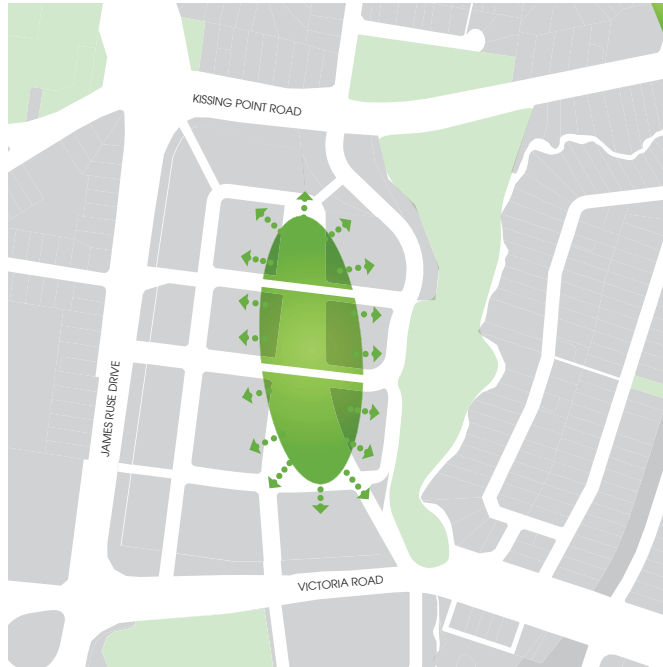


PLACEMAKING PRINCIPLES (CONT.)



OPEN SPACE AS THE COMMUNITY FOCUS.

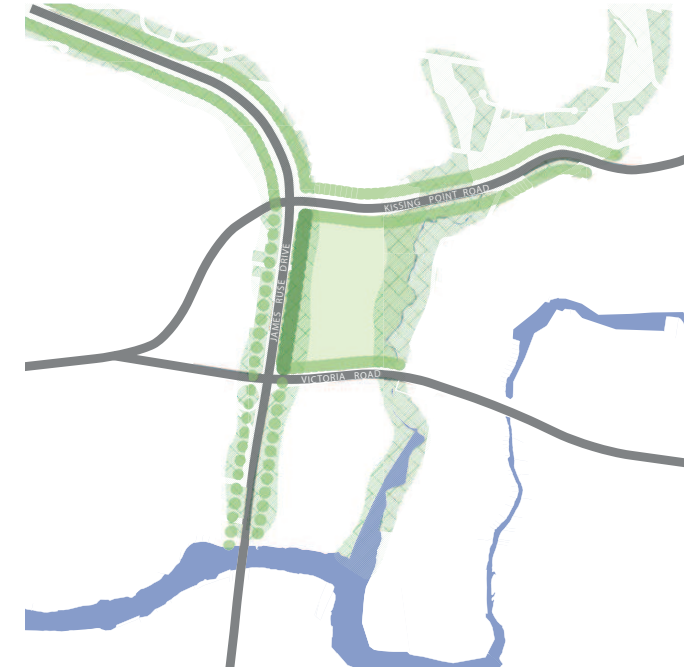
The primary open spaces in the development are consolidated centrally within the precinct to form the focus for community life. The central open space spine is split into three by the street network and the terracing of the site. Collectively these contribute to a rich sense of place for the precinct.

The central location provides equitable access for residents.



LINK WITH THE WIDER OPEN SPACE NETWORK.

The pedestrian permeability of the Concept Plan and the network of internal open space is designed to connect with surrounding active recreation areas, riparian corridors, passive open space and cycleways. By connecting these disconnected resources through the site, the Concept Plan helps to improve the utility of these open space / recreational assets.



THE GREENING OF JAMES RUSE DRIVE.

A significant length of James Ruse Drive north of the site is a landscaped arterial road where the experience is one of driving through a corridor of trees. This landscaped character dissipates as the tree cover thins out south of Kissing Point Road.

The Concept Plan proposes to reinforce this positive landscape character by augmenting the landscape buffer at the interface with James Ruse Drive. The significant size of the precinct can be leveraged to establish a precedent for future landscape upgrades elsewhere along the road. The idea is to establish a tree-lined road that mediates the interface between this busy arterial road and adjacent development; one which can extend to the crossing of the Parramatta River.

5.3 LAND USE STRATEGY

LAND USE THAT MAXIMISES SITE OPPORTUNITIES.

The Concept Plan opens up the site for residential development that is supported by retail, commercial and community uses. The majority of the site is allocated for residential uses. This establishes a future community that benefits from access to public transport and major arterial roads, close to employment, higher education precincts and the Parramatta CBD.

The LEP land use zoning for the site will be proposed to reflect the land use strategy developed in the Concept Plan.

Commercial: Employment generating commercial uses are located in close proximity to bus stops and Rydalmere Station, in a clearly defined precinct separate from the residential parts of the site.

The commercial development establishes a frontage to Victoria Road that presents a non-residential urban edge to the road and interfaces with the WSU site opposite. The commercial area benefits from an outlook to the new central open space spine to the north.

The commercial area allows for the establishment of a supermarket, office space, local retail and services, and community facilities such as a childcare centre. It has the potential to accommodate institutional tenants associated with tertiary education that leverages proximity to WSU and complements the nearby employment areas.

Residential: Residential development is located north of the commercial area, capitalising upon the terracing landform that rises to the north to maximise view opportunities for residents.

Community-related uses and local retail established on the ground floor of residential lots activates the proposed Urban Park at the southern end. This activated 'heart' is located near Rydalmere Station to integrate the precinct with its context.

One of TfNSW's strategic objectives is to create nodes around Light Rail stops through placemaking. The precinct 'heart' is consistent with this intent, having been located to read as an extension of the future node around the Rydalmere stop.



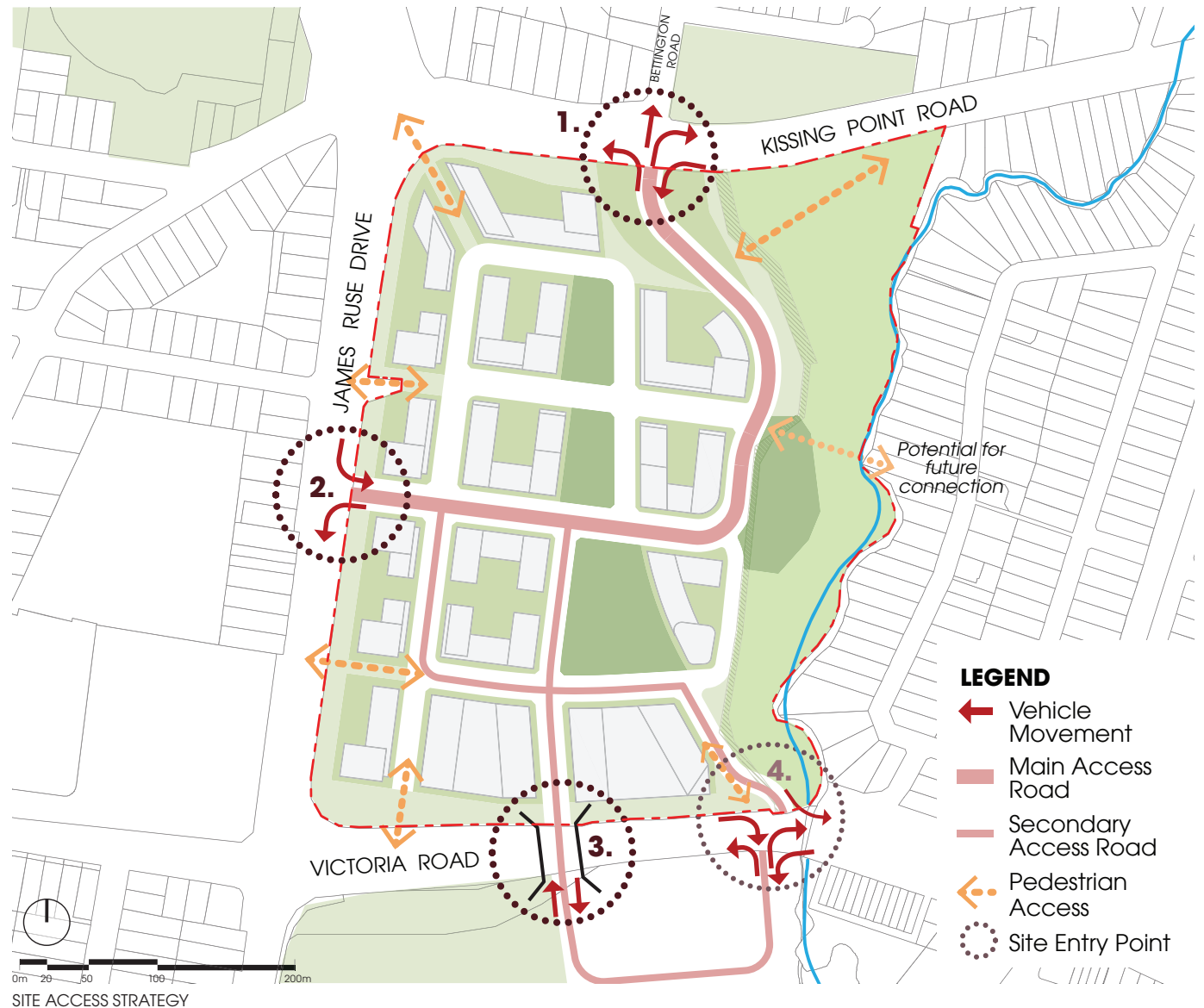
5.4 SITE ACCESS STRATEGY

OPEN UP THE SITE FOR DEVELOPMENT.

New and upgraded connections into the site improves access to support new development (reference numbers below correlate with the adjacent diagram).

1. Establish a new intersection at Kissing Point Road that aligns with Bettington Road to connect the site to the existing road network.
2. Re-locate the existing left-in, left-out access from James Ruse Drive to the south to improve safety and centralise access into the precinct.
3. Establish the existing bridge connecting WSU to the site as the entry into the site for traffic entering off Victoria Road. This assists in mitigating capacity issues at the existing Victoria Road intersection that would arise in the future due to background traffic growth, regardless of whether or not the site is developed.
4. The existing Victoria Road access into the site is converted into an exit only road.

Alternative access off Victoria Road: In principle, the Concept Plan is designed to accommodate an alternative means of access into the site off Victoria Road, instead of being reliant on the existing bridge connecting the site to WSU. One such option entails establishing an elevated off-ramp that connects to the site off the existing Victoria Road overpass over James Ruse Drive. In this way, the Concept Plan has the flexibility to incorporate refinements to access arrangements off Victoria Road if required.



5.5 STREET HIERARCHY

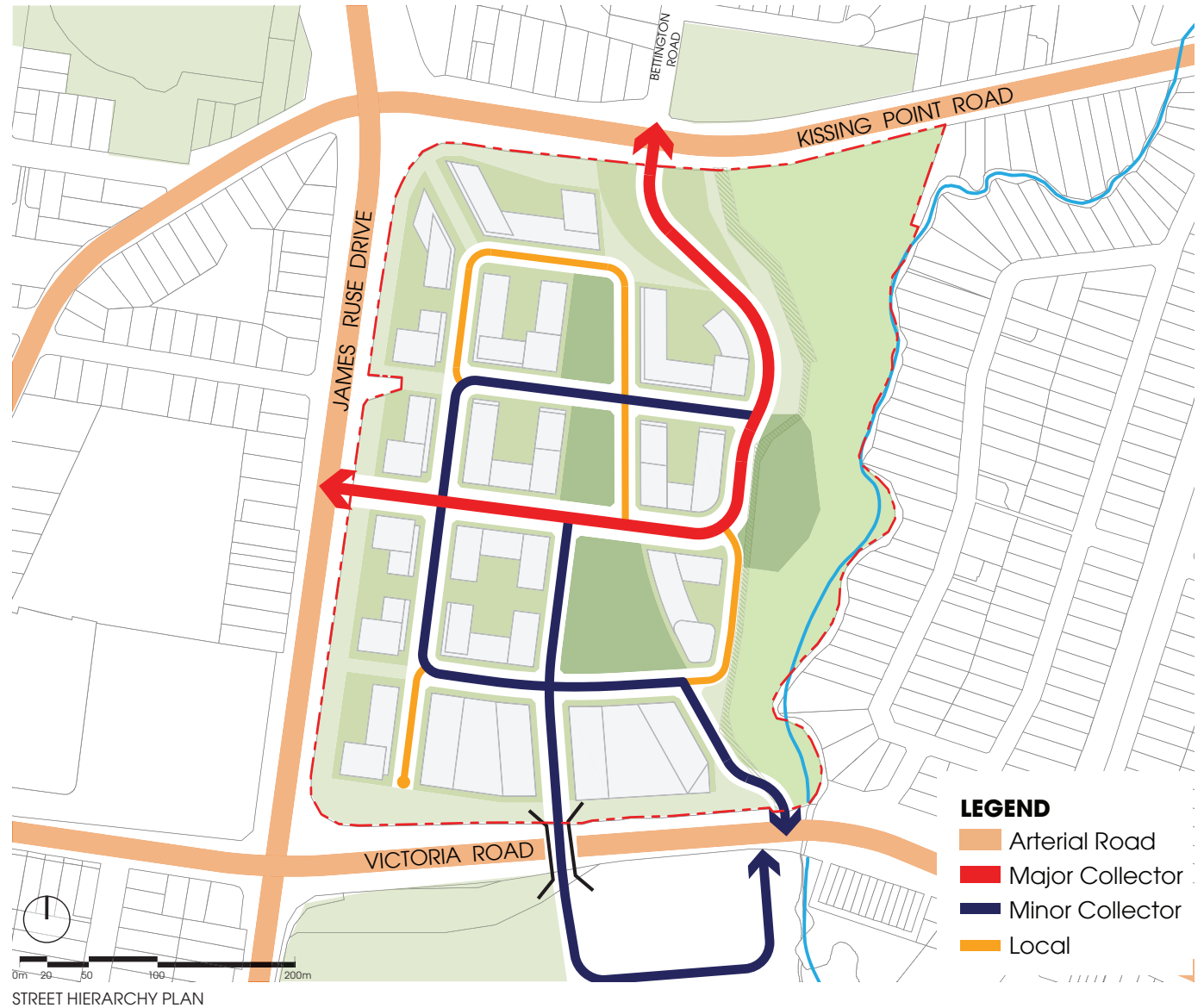
RATIONAL, EFFICIENT AND LEGIBLE ROAD NETWORK.

Two collector roads provide access into the site from the arterial roads bordering the site. The alignment of the major collector road off Kissing Point Road negotiates the steep level change at this end of the site to establish an entry road with a reasonable gradient.

Minor collectors and local streets branch off the major collectors to distribute traffic throughout the development, providing north-south and east-west permeability to distribute traffic efficiently.

Streets running east-west maintain a similar alignment to existing roads on the site to minimise changes to the existing terraced landform.

The conceptual road geometry accommodates the swept paths of 11m trucks, which allows for typical garbage vehicles.



5.6 DEVELOPMENT SITES

The Concept Plan defines lots in a variety of sizes and configurations to encourage variety in built form outcomes.

The lots include a developable area footprint and land that the Concept Plan has identified as future open space. The lots are sized to enable viable development outcomes coupled with high levels of amenity. All lots have some form of outlook to landscape, such as the riparian corridor, central open space spine, and the recreational loop around the site periphery.

The road network allows lots to be accessed from multiple frontages, facilitating further subdivision of lots in response to market demand. The commercial lots may be developed with or without podiums. Lot C-02 is large enough to accommodate a 3,000sqm supermarket in its podium.

	m ²	%
Developable Land		
Residential	59,723	31%
Commercial	15,116	8%
Developable Land Total	74,839	39%
Open Space		
Open Space	17,713	9%
Landscape Buffer	24,764	13%
Riparian	36,695	19%
Open Space Total	79,172	41%
Road Reserve	40,090	21%
Total Site Area	194,101	100%
GFA		
Residential	229,146	85%
Commercial	40,057	15%
Total	269,203	100%
FSR (site Avg)	1.39	
Total Apartments	2,696	units
Total Population	6,200	people

DEVELOPMENT SUMMARY (REFER TO NEXT PAGE FOR MORE DETAIL AND KEY ASSUMPTIONS UNDERLYING THE ESTIMATES)



DEVELOPMENT SITES

5.7 PROJECTED YIELD ESTIMATE

The table adjacent provides further detail on the projected yield estimate, accompanied by a statement of the key assumptions underlying the calculations.

LOTS			Proposed Controls			
	Lot Area m ²	%	Max. Permitted GFA Total Units		Parking	Visitor Parking
Residential						
R-01	6,149		21,522	253	253	51
R-02	5,860		15,822	186	186	37
R-03	5,745		21,831	257	257	51
R-04	6,757		25,677	302	302	60
R-05	2,890		13,294	156	156	31
R-06	5,673		23,259	274	274	55
R-07	4,961		21,828	257	257	51
R-08	5,080		21,844	257	257	51
R-09	8,506		29,771	350	350	70
R-10	4,322		17,288	203	203	41
R-11	3,780		17,010	200	200	40
SUBTOTAL	59,723	31%	229,146	2,696	2,696	539
Commercial						
C-01	7,303		19,353		276	
C-02	7,813		20,704		296	
SUBTOTAL	15,116	8%	40,057		572	
Total Saleable Land	74,839	39%				

KEY ASSUMPTIONS

- > GFA / GBA Building Efficiency for Residential = 75% (as per Council direction)
- > GFA / GBA Building Efficiency for Commercial = 80% (as per Council direction)
- > Average Unit Size = 85 sqm (this allows for an apartment mix consistent with Parramatta DCP 2011: 10-20% 1-bed, 60-75% 2-bed, 10-20% 3-bed)
- > Average Unit Occupancy = 2.3 persons / unit (as per Council direction and based on the average size of households living in high density residential typologies)
- > Required number of parking spaces calculated based on Parramatta DCP 2011 rates

5.8 BUILDING HEIGHTS STRATEGY

MASSING THAT ADDRESSES CONTEXT, AMENITY AND LEGIBILITY.

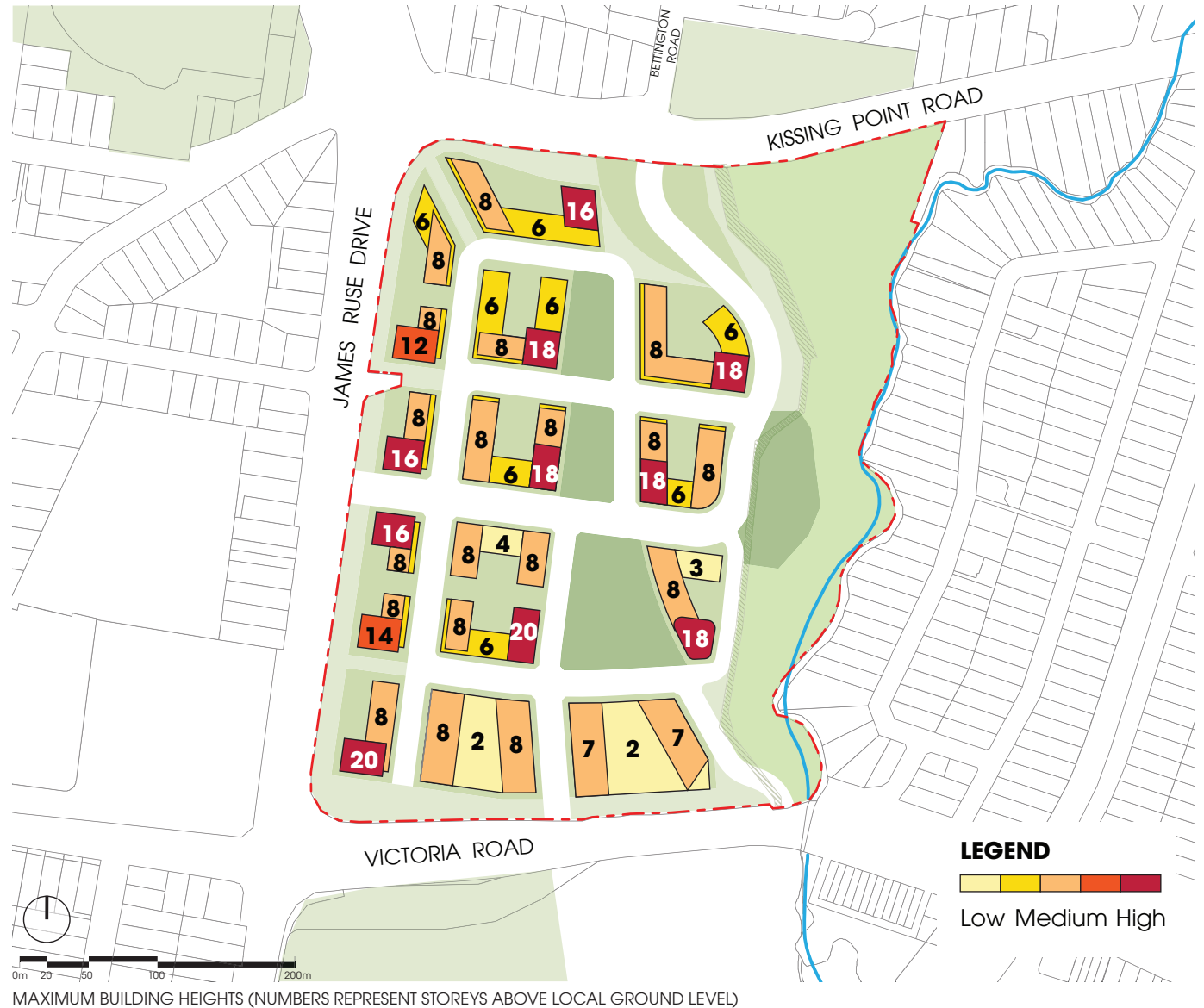
The street level urban form is primarily defined by 6 to 8 storey buildings that establish a comfortable urban scale for pedestrians. This pedestrian scale is further reinforced by setbacks in building envelopes above 6 storeys.

The predominantly 6 to 8 storey scale at street-level is enabled by the careful distribution of slender residential towers. Taller built form is mainly organised around the edge of the central open space spine, and along James Ruse Drive.

The clustering of taller form along the central open space spine consolidates taller form in the centre of the precinct, allowing for a transition in urban form from the periphery of the site.

Taller form along James Ruse Drive minimises impact on surrounding areas and establishes an urban scale that is commensurate with the wide arterial road. Height variations create variety in the urban form at this interface and denotes the south western corner and the entry into the site.

Heights in the commercial area are limited to minimise blocking of residential views from the northern parts of the site.



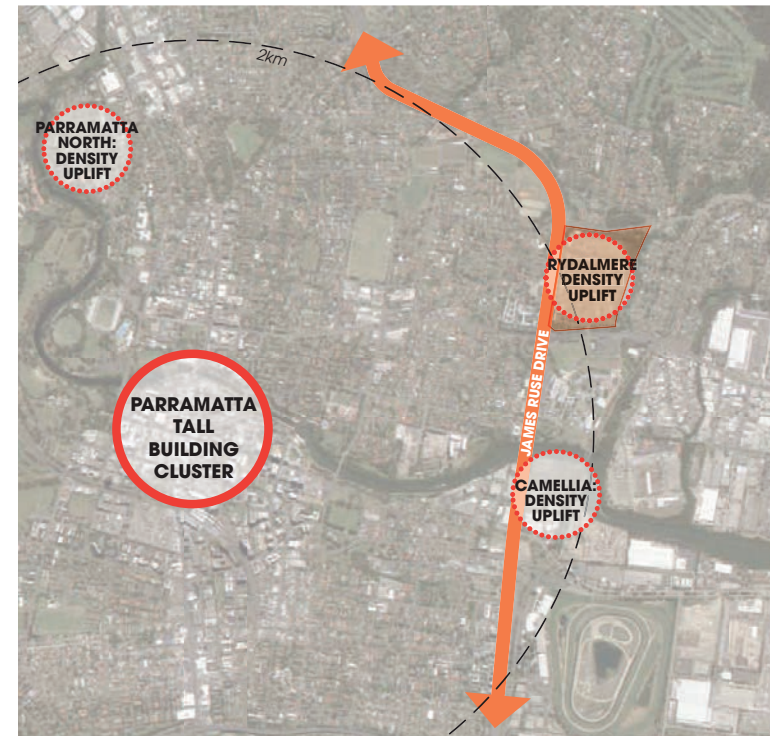
URBAN FORM PRINCIPLES

- > Taller and articulated built form act as markers for the precinct and orientation devices when viewed from surrounding areas. These assist in establishing the presence of the site within its context, visually integrating the site to address its existing disconnection from the wider area
- > Continuous built edges give clear and consistent definition to the central open space spine, and maximises units with outlook over the parklands



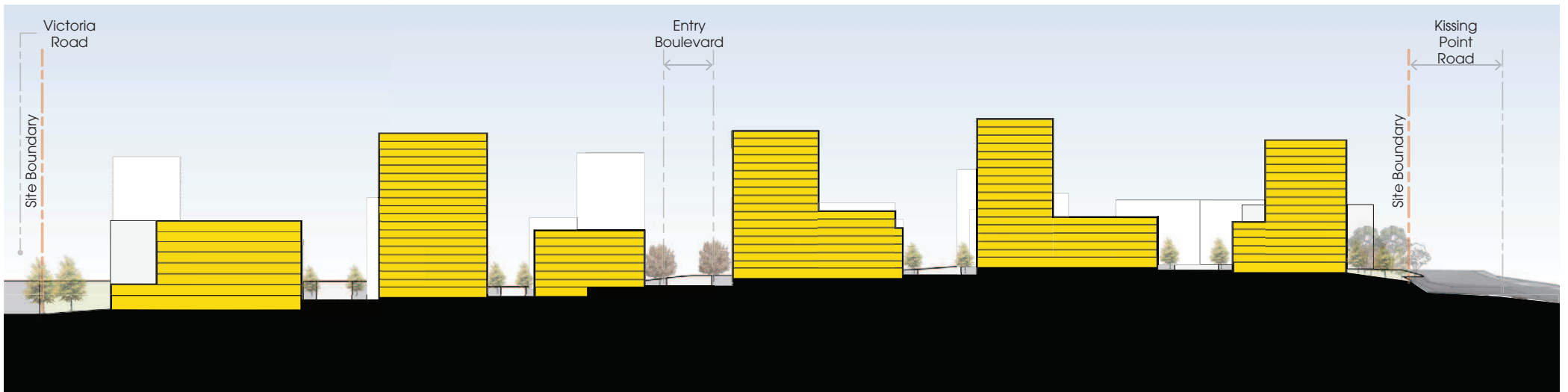
URBAN FORM PRINCIPLES

- > The proposed massing takes advantage of the riparian corridor vegetation to screen buildings when viewed from the east and reduce the perception of building mass, mediating the transition in density
- > Built form along James Ruse Drive establishes an acoustic buffer to reduce the penetration of traffic noise into the site. With regard to future development located by arterial roads, acoustic studies will be required as part of their detailed design to ascertain the need for architectural noise mitigation
- > The pair of taller form at the James Ruse Drive entrance marks the entry into the precinct
- > Taller forms are located in visible locations at each entry point into the site to enhance urban legibility
- > The site is located 2km from the Parramatta CBD, similar to other proposed areas for density uplift. Together these establish a wider urban form that reads as nodes of higher density ringing the Parramatta CBD.

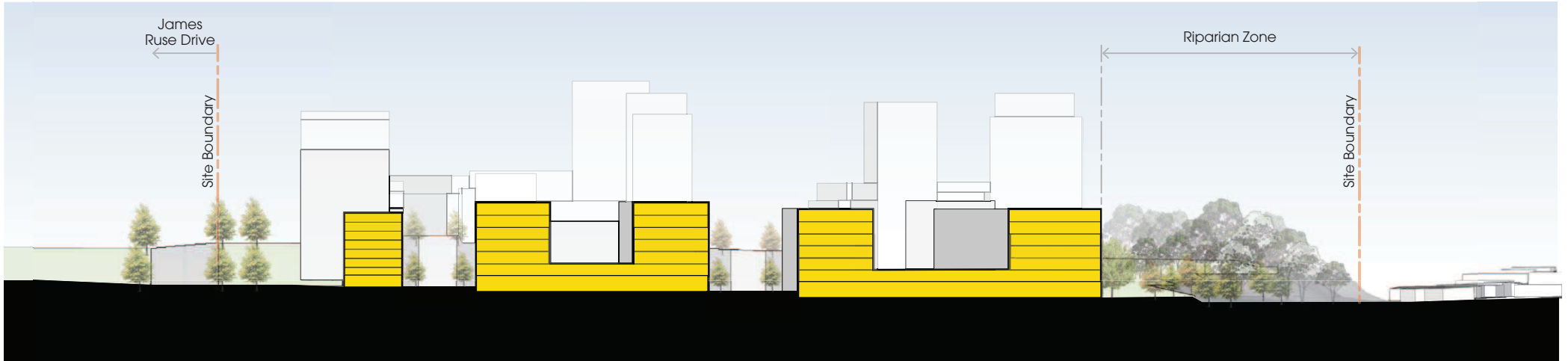


POTENTIAL FUTURE DEVELOPMENT CONTEXT

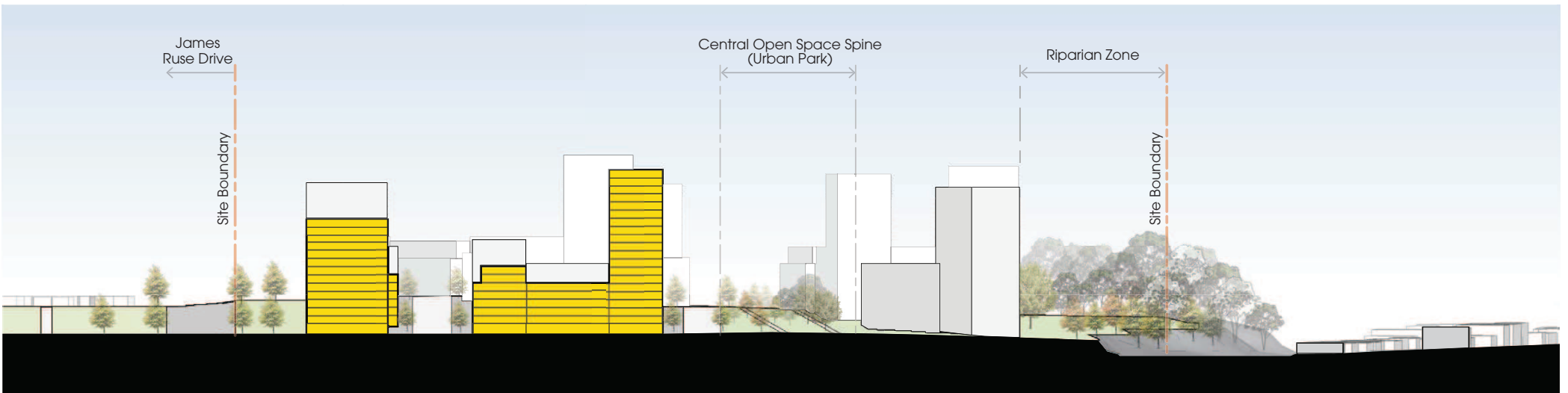
5.9 SITE SECTIONS



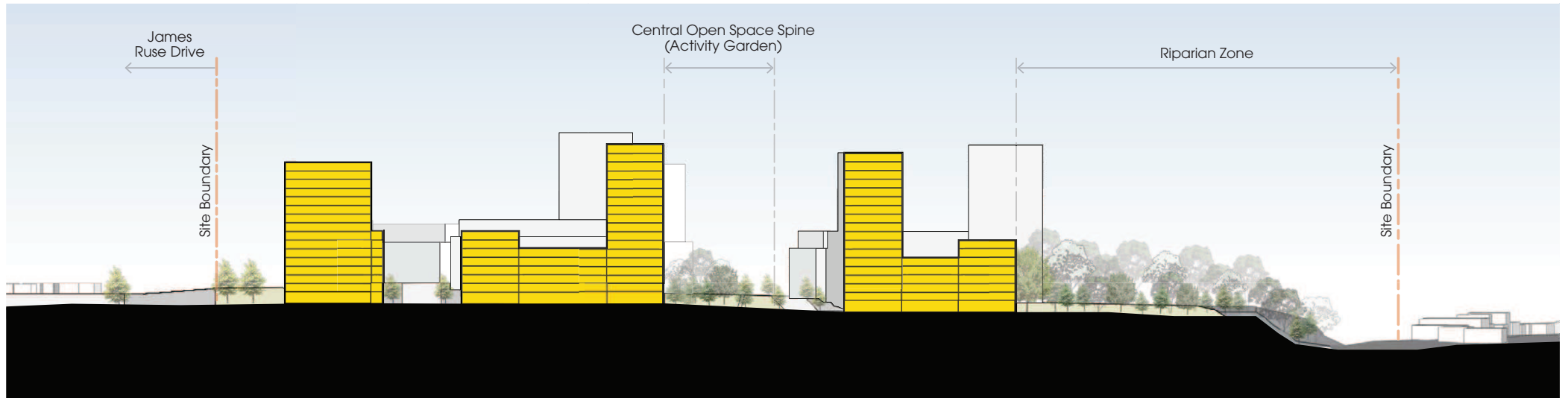
SECTION A-A



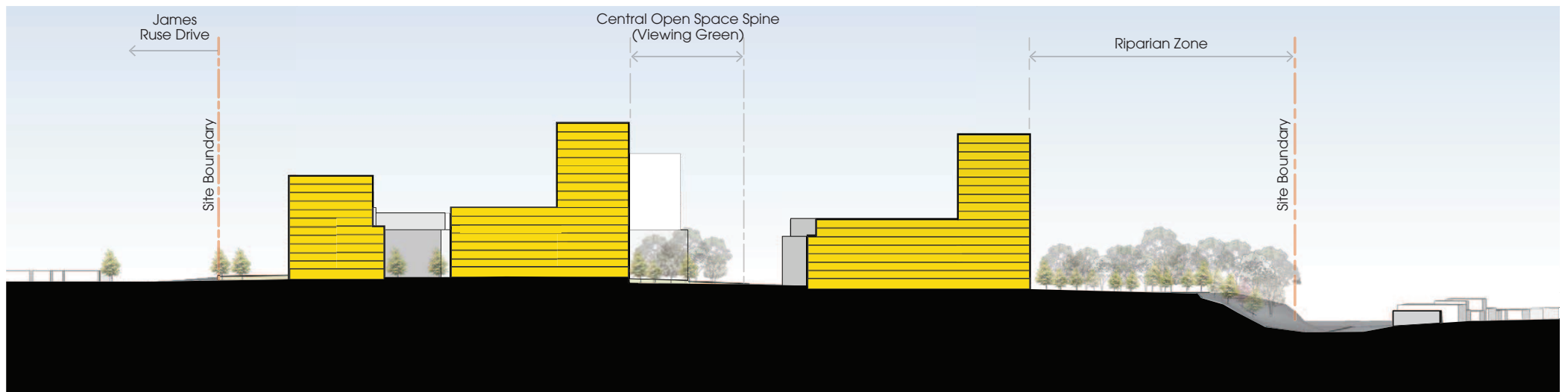
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

5.10 SOLAR ACCESS ANALYSIS

SOLAR ACCESS: OPEN SPACE

The adjacent diagrams show the overshadowing of the public domain at the winter solstice between 9am and 3pm.

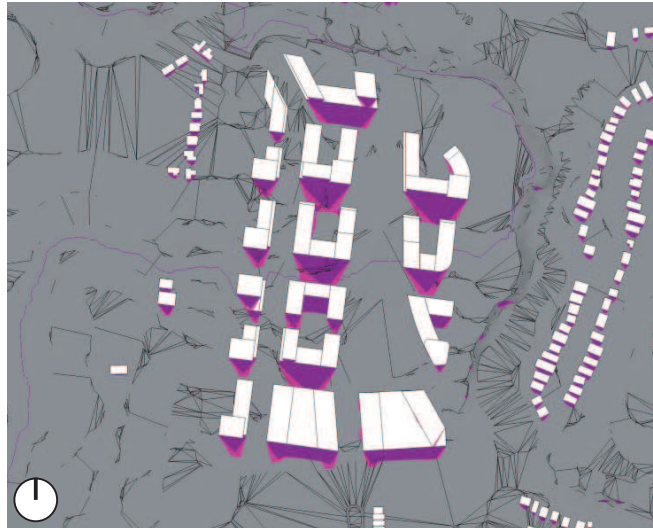
The diagram with the purple graphic is a composite of shadow analysis undertaken during the winter solstice. The darker purple represents areas that receive less than 1 hour of sunlight, while the lighter purple represents areas that receive between 1 to 2 hours of sunlight. The other 3 diagrams illustrate the movement of shadows across the day.

The analysis clearly illustrates that the central open space spine enjoys excellent solar access in winter. The entirety of the open space is projected to receive at least 3 hours of sunlight in mid-winter.

Similarly, the majority of streets receive at least 2 hours of sunlight.

The analysis also indicates that the SEPP 65 ADG criteria of at least 50% of communal open space within each lot achieving the minimum 2 hours of direct sunlight can be met.

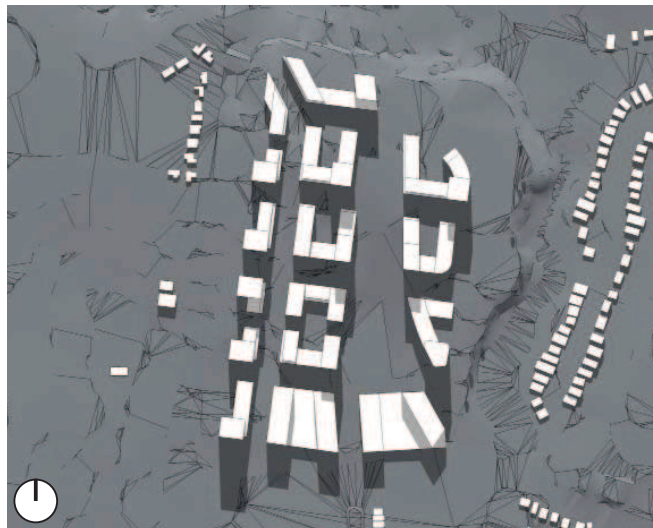
In terms of impacts on neighbouring dwellings, the majority of private front and rear yards are not overshadowed at all. Where there is some overshadowing, well over 2 hours of solar access to private open space is projected.



SUMMARY: PURPLE DENOTES OPEN SPACE AREAS THAT RECEIVE LESS THAN 2 HOURS OF SUNLIGHT AT THE WINTER SOLSTICE



JUNE 21ST - 09:00



JUNE 21ST - 12:00



JUNE 21ST - 15:00

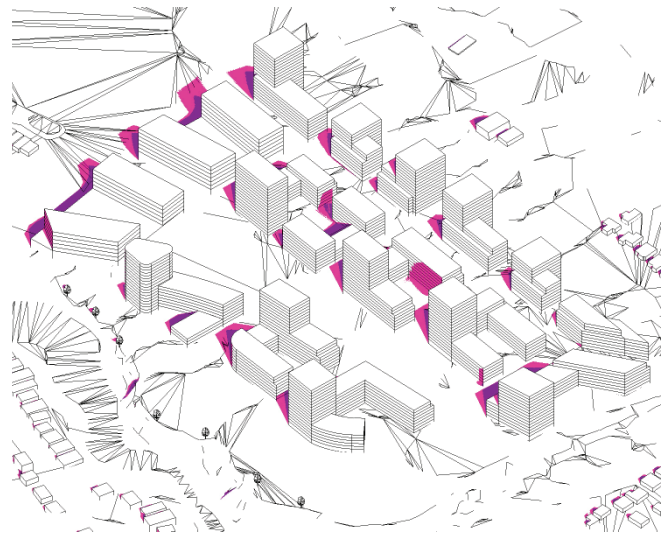
SOLAR ACCESS: BUILDINGS

The adjacent diagrams show solar access to the building envelope facades at the winter solstice between 9am and 3pm.

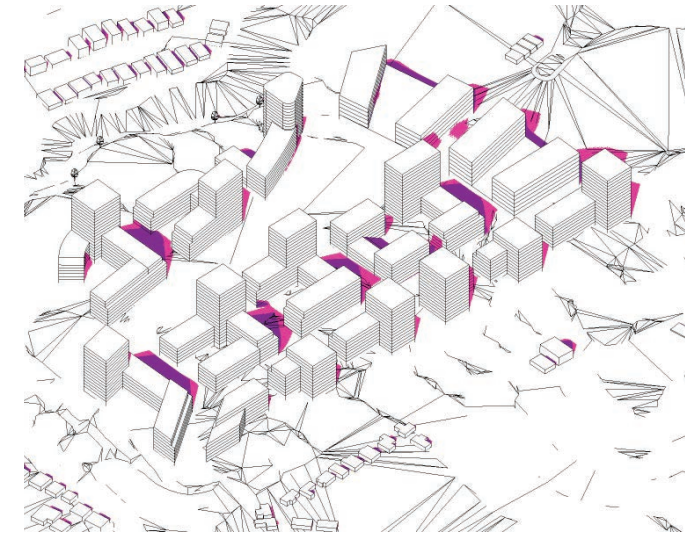
The purple graphic is a composite of shadow analysis undertaken during the winter solstice. The darker purple represents facades that receive less than 1 hour of sunlight, while the lighter purple represents facades that receive between 1 to 2 hours of sunlight.

The analysis indicates that, with a few exceptions, all non-south-facing facades receive at least 2 hours of sunlight in mid-winter. This suggests that compliance with ADG requirements should be achievable during the subsequent detailed design of buildings.

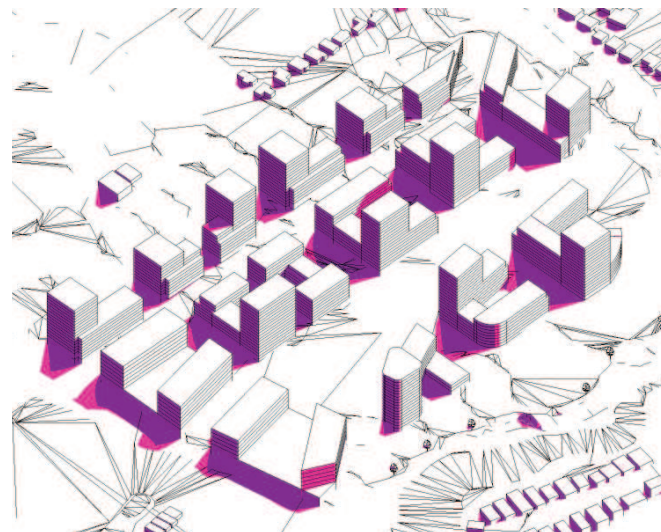
The analysis also illustrates that the facades of neighbouring residences beyond the site boundary are generally not overshadowed by the proposed development. Shadow impacts are minor and limited to the facade of 6 dwellings to the east, which are estimated to be overshadowed to varying degrees after about 2:45pm.



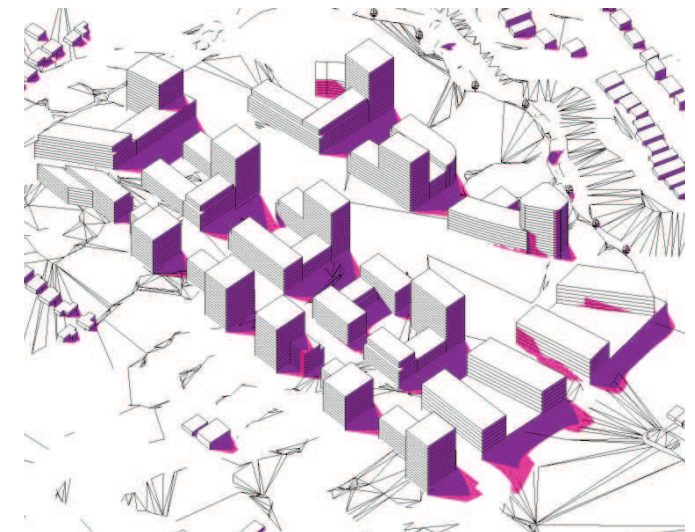
VIEW FROM NORTH-EAST



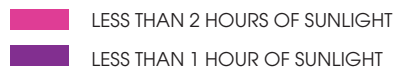
VIEW FROM NORTH-WEST



VIEW FROM SOUTH-EAST



VIEW FROM SOUTH-WEST



5.11 PEDESTRIAN + CYCLE NETWORK

HIGHLY PERMEABLE PEDESTRIAN AND CYCLE NETWORK.

Pedestrian: All streets, open space and open space links are provided with pedestrian footpaths to establish a pedestrian-focused and permeable public domain.

The central open space spine enables diagonal pedestrian movement across the site to reduce walking distances. This facilitates pedestrian movement between the recreational areas north west of the site (PH Jeffery Reserve etc) and the established locality around Rydalmere. Combined with other pedestrian connections to areas beyond the site, the links integrate the precinct into its context and stitch together the fragmented enclaves surrounding the site. The plan establishes the following pedestrian connections (reference numbers below correlate with the adjacent diagram):

1. To the PH Jeffery Reserve
2. To Kissing Point Road / Bettington Road. Dundas Station can be accessed via this route
3. Alternative path to Dundas Station through the riparian corridor
4. To James Ruse Drive, off the new entry boulevard as well as off the recreational loop
5. To Victoria Road (2 locations). The pedestrian crossing at the Victoria Road intersection is proposed to be moved to the eastern side of the intersection to create a more direct connection to the bus stop opposite and beyond it, Rydalmere Station
6. To the WSU Campus to the south via the existing bridge
7. The plan allows for a potential connection east to the residential area beyond the riparian corridor to be established in the future
8. Similarly, the plan can accommodate potential pedestrian bridge connections in the future to (a) the WSU Campus to the west, and (b) to Collett Parade.

A continuous recreational loop is provided around the perimeter of the site. This opens up the riparian corridor for recreational use, as well as providing generous, landscaped pedestrian routes located at a remove from the heavy traffic along Victoria Road and James Ruse Drive.

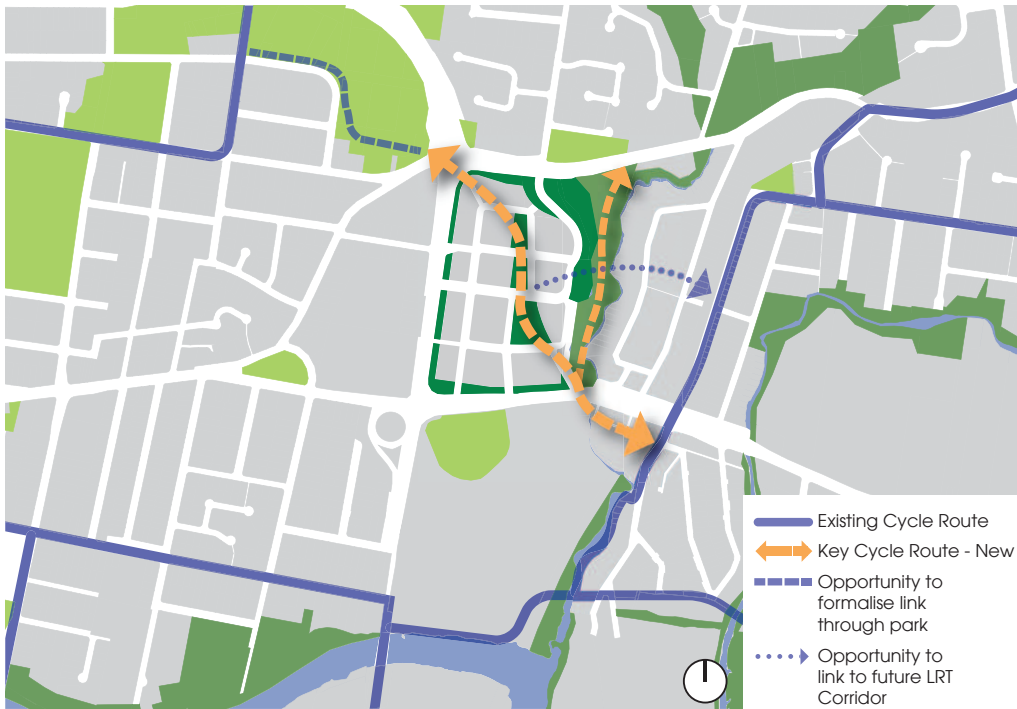


PEDESTRIAN + CYCLE PATHS

Mid-block connections through the larger lots are also proposed to further increase the permeability of the precinct.

Below are some walking times (approx) to local points of interest from the centre of the site:

- + Parramatta City Tennis (PH Jeffery Reserve) = 10 minutes
- + Dundas local shops = 13 minutes
- + Rydalmere employment precinct = 10 minutes
- + WSU Oval = 5 minutes
- + WSU Parramatta South Campus = 7 minutes
- + WSU Parramatta North Campus = 5 minutes (assumes bridge across James Ruse Drive)



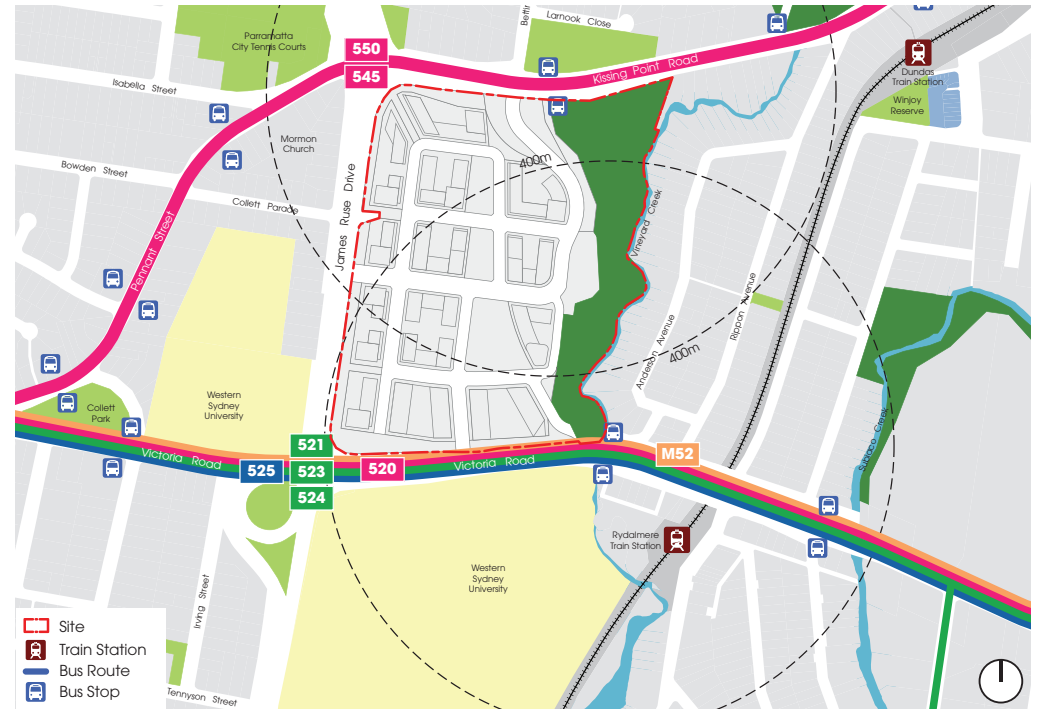
LINKING THE REGIONAL CYCLE ROUTES

BICYCLES

Cyclists are generally accommodated on the road. The entry boulevard extending into the site from James Ruse Drive offers marked, on-road routes. Pedestrians and cyclists are segregated along the recreational trail looping the site, and through the riparian corridor. Collectively these establish a permeable network for cyclists to navigate, with multiple opportunities to access the surrounding road network beyond the site.

The Concept Plan facilitates a new diagonal connection across the site from Victoria Road in the south eastern corner to PH Jeffery Reserve / Barton Park. This creates an opportunity to establish a cycle route that connects an existing route along Barton Park to the Parramatta Valley Cycleway, promoting the integration of regional cycle routes.

The proposed upgrade of the Carlingford Railway Line into Light Rail envisions the line as an active transport corridor. The site's proposed cycle routes can integrate with this LRT corridor.



PUBLIC TRANSPORT NETWORK

CONNECTIVITY TO BUS STOPS

The 400m walking catchment of bus stops on Kissing Point Road and Victoria Road cover the site, with extensive areas of overlap. All areas are within a 5 minute walk of a bus stop, with many parts of the site within a 5 minute walk of bus stops on both Kissing Point Road and Victoria Road.