

Urban Design Report

Revision B - October 2018

Holsworthy Centre



A NEW VILLAGE CENTRE WITH GREAT AMENITY

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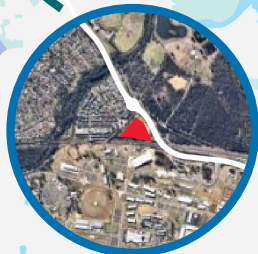
This document is for discussion purposes only unless signed.



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HOLSWORTHY IS THE BEST CONNECTED CENTRE IN LIVERPOOL

15 mins
to Liverpool



Holsworthy

20 mins
to airport

30 mins
to Central
Sydney

1 Site and context

Purpose of this report

Architectus has been engaged by Holsworthy Shopping Centre Pty Ltd to undertake an urban design analysis and review of the site at Macarthur Drive and Heathcote Road, Holsworthy. The site is currently subject to an approved Development Application (DA) for a mixed-use retail and residential centre.

This report details Architectus' design-led planning approach to the future redevelopment of the site as an integrated retail and residential centre with excellent connections to Liverpool and Central Sydney, leading to a master plan to realise the potential for the site.

A landscape concept for the site has been developed by Clouston Associates alongside Architectus' master plan and is included in this report.

This report is intended to accompany a Planning Proposal which will seek to amend the relevant planning controls under the Liverpool Local Environmental Plan (LEP) 2008 to allow the vision for the site to be achieved through subsequent development application(s).

This version of the report has been revised in 2018 following submission of an earlier version to Council (August 2017) and feedback from Council.

The site

The site has an area of approximately 18,620 square metres. It is bound by the railway line to the south, Heathcote Road (an RMS road) to the north east and Macarthur Drive to the north west.

The site is strategically located adjacent to Holsworthy Railway Station (T2 Airport, Inner West and South line), which provides express services to major employment hubs, such as Sydney Airport (17 minutes) and Central Sydney (30 minutes).



1.1 Summary of strategic context

Greater Sydney Region Plan

The Greater Sydney Region Plan (A Metropolis of Three Cities) is the metropolitan strategy for Sydney updated by the NSW Department of Planning and Environment in March 2018.

The site lies in the ‘Western City’ for which the strategy notes that **“In the Western City, improving liveability is about new great places, with well-connected communities which have access to a range of jobs and services.”**

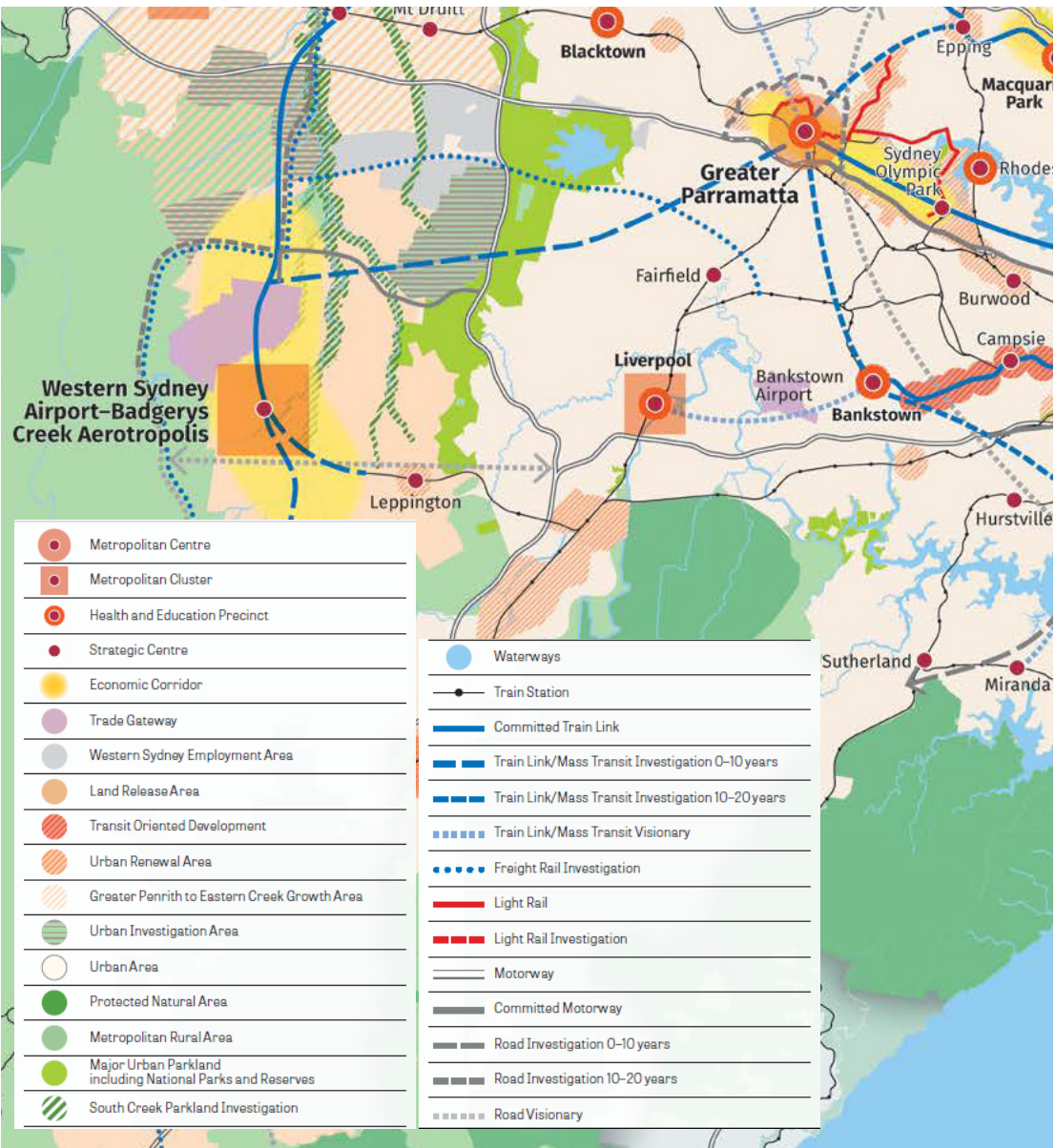
Key directions with relation to this site include:

- The Western City region will experience the greatest housing growth of all regions.
- Principles for housing strategies in delivering new growth include to **“facilitate high quality urban outcomes including the creation of walkable neighbourhoods which support active and healthy lifestyles, as well as the creation and renewal of great places”**

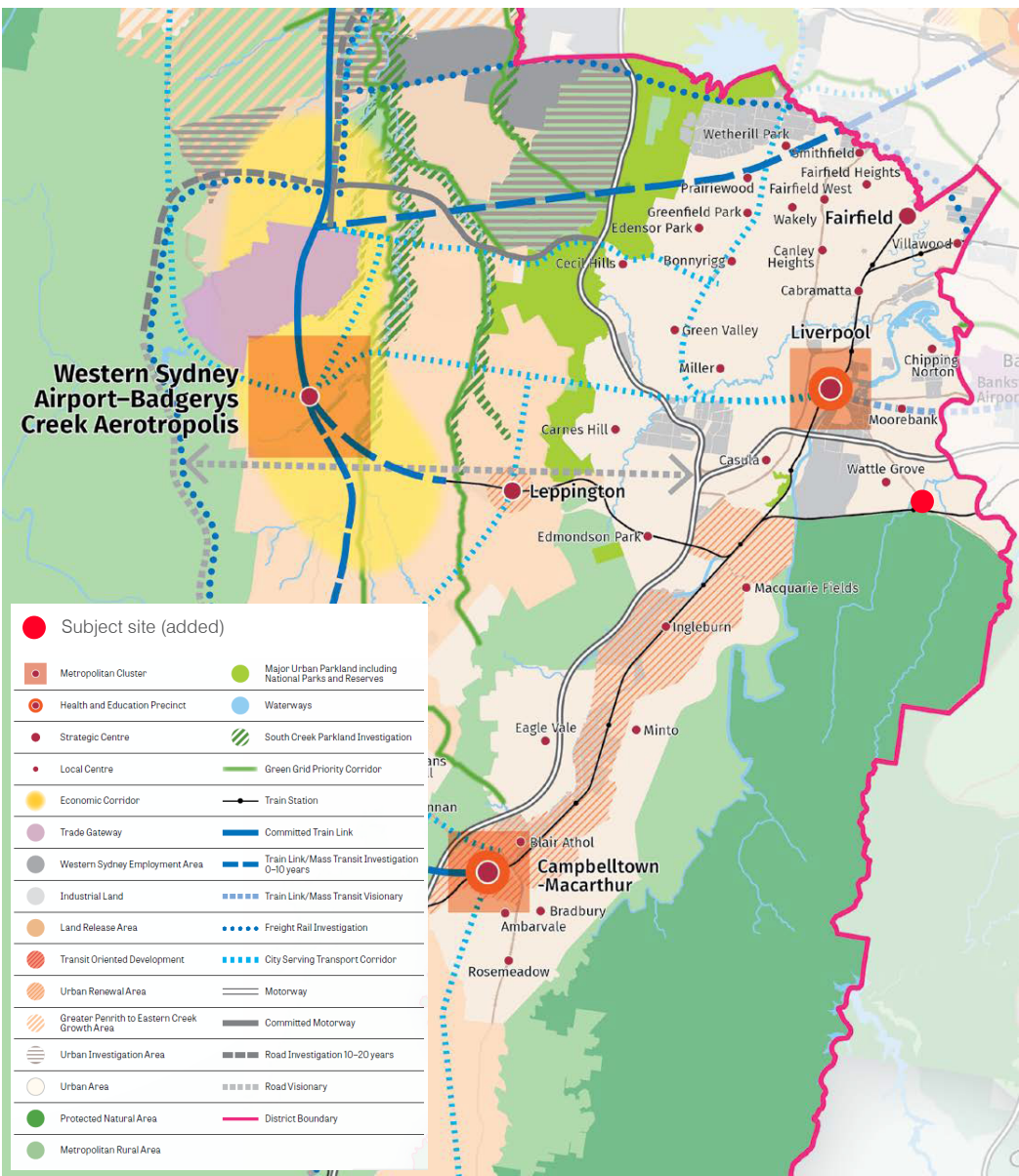
Western City District Plan

The Western City District Plan, updated by the Greater Sydney Commission in March 2018, is a 20 year plan with a 40 year vision for the district.

This project is particularly well suited to meet the needs of the following Liveability objective of **Providing housing supply, choice and affordability, with access to jobs, services and public transport.**



Extract from Greater Sydney Region Plan



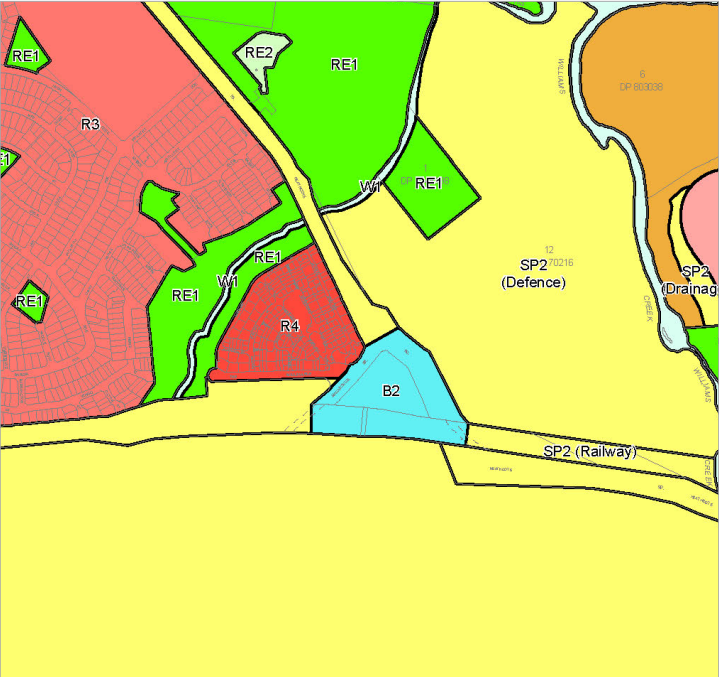
Extract from Western City District Plan

With regard to these strategic documents, the site is ideally and strategically located to advance these visions and to enhance access from the South West District to key employment hubs within 30 minutes (particularly Sydney Airport and Central Sydney via the East Hills T2 Railway Line).

1.2 Existing LEP controls

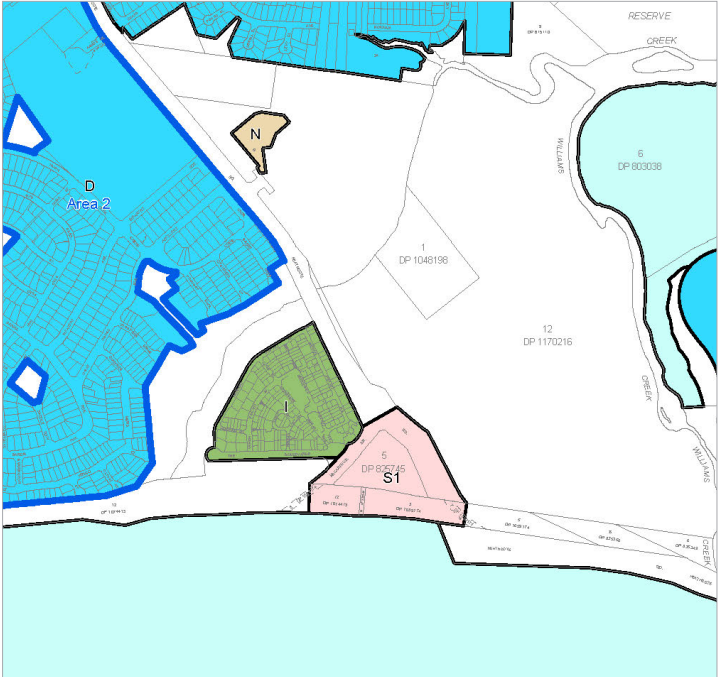
The following key controls from the Liverpool LEP 2008 apply to the site:

- B2 Local Centre zone
- 1.5:1 Floor Space Ratio
- 21m height of buildings
- 1,000sqm minimum lot size



Land use zoning

B2	Local Centre
E2	Environmental Conservation
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
RE1	Public Recreation
RE2	Private Recreation
SP2	Infrastructure
W1	Natural Waterways



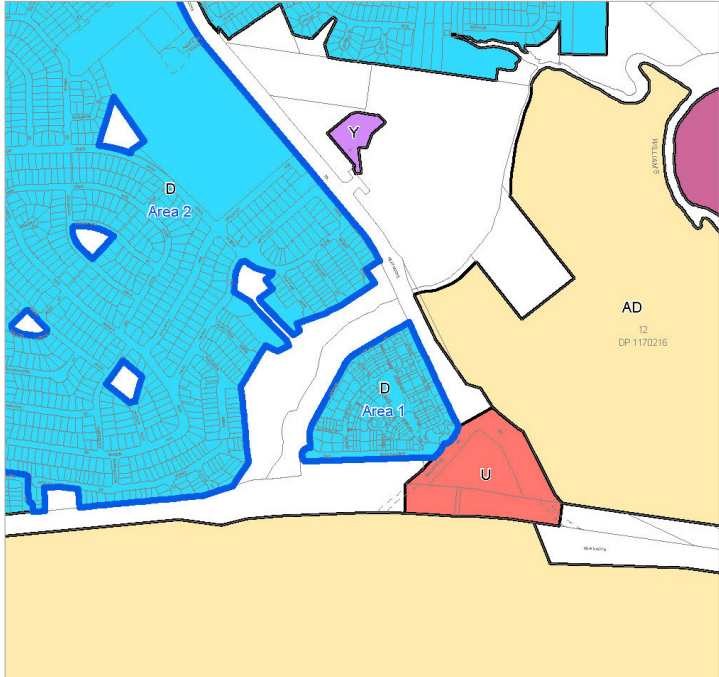
Floor space ratio

A1	0.01
D	0.5
I	0.75
N	1.0
S1	1.5



Building height

I	8.5
M	12
O	15
R	21



Minimum lot size

D	300
U	1000
W	4000
Y	10000
AD	120ha
	refer to clause 4.1

1.3 Holsworthy’s role - Why a residential centre?

Architectus considers that the current planning controls relating to the site do not reflect strategic significance and it’s potential to develop as an integrated and well-connected mixed-use centre for the following key reasons:

1

The site's strategic importance as one of four **centres within walking distance of a railway station** within Liverpool LGA.

2

Urban renewal along rail corridors being planned by the Department of Planning indicate an appropriateness for uplift around key railway stations, with FSRs proposed of 4:1 and 5:1 in these centres.

3

Other **comparison centres** in Liverpool are being planned for comparable growth.

4

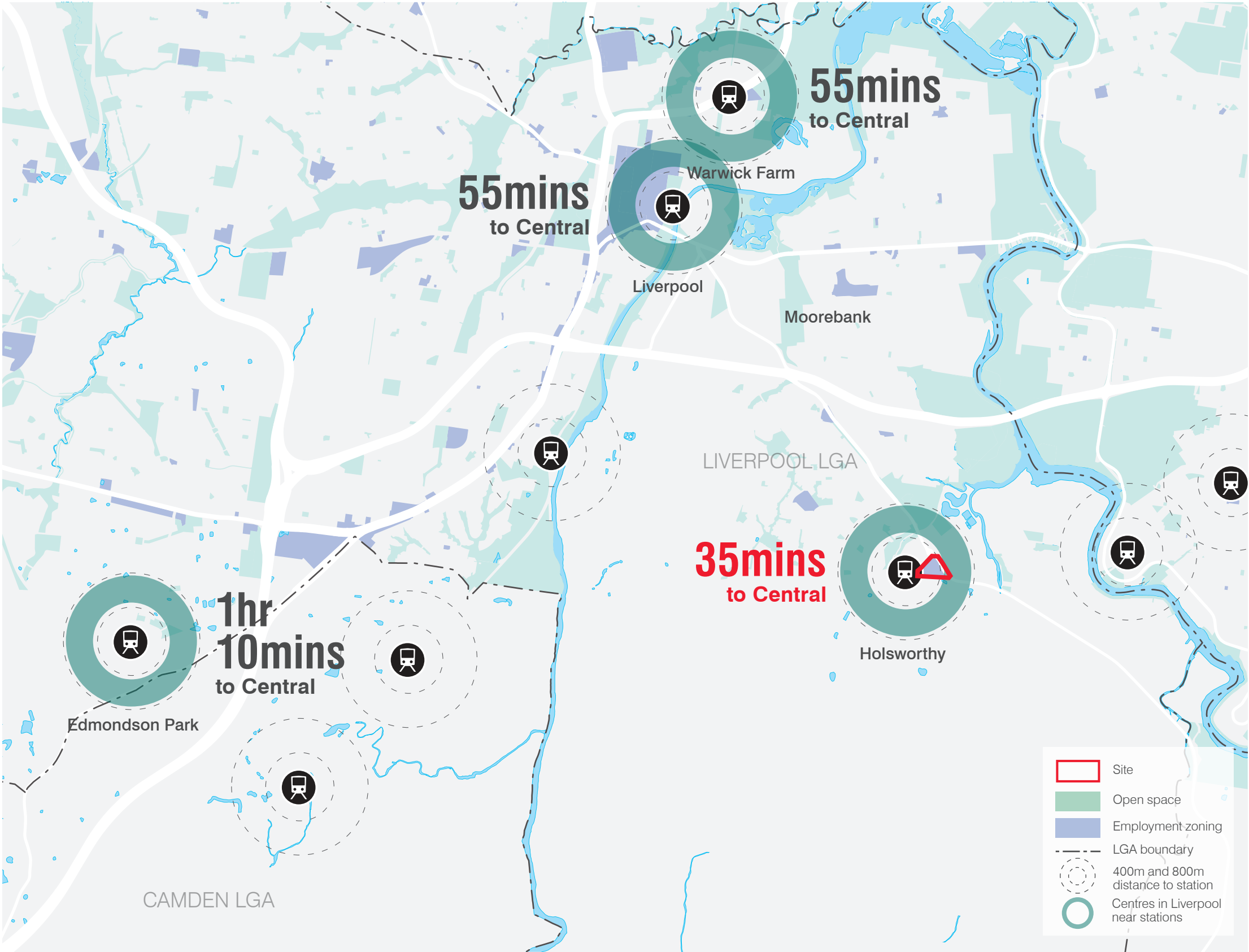
Change is appropriate within the **hierarchy of centres**.

The following pages describe these issues in further detail.

1 Centres within walking distance to a railway station

THE SITE IS ONE OF ONLY FOUR ZONED CENTRES WITHIN LIVERPOOL LGA WHICH ARE WALKABLE TO A RAILWAY STATION, AND THE SHORTEST TRIP TO CENTRAL SYDNEY OF THESE.

These four centres are Liverpool itself, the Edmondson Park Town Centre a currently undeveloped site in Warwick Farm, and the site.

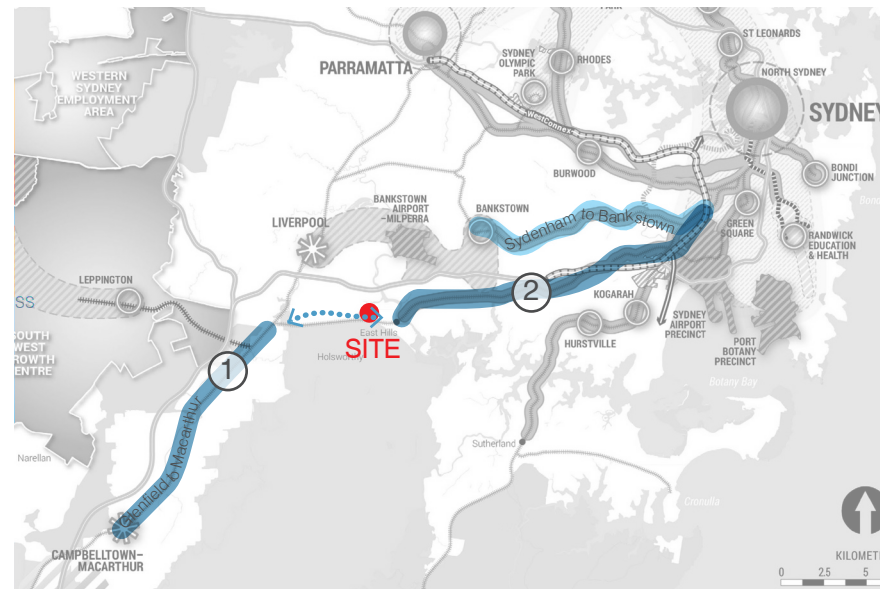


URBAN RENEWAL ALONG RAILWAY CORRIDORS IS PLANNED. THE SITE CAN BE SEEN AS THE OPPORTUNITY TO LINK TWO URBAN RENEWAL CORRIDORS ALONG RAILWAYS.

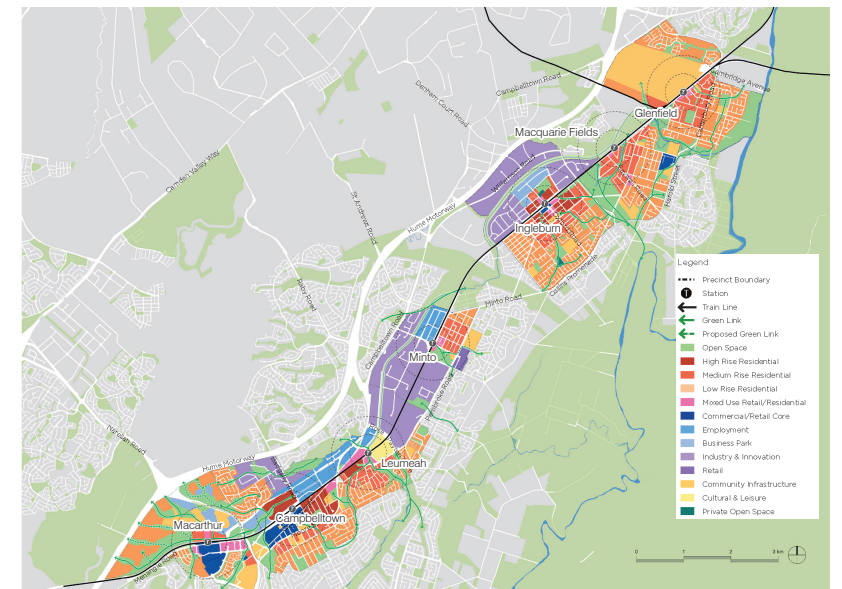
Holsworthy provides the **opportunity to link two existing urban renewal corridors:**

- ① The Glenfield to Macarthur urban renewal corridor currently being planned and;
- ② Another urban renewal corridor within the Plan for Growing Sydney east of East Hills.

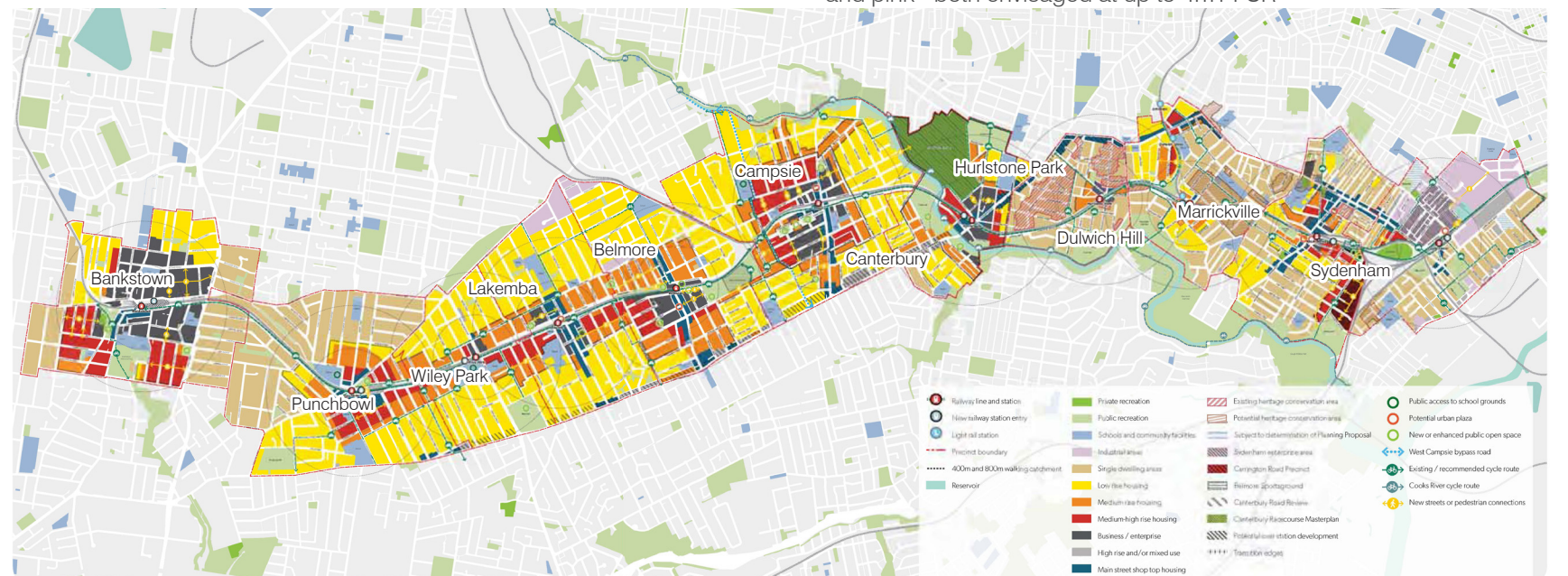
Other comparison railway corridors are planning for FSRs of 5:1 and 4:1 around similar centres. These are the densities planned in the draft Sydenham to Bankstown Strategy as well as Glenfield to Macarthur Strategies respectively. These are likely to result in buildings up to around 25 storeys (another state-led document, the Parramatta Road Urban Transformation Strategy notes a typical maximum 25 storeys relating to FSRs of 4.5:1).



Linking existing urban renewal corridors



Glenfield to Macarthur Strategy - Built form and Land Use Plan (2015)
Station names added for clarity. Darker red (envisaged at 7 storeys +) and pink - both envisaged at up to 4.1:1 FSR



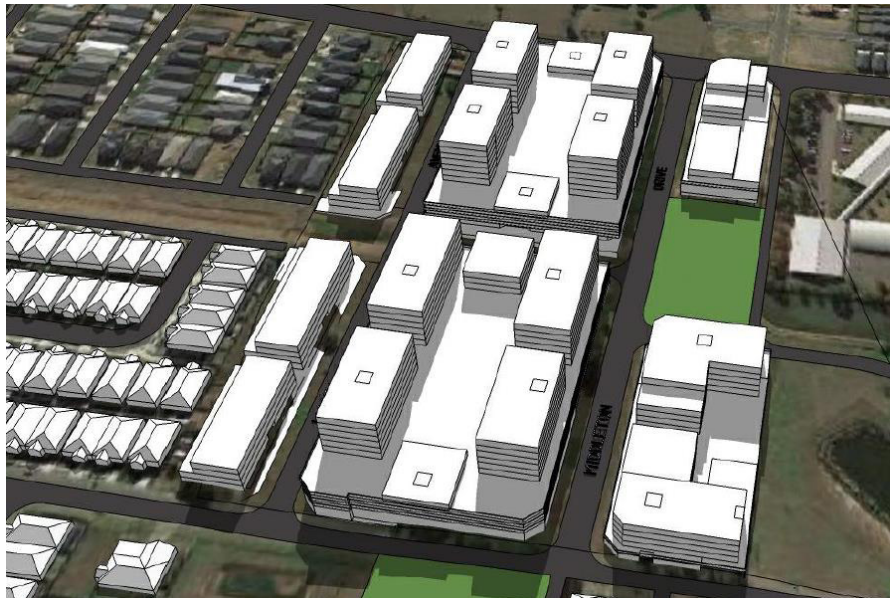
Sydenham to Bankstown Strategy - Built form and Land Use Plan 2017

Station names added for clarity.

Note: In the Drafter Strategy, higher density areas around centres were noted as being 9 storeys+, up to around 5.1:1 FSR

3 Comparison Centres

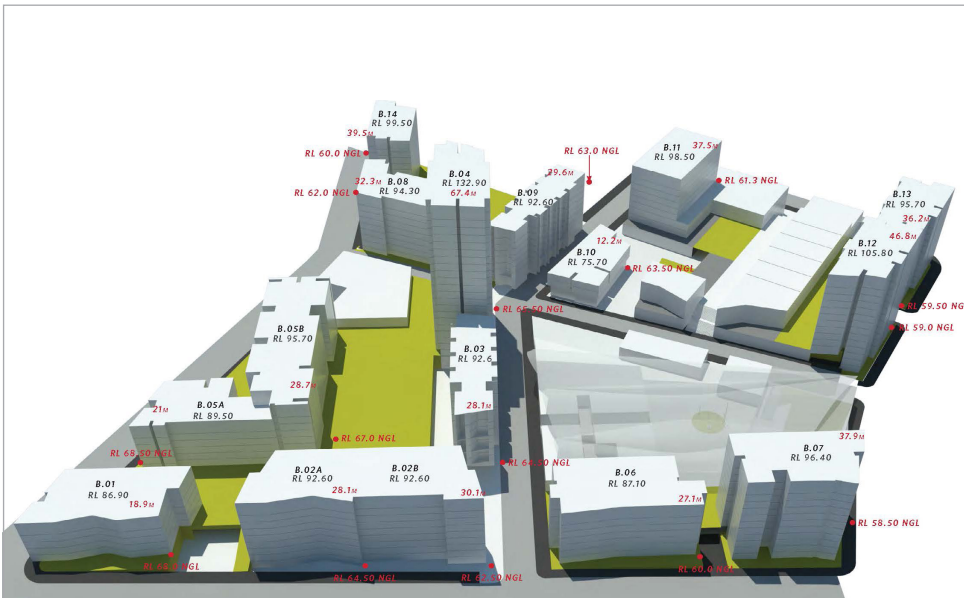
OTHER CENTRES ARE BEING PROPOSED FOR COMPARABLE GROWTH



Source: Proposed Concept Plans, Christiansen O'Brien Architects Pty Ltd

Middleton Grange

Middleton Grange, which is being publicly exhibited by Council between 29 August and 26 October 2018 with an FSR up to 2.3:1 and up to 12 storeys in height, is at the same level in the retail hierarchy as Holsworthy, however, is not serviced by a railway station as Holsworthy is.



Illustrative Design - Edmondson Park Town Centre Core - Approved MP10_0118 MOD 4 (HDR Rice Daubney 2016)

Edmondson Park

Edmondson Park, although a larger centre than Holsworthy, is introducing high-rise living up to 20 storeys (67.4m). The train journey to Central Station is half as long from Holsworthy (35 mins) as Edmondson Park (1 hour 10 mins).



Washington Park development, Riverwood - approx. 10 mins (800m) from rail station

Centres in Bankstown LGA

Panania, Revesby, Padstow and Riverwood are neighbouring centres in Bankstown LGA.

All of these centres are proposed for FSRs of 2:1-3:1 within key locations close to the railway station.

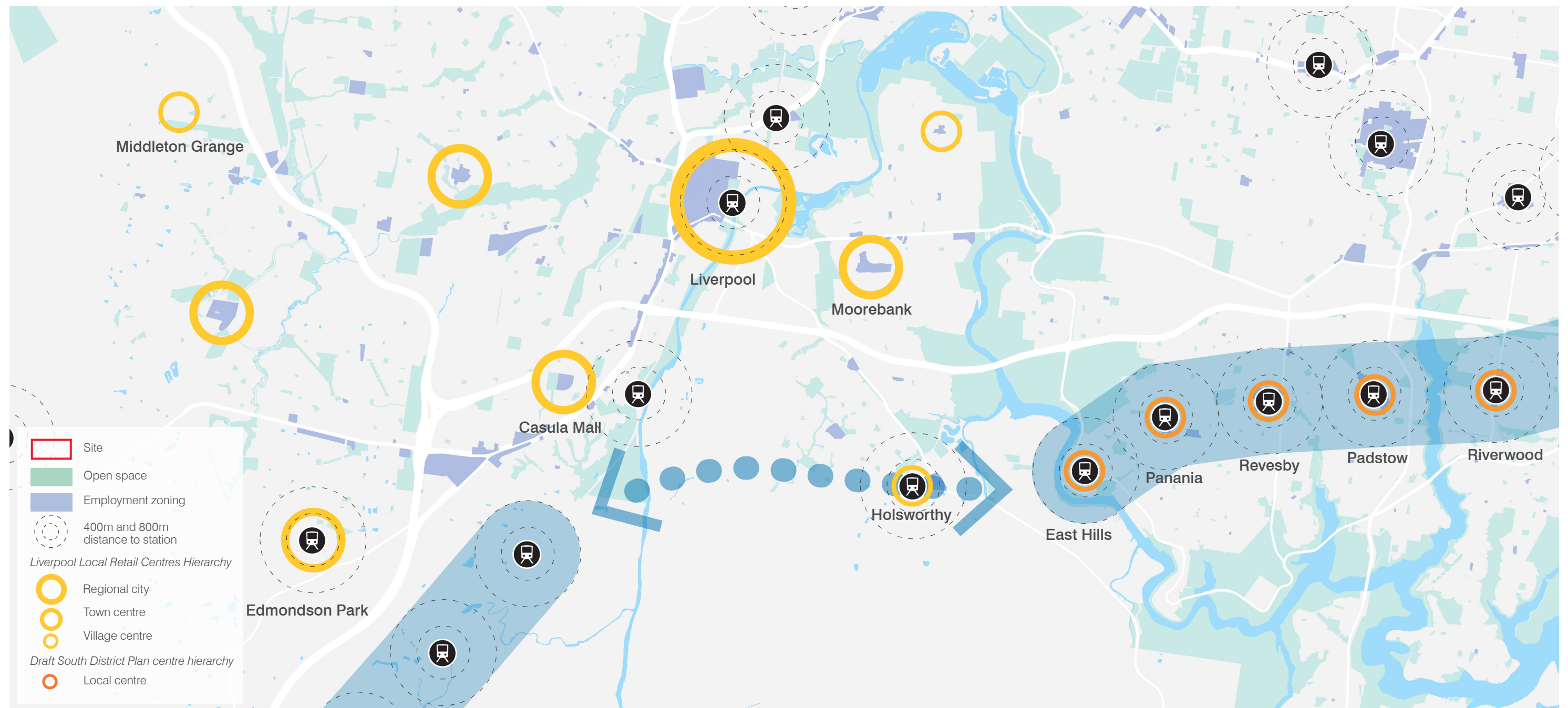
They represent a similar accessibility to Central Sydney as in Holsworthy.

4 Hierarchy of centres

RESIDENTIAL GROWTH IS APPROPRIATE WITHIN THE HIERARCHY OF CENTRES

Liverpool's 'retail centres hierarchy' was developed by HillPDA based on retail catchments. Architectus considers that the **residential densities and retail hierarchy should not necessarily be linked and this is evident in recent planning** e.g. at Middleton Grange.

Holsworthy has the opportunity to be a higher-order centre within its locality. Although a significant uplift in retail is not considered appropriate, its retail role is already greater than other centres along the railway nearby and it has the potential to provide residential growth around a railway station unlike Wattle Grove and Moorebank.



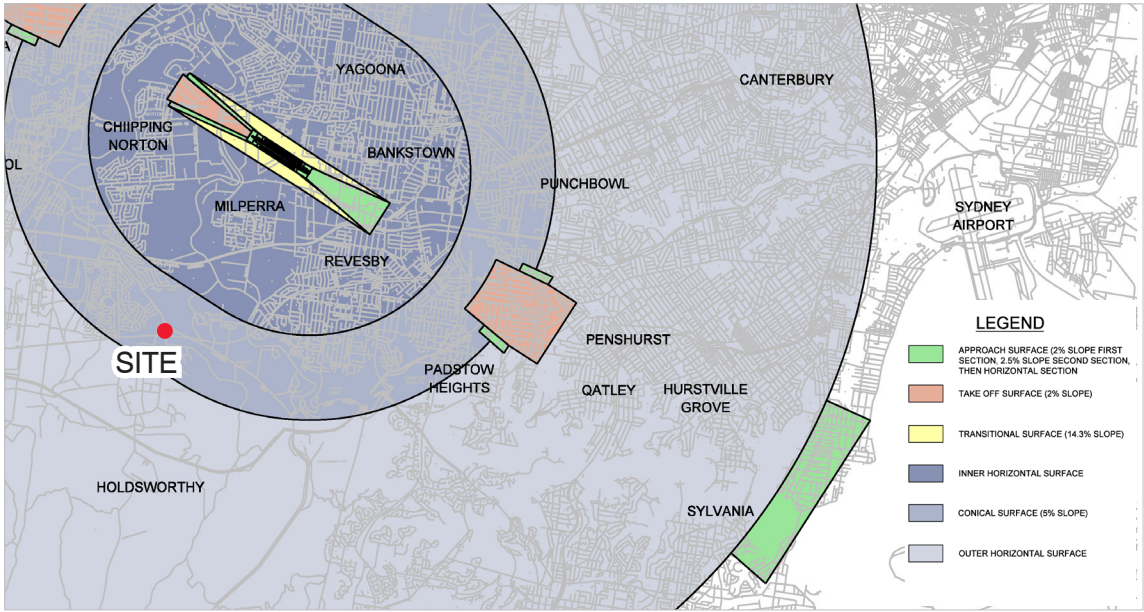
1.4 Aviation height limits

Aviation limits are not considered likely to affect development of the site based on Architectus' understanding described below.

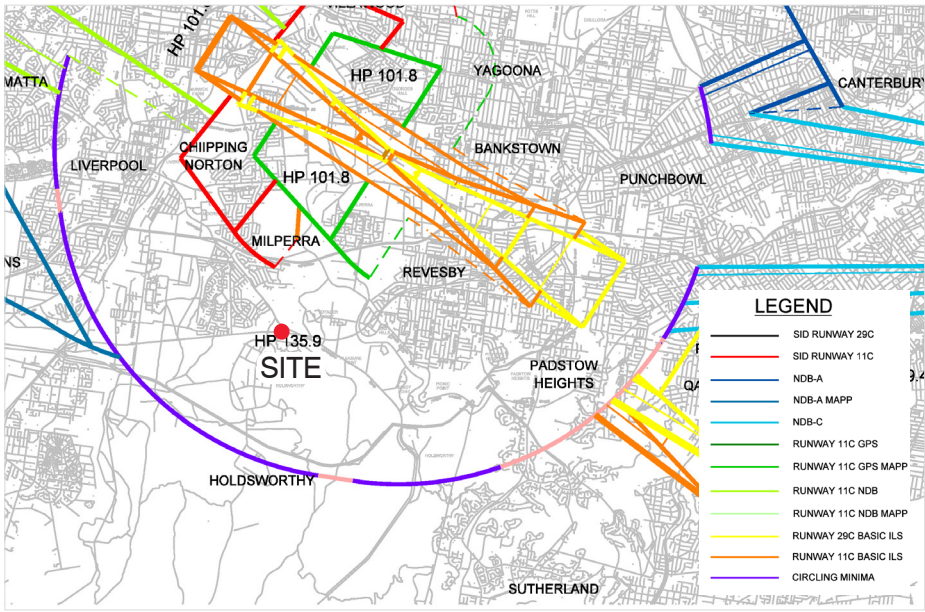
Key surfaces describing prescribed airspace are presented in the diagrams below and adjacent. It is understood that:

- Any development above the OLS surface will need approval from relevant civil aviation authorities. This is understood to be approximately 25 storeys above ground for the site (approx 100m AHD - the site is approx. 1km into the conical surface at 5% slope from the inner horizontal surface of 51m AHD).
- Development above the OLS may be acceptable up to the heights of the PANS-OPS surface, which is approximately 35 storeys for the site (135.9m AHD).

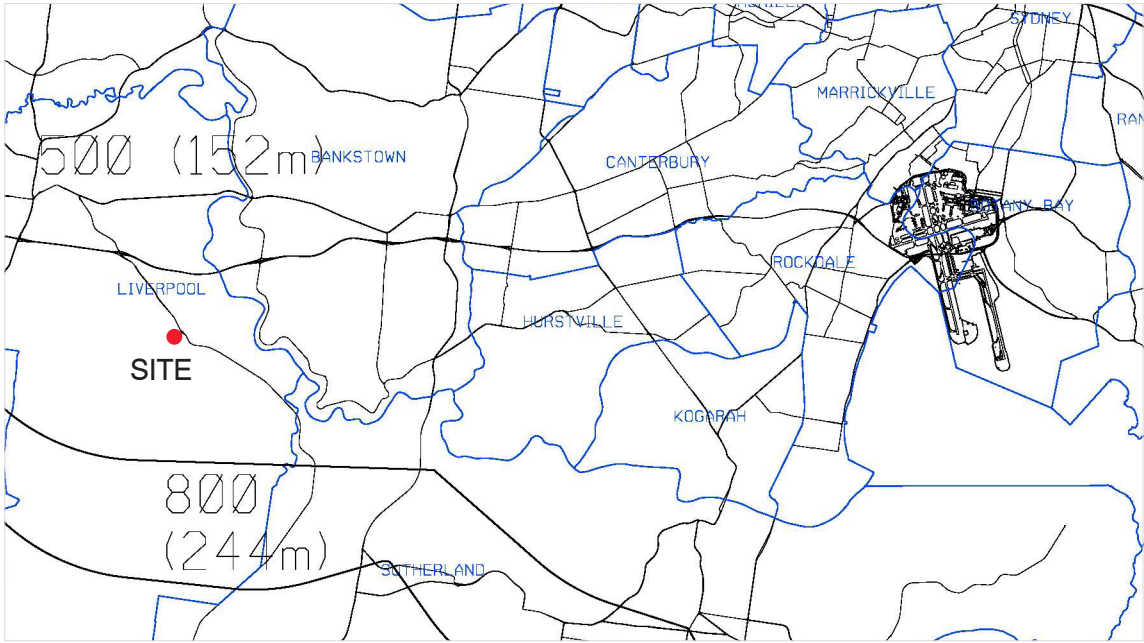
The proposed maximum building height (see final chapter of this document) will result in buildings of up to approximately RL 64m AHD.



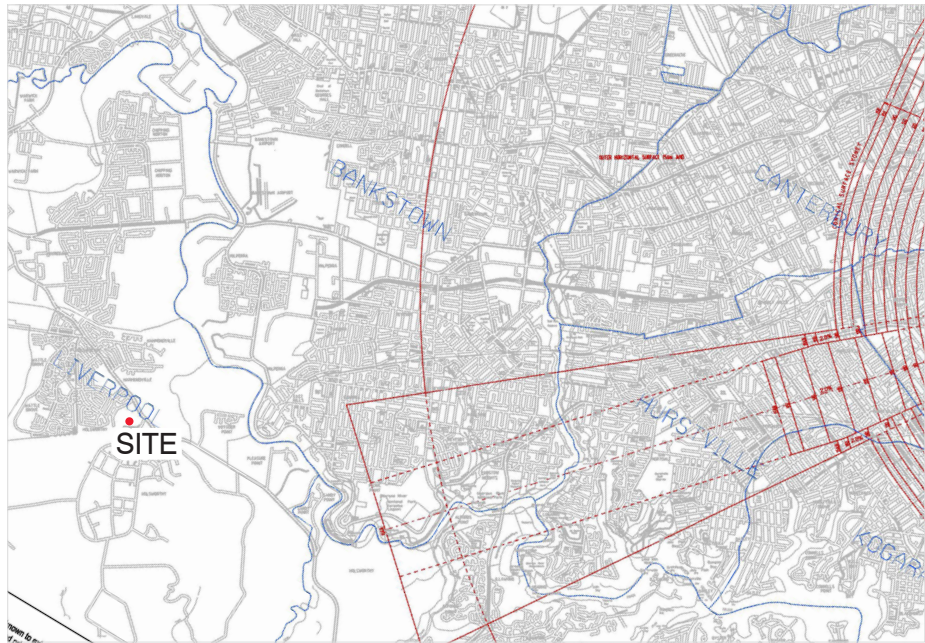
OLS - Bankstown Airport (extract)



PANS-OPS - Bankstown Airport (extract)



RTCC - Sydney Airport (extract)



OLS - Sydney Airport (extract)

● Subject site

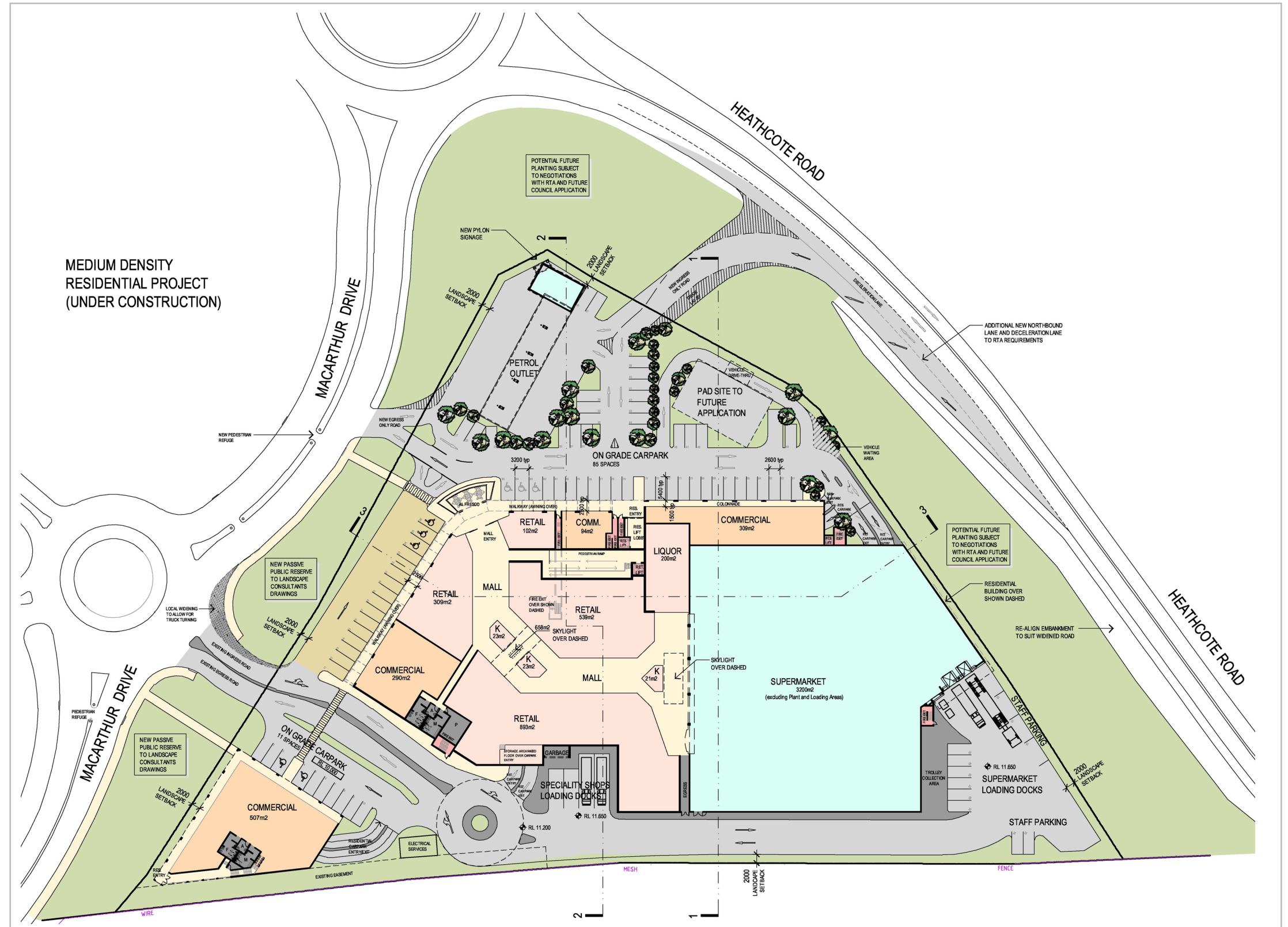
1.5 Existing approval

The site has an existing DA approval for a mixed-use development which includes retail and commercial uses at ground level and two levels of residential above.

The retail centre includes:

- Supermarket
- Internal retail mall
- Petrol outlet
- Commercial uses
- At-grade car parking
- Vehicular entries / exits from Heathcote Road and Macarthur Drive

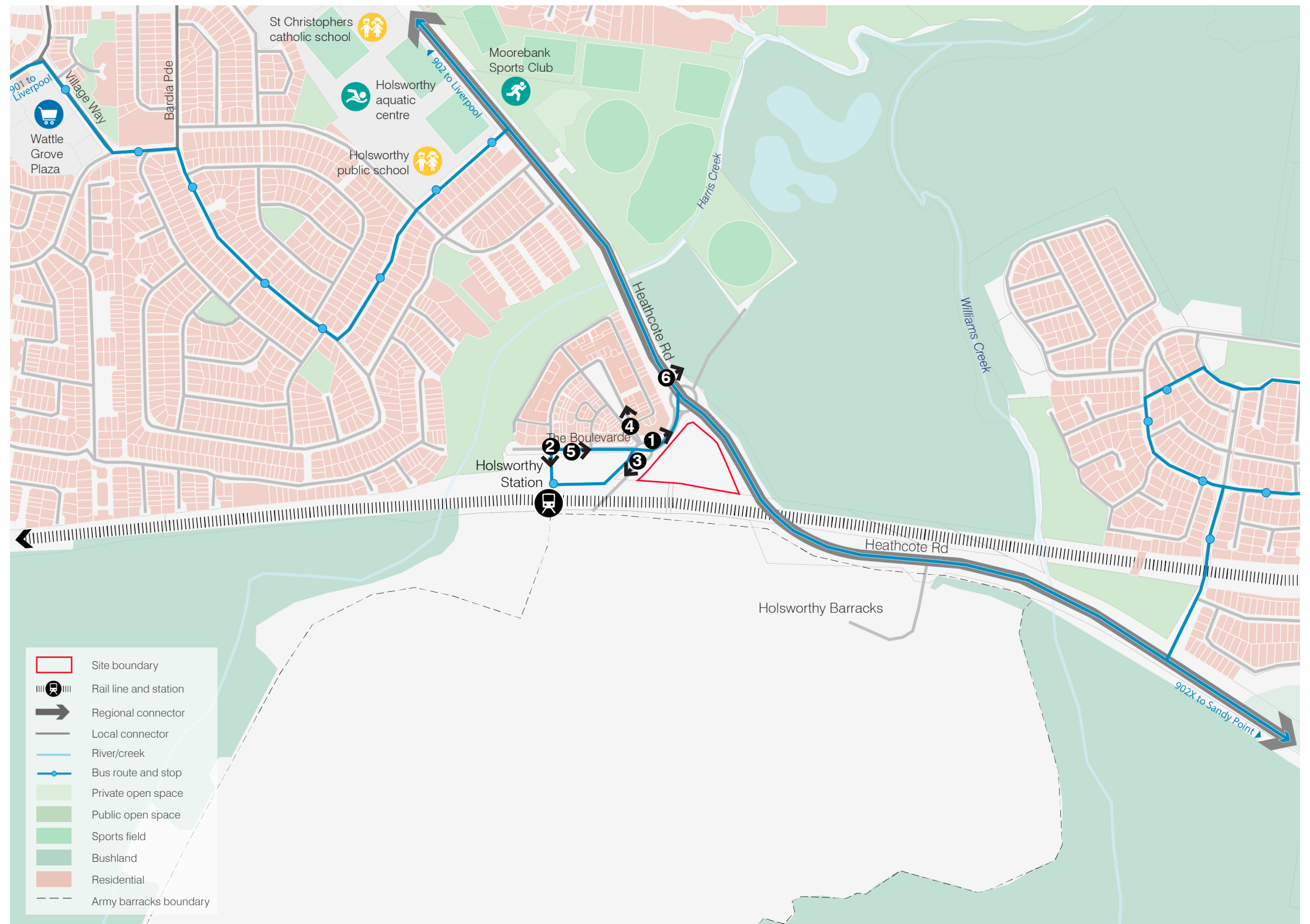
The proposal included in this document seeks a similar retail GFA to the existing approval. The proposal provides improved access to the railway station, improved relationship to streets and greater amenity for residents.



Existing DA approval for site

1.6 Local context

- The site is located adjacent to the Holsworthy railway station (200m).
- The site is surrounded by a commuter carpark to the west, a small area of detached dwellings to the north west, bushland to the north and east and Holsworthy Army Barracks to the south.
- The site is within walking distance of amenities and services within the established area of Holsworthy and adjoining Wattle Grove, to the north west of the site, including an existing local shopping centre, two primary schools, an aquatic centre and the Moorebank Sports Club.
- Holsworthy station is located on three bus routes including the 901 and 902 which connect the site to Liverpool and the 902X which connects to Sandy Point.
- Heathcote Road, immediately north of the site, is a regional arterial road. It provides good vehicular access to the site, however also acts as a barrier for pedestrian accessibility. The railway line and Holsworthy Barracks are also major barriers to connectivity to the south.
- All other roads surrounding the site are local roads, with a large number of cul-de-sacs in the area. There is an existing road entry/stump to the site provided from the roundabout at the intersection of Macarthur Drive and The Boulevard, to the west of the site. The roundabout exit to the south leads to a disused road bridge to the Holsworthy Barracks.



Site opportunities and constraints analysis

N 1:10,000 0 100 200 300 400M



1 Macarthur Drive is a landscaped local street that borders the site. On the western side of the road is an existing footpath and on the eastern side is a wide, overgrown verge.



2 The commuter carpark provides an unattractive pedestrian connection to the station.



3 Adjacent to the site is a disused road which is the former entry to Holsworthy Army Barracks.



4 The Mornington Estate adjacent to the site is primarily duplex residential developments.



5 The Boulevard leading from the site to Holsworthy station is a well landscaped street.

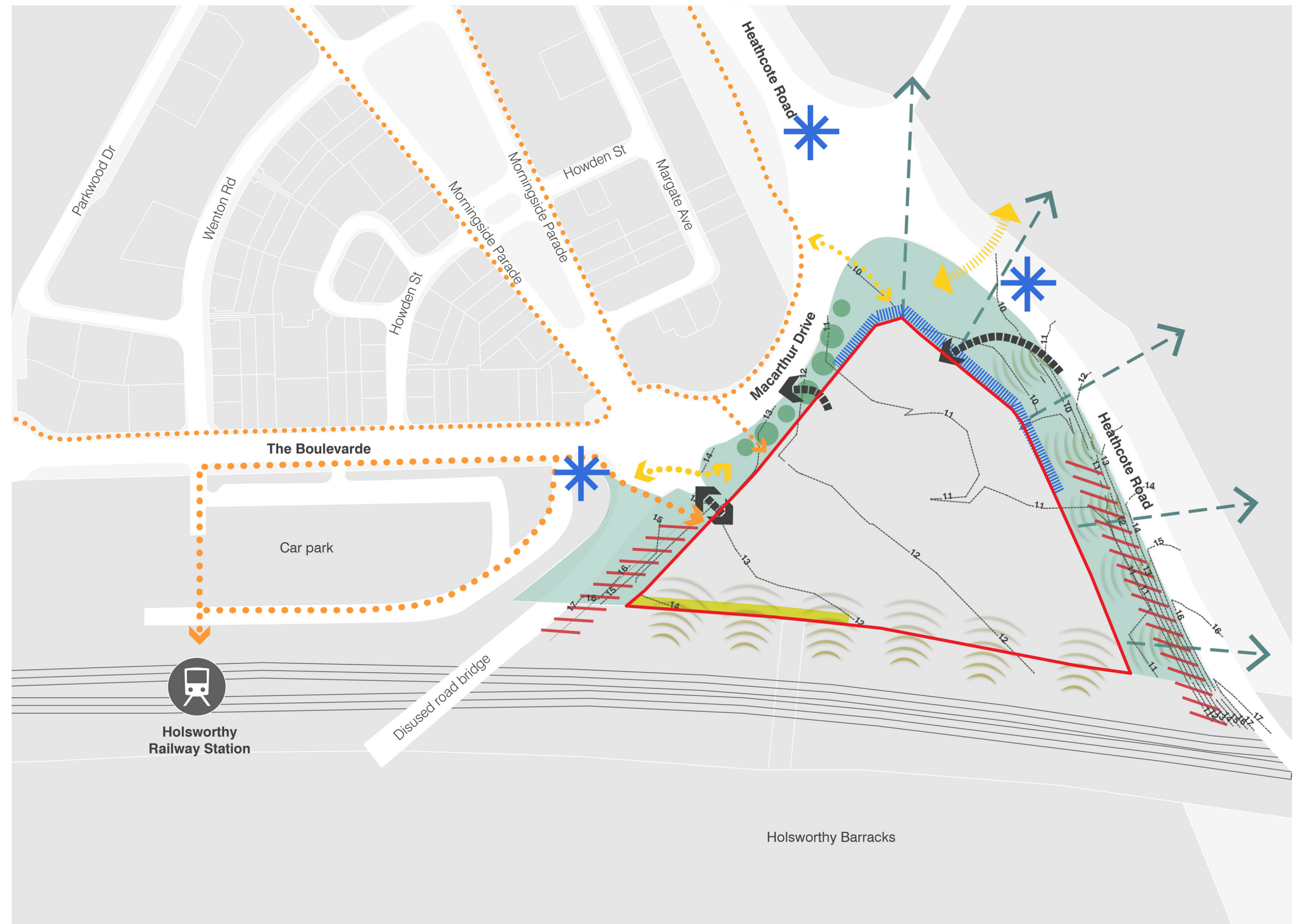


6 To the north of the site along Heathcote Rd is existing bushland.

1.7 Opportunities and constraints

- The site has a strategic location next to Holsworthy Railway Station.
- Sloping topography (4m from northern corner of site to southwest) can be utilised to provide a range of streetscape relationships. The site is partially excavated.
- The local area has a well defined network of vehicular and pedestrian links which development will need to connect.
- Extensive green verges around the site present an opportunity for improved use.
- Noise from the railway to the south and Heathcote Road to the north-east will need to be considered.
- Heathcote Road provides an opportunity for a high retail visibility to passing traffic.
- An existing services easement to the south-west presents a local constraint.
- Existing significant Bunya Pine Trees on Macarthur Road are in varying condition but mostly good health. They are an attractive feature of this frontage
- The opportunity for a future pedestrian linkage over Heathcote Road should also be considered.

- Site boundary
- Sense of arrival
- Primary frontage for road visibility
- Vehicular access to site - approved development
- Pedestrian access from railway station
- Other existing pedestrian routes
- Missing pedestrian links
- Opportunity for future pedestrian linkage
- Views from upper levels across bushland to east
- Extensive verges in front of site - potential for landscaping and use
- Services easement - southwest corner of site
- Topography (1m contour intervals)
- Major slope
- Noise from the railway line and major road
- Existing Bunya Pine trees



Site opportunities and constraints analysis

N 1:2000 0 20 40 60 80M

2 Developing the master plan

This section explains the approach for the development of the master plan. It includes:

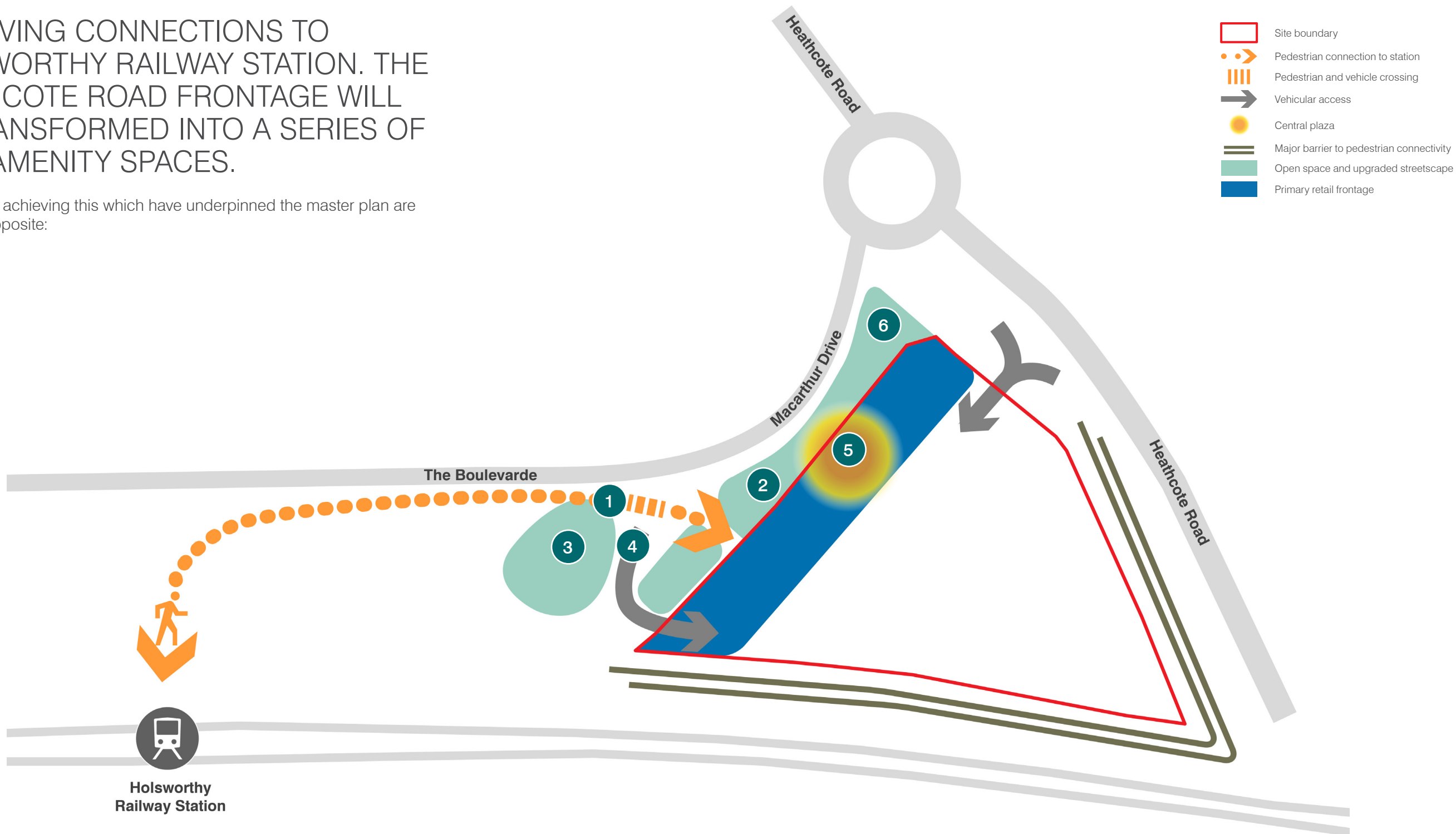
- Open space and connectivity principles to establish development of part of the centre.
- A retail vision and strategy.
- Residential case studies for the proposal including successful typologies for mixed use developments with residential over retail, as well as exemplar residential developments which abut railway lines.
- Preliminary options development for the site including options at varying heights and densities.

These have led to the development of the master plan presented in the following chapter.

2.1 Open space and connectivity principles

IMPROVING CONNECTIONS TO HOLSWORTHY RAILWAY STATION. THE HEATHCOTE ROAD FRONTAGE WILL BE TRANSFORMED INTO A SERIES OF HIGH AMENITY SPACES.

Principles for achieving this which have underpinned the master plan are described opposite:





1

Maximise pedestrian permeability and connectivity between the retail centre and the railway station, including consideration of topography.



2

Utilise Macarthur Drive as the preferred frontage for active uses and pedestrians



3

Utilise the broad verge of Macarthur Drive and the underutilised space around the former railway bridge to maximise public amenity of the area.



4

Minimise the impact of vehicles on pedestrian routes.



5

Provide well-located and attractive open spaces on site, including a public square and communal open spaces.



6

Maximising solar access to green spaces and providing shading through tree canopies is key to ensuring amenity.

THE NEW
HOLSWORTHY RETAIL
CENTRE WILL HAVE
A BUSTLING VILLAGE
FEEL AND FINE-
GRAIN HIGH STREET
APPROACH.

Expert input on a retail strategy for the site has been provided for this project by Bonnefin Property.

Vision and concept

A key intent of the retail vision and concept developed has been to ensure that the retail space adds significantly to the overall amenity of the residential component and is seen as a major contributor to the innovative design and place making strategy of the project.

In achieving this objective we want to ensure that pedestrian movement in and around the retail precinct creates activities and connections with the neighbouring residential occupants and creates an easy and logical pedestrian path directly to the railway station.

Whilst the residential component of the mixed use development will be the predominant use of the site, it is the ground floor plane that remains in the public domain and is pivotal in ensuring a successful development outcome for the site.

Future residents will want to see an active, well thought out retail precinct that addresses their every day needs and provides essential services, together with a great place to meet up, entertain, dine and relax.

Key design elements

A good retail strategy requires key urban design and place-making elements including:

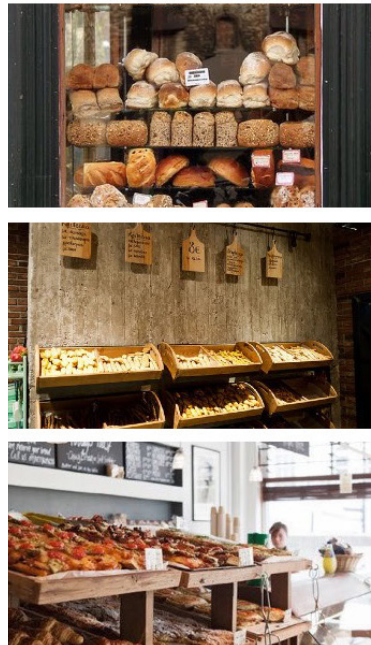
- A bustling local village feeling, trading 7 days a week.
- High Street and fine-grain approach to the design where possible - turning the retail shops towards the edges and ensuring solar access to pedestrian areas during the cooler months.
- Easy pedestrian and vehicular access in and around the site.
- Good clear sight lines through the centre.
- Centrally located vertical transportation (VT) from ground to car park.
- Covered outdoor dining areas to support a range of dining options from early morning cafe culture to
- Quick service food and casual dining.
- High quality public facilities, parent rooms, disabled access.
- Quality landscaping to support the outdoor dining.
- Night time lighting to ensure customer safety and passive security and extend the night time economy.

Perfect partners

The key to the projects success from a retail perspective is in the curation of each retail offering, understanding each business, and hand-picking each operator.

The retail uses we see working together to create an aspiration high quality, urban residential and retail precinct include the following:

- Supermarkets
- Quality Fresh Food
- Casual Dining
- Cafe Culture
- Quick Service Food
- Everyday Needs and Services
- Healthy Lifestyle Options
- Child Care



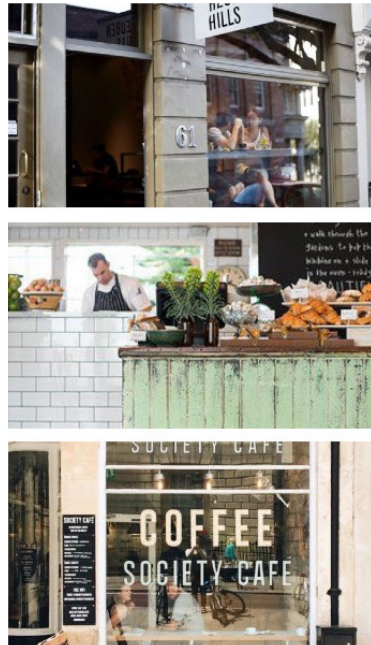
Bakery and patisserie



Quick service food options



Quality fresh food



Cafe culture



Everyday needs



Healthy lifestyle

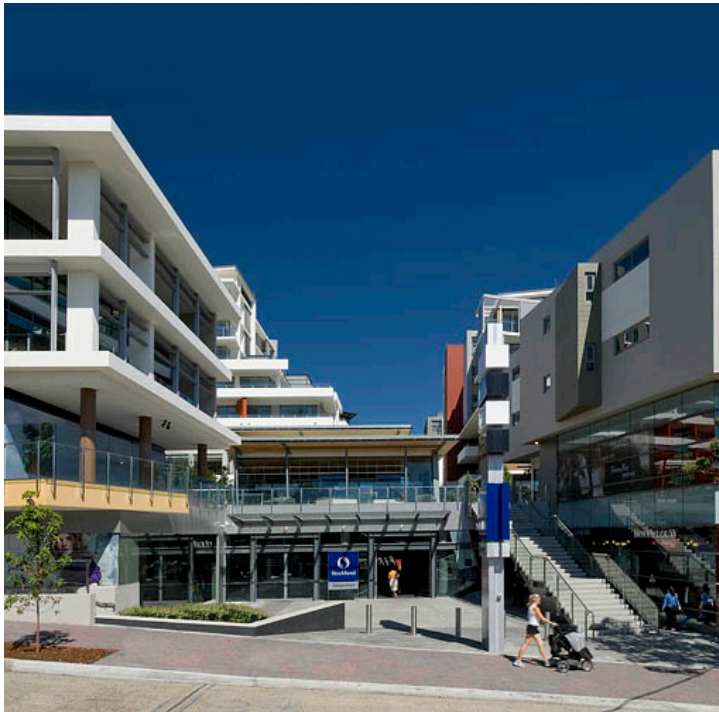
2.3 Residential case studies

Residential over retail

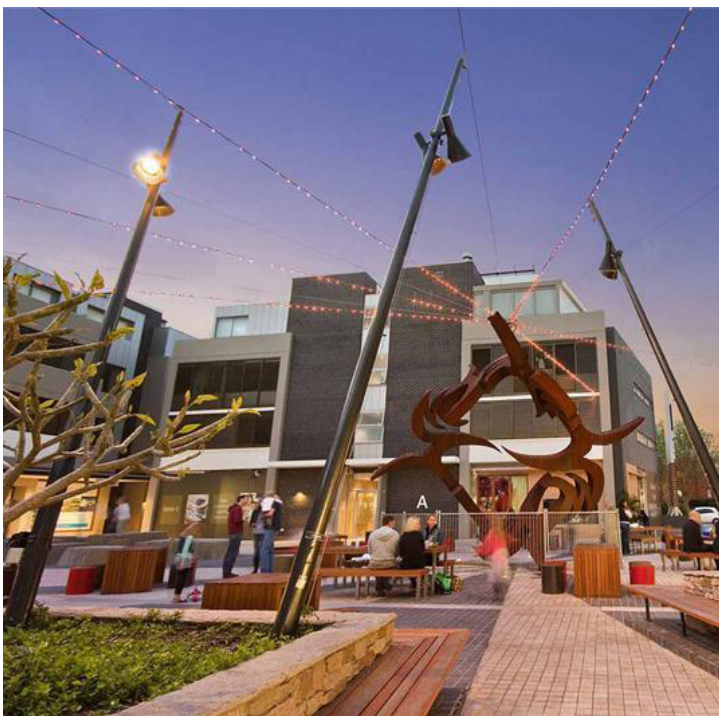
Successful developments incorporating residential and retail uses can be achieved through:

- Locating development within easy walking distance (400 metres) of high quality public transport corridors.
- Providing a range of development types that allow for a mix of day and night time activities supported by dense residential activity that aids with natural surveillance and provides a base load of activity.
- Providing high amenity open space and recreation areas.
- Ensuring that lighting, street furniture, signage, footpath treatments and safe road crossings provide a safe and legible urban realm for all users.

The images adjacent show examples of successful typologies for mixed use developments in Sydney which include retail at ground/podium level with residential apartments above. These precedents and the principles described above have been considered in developing a concept for the site.



Village Balgowlah



Cammeray Square, Cammeray



East Village, Victoria Park (South Sydney)

Railway interface

The 'Development near Rail Corridors and Busy Roads Interim Guideline (2008)' provides requirements to avoid vandalism including, where sites are less than 20m from a railway to:

- Enclose balconies
- Install louvred windows or restricted window openings
- Restrict all opening windows to maximum of 80 millimetres

The site is able to comply with these requirements through detailed design.

The images adjacent show exemplar residential developments which abut railway lines. These precedents have been considered in developing a concept for the site.



Metro Residences, Chatswood



The Forum St Leonards



Deicota Tower and Urba, Redfern

2.4 Options development

Architectus considered a range of design approaches for the site which included plan and built form options tested at varying heights and densities.

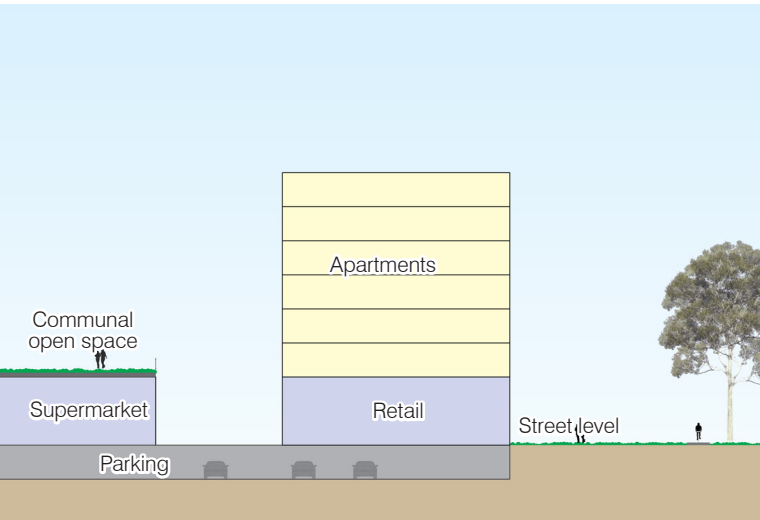
Initially a comparison of an LEP height and density compliant scheme (Option 1) was considered for two different models of retail (Options 2 and 3) at different densities.

Further analysis of the site context and review of comparison projects resulted in a better understanding of the site's capacity to accommodate density led to the development of Option 4, which investigated moving taller building forms away from the street frontage to minimise any potential impact on neighbours.

Through consideration of the site's strategic context, the role of the Holsworthy centre as a transit-oriented mixed-use development, analysis of comparable centres (see previous chapter of this report), and testing of various built form options for the site, an FSR of 2.5:1 was identified as being the most appropriate density for the site. This FSR has been used in developing the submitted master plan (Option 5)

The submitted masterplan has been revised following submission to respond to Council's concerns, including reducing the building height and bulk, especially Macarthur Drive. The final master plan is presented in the following chapter.

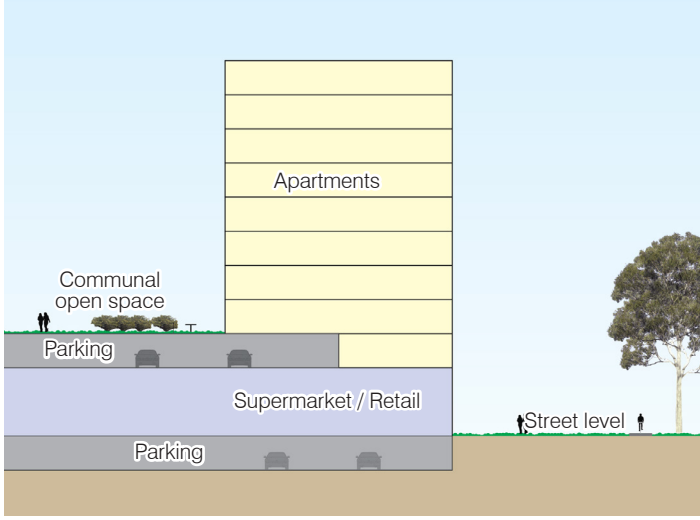
Option 1 - Compliant - 1.5:1 FSR



Typical section with open air link

- Compliant with existing controls
- 7 storeys
- Long building forms
- Large roof top over supermarket provides poor outlook for residential
- May not be the best strategic use of land

Option 2 - Central courtyard - 2.25:1



Typical section residential over supermarket

- Up to 16 storeys
- Remains below potential FSR of sites of similar strategic significance in Edmondson Park
- Open space created internally to provide address to residential uses further from street frontage
- Residential uses and communal open space over supermarket/shops

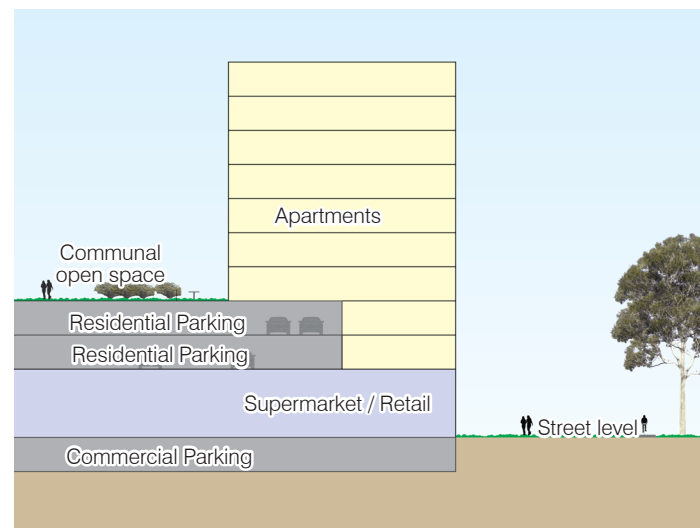
Option 3 - Raised open space - 2.5:1



Option 4 - Rotated towers - 2.5:1 FSR

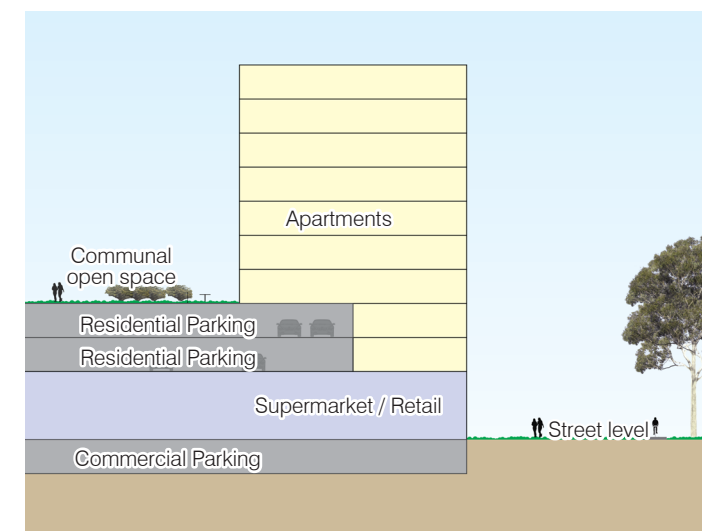


Option 5 - Parallel towers - 2.5:1 FSR (Preferred master plan as submitted in October 2017)



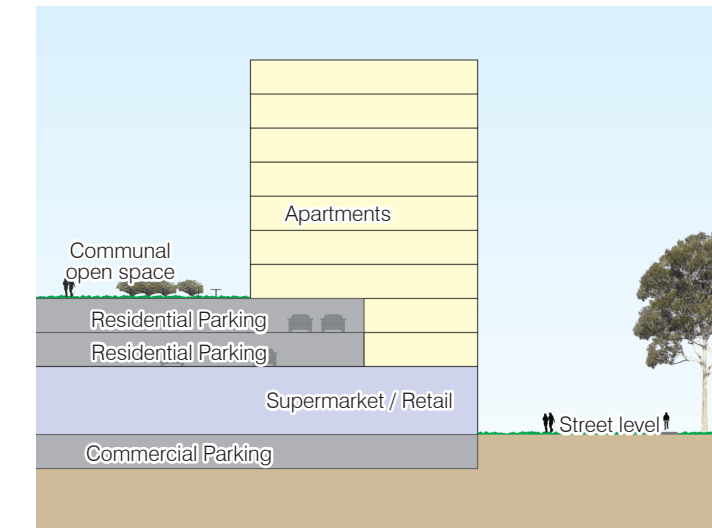
Typical section residential over supermarket

- Up to 21 storeys
- Similar FSR to sites of similar strategic significance in Edmondson Park
- Apartments accessed from the street, with communal open space over retail



Typical section residential over retail

- Two towers up to 19 storeys
- Tower rotated to reduce visual impact to low scale residential
- Similar FSR to sites of similar strategic significance in Edmondson Park
- 8 storey buildings widened to allow for double-loaded apartments



Typical section residential over retail

- Three parallel towers up to 14 storeys and four 9 storey buildings reduces height of development
- Courtyard, retail frontage and residential entrance orientated to Macarthur Drive primary frontage
- Similar FSR to sites of similar strategic significance in Edmondson Park



3 Master plan



3.1 Master plan key principles



A new **strategically located centre** adjacent to Holsworthy Railway Station.



A new **active public square** at the heart of the centre, activated by a retail frontage along Macarthur Drive with the opportunity for alfresco dining.



Improved **pedestrian connections to the station.**



High quality landscaping of Macarthur Drive and Heathcote Road for positive visual impact and to allow the provision of shading by trees in summer.



Slender residential buildings on the podium at varying heights up to 12 storeys.



Delivery of approximately 350 apartments with excellent amenity including access to communal open space, communal and public facilities and public transport.



An attractive and successful retail centre. The design includes ground floor retail anchored by large and small supermarkets (e.g. Woolworths/Coles, Aldi) together with supporting specialty retail





Heathcote Road
upgrades by RMS

Proposed
amendments to
intersection

6st

8st

12st

11st

6st

8st

1st

6st

12st

7st

11st

9st

N 1:1000 0 10 20 30 40M

3.2 Desired character

Holsworthy Square

A bustling local village feel is created for the centre with active retail frontages centred around a new public square providing spaces for outdoor dining, informal meetings and passive recreation. A pedestrian promenade along Macarthur Drive with generous footpaths and high quality landscaping ensures an inviting front door to the centre is created.



Heathcote Road

The proposed three storey podia provides an appropriate scale and feel, sympathetic to the existing neighbouring residential dwellings. Slender, articulated buildings with high quality designs and height variations ensure variety and visual interest in the building forms over the podium.



Macarthur Drive

New high quality hedging and pedestrian paths will ensure good pedestrian accessibility and legibility to the centre from the station. Existing street tree coverage ensures taller residential buildings have minimal visual impact from street level.



FOUR KEY OPEN SPACE
CHARACTER AREAS HAVE
BEEN DEFINED



Principles for the open space character areas are as follows:

1

Holsworthy Square

- Create a focal space for Holsworthy
- Create a focal space for retail activity
- Utilise planting to create a high quality amenity space
- Provide a buffer between active places and the noise of Macarthur Drive
- A small staged space can provide form informal performance, small retail events or demonstrations
- Include tree cover to provide shade and enhance the green setting of Macarthur Drive

2

Macarthur Drive

- Transform Macarthur Drive into ‘Main Street’ of active uses
- Link the proposal’s residential and retail ‘front doors’ to Holsworthy Railway station with a series of attractive spaces
- Create a series of new spaces and places that provide amenity to the wider community
- Provide for active ground floor uses
- Deal with changes in topography appropriately
- Enhance the tree cover and setting of Macarthur Drive
- Include public art

3

Heathcote Road

- Create an active path
- Provide a visually attractive frontage to Heathcote Road
- Utilise the opportunity for quieter spaces away from the primary retail activity
- Deal with topography
- Provide a ‘front door’ to residential buildings facing Heathcote Road
- Allow for the potential for a future connection across Heathcote Road should this be proposed by Council
- Improve the landscape amenity of RMS land through appropriate planting where possible

4

Residents open space

- Create high quality amenity for residents and users (such as rooftop childcare), including outdoor spaces
- Create excellent access to the street and station for all residential users through a generous landscaped staircase and lift access
- Create an attractive green outlook for residents
- Utilise opportunities for skylights e.g. a water covered skylight over the central retail spine

3.4 Public domain and open space precedents



Hedges help enclose and define spaces.



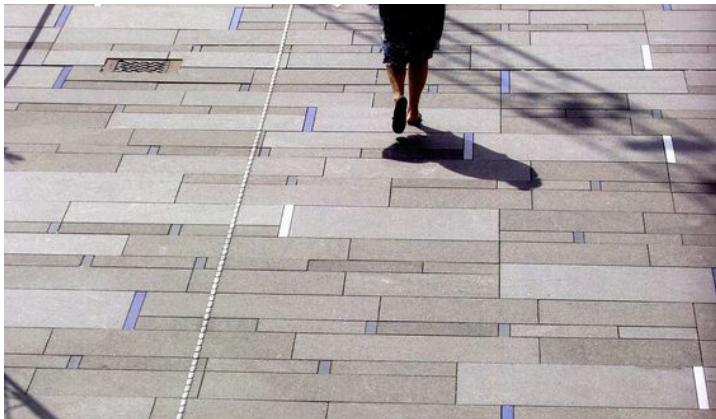
Paving design assists in defining spaces and intuitive wayfinding.



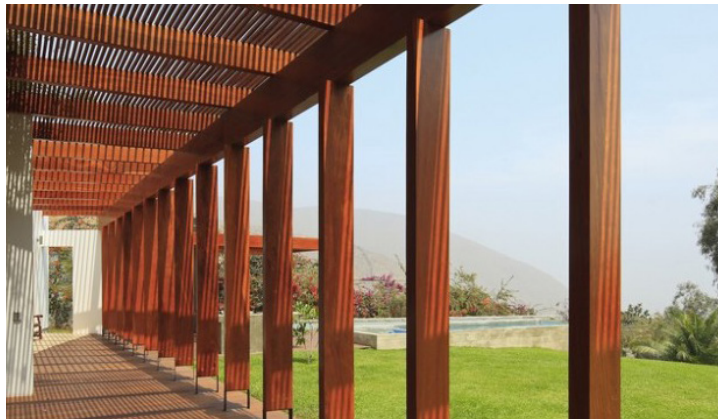
Shade structure adjoining building.



Paving pattern for private garden courtyard spaces.



Irregular paving pattern to add visual interest.



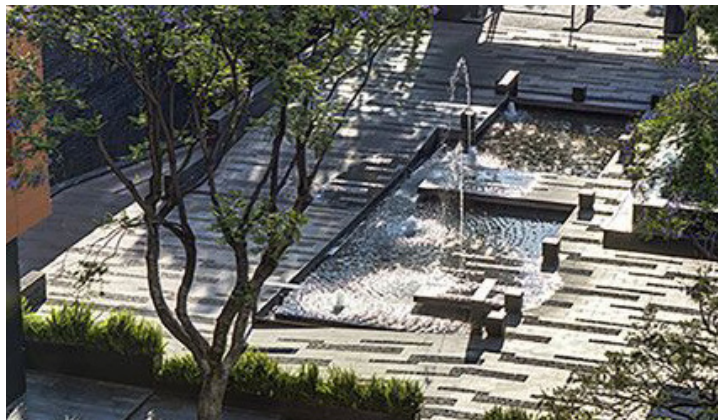
Pergolas provide shade and a comfortable space to sit and walk



Accent plants provide interest and colour.



Raised planters also provide additional seating options.



Water elements add interest and cool ambient temperature.



Terracing is enhanced by planting.



Curved terraces assist level changes and add visual interest.



Steps are generous in length and accompanied by ramps for access.



Green walls assist temperature control and add year round interest.



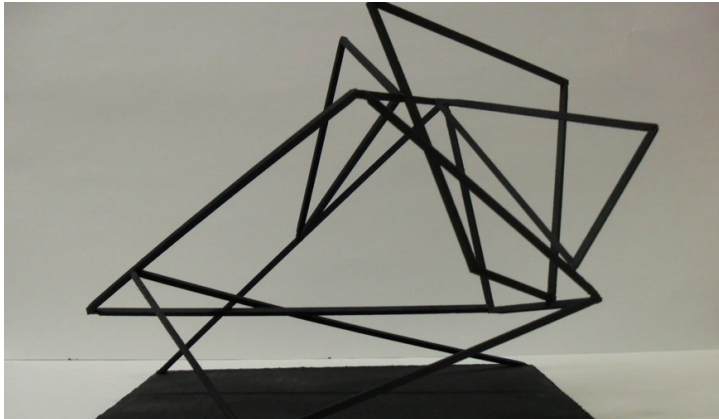
Climbing plants extend green.



Large planting pots.



Play will be important on the podium level, especially for toddlers.



Public art adds interest to the streetscape and front plaza.



Ample and comfortable seating in shade is key to socialising.

3.5 Illustrative floor plans

Illustrative floor plans

The plans presented over the following pages demonstrate the indicative layout for the site.

Final designs for the site will be subject to future development application(s).



- 1 BED
- 2 BED
- 2 BED 2 STOREYS
- 3 BED
- 3 BED 2 STOREYS
- CORRIDOR/LOBBY
- PRIVATE OPEN SPACE
- COMMUNAL FACILITIES
- NON-TRAFFICABLE GREEN ROOF

- Solar access 2 hours or greater
- Solar access 2 hours or greater via roof skylight on top level
- Cross ventilated
- Cross ventilated via roof skylight on top level

- 1 BED
- 2 BED
- 3 BED
- CORRIDOR/LOBBY
- UPPER LEVEL OF 2 STOREYS



Level 1 layout

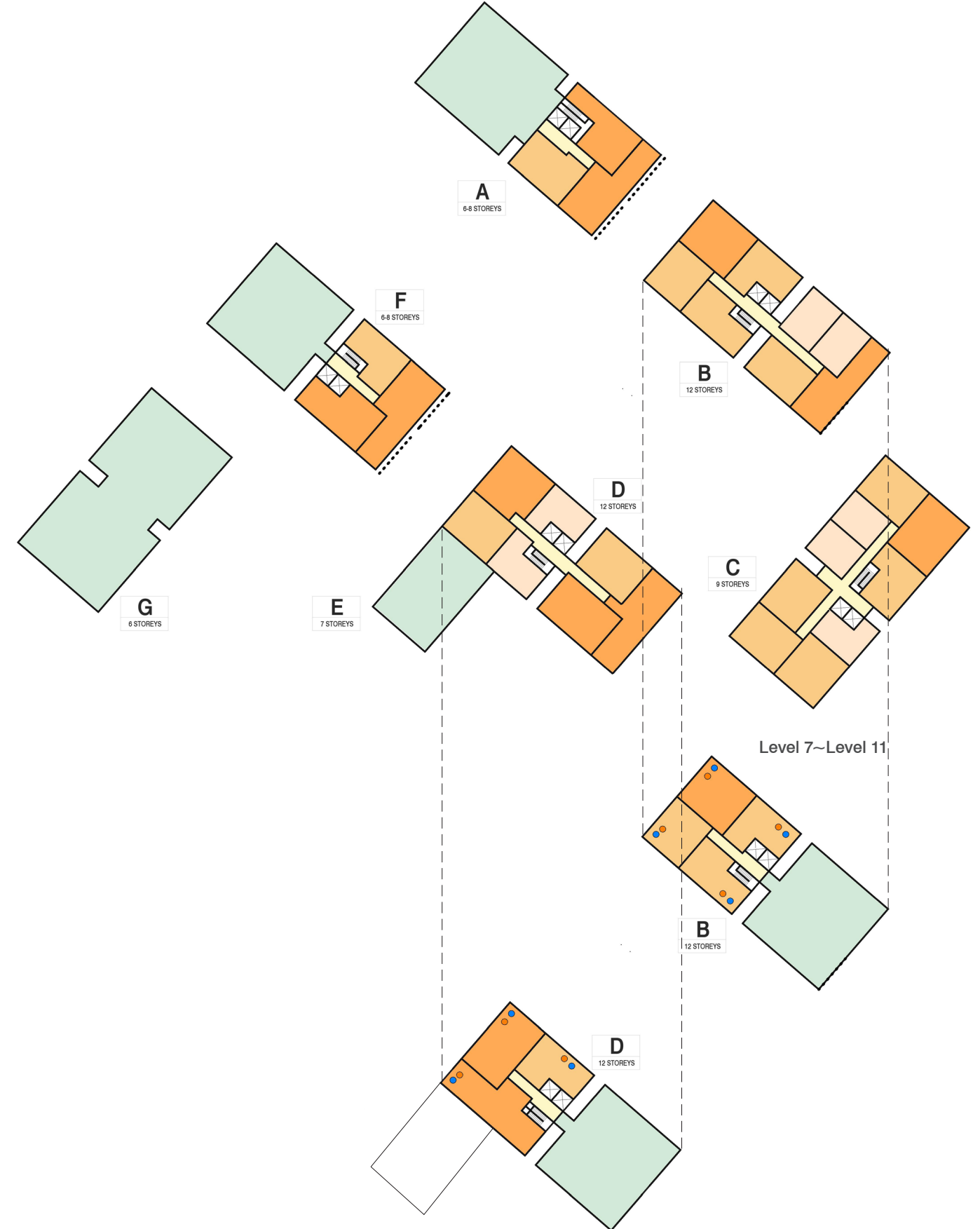
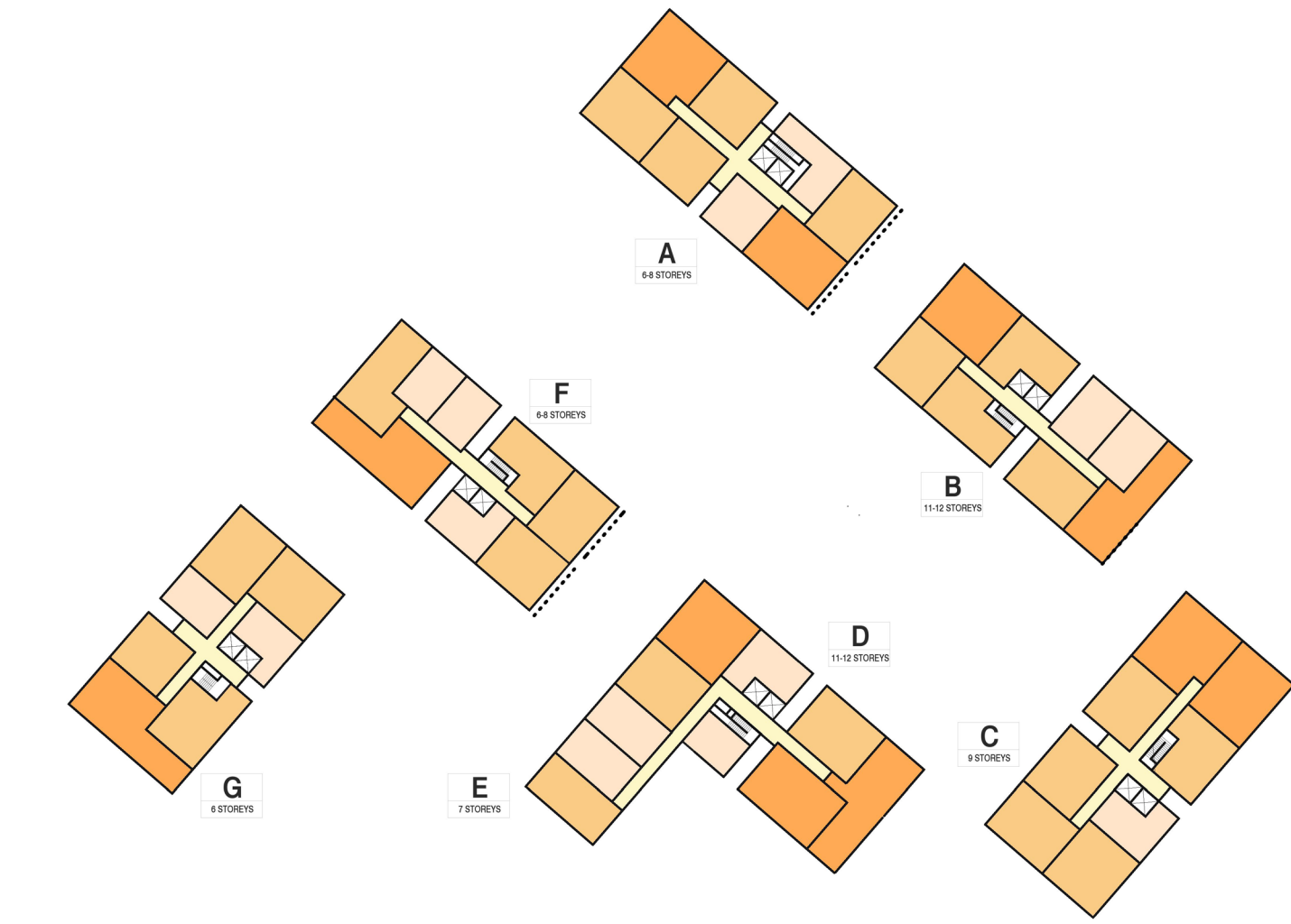


Level 2 layout

- 1 BED
- 2 BED
- 3 BED
- CORRIDOR/LOBBY
- ROOF TOP
- NON-HABITABLE FACADE (HIGH LEVELS OR TRANSLUCENT WINDOWS ONLY)

- Solar access 2 hours or greater
- Solar access 2 hours or greater via roof skylight on top level
- Cross ventilated
- Cross ventilated via roof skylight on top level

Level 3~6 Typical layout



Level 12 Penthouse

- CORRIDOR / LOBBY
- RETAIL+VISITOR PARKING
- SERVICE

- BYCECLE PARKING
- CORRIDOR / LOBBY
- RESIDENTIAL PARKING
- SERVICE



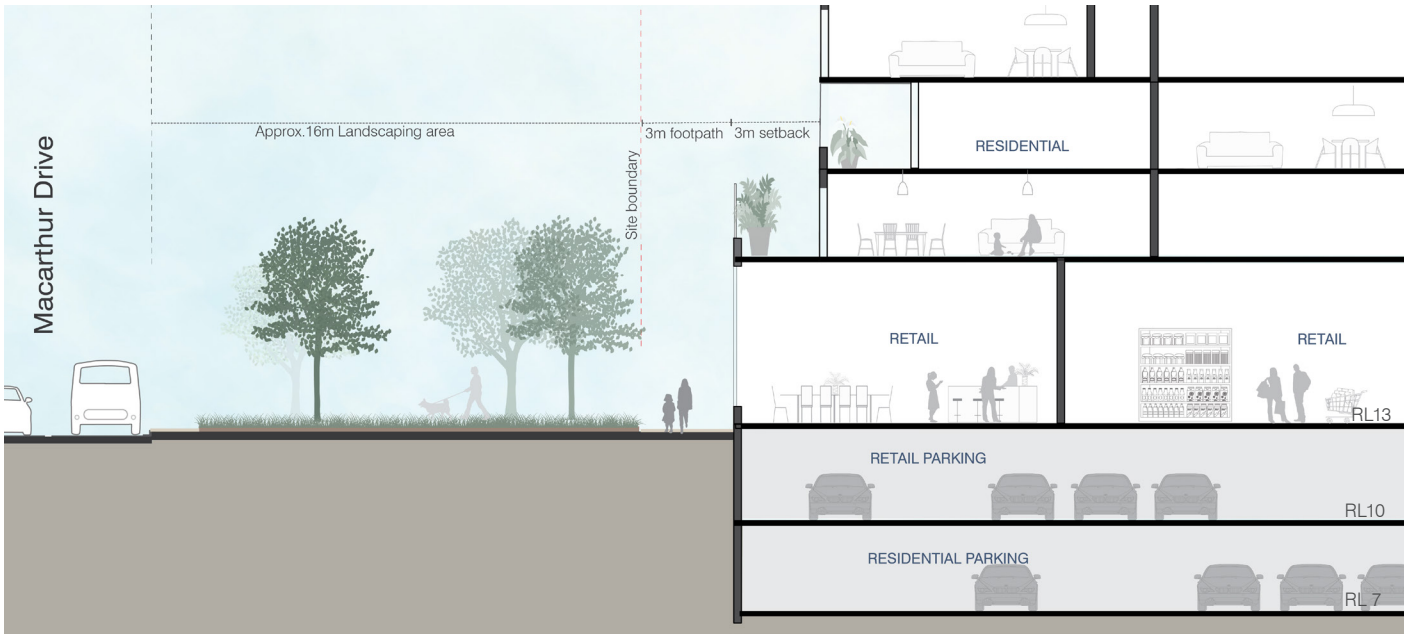
Basement level 1 retail parking layout



Basement level 2 residential parking layout

3.6 Illustrative sections

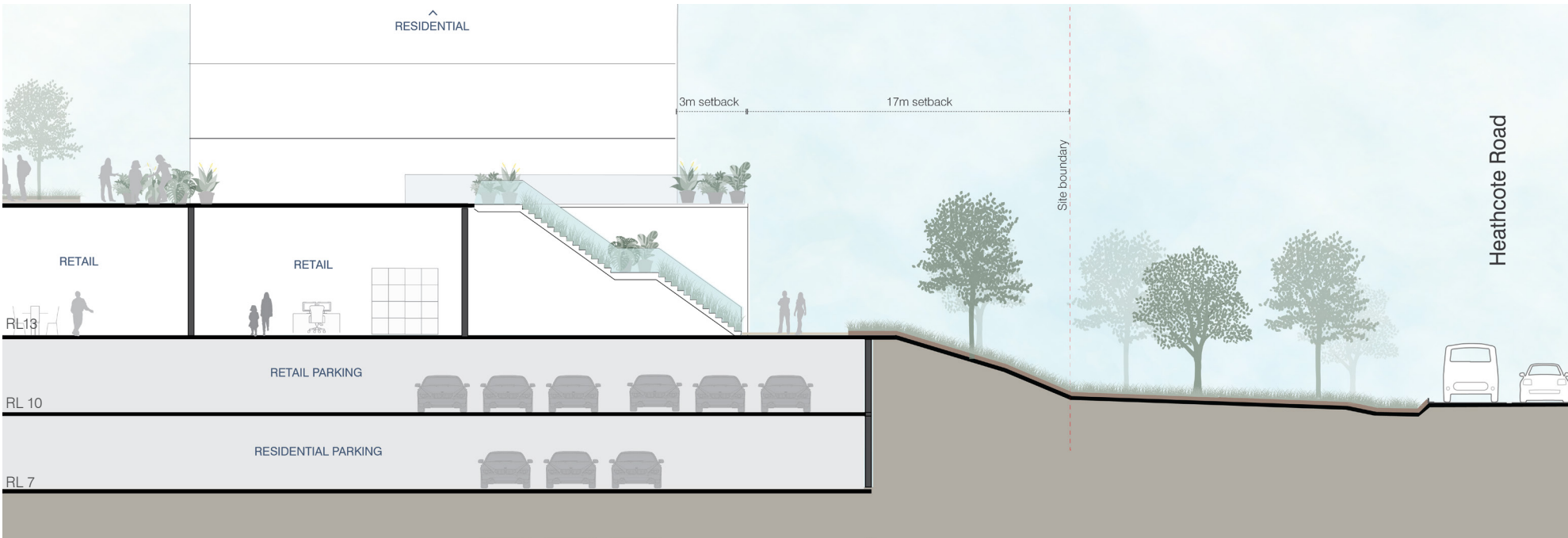
These sections have been developed in conjunction with the illustrative floorplans above and describe the relationship between different uses and the topography across the master plan.



① Macarthur Drive section



Site plan with section locations



② Heathcote Road stair section



3.7 Schedule of areas and SEPP65 compliance

The schedules adjacent demonstrate calculations used in this master plan. Key figures are as follows:

- Total GFA 40000sqm, including:
 - 31035 sqm residential (350 apartments)
 - 8965 sqm retail (approx. 8804sqm GLA)
- Parking can be provided within 2 levels of basement parking (retail parking and residential parking)
- The proposal is capable of achieving SEPP65 solar compliance and cross ventilation requirements

Assumptions:

- Ground floor
- GBA and GLA as illustrative floor plans
 - GFA as 85% of GBA (including amenities, corridor, office)

- Level 1 and above
- GFA as 75% of envelope area.

Schedule of GFA

Based on illustrative floor plans (ground floor retail) and building envelopes (typical)

Retail			
Ground	GBA sqm	GLA	
SM	3,440	3,440	
SM BOH	656	656	
SSM	1,218	1,218	
SSM BOH	379	379	
Retail -A	468	468	
Retail -B	659	659	
Retail -C	400	400	
Retail -D	572	572	
Retail -E	1,012	1,012	
Amenities	221		
Corridor	1,389		
Office	133		
Total	10,547	8,804	

Residential			
Building No.	Levels	Envelope area	Total Area
A	5	880	5240
	2	420	
B	10	880	9240
	1	440	
C	8	940	7520
D	10	860	8600
	1	420	
E	6	260	1560
F	5	840	5000
	2	400	
G	5	760	3800
Total			41380

Community Centre		
Building F	Ground floor	355
Site Area		18620
Total Use	GFA	FSR
Residential	31,035	1.67
Retail	8,965	0.48
Community Centre		
Total	40,000	2.15

Schedule of apartments

Based on illustrative floor plans

Building No.	No.of storeys		1B	Total 1B	2B	Total 2B	3B	Total 3B	Total No. of apartments
A	Terrace Apt Lower	1	0	0	9	9	3	3	12
	Terrace Apt Upper	1	0	0	0	0		0	0
	Typical level	3	2	6	4	12	2	6	24
	Penthouse level	2	0	0	1	2	2	4	6
B	Terrace Apt Lower	1	2	2	8	8	3	3	13
	Terrace Apt Upper	1	0	0	0	0	0	0	0
	Typical level	8	2	16	4	32	2	16	64
	Penthouse level	1	0	0	3	3	1	1	4
C	Typical level	8	1	8	5	40	2	16	64
D	Entry level	1	2	2	2	2	3	3	7
	Typical level	9	2	18	2	18	3	27	63
	Penthouse level	1	0	0	1	1	2	2	3
E	Typical level	6	2	12	1	6	0	0	18
F	Terrace Apt Lower	1	0	0	5	5	1	1	6
	Terrace Apt Upper	1	1	1	3	3	0	0	4
	Typical level	3	3	9	4	12	1	3	24
	Penthouse level	2	0	0	1	2	2	4	6
G	Terrace Apt Lower	1	1	1	8	8	2	2	11
	Terrace Apt Upper	1	0	0	0	0		0	0
	Typical level	3	2	6	4	12	1	3	21
				81		175		94	350
% of units mix			23.1%		50.0%		26.9%		

Car parking requirements

Based on illustrative floor plans

Parking requirement	Requirement	Per unit	Number of units in illustrative floor plans	Required spaces	Sqm GBA / car park area	Total approx. sqm
Residential - 1 bedroom unit	0.6	apartment	81	49	42	2,041
Residential - 2 bedroom unit	0.9	apartment	175	158	42	6,615
Residential - 3 bedroom unit	1.4	apartment	94	132	42	5,527
Visitor	1/5	apartment	350	70	42	2,940
Supermarket + shops	1/20	sqm GLA	8804	440	36	15,847
Sub-total Residential				408		17,123
Sub-total Commercial				440		15,847
Total				848		65,941

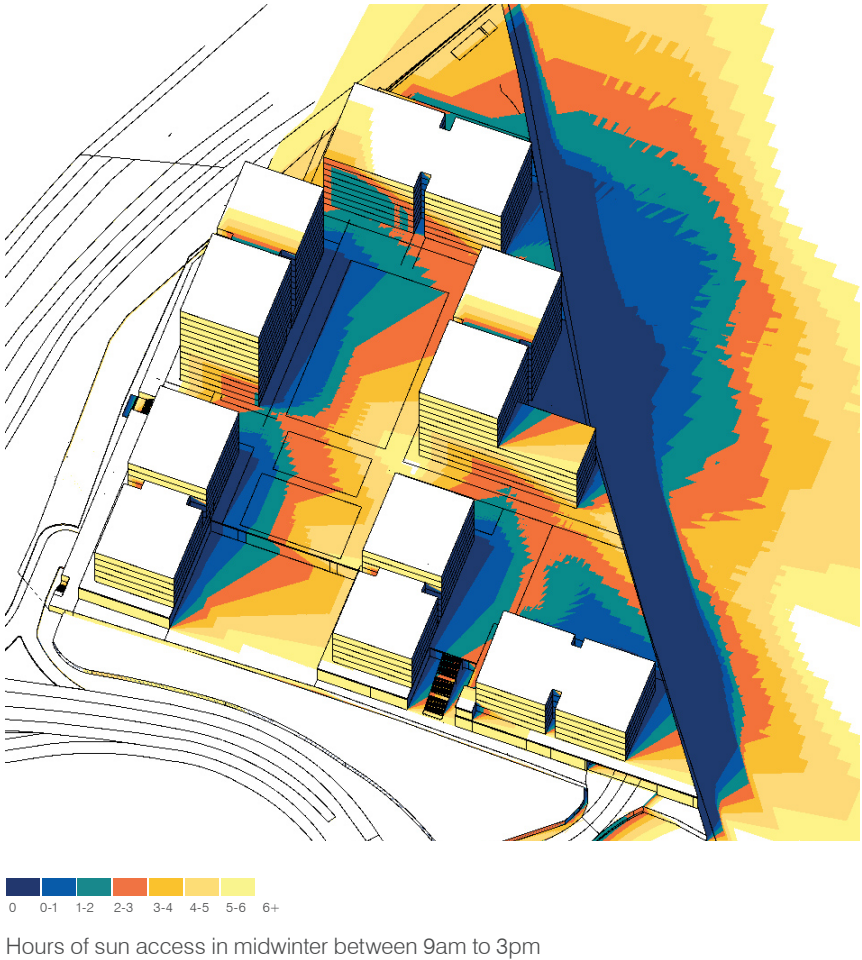
Schedule of SEPP65 solar compliance

Based on illustrative floor plans

Building No.	Levels	No. of storeys	Number of apartments per storey	Total number of apartments	Solar access > = 2hrs in mid winter)		
					No. of apartment on typical storey	Adjustment for non typical storey	Total number of apartments
A	Terrace Apt Lower	1	12	12	10		10
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	8	24	5		15
	Penthouse level	2	3	6	3		6
B	Terrace Apt Lower	1	13	13	10		10
	Terrace Apt Upper	1	0	0	0		0
	Typical level	8	8	64	6		48
	Penthouse level	1	4	4	3		3
C	Typical level	8	8	64	5	-3	37
D	Entry level	1	7	7	5		5
	Typical level	9	7	63	5		45
	Penthouse level	1	3	3	3		3
E	Typical level	6	3	18	3		18
F	Terrace Apt Lower	1	6	6	5		5
	Terrace Apt Upper	1	4	4	2		2
	Typical level	3	8	24	6		18
	Penthouse level	2	3	6	3		6
G	Terrace Apt Lower	1	11	11	9		9
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	7	21	5		15
Total				350			255
% achieved apartments with 2hrs or greater solar access							72.9%
Requirement SEEP65-4A-1 Criteria 1							70.0%
Compliant							Yes

This image describes the number of hours of sunlight achieved within each block of the proposal. It has been used in conjunction with the illustrative floor plans to develop a schedule of SEPP65 compliance for solar access.

It also demonstrates solar access to the open spaces proposed.



Schedule of SEPP65 cross-ventilation compliance, first nine storeys

Based on illustrative floor plans on first nine storeys

Building No.	Levels	No. of storeys	Number of apartments per storey	Total number of apartments	Cross ventilated apartments		
					No. of apartment on typical storey	Adjustment for non typical storey	Total number of apartments
A	Terrace Apt Lower	1	12	12	11		11
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	8	24	4		4
	Penthouse level	2	3	6	3		6
B	Terrace Apt Lower	1	13	13	11		11
	Terrace Apt Upper	1	0	0	0		0
	Typical level	6	8	48	8		48
	Penthouse level	0	3	0			
C	Typical level	8	8	64	4		32
D	Entry level	1	7	7	6		6
	Typical level	7	7	49	7	-2	47
	Penthouse level	0	3	0			
E	Typical level	6	3	18	3		18
F	Terrace Apt Lower	1	6	6	6		6
	Terrace Apt Upper	1	4	4	4		4
	Typical level	3	8	24	7		21
	Penthouse level	2	3	6	3		6
G	Terrace Apt Lower	1	11	11	10		10
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	7	21	3		9
				313	239		
*	Adjusted storey numbers based on the first nine storey in consideration (SEEP65-4B-3 Criteria 1)						
% achieved apartments with cross ventilation							76.4%
Requirement SEEP65-4B-3 Criteria 1							60.0%
Compliant							Yes

4 Conclusions and recommendations

4.1 Conclusions

Holsworthy's strategic role

Outside of the Liverpool centre, the site is one of only three zoned centres within walking distance to a train station in the Liverpool LGA. Of these centres, Holsworthy has the best rail connectivity to Central Sydney (30 minutes travel).

The Plan for Growing Sydney and draft South West District Plan place an emphasis on residential growth in centres and in locations with good public transport.

Recent planning along rail corridors and in nearby centres suggest that the site's current 21m height / 1.5:1 FSR zoning does not reflect the site's potential to contribute towards these goals.

Development of the master plan

While the existing context of the site does not include high density residential to reflect its strategic role, Architectus has developed a tailored master plan based on urban design principles to deliver strategically appropriate growth with excellent amenity for residents.

Key benefits of the master plan

- A new strategically located centre adjacent to Holsworthy Railway Station.
- A new active public square at the heart of the centre, activated by a retail frontage along Macarthur Drive with the opportunity for alfresco dining.
- Improved pedestrian connections to the station
- High quality landscaping of Macarthur Drive and Heathcote Road for positive visual impact and to allow the provision of shading by trees in summer.
- Slender residential buildings on the podium at varying heights up to 12 storeys.
- Delivery of approximately 350 apartments with excellent amenity including open space amenity, access to facilities and public transport.
- An attractive and successful retail centre. The design includes ground floor retail anchored by large and small supermarkets (e.g. Woolworths/Coles, Aldi) together with supporting specialty retail.



4.2 Proposed LEP amendments

This report will accompany a Planning Proposal which seeks the support of Liverpool City Council to amend the Liverpool LEP 2008 to allow the objectives and vision of the master plan to be achieved.

To achieve a highly-integrated and connected mixed-use development of the site of a scale which is commensurate with it's location adjacent Holsworthy Railway Station the following development standards would need to be amended for the site under the Liverpool LEP 2008:

- **FSR:** It is recommended that an FSR of 2.15:1 is appropriate and will allow for a scale of development which reflects the strategic significance of the site.
- **Height of buildings:** To enable the master plan to be achieved, a maximum building height of 45 metres is recommended. A lower height of 24m is proposed for the frontage to Macarthur Drive (approximately 25m in depth from this frontage). Buildings of this height will allow an FSR of 2.15:1 to be achieved in slender tower forms with high levels of residential amenity. The location of the site is such that any impacts associated with overshadowing will be negligible, as the site is located immediately to the north of the railway line and the Holsworthy Army Barracks.

The recommended development standards for the site are illustrated in the adjacent maps.



Floor space ratio

A1	0.01
D	0.5
I	0.75
N	1.0
S1	1.5
U	2.15



Building height

I	8.5
M	12
O	15
R	21
S	24
X	45

Appendix Landscape Concept

Introduction

The following landscape concept has been developed for Clouston. This provides further detail on potential landscape implementation than provided in the main urban design report.

The landscape objectives

The concept design for the proposed development has been based on clear objectives for it’s landscape. These objectives are to:

- Provide an attractive public domain frontage using quality landscape elements consistent with the surrounding existing and proposed streetscapes.
- Provide clear and integrated building entries using feature landscape treatments.
- Maximise communal landscape opportunities through use of an urban plaza and upper level podium.
- Provide a variety of communal spaces suitable for different activities.
- Utilise private balconies for integrated planter boxes that provide smaller garden opportunities for residents.
- Maximise the opportunities for vertical greening of the building by providing communal landscape planting to the atriums of the building.
- Utilise native planting landscape as the framework with highlights of exotic species.
- Transport species that are tolerant of the particular conditions that the site and building presents (shade, full sun, high wind, shallow soil etc.).
- Incorporate sustainability initiatives (water harvesting and re-use, low energy materials, ambient temperature amelioration).

Public domain / streetscapes

The public domain design provides a continuation of landscape materials and planting established for the precinct.

A pedestrian linkage from Holsworthy Railway Station to the site will be enhanced accordingly. Existing Trees will be retained where possible to provide a sense of establishment.

In the following pages landscape concepts for the street level and upper podium are illustrated and described.

Public domain

main square

Key Features

- 1 Turfed edge creates a buffer between the shared path and Macarthur Road, while also allowing clear line of site for vehicles.
- 2 Mass planting provides visual buffer between urban plaza and shared path while also allowing clear line of site for cyclists and pedestrian.
- 3 Feature mass planting to provide a sense to arrival.
- 4 Low hedging defines the space and acts as a passive barrier for pedestrians.
- 5 Water feature improves the microclimate of main plaza while creates visual interest and focal point.
- 6 Large pavers of varying sizes and colour tones assist in accentuating the geometric form.
- 7 Large level lawn area for residents and shoppers.
- 8 Decomposed granite gravel with paving inserts.
- 9 Stepping stones provide opportunity for people's interaction with water feature.
- 10 Large paved plaza space with shaded seating and trees.
- 11 Grid of *Calodendrum capense* trees gives the plaza structured form and improves microclimate of the area.
- 12 Small stage space allows for informal performances minor retail events or demonstrations and gives the plaza a variety of functions.
- 13 Main circulation and building access path.
- 14 *Eucalyptus maculata* trees tie the space into the wider environment and improve the microclimate of the area.
- 15 Proposed shared path.



open space/ potential connection

Key Features

- 1 Proposed shared path.
- 2 Decomposed granite with paving inserts.
- 3 Main access path to north side of building.
- 4 Small lawn creates a quiet space.
- 5 Low hedging defines the space and acts as a passive barrier for pedestrians.
- 6 Sandstone wall with climber planting addresses the level change between the site and road, while also creating visual appeal.
- 7 Paved area with tree provide opportunity for outdoor seating
- 8 Trees on RMS land planted in loose clusters to provide slotted view.
- 9 Native grasses as per RMS guidelines.
- 10 Large open lawn area to reduce urban heat island effect.



1:250 0 2.5 5 7.5 10M

urban plaza

Key Features

- 1 Terraced planting allows for the change in level from the road/ shared path, while also creating attractive visual appeal. Line of site for vehicles is maintained.
- 2 1:21 shared path allows for universal access to the site and improves the pedestrian connections to Holsworthy Station.
- 3 Stairs access to the urban plaza
- 4 Potential new connection creates strong pedestrian link to the nearby Holsworthy Train Station.
- 5 Small lawn creates a quiet space for people to sit and enjoy a book or have lunch.
- 6 Hedging creates visual buffer to the adjacent access road, making the lawn a more pleasant place to sit.
- 7 Large pavers of varying sizes and colour tones assist in accentuating the geometric form.
- 8 450mm seating wall along terrace planting facing the stage.
- 9 Main circulation and building access path.
- 10 Large elevated stage space allows for informal performances minor retail events or demonstrations and gives the plaza a variety of functions.
- 11 Large Pergola structure for shading as well as creating a iconic landmark.
- 12 *Eucalyptus maculata* trees tie the space into the wider environment and improve the microclimate of the area.



open space/ potential connection to
Holsworthy Station

Key Features

- 1 Main circulation and building access path.
- 2 Potential new connection creates strong pedestrian link to the nearby Holsworthy Train Station.
- 3 Large turf open space provide flexibility for different functions.
- 4 Shrub planting creates a buffer between the open space and proposed road, while also allowing clear line of site for vehicles.
- 5 Potenital playground
- 6 Semi open space with decomposed granite gravel and pergola to provide opportunities for BBQs and picnics.
- 7 Proposed trees grid to provide shading.



1:250 0 2.5 5 7.5 10M

Sections



Sections AA



Sections BB

Sections

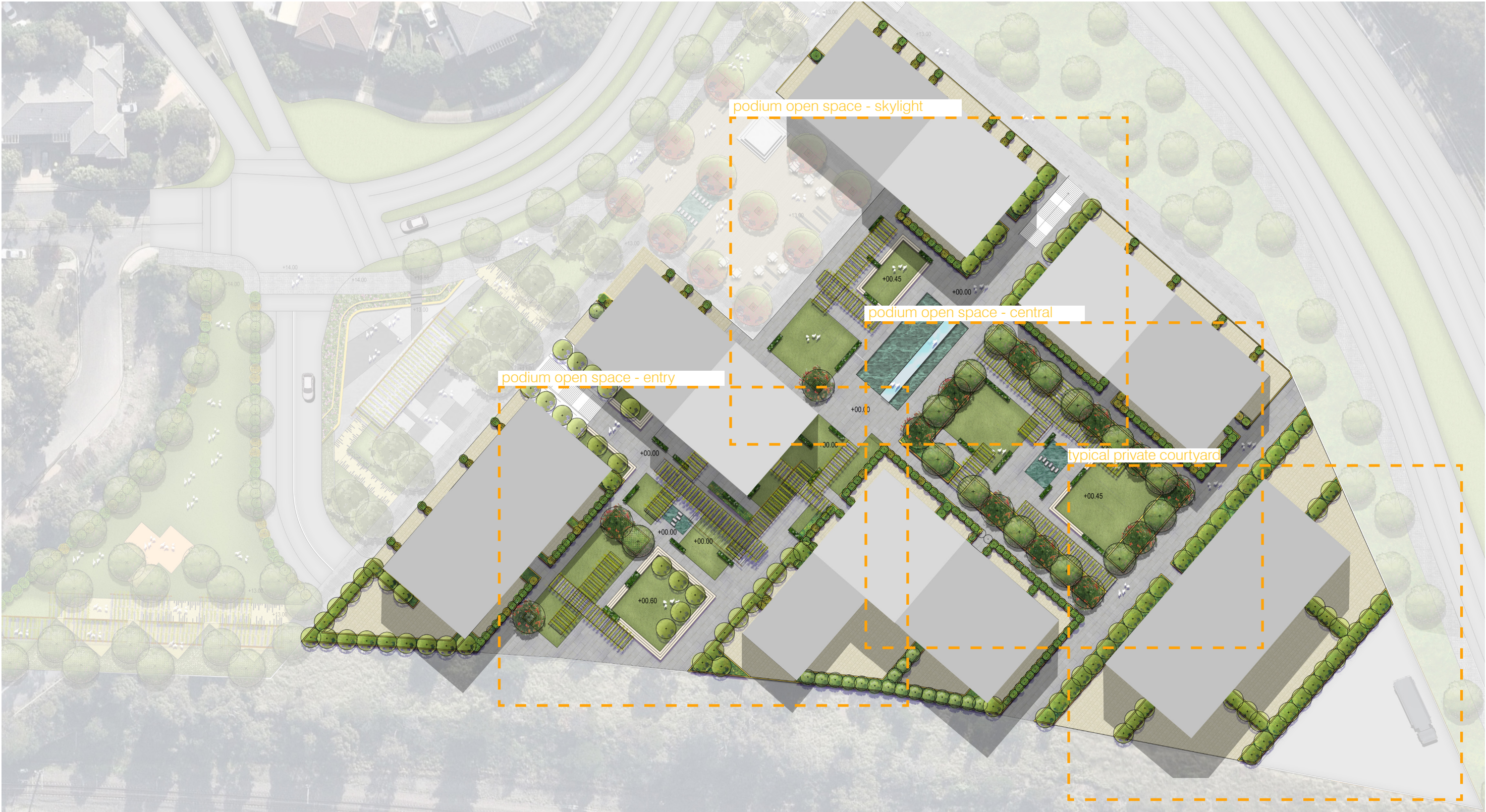


Sections CC



Sections DD

Podium communal open space



Podium master plan



podium space - entry walkway

Key Features

- 1 Trees planted along building edge help to naturally cool the building while also provide a verdant green edge.
- 2 Main stairway and adjoining lift to podium level
- 3 Small areas of lawn create quiet space for resident to relax or socialise with neighbours.
- 4 Shaded pergola and seating.
- 5 Water feature with stepping stones.
- 6 Low hedging encloses and defines space.
- 7 Paved courtyard space.
- 8 Elevated open lawn for relaxing and socialising while achieving sufficient depth of soil for tree planting.
- 9 Mass planting along pathway softens the edge of the built form.
- 10 Large planting bed defines space.
- 11 Main circulation path.
- 12 Outdoor spaces (including potential plays) for adjoining community facilities.
- 13 Large open lawn flexible space to reduce urban hear island effect.



1:250 0 2.5 5 7.5 10M

podium open space - skylight

Key Features

- 1 Trees planted along building edge help to naturally cool the building while also provide a verdant green edge.
- 2 Pergola structures provides form to the space, while providing comfortable walkways and seating space.
- 3 Large raised planting beds enclose and define spaces.
- 4 Visual connection between the stairs and the water feature to be maintained.
- 5 Small raised areas of lawn allow for comfortable places to sit and relax.
- 6 Large lawn area creates a relaxing place for people to sit and socialise with friends.
- 7 Paved courtyard space for the residents with views out onto the public plaza below.
- 8 Water feature skylight improves the microclimate of the podium while also creating light and visual interest below.
- 9 Walkway across the water skylight improves pedestrian connections and provides interaction with water.
- 10 Private garden spaces with privacy screen and planting beds.



podium open space - central

Key Features

- 1 Raised planter beds provide privacy for the private courtyard areas and improve views from the residences.
- 2 Large planter beds enclose space.
- 3 Pergola structure for seating and walking.
- 4 Lawn area creates a relaxing place for people to sit and socialise with friends.
- 5 Water feature with stepping stones.
- 6 Raised areas of lawn allows for comfortable places to sit, relax and for toddlers to run around.
- 7 Private garden spaces with privacy screen and planting beds.



1:250 0 2.5 5 7.5 10M

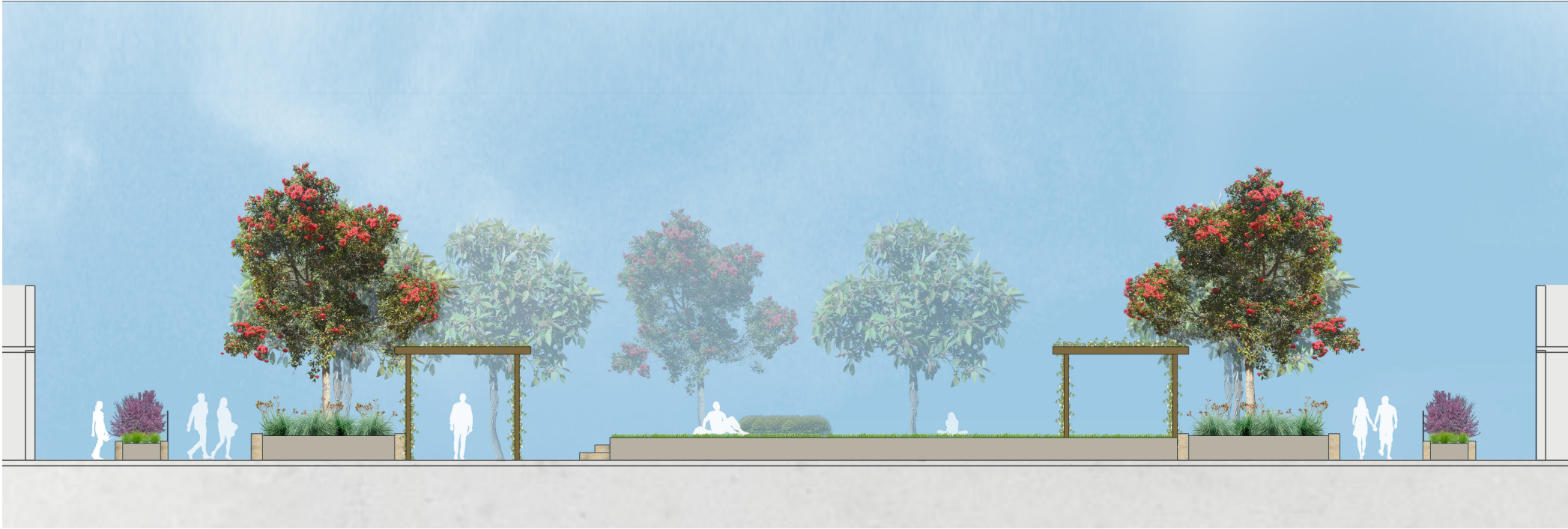
typical private courtyard

Key Features

- 1 Raised planting bed to define private courtyard and provide buffer between space.
- 2 Private courtyard.
- 3 Trees planted along building edge help to naturally cool the building while also provide a verdant green edge.
- 4 Raised planter to provide buffer between courtyard and loading docking on ground floor.
- 5 Balustrade along the edge of the building.



Sections



Sections EE

architectus™