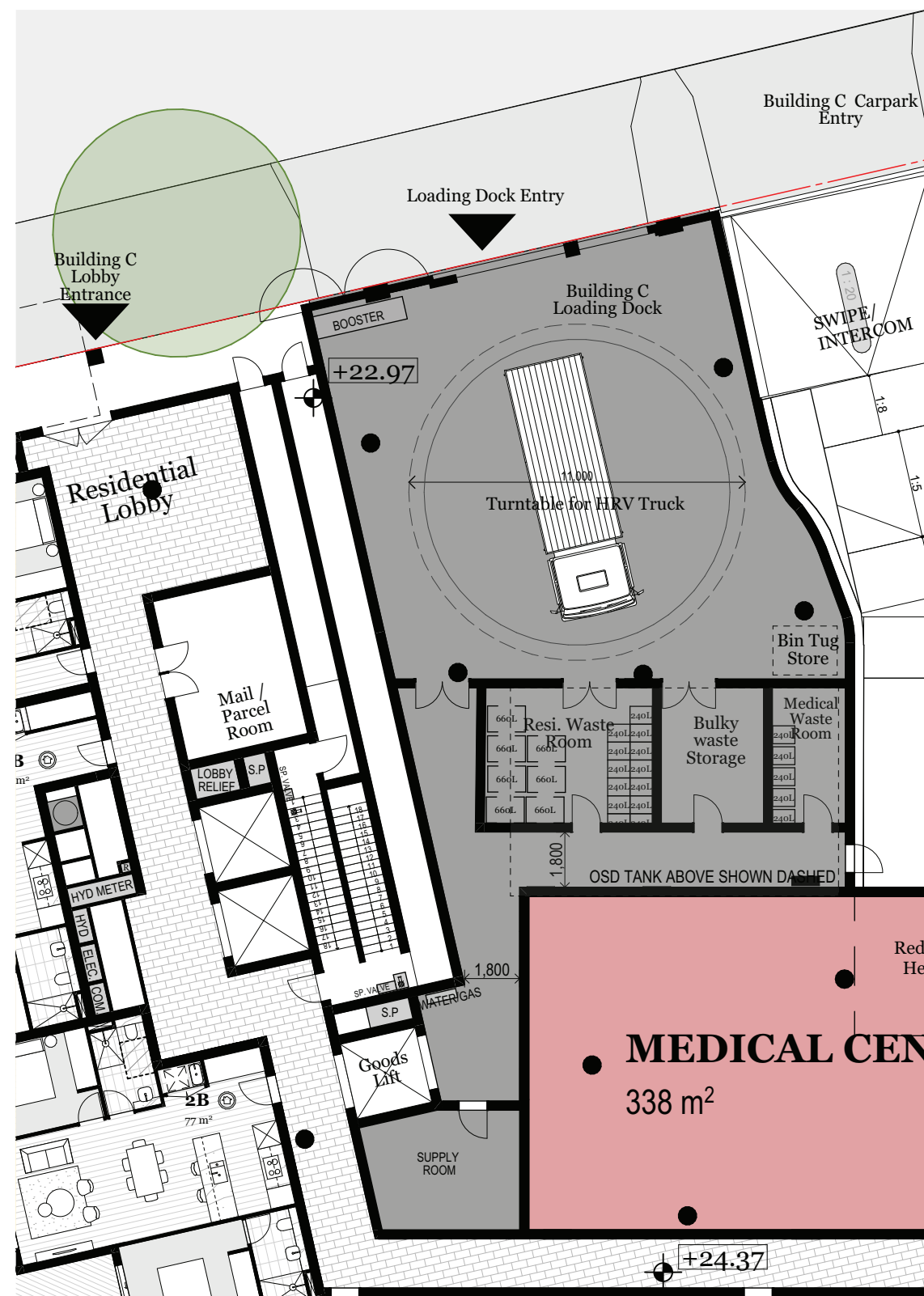
The adjacent waste storage room/s (residential, bulky, medical, childcare) do not support the internal movement of bins from the respective storage room to the integrated on-site loading bay. Unobstructed internal bins access (1100L, 660L & 240L) is required to support the provision of a safe and efficient waste collection service. Consideration shall be given to the implementation of dual doors (1.8m wide opening) on the northern elevations to permit direct access to the service vehicles.

Response

Direct access had been provided from loading dock to each respective storage room

Section has been provide to demonstrate the minimum height clearance to the loading dock are achieved.

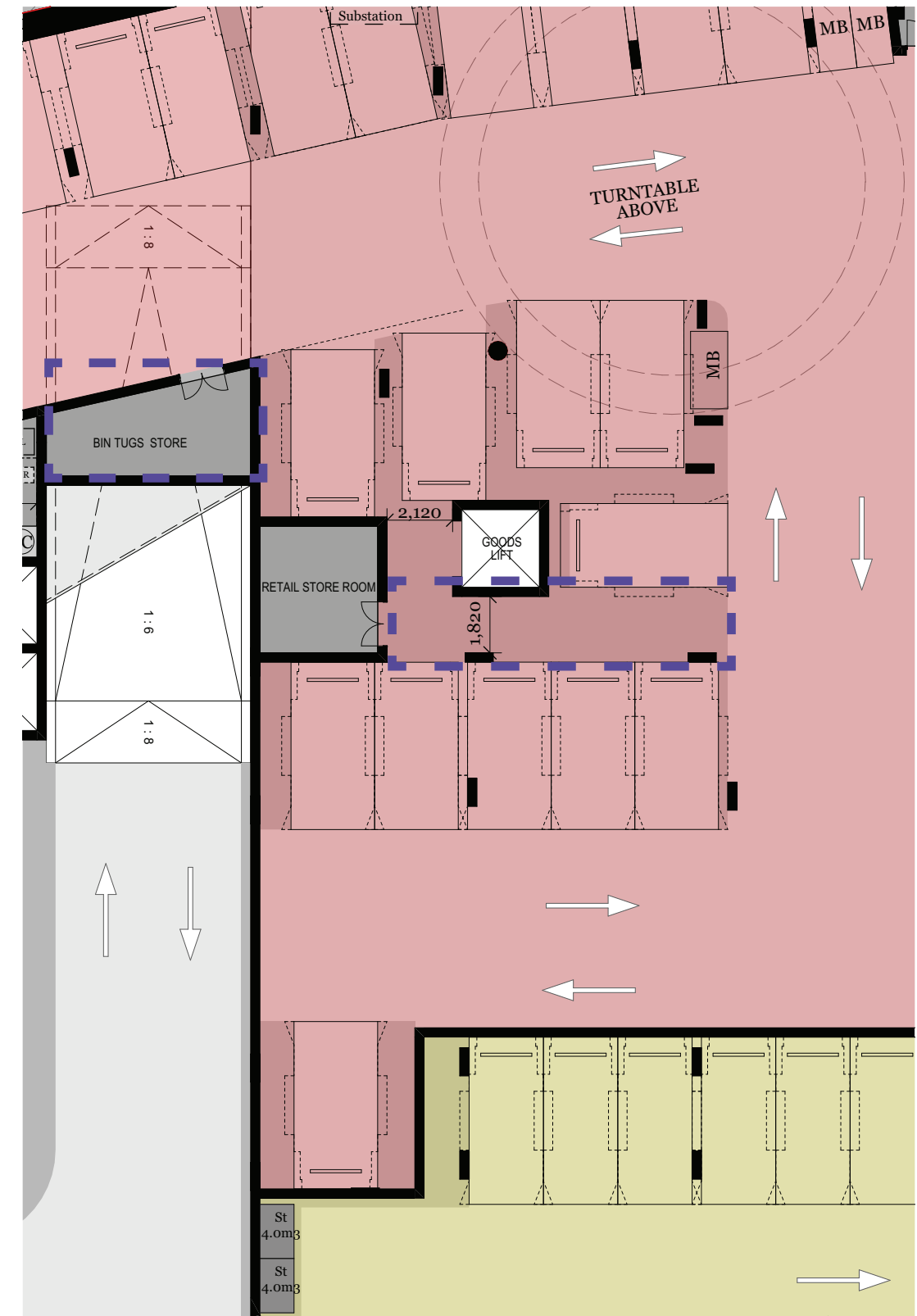
Bins have been updated from 1100L to 660L



The 'goods lift' located within Basement 1 shall be accessed via a 1.8m unobstructed access corridor. The current arrangement proposes 'MB' parking within the corridor inhibiting access. It is noted the WMP proposes a 'bin tug/trailer' to support bin movements.

Response

All accesses and corridors of Building A & C are sufficiently sized for the safe and efficient use of the goods lift all other waste rooms.



DKO
TP

