Concord RSL Club, Concord West

Urban design study and built form layout

May 2018

GMU
Urban Design & Architecture

INTRODUCTION

GM Urban Design and Architecture (GMU) have been appointed by Mounties Group to conduct an independent urban design study of the potential built form on the subject site located at Nirranda St, Concord West to study the sustainability of the site for the provision of a mixed use development including a clubhouse, a new health club and a proposed seniors village.

In arriving at the opinions expressed in this report GMU have considered the aims of the metropolitan strategies as well as reviewed Council's policies and controls for the surrounding area and as well as the subject site. We have also researched the opportunities and constraints for the site, developed a vision and height strategies and generated 3 built form options.

These options in turn were further tested with regards to overshadowing, built form and scale, the relationships with the surrounding context and have been coordinated with various disciplines which led to selection of the final preferred masterplan for the subject site.

The analysis and studies shown in this report illustrate the overall principles and methodology that GMU and the project team went through to arrive at the final preferred masterplan for the site.

Introduction

The subject site is located approximately within a 1.1km of Concord West Train Station. It is located within a transitional area from a low-density neighborhood to a natural reserve surrounded by green recreational areas.

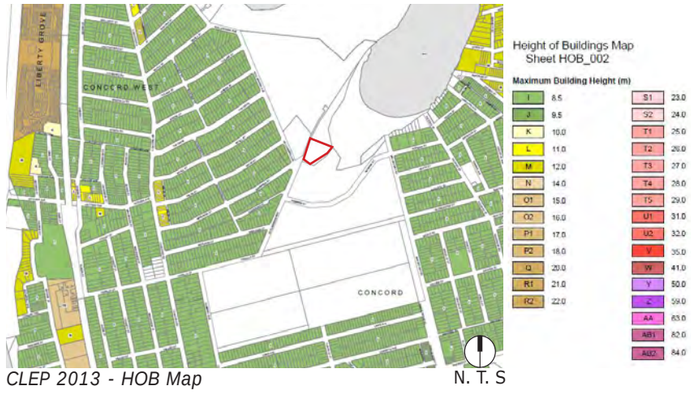
In order to understand the existing context, the future desired character of the area and the most appropriate built form outcome from an urban design point of view, GMU has reviewed and analysed the applicable controls, strategic and local policies as well as doing an urban design analysis of the surrounding local context. The analysis also included investigating the local context with regards to the height, views and vistas, topography and the potential or evolving local character through recent DAs and/or planning proposals.

We understand that there is no significant development within the immediate context of the subject proposal for higher developments and/or planning proposals are situated within close proximity of the railway corridor. We have also taken into account the high visibility of the subject site from its immediate surrounding context and the nature of its adjacent natural reserves as well as its location at the edge of a low-density neighbourhood.

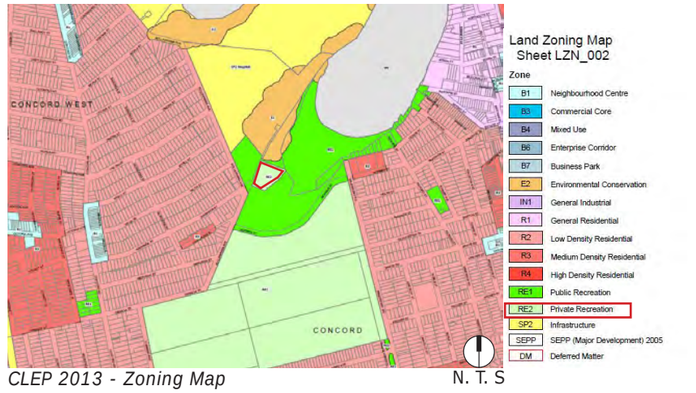
The subject site is zoned RE2- Private recreation- as per the LEP 2013. There is no applicable height and FSR controls for the subject site; however, the site is surrounded by R2 -low density residential with a maximum height of 8.5m. Therefore, we believe that the future development of the site should provide a sensitive design approach to maintain and enhance the transitional character of the area as well as responding to the current density of the surrounding context.

We have analysed the main constraints and opportunities for the subject site and its immediate context including view analysis which will need to be taken into account for the future development of the site. The analysis is followed by a number of urban design principles which leads to the height and built form strategies for the subject site, as discussed in the following pages.

The subject site *The railway corridor* N. T. S



CLEP 2013 - HOB Map N. T. S



CLEP 2013 - Zoning Map N. T. S

CONSTRAINTS

The main constraints for the subject site include:

- The location of the subject site adjacent to the heritage items and the heritage conservation areas which require a sympathetic design approach to achieve a good contextual fit approach.
- The location of the subject site adjacent to the low-density developments to the west and natural reserves/areas to the north, south and east.
- The site's interface with the natural reserves which requires a sympathetic design approach.
- High visibility of the site and the potential adverse impacts on the surrounding context by allocating high-density developments on the subject site.
- The existing mature trees/vegetations to the boundary of the subject site which require to be preserved.
- At-grade parking requirement due to the site's contamination.
- Potential interface issues to the public domain due to the location of on-grade parking.
- Flooding issues and the free board level requirement approximately 1-1.5m above the natural ground level.
- The existing view corridor to the site from Nirranda Street which needs to be considered.
- The location of the existing public parking to the north of the site as a detracting outlook for future residential uses on the site.

The next pages discuss the main opportunities for the subject site.

N. T. S

Heritage item
Low density surrounding residential
Existing public parking
Heritage conservation area boundary
Existing mature tree and landscape
Sensitive interface to the natural reserves/recreation areas required
The subject site
High visibility of the subject site from different vantage points
Existing view corridors to the site

OPPORTUNITIES

GMU has identified a number of opportunities for the future redevelopment of the subject site which aim to:

- Take advantage of the existing vegetation to the boundary of the subject site to minimise the adverse visual impact of the future development of the site on the surrounding environment.
- Create a responsive built form taking into the account the sensitive built form and natural surrounding context.
- Enhance the visual and physical permeability of the site through built form breaks and pedestrian links.
- Create a local/community hub by locating the club facility closer to the existing neighbourhood.
- Take advantage of the natural views to the north as well as providing a level of privacy for the future residents of the site by allocating the northern part of the site for residential uses.
- Take advantage of the maximum height of the tree canopies to identify the built form height on the boundaries of the subject site.
- Respond to the low-density neighbourhood to the south.
- Enhance the built form interface with the public domain through sleeving the residential units and/or club facilities.
- Take advantage of the location of the bus stop in close proximity of the subject site which provides future residents and visitors comfortable access to public transport.
- Concentrate potential higher density developments to the north and south as per the view analysis.

N. T. S

The subject site

Potential Visual/physical link to break the form and enhance permeability

Potential lower built form- Club facility

Potential medium height built form- residential

Potential taller built form/lower visibility area

Potential congregation space

Landscape buffer/Deep Soil

Take advantage of the view to the natural reserves

Bus stop to serve future residents

VIEW ANALYSIS

To identify the optimum height/density opportunities for the subject site, GMU has prepared an extensive view analysis based on the site's visibility form different vantage points. These are selected locations along main access points with a high visibility to the site. The aim of this analysis is to determine the maximum potential height of the subject site with a minimum adverse visual impact to the existing open spaces and surrounding developments.

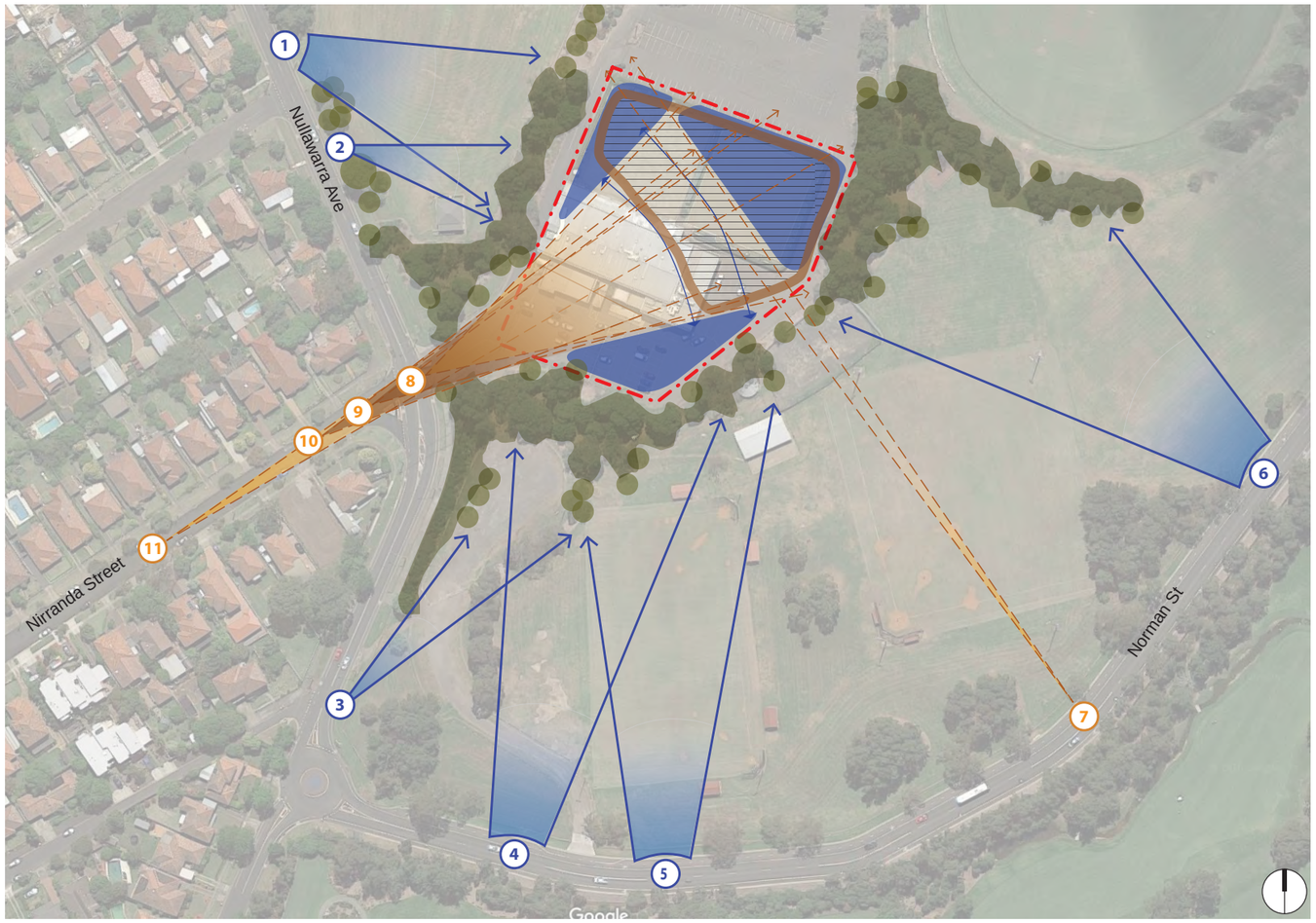
The indicative diagrams demonstrate 2 view categories. The blue lines demonstrate the views to the site that are blocked because of the existing mature trees on the boundaries. The survey analysis shows that the height of the trees are approx. 15-20m on the western boundary of the site and 18-22m on the north-eastern and southern boundaries.

The second view category (orange lines) shows the main unobstructed view corridors to the site (View Points 7-11). Vantage Point 7 is located within approx. 180m distance from the subject site with a minor visibility of the subject site as per the Picture 1 attached.

The more visible areas are Vantage Points 8-11, where the site is approached from the main street. The view analysis diagrams show the visibility of the subject site within various distances. Vantage Point 8 starts from the intersection of Nullawarra Ave and Nirranda Street which is the main entrance to the site. A 3 storey bulk and scale (compatible with the low-density surrounding developments) on the southern boundary of the site, allows for higher density development to be located around the middle of the site to the north.

The visibility analysis every 20m distance from the site up to 100m distance, shows that from a certain distance to the site, the visibility of the view corridor will be minor as shows by Picture 2.

The view analysis diagrams are demonstrated on the next page.



N. T. S

1.Minor visibility along View Corridor 7

2. Site's visibility along View Corridor 11, Approx. 100m to the site

Potential higher density built form/

Lower visibility area

The subject site

View corridors blocked by the existing trees

View corridor to the site

HEIGHT STRATEGIES

The indicative diagrams demonstrate the potential height of each section of the subject site based on its visibility from different vantage points.

Vantage points 1 & 2 from Nullawarra Street are located approx. 100m from the subject site and are the first vantage points approaching the site from the north-west. Considering the height of the trees (15-20m) adjacent to the north west boundary of the subject site, there is an opportunity to accommodate up to 6 storeys on the site with low levels of visibility from the north-western access point. Following the indicative visual line, there is an opportunity for greater height up to 2 storeys set backed from the north-western boundary as per diagram 1.

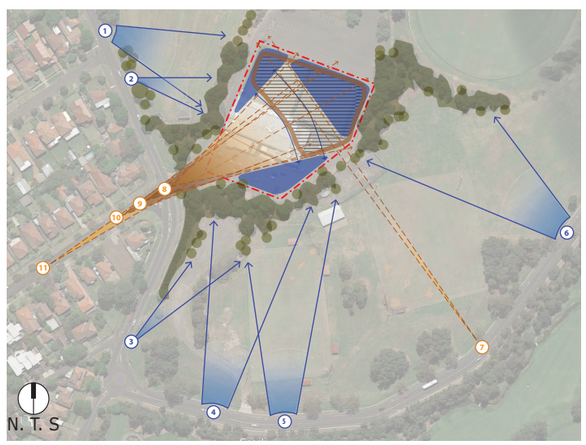
Diagram 2 is from Vantage Point 6 at approximately 180m distance to the site. The site has a very low visibility from this area as the first vantage point approaching the site from the south. The view analysis shows a greater height opportunity up to 8 storeys to the north eastern part of the site with no adverse visual impacts on the natural character of the surrounding context viewed from the south-east.

Diagram 3 analyses the potential view impacts of the future development of the site viewed from Vantage Points 3-5, closer to the southern entrance. These vantage points are located between 150-200m distance to the subject site with medium-low visibility. This provides an opportunity for a height of up to 6 storeys to the southern boundary with additional set backed 1-2 storeys with no visibility from these vantage points.

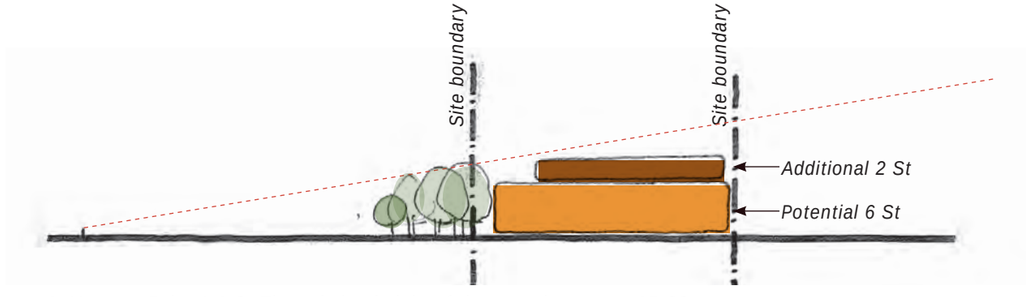
The subject site is highly visible form Vantage Points 8-11 along Nirranda Street as the main access point. So a number of vantage points have been analysed along the street to ensure the visual compatibility of the subject site from the low density surrounding context.

Diagram 4 analysis a number of vantage point starts from the intersection of Nullawarra Ave and Nirranda Street - as the main entrance to the site- every 20m to the site. Considering a potential (compatible) 3 storey development on the site (as applicable to the surrounding context) the diagram shows that with a setback above the 3 storey massing, there is an opportunity for a higher density development to the northern boundary of the subject site where there is minimum adverse visual impact perceived by the neighbourhood to the south west of the site.
It should be noted that the site's visibility from a distance greater that 80m is minor; therefore vantage points 8-10 have been the main positions considered in arriving at the built form strategy.

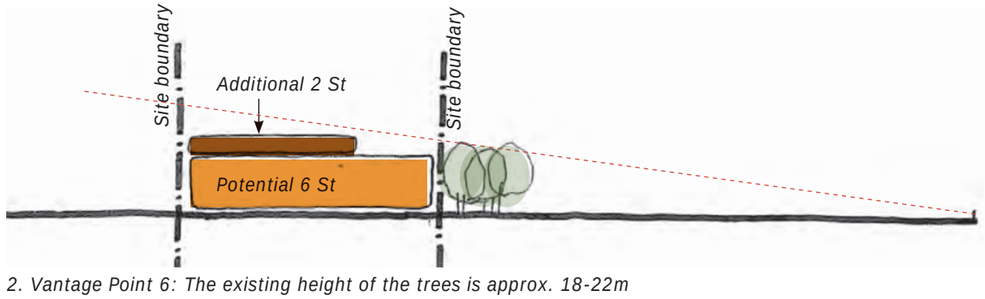
Based on view analysis, GMU has developed a built form/height strategy for the subject site which is discussed on the following page.



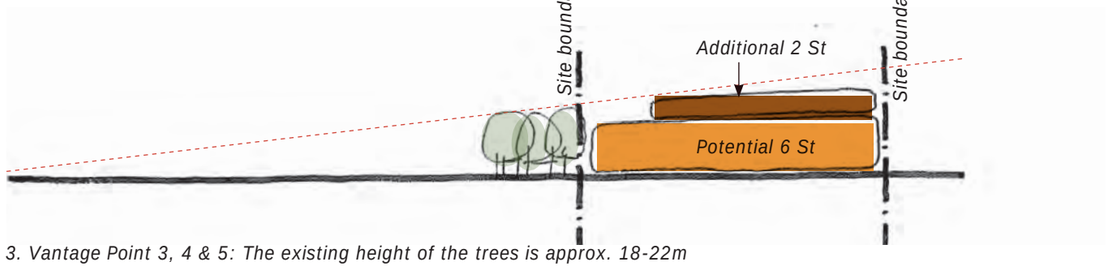
Key map for the view analysis



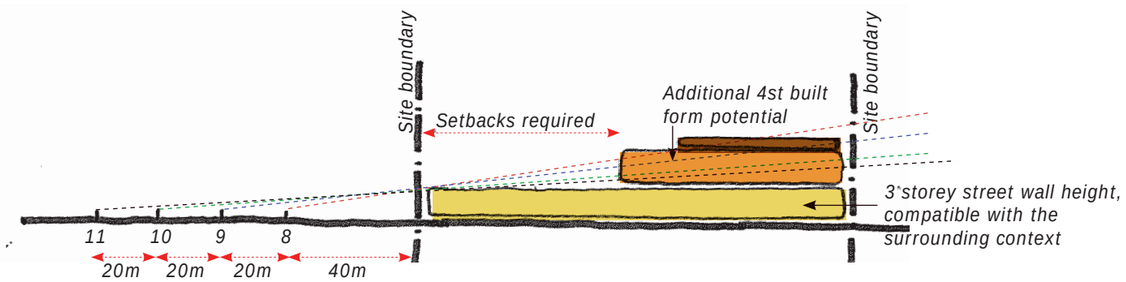
1. Vantage Point 1 & 2: The existing height of the trees is approx. 15-20m



2. Vantage Point 6: The existing height of the trees is approx. 18-22m



3. Vantage Point 3, 4 & 5: The existing height of the trees is approx. 18-22m



4. Vantage Point 8, 9, 10 & 11: The existing main view corridor to the site

HEIGHT STRATEGIES

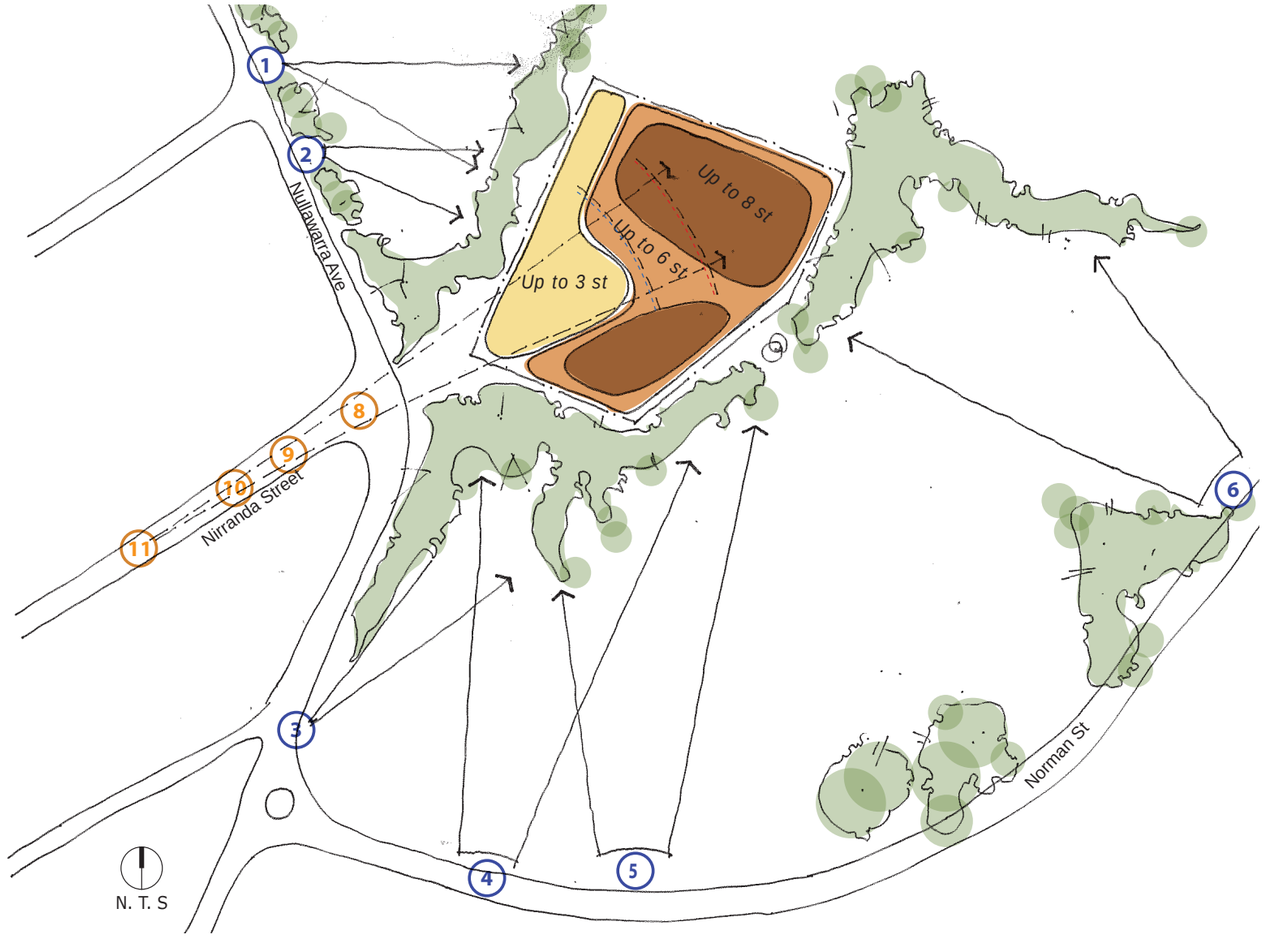
The indicative diagrams demonstrate the potential height of each section of the subject site based on its visibility from different vantage points as follows:

- Opportunity for higher density development to the south and north of the site due to minor visibility of the built form behind the tree canopies.
- Opportunity for up to 3 storey street wall height to the south of the subject site along View Corridors 8-11 with a certain level of setbacks above to accommodate a potential higher density development to the north.
- Opportunity for up to 6 storey development as an average density for the majority of the site.
- Opportunity for additional 1-2 storeys above the 6th level in areas of low visibility per the view analysis diagrams.

Conclusion

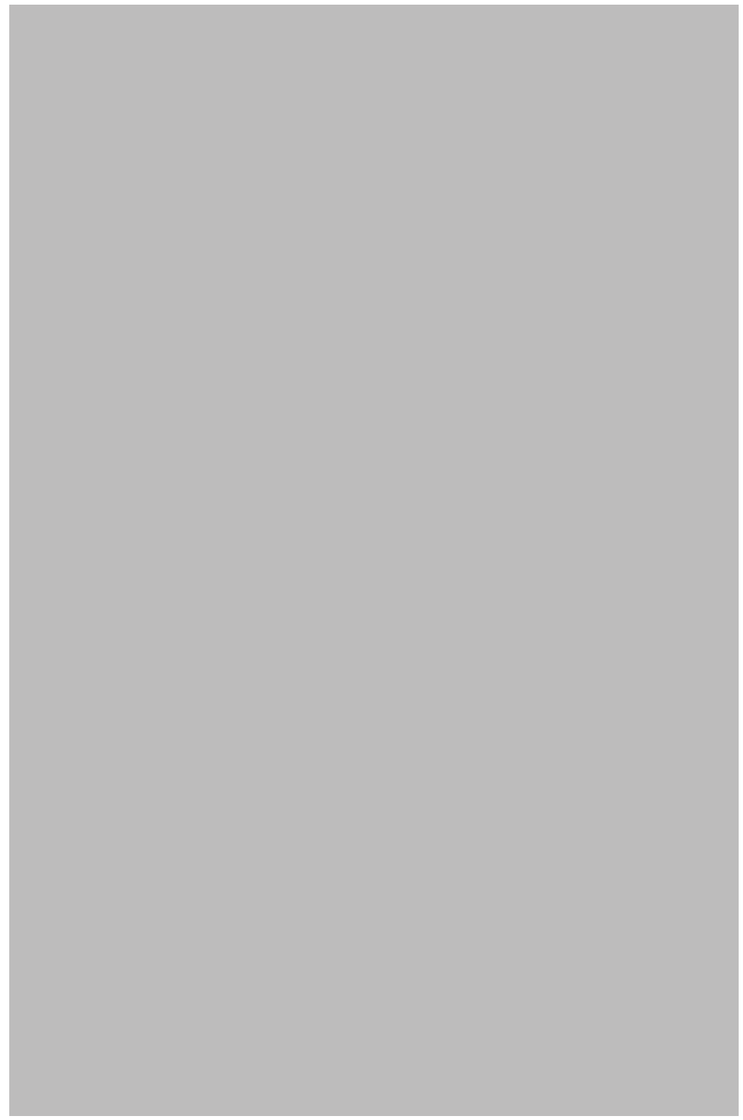
The areas shown in the potential height distribution diagram represent developable areas only; however, the concentration of height responds to low visibility ares in order to ensure a greater contextual fit with the surrounding context.

Future analysis and design work will provide an indicative location and configuration of the potential built form envelopes varying between 3-8 storeys.



Potential height distribution of the subject site

Max. 3 st
Max. 6 st
Max. 7-8 st
Required setbacks for higher development as per View 8
Required setbacks for higher development as per View 9

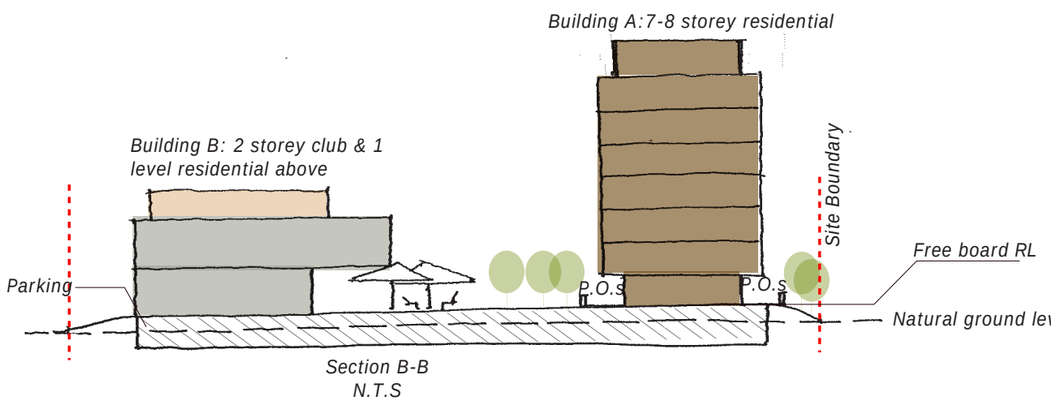


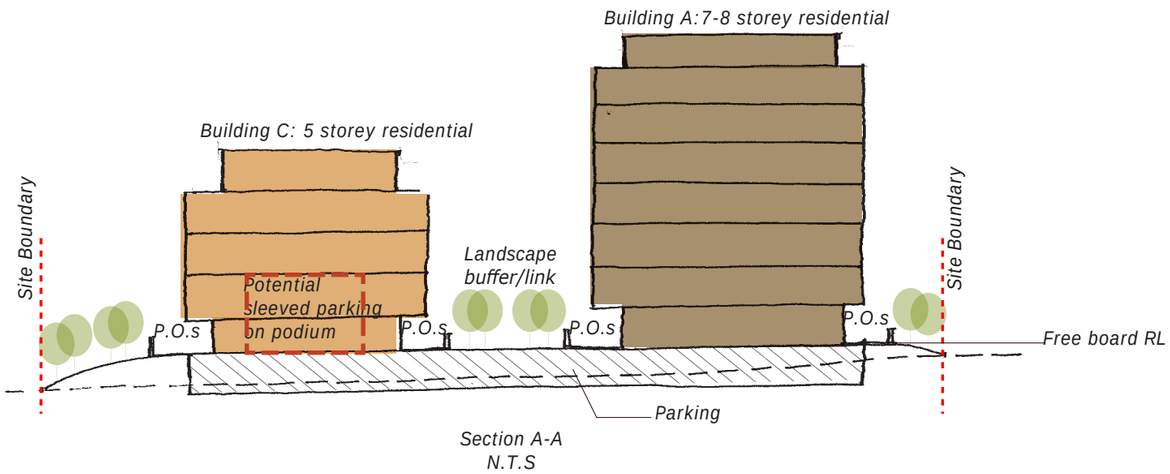
BUILT FORM OPTIONS

OPTION 1

This options relies on 1 level parking below the ground, taking advantage of the topography and a minor excavation of the site (Max 1.5m). The main characteristics of this option include:

- A 2 storey club building plus 1 level residential element above Building A.
- A 7-8 storey residential built form element (Building B).
- A 5 storey residential built form element (Building C). It should be noted that the sleeved at-grade parking is located within the first 2 storeys of this building.
- Building separation to enhance the view corridor from the main entrance along Nirranda Street to the oval.
- A high level landscape/deep soil area to the boundaries of the subject site to enhance the landscape character of the site and integrate it better with the surrounding context.
- Variety of communal open spaces between buildings for club patrons and residents.
- A northern aspect communal open space to achieve the required solar access.
- Publicly accessible pedestrian pathways across the site to enhance the connectivity between Nirranda Street, the oval and the existing walking pathway to the north along the water.





OPTION 2

This options involves no excavation of the site. The underground parking will be provided on the lower part of the site below the free board. The at-grade parking will be limited to the extend that it does not result in a massive bulk and scale on the ground. This option includes:

- A separated club building with a maximum of 2 storeys (Building A).
- Maximum of 8 storey built form element for the residential development on Building B. It includes at-grade parking on the first 2 levels of the podium element sleeved with residential units.
- Building separation to enhance the view corridor from the main entrance along Nirranda Street to the oval.
- A high level landscape/deep soil area to the boundaries of the subject site to enhance the landscape character of the site and integrate it better with the surrounding context.
- Variety of communal open spaces between buildings for club patrons and residents.
- A northern aspect communal open space to achieve the required solar access.
- Publicly accessible pedestrian pathways across the site to enhance the connectivity between Nirranda Street, the oval and the existing walking pathway to the north along the water.

N. T. S

Club- 2 storeys
Max 2 storey podium (parking sleeved with residential units)
Max 8 storey residential (6 storeys above podium)
Underground parking
Sleeved parking within podium
Parking access
Pedestrian access
Landscape buffer/private open space
Communal open space
Site boundary
Publicly accessible pedestrian link

OPTION 3

To provide the parking area required for this development in case excavation is not allowed, we need to cover the entire site for 2 levels which does not give us the opportunity to provide adequate levels of landscape and deep soil areas within the subject site. This will provide a large impermeable bulk and scale, block the potential views and create a long continuous built form which results in a poor urban design outcome. The main characteristics of this option are as follows:

- 2 levels of podium element including at-grade parking sleeved with the residential units and the club back of house areas.
- Club area on the third level (Building C).
- A range of 4-8 storey residential buildings above podium.

N. T. S

Max 2 storey podium (sleeved parking)
Club area on the third level
Residential building on the 4th level
Max 8 storey residential (6 storeys above podium)
Communal open space above podium
Site boundary

Parking access
Pedestrian access
Landscape buffer/private open space
Parking area with podium
Club back of house within podium
Residential units within podium

THE PREFERRED MASTERPLAN

PREFERRED MASTERPLAN

Based on the previous options considered, the preferred masterplan responds to the views and vistas to/from the subject site by creating lower building edges and recessed upper levels to minimise the perception of bulk and scale. It provides an opportunity for a through-site pedestrian link from Nullawarra Avenue to the recreational area to the north and proposes separate built form elements on the site. The main characteristics of this option include:

- A 2 storey club building plus 2 levels of residential uses above Building A.
- An 8 storey residential built form element (Building B).
- A 5 storey residential built form element (Building C).
- Building separation to enhance the view corridor from the main entrance along Nirranda Street to the oval.
- A high level landscape/deep soil area to the boundaries of the subject site to enhance the landscape character of the site and integrate it better with the surrounding context.
- Variety of separate communal open spaces between buildings for club patrons and residents.
- A northern aspect communal open space to achieve the required solar access.
- Publicly accessible pedestrian pathways across the site to enhance the connectivity between Nirranda Street, the oval and the existing walking pathway to the north along the water.
- 1.5 levels parking below the ground, taking advantage of the natural topography of the subject site.

The following pages provide bird's eye and perspective views as well as indicative layouts and precedent images for the site.

The preferred masterplan

- *Pedestrian entrance*
- *Parking entrance*

BIRD'S EYE AND PERSPECTIVE

Bird's eye view towards the site to the north

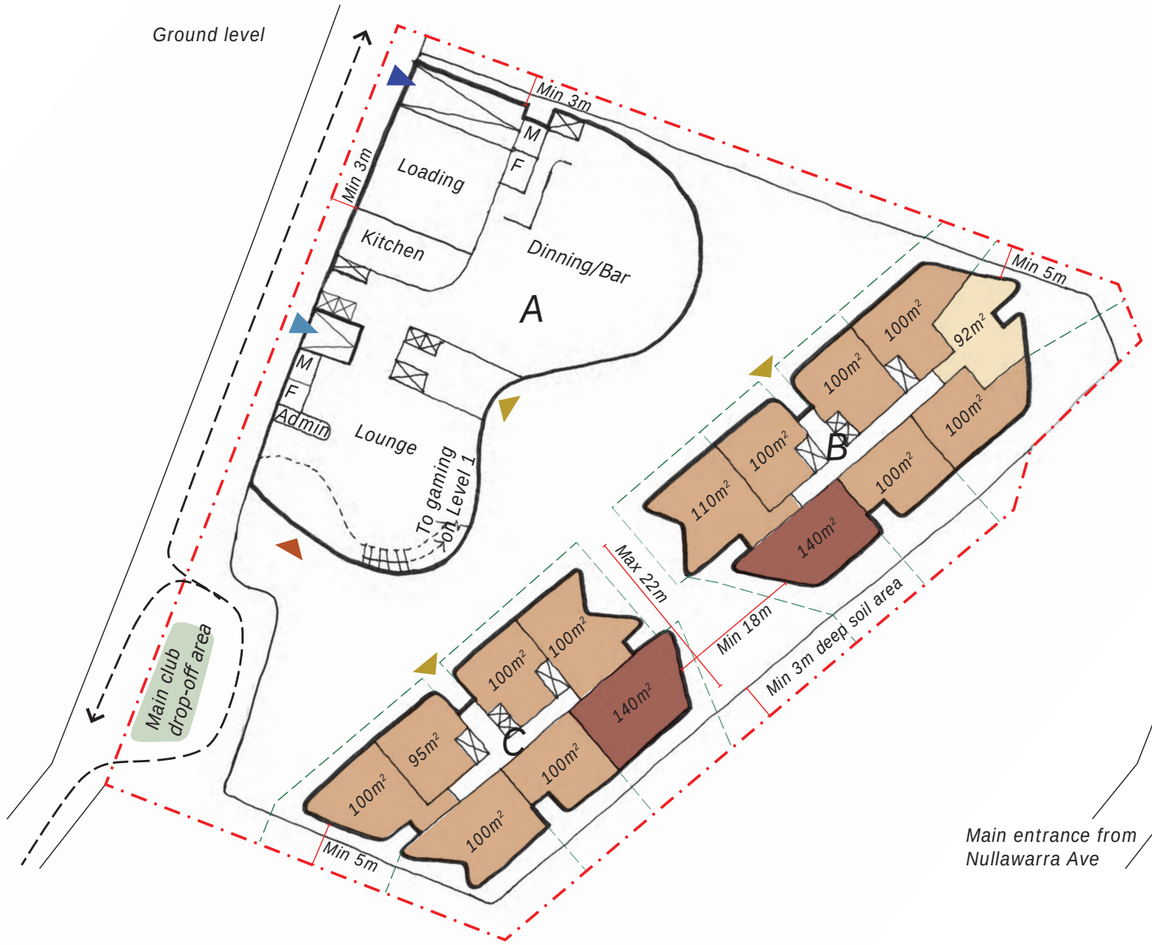
Publicly accessible pedestrian link

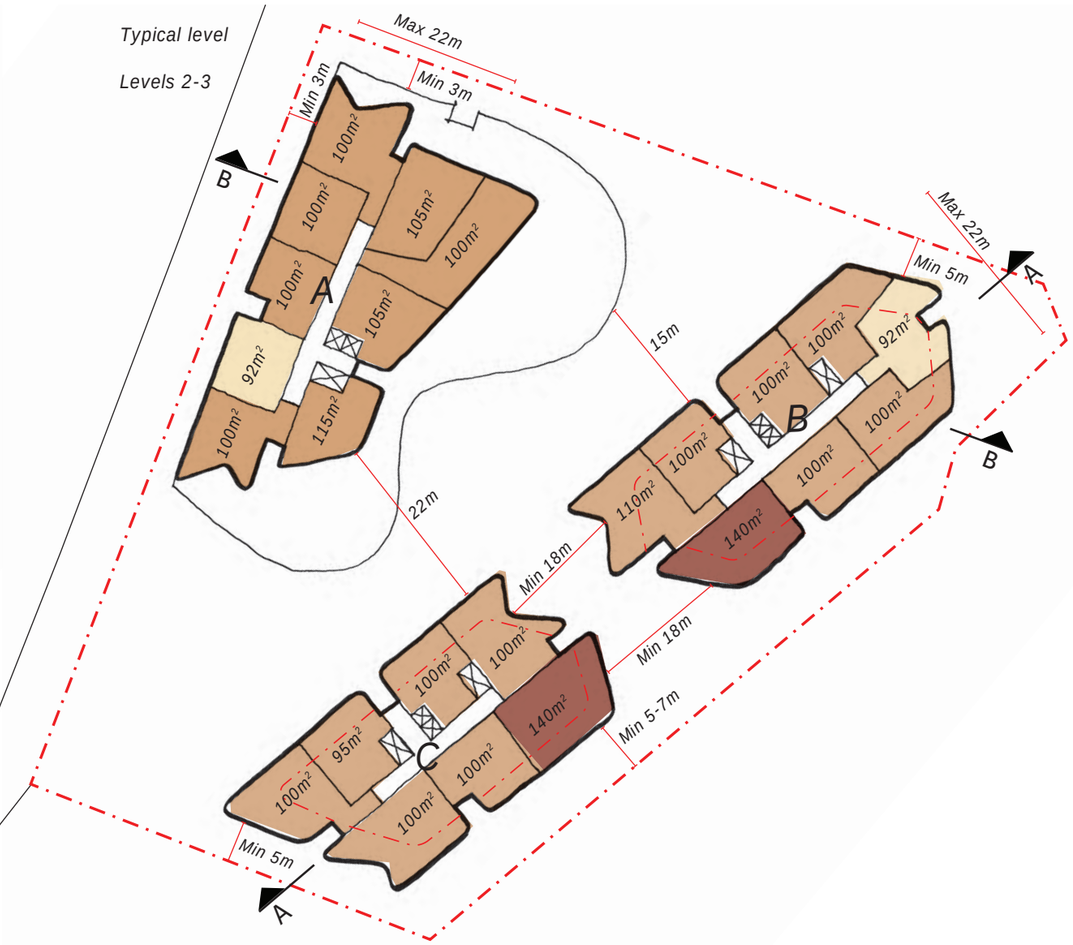
View A: The main access point to the site from Nullawarra Avenue

View B: View towards the site to the south

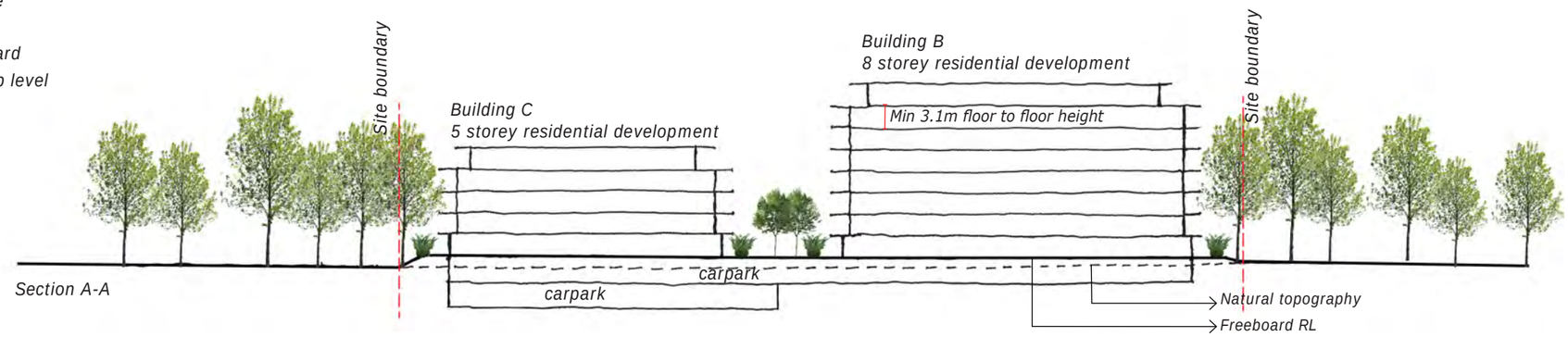
View C: View towards the site to the North

INDICATIVE LAYOUTS





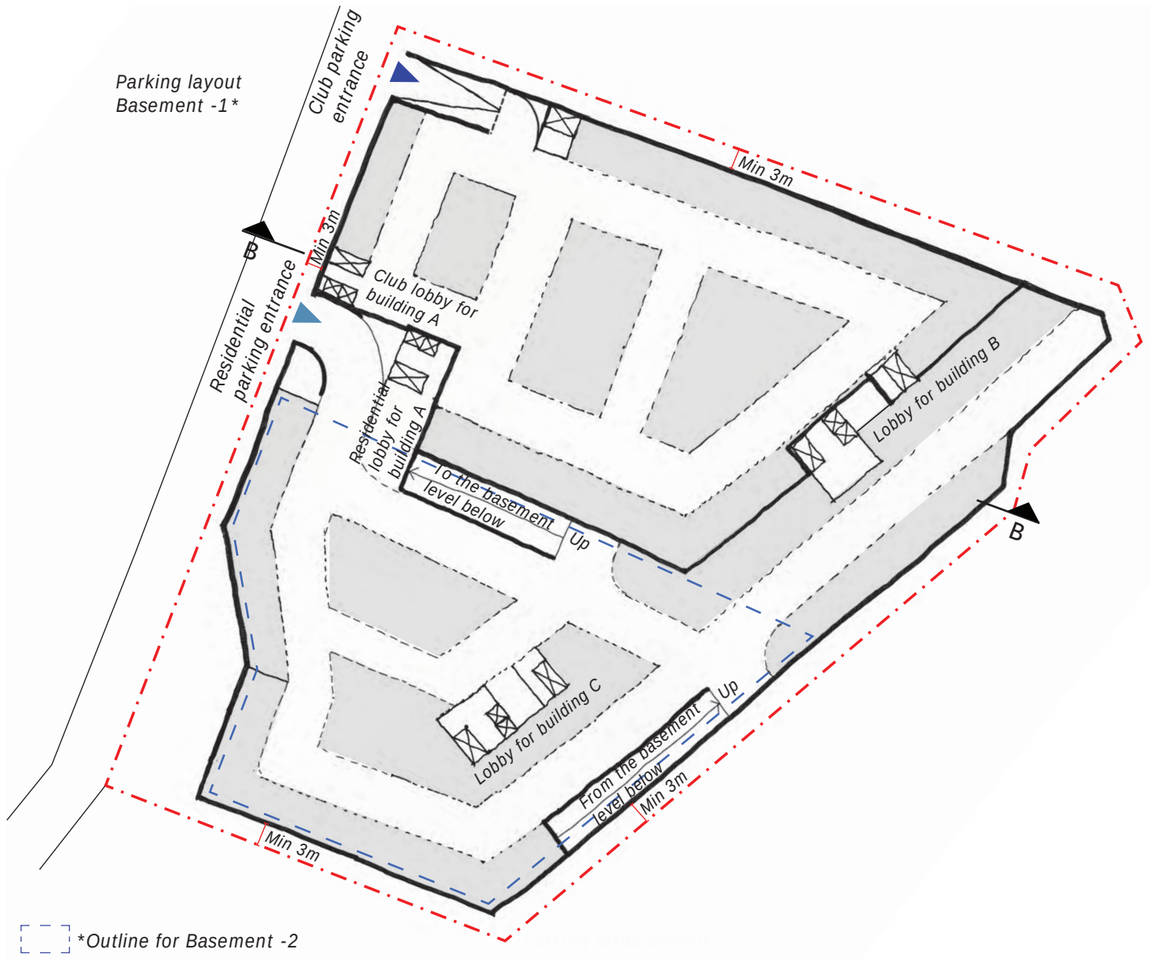
- Club entrance
- Residential entrance
- Residential parking entrance
- Club parking entrance
- Ground level private courtyard
- Built form outline for the top level
- 1 Bedroom unit
- 2 Bedroom unit
- 3 Bedroom unit



N. T. S

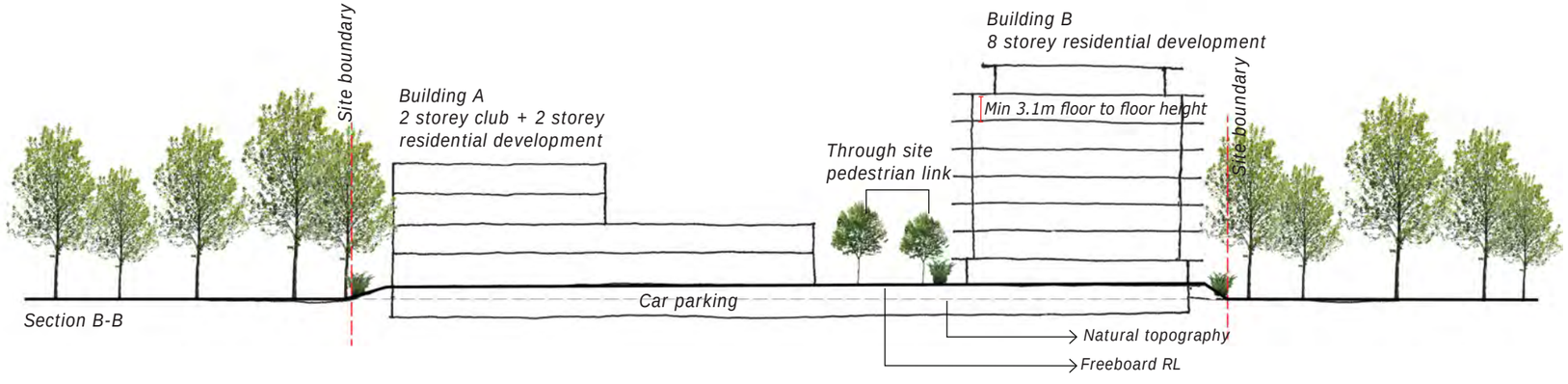
*Please note that the residential unit GFA provided at this stage excludes the circulation area and balcony, but it does not exclude the depth of the external walls.

INDICATIVE LAYOUTS



Estimated Yield table

	1-Bed	2-Bed	3-Bed	Total unit	Cross ventilation	Minimum 3H solar in mid-winter
Building A **2 storey residential above 2 storey club**	2	16	-	18	8	14
Building B **8 storeys**	7-9	45	9	61 (including 5-7 units on the top level)	40	44
Building C **5 storeys**	0-2	28	4	32(including 4-6 units on the top level)	21	23
Total	9-13	89	13	110-115 Units	69	81
	11%	78%	11%		60%	70%



N. T. S

VISION- CLUB DINNING AND ENTERTAINMENT FACILITIES

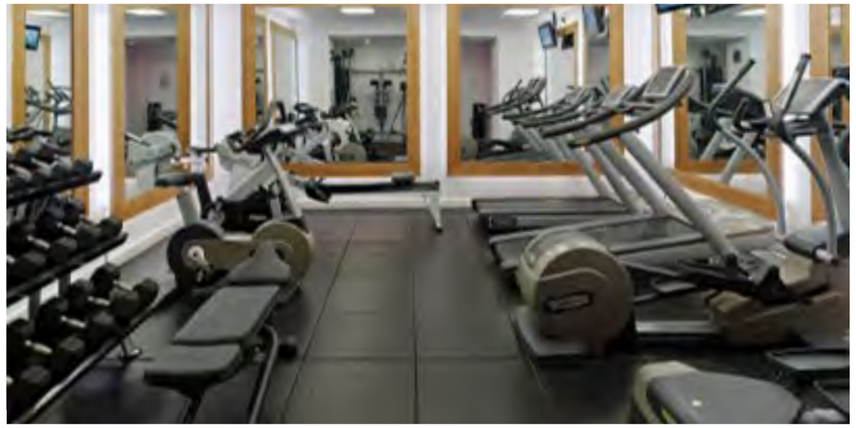
Source: heartofwilloughby.com.au/clubwilloughbymemberconstruction

VISION- MULTI- FUNCTIONAL CLUB EVENT SPACES

Source: heartofwilloughby.com.au/clubwilloughbymemberconstruction

VISION- POTENTIAL SHARED CLUB AND SENIORS INDOOR FACILITIES

Source: https://vaucluse.markmoran.com.au/retirement-living/your-lifestyle/



Source: heartofwilloughby.com.au/clubwilloughbymemberconstruction

Source: https://www.amway.com.au/en/join-now/about-the-business-opportunity/business-centres/

Source: http://www.lemeridiensuvarnabhumi.com/business-centre

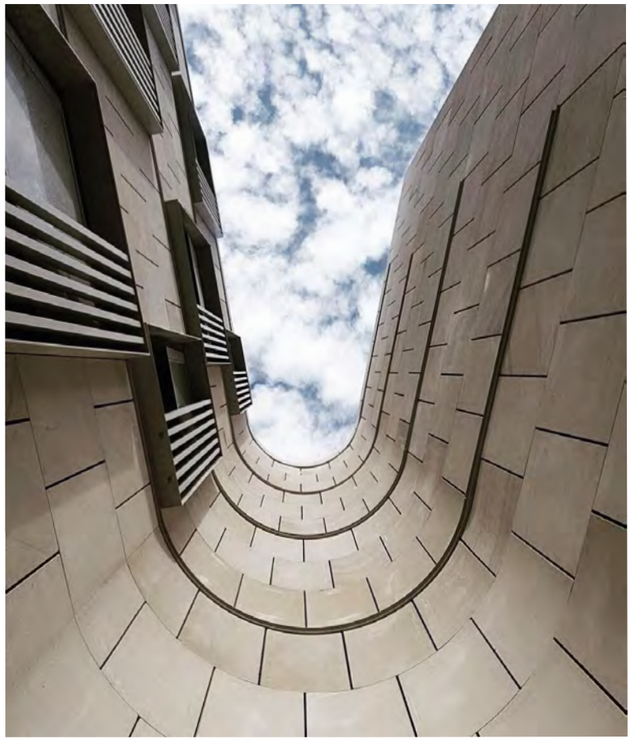
VISION- BUILT FORM CHARACTER

Source: https://www.wyndhamharbour.com.au/living/apartments/

Courtesy of Architectus + CHROFI + JMD Design

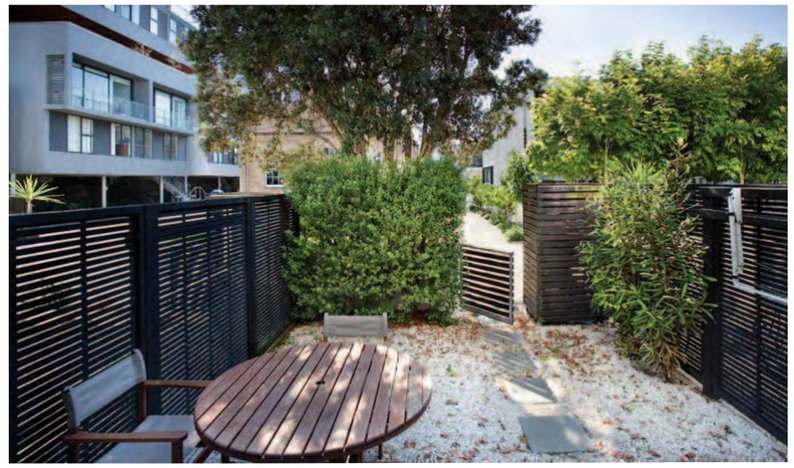
Source: http://tomkinscommercial.com.au/tomkins-secures-newport-project-with-australand/

Courtesy of Architectus + CHROFI + JMD Design



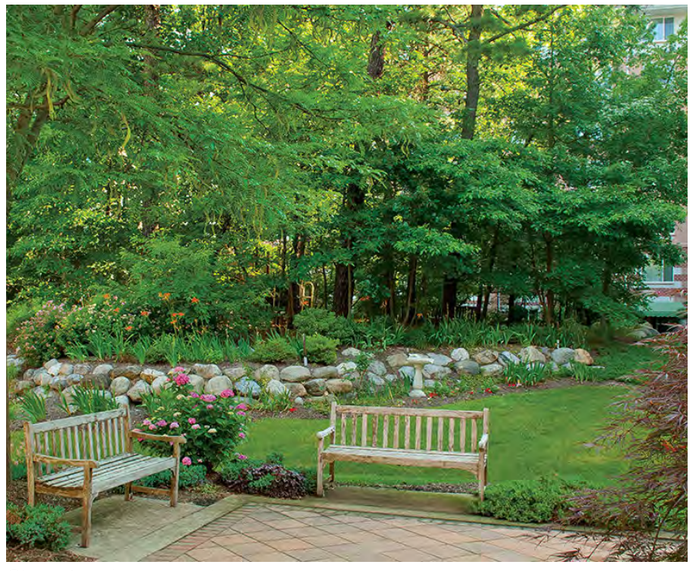
VISION- RESIDENTIAL LANDSCAPE CHARACTER

Character of communal open spaces
Source: http://my.chicagobotanic.org/tag/landscape-design/

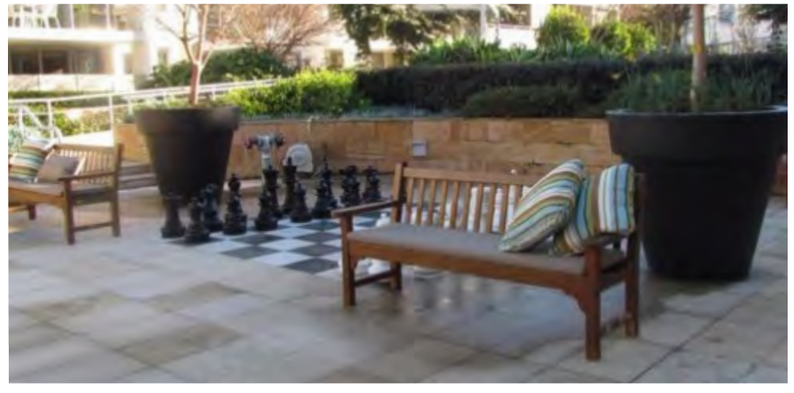


Example of private courtyard on the ground level
Source: www.aucklanddesignmanual.co.nz

Landscape solution to deal with the topography, particularly on the edges
Source: heartofwilloughby.com.au/clubwilloughbymemberconstruction



Character of communal open spaces
Source: https://www.ericksonliving.com/seabrook



Character of communal open spaces on the ground
Source: heartofwilloughby.com.au/clubwilloughbymemberconstruction

GMU

Urban Design & Architecture

Project	UDR - Concord West - Concord RSL
Job number	17046
Date issued	31 May, 2018