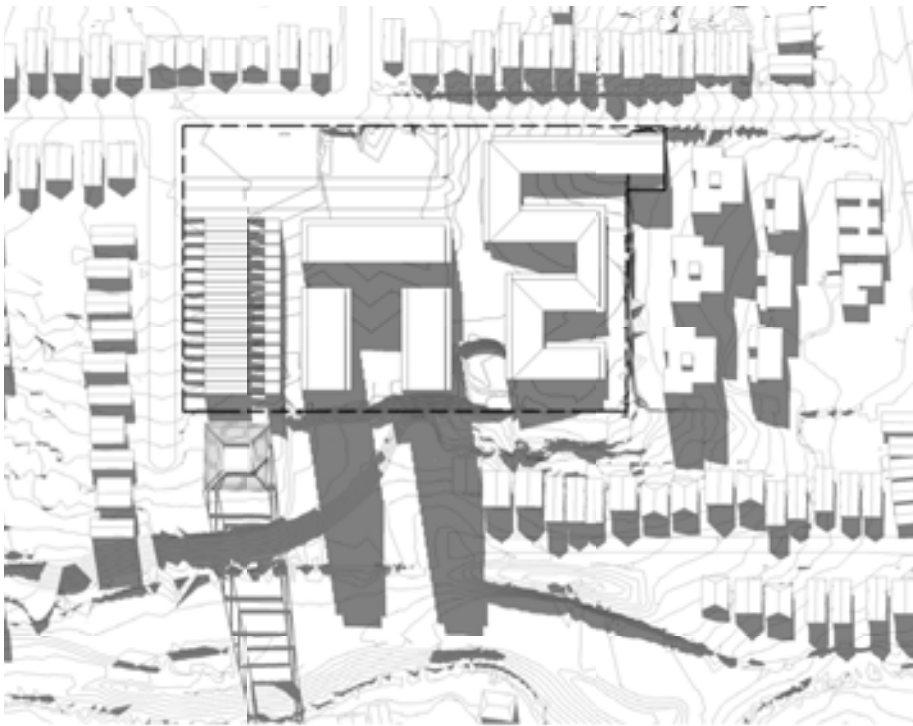


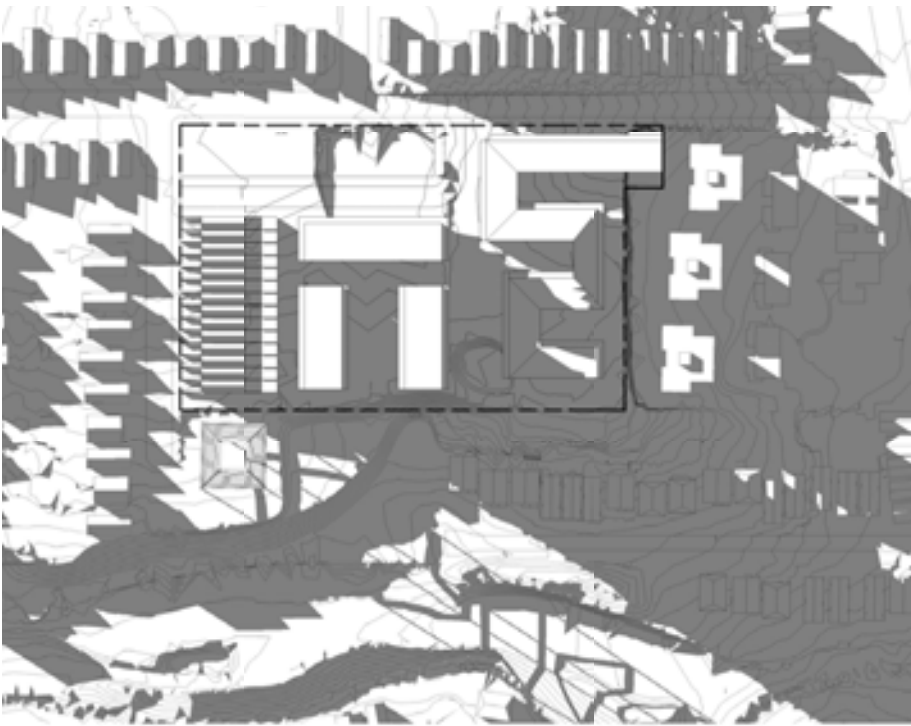
6.1.4 Shadow Study



04 Mid-Winter (21 June 2012) 9am



05 Mid-Winter (21 June 2012) 12pm



06 Mid-Winter (21 June 2012) 3pm

Mid-Winter Shadow Analysis - Option 01

Any development on the site will cast a shadow during the morning (9am to 10am) and afternoon (2pm-3pm) in mid-winter.

The most sensitive period is during the middle of the day. The setbacks from the southern boundary ensure the Walter Street properties aren't impacted. The longest shadows fall over the Council Reserve and the Gore Hill Freeway.

6.1.5 View Analysis - Option 01



01 View across the Gore Hill Freeway from Naremburn



02 View From Richmond Avenue



01 View across the Gore Hill Freeway from Naremburn



02 View From Richmond Avenue

6.1.5 View Analysis - Option 01



03 View from Edward Street



04 View from the corner of Richmond Avenue & Artarmon Road



03 View from Edward Street



04 View from the corner of Richmond Avenue & Artarmon Road

6.1.5 View Analysis - Option 01



05 View from the corner of Artarmon Road and Scott Street



06 View from Walter Street



05 View from the corner of Artarmon Road and Scott Street



06 View from Walter Street

6.1.5 View Analysis - Option 01



07 View from the corner of Small Street and Willoughby Road



08 View from Willoughby Incinerator



07 View from the corner of Small Street and Willoughby Road



08 View from Willoughby Incinerator

6.1.5 View Analysis - Option 01



09 View from Artarmon Reserve



10 View between no. 14 & 16 Salisbury Road



09 View from Artarmon Reserve



10 View between no. 14 & 16 Salisbury Road

6.1.5 View Analysis - Summary

The site's position at the end of a natural ridge line and on the edge of the Flat Rock Gully ensure that any development on the site will be clearly visible from long views, most notably, views 01, 03, 06, 08, 09 and 10. Further development of the scheme and a reduction in the height of some buildings will improve the site's appearance in these views.

By their very nature, the local views to the site reveal much less of the proposal as the existing street trees, vegetation and buildings obscured lines of sight. The existing trees along Richmond Avenue and Artarmon Road successfully screen development along these frontages.

The addition of the public park along Artarmon Road will occupy the foreground of View 04, screening the majority of the built form, which is set back 45m from the road edge.

Reducing the height and scale of development along the southern and eastern boundary will improve the visual impact for Views 06, 07 and 08.



01 View across the Gore Hill Freeway from Naremburn



03 View From Richmond Avenue



03 View from Edward Street



04 View from the corner of Richmond Avenue & Artarmon Road



05 View from the corner of Artarmon Road and Scott Street



06 View from Walter Street



07 View from the corner of Small Street and Willoughby Road



08 View from Willoughby Incinerator



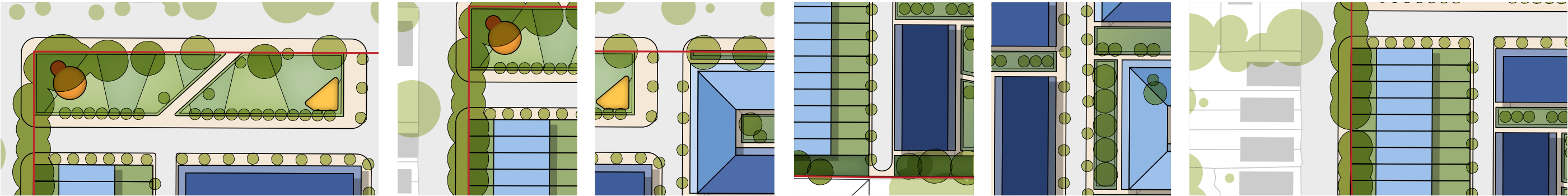
09 View from Artarmon Reserve



10 View between no. 14 and 16 Salisbury Road

6.1.6 Design Appraisal

<div><div>1. Spaces</div><p>The design will incorporate the creation of significant open space on site that is for the residents and the general public alike. This space will provide amenity through landscape design that promotes healthy and active lifestyles, improve amenity for existing and proposed dwellings, visual privacy and the opportunity for recreational and social engagement.</p><p>Design Response</p><ol style="list-style-type: none">Linear park along Artarmon Road, 25m x 132m, featuring passive and active recreation, publicly accessibleFront and rear gardens provided for the terraces along Richmond AvenueImprove the site permeability and connectivity with surrounding areas by encouraging pedestrian movements through the siteGround floors apartments have access to private open spaces (courtyards)All other dwellings have access to a range of private open spaces within their developments - design of these spaces to meet needs of the property owners (site by site appraisal at DA stage)<p>Recommendations</p><ul style="list-style-type: none">Over-shadowing of private and semi-private spaces, particularly in the eastern end of the site. Needs further investigation and testingFurther characterisation of the site's various spaces, including the setback zones around the site's edges</div>	<div><div>2. Access</div><p>Access to the site will be gained through a number of spaces and routes, for a range of modes, and in a manner that allows safe movement patterns. The layout of the site should encourage residents and neighbours to walk and cycle, instead of relying on the private vehicle to access services or commute to work and school.</p><p>Design Response</p><ol style="list-style-type: none">Minimise the number of access and egress points for vehicles from Artarmon Road - 3 (existing) to 1 (proposed)Provides additional access from Richmond Avenue, at its northern end near the junction with Artarmon RoadAvoiding site access at the junction of Edward Street and Artarmon RoadScott Street junction retain in principle, to serve as an access to the basement car parking area<p>Recommendations</p><ul style="list-style-type: none">Define the turn-in and turn-out arrangements for the Artarmon Road accessTest the requirements for the Scott Street basement parking entrance - whether this can be provided within the siteRefer to accompanying traffic report by Aecom</div>	<div><div>3. Circulation</div><p>The circulation arrangement will provide permeability through the site for both residents and the wider community, unlocking a previously contained and secure site. For ease of navigation, sense of place and safety, the site will feature streets and spaces fronted by buildings. All streets and routes will be owned and managed by the strata, though they'll remain accessible to the public.</p><p>Design Response</p><ol style="list-style-type: none">Two north-south connector roads provide access between Artarmon Road and the park in the north of the site, to the site's southern boundary and Walter Street, via the Council ReserveAll routes are publicly accessible and feature pedestrian and cycle pathsSite's access road (along park edge) and connector roads are fronted by development, including ground floor apartments with direct street accessWestern connector road provides access to the terrace's rear garages and granny flats, which ensures access from Richmond Avenue is retained for pedestrians only<p>Recommendations</p><ul style="list-style-type: none">Provide an east-west publicly accessible pedestrian connection through the central site, between the eastern and western connector roadsInvestigate the type and form of pedestrian connection between the site and Walter Street through the Council Reserve</div>	<div><div>4. Transition</div><p>The proposed development will respond to the existing character and grain of the neighbourhood, and will also relate to the future desired character that Council has proposed for the Willoughby Road Corridor. Redevelopment of the site will respond to the varying conditions by transitioning height and mass from the neighbouring properties to the internal 'void' zones deep within the site's boundaries.</p><p>Design Response</p><ol style="list-style-type: none">The development serves as a transition between the existing 7-storey (Castle Vale) development to the east, the proposed up-zoning of the properties along Walter Street (Draft LEP 2012), and the low-density residential housing to the north and west.Taller buildings are located in the centre of the site where the impact on adjacent properties is reducedThe heights and footprints of buildings steps down towards the more sensitive streetscape, particularly Richmond Avenue and the western end of the Artarmon Road frontage.<p>Recommendations</p><ul style="list-style-type: none">Greater change in building heights between the taller buildings (centre) and the site's eastern boundary, and the northern edge to the public park</div>
---	---	--	---



6.1.6 Design Appraisal

5. Interface

The site will address the four varied edges that exist along its boundary by respecting and contributing positively to these different conditions. Proposed development will address the edges with built frontages and landscaped setbacks that remove the gated perimeter fence and return the site to the neighbourhood. The form and scale of development will be compatible with the existing properties.

Design Response

1. Development along Richmond Avenue is two-storey terrace typology, reflecting the existing low-density character of the street
2. Artarmon Road features a linear park, which sets development 45m back from the street edge
3. Development along the eastern end of Artarmon Road responds to the change in levels and the elevation of the properties along the northern frontage
4. Setbacks from the site's eastern and southern boundaries respond to over-shadowing of existing properties - see recommendations
5. Taller buildings are located in the centre of the site where the impact on adjacent properties is reduced

Recommendations

- Development along the eastern boundary needs to be reviewed in terms of the transition between Castle Vale (existing 7-storey development) and level changes
- The built form along the southern frontage of the park should be considered in terms of its visual impact and interface with a public space

6. Scale

Development will be of an appropriate scale, in terms of height, location, orientation and yields. This will be achieved by balancing height of development with open space and the public realm to achieve the optimum level of density. The visibility of the site is a major consideration, one which will influence the location and orientation of buildings, particularly when viewed from the south of the site.

Design Response

1. Heights not to exceed 20-storeys, as was proposed in the initial 2010 concept plan
2. Taller buildings along the site's southern boundary to be orientated with the short-edge to the south, reducing its visibility from Naremburn, Walter Street and the Gore Hill Freeway
3. Single contiguous building along the eastern boundary investigates alternative forms to deliver target GFA - see recommendations

Recommendations

- Reconfigure the building along the eastern boundary to meet SEPP 65 requirements
- Reduce height of key buildings to respond to visual impact of site within long views, as outlined above

7. Shadows

Built form will be designed and orientated to ensure reasonable daylight access is delivered to all properties and public domain within and adjacent to the site. Setbacks, open spaces and building articulation should be used to maximise access to sunlight and mitigate any instances of over-shadowing caused by the proposal. Careful consideration should be granted to those properties located to the south-east, south and south-west of the site.

Design Response

1. Development setback from the eastern and southern boundaries to be a minimum of 10m
2. Reduce height of buildings along southern and eastern boundaries
3. Taller buildings located in the centre of the site where shadows are cast over the Council Reserve, telecommunications tower site and the Gore Hill Freeway
4. Single building in the east of the site steps up towards the centre, with the shorter buildings at the northern and southern ends

Recommendations

- Respond to the shadow diagrams outlined above, particularly the impact of the development at midday during mid-winter
- Ensure appropriate analysis of solar access for proposed buildings, in line with SEPP 65 requirements

8. Sustainability

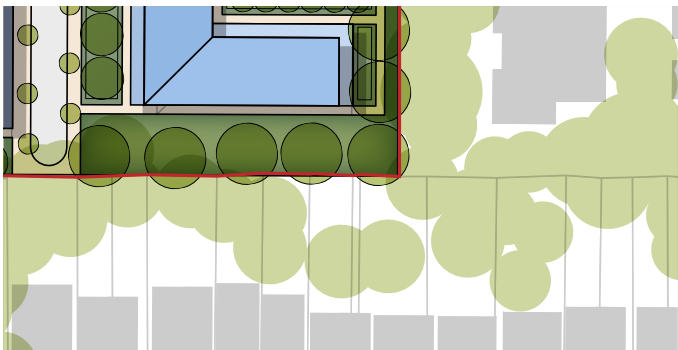
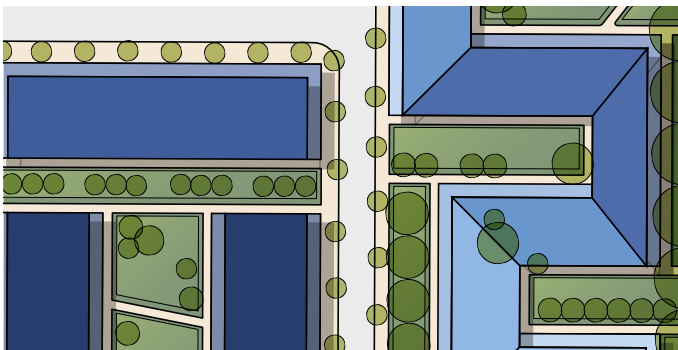
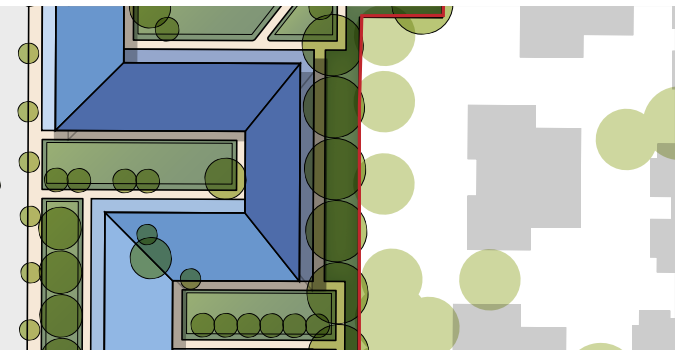
Sustainable design and development measures will form the basis of development on this site. At this early stage nothing is precluded. Sustainability will be approached holistically looking at a triple bottom line concept that looks at Economic, Social and Environmental objectives. Measures will be undertaken to ensure the future of the community is secured over the life of this project.

Design Response

1. All appropriate sustainability approaches and mechanisms can be investigated as part of the on-going design
2. Scale of development will support co-gen or tri-gen energy centre
3. WSUD systems to be designed as part of the site's landscape and open space network
4. Support a car-sharing scheme, which will reduce the number of parking spaces required on the site, reduce car ownership, and encourage patronage of public transport

Recommendations

- Nothing is precluded at this stage of the project
- See ESD Statement in accompanying report by JBA Planning



6.2.1 Site Layout - Option 02

Based on the same site layout as Option 01 (6.1), with the single access of Artarmon Road and the linear park along the northern site boundary, this scheme replaces the single contiguous building along the eastern boundary with a more conventional layout.

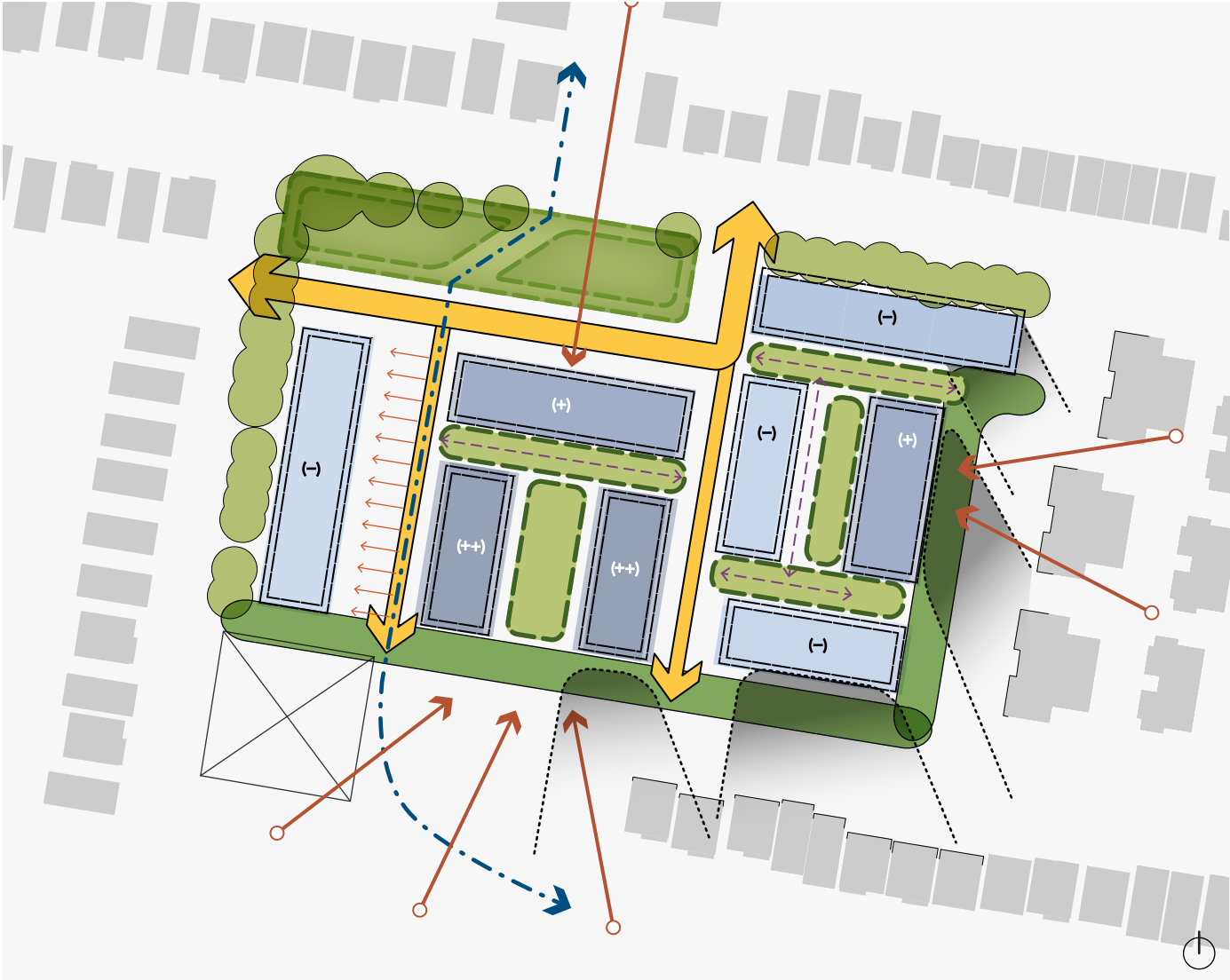
Four buildings are orientated towards the four edge conditions, three of them to the external boundaries and one to the internal connector road. The heights of the new buildings range from 4-storeys along the southern boundary, 6-storeys stepping down along Artarmon Road and 12-storeys along the site's eastern boundary.

This variation in building height seeks to respond to the surrounding properties, internal circulation and requirements of SEPP 65, particularly building separation and solar access.

The remainder of the scheme mirrors Option 01, with some variation in the building heights along the southern boundary.

The design intent includes the following key features:

1. Reduce the impact of over-shadowing on the neighbouring properties, particularly those located to the south of the site on Walter Street.
2. Orientate taller buildings so the short-edge faces long views from Naremburn, reducing their visual impact and allowing views past the buildings.
3. Reduce visual impact of buildings when viewed along Edward Street
4. Lower scaled residential development along Richmond Avenue, responding to the existing character of the streetscape
5. Minimise the traffic access and egress points at Artarmon Road by allowing an additional access point at the northern end of Richmond Avenue
6. Provide a publicly accessible pedestrian link through the site to connect Artarmon Road to the Council Reserve and Walter Street
7. Create a new publicly accessible open space along Artarmon Road to provides a range of active and passive uses
8. Reduce the height of buildings and increase the setback at the south-eastern corner, to minimise any over-shadowing impact on Walter Street properties
9. Building frontage in internal connector roads, which run north-south between Artarmon Road and the Council Reserve
10. Ensure taller buildings (existing and proposed) have the appropriate separations to satisfy SEPP 65 requirements

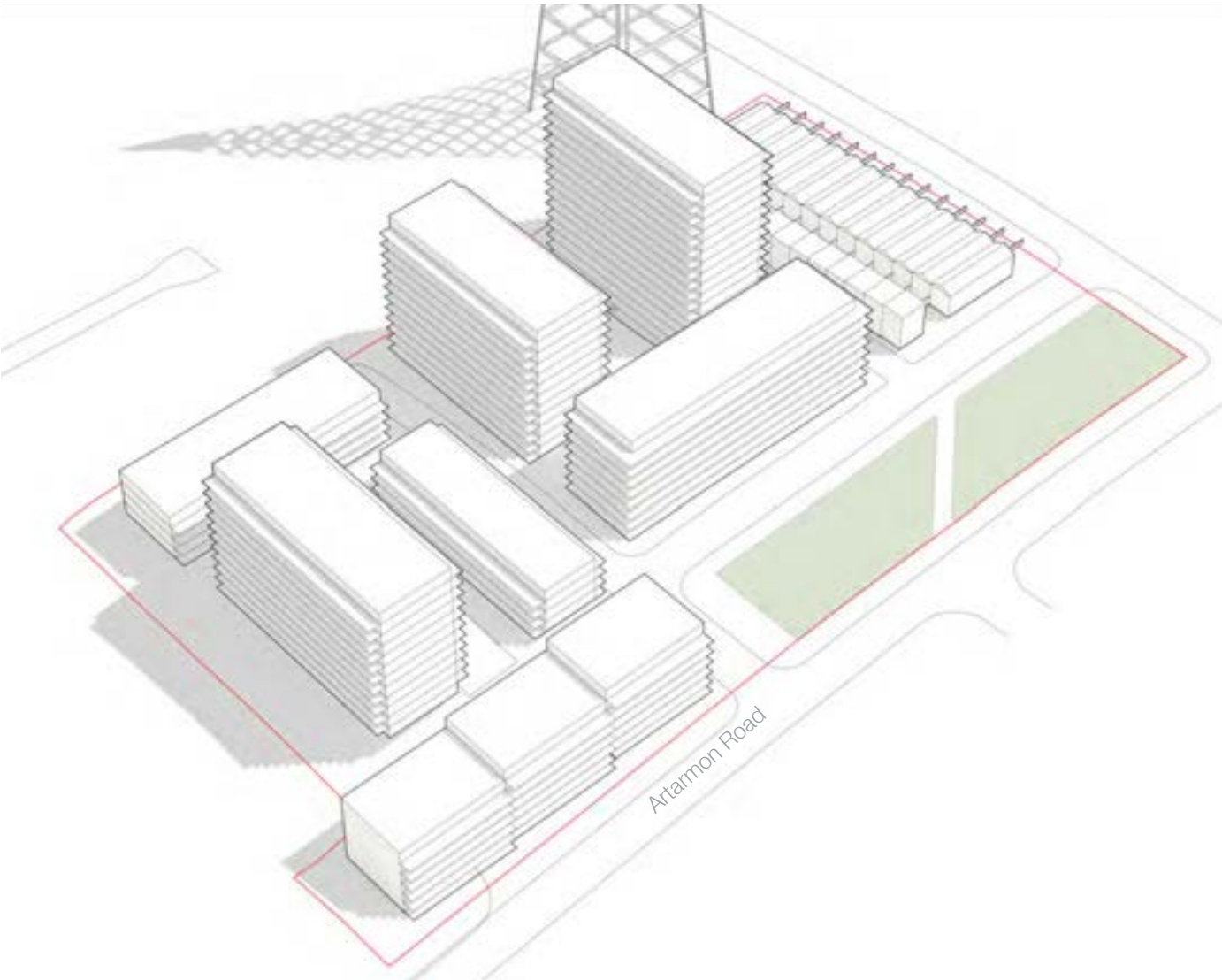


Option 02 Design Concept



Option 02 Site Layout

6.2.3 Massing Study

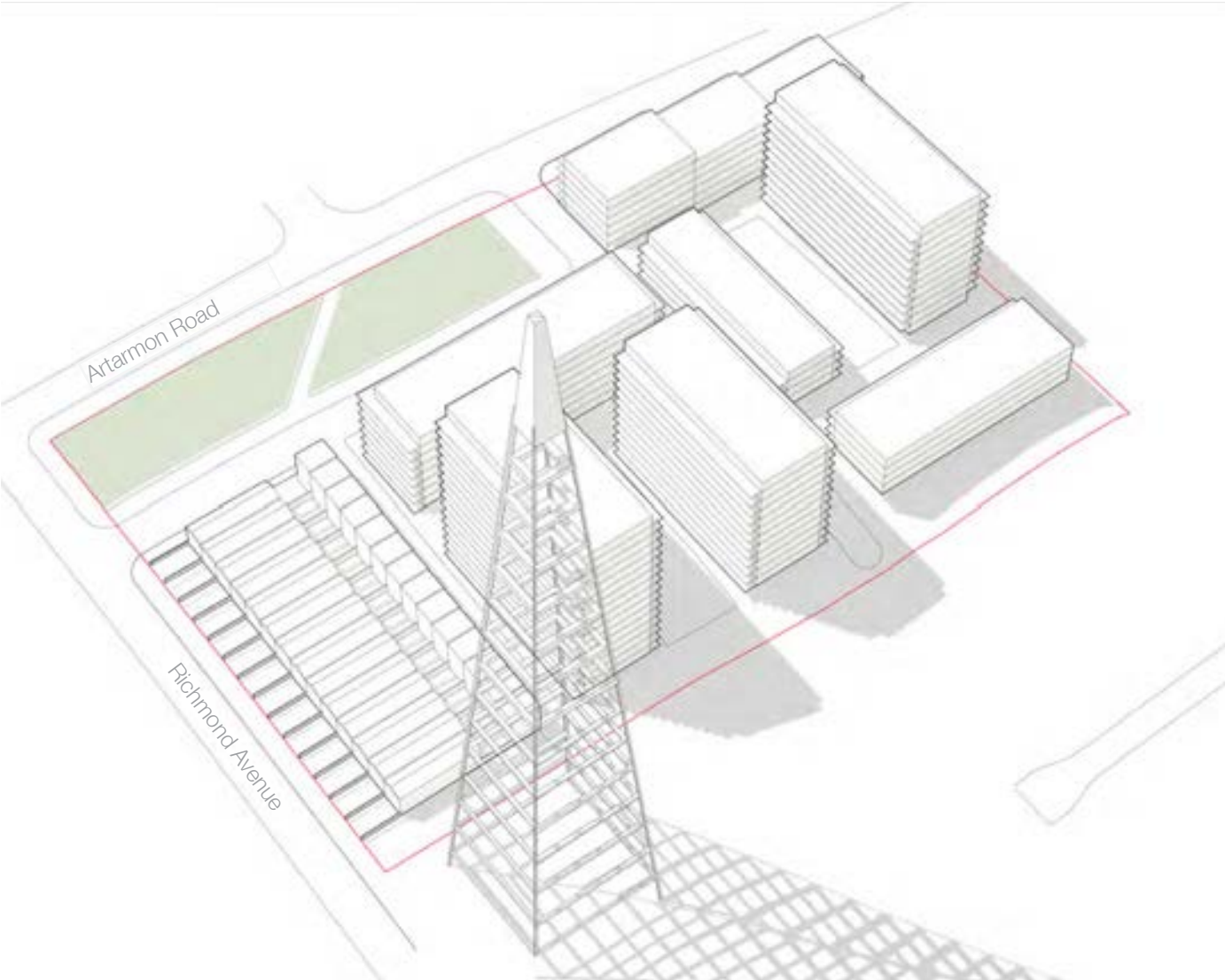


01 Massing Model view to south-west

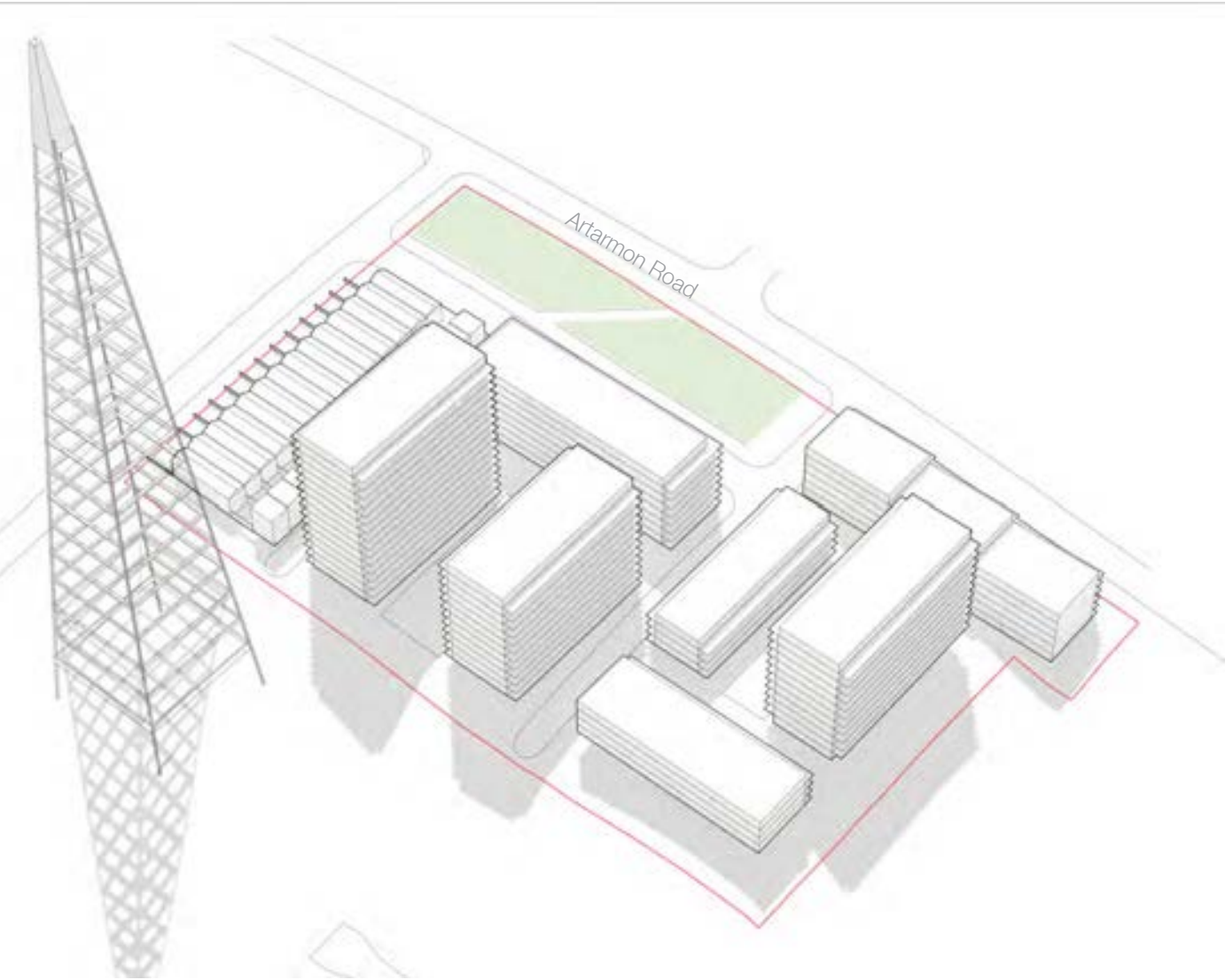


02 Massing Model view to south-east

6.2.3 Massing Study



03 Massing Model view to north-east



04 Massing Model view to north-west