



13 Endeavour Road Urban Design Study

In support of a Planning Proposal for:

13 Endeavour Road
Caringbah
NSW

Prepared for
Aliro Group

Issued
8 November 2021

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We create amazing places



At SJB we believe that the future of the city is in generating a rich urban experience through the delivery of density and activity, facilitated by land uses, at various scales, designed for everyone.

Ref: 6272
Version: 09
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Issue Revisions

01	Draft for review	28.08.2020
02	Draft for review	04.09.2020
03	Draft for review	07.09.2020
04	Draft for review	10.09.2020
05	Draft for review	10.09.2020
06	Draft for review	11.09.2020
07	For Lodgement	18.09.2020
08	Post Lodgement	08.10.2021
09	Post Lodgement	08.11.2021

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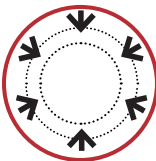
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1.1 Purpose of this Report

SJB have been engaged by Aliro Group to prepare an Urban Design Study for a site located at 13 Endeavour Road, Caringbah - the former Toyota Motor Company Australia (TMCA) site. It has been prepared in support of a Planning Proposal that seeks amendments to the current LEP controls for the subject site.

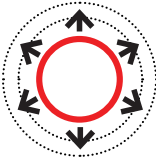
This study offers a development strategy and pathway for the site in order for it to continue to provide local employment and services opportunities for Sutherland Shire and the broader South District. The vision is aspirational and is derived from a high level understanding of current and emerging policy documents, market conditions, infrastructure upgrades, potential employment provision and future public / active transport projects and upgrades.

The urban design strategy works at two scales in parallel:



Strategic Contextual Approach

At this scale, strategic high level opportunities and constraints along with the site vision and priorities are identified. A response to these items is embedded in an urban framework and structure plan which demonstrates the merit in the delivery of the project within the context of Caringbah as a whole.



Site Specific Site Approach

Informed by the lessons learnt from the wider contextual analysis, the key focus at this scale is to explore the viability and potential public benefits of the proposals on the surrounding context at a site specific scale. This includes balancing the provision of new employment floorspace with the ability of community infrastructure to support it, the retention of the existing landscape character with the

provision of new high quality and sustainable buildings as well as the provision of ground level activation with the scheme's basic functional service requirements such as car parking.

Our strategic framework research identifies an opportunity for additional built form height and a greater variety of uses than are currently permissible on-site, driven by its unique size, a desire to maintain and build upon the legacy of the existing main warehouse building, the site's location and ability to complement, not replace, other local commercial centres, the proximity of recreational spaces as well as its walkability from local housing supply. The indicative reference scheme aims to achieve a long term vision for the site in regard to the provision of commercial floorspace, ground floor activation, areas of open space, the retention and enhancement of the existing landscape character (including the foreshore), community facilities, the capacity of local road networks to support the development, potential upgrades to public / active transport and services as well as the minimal impact on the existing surrounding context and communities.

In order to achieve this, the Planning Proposal proposes the following amendments to Sutherland Shire LEP 2015 (SSLEP 2015):

- Amending the SSLEP 2015 Height of Buildings Map in accordance with the proposed height of buildings map, as shown within the planning report.
- The inclusion of a new clause / items in Schedule 1 of SSLEP 2015 to permit additional on-site uses - also outlined within the planning report.

The appropriate information to support the planning proposal is contained in this report, and includes the following:

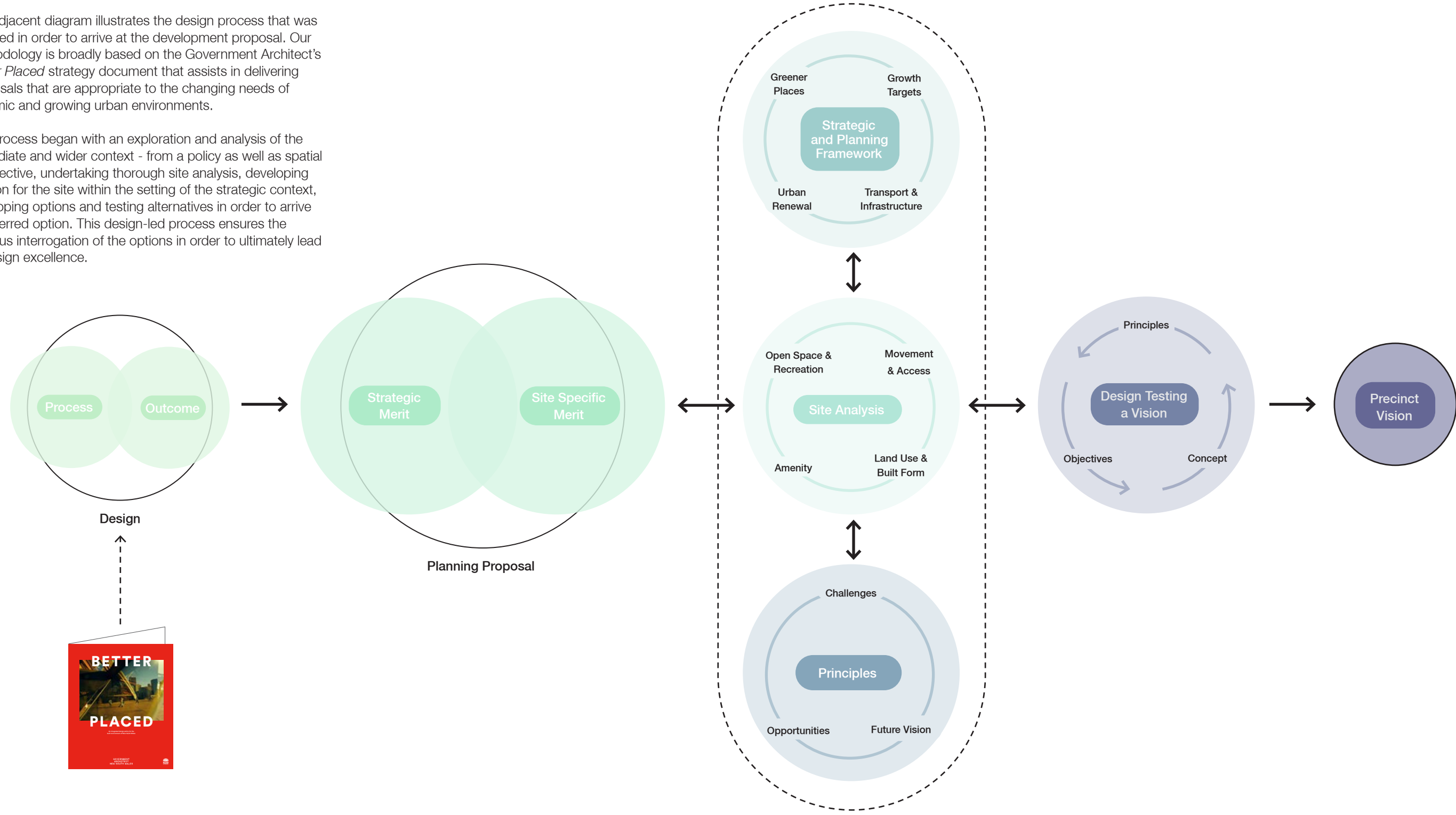
- An introduction to the site, its context and relevant planning frameworks
- A strategic framework and benchmarking analysis
- A thorough understanding of the local and urban context and an analysis of the design implications
- Key design principles that will inform the future character, quality of the proposed development and underpin the building design
- An indicative reference scheme for the subject site (and potential staging options) to help convey how the proposed LEP amendments may manifest themselves in future.



1.2 Approach Methodology

The adjacent diagram illustrates the design process that was followed in order to arrive at the development proposal. Our methodology is broadly based on the Government Architect's *Better Placed* strategy document that assists in delivering proposals that are appropriate to the changing needs of dynamic and growing urban environments.

The process began with an exploration and analysis of the immediate and wider context - from a policy as well as spatial perspective, undertaking thorough site analysis, developing a vision for the site within the setting of the strategic context, developing options and testing alternatives in order to arrive a preferred option. This design-led process ensures the rigorous interrogation of the options in order to ultimately lead to design excellence.



Setting the Scene

1

Setting the Scene

1.1 Regional Context

‘Sutherland Shire comprises an area of 370 km², located on the southern periphery of Greater Sydney. The Sutherland Shire Council area, together with Georges River Council and the City of Canterbury-Bankstown, form the South District of Greater Sydney.’

Source: Sutherland Shire Council Draft LSPS

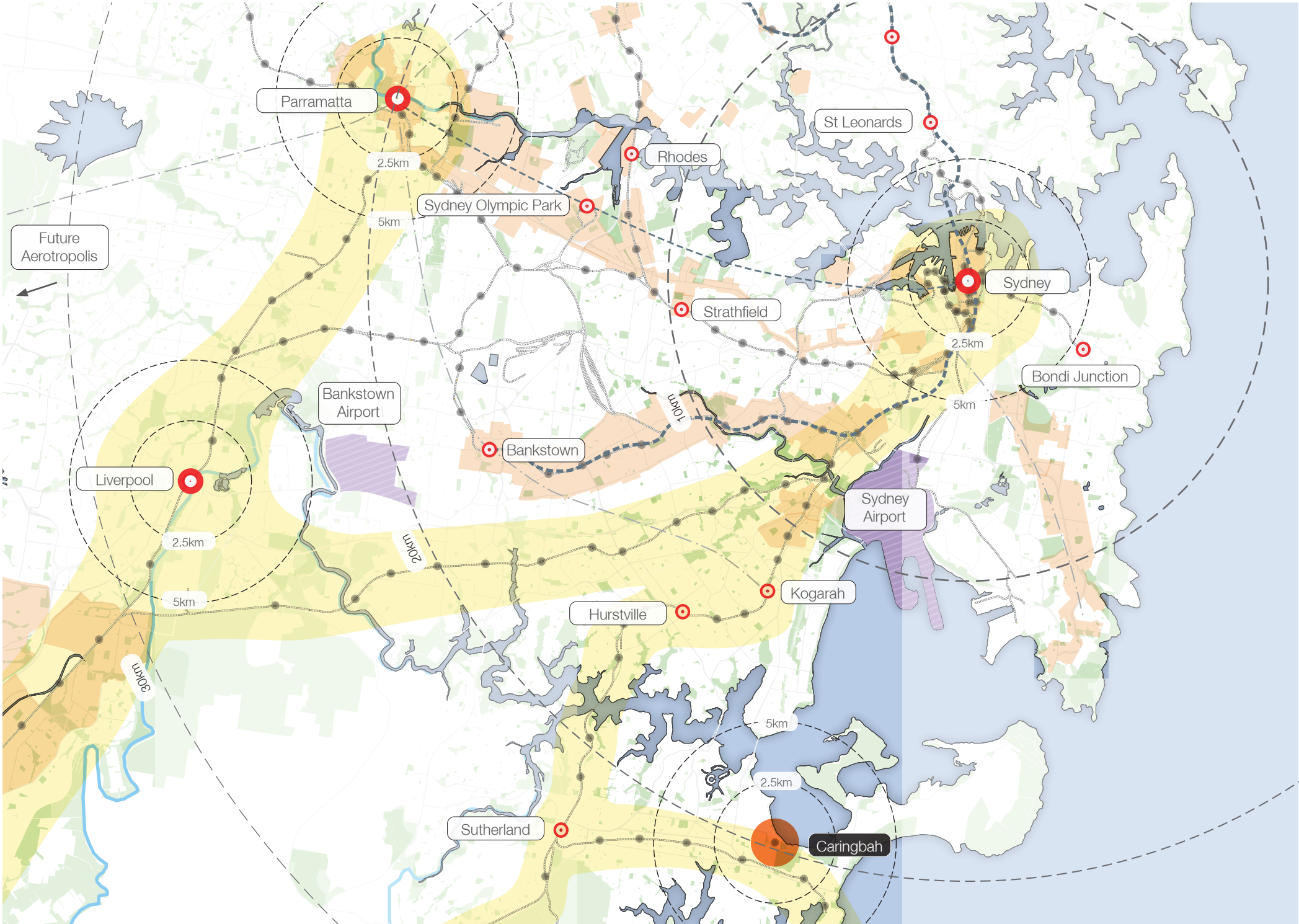
The Greater Sydney Region Plan - A Metropolis of Three Cities was released by the Greater Sydney Commission (GSC) in 2018. The Plan provides high level strategic guidance for the development of Greater Sydney to 2056. It is based on a vision of three cities – the ‘Eastern Harbour City’, ‘Central River City’ and ‘Western Parkland City’ – whereby people can access jobs and services in their nearest metropolitan city within 30 minutes, by public transport.

Caringbah is located approximately 26km to the south-west of the Harbour CBD (20km as the crow flies), in the south of the Sydney Metropolitan Area and within the Greater Sydney Commission’s Eastern Harbour City (South District). Its vision will be achieved by;

- *‘Supporting the growth of the ANSTO innovation precinct, health and education precincts, Bankstown Airport-Milperra industrial area and the District’s strategic centres*
- *Retaining industrial and urban services land and freight routes*
- *Optimising on the District’s locational advantage of being close to Sydney Airport, Port Botany, the Illawarra and Port Kembla*
- *Building on the District’s connections to Parramatta, and in the longer term to Liverpool and Western Sydney Airport*
- *Sustaining vibrant public places, walking and cycling, and cultural, artistic and tourism assets*
- *Protecting and enhancing natural assets including waterways and beaches, bushland and cultural landscapes*
- *Transitioning to a low-carbon, high efficiency District through precinct-scale initiatives’*

KEY

- Strategic Centre
- Economic Corridor
- Renewal Areas



Setting the Scene

1.2 Local Context

The subject site, 13 Endeavour Road, is located adjacent to Woollooware Bay and approximately 1km to the north east of Caringbah Railway Station. It is framed by Captain Cook Drive along the south boundary, Solander Fields to the east, industrial uses to the north west and a mangrove biome to the north east.

The mixed use / general industrial district is a major employer in the local area and extends northwards to Taren Point and Captain Cook Bridge with good access to major vehicular routes (particularly the M5), Port Botany and Sydney Airport.

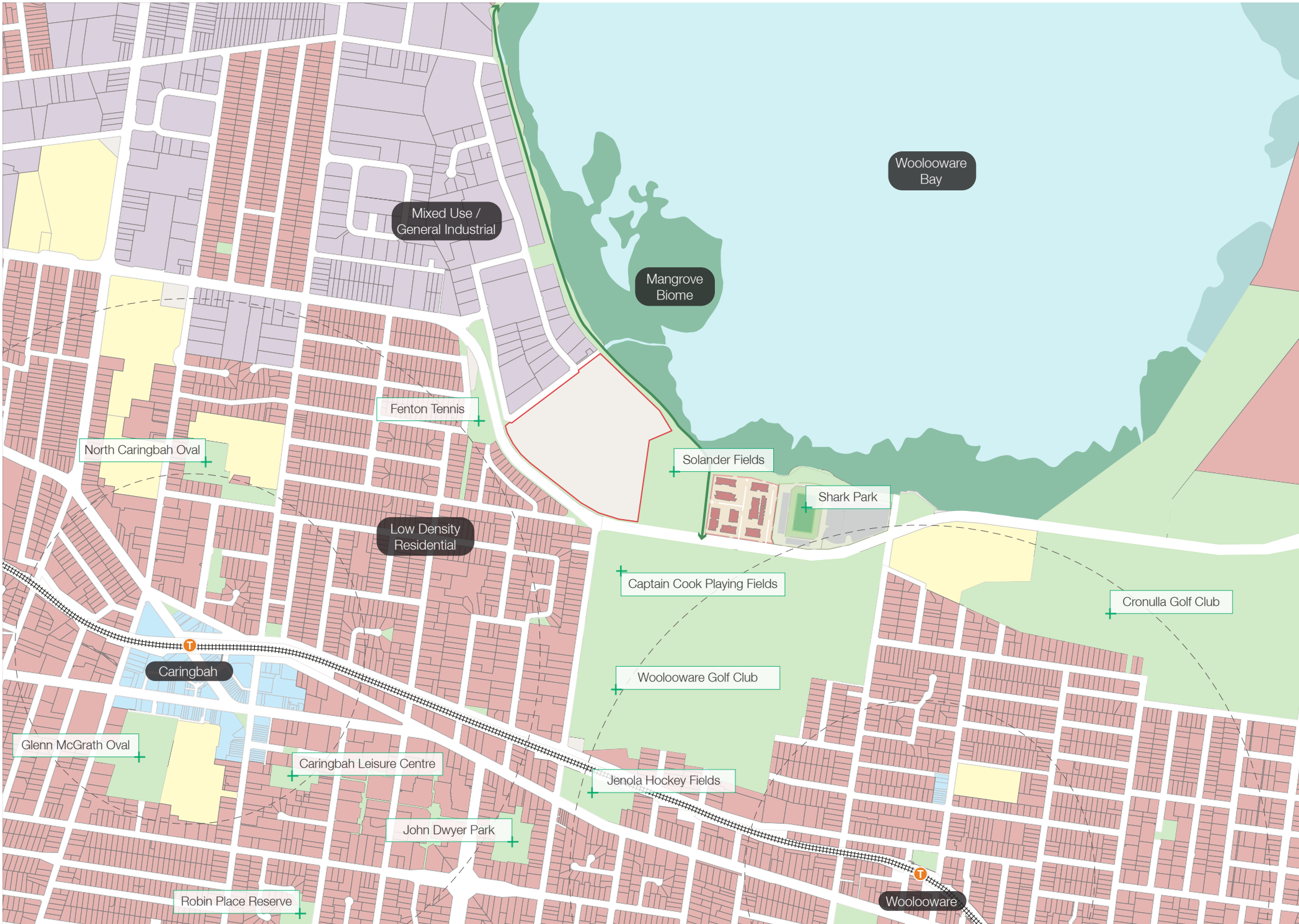
Low density residential uses envelop Caringbah commercial core / town centre - predominately comprising detached dwellings on the northern side of the rail infrastructure and low rise apartment buildings / multi dwelling houses to the south. There is a similar pattern surrounding Woollooware Station but without the commercial component.

To the south east of the site, there are extensive recreation spaces including Solander Fields, Captain Cook Playing Fields, Woollooware Golf Club, Cronulla Golf Club as well as Shark Park (with an adjacent high density residential development),

The periphery of the wider Woollooware Bay offers Estuarine Mangrove Forest with small patches of Estuarine Saltmarsh and have high levels of biodiversity.

KEY

- Site Boundary
- Mixed Use / General Industrial Character
- Low Density Residential Character
- Commercial Core
- Education
- Open Space
- Mangrove Biome
- Water



1:7,500 @ A3

Setting the Scene

1.3 Context Photographs

The surrounding context offers a varied mix of built form, uses and architectural styles.

Typically, to the north west of the site, the built form comprises low rise / large floor plate warehouses and general industrial buildings served by Endeavour Road and Resolution Drive. On the southern side, on the opposite side of Captain Cook Drive, there is a significant area of low rise residential dwellings that have gradually modernised since their initial post-war construction. The suburban residential streets generally lack pedestrian footpaths and as such are car dominated.

To the east of the site and fronting the other side of Solander Fields, the recent Woollooware Bay development(s) offer a number of large residential flat buildings up to 14 storeys in height.

Fronting Woollooware Bay, the pedestrian / bicycle shared path provides a well used east-west connection that is complemented by dedicated cycle lanes on Captain Cook Drive.



01 - Typical low density suburban street to the south west



02 - Significant tree planting provides visual barrier to major vehicular route



03 - Typically industrial warehouses with some additional ancillary services



04 - Foreshore shared path with high-density residential development



05 - Solander Fields with Stingrays Football Club clubhouse



06 - Segregated pedestrian circulation spaces



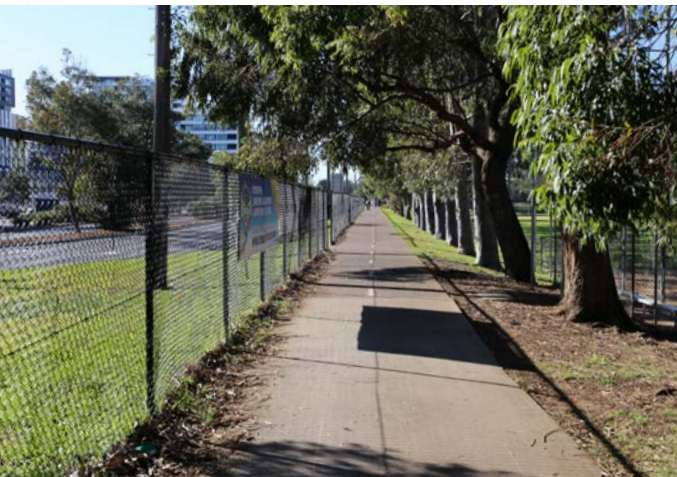
Site photo plan



07 - Foreshore area currently under development



08 - Foreshore shared path with seating area and information boards



09 - Shared path on southern side of Captain Cook Drive

Setting the Scene

1.4 Site Context

The subject site is located at the southern end of Endeavour Road with an additional vehicular entrance on the southern boundary of the site fronting Captain Cook Drive. It is bounded by these two roads as well as Solander Grounds / Fields to the east and Woollooware Bay to the north.

To the north west of the site, a general industrial area with a variety of different sized warehouses is serviced by Endeavour and Resolution Drives. The character of the area to the south west, on the opposite side of Captain Cook Drive, is largely low density residential and mainly comprises detached 1-2 storey dwellings.

There a number of (largely) vacant buildings on site, all commercial or industrial in nature, which are set amongst a well maintained and well established landscape containing a variety of endemic and exotic planted specimens. There is a high site coverage of impermeable surfaces due to numerous surfaces car parks and loading docks etc. A soft landscaped buffer is present fronting the mangrove biome within Woollooware Bay.

Site area: 12.3 Hectares / 123,891 sq.m.



Site Aerial Photograph

1:1,000 @ A3

Setting the Scene

1.5 Site Photographs

The subject site contains a voluminous and large floor plate warehouse building positioned towards the north west boundary. The remainder of the site offers a mix of storage, light industrial and commercial buildings as well as extensive surface car and heavy goods vehicles.

There is extensive and well-established landscape character to the site that offers a range of endemic and exotic species. Since the site was vacated in 2017, landscape maintenance has continued.



01 - Aerial view looking north



Site photo plan



02 - Loading bays of existing warehouse building



03 - Landscaped area within foreshore setback



04 - Extensive existing landscape character

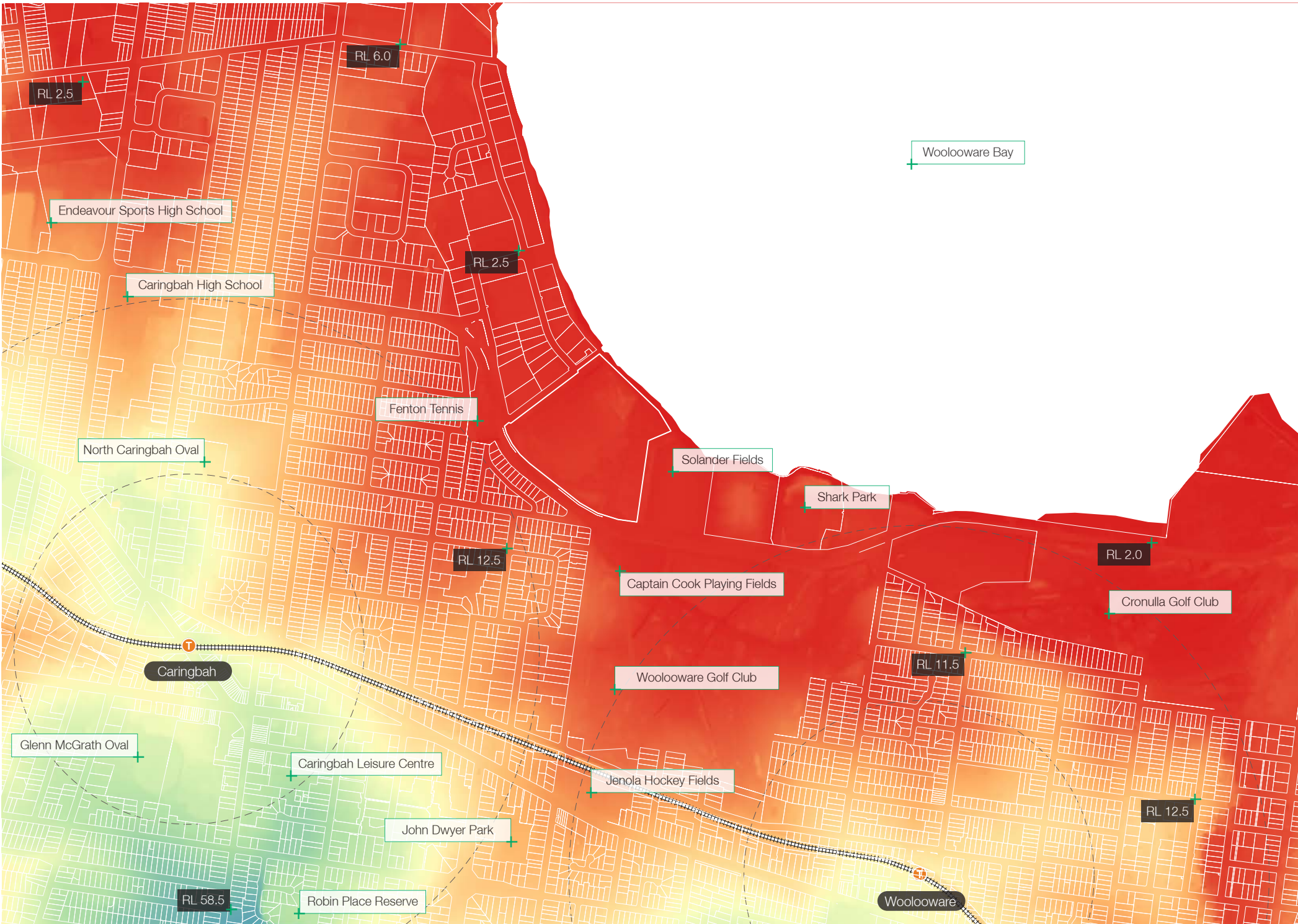
Setting the Scene

1.6 Context Topography

Situated adjacent to Woollooware Bay, the subject site sits in a coastal buffer zone of low elevation, within the broader eastern peninsular of the South District, extending to Kamay Botany Bay National Park to the east.

The highest point within the extents of the map opposite is south of Caringbah Station at RL 58.5 (and continues to rise to a maximum RL 65 to the south). As such, there are limited opportunities where the subject site is visible from an elevated position.

KEY



Setting the Scene

1.7 Movement and Access

The site is bounded by Captain Cook Drive to the south (a major arterial road), Endeavour Road to the west, by the Woollooware Bay foreshore to the north and Solander Fields to the east.

Captain Cook Drive is a major east-west distributor road connecting the peninsular to the A1 Princes Highway (via The Boulevard) as well as Taren Point Road heading north towards the Harbour CBD.

Gannons Road provides a significant north-south link towards Dolans Bay and provides one of the few connections across the rail corridor in the local area. It is a significant barrier dividing north and south Caringbah. Kingsway (to the east and west) provides the closest alternative vehicular crossing points with Caringbah and Woollooware Stations also offering pedestrian crossing points.

The local area's street network comprises a generally clear grid structure with a limited number of dead ends and generally good connectivity - especially within residential areas.

The surrounding bicycle network is extremely limited with only a few segregated cycleways - predominately along Captain Cook Drive. The foreshore shared path currently ends at Solander Fields.

KEY

Distributor Road

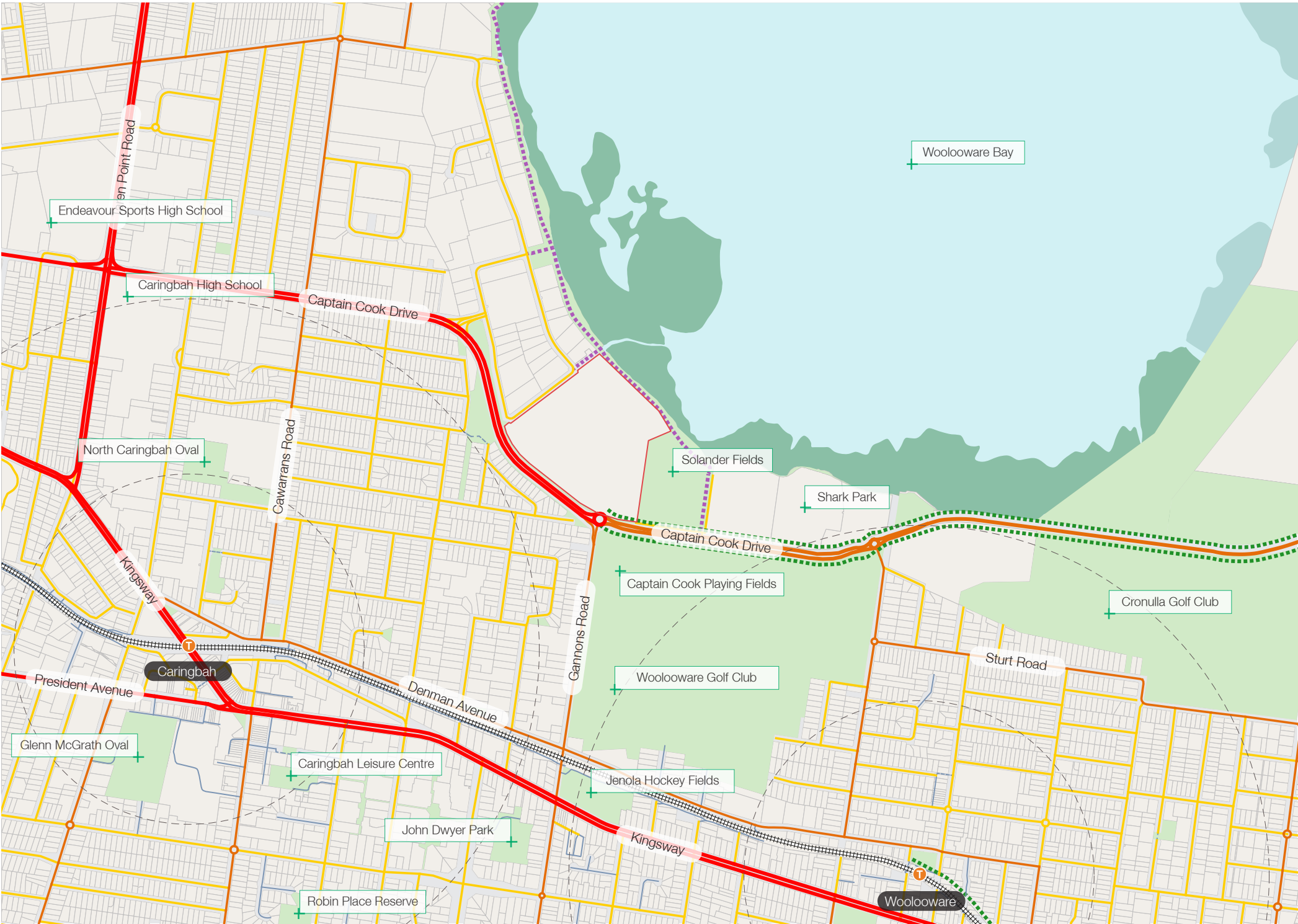
Collector Road

Local Road

Access Road

Shared Path

Dedicated Bicycle Path



Setting the Scene

1.8 Land Zoning

Radiating from Caringbah’s Commercial Core, the immediate environs provide High Density Residential (predominately to the east and west) which then gradually dissipates to Low Density Residential zoning in the surrounding local streets.

Moving north, generally speaking, Captain Cook Drive acts as a buffer to General / Light Industrial and Business Park uses (including the subject site itself) which extend up to Taren Point. These uses enable a mix of business and warehouse uses, and specialised retail premises that require a large floor area, in locations that are close to, and that support the viability of centres.

‘Common with other business zones, B7 is an ‘open zone’ under the LEP, which means that prohibited uses are listed and all other uses are permissible. The benefits of this method is that new uses not yet included in the LEP dictionary definitions will be permissible, provided they are consistent with the objectives of the zone.’ Source: SS DCP - Chapter 27, p1

As noted within the GSC (2019): Employment Lands Database, prepared by SGS Economics & Planning ‘the Caringbah / Taren Point cluster is the most significant location for jobs and gross value added’ in regard to the potential to provide growth in industrial and urban services jobs.

‘Finding the right balance between industrial and other uses in this zone is crucial to the long-term viability of the maritime industry in Sutherland Shire and Greater Sydney. The 12-hectare site zoned B7 Business Park, to be vacated by Toyota, is a strategically important employment site.’ Source: Sutherland Shire LSPS - Planning Priority 13

KEY

<div></div> Site Boundary	<div>IN1</div> General Industrial
<div>B1</div> Neighbourhood Centre	<div>IN2</div> Light Industrial
<div>B2</div> Local Centre	<div>R2</div> Low Density Residential
<div>B3</div> Commercial Core	<div>R3</div> Medium Density Residential
<div>B4</div> Mixed Use	<div>R4</div> High Density Residential
<div>B5</div> Business Development	<div>RE1</div> Public Recreation
<div>B7</div> Business Park	<div>RE2</div> Private Recreation
<div>E1</div> National Parks and Nature Reserves	<div>SP2</div> Infrastructure



Setting the Scene

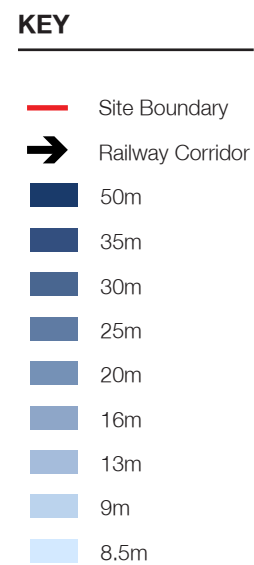
1.9 Maximum Building Heights

The highest permissible height in the local area (and resultant built form) of 50m is currently located to the east of the subject site which transitions down to 25m further to the east.

Surrounding Caringbah Station, there is a cluster of increased maximum building heights up to 30m with slightly higher permissible heights afforded to High Density Residential zoned land (16m).

The Caringbah / Taren Point industrial and business park cluster generally has a maximum building height limit of 16m.

The subject site has a maximum building height of 16m under Sutherland Shire Local Environmental Plan (LEP) 2015.



Setting the Scene

1.10 Open Space, Recreation and Community Infrastructure

Community infrastructure tends to be clustered on the southern side of the rail corridor in close proximity to Caringbah and Woollooware town centres and higher density residential areas. In contrast, this gradually diminishes on the northern side due to lower population concentrations and more diverse land uses.

High levels of accessibility to open space is also concentrated on the southern side of the railway corridor (closer to higher population densities) with Glenn McGrath Oval and John Dwyer Park both offering substantial open spaces (i.e. sports ovals) for sports and recreation. To the north, Solander Fields and Captain Cook Playing Fields provide regionally significant recreational spaces complemented by Woollooware and Cronulla Golf Clubs.

Much of the coastal buffer including some open spaces fronting Woollooware Bay are generally publicly inaccessible due to environmental protection.

KEY

Site Boundary

Railway Corridor

200m Catchment

RE1 Zones

RE2 Zones

Childcare

Primary School

Secondary School

Retail hub

Post Office

Community Facility / Centre

Library

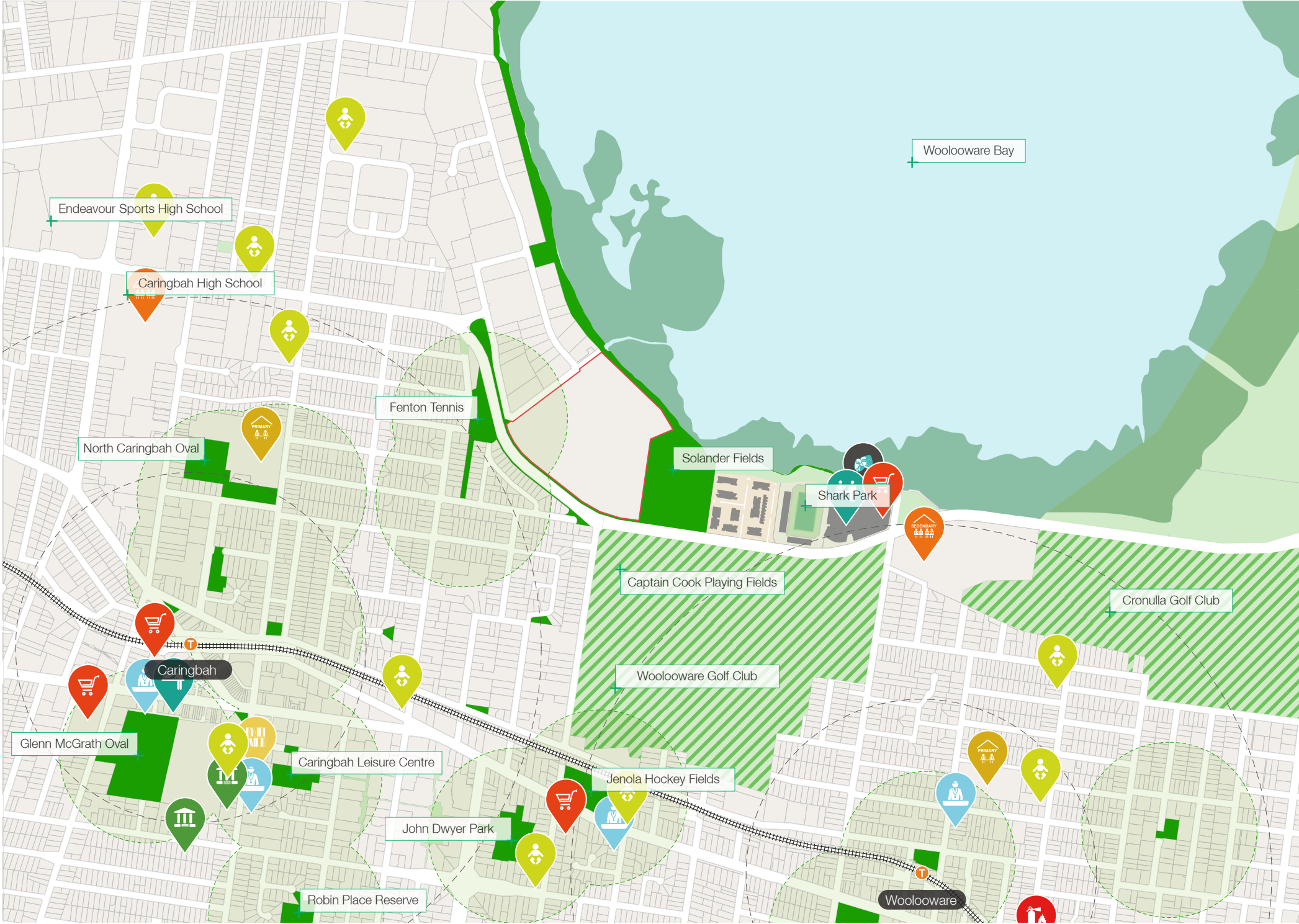
Theatre

Centrelink

Medical Centre

Police Station

Fire Station



Setting the Scene

1.11 Site and Context Historical Development



Aerial Photograph (Source: Sutherland Shire Council)

1943

In 1943, the site is completely undeveloped with a large portion of the northern part of the site occupied by the mangrove biome. An open channel meanders its way across the western side of the site to Woollooware Bay. There is no vehicular access to the site.

The context is general rural with small to medium sized landholdings comprising detached dwellings and low scale orchards. A grid of east-west roads to the west has been established to enable future development and densification. A number of informal pathways and tracks are evident throughout the highlighting the prevalence of pedestrian, cycle and horse travel. The Sutherland-Cronulla railway line (and station) to the south recently opened in 1939.



Aerial Photograph (Source: Sutherland Shire Council)

1955

By the end of the Second World War, the site has changed relatively little and remains semi-covered in vegetation.

A new bi-directional (two lane) road (Captain Cook Drive today) has been constructed along the southern boundary of the site which facilitates vehicular access to the wider area. Significant numbers of detached low rise residential dwellings have been constructed to the south and west of the site - drastically increasing the size of the local population. The golf course, to the south, has been established.



Aerial Photograph (Source: Sutherland Shire Council)

1970

The site has likely been artificially drained and reclaimed to enable future development. All existing vegetation has been cleared which has resulted in a large decrease in the amount of coastal saltmarsh communities. The channel following the western boundary of the site has been straightened and rationalised.

Captain Cook Drive (in parts) has been upgraded to cope with additional vehicular loading. The adjoining lots remain undeveloped but a sports field has been established to the east and industrial / warehouse building typologies have also begun to develop to the north west. The golf course has been expanded to the north east.



Aerial Photograph (Source: Sutherland Shire Council)

1994

By 1994, the current site buildings had begun to be constructed with a slightly different internal road layout. New planting has been introduced throughout the site - much of which is still in existence today. Electrical transmission lines have been constructed along the northern boundary of the site.

Present day Solander Fields (as well as the adjoining site) provides pitches / fields for a variety of sports. Captain Cook Drive has also been upgraded - largely in line with its current configuration.

Setting the Scene

1.12 Tree Canopy Coverage

‘Street trees have fulfilled various purposes in our cities. They have been considered variously as aesthetic make-up and creators of space; as territorial markers and instruments of defence, emancipation, and empowerment; as sanitisers and air conditioners; as upholders of moral values; as economic engines, scientific instruments; and as ecological habitat.’

Sonja Dümpelmann - Multitasking Street Trees, Biophilic Cities Journal

As described by the Greater Sydney Commission in a *Metropolis of Three Cities*, ‘the urban tree canopy is a form of green infrastructure providing shade, which reduces ambient temperatures and mitigates the heat island effect. The urban heat island effect is where large amounts of hard and dark-coloured surfaces like roads and roofs cause localised warming. Every 10 per cent increase in tree canopy cover can reduce land surface temperatures by 1.13°C.

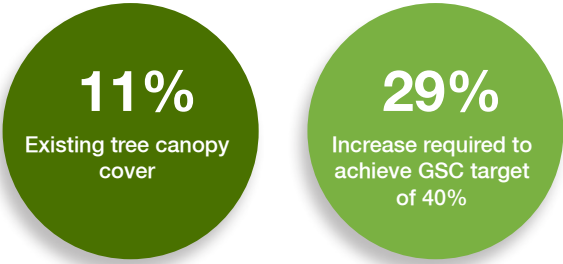
As Greater Sydney grows and urban areas become denser, extending urban tree canopy is one of the most effective ways to improve amenity. A target has been set to increase tree canopy cover to 40%, up from the current 23%’ which also broadly aligns with Council’s Draft Local Strategic Planning Statement.

The site has an existing tree canopy cover of just 11% with the majority of mature trees positioned near the boundary of the site and within the eastern surface car park(s).

The diagram adjacent maps out the existing on-site vegetation which has been graded according to its retention value which will help inform the future development of the site.

KEY

- High Retention Value
- Medium Retention Value
- Low Retention Value



01 - Casuarina glauca (with high retention value) fronting Captain Cook Drive



02 - Washingtonia robusta sub-dividing the existing surface car parks



03 - Varied species adjoining the car park access road

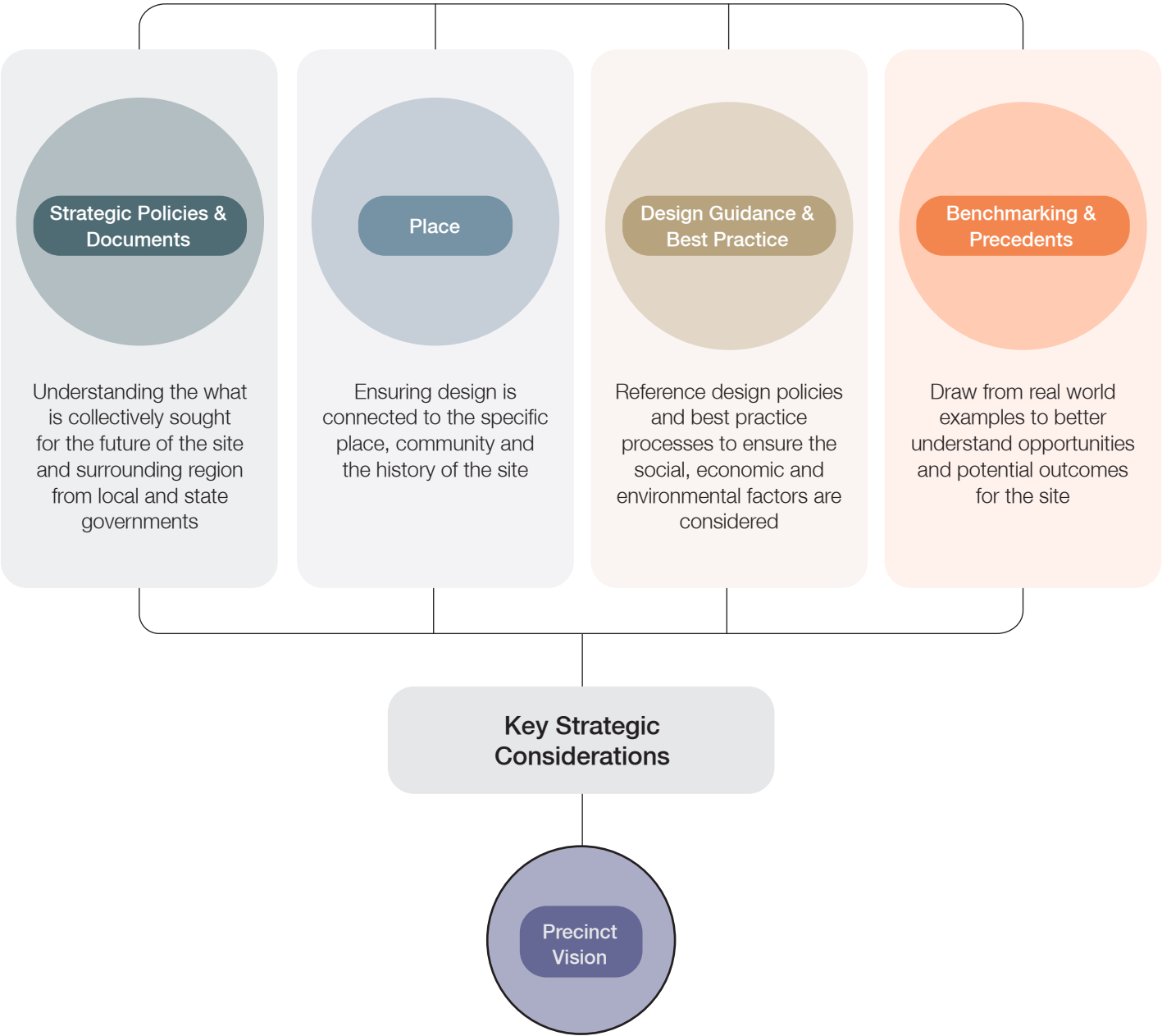
Strategic Framework

2.1 Strategic Framework Overview

This strategic framework underpins this urban design study and brings together an understanding of what is collectively sought for the future of the site from a range of government policies, strategies, stakeholders with best practice processes and precedents which will enable the best social, economic, and environmental outcome for the site.

A thorough understanding of existing government strategies and policies will establish the base assumptions and drivers for the project, and enable the urban design study to incorporate and respond to the higher level thinking than has already taken place. The study inform a future masterplan that will become a vehicle for the implementation through combining aspirations for the project with an understanding of the planning context which supports its delivery.

The policies and plans shown to the right have been considered as part of the masterplan’s strategic framework. Select documents have been explored in more detail in the following pages.



Strategic Framework

2.2 Strategic and Design Policy Documents

- 1 Eastern Harbour City Plan / South District Plan
(March 2018)

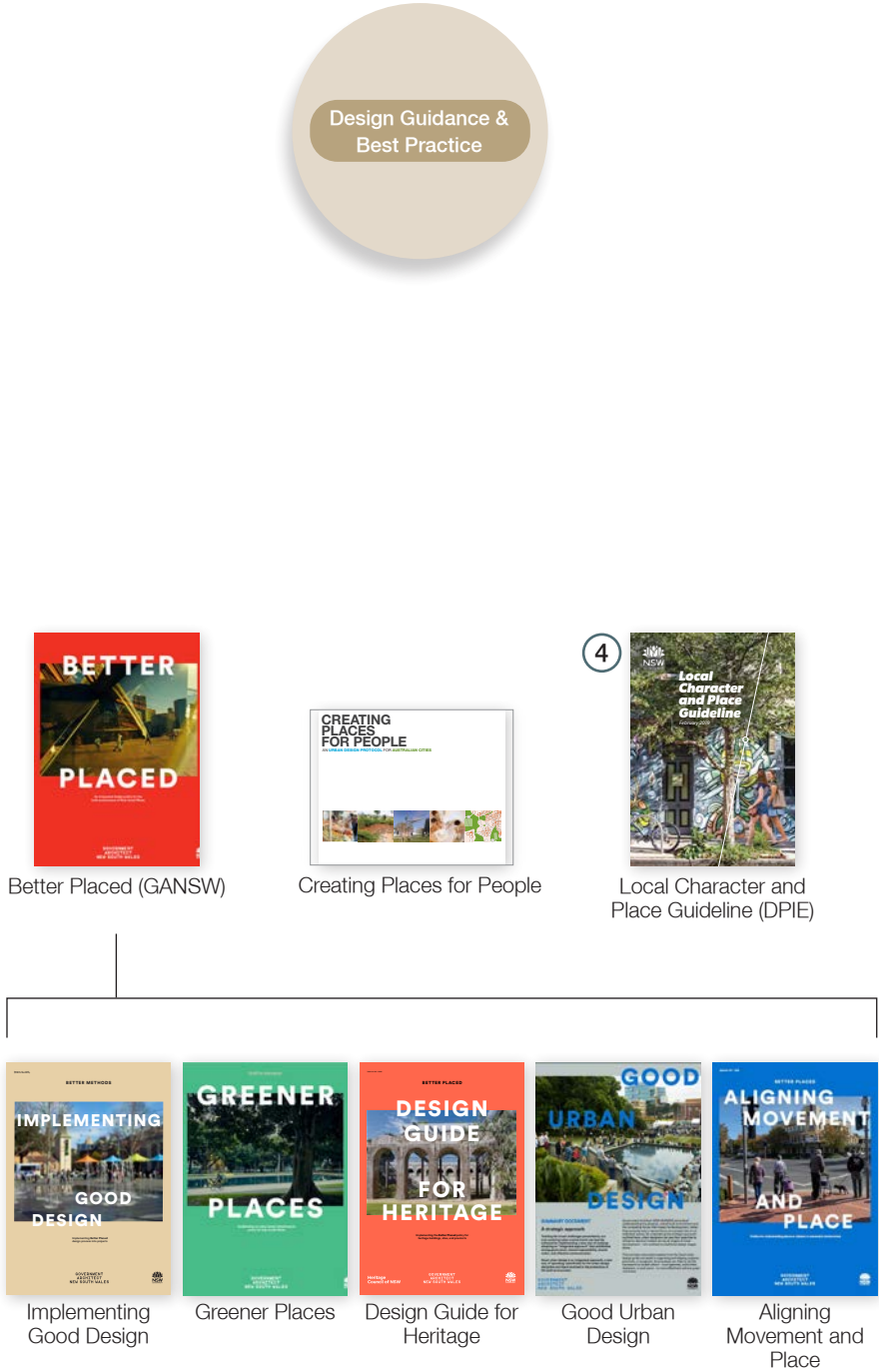
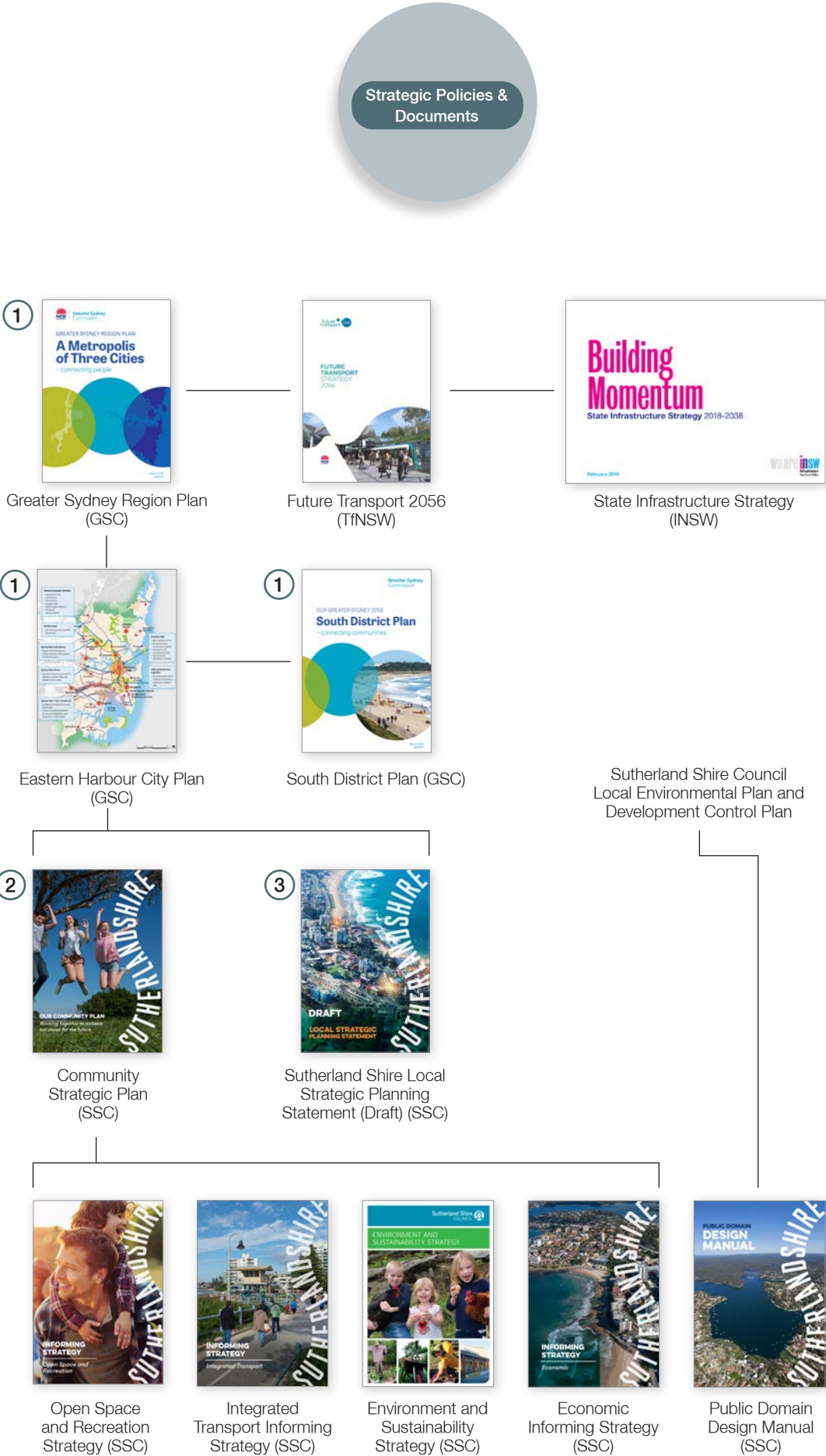
This plan was released with the *Greater Sydney Region Plan - A Metropolis of Three Cities* by the Greater Sydney Commission (GSC) in 2018. The District Plans are a bridge between regional and local planning, and inform local environmental plans, community strategic plans and the assessment of planning proposals
- 2 Community Strategic Plan
(2017)

'The Community Strategic Plan outlines the community's aspirations and long-term vision for Sutherland Shire. It is based on collaboration between all levels of government, local agencies, residents and visitors of the Shire. It is a road map for the long-term which will be used to guide shorter-term planning and actions.'
- 3 Sutherland Shire Local Strategic Planning Statement
(March 2020)

The (draft) LSPS is Sutherland Shire Council's plan for the community's social, environmental and economic land use needs over the next 20 years. This is structured around the priorities and direction set out by the Greater Sydney Region Plan and South District Plan. It provides context and direction for land use decision making within the Sutherland Shire Local Government Area (LGA) and will inform future LEP / DCP amendments.
- 4 Local Character and Place Guideline
(February 2019)

This document, produced by DPIE, coupled with an understanding of what is collectively sought for the future of the site from local and state governments at a strategic level (through an appreciation of strategic policies and dialogue with Council), a thorough understanding of place will enable better social, economic and environmental outcomes for the precinct as a whole. When designed in response to place and a shared desired future character, the precinct will *'be more sustainable, contribute to good quality of life and attract investment.'*

Source - DPIE, Local Character and Place Guideline, p5



GSC: Greater Sydney Commission
SSC: Sutherland Shire Council
TfNSW: Transport for NSW
GANSW: Government Architect NSW
DPIE: NSW Department of Planning, Industry and Environment
INSW: Infrastructure NSW

2.3 A Metropolis of Three Cities (2018) and South District Plan

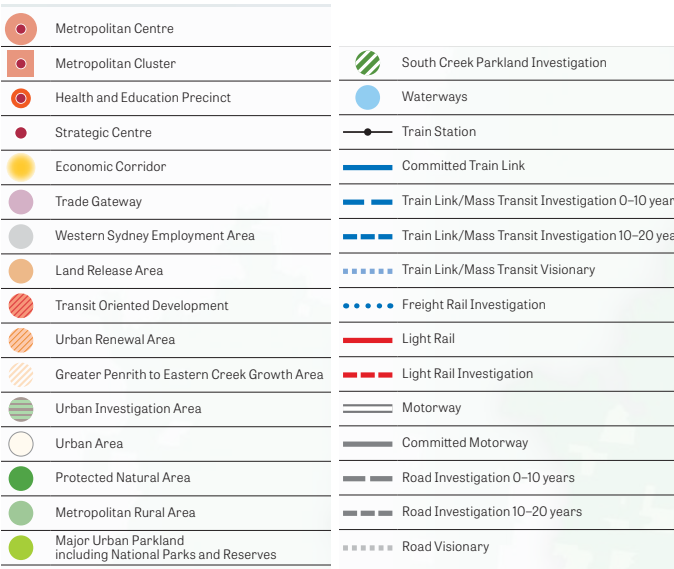
The *Greater Sydney Region Plan, A Metropolis of Three Cities* was released by the Greater Sydney Commission (GSC) in 2018. The Plan provides high level strategic guidance for the development of Greater Sydney to 2056. It is based on a vision of three cities – the *Eastern Harbour City*, *Central River City* and *Western Parkland City* – whereby people can access jobs and services in their nearest metropolitan city within 30 minutes, by public transport.

The subject site is located in the South District of the *Eastern Harbour City* which covers the Canterbury-Bankstown, Georges River and Sutherland LGAs.

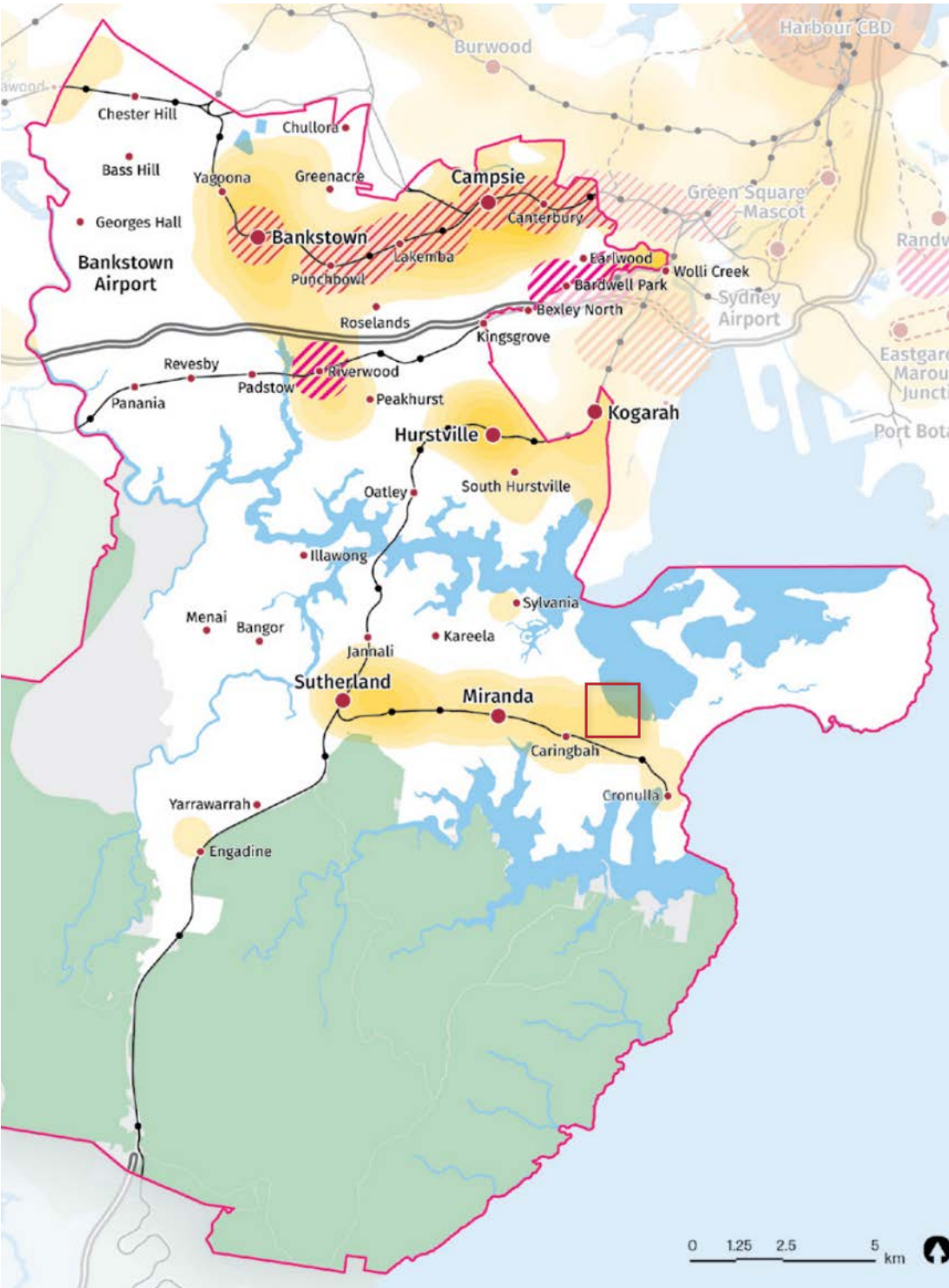
The ‘*South District Plan* is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the *Greater Sydney Region Plan, A Metropolis of Three Cities*, at a district level and is a bridge between regional and local planning.

The *District Plan* informs local strategic planning statements and local environmental plans, the assessment of planning proposals as well as community strategic plans and policies. The *District Plan* also assists councils to plan for and support growth and change, and align their local planning strategies to place-based outcomes.’

Source: GSC - South District Plan, p14

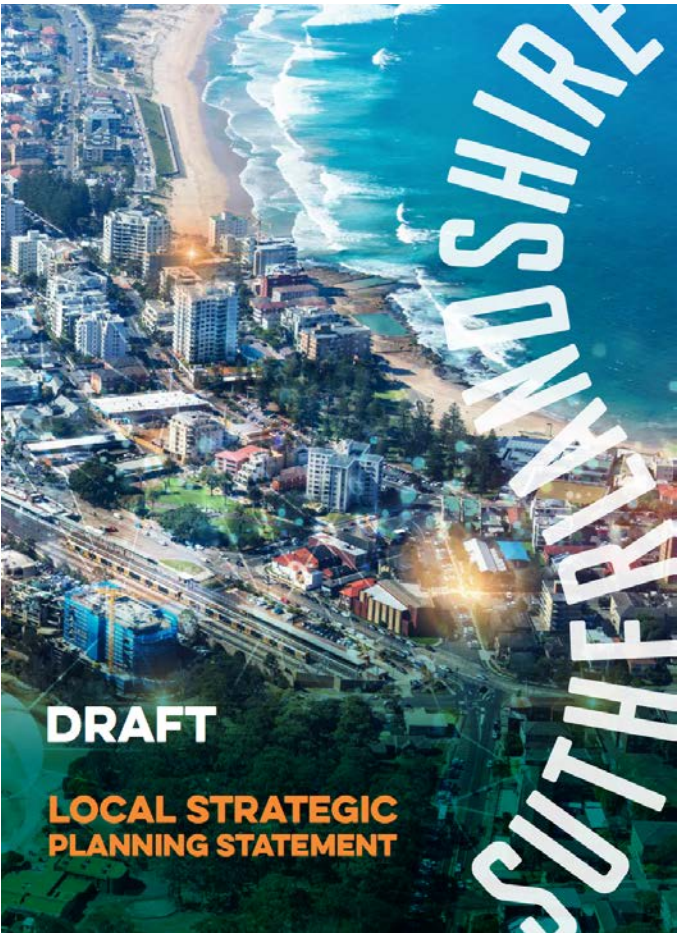


Source: 'Structure Plan for the Metropolis of Three Cities' - Greater Sydney Region Plan, GSC, p.7



Source: 'South District Structure Plan' - GSC

2.4 Sutherland Shire Draft Local Strategic Planning Statement (LSPS) 2019



Sutherland Shire Draft LSPS - Front Cover

The SSC (draft) Local Strategic Planning Statement (LSPS) ‘expresses the vision and planning principles to guide land use decisions for the next 20 years. It identifies priorities to deliver specific land use outcomes for infrastructure, housing, town centres, employment, transport, recreation and the environment. It also sets short, medium and long-term actions to achieve these outcomes.’ The final version is currently under development.

The LSPS sets priorities and actions around four themes:

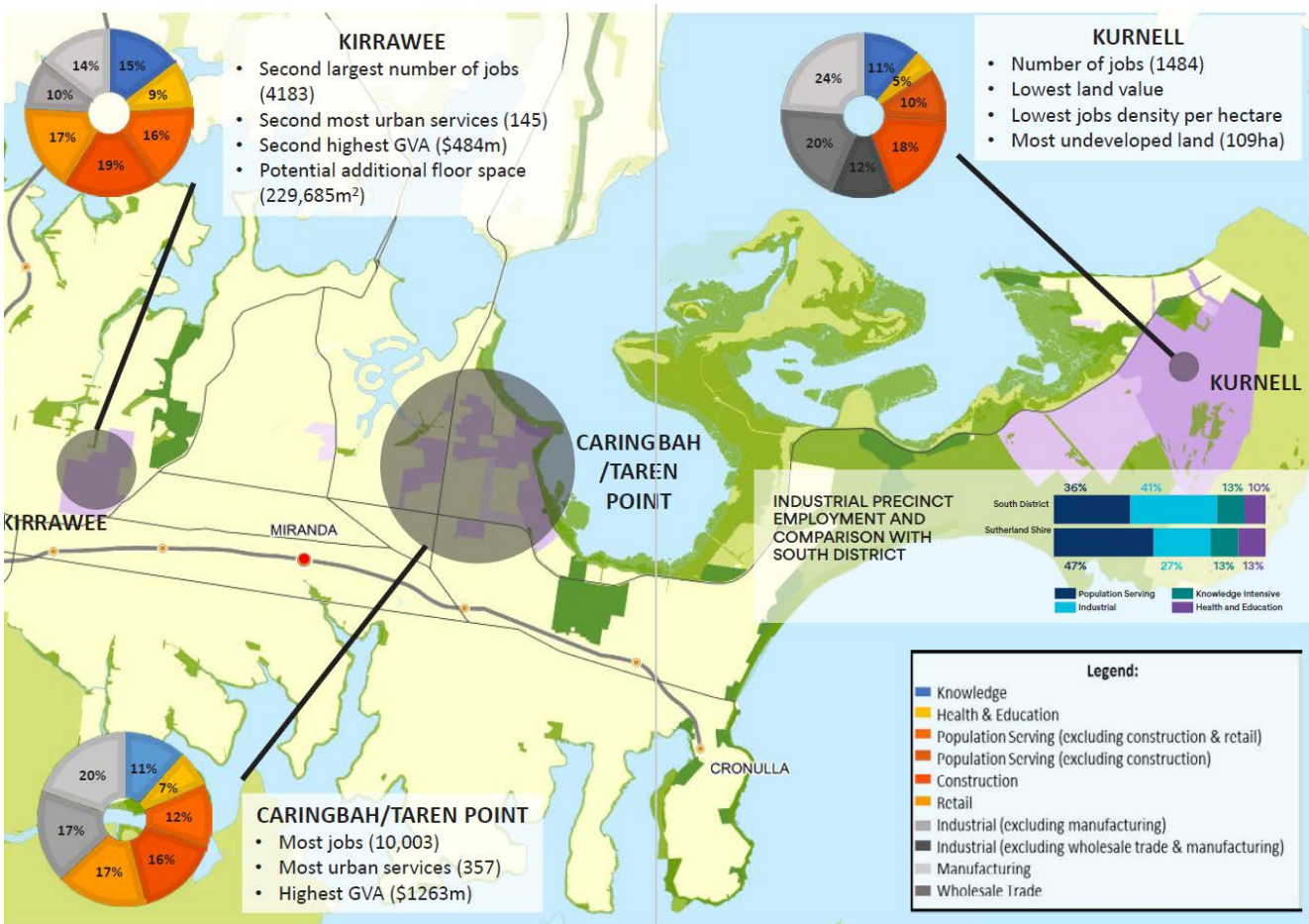
- Infrastructure and Collaboration
- Liveability
- Productivity
- Sustainability



Sutherland Shire Draft LSPS - Structure Plan, p8-9

The Structure Plan as well as *Planning Priority 13 - Grow Industrial and Urban Services Jobs* note that ‘finding the right balance between industrial and other uses in this zone is crucial in to the long-term viability of the maritime industry in Sutherland Shire and Greater Sydney. The 12-hectare site zoned B7 Business Park, to be vacated by Toyota, is a strategically important employment site.’

It is also noted within *Planning Priority 20 - Improve Efficiency* that ‘large strategic sites provide opportunities to pursue low-carbon high efficiency initiatives, allowing new technologies to be adopted and integrated. Large redevelopment precincts include ANSTO, the Toyota site at Woolooware.’



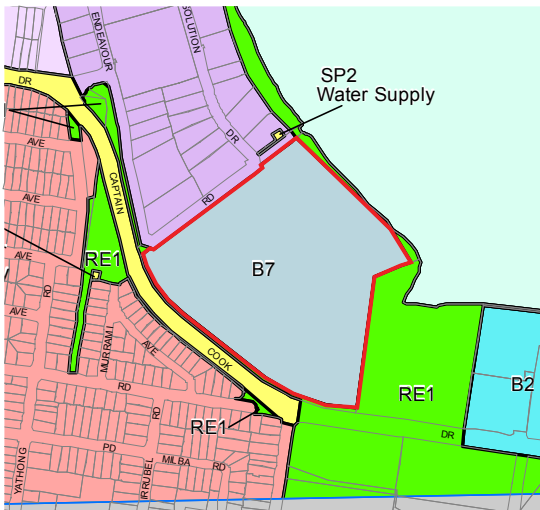
Sutherland Shire Draft LSPS - Industrial and Urban Services Precincts

In Sutherland Shire, there are c. 600 hectares of land zoned for industrial and urban services purposes. The Caringbah / Taren Point Precinct is the largest (out of ten) providing;

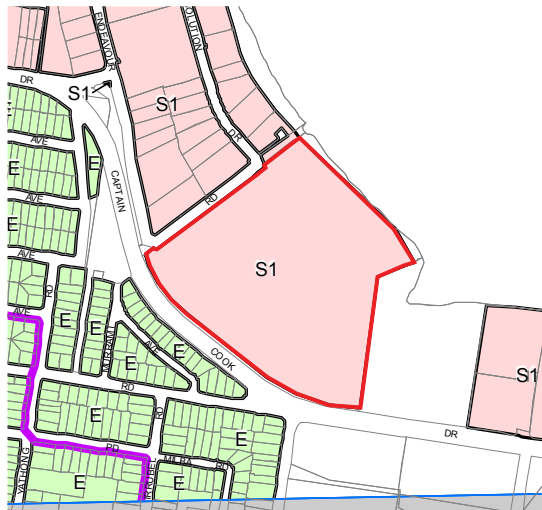
- The most jobs at 10,003
- The highest numbers in urban services (357)
- The highest gross value added (GVA) at \$1,263m

Located within one of Sutherland's most significant employment precincts, it is evident that the subject site should continue to provide high levels of industrial and urban services jobs in the future.

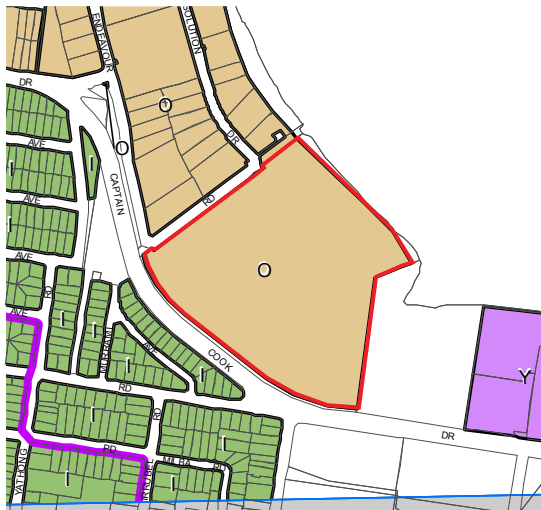
2.5 Sutherland Shire Local Environmental Plan 2015



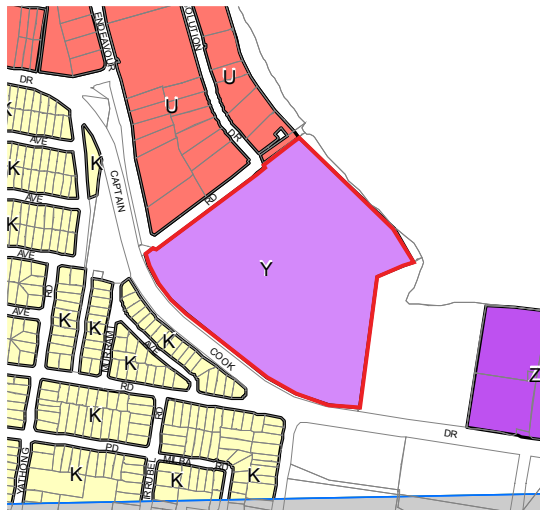
SSLEP 2015 - Land Zoning Map



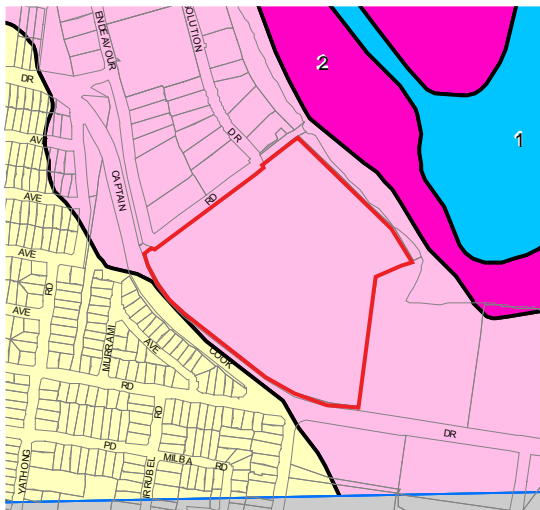
SSLEP 2015 - Floor Space Ratio (FSR) Map



SSLEP 2015 - Maximum Building Height Map



SSLEP 2015 - Lot Size Map



SSLEP 2015 - Acid Sulfate Soils Map

Land Zoning

The site is zoned as B7 Business Park.

- B2** Local Centre
- B7** Business Park. Objectives of this zone:
 - To provide a range of office and light industrial uses.
 - To encourage employment opportunities.
 - To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
 - To prevent the fragmentation of large sites and to realise their economic strategic advantage.
 - To provide opportunities for the erection of buildings requiring large floor areas and to discourage small-scale uses unless they are of an ancillary or service nature.
 - To enhance the visual appearance of the employment area by ensuring new development achieves high architectural and landscape standards.
 - To minimise the impact of development within the zone on areas of environmental or heritage significance.
- IN1** General Industrial
- IN2** Light Industrial
- R2** Low Density Residential
- RE1** Public Recreation
- SP2** Infrastructure

Floor Space Ratio

There is an FSR of 1.5:1 applicable to the site.

- E** 0.55:1
 - S1** 1.5:1
- Under the SSLEP 2015, Clause 4.5 - Calculation of floor space ratio and site area; (2) *Definition of "floor space ratio"* The floor space ratio of buildings on a site is the ratio of the gross floor area of all buildings within the site to the site area.

Maximum Building Height

The site has a maximum building height of 16 metres.

- I** 8.5 metres
 - O** 16 metres
 - Y** 50 metres
 - Refer to clause 4.5A(2) of the LEP
- Under the SSLEP 2015 Dictionary, **Building height** (or **height of building**) means—
(a) in relation to the height of a building in metres—the vertical distance from ground level (existing) to the highest point of the building, or
(b) in relation to the RL of a building—the vertical distance from the Australian Height Datum to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

Minimum Lot Size

The subject site has a minimum lot size of 1 Ha.

- K** 550 sqm
- U** 1,000 sqm
- Y** 1 Ha
- Z2** 2.45 Ha

Acid Sulfate Soils

The subject site has a Class 3 rating.

- 1**
 - 2**
 - 3**
 - 5**
- Under the SSLEP 2015, Clause 6.1 - 7.5 - Acid Sulfate Soils, development consent is required for carrying out of works:
- Works more than 1 metre below the natural ground surface.
- Works by which the water table is likely to be lowered more than 1 metre below the natural ground surface.

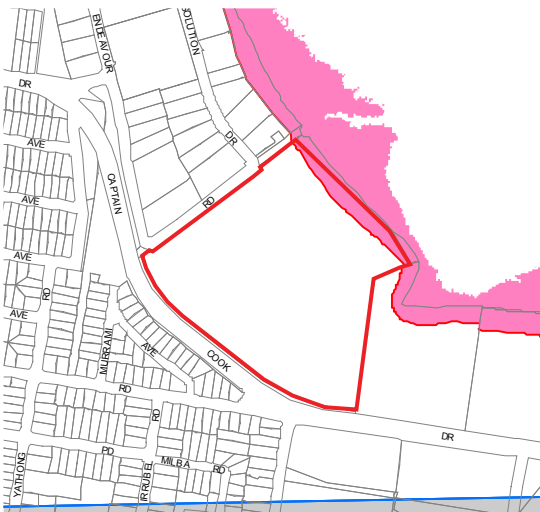
2.6 Sutherland Shire Local Environmental Plan 2015



Foreshore

The site is identified as being within the Georges River and Botany Bay foreshore.

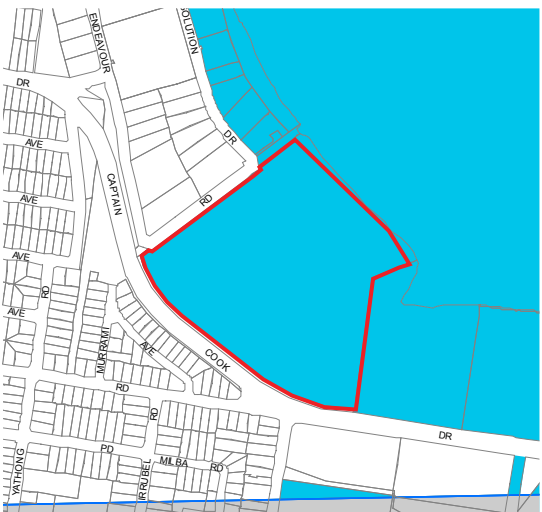
Blue cross-hatch pattern: Foreshores of Port Hacking, Georges River, Woronora River and Botany Bay



Foreshore Building Line

Part of the site is within the Foreshore Area.

Pink color: Foreshore Area
Red line: Foreshore Building Line



Riparian Lands

The site is identified as being “Environmentally Sensitive Land” within the Riparian Lands and Watercourses Map.

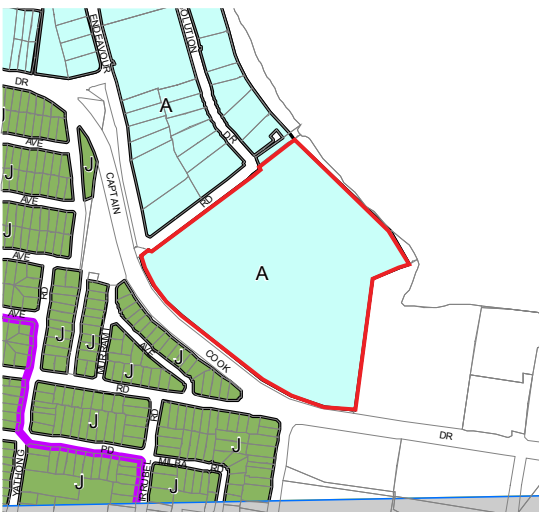
Blue color: Environmentally Sensitive Land



Terrestrial Biodiversity

The site is identified as being “Environmentally Sensitive Land” within the Terrestrial Biodiversity Map.

Green color: Environmentally Sensitive Land



Minimum Landscape Area

The subject site has a minimum Landscape Area of 10%.

Light blue color: A 10%
Green color: J 35%
Purple line: Refer to clause 4.5A(2) of the LEP

2.7 Sutherland Shire Development Control Plan 2015



The subject site is zoned B7 - Business Park under SSLEP 2015 and as such, Chapter 27 of the SS DCP 2015 provides development standards for development. This zone allows office premises as well as general industrial uses.

'Parts of Taren Point employment area have been zoned B7 Business Park. The zone has been allocated to encourage the retention of large sites in these locations. It is intended that redevelopment of these sites will maintain or establish high quality landscaping including large trees, contributing to the creation of an attractive streetscape and good amenity on the sites. An attractive well landscaped area should attract more businesses to establish in the area.'

The Taren Point employment area is located in close proximity to an environmentally sensitive waterway. The strategy seeks to minimise the environmental impacts of industrial development. It also aims to improve the visual and environmental performance of the precinct through the reinstatement of indigenous canopy trees.'

Relevant development controls include;

Subdivision

- The minimum allotment size for subdivision is 20,000 m².
- The minimum gross floor area of each unit is 150m²

Streetscape and Built Form

- Building entrances are to be clearly defined and located so they can be clearly distinguished from the street.

- Incorporate passive solar building design principles into development.
- Industrial unit of more than 10 units: building layout must allow for visual connections through and beyond the site, use of varying architectural resolutions.
- The site layout and building forms should allow views from within the site to the bay or foreshore
- Any outdoor storage area must be screened.
- Frontage works for all developments must be in accordance with the *SSC Public Domain Design Manual*. A minimum street tree planting rate is set at one indigenous canopy tree.

Building Setbacks

- A minimum setback from the street frontage of 9m is required
- A minimum setback of 4m to the secondary street frontage.
- Nil setbacks to side and rear boundaries are permitted.
- Development adjoining public reserves must have a minimum landscaped setback of 3m.

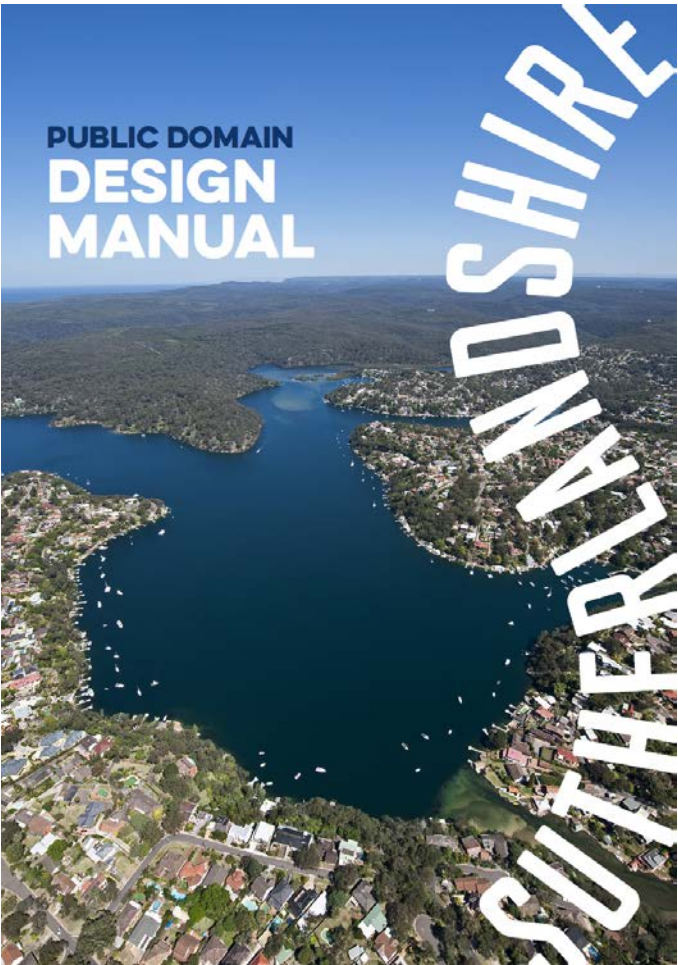
Daylight Access

- Provide for the potential use of solar energy collectors by incorporating pitched roofs facing north.
- The office space within each separate industrial unit should be designed to provide daylight to office areas.

Landscaping

- A landscaped strip with minimum width of 3m must be provided adjacent to the front boundary.
- Landscaping should consist of a mix of indigenous canopy trees informally spaced at 3m intervals. At least 50% of the trees must be capable of achieving a height of at least 6m at maturity.
- 50% of the species used must be chosen from the species list in the Sutherland Shire Council Native Plant Selector database.
- In car parking areas, tree blisters 5 x 2.5m between every six (6) car spaces or a continuous planting bed 3m wide between rows.
- All new developments will be required to install street frontage works such as street trees and / or footpath.

Other development controls include waste management, safety and security and vehicular traffic parking



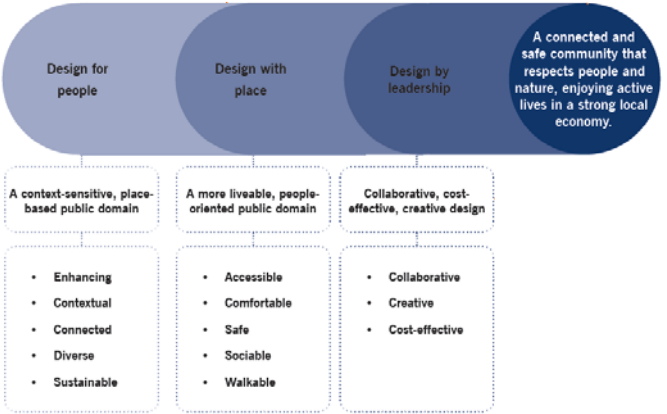
The Sutherland Shire Public Domain Design Manual (to be read in conjunction with the companion Technical Manual), provides guidance on the design guidance and principles focusing on the Shire's public domain.

'The PDDM applies to all land that is under the care, control or management of Sutherland Shire Council.'

While some of its content is prescriptive, the PDDM should be used as a guide to decision making and not as a rigid rule book.

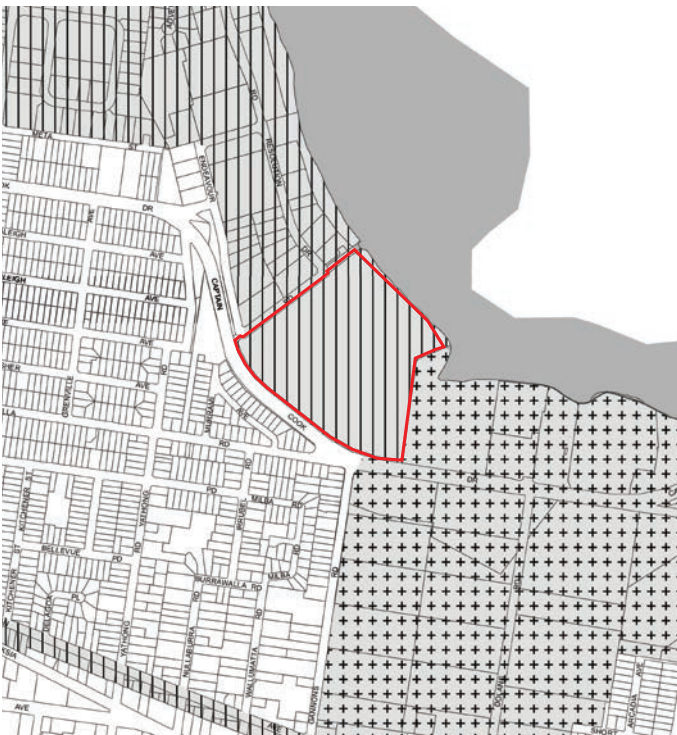
Project designs should aim to create a sense of place and should reflect a full appreciation of all relevant design considerations, including site conditions, context, sustainability and the needs of all users and stakeholders.'

Source: Sutherland Shire PDDM, p.10



Moving forward, as the site generally becomes more accessible to the public, the detailed design of the future built form will adhere to the design principles and objectives established within the Public Domain Design Manual.

2.8 Sutherland Shire Development Control Plan 2015



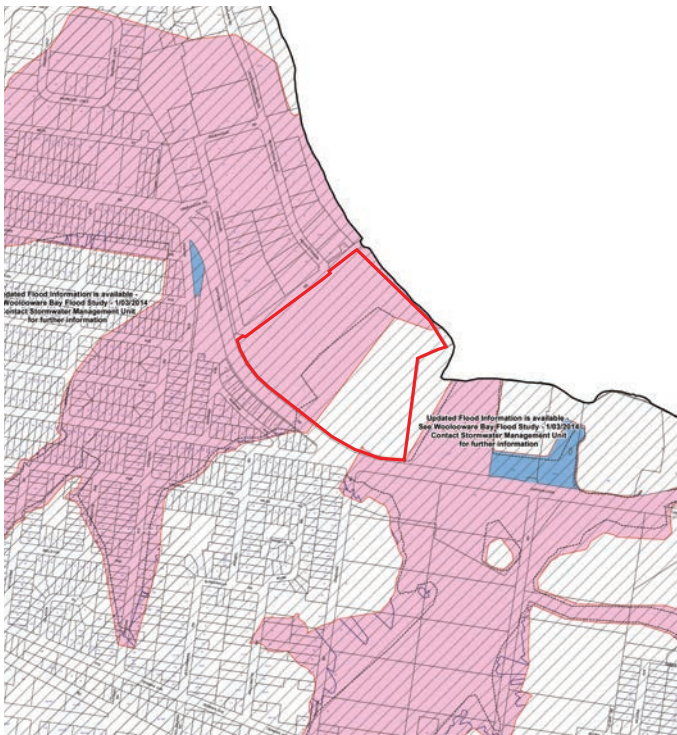
SSDCP 2015 - Greenweb Map

Greenweb

The Sutherland Shire's Greenweb is mapped to include:

- 'Core areas of high significance to the sustainability of the Greenweb as they contain key habitat areas, key linkages and threatened species or endangered ecological communities.
- Support areas that provide ancillary habitat areas or secondary linkages between habitats. They also contain lands that form a buffer between developments adjacent key habitats and corridors.
- Restoration areas that provide opportunities for the establishment / vegetation of corridors between core areas.'

- Greenweb Core
- Greenweb Support
- Greenweb Restoration

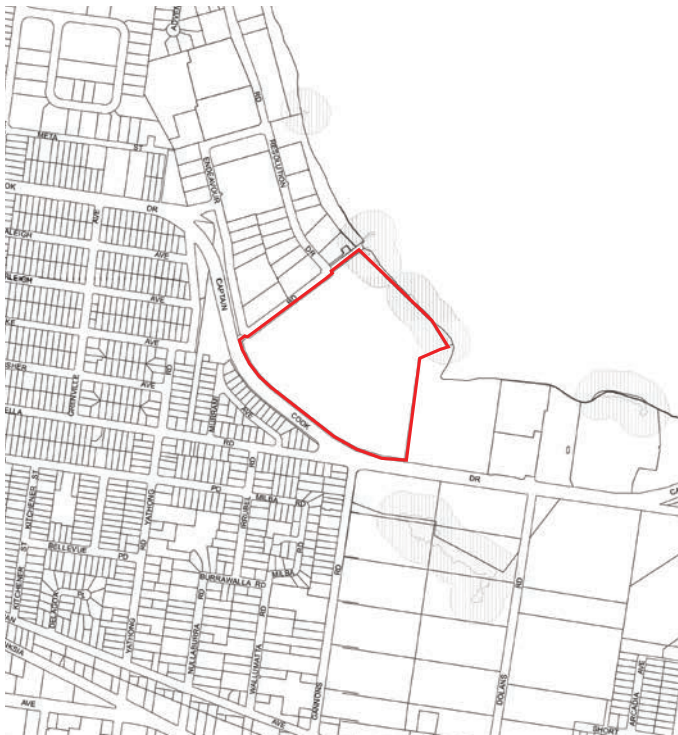


SSDCP 2015 - Flood Risk Management Map

Flood Risk Management

'Flood risk mitigation, being costly and likely to adversely affect the natural environment, is the least preferred option to allow development of flood prone land to occur. Avoidance and minimisation of flood risk based on land use planning and development controls are the preferred options.'

- Initial Assessment
- Medium Risk



SSDCP 2015 - Protected Species Map

Protected Species and Communities of High Conservation Significance

'Threatened fauna (animal) species move around and endangered vegetation communities tend to grade from one type to another without hard and fast boundaries. In order to account for this a buffer is generally drawn around a known area of habitat. This buffer also recognises that development adjacent to these habitats has the potential to impact on them through processes such as stormwater runoff and escape of weeds and domestic animals.'

- Threatened Species
- Threatened Species - Buffer



SSDCP 2015 - Wetlands and Waterways Map


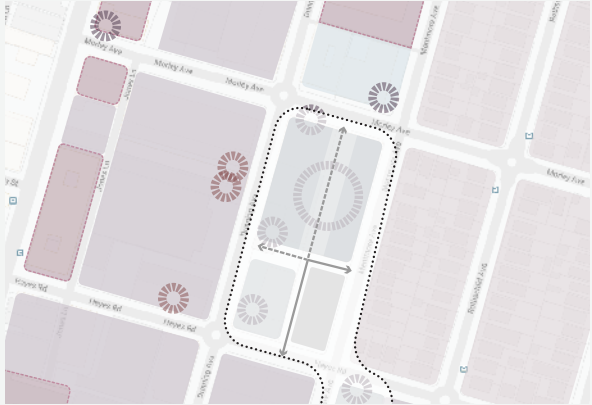
Wetlands and Waterways

'Mangroves are protected under the NSW Fisheries Act and are mostly found in fourth and third order waterways in Sutherland Shire. A 40 metre buffer applies to mangrove wetlands which is consistent with the Georges River REP and the Department of Primary Industries Office of Water – Guidelines for riparian corridors on waterfront land.'

- Waterway
- Riparian Zone
- Wetlands
- Wetlands Buffer

2.9 Business Park Precedent Study

The Cannery



Name	The Cannery
Location	Rosebery, Sydney
Facilities	Food and beverage, retail (wholesale and retail), commercial

- Variety of uses for day and evening activation
- Internal space for customer comfort and safety
- Adaptive re-use of the existing warehouse building to create an internalised high street offering food and beverage as well as retail opportunities


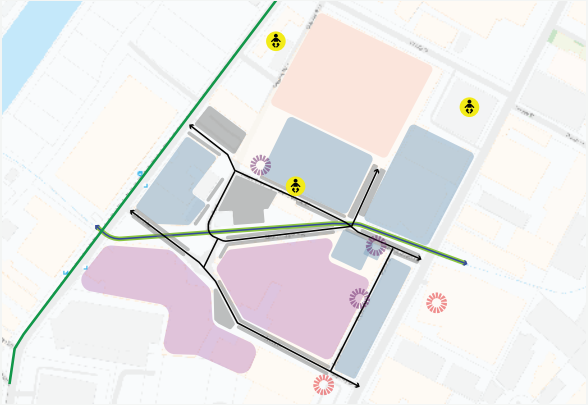
The Grounds of Alexandria



Name	The Grounds of Alexandria
Location	Alexandria, Sydney
Facilities	Food and beverage, retail, events, urban farm

- Separation of vehicular and pedestrian movements create a safe and intimate pedestrian environment
- Car parking in consolidated in the south portion of the site
- Streets offer a human scale to the public domain
- A series of bold and carefully curated landscaped spaces create a distinctive character and brand



Sydney Corporate Park



Name	The Corporate Park
Location	Alexandria, Sydney
Facilities	Events, recreation and sport, retail, education, warehouse

- Broad range of tenancies and uses attracting a wide range of customers / visitors
- Retained industrial structural frames contribute to the character of the estate
- Night and day activation
- Natural assets drastically under utilised
- Public domain is dominated by vehicles
- Estate has developed organically with little oversight

Entertainment Quarter



Name	Entertainment Quarter
Location	Centennial Parklands, Sydney
Facilities	Cinema, events, food and beverage, entertainment, trade markets

- Broad range of tenancies and uses attracting a wide range of customers / visitors
- Destination entertainment facilities focus on families and young adults
- Large scale consolidated car park help improve the character and permeability of the site
- Character is generated through the public domain as opposed to the built form

Existing Framework

3



3.1 Protecting the Extant Site Qualities

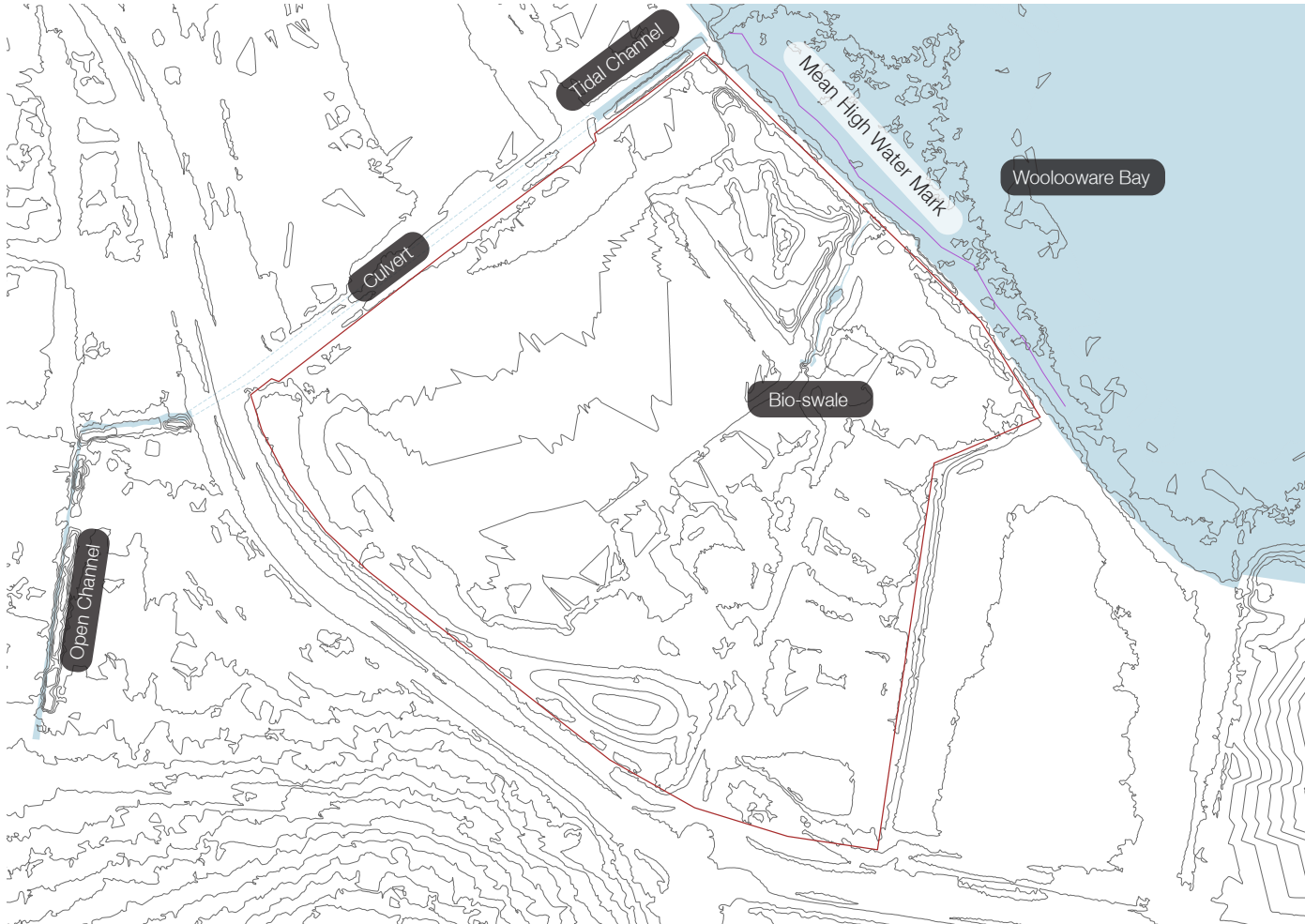


Site Topography

The subject site is broadly an irregular quadrilateral in shape, with no parallel boundaries or consistent dimensions. There is a topographic change of between 0 and 1.5m between Captain Cook Drive and the foreshore shared path and between 0.5 and 1.0m running from east to west. As such, there is no significant level change across the site and it is wholly low lying.

Future development proposals will therefore need to consider the potential for sea level rise and its impact upon the built form and public domain.

The site's boundary generally follows road infrastructure boundaries along the southern and western edges, with the northern edge running parallel to the shared foreshore path and the eastern edge fronting Solander Fields.

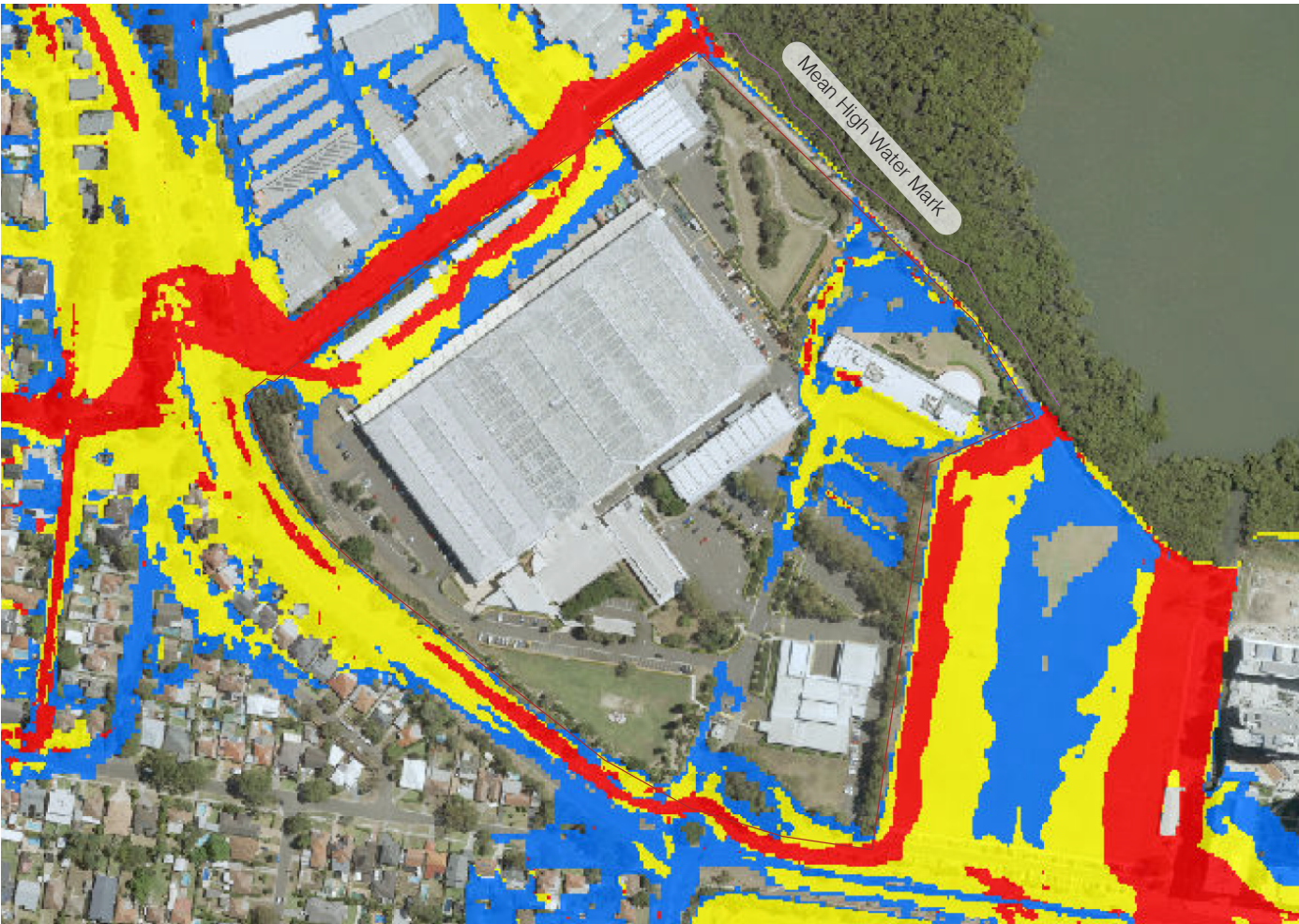


Existing Waterways

Located to the north of the site, 'the name Woollooware Bay first appears on Surveyor Robert Dixon's 1827 map of Port Hacking and Georges River as Woolloowear Bay. By 1835 the name was changed slightly to Woollooware Bay by Surveyor General Mitchell. The name is assumed to have been obtained by Dixon from Aboriginal people living in the area. Woollooware Bay was part of a land grant to John Connell and became part of the Holt Estate bought by Shire pioneer Thomas Holt from the 1860s.

The bay was used extensively for oyster cultivation by a number of people using various methods'.
Source: Sutherland Shire - Local History

A drainage channel connects to the Bay from the opposite side of Captain Cook Drive which comprises an open channel, a culverted section (below Endeavour Road) and a channelised tidal section at the northern end. The channel provides limited visual amenity but does provide ecological and hydrological value.



Potential Flood Risk

The above image sets out the 1% AEP Provisional Hydraulic Categories based upon Council's mapping from September 2019. Further detailed studies have been undertaken by the proponent in support of this planning proposal.

In summary, the greatest potential flood risk lies along the north west boundary of the site (parallel to the existing Endeavour Road channel) as well as in the northern part of the site within the foreshore setback.

Source: <http://www.sutherlandshire.nsw.gov.au/files/assets/website/woolloomare-bay-catchment-fs-revised-flood-maps.pdf>

KEY

- Floodway
- Flood Storage
- Flood Fringe



Existing Vegetation

The NSW Office of Environment and Heritage 'mapped patches of vegetation within the development site as 'Urban Exotic / Native'. Additional patches of vegetation were mapped as 'Urban Exotic / Native' as a result of ELA's site inspection in February 2020.

There are no endangered ecological communities within the development site. The grounds of the development site are well maintained so there are few weeds.

Vegetation to the north of the development site is Estuarine Mangrove Forest with small patches of Estuarine Saltmarsh fringing Woolloomare Bay (OEH 2016). The mangroves to the

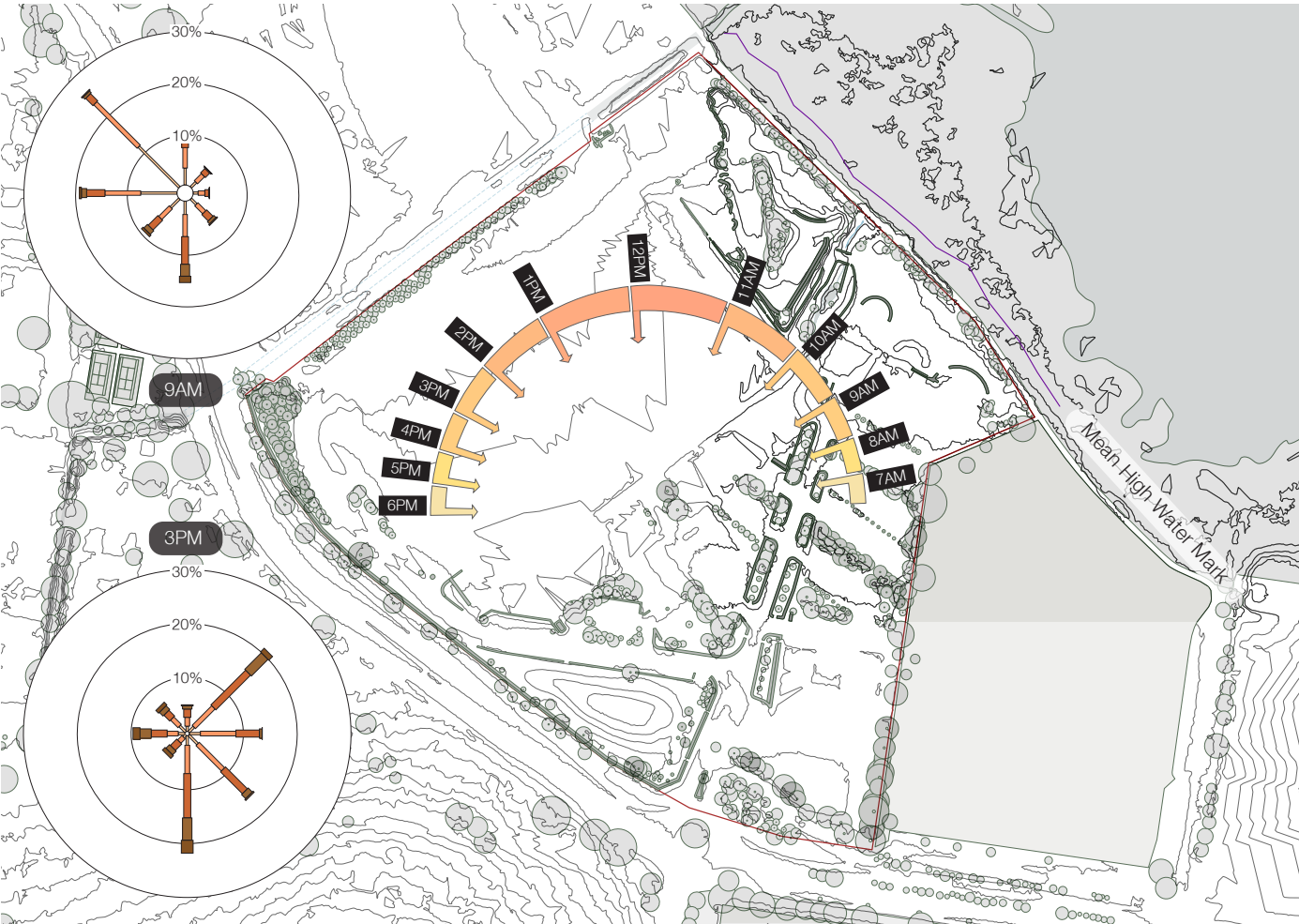
north of the site are mapped by OEH (2018) as areas of high biodiversity value.'

Source: ELA - 13 Endeavour Rd Caringbah Ecological Due Diligence Report

There is approximately 1.08 ha of vegetation within the subject site which is dominated by species native to NSW. Whilst offering a greater quantum of canopy cover than some adjoining / neighbouring sites, the amount of cover is still significant below the Greater Sydney Commission's target of 40%.



3.2 Embodying the Existing Site Conditions



Environmental Conditions

Given the flat surrounding topography and low rise buildings of the surrounding context, the site receives excellent and uninterrupted solar access throughout the day and year.

Wind direction is predominately NW in the mornings, switching to NE and S in the afternoons.

Based upon climate data from Sydney Airport (the closest weather station available), mean temperatures between 1939 and 2020 have been 22.4°C with a maximum recorded daytime temperature of 46.4°C.



Mean maximum temp.	Highest maximum temp.	Lowest maximum temp.	Mean 9am temp.	Mean 3pm temp.
22.4 °C	46.4 °C	9.1 °C	17.4 °C	20.8 °C

BOM - Monthly Climate Statistics for 'SYDNEY AIRPORT AMO' [066037]. Latitude: 33.95 Degrees South, Longitude: 151.17 Degrees East



Existing Edge Conditions

- The subject site has four very distinct edge conditions;
- Northern boundary - land that is fronting the “soft” mangrove biome of Woollooware Bay as well as the foreshore pedestrian / cycle shared path;
 - Eastern boundary - fronting the open space amenity provided by Solander Fields (albeit with a treed interface);
 - Southern boundary - land that is fronting the “hard” road / vehicular infrastructure of Captain Cook Drive with its notable associated exhaust and noise pollution;
 - Western boundary - running parallel to Endeavour Road but with a well established planted boundary setback. The northern most part of the boundary also addresses the open tidal channel.
- As such, proposed development, particularly the ground floor condition, will be carefully tailored to each particular condition in terms of both land use and architectural treatment.



3.3 Integrating with the Local Context



Surrounding Context Character

The surrounding context has a number of distinct character areas that are fragmented by infrastructure connections and provide heavily contrasting uses / functions. The site lies north of the low density residential communities serving Caringbah town centre.

Proposals, in regard to building program, built form heights and architectural character, will respond to each contextual condition appropriately.

KEY

- Open Space
- Low Density Residential
- High Density Residential (B2 Local Centre)
- General Industrial
- Woollooware Bay



Regional, Collector and Local Roads

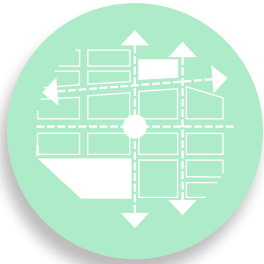
The most prominent site access point on Captain Cook Drive connects the site to regional roads and wider South District destinations. This entrance, however, provides access for private vehicles only.

The two vehicular entry points on Endeavour Road provide access points for heavy goods / services vehicles that require larger turning circles and have a large impact on surrounding traffic volumes with slower vehicular movements.

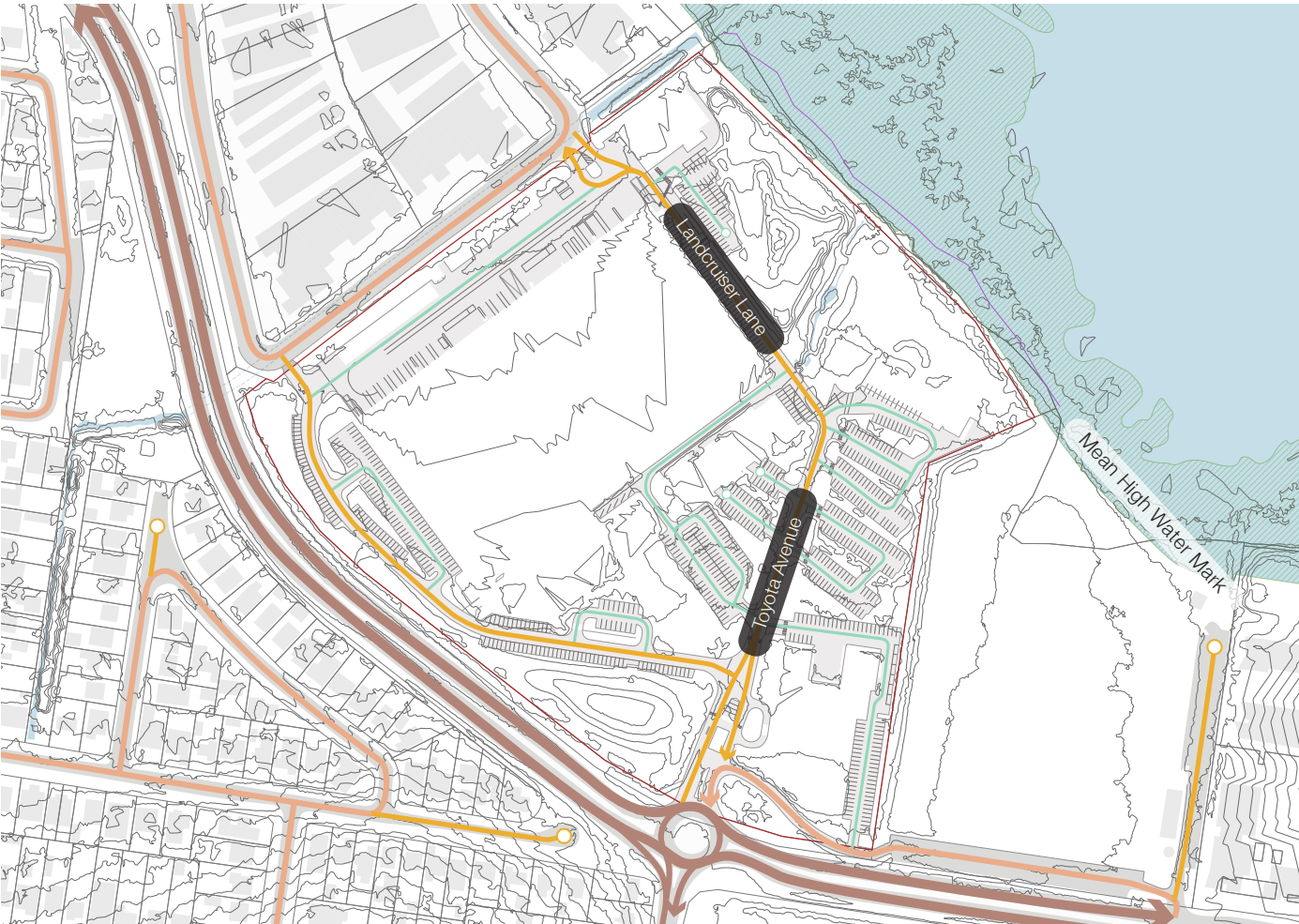
Across the south east corner of the site, a small slip road provides access from the public car park to the south of Solander Fields to Captain Cook Drive.

KEY

- Regional Road
- Collector Road
- Local Road



3.4 Vehicular Movement and Street Hierarchy



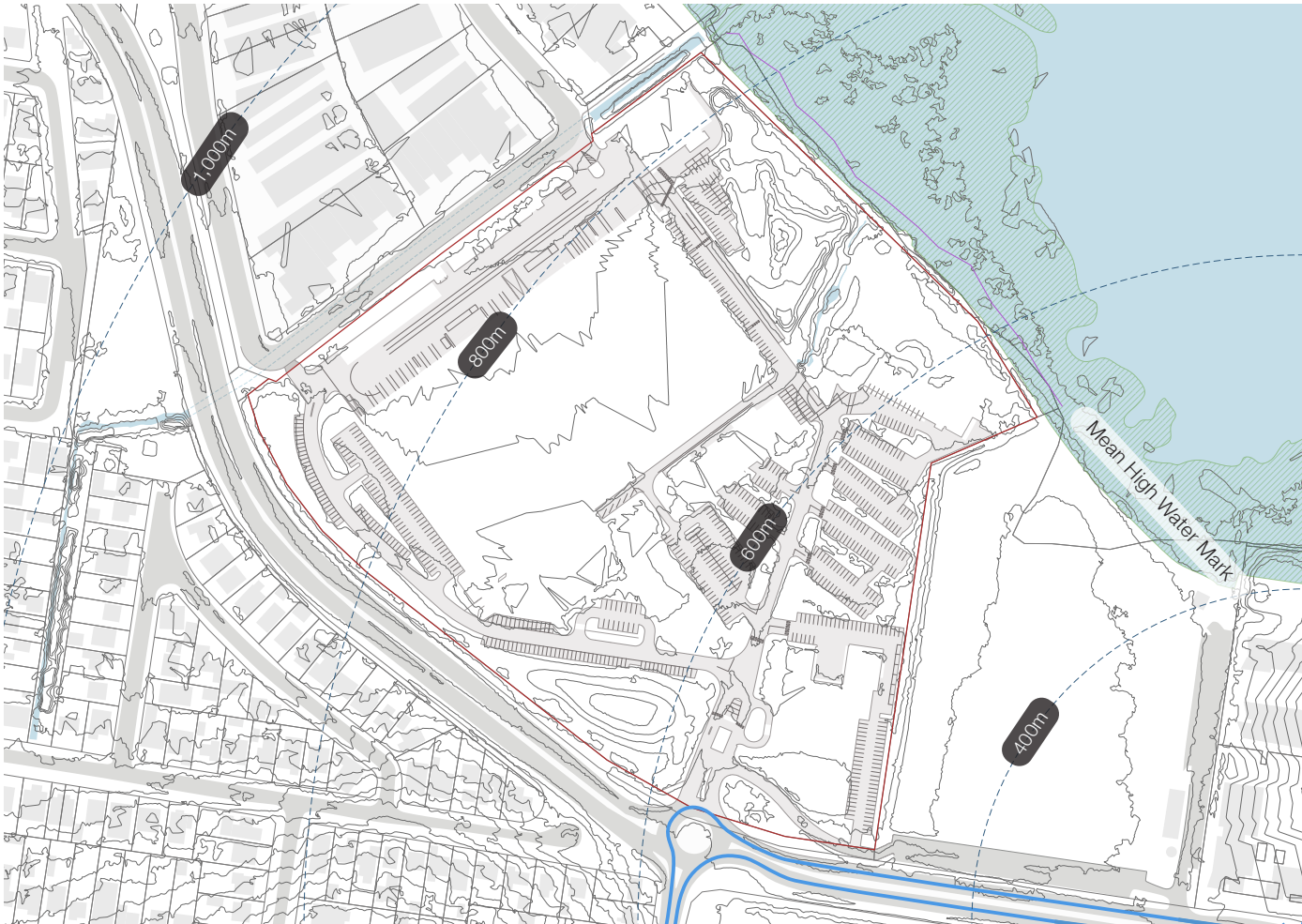
Private Roads

The site is currently privatised with a secure fence line around the perimeter and gate houses positioned at the main two site entrances. As such, the internal road network is bespoke and tailored to the use of the previous site occupants - Toyota.

A simple looped service road (comprising Landcruiser Lane and Toyota Avenue) connects Endeavour Road to Captain Cook Drive. A number of smaller loop roads and surface car parks feed off this service road.

KEY

- Regional Road
- Collector Road
- Local Road
- Private Collector Road
- Private Local Road



Public Transport Connections

There is a notable lack of public transport infrastructure in the site. The closest bus stops are c. 450m from the nearest corner of the site and over 900m from the furthest (as the crow flies). These stops, however, currently only serve one bus route.

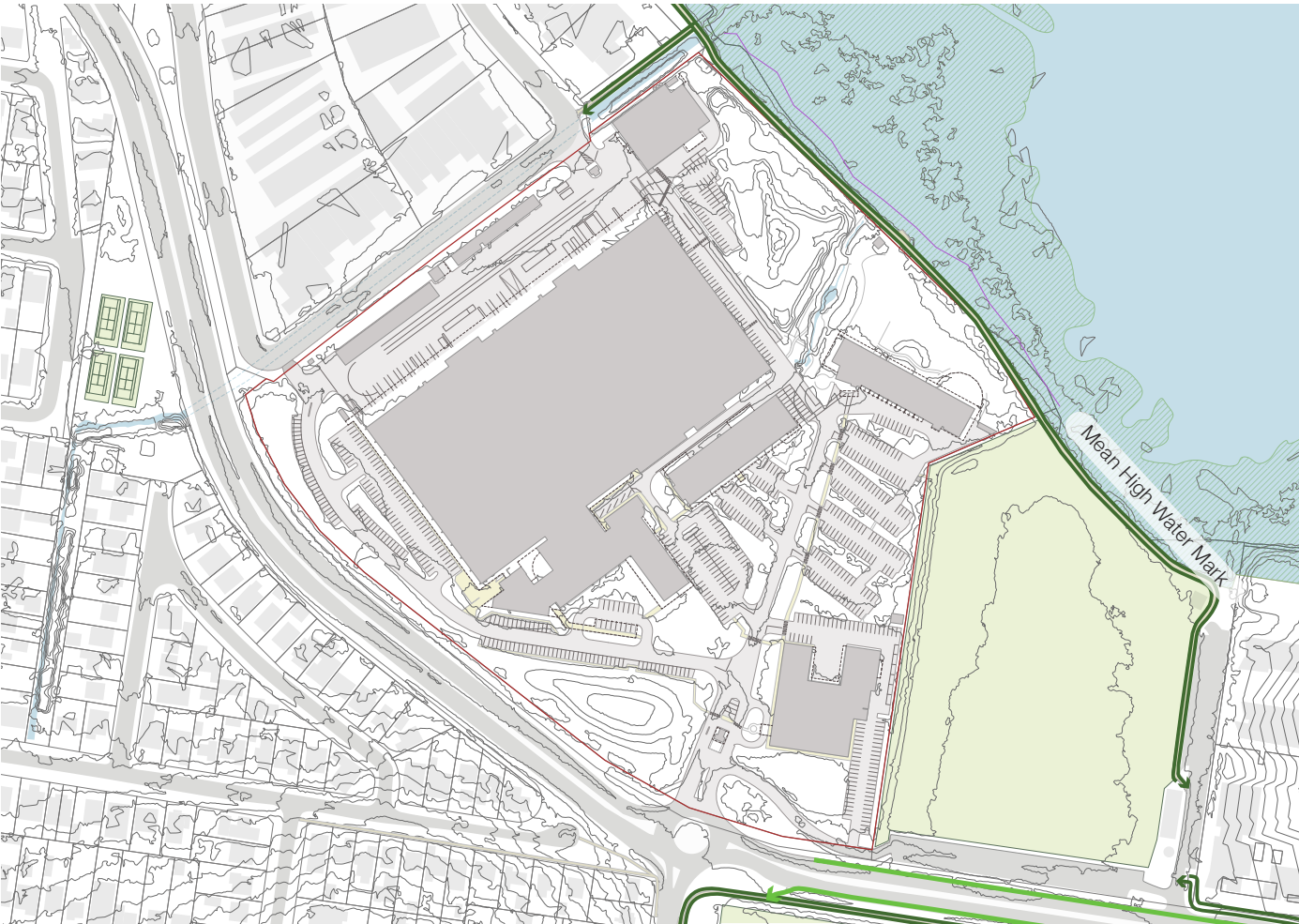
Caringbah Station is approximately a 20 - 25 minute walk from the site to the south west.

KEY

- Bus Stop
- Bus Route



3.5 Amenities for Active Lifestyles

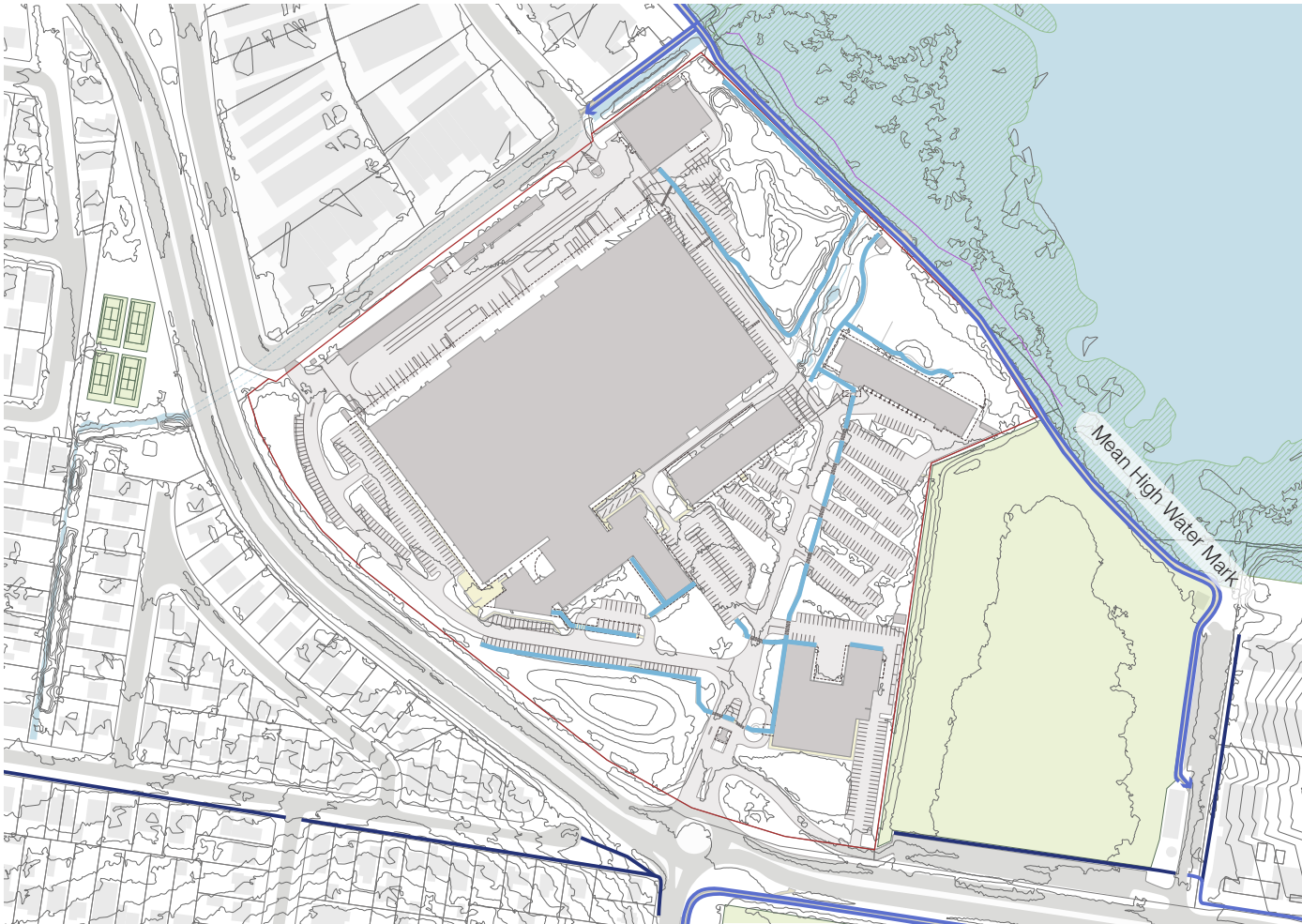


Dedicated Bicycle Infrastructure

The redevelopment of the site brings a significant opportunity to tie into the existing shared paths and dedicated bicycle infrastructure through new internal route provision - promoting active transport for the benefit of both employees and visitors.

KEY

- Public Shared Path
- Segregated Single Direction Cycle Path



Pedestrian Connections

Within the wider context, there is very little dedicated pedestrian infrastructure / footpaths, even within the residential communities to the south of the site.

Within the industrial area to the north served by Endeavour Road, there are no footpaths resulting in pedestrians using the front property setbacks or the road carriageway.

Within the site itself, there are a number of dedicated routes that connect the existing surface car parking to the individual buildings as well as to the foreshore area to the north (but not the existing shared path itself).

KEY

- Public Footpath
- Public Shared Path
- Private Footpath

Project Vision

4

Project Vision

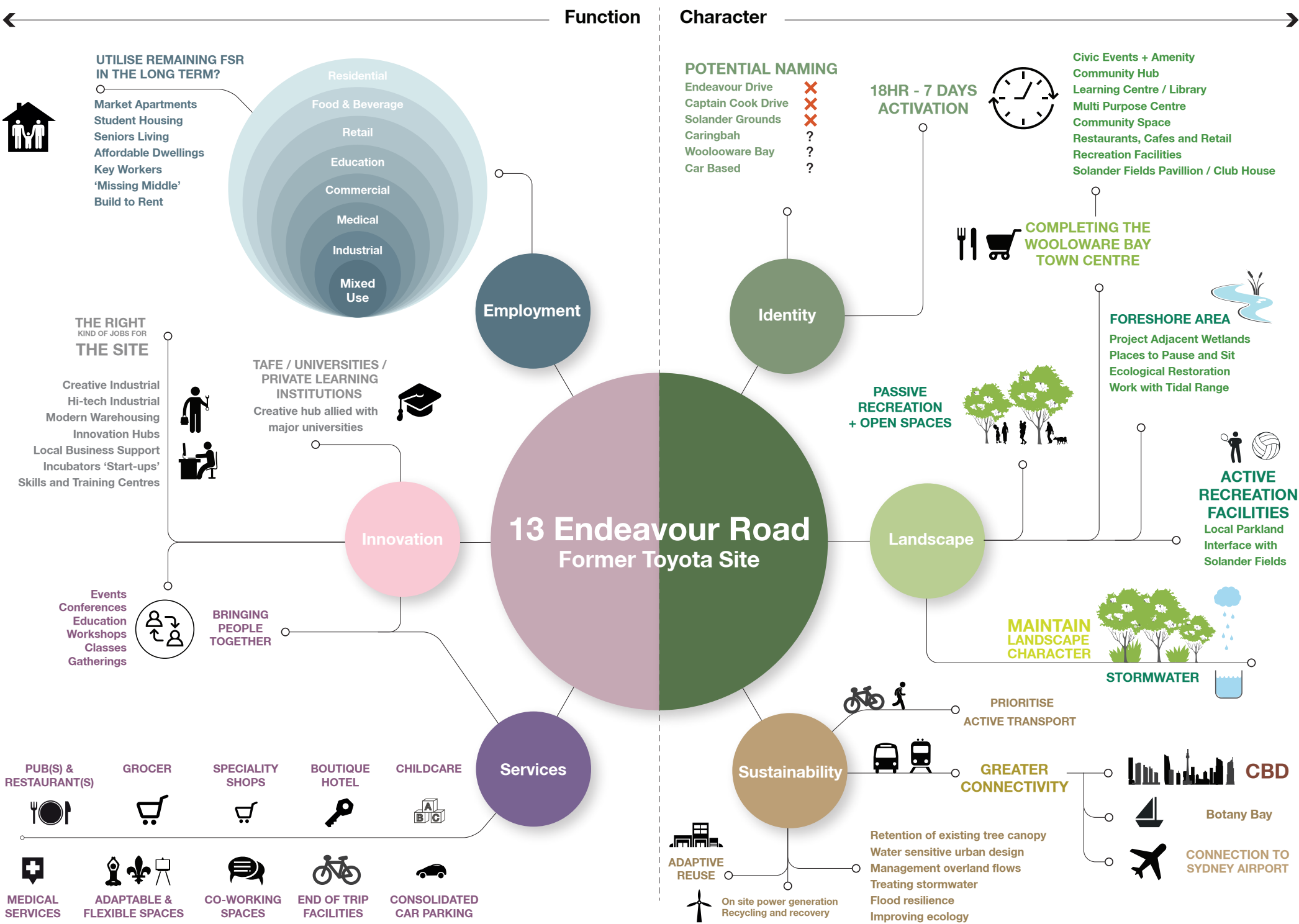
4.1 Visioning Diagram

The 13 Endeavour Road proposal will create an active and inviting mixed-use precinct that will be closely connected to Caringbah town centre as well as the wider Sutherland Shire. Unlocking the potential of the current underutilised industrial and commercial site, the precinct has the opportunity to deliver larger scale development, more diverse building typologies, additional services and amenities and most importantly a significant number of local employment opportunities.

It presents the unique potential to realise the strategic aspirations for the site as identified in Sutherland Shire's draft LSPS which builds upon Council's other key Planning Priorities. The wider Caringbah / Taren Point cluster can deliver significant employment opportunities, and access to goods and services that support increased Strategic Centres, Industrial and Urban Services jobs.

The precinct will celebrate the unique ecological and hydrological features of the site, stitching together the remnant natural features such as the existing foreshore / mangrove biome as well as the extensive endemic on-site planting.

A holistic approach to environment, landscape and whole-cycle water management enables sustainability to be embedded at the heart of the approach. Integrated at this early stage, this focus will permeate through to future stages of detailed design and delivery.



Project Vision

There are ten shared key project drivers which emerge from the local and state government policies, design guidance, benchmarking and precedents within the strategic framework. They will form the foundation for the vision of the project and will be embedded within the site plan.

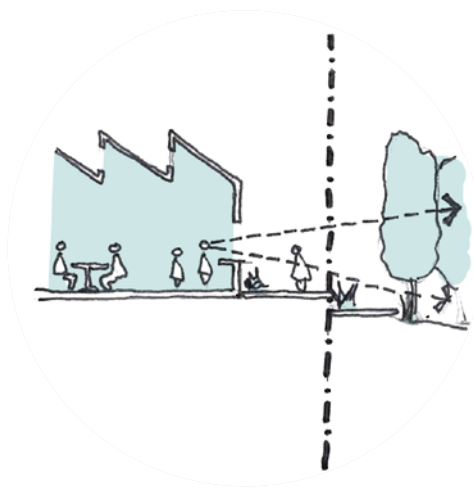
4.2 Key Project Drivers



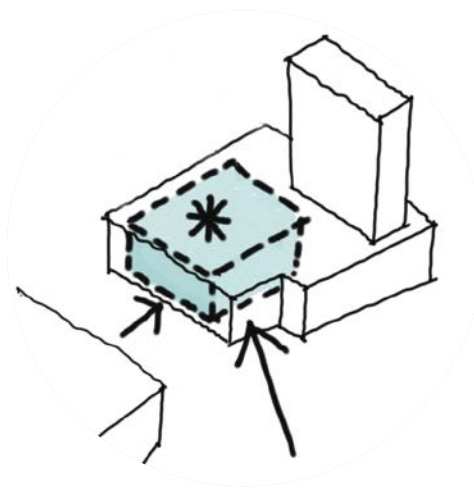
Retain and embellish the existing built form wherever possible



Reduce potential conflicts between service vehicle, private vehicle and pedestrian movements



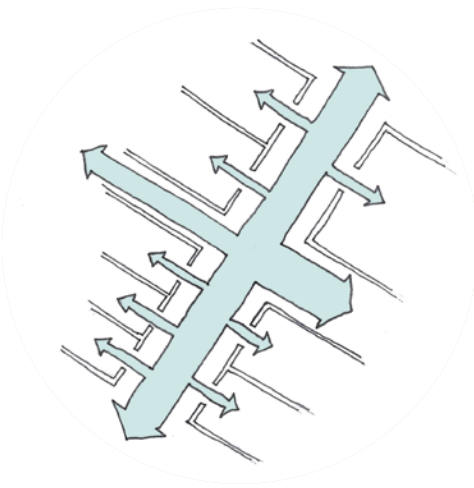
Programme the boundary interfaces to respond to the respective adjoining uses



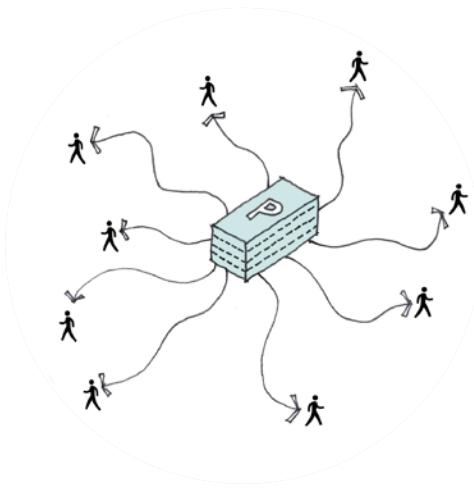
Explore opportunities for increased building heights in the centre of site



Improve the foreshore and bio-swale habitat and ecology



Focus street level uses and activation along a central thoroughfare



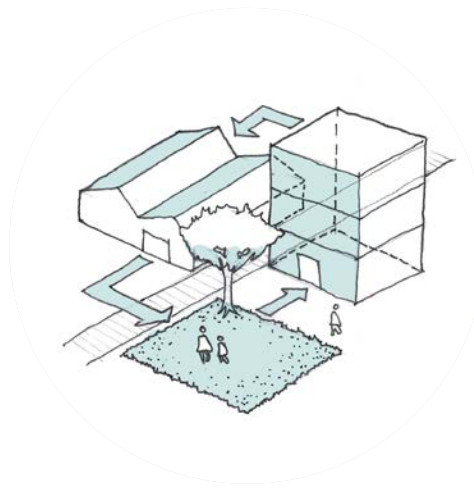
Consolidate car parking into a centralised and convenient location(s)



Protect and embellish the tree'd nature of Toyota Avenue



Balance the retention of the underlying landscape character with opportunities for development



The built form offers complementary character and uses



4.3 Design Objectives

The precinct vision has been informed by a set of overarching design objectives. These objectives reflect the design objectives provided in GANSW's Better Placed policy document and outlined below. The correlation between the Better Placed objectives and the site principles are represented through the colour coding system.

Design Objectives - Better Placed, GANSW

1.	Better Fit - contextual, local and of its place
2.	Better Performance - sustainable, adaptable and durable
3.	Better for Community - inclusive, connected and diverse
4.	Better for People - safe, comfortable and liveable
5.	Better Working - functional, efficient and fit for purpose
6.	Better Value - creating and adding value
7.	Better Look and Feel - engaging, inviting and attractive



i. Integrate development with the existing and future movement network, facilitating transit-oriented development and promoting active and public modes of transport

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ii. Respond to the landscape setting, retaining and utilising key view corridors to and from the site

● ● ●



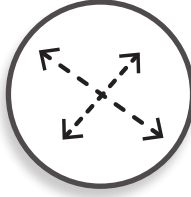
iii. Provide a mix of housing types and affordability, accounting for the diversity of users and needs of the local area

● ● ● ●



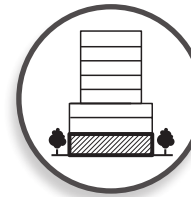
iv. Deliver high quality public open space and social infrastructure that responds to current and projected trends or deficiencies in the area

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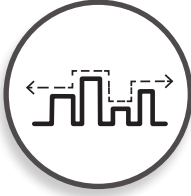
v. Create a permeable development site that ensures a high level of accessibility and integration with existing neighbourhoods

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vi. Engage with the streetscape through considered setbacks and streetwall heights, providing opportunities for active uses and passive surveillance at ground level

● ● ●



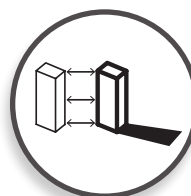
vii. Respond to the height and scale of the surrounding built environment through fit or transition of built form

● ●



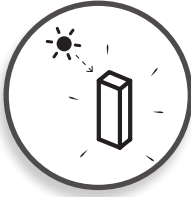
viii. Respond to the existing landform and environmental conditions, minimising impact on ecologically sensitive areas

● ●



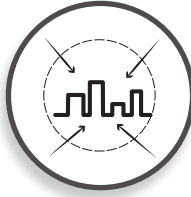
ix. Minimise impact on surrounding context, maintaining solar access and views through adequate separation and orientation of built form

● ●



x. Demonstrate design excellence through a quality development of architectural merit, that ensures a high level of amenity and sustainability

● ● ● ● ●



xi. Respond to significant qualities of the existing and desired future character of the local area

● ● ●



xii. Contribute to a sense of place, engaging with the needs, demographics and values of the local community

● ● ● ●



xiii. Balance the mix of residential and non-residential uses, to support the increased density and feasibility of the development

● ● ● ●



xiv. Respond to the geological significance of areas within the site and locality

● ● ●



xv. Consider the staging of development to align with the delivery of infrastructure and an evolving vision for the wider context

● ●

4.4 Development Principles



Embodying the Extant Site Qualities

The development principles underpin the project vision. They combine an understanding of key considerations outlined within the strategic framework with a place-based approach that seeks to enhance and capitalise on the existing social, economic and environmental features of the precinct.

The existing conditions present the site's fundamental constraints and opportunities for the project. As such, embodying these conditions becomes the most significant component of the framework that shapes future development.

The site's natural features, its existing topography, the orientation and environmental conditions, the foreshore mangrove biome of Woollooware Bay, the proximity of Solander Fields, the transport network as well as the immediate and wider context all form vital components of site analysis and offer vital cues in developing an appropriate place based strategy.



Connectivity and Movement

The proposed development will have a fully integrated movement network that enables the community to access community, employment, open space and capitalise on proximity to Caringbah town centre, Solander Fields and the Botany Bay foreshore walk. New public and semi-public transport connections to Caringbah station will connect the precinct to the commercial core and specialty / big box retail.

Connectivity to the wider regional transport network is important to enable commuters to leverage the amenity and employment opportunities provided by access to different centres.

A refined street network will balance the need for efficiency and speed with the creation of places for people. The nature, scale, legibility, carriage and speed of connections will look to optimise and promote sustainable and active transport modes. The creation of a highly walkable environment with landscaping and tree canopy will support an active ground plane that supports food and beverage uses as well as providing passive surveillance.

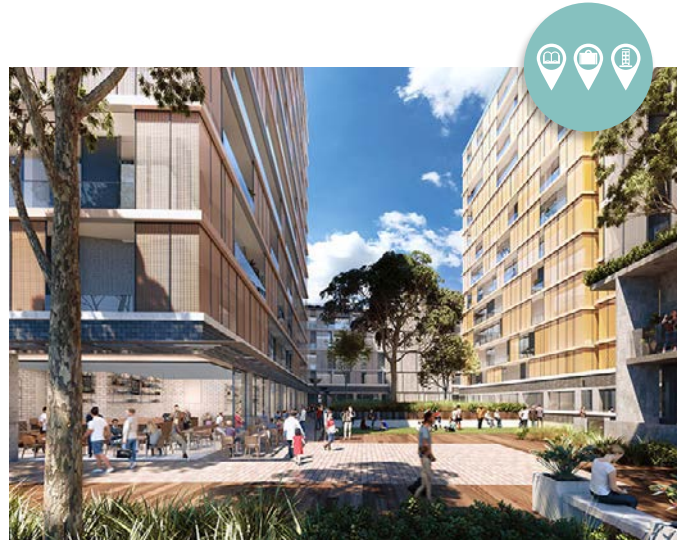


Landscape and Open Space

The proposals will respond to and celebrate the established landscape character of the site, Woollooware Bay, Solander Fields and the wider region. The site will look to connect the remnant natural features in the wider area to complete links in the GANSW's Sydney South District Green and Hydrological Grids. The revitalisation of these green and blue corridors through the site will be utilised as structuring elements and opportunities for recreation, respite and urban cooling. Environmental rehabilitation of the foreshore will continue to build upon Council's previously established aspirations adopted within the Woollooware Bay Town Centre developments.

The sheer size and proximity of Solander Fields means a range of smaller local open spaces on site will support a variety of experiences including passive and active uses.

Urban tree canopy within public open spaces, down streets and on top of built form will form a key part of mitigating the urban heat island effect. Where suitable, endemic and low water species will be utilised to ensure the precinct's landscape is resilient and long lasting.



Land Use and Diversity

Located within the Taren Point / Caringbah Industrial Precinct and in close proximity to Caringbah town centre, the site will need to include the right balance and scale of land uses to continue to operate as a high density employment centre. This includes delivering the appropriate type and mix jobs as well as providing a wide range of goods and services. This should carefully be considered with reference to Sutherland Shire's *Planning Priority 13 - Grow Industrial and Urban Services Jobs*.

Land use will be engaged to support activation across the day and outside of traditional business hours, establish different character areas and support safety and passive surveillance.

Project Vision



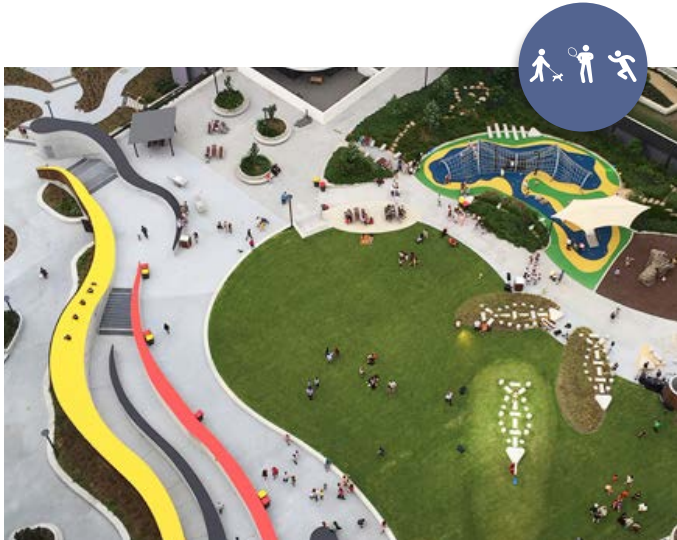
Built Form and Scale

This subject site signals the opportunity for the delivery of more diverse building typologies unencumbered by the existing fine-grain urban fabric and fractured ownership of the town centre. A large and strategically important site with a single owner can much more readily support the delivery of buildings of an increased scale and footprint to enable high density industrial and commercial uses to fulfil its role as part of the Taren Point / Caringah Industrial Precinct.

When considered at the site wide scale, the potential environmental impact of buildings of increased height and larger footprints can be better managed. The transitioning height, shaping of building footprints and orientation of buildings can be engaged holistically to enable better solar penetration to the ground plane and public spaces.

Consistent street walls will frame streets, facilitate active frontages and passive surveillance. Active uses at ground will look to mediate the interface between public spaces through landscape.

The proposed scale and language of built form on the site will support the primacy of the site in the region for years to come.



Amenity

Considered holistically with an understanding of the ultimate built form and employment density and land use aspirations, the proposals will include infrastructure and spaces that cater to the future needs of the community, including potential childcare, entertainment, education, recreational and cultural facilities.

The provision of public landscaped spaces, urban tree canopy, the connection to Solander Fields, consideration of view sharing and management of the environmental impact of built form will enable the precinct to support the health and well-being of its residents, workers and visitors.



Sustainability

Social, environmental and economic sustainability will be embedded in the precinct, ensuring that the strategic aspirations for the region can be delivered and supported over time. It will build on the site's relationship with Caringbah town centre, growth in the nearby health and medical precinct and the delivery of new public transport infrastructure upgrades.

The development will become an inclusive and inviting mixed-use precinct optimised for active and public transport. Socially sustainable, the precinct will include community infrastructure, high performing building, a range of parks and landscaped corridors which enable a network of non-transactional spaces alongside industrial and commercial uses.

Coupled with investment in high quality building design, on-site energy generation, integrated water life-cycle management and urban tree canopy, the site will fully engage with its environmental impact and seek to mitigate the urban heat island effect.

The potential staged delivery of the precinct will support increased investment in the region and the revitalisation of the local area.



Staging and Delivery

The deliverability of the subject site is important to realising the strategic aspirations for the proponent whilst also capturing the opportunities outlined in Council's draft Local Strategic Planning Statement. Projects that support these strategic aspirations will need to be delivered incrementally and cannot await the completion of major infrastructure projects.

Unencumbered by the fine-grain development pattern and fractured ownership pattern of smaller development parcels, this generous site presents short and long term opportunities to deliver on the strategic aspirations for the region. This may also incentivise increased investment in the wider region.

Project Vision

4.5 Masterplan Framework

The primary design concept for the site is to create a vibrant employment precinct that offers a range of uses and experiences that build on the sites legacy and celebrates its existing natural and built features. The masterplan framework distils the aspirations of the project vision and principles into the following priorities:

The masterplan framework is underpinned by the following priorities:

- 1. Establish distinct character areas across that appropriately interface with the surrounding context and provide a guide for future building use
- 2. Create a legible network of roads and spaces that enable efficient movement across the site minimising vehicular/ pedestrian conflicts
- 3. Revitalise the foreshore by providing a 40m buffer zone to facilitate the opportunity for ecological improvements and recreational amenity
- 4. Create a network of spaces within each character area to provide additional amenity and to encourage pedestrian movement
- 5. Minimise overshadowing impact to the surrounding context
- 6. Maintain the legacy of the former uses of the site through the adaptive reuse of the main warehouse building
- 7. Provide efficient parking solutions across the site to maximise pedestrian activity
- 8. Improve vehicle and pedestrian connection into, and through the site

KEY

- Heavy Goods Vehicular Service Loop
- Private Vehicular Access Loop
- Connections
- Open Space/ Plaza
- Intersection Upgrades
- Internalised Car Parking
- 40m MHWB Setback Buffer
- Trees with high retention value



Project Vision

4.6 Building Uses and Character Areas

The long term vision for the site sets out how it may develop and grow over a period of many years. It is vital any development plan provides both flexibility and a framework for future change to occur.

The four identified character areas include:

Production

This character area will offer a range of tenancies that produce perishable and manufacture non-perishable goods for a range of both retail and wholesale customers.

Innovation

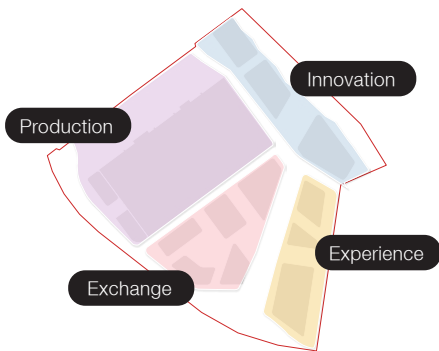
This area will establish a series of spaces that provide opportunities for sharing and cross fertilisation of different industries, supporting new approaches and ways of thinking that drive the estate and broader economy.

Exchange

Create unique forums and opportunities (planned and unplanned) for the exchange of ideas as well as goods. This may manifest itself in terms of shared workspaces, tech hubs or conference and workshop facilities, open space, food and beverage outlets, etc.

Experience

Deliver destinations that are experiential based - food and beverage, cinemas, recreation museums etc. This will likely offer a broad mix of uses attracting a wide range of local visitors.



Production

Offer a range of tenancies that produce perishable and manufacture non-perishable goods.



Innovation

A series of spaces that provide opportunities for cross fertilisation of industries.



Exchange

Creates forums for the exchange of ideas as well as goods.



Experience

Establish destinations that are experiential based - food and beverage, cinemas, museums etc.

Project Vision

4.7 Public domain and Space

The precinct will provide a variety of street and open space typologies (as described within the Public Domain chapter of this report) that are tailored to their particular locations, orientations and associated building uses.

The foreshore and Solander Fields interfaces will offer the most densely vegetated spaces - utilising significant amounts of existing vegetation. Toyota Avenue and the Captain Cook Drive setback will also maximise the retention of highly significant trees.

A new public open space is provided on the south-east corner of the site adjacent to Solander Fields.

Vehicular service areas and service roads will generally be more functionally driven.

KEY

- Highly Vegetated Streetscape / Open Space
- Vegetated Street Utilising Existing Landscape Character
- Neighbourhood Street with Double Sided Tree Blister Planting
- Service Roads with Single Sided Tree Blister Planting
- Vehicular Service Areas
- Pedestrianised Zones
- Open Space/ Plaza
- 40m MHWL Setback Buffer
- Trees with high retention value



1:1,600 @ A3

4.8 Vehicular Access and Servicing

Movement across the precinct will be defined by two distinct loop roads that separate the primary industrial uses from small private vehicles and pedestrian moving through the site. The movement network will be supported by smaller roads and connections, creating granular development parcels that crates an active ground plane and support proposed character areas. Access into the site will be improved through intersection upgrades at Endeavour Road and the Gannons Road intersection.

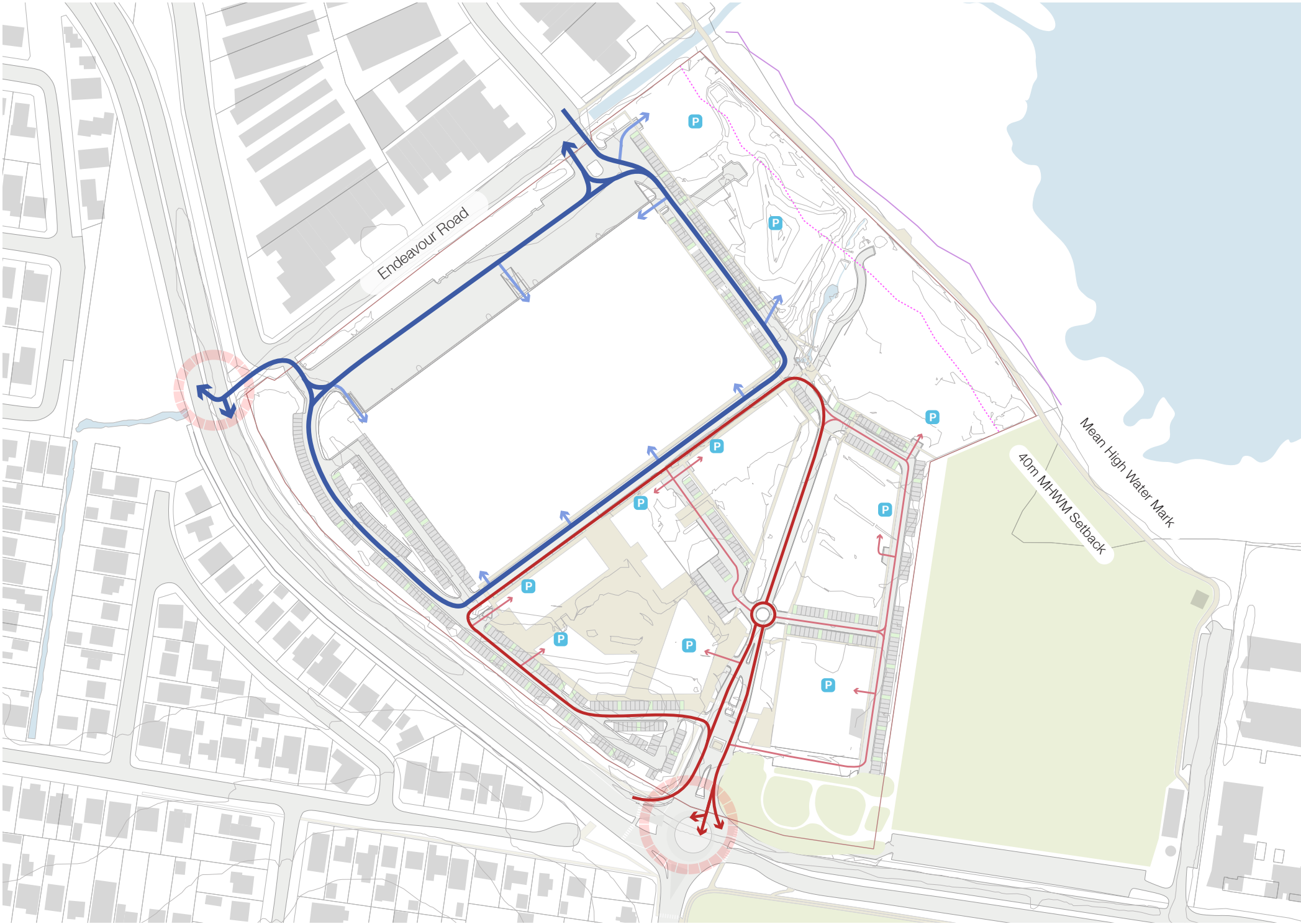
Parking will be evenly distributed across the site to meet the demands of the individual tenants as the precinct evolves. All above ground parking will be appropriately screened and able to be adapted to complementary uses in the future.

KEY

Heavy Goods Vehicular Service Loop

Building Access Points

P



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4.9 Parking Strategy



Early Activation - At-grade Parking

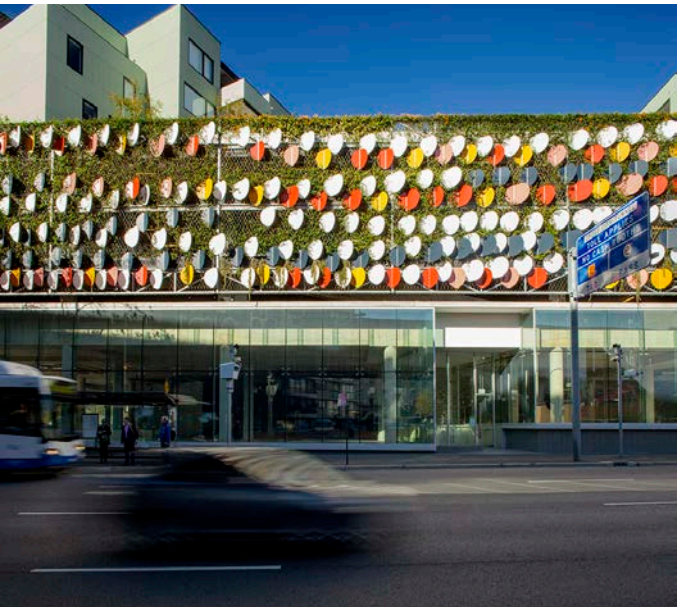
From the earliest stages of development, at-grade parking will provide for the needs of the site. These will be developed in accordance to quality landscape design parameters including the provision of tree pits and verges from provide areas for deep soil and diverse landscapes to buffer parking from buildings. These also act to provide a more walkable and comfortable environment.



End State - Internalised Parking (above ground)

As developments continue, internalised parking would be provided to accommodate for increased needs. These internalised parking structures will be provided primarily across the first and second levels above ground to ensure more pedestrian friendly and activated ground floor frontages. This is also to mitigate flooding impacts.

The above ground parking façades will be screened appropriately to ensure the built form maintains a strong aesthetic appearance whilst enabling natural cross ventilation.



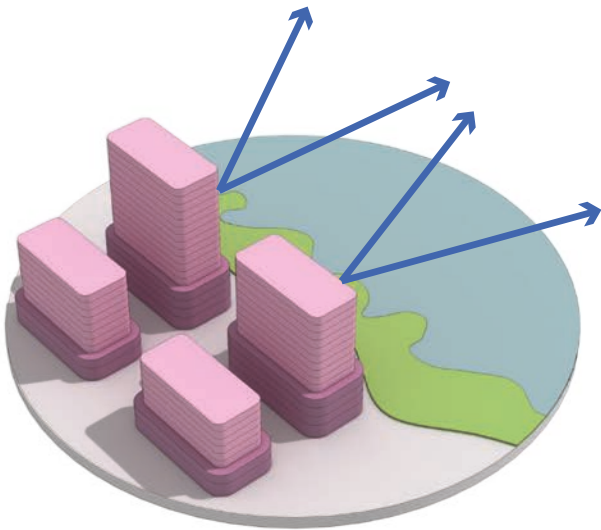
4.10 Site Height Strategies

Building height and its location, distribution and contribution to the broader context has been carefully considered in response to Council's strategic documents and our work for various local authorities and state government agencies. In preparing the site plan and the site specific response, the following strategies were applied to building height.

Height is generally only perceived from a distance. The future character of the site will be defined by the pedestrian experience and sense of arrival. The priority is therefore placed on the definition and quality of the street-level experience and movement corridors in and around the local area.

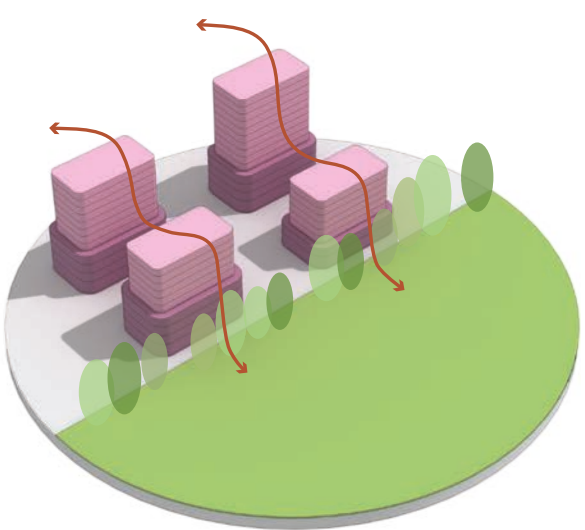
The height of buildings will typically be viewed and experienced from nearby public open spaces, or through local view corridors within close proximity to the site. In these instances, the placement, orientation and design of the buildings will be addressed through detailed design.

Shown to the right are the height strategies adopted for the site to mitigate impacts and consider the visual character of the precinct within the local and broader context.



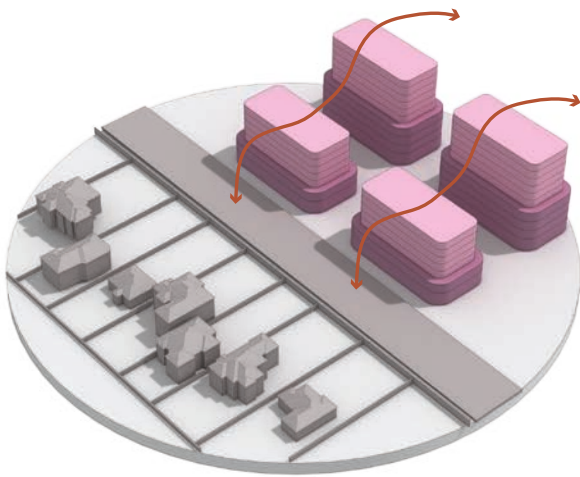
Maximise Views of Woollooware Bay

Uniquely positioned on the foreshore of Woollooware Bay looking north over the water towards the Harbour City CBD, taller buildings provide a distinctive identity that positively contributes to the local skyline and also provides excellent visual amenity for building occupants.



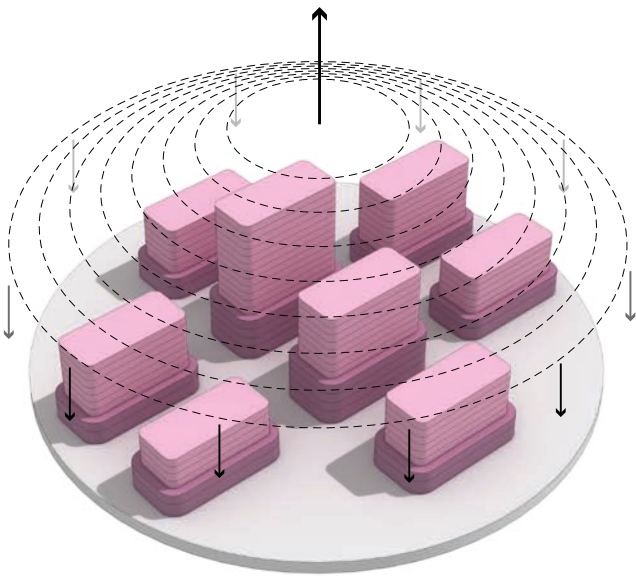
Protect Amenity of Solander Fields

Built form heights transition down towards Solander Fields to minimise afternoon overshadowing of the sports pitches and also offer high levels of visual amenity to the taller buildings further away.



Respond to Adjacent Low Density Residential

With low density residential dwellings on the southern side of Captain Cook Drive, the heights of any proposed built form is reduced along the southern edge of the site to minimise and mitigate the overshadowing of neighbouring properties. To create a varied skyline, buildings are also staggered in plan and section with their heights having a minimum 15% in variation.



Concentration at Core of Site

To improve the legibility of the site's core, and to minimise any potential impact of overshadowing or on view corridors, height and density is concentrated in the centre of the site and subsequently reduced around the perimeter.



4.11 A Sustainable Vision

The approach for the site will be underpinned by an integrated approach to social, economic and environmental sustainability that will permeate across various scales of governance and intervention. Considering the site’s location in Sydney’s south, and especially in a waterfront location, this approach will embed an important and lasting legacy of climate resilience that will enable the population to actively combat the urban heat island effect, sea level rise and changes in the climate.

The site will co-locate commercial, leisure, community and industrial uses into a mixed-use destination. This will be tied together through a network of walkable, accessible and inviting streets which promote active transport and tie into public and active transport infrastructure. The quality of the public domain will be a key attractor and minimise the community’s use of private vehicles.

The proposals will also engage with opportunities unlocked through innovative building design, material selection and energy generation.

To the right are a number of key areas which have been considered as part of the approach to sustainability.



Engaged with Government and Communities

The precinct plan will serve as a tool to engage with government and the local community about the future of the site. It has been prepared with an understanding of the strategic framework and planning mechanisms that will support its implementation.



Healthy and Active Living

A network of open spaces, strong connections to Solander Fields and the foreshore shared path as well as inviting streets will support opportunities for exercise, social interaction and activity. This will include sports fields and facilities. The promotion of active transport within the site will also encourage incidental exercise as part of people’s daily routine.



Adaptable and Resilient

Significant tree canopy, soft landscaping and an integrated approach to the water cycle has been integrated to reduce the impact of rising temperatures brought about by climate change. The regeneration of the public domain contributes to the mitigating the impact of potential flood events and sea level rise.



Inclusivity and Affordability

A mix of employment building types and tenures, commercial, experience and recreation opportunities will enable engagement across a diverse range of people in the community.



Sustainable Transport and Movement

The precinct will be optimised for active transport and tied into regional public transport networks - private and public. This will easily connect workers and visitors to goods, services and employment, and discourage the use of private vehicles. This will be underpinned by a network of cool and comfortable streets.



Sustainable Buildings

Buildings will be considered across their entire life-cycle. They will feature high performance materials and engage with opportunities passive solar, cooling and on-site energy generation.



Ecological Value

The unique ecological value of the region will be enhanced through the retention and creation of new landscaped areas connecting to the Woollooware Bay foreshore and Solander Fields. Significant landscaping and endemic planting will also provide new habitats for native fauna.



Urban Heat Island Effect

Impacting people, infrastructure, the economy and the environment, heatwave conditions exist on an annual basis in Caringbah. Heatwaves kill more Australians than any other disaster, have untold economic implications and a huge effect on transport, power and community infrastructure.



Safe Places

Streets and public spaces will form the backbone of the precinct providing a safe and inclusive places for the community. This will be supported by a range of land uses activating the precinct across the day, prioritisation of pedestrians, passive surveillance and the integration of Crime Prevention through Environmental Design Principles (CPTED)



Culture and Community

A sense of community will be fostered through the creation of public focal points for gathering and events. New facilities will incorporate opportunities for education and engagement of a diverse groups across the community.



Integrated Water Cycle

Water within the precinct will be considered in a holistic manner with opportunities for water sensitive urban design, stormwater treatment, and with flood mitigation measures integrated into the design of the public domain and buildings.



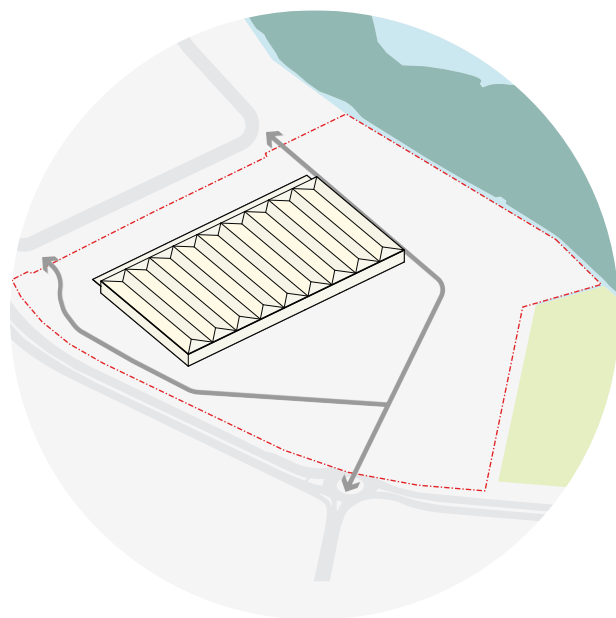
Smart City

The integration of smart technologies across the site will enable opportunities to better adapt to changing conditions, plan for the future, acknowledge successes and prioritise projects that will support our shared vision for the place.

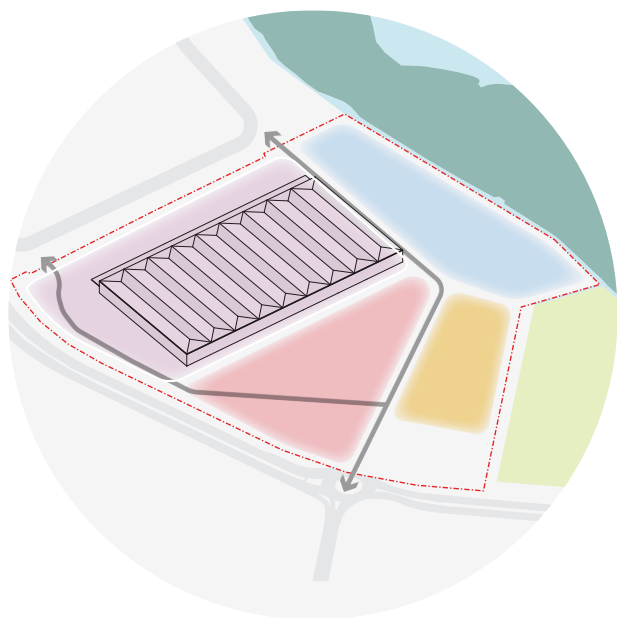
Concept Masterplan

5.1 Key Moves

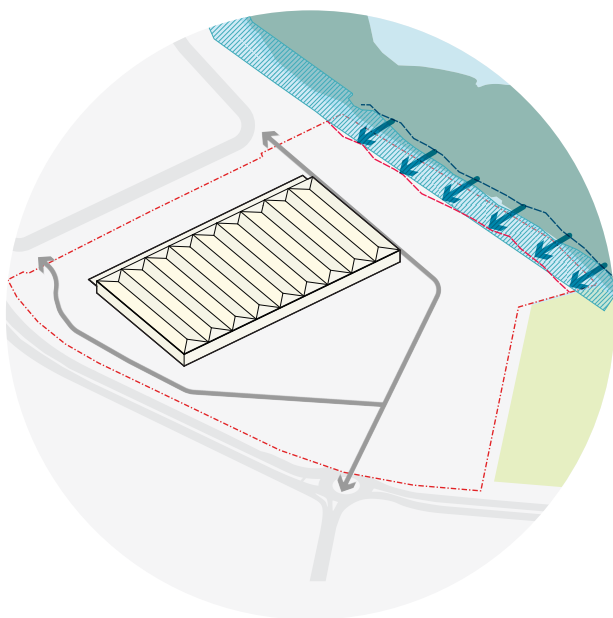
The following diagrams demonstrate how the concept masterplan delivers the aspirations of the precinct vision and the masterplan framework



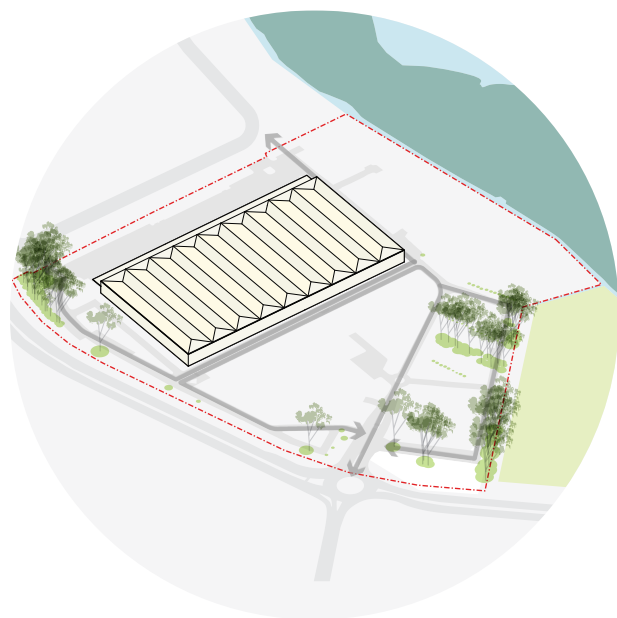
Celebrate the sites legacy through the adaptive reuse of the main warehouse building, given its footprint and unprecedented volumes



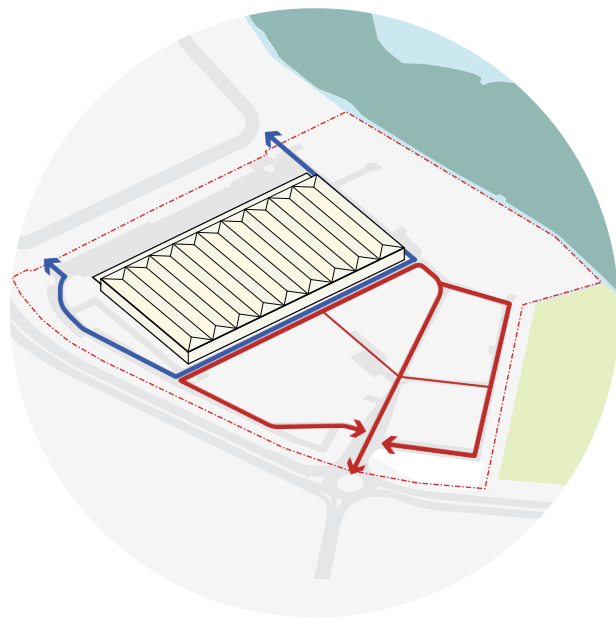
Establish a series character areas that appropriately respond to the surrounding context and provide for a variety of different employment opportunities and experiences across the site



Provide a 40m setback from the mean high water mark to improve the landscape ecology along the northern edge



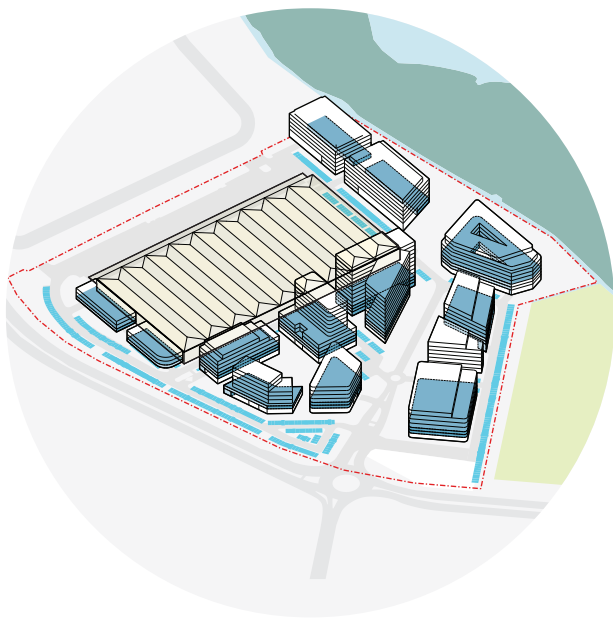
Preserve trees with high retention value to contribute to the landscape character of the precinct



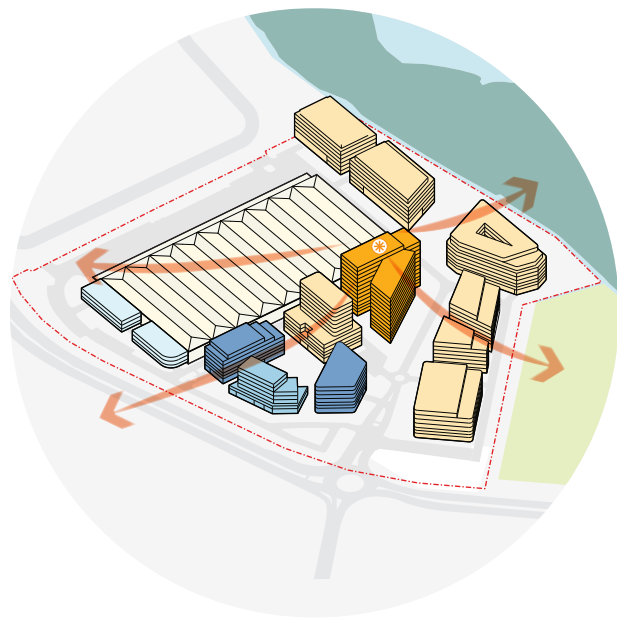
Create a legible movement network across the site that support the various uses and character areas



Promote an active ground plane reinforced by a network of streets and spaces encouraging pedestrian movement



Elevate parking to facilitate an active ground plane. Parking levels have sufficient floor to floor heights to enable adaptive reuse



Proposed building envelopes to deliver high quality architecture that celebrate the uses on site while minimises the impact to surrounding development









5.3 Character Areas

Without being overly prescriptive in terms of limiting future building uses within each character area, the areas broadly manifest themselves on site with particular reference to the micro site specific conditions and future desired characters:

Production

Tapping into the existing Taren Point / Caringbah Industrial Precinct that the site sits on the periphery of, this part of the site will continue to provide manufacturing and industrial based employment opportunities for years to come.

Innovation

Considering future shifts in industrial / manufacturing practices and trends, the northern part of the site fronting Woollooware Bay will change over time. As such, large floorplate and flexible built forms have the potential to offer a variety of uses from industrial warehousing to high specification office space.

Exchange

The truly mixed-use core of the site brings together a range of uses and people for both the exchange of information as well as physical goods. This may have a user base of both wholesale and F & B customers. The public plaza will become the focus of this character area - a place for people to meet, gather and socialise.

Experience

Fronting Solander Fields, providing more recreational, leisure and experiential type spaces, these will provide more evening and weekend activation and will attract a number of specialty tenants.



Concept Masterplan

5.4 Indicative Masterplan

The indicative masterplan is structured around the extant built form and existing road network to allow the project to be staged and be flexible in its delivery.

A new plaza will be public open space to the wider context and provide community, and commercial functions - establishing a central place for gathering.

Internal vehicular circulation has been minimised to reduce conflicts with pedestrians but consideration has been made to ensure all buildings will have a safe and secure front door and car drop off area.

Commuter car parks will be housed within each of the buildings that are vertically sleeved by commercial uses at ground. In time, these will have the capacity to be converted to commercial floorspace as the future market demand dictates and demand for parking reduces.

Communal roof terraces will provide significant amount of amenity for workers with easy and accessible connections down to the more public ground plane that offers convenient and direct access to Solander Fields and the foreshore shared path.

Existing trees with notable retention value will be retained wherever possible - especially on the boundaries of the site and along Toyota Avenue with its strong tree'd and vegetated character.

KEY

- ① Pedestrian & Cycle Shared Path
- ② 40m Mean High Water Mark Setback
- ③ Bio-Swale / Overland Flow Path
- ④ Embellished Toyota Avenue
- ⑤ Private Shuttle Bus Drop Off Bay
- ⑥ New Open Space
- ⑦ Significant Stands of Existing Trees Retained
- ⑧ New Public Plaza
- ⑨ Potential New Public Bus Stops
- ⑩ Existing Main Warehouse Building Retained
- ⑪ Service Area
- ⑫ New Internal Service Road



5.5 Primary Site Features

The provision of commercial and mixed used facilities will allow for a gradual transformation and activation of the site and wider context - especially the foreshore shared path and the Solander Fields frontage.



1. Retain the Existing Main Warehouse



2. Create Substantial Employment Floorspace



3. Establish Ground Level Activation



4. Enhance the Landscaped Foreshore Setback



5. Develop a New Boutique Hotel



6. Embellish the Treed Character of Toyota Avenue

Concept Masterplan

5.6 Indicative Ground Floor Plan

The ground floor plan has been developed to balance the basic functional needs of the development with an aspirational vision to establish a lively and active ground plane that provides a variety of building uses.

A vibrant site 'requires an adequate level of commercial floor space to support a range of retail, business, entertainment and community uses to serve the needs of local residents, workers and visitors. The commercial floor space also plays a vital role in generating employment opportunities in accessible locations for the wider community. A successful centre needs continuous street level retail and commercial activities that enliven the public domain and promote a safe and secure environment.'

Source: https://www.randwick.nsw.gov.au/__data/assets/pdf_file/0017/26045/Kingsford-Centre.pdf

Generally, with the exception of the industrial / warehouse buildings in the northern half of the site, the majority of the ground level storey provides food and beverage, recreation or commercial uses, with commercial lobbies and some back of house spaces.

Car park entrances are provided in the least conspicuous (yet functional) locations within almost all buildings to provide a car parking strategy that allows each building to function independently. The car parking is generally provided at levels 01 and 02 and are likely to be able to be converted into additional employment floorspace as future demand dictates.

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking
- Building Entrance
- Lobby Entrance
- Car Park Entrance



5.7 Building Height Strategy

Across the masterplan, there are a number of different contextual conditions, building typologies and streetscape interfaces that generate highly tailored responses to building height.

Generally, building heights are greatest in the centre of the site where the visual and potential overshadowing impacts can be mitigated. These taller elements gradually step down towards Captain Cook Drive and the RE1 zones as outlined over the following pages.

KEY

- ⊗ Number of Storeys
- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



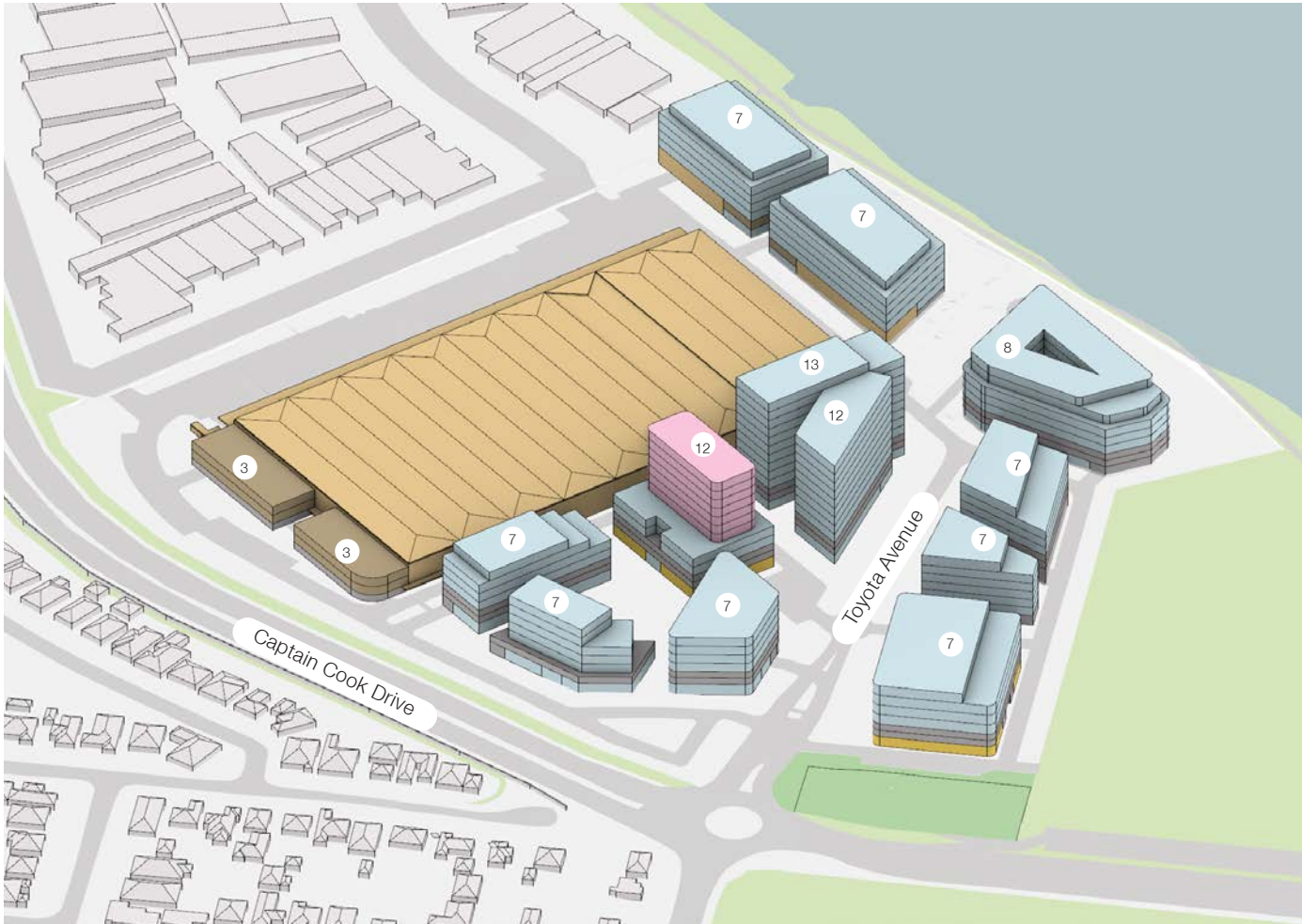
5.8 Indicative Built Form Massing



Aerial View Looking East

Building height is concentrated in the centre of the site where employment density will be highest and to reduce the perceived tallest building from the surrounding context / public realm.

Built form fronting Woollooware Bay also has the potential to have offer additional height to maximise the potential views to the north over the water towards the Harbour City CBD.



Aerial View Looking North

Building heights generally transition down towards Captain Cook Drive to remove any overshadowing of residential properties (including their private open spaces) to the south. There is also potential to use height at the entrance of site to de-mark the arrival point into the development. Within the indicative design scheme shown above, this has been conceived to be a signature hotel building.

KEY

Grey	Pink	Blue	Yellow	Light Blue	Brown	Orange	(x)
Car Parking	Hotel	Recreation	Food & Beverage	Office and Business Premises	Ancillary Industrial / Warehouse Office	Industrial / Warehouse	Number of Storeys

Concept Masterplan

5.9 Indicative Site Section

The indicative site cross section reveals the balance between public realm and built form proposed by this redevelopment.

The new public plaza is enclosed by 7 to 12 storey high buildings establishing a clear pedestrian environment protected and highly vegetated. The plaza is also highly accessible with 4 wide entry points.

The section also shows the hierarchy of heights across the site with taller 12-13 storey building at the centre of the site and 7 storey building at the perimeter.

Street and public domain across the site will have significant tree canopy to provide shaded and comfortable spaces for the community with 609 of these begin retained and 245 proposed tree planting.

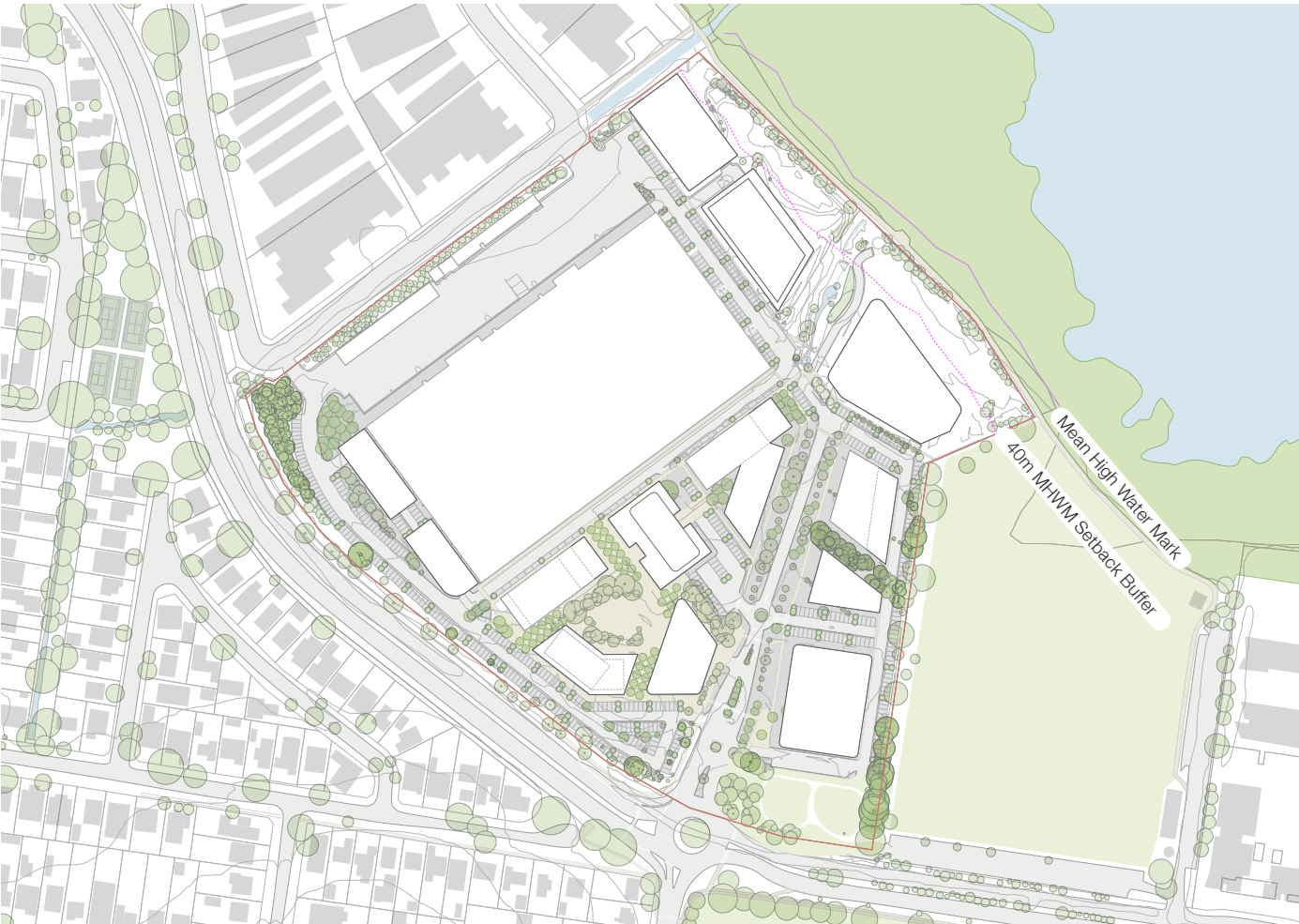
The site's interface with the mangrove and the foreshore shared path will also be a key opportunity for recreation and landscape and connection of the site into the wider context.



Section cut key plan



5.10 Integrating Public Places with Landscape



Retention of Landscape Character

There has been a conscious decision to retain a very high proportion of the existing on-site trees, especially those considered to be of high retention value.

Within the main public plaza, the large number of retained mature trees will help define the character of the space and immediately help to soften the built form.

New trees will be planted and maintained in key locations, whilst also being provided in tree blisters every 6 (row) car parking spaces in line with Council's B7 - Business Park DCP controls.

Refer to accompanying technical report

KEY

- Retained Trees with High Retention Value
 - Retained Trees
 - Proposed New Trees
 - Retained Hedgerows / Other Landscaping Elements
- Refer to the Public Domain chapter and Ecologist's report for additional information



Re-vitalisation of Woollooware Bay Foreshore

The re-vitalisation of the foreshore setback will provide a new 40m deep (minimum) landscaped buffer on the northern boundary of the site which creates new opportunities for recreation and ecological improvements. The upgrades will make visible the role and significance of waterways and wetlands in this region as noted in Council's draft LSPS:

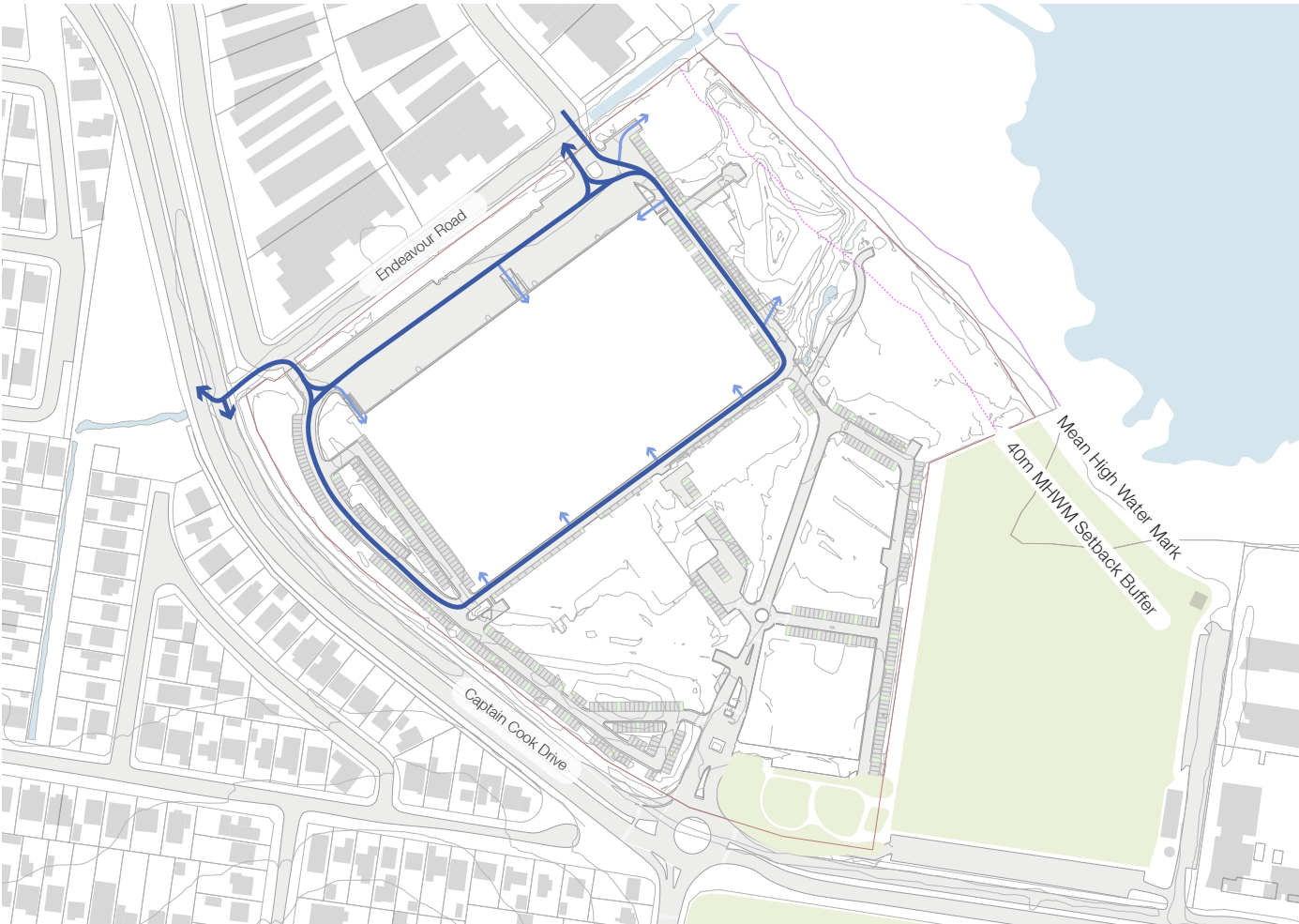
'Wetlands and waterways have a critical function in ecological processes, as breeding sites and corridors for wildlife. Wetlands help to purify the waterways. The health and quality of the waterways depends on the health of their catchments. Buffer areas are important as runoff from surrounding land is critical to waterway health and biodiversity.'

Refer to accompanying technical report

KEY

- Foreshore Buffer Zone
 - ① Mean High Water Mark (MHW)
 - ② 40m MHW Setback Buffer
 - ③ Electrical (Transmission Lines) Easement
 - ④ 50m Coastal Wetlands Buffer
 - ⑤ Coastal Wetlands Proximity Area
- Refer to the ecologist's report for further detail in regard to the above

5.11 Vehicular Access and Servicing



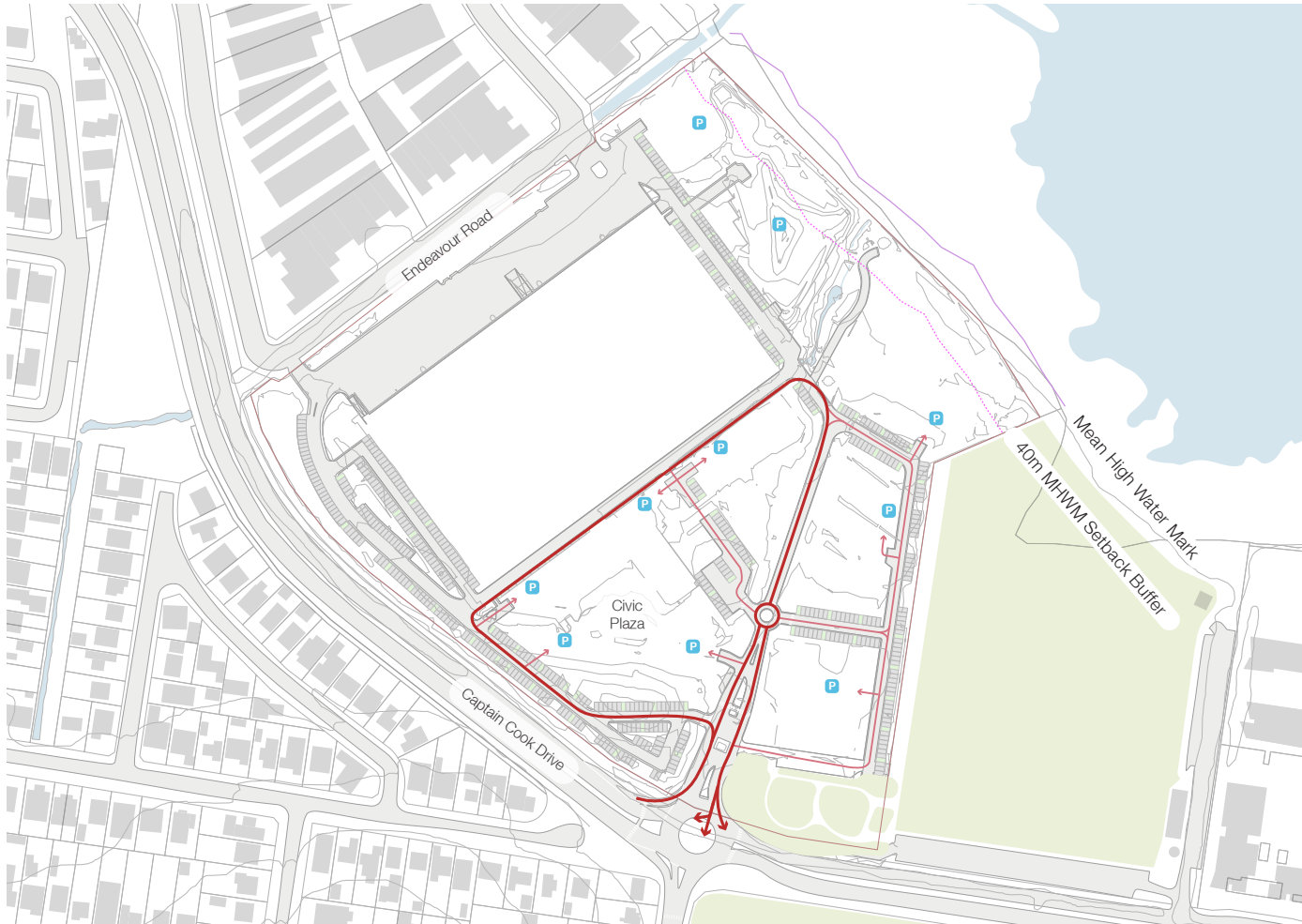
Heavy Goods Vehicular Access

Utilising access from Endeavour Road (which currently provides heavy goods / service vehicle access for the adjoining general industrial buildings) will allow the larger industrial tenancies, including the main warehouse, to be serviced by a clear vehicular loop that does not require access or use of the Captain Cook Drive entrance / Toyota Avenue - thus minimising conflicts with pedestrian and other road users.

This also reduces potential additional loading on the Captain Cook Drive / Gannons Road intersection.

KEY

- Heavy Goods Vehicular Service Loop
- Building Access Points



Private Vehicular Access and Car Parking

The regional road of Captain Cook Drive connects the site to wider regional destinations. Establishing a high mobility loop feeding off the Gannons Road intersection (with a series of additional sub-circuits) will form an important structuring element within the site and will provide a spine road that stitches together a range of different land uses including commercial, recreation, food and beverage, community and open space.

Car parking will be provided on a pad by pad basis and (generally) be provided on the first and second storeys to enable an active and vibrant ground floor streetscape. Vehicular traffic will not be permitted within the main plaza.

KEY

- Private Vehicular Access Loop
- Building Access Points
- Internalised Car Parking

5.12 Public Domain Upgrades - Internal Service Road



Current Condition

In the current situation the space between the main warehouse and Thiess House is used as loading area with one large carriageway of which 3.6m are dedicated to angled parking.

The access to the main warehouse has a 4m wide pedestrian footpath partially cover by an awning.

The space serves well the function of loading area, but has very little to offer for pedestrians.



Current condition of main warehouse loading area



Future Potential Condition

The development of the site changes the character of the lane and gives opportunity to significantly improve the space. The one way lane will be partially used as service road for the warehouse uses and partially to provide an exit loop to private vehicles and additional parking opportunities.

The road will have 2 carriageway 3.5m wide, footpath on both sides and parallel parking along the whole length of the road with single sided tree blister planting.

The service road will be part of the a clear vehicular loop providing access to the main warehouse for heavy goods



Section cut key plan

5.13 Public Domain Upgrades - Toyota Avenue



Current Condition

Toyota Avenue is currently a 2 way road composed of one carriageway per direction. The avenue is framed by established edges and mature tress that gives strong character and amenities to the space.

On both sides of the avenue there are large areas dedicated to surface parking. Currently Toyota Avenue does not have footpaths for safe pedestrian movements.



Current condition of Toyota Avenue



Future Potential Condition

The character of Toyota Avenue will be reinforced and embellished. The edges and mature trees that provide character and amenities will be entirely maintained, but the development of commercial buildings with active ground floors on both sides of the avenue gives opportunity to provide pedestrian footpaths on both sides and protective awnings.

The activity at ground will also bring more life into the street and provide passive surveillance.

Toyota Avenue will be used only by private vehicles and will be main entry point from Gannons Road intersection forming the spine road that stitches together a range of different land uses including, commercial, recreation, food and beverage, community and open space.



Section cut key plan









5.14 Public and Active Transport

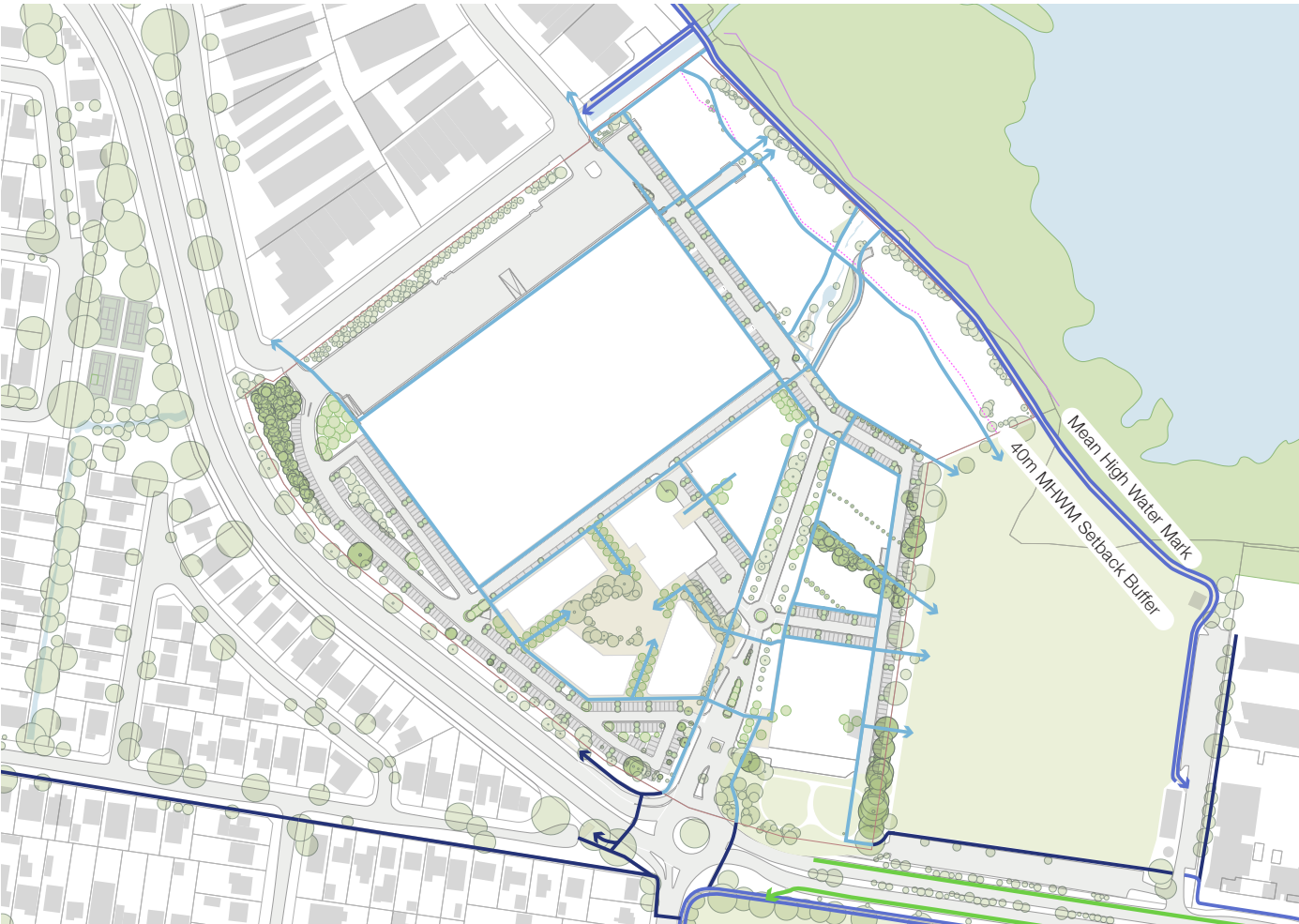


Public / Semi-Public Transport

A substantial future rise in on-site employment floor space will trigger a proportional increase in trip generation. Noting ‘Sutherland Shire residents have much higher car ownership rates than Greater Sydney with significant trip generation for work, recreation and shopping/services’ (Source: SS Draft LSPS), moving away from a reliance on private vehicles and providing alternative means of transport is of paramount importance. Complementing the existing public bus stops to the east, there is significant potential to establish additional public stops on Captain Cook Drive directly adjacent to the site as well as the creation and provision of a semi-public bus / shuttle service that offers commuter transport from Caringbah Station.

KEY

-  Existing Public Bus Stop (off-map to the east)
-  Existing Public Bus Route
-  Pedestrian Route to Existing Stop
-  Potential Future Public Bus Stop
-  Potential Future Public Bus Route
-  Future Pedestrian Route to Potential Stop
-  Semi-Public Bus Stop
-  Semi-Public Bus Route



Dedicated Active Transport Network

There is significant potential to greatly improve the pedestrian network within the site in a manner that ties in with the surrounding existing infrastructure.

This refocus towards an active transport network will provide tangible benefits by increasing daily activity levels, improve social well-being and provide a greater sense of community and interaction.

KEY

-  Public Footpath
-  Public Shared Path
-  Private Footpath
-  Segregated Single Direction Cycle Path

5.15 Overshadowing of Surrounding Context

It should be noted that there are no specific Sutherland Shire LEP or DCP controls in regard to B7 - Business Park zoned land overshadowing neighbouring residential properties or RE1 - Public Open Space.

The proposals seek to manage the impacts of additional height within the site - environmental impacts (such as overshadowing) are largely contained within the site itself, and the scale of the site provides opportunities for suitable setbacks to be established so taller height can be strategically located and visual impacts can be appropriately managed.

Key Built Form Controls

- Built form proposals should create no additional overshadowing of any R2 Low Density Residential property on the southern side of Captain Cook Drive in mid winter.
- 85% of RE1 - Public Recreation zoned land (including Solander Fields) should not more overshadowed for more than a period of two hours in mid winter.

KEY

- Site Boundary
- R2 - Low Density Residential
- RE1 - Public Recreation

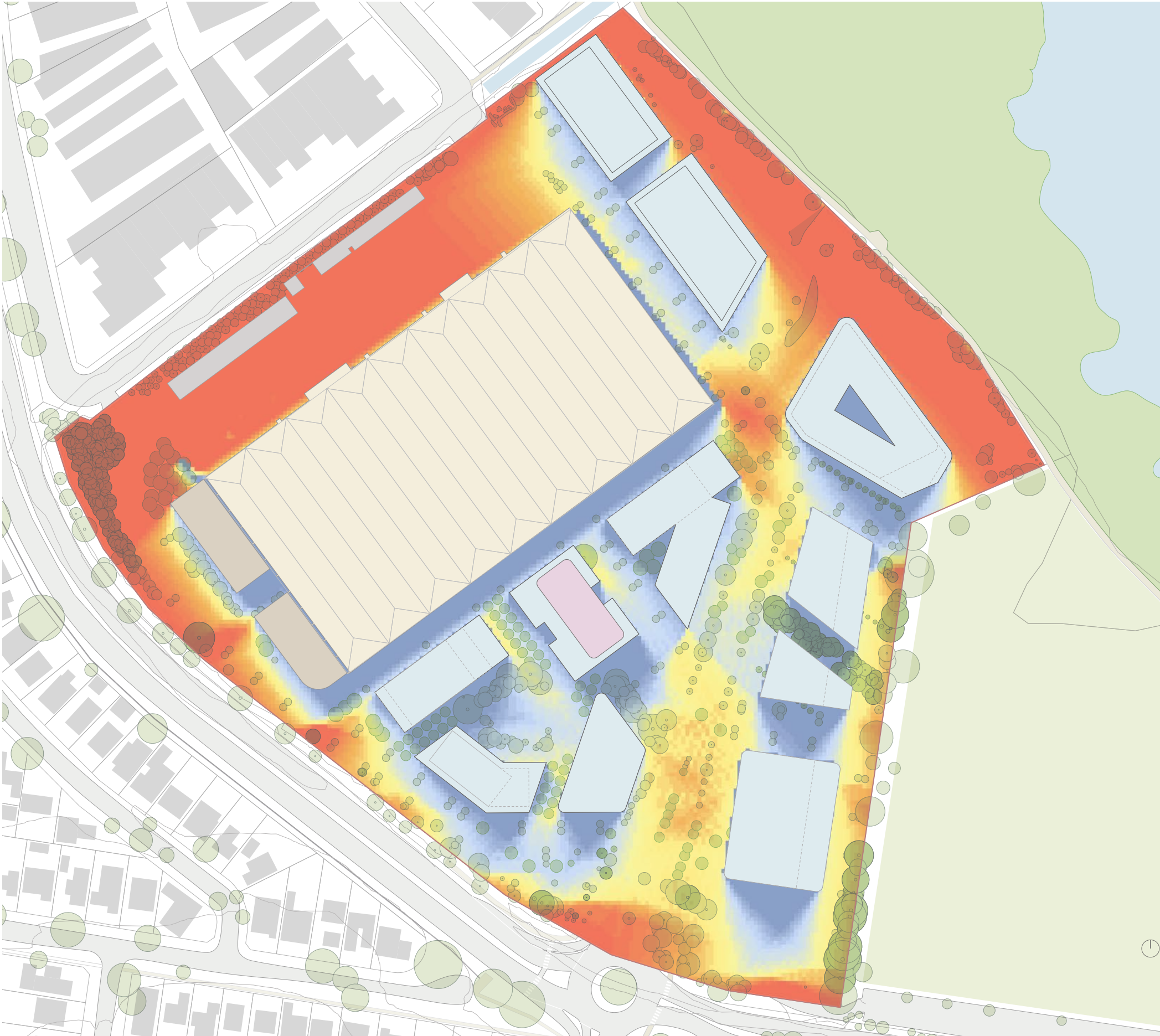
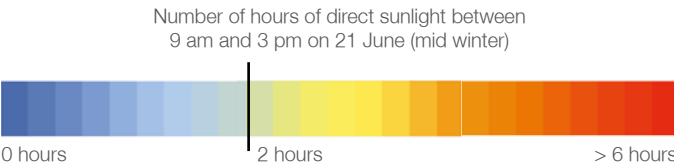


5.16 Open Space Insolation

Whilst there are no prescriptive controls within SSLEP, SSDCP or the (draft) LSPS in regard to the overshadowing of public open spaces on B7 - Business Park zoned land, we acknowledge best practice and refer to the ADG - specifically 'Objective 3B-2 - An adequate area of communal open space is provided to enhance residential [or commercial] amenity and to provide opportunities for landscaping'

The diagram opposite demonstrates, that areas of public open space achieve a minimum of 50% direct sunlight to the principal usable part of the private open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter).

Whilst it is necessary to demonstrate the capability of compliance, the indicative design scheme is also mindful of the significant issues that exist in the South District and broader Sydney associated with the Urban Heat Island Effect. As such, a suitable response must be carefully tailored to place and thus developing a significant tree and shading canopy within open spaces is also vital.



5.17 Shadow Analysis

The subject site is in a fortunate position located on the northern side of the relatively wide road corridor.

Whilst there are no prescriptive controls within SSLEP, SSDCP or the (draft) LSPS in regard to the overshadowing of low density residential by development on B7 - Business Park zoned land, we acknowledge best practice and refer to 'Objective 3B-2 - Overshadowing of neighbouring properties is minimised during mid winter' of the Apartment Design Guide. As such, the diagrams adjacent set out the detailed potential overshadowing of the indicative reference scheme, demonstrating the impact on neighbouring residential properties is minimal / non-existent during mid winter between 9AM and 3PM.

In regard to Solander Fields, this is generally not overshadowed by the indicative design scheme until approximately 1PM (with the exception of Pad C) meaning that it generally receives c. 4 hours of direct solar access in mid-winter (between 9AM and 3PM) and should provide adequate environmental conditions to enable the grass seed to continue to germinate.



21st June - 9am



21st June - 10am



21st June - 11am

Concept Masterplan



21st June - 12pm



21st June - 1pm



21st June - 2pm



21st June - 3pm

5.18 Proposed Amendment to SSLEP 2015 - HOB

The diagram opposite sets out the sought amendment to the Sutherland Shire LEP 2015 Maximum Building Height Map.

Further information is contained within the overarching Planning Proposal documentation.

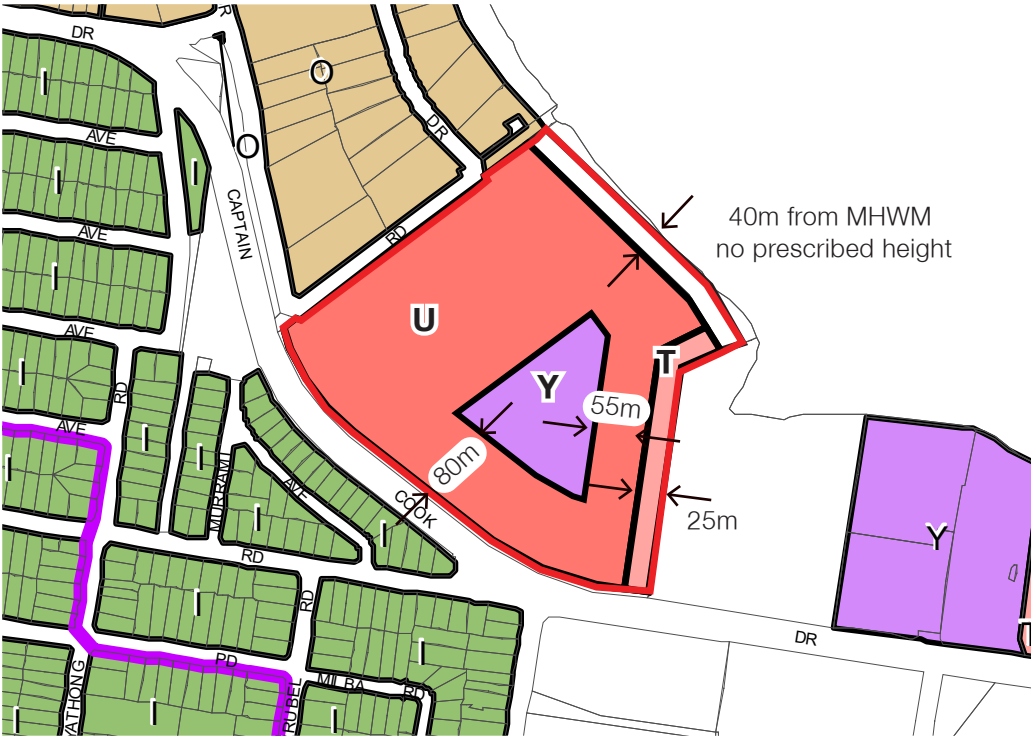


SSLEP 2015 - Maximum Building Height Map

Current Maximum Building Height

The site currently has a maximum building height of 16 metres.

- 8.5 metres
- 16 metres
- 50 metres
- Refer to clause 4.5A(2) of the LEP



Proposed Maximum Building Height

The proposed revised maximum building height steps from 25m on the eastern boundary up to 50m maximum at the centre of the site. The setback in height is provided in to the east of the site to minimise afternoon over-shadowing of Solander Fields (Dimensions added for information purposes only).

- 8.5 metres
- 16 metres
- 25 metres
- 30 metres
- 50 metres
- Refer to clause 4.5A(2) of the LEP

Public Domain Character

6

Public Domain Character

6.1 Landscape Masterplan

- 1. EXISTING VEGETATION TO BE INCREASED WITH ENDEMIC RIPARIAN PLANTING
- 2. WSUD BASIN WITH SANDSTONE TERRACE WALLS
- 3. AUSGRID ACCESS
- 4. TIMBER DECK (PARK INFRASTRUCTURE)
- 5. INTERNAL GRASSED AREA RETAINED
- 6. SPORTS FIELD BOUNDARY PLANTING RETAINED
- 7. AVENUE PLANTING RETAINED & ENHANCED WITH ADDITIONAL PLANTING
- 8. EXISTING EUCALYPTUS SP. GROVE RETAINED
- 9. RAINWATER GARDENS
- 10. EXISTING SETBACK PLANTING RETAINED AND ENHANCED
- 11. TRANSPLANTED PALM GROVE PLAZA WITH FIG TREE AT FOCAL POLE
- 12. AUSGRID POWER POLE
- 13. VIEWING PLATFORM / LUNCH AREA
- 14. EXISTING NATIVE VEGETATION RETAINED
- 15. NEW ENDEMIC UPPER RIPARIAN PLANTING
- 16. EXISTING BIKE PATH (OUTSIDE SITE BOUNDARY)
- 17. INTERSECTION TO BE UPGRADED
- 18. PROPOSED PARK & PLAYGROUND
- 19. EXISTING TREES TO BE RETAINED (WHERE POSSIBLE)

RE-VEGETATION STATISTICS



Greener Places Principles

PRINCIPLE 1.
Integration

combine green infrastructure with urban development and grey infrastructure

PRINCIPLE 2.
Connectivity

create an interconnected network of open space

PRINCIPLE 3.
Multi-functionality

deliver multiple ecosystem services simultaneously

NSW DRAFT GREENER PLACES POLICY (GAO 2020)



Public Domain Character

6.2 Landscape Tree Retention and Planting Strategy

RE-VEGETATION STATISTICS (APPROXIMATE)	
EXISTING TREES TO BE RETAINED	575
EXISTING TREES TO BE REMOVED	185
PROPOSED TREE PLANTING	306
TREES (PARKING SPACES)	132
EXISTING PALMS TO BE TRANSPLANTED	37

KEY

- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED
- PROPOSED TREE PLANTING
- LOCATION OF TRANSPLANTED PALMS
- TREES (PARKING SPACES)
- EXISTING PALMS TO BE TRANSPLANTED



6.3 Landscape Detail Plan: Waterfront (North East)

- 1. RAISED LUNCH AREA WITH SANDSTONE TERRACES
 - Decomposed granite
 - Tables / Seats
 - Feature tree
 - Shade / Pergola
- 2. FEATURE FICUS RUBIGINOSA (FIG TREE OR SIMILAR)
- 3. TURF MOUND
- 4. CONCRETE PATH ALONGSIDE BUILDING FACADE
- 5. BENCH SEAT
- 6. TERRACED SANDSTONE WALLS INTO BASIN
- 7. TIMBER VIEWING DECK / SITTING AREA
- 8. DECOMPOSED GRANITE (AUSGRID ACCESS)
- 9. EXISTING AUSGRID POWER POLE
- 10. EXISTING GRASS AREA RETAINED
- 11. EXISTING VEGETATION TO BE INCREASED WITH ENDEMIC UPPER RIPARIAN PLANTING
- 12. WSUD BASIN
- 13. SANDSTONE SITTING BLOCKS
- 14. RAINWATER GARDEN
- 15. NEW ENDEMIC RIPARIAN PLANTING
- 16. REEDS & RUSHES PLANTING
- 17. HEADWALL (ROCK)
- 18. EXISTING MANGROVES
- 19. EXISTING BOARDWALK / BIKE PATH
- 20. CONNECT TO EXISTING OUTLET

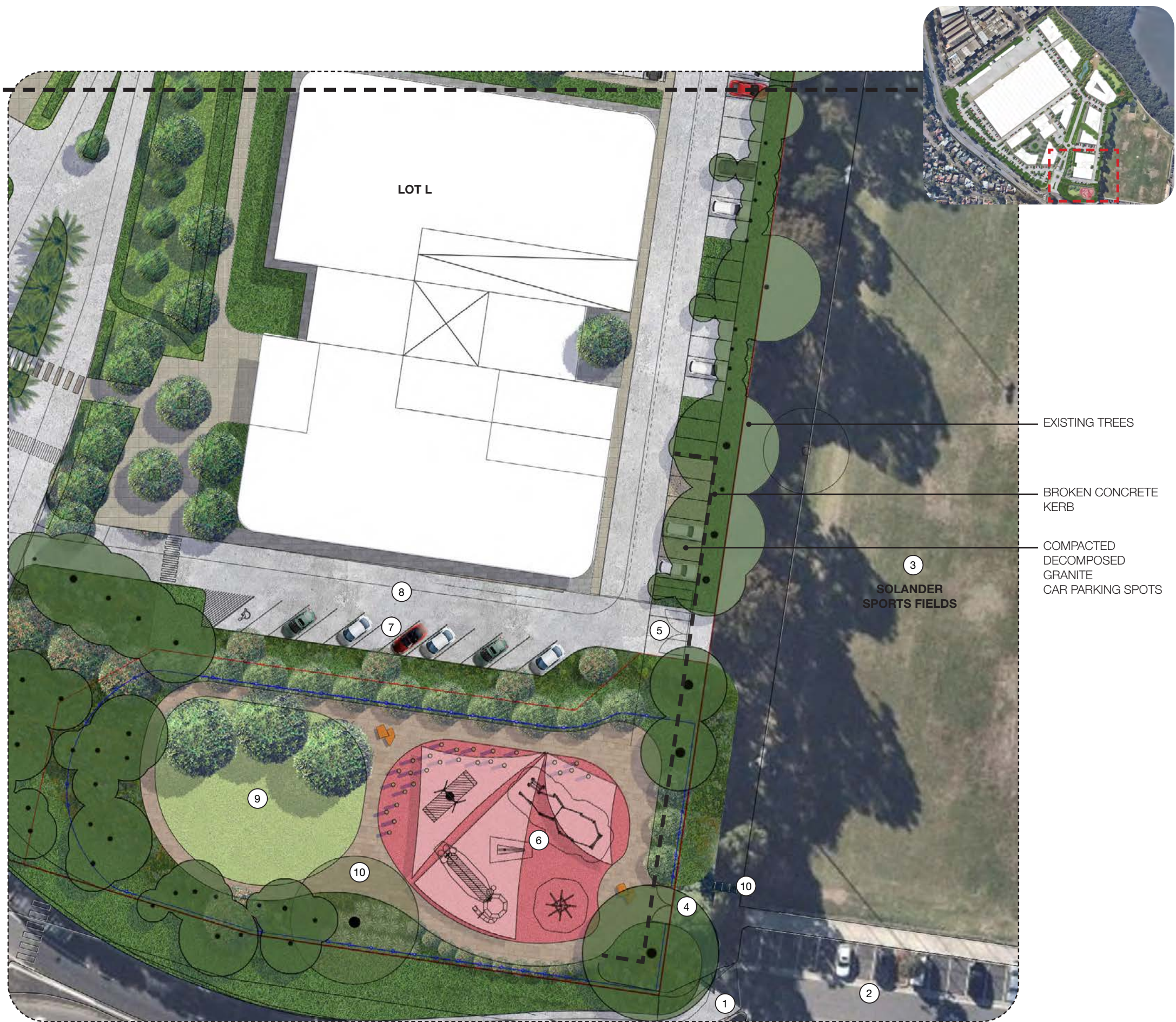
KEY

- - - MHW (MEAN HIGH WATER MARK)
- - - AUSGRID EASEMENT / TRANSMISSION LINES
- == FENCE LOCATION



6.4 Landscape Detail Plan: Eastern Boundary

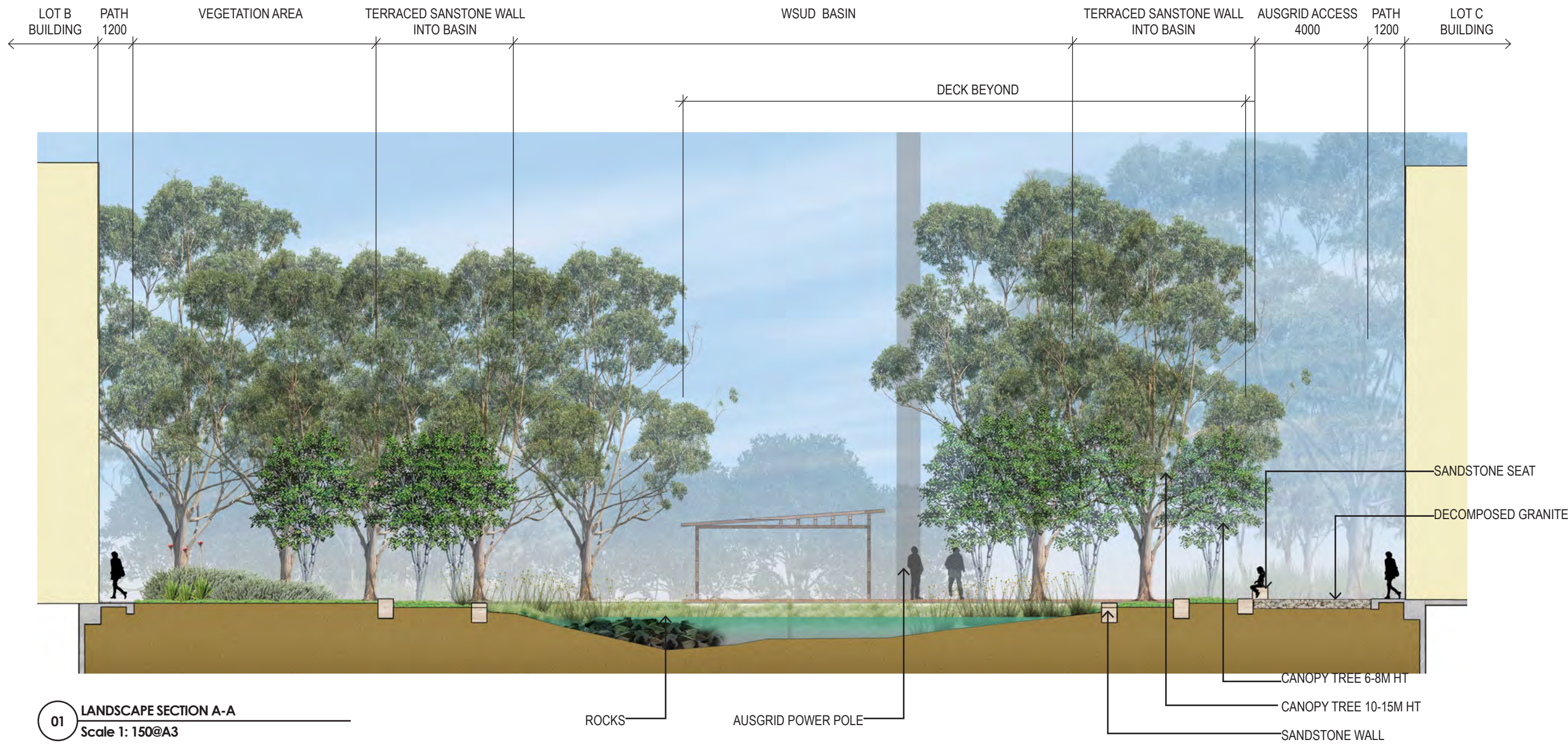
- 1. PROPOSED SLIP LANE
- 2. SOLANDER CAR PARK
- 3. SOLANDER FIELDS
- 4. ENTRY AREA
- 5. VEHICLE ACCESS WITH GATES (MAINTENANCE ONLY)
- 6. PLAYGROUND
- 7. ANGLED PARKING
- 8. ONE WAY ROAD
- 9. GRASSED PLAY AREA WITH SHADE TREES
- 10. BIKE / SCOOTER PATH CIRCULATION
- 11. BICYCLE PARKING



6.5 Landscape Section AA



KEYPLAN

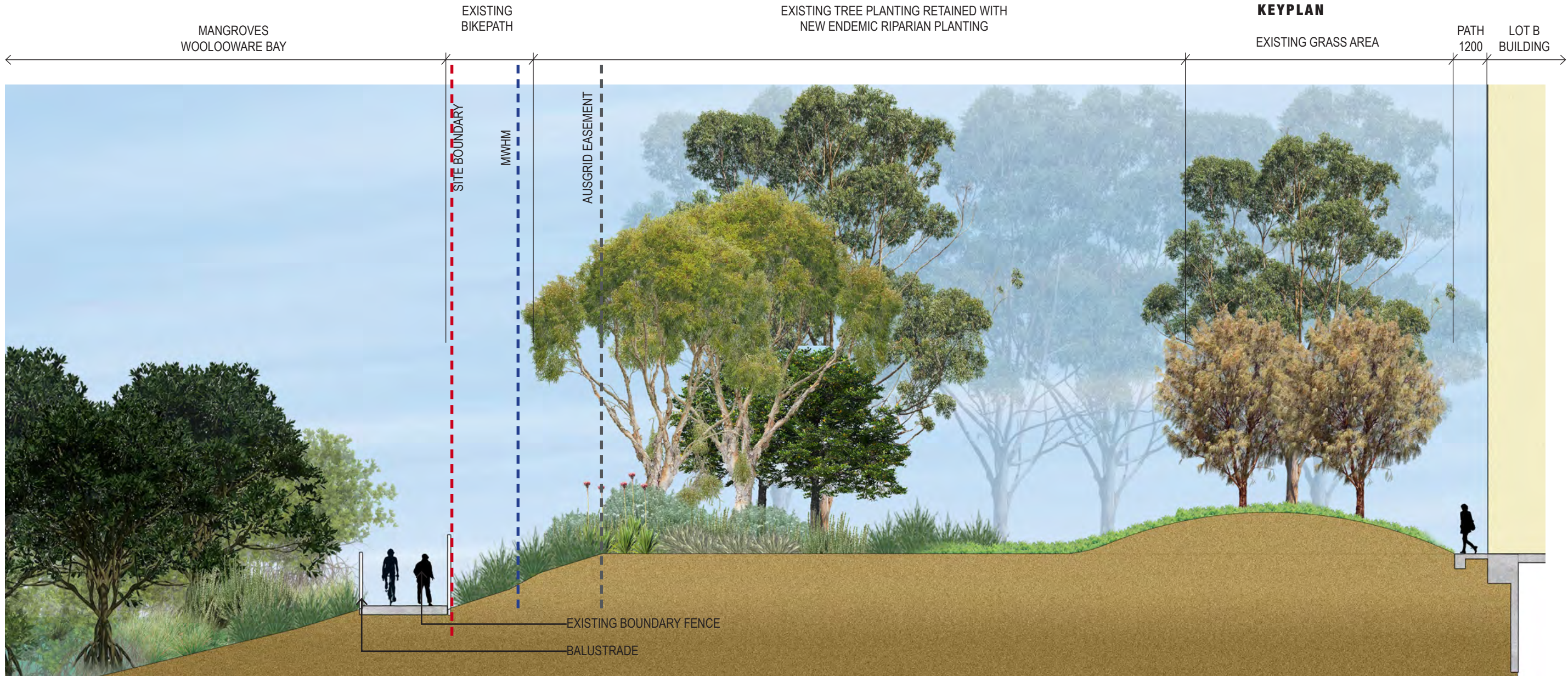


Note: Landscape sections are indicative only

6.6 Landscape Section BB



KEYPLAN



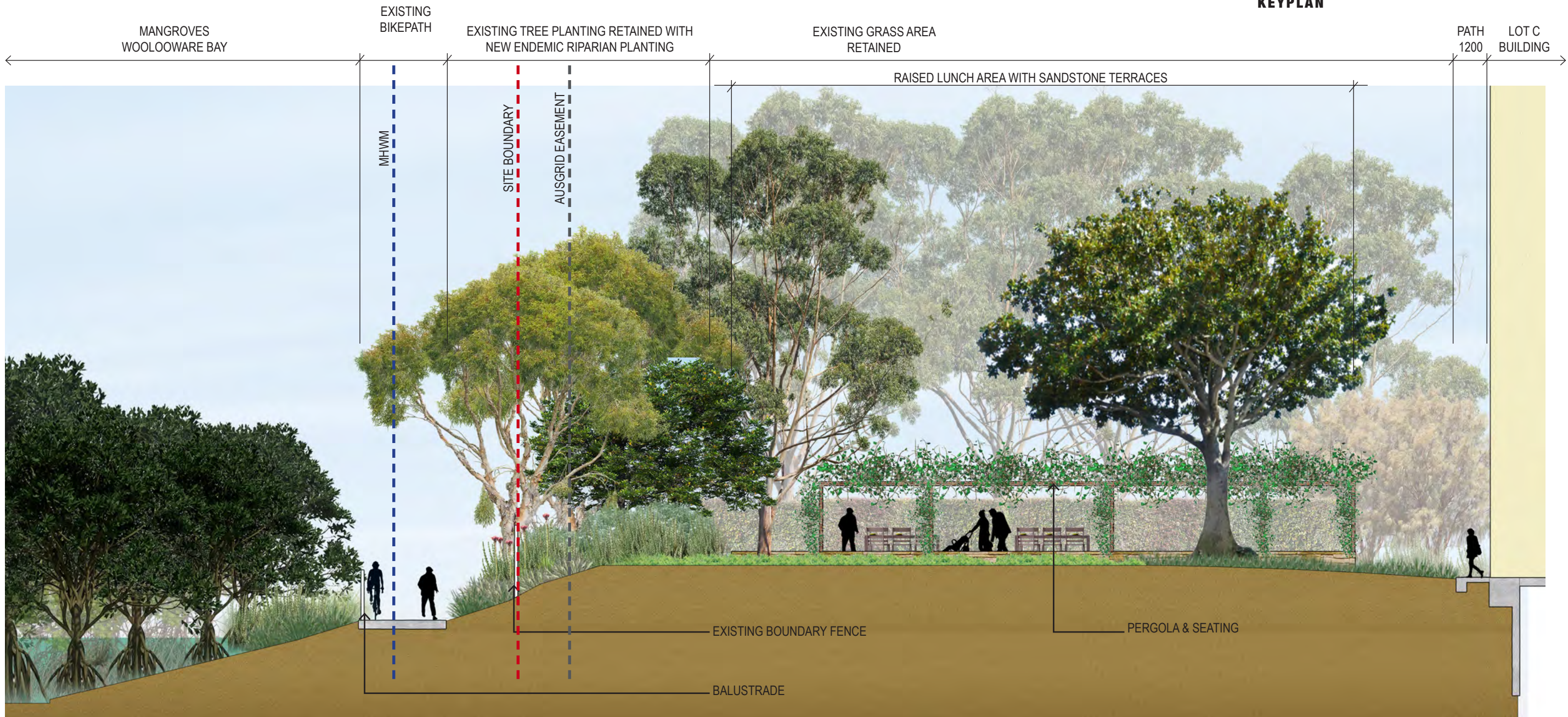
01 LANDSCAPE SECTION B-B
Scale 1: 150@A3

Note: Landscape sections are indicative only

6.7 Landscape Section CC



KEYPLAN



01 LANDSCAPE SECTION C-C
Scale 1: 150@A3

Note: landscape sections are indicative only

Public Domain Character

6.8 Precedent Images

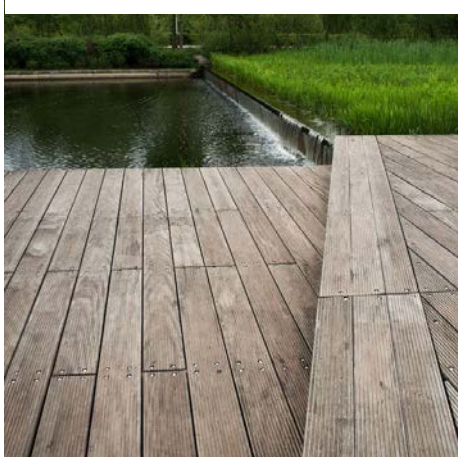
BUILDING FRONTAGES



ENHANCED RIPARIAN PLANTING



VIEWING DECK AND BASIN



TERRACED SANDSTONE WALL



PERGOLA



SANDSTONE SITTING BLOCKS



PARKING AREA



Public Domain Character

6.9 Proposed Planting List

TREES	
BOTANICAL NAME	COMMON NAME
Acacia binervata	Two Veined Hickory
Acacia binervia	Coast Myall
Acacia decurrens	Green Wattle
Acacia implexa	Hickory
Acacia irrorata	Green Wattle
Acacia maidenii	Maiden's Wattle
Acacia parramattensis	Sydney Green Wattle
Acacia parvipinnula	Silver Stem Wattle
Acmena smithii	Lillypilly
Aegiceras corniculatum	River Mangrove
Allocasuarina littoralis	Black Sheoak
Allocasuarina torulosa	Forest Oak
Alphitonia excelsa	Red Ash
Angophora bakeri	Narrow Leaf Apple
Angophora costata	Smooth Barked Apple
Angophora floribunda	Rough Barked Apple
Archontophoenix cunninghamiana	Bangalow Palm
Avicennia marina	Grey Mangrove
Banksia integrifolia	Coast Banksia
Banksia serrata	Old Man Banksia
Callicoma serratifolia	Black Wattle
Callitris rhomboidea	Port Jackson Pine
Cassine australis	Red Fruited Olive Plum
Casuarina glauca	Swamp Sheoak
Celtis paniculata	Hackberry
Ceratopetalum apetalum	Coachwood
Corymbia gummifera	Bloodwood
Cupaniopsis anacardioides	Tuckeroo
Ehretia acuminata	Koda
Elaeocarpus reticulatus	Blueberry Ash
Endiandra sieberi	Corkwood
Eucalyptus agglomerata	Blue Leaf Stringy Bark
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus baueriana	Blue Box
Eucalyptus botryoides	Bangalay
Eucalyptus botryoides X saligna	Blue Gum Hybrid
Eucalyptus camfieldii	Heart-leaved Stringybark
Eucalyptus capitellata	Brown Stringybark
Eucalyptus consideniana	Yertchuk

TREES	
BOTANICAL NAME	COMMON NAME
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus eugenioides	Thin Leaf Stringybark
Eucalyptus fibrosa	Broadleaf Ironbark
Eucalyptus globoidea	White Stringybark
Eucalyptus haemastoma	Scribbly Gum
Eucalyptus longifolia	Woollybutt
Eucalyptus luehmanniana	Yellow Top Ash
Eucalyptus multicaulis	Whip Stick Mallee
Eucalyptus oblonga	Sandstone Stringybark
Eucalyptus obstans	Port Jackson Mallee
Eucalyptus paniculata	Grey Ironbark
Eucalyptus pilularis	Blackbutt
Eucalyptus piperita	Sydney Peppermint
Eucalyptus punctata	Grey Gum
Eucalyptus racemosa	Narrow Leaf Scribbly Gum
Eucalyptus resinifera	Red Mahogany
Eucalyptus robusta	Swamp Mahogany
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus sieberi	Silver top Ash
Eucalyptus squamosa	Scaly Bark
Eucalyptus tereticornis	Forest Red Gum
Euroschinus falcata	Ribbonwood
Ficus coronata	Sandpaper Fig
Ficus rubiginosa	Rusty Fig
Ficus superba var. henneana	Deciduous Fig
Glochidion ferdinandi	Cheese Tree
Gmelina leichhardtii	White Beech
Guioa semiglauca	Guioa
Hymenosporum flavum	Native Frangipani
Leptospermum laevigatum	Coastal Tea Tree
Livistona australis	Cabbage Palm
Macadamia tetraphylla	Macadamia Nut
Melaleuca bracteata + cultivars	Melaleuca
Melaleuca decora	White Feather Honeymyrtle
Melaleuca linariifolia	Snow in Summer
Melaleuca quinquenervia	Broad Leaf Paperbark
Melaleuca styphelioides	Prickly Tea Tree
Myrsine howitteaana	Brush Muttonwood
Planchonella australis	Black Plum

TREES	
BOTANICAL NAME	COMMON NAME
Polyscias elegans	Celerywood
Sarcomelicope simplicifolia	Yellow Wood
Schizomeria ovata	Crab Apple
Streblus brunonianus	Whalebone Tree
Syncarpia glomulifera	Turpentine
Syzygium australe	Brush Cherry
Syzygium oleosum	Blue Lilly Pilli
Syzygium paniculatum	Magenta Lilly Pilli
Toona ciliata	Red Cedar
Tristaniopsis laurina	Water Gum

SHRUBS	
BOTANICAL NAME	COMMON NAME
Acacia elongata	Swamp Wattle
Acacia falcata	Sickle Wattle
Acacia floribunda	Sally Wattle
Acacia linifolia	Flax Leaf Wattle
Acacia longifolia	Sydney Golden Wattle
Allocasuarina distyla	Scrub Sheoak
Angophora hispida	Dwarf Apple
Aotus ericoides	Common Aotus
Backhousia myrtifolia	Grey Myrtle
Baeckea linifolia	Swamp Baeckea
Banksia ericifolia	Heath Leaf Banksia
Banksia marginata	Silver Banksia
Banksia oblongifolia	Banksia
Banksia robur	Swamp Banksia
Banksia spinulosa	Hairpin Banksia
Bauera rubiodes	Dog Rose
Bertya brownii	Bertya
Bertya pomaderroides	Hazel Bertya
Breynia oblongifolia	Breynia
Bursaria spinosa	Blackthorn
Callistemon (Candy Pink)	Bottlebrush
Callistemon (Captain Cook)	
Callistemon (Endeavour)	
Callistemon (Eureka)	
Callistemon (Hannah Ray)	Hannah Ray Bottlebrush

SHRUBS	
BOTANICAL NAME	COMMON NAME
Callistemon citrinus	Crimson Bottlebrush
Callistemon citrinus	White Anzac
Callitris muelleri	Mueller's Cypress
Callitris rhomboidea	Port Jackson Pine
Calytrix tetragona	Fringe Myrtle
Cassinia aureonitens	Golden Cassinia
Cassinia uncata	Bent Cassinia
Ceratopetalum gummiferum	NSW Christmas Bush
Clerodendrum tomentosum	Hairy Clerodendrum
Daviesia corymbosa	Bitter Pea
Daviesia mimosoides	Bitter Pea
Dillwynia retorta	Eggs and Bacon
Dodonaea triquetra	Hop Bush
Duboisia myoporoides	Duboisia
Eriostemon australasius	Pink Wax Flower
Eupomatia laurina	Native Guava
Gompholobium grandiflorum	Wedge Pea
Gompholobium latifolium	Broad Leaf Wedge Pea
Grevillea (Clear View David)	
Grevillea (Ivanhoe)	
Grevillea (Moonlight)	
Grevillea (Ned Kelly)	
Grevillea (Poorinda Constance)	
Grevillea (Robyn Gordon)	
Grevillea mucronulata	Green Grevillea
Hakea dactyloides	Broad Leaf Hakea
Hakea gibbosa	Needlebush
Hakea propinqua	Needlebush
Hemigenia purpurea	Common Hemigenia
Hibbertia riparia	Erect Guinea Flower
Homalanthus populifolius	Bleeding Heart
Indigophora australis	Native Indigo
Jacksonia scoparia	Dogwood
Kunzea ambigua	Tick Bush
Kunzea capitata	Pink Kunzea
Lambertia formosa	Mountain Devil
Leionema dentatum	Phebalium
Leptospermum continentale	Prickly Tea Tree

Plant list sourced from Sutherland Shire Council Native Plant Selection

Public Domain Character

6.10 Proposed Planting List

SHRUBS		NATIVE PLANT SPECIES		NATIVE PLANT SPECIES		GRASSES & GROUNDCOVERS	
BOTANICAL NAME	COMMON NAME	BOTANICAL NAME	COMMON NAME	BOTANICAL NAME	COMMON NAME	BOTANICAL NAME	COMMON NAME
Leptospermum grandifolium	Woolly Tea Tree	Tristania nerifolia	Water Gum	Dampiera purpurea	Dampiera	Alternanthera denticulata	Lesser Joyweed
Leptospermum juniperinum	Tea Tree	Tristaniopsis collina	Mountain Water Gum	Dampiera stricta	Blue Dampiera	Astroloma humifusum	Craneberry Heath
Leptospermum polygalifolium	Lemon Scented Tea Tree	Viminaria juncea	Native Broom	Darwinia diminuta	Darwinia	Atriplex australasica	Saltbush
Leucopogon lanceolatus	Lance Leaf Beard Heath	Westringia (Blue Heaven)		Daviesia ulicifolia	Gorse Bitter-pea	Banksia integrifolia (Prostrate)	Groundcover Banksia
Leucopogon parviflorus	Coastal Bearded Heath	Westringia fruticosa	Coast Rosemary	Dillwynia floribunda	Eggs and Bacon	Billardiera scandens	Appleberry
Logania albiflora	Logania	Westringia glabra		Dillwynia parvifolia	Small Leaf Dillwynia	Brunoniella australis	Blue Trumpet
Lomatia myricoides	River Lomatia	Xylomelum pyriforme	Woody Pear	Einadia hastata	Saloop	Carpobrotus glaucescens	Native Pig Face
Maclura cochinchinensis	Cockspur Thorn	Zieria smithii	Sandfly Zieria	Epacris longiflora	Fuchsia Heath	Centella asiatica	Swamp Pennywort
Melaleuca armillaris	Gaint Honeymyrtle	Acacia brownei	Prickly Moses	Hibbertia bracteata	Guinea Flower	Cissus antarctica	Kangaroo Grape
Melaleuca deanei	Deane's Honeymyrtle	Acacia hispidula	Rough Hairy Wattle	Hibbertia linearis	Showy Guinea Flower	Darwinia grandiflora	Darwinia
Melaleuca nodosa	Ball Honeymyrtle	Acacia ulicifolia	Prickly Moses	Hibbertia nitida	Shining Guinea Flower	Dichondra repens	Kidney Weed
Myoporum acuminatum	Mangrove Boobialla	Actinotus helianthi	Flannel Flower	Hibbertia obtusifolia	Grey Guinea Flower	Einadia nutans	Native Seaberry
Myrsine variabilis	Mutton Wood	Actinotus minor	Lesser Flannel Flower	Hovea linearis	Hovea	Geranium homeanum	Northern Cranesbill
Notelaea longifolia	Mock Olive	Allocasuarina diminuta ssp. diminuta	Sheoak	Hypericum gramineum	Small St.John's Wort	Grevillea (Gaudichaudii)	
Olearia microphylla	Small Leaf Daisy Bush	Allocasuarina nana	Dwarf Sheoak	Isopogon anemonifolius	Drumsticks	Grevillea (Royal Mantle)	
Olearia tomentosa	Hairy Olearia	Austromyrtis dulcis	Midyin Berry	Lasiopetalum ferrugineum	Rusty Petals	Hardenbergia violacea	False Sarsaparilla
Ozothamnus diosmifolius	Everlasting Paper Daisy	Austromyrtus tenuifolia	Narrow Leaf Myrtle	Leptospermum arachnoides	Spidery Tea Tree	Hibbertia scandens	Snake Vine
Persoonia pinifolia	Pine Leaf Geebung	Baeckea imbricata	Heath Myrtle	Leptospermum polygalifolia	Pacific Beauty	Ipomoea brasiliensis	Goatsfoot Convolvulus
Petrophile pulchella	Cone Stick	Baeckea virgata (Nana)	Dwarf Swamp Myrtle	Lobelia dentata	Native Lobelia	Kennedia prostrata	Running Postman
Petrophile sessilis	Cone Stick	Bauera microphylla	White River Rose	Lomatia silaifolia	Wild Parsley	Podocarpus spinulosus	Plum Pine
Phebalium squamulosum	Phebalium	Boronia floribunda	Pale Pink Boronia	Mirbelia rubifolia	Mirbelia	Polymeria calycina	Swamp Bind Weed
Philotheca myoporoides	Long Leaf Wax Flower	Boronia ledifolia	Sydney Boronia	Persicaria lapathifolia	Pale Knot Weed	Rubus hillii	Broad Leaf Bramble
Pittosporum revolutum	Hairy Pittosporum	Boronia serrulata	Native Rose	Phyllanthus hirtellus	Thyme Spurge	Rubus parvifolius	Native Raspberry
Platylobium formosum	Handsome Flat Pea	Bossiaea ensata	Small leafless Bossiaea	Platysace ericoides	Healthy Platysace	Samolus repens	Creeping Brookweed
Polyscias sambucifolia	Elderberry Panax	Bossiaea heterophylla	Variable Bossiaea	Platysace linearifolia	Carrot Tops	Sarcocornia quinqueflora	Samphire
Pomaderris andromedifolia	Pomaderris	Bossiaea scolopendria	Egg and Bacon	Pomax umbellata	Pomax	Scaevola aemula	Fan Flower
Prostanthera incana	Velvet Leaf Mint Bush	Bossiaea stephensoni	Bossiaea	Pseudanthus pimeleoides	Pseudanthus	Scaevola albida	White Fan Flower
Prostanthera linearis	Narrow Leaf Mint Bush	Brachycome multifida	Swan River Daisy	Pultenaea tuberculata	Bush Pea	Scaevola calendulacea	Dune Fan Flower
Pultenaea blakelyi	Blakely's Bush Pea	Callistemon citrinus	Crimson Bottlebrush	Rhagodia candolleana	Seaberry Saltbush	Tetragonia tetragonoides	Warrigal Cabbage
Pultenaea daphnoides	Large Leaf Bush Pea	Callistemon citrinus	White Anzac	Senecio hispidulus	Rough Groundsel	Viola hederacea	Native Violet
Rhodamnia rubescens	Scrub Turpentine	Callistemon subulatus	Dwarf Bottlebrush	Senecio lautus	Coastal Groundsel	Zoysia macrantha	Prickly Couch
Ricinocarpos pinifolius	Wedding Bush	Chloanthes stoechadis	Common Stoechadis	Tetratheca neglecta	Black Eyed Susan	Anisopogon avenaceus	Oat Spear Grass
Rulingia dasyphylla	Kerrawang	Comesperma ericinum	Pink Matchheads	Wahlenbergia communis	Blue Bells	Aristida vagans	Three Awned Spear Grass
Stenocarpus salignus	Scrub Beefwood	Correa alba	Coast Correa	Xanthosia pilosa	Hairy Xanthosia	Baumea articulata	Jointed Twig Rush
Synoum glandulosum	Bastard Rosewood	Correa baeuerlenii	Chefs Cap Correa	Xanthosia tridentata	Rock Xanthosia	Baumea juncea	Twig Rushes
Tasmania insipida	Pepper Bush	Correa decumbens	Correa	Zieria laevigata	Smooth Zieria	Baumea rubiginosa	Soft Twig Rush
Telopea speciosissima	NSW Waratah	Correa reflexa	Native Fuchsia	Zieria pilosa	Hairy Zieria	Carex appressa	Tall Sedge
Trema tomentosa	Native Peach	Crowea exalata	Crowea			Crinum pedunculatum	Crinum Lily

Plant list sourced from Sutherland Shire Council Native Plant Selection

Public Domain Character

6.11 Proposed Planting List

LOWER RIPARIAN	
BOTANICAL NAME	COMMON NAME
TREES	
Acacia longifolia var sophorae	
Allocasuarina littoralis	Black Sheoak
Casuarina glauca	Swamp Sheoak
Eucalyptus botryoides	Bangalay
Eucalyptus robusta	Swamp Mahogany
SHRUBS	
Melaleuca nodosa	Ball Honeymyrtle
Persicaria lapathifolia	Pale Knot Weed
Viminaria juncea	Native Broom
UNDERSTOREY	
Carex appressa	Tall Sedge
Cissus hypoglauca	Water Vine
Crinum pedunculatum	Crinum Lily
Cymbopogon refractus	Barbed Wire Grass
Dianella caerulea	Blue Flax Lily
Dichondra repens	Kidney Weed
Imperata cylindrica var. Major	Blady Grass
Hibbertia scandens	Snake Vine
Isolepis inundata	
Juncus krausii	Sea Rush
Juncus planifolius	Broad Rush
Juncus usitatus	Common Rush
Kennedia rubicunda	Dusky Coral Pea
Lomandra longifolia	Spiny Mat Rush
Oplismenus imbecillis	
Sporobolus virginicus	Salt Water Couch
Tetragonia tetragonoides	Warrigal Cabbage

RAIN GARDEN	
BOTANICAL NAME	COMMON NAME
Baumea articulata	Jointed Twig Rush
Carex appressa	Tall Sedge
Dianella caerulea	Blue Flax Lily
Gahnia sieberiana	Sword Sedge
Juncus krausii	Sea Rush
Lomandra longifolia	Spiny Mat Rush
Philydrum lanuginosum	Woolly Frogmouth

UPPER RIPARIAN	
BOTANICAL NAME	COMMON NAME
TREES	
Acmena smithii	Lillypilly
Banksia integrifolia	Coast Banksia
Eucalyptus botryoides	Bangalay
Eucalyptus robusta	Swamp Mahogany
Glochidion ferdinandi	Cheese Tree
Acacia parramattensis	Sydney Green Wattle
SHRUBS	
Acacia terminalis subsp angustifolia	
Banksia oblongifolia	Banksia
Banksia spinulosa	Hairpin Banksia
Callistemon citrinus	Crimson Bottlebrush
Kunzea ambigua	Tick Bush
Leptospermum polygalifolium	Lemon Scented Tea Tree
Westringia fruticosa	Coast Rosemary
UNDERSTOREY	
Carpobrotus glaucescens	Native Pig Face
Cissus hypoglauca	Water Vine
Cymbopogon refractus	Barbed Wire Grass
Dianella caerulea	Blue Flax Lily
Dichelachne crinita	Long Hair Plume Grass
Dichondra repens	Kidney Weed
Hardenbergia violacea	False Sarsaparilla
Hibbertia scandens	Snake Vine
Juncus usitatis	
Kennedia rubicunda	Dusky Coral Pea
Lomandra longifolia	Spiny Mat Rush
Pratia purpurascens	White Root
Scaevola calendulacea	Dune Fan Flower

SWALE PLANTING	
BOTANICAL NAME	COMMON NAME
Baumea articulata	Jointed Twig Rush
Carex appressa	Tall Sedge
Dianella caerulea	Blue Flax Lily
Gahnia clarkei	Sword Sedge
Gahnia sieberiana	Sword Sedge
Juncus usitiatus	Common Rush
Lomandra longifolia	Spiny Mat Rush
Philydrum lanuginosum	Woolly Frogmouth
Paspalum distichum	Water Couch

Plant list sourced from Sutherland Shire Council Native Plant Selection

6.12 Selected Plant Images



EUCALYPTUS CREBRA



MAGNOLIA "COOLWYN GLOSS"



ELAEOCARPUS RETICULATUS



CUPANIOPSIS ANACARDIOIDES



EUCALYPTUS AMPLIFOLIA



WATERHOUSEA FLORIBUNDA



Glochidion ferdinandi



Melaleuca linariifolia



Syncarpia glomulifera



Melaleuca styphelioides



Tristaniopsis laurina



Banksia serrata



Callistemon sp

Indicative Site Evolution

7

Indicative Site Evolution

7.1 Existing Site Conditions

Building	GFA
Links House	2,174 sqm
Toyota House	4,872 sqm
Main Warehouse	*25,706 sqm
The Hub	3,228 sqm
Thiess House	3,148 sqm
Toyota Institute	2,705 sqm
Sub Total	*41,833 sqm
Additional within storage garages / demountable / gatehouses	263 sqm
Total	*42,096 sqm

Notes:
- Areas based upon Real Serve's "Summary of Areas Rev A" dated 26/09/2019
- Areas shown to nearest whole square metre
- *Area of Warehouse excludes mezzanine, fire tunnels and garages



1:2,000 @ A3

Indicative Site Evolution

7.2 Indicative Pad Boundaries



KEY

- Development Pad
- Proposed Building Outline

Indicative Site Evolution

7.3 Indicative Proposed Staging



KEY

— Development Pad

- - - Proposed Building Outline

Indicative Site Evolution

7.4 Existing Buildings



The adjacent diagram presents simplified versions of the existing built form - all legacy items of the site's previous use by Toyota Motor Company Australia (TMCA).

The following pages demonstrate how the site may evolve over time (dependent on markets, tenancy interest, investment opportunities etc.) but it should be noted that the site's framework has been established to provide ultimate flexibility and adaptability moving forward.

The indicative design scheme shown on the following pages is just one example of how the long term vision might manifest itself.

KEY

Industrial / Warehouse

Ancillary Industrial / Warehouse Office

Office and Business Premises

Food & Beverage

Recreation

Hotel

Car Parking



Indicative Site Evolution

7.5 Indicative Stage A



Pad B may be delivered first considering this is largely vacant (except for some surface car parking). The built form proposals in this part of the site must carefully consider the necessary setbacks to the foreshore / Woollooware Bay as well as the Ausgrid easements to the transmission lines.

The indicative massing shows warehouse and car parking at ground with the remainder of the building providing commercial floorspace.

Car Parking	29 Spaces
Surface Car Parking	52 Spaces
Total Car Parking	81 Spaces

KEY

Industrial / Warehouse

Ancillary Industrial / Warehouse Office

Office and Business Premises

Food & Beverage

Recreation

Hotel

Car Parking



Indicative Site Evolution

7.6 Indicative Stage B



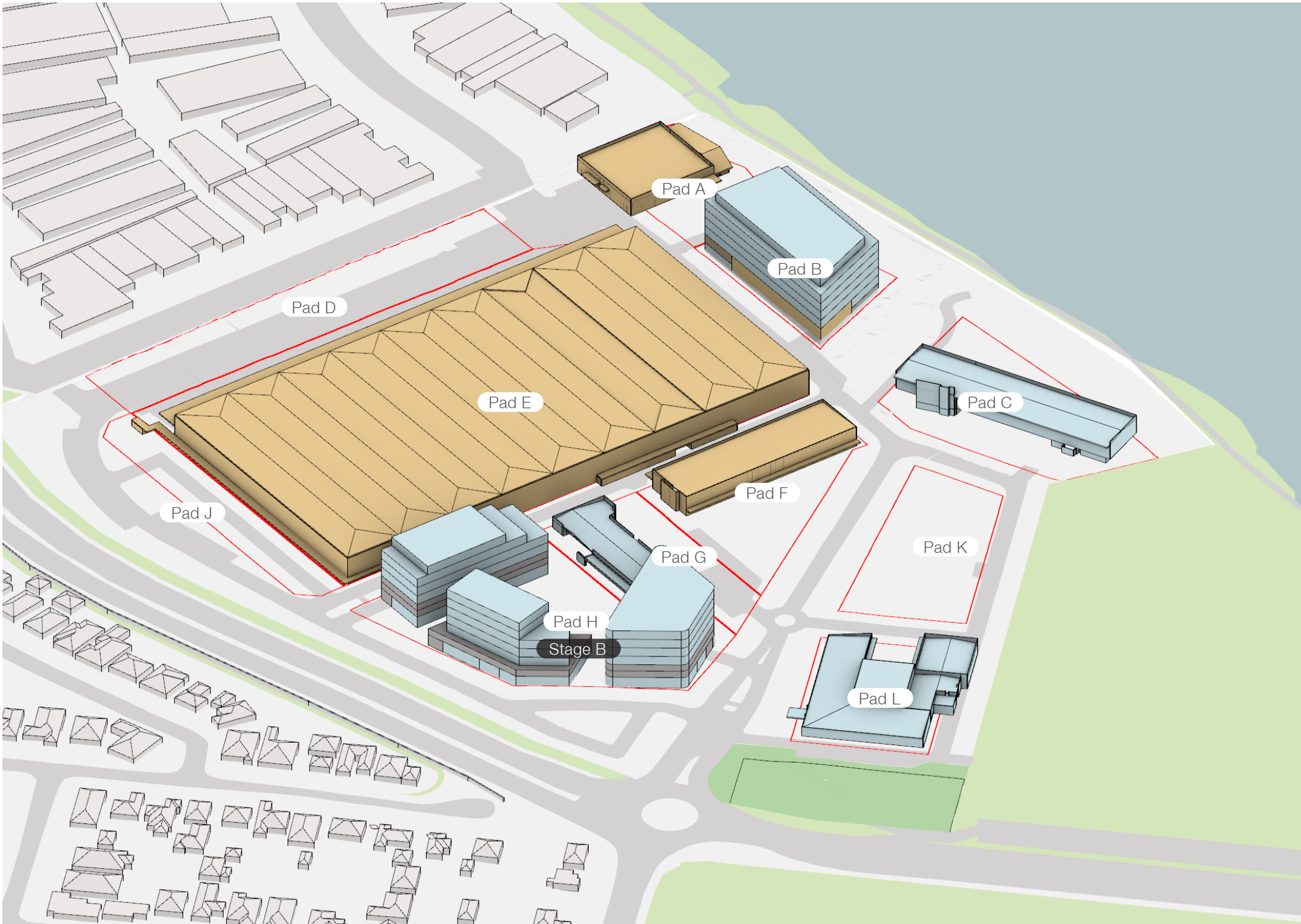
Pad H would require the demolition of the existing Thiess House (in part) and the creation of a new internal service road parallel to the existing main warehouse. It also proposes the relocation of the existing access road - moving it closer to Captain Cook Drive.

The indicative massing shows three buildings with a generous public plaza in the centre. They would generally comprise commercial at ground, car parking at the lower levels and then commercial or hotel for the balance of the upper floors. These buildings would act as the gateway to the site and define its future character.

Car Parking	203 Spaces
Surface Car Parking	115 Spaces
Total Car Parking	318 Spaces

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



Indicative Site Evolution

7.7 Indicative Stage C



Pad J could also easily be delivered as this is also largely vacant (except for some surface car parking). The built form proposals in this part of the site must carefully consider the necessary built form setbacks and the visual impact when seen from Captain Cook Drive.

The indicative massing simply shows car parking at ground level (to replace that which would be lost) with ancillary industrial / warehouse office on the upper two levels supporting the main warehouse.

Car Parking	0 Spaces
Surface Car Parking	150 Spaces
Total Car Parking	150 Spaces

KEY

Industrial / Warehouse

Ancillary Industrial / Warehouse Office

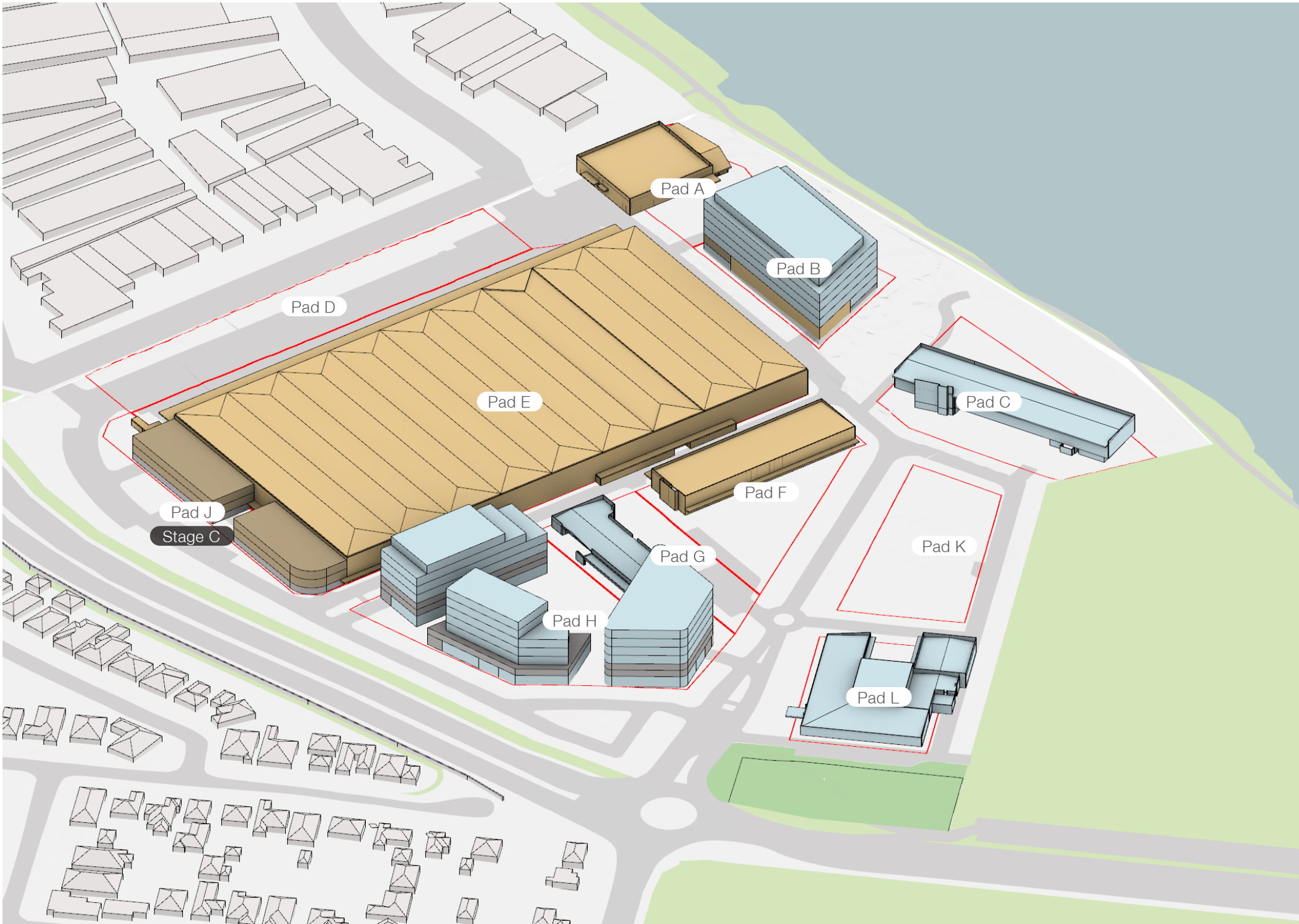
Office and Business Premises

Food & Beverage

Recreation

Hotel

Car Parking



Indicative Site Evolution

7.8 Indicative Stage D



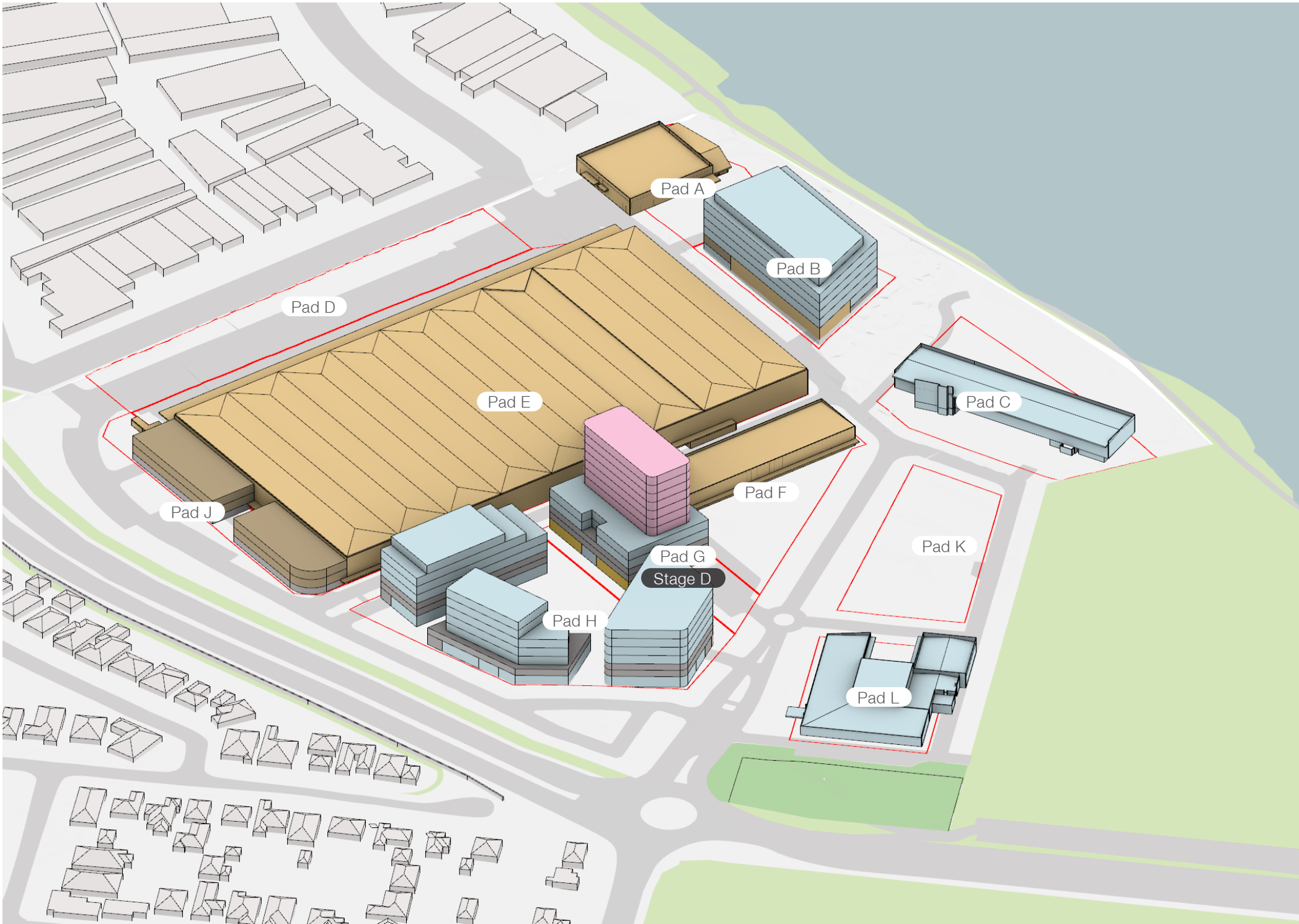
The development of Pad G would require the demolition of the remainder of the northern part of Thiess House and maintains space for the internal service road to its west.

The indicative massing shows commercial at ground, car parking at the lower levels and then commercial as the balance of the building. This site has the opportunity for some additional height given its significant distance away from public thoroughfares or vantage points.

Car Parking	109 Spaces
Surface Car Parking	22 Spaces
Total Car Parking	131 Spaces

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



Indicative Site Evolution

7.9 Indicative Stage E



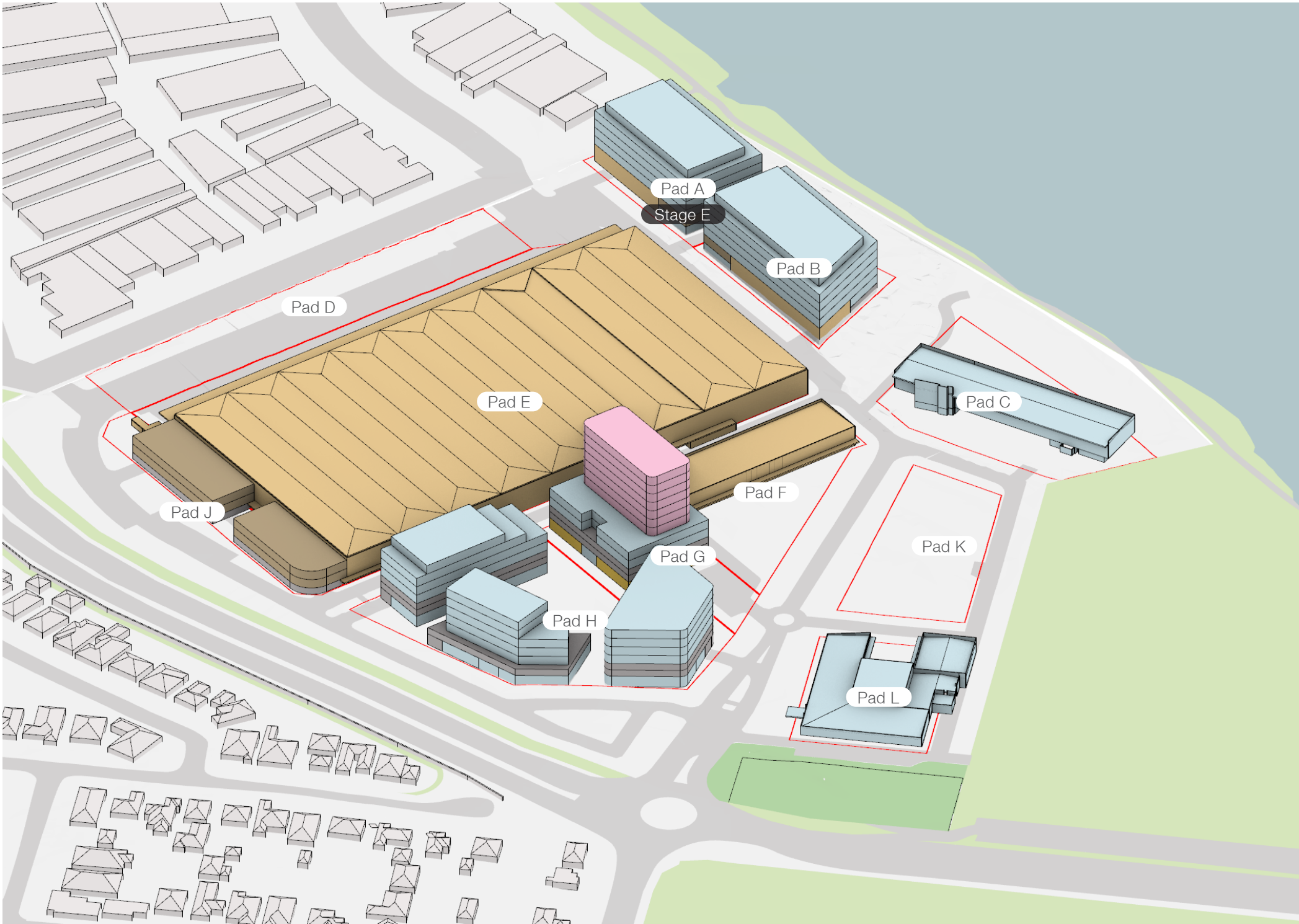
The re-development of Pad A would require the demolition of the existing Links House and the construction of a new building of a similar nature to that proposed for Pad B. The built form proposal must carefully consider the necessary setbacks to the foreshore / Woollooware Bay as well as the Ausgrid setbacks to the transmission lines.

The indicative massing shows warehouse and car parking at ground with the remainder of the building providing commercial floorspace.

Car Parking	27 Spaces
Surface Car Parking	15 Spaces
Total Car Parking	42 Spaces

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



Indicative Site Evolution

7.10 Indicative Stage F



Pad K may be also be developed reasonably easily considering this is largely vacant (except for some surface car parking and numerous existing trees). The built form proposals in this part of the site must carefully consider the retention value of the trees as well as the interface with Solander Fields.

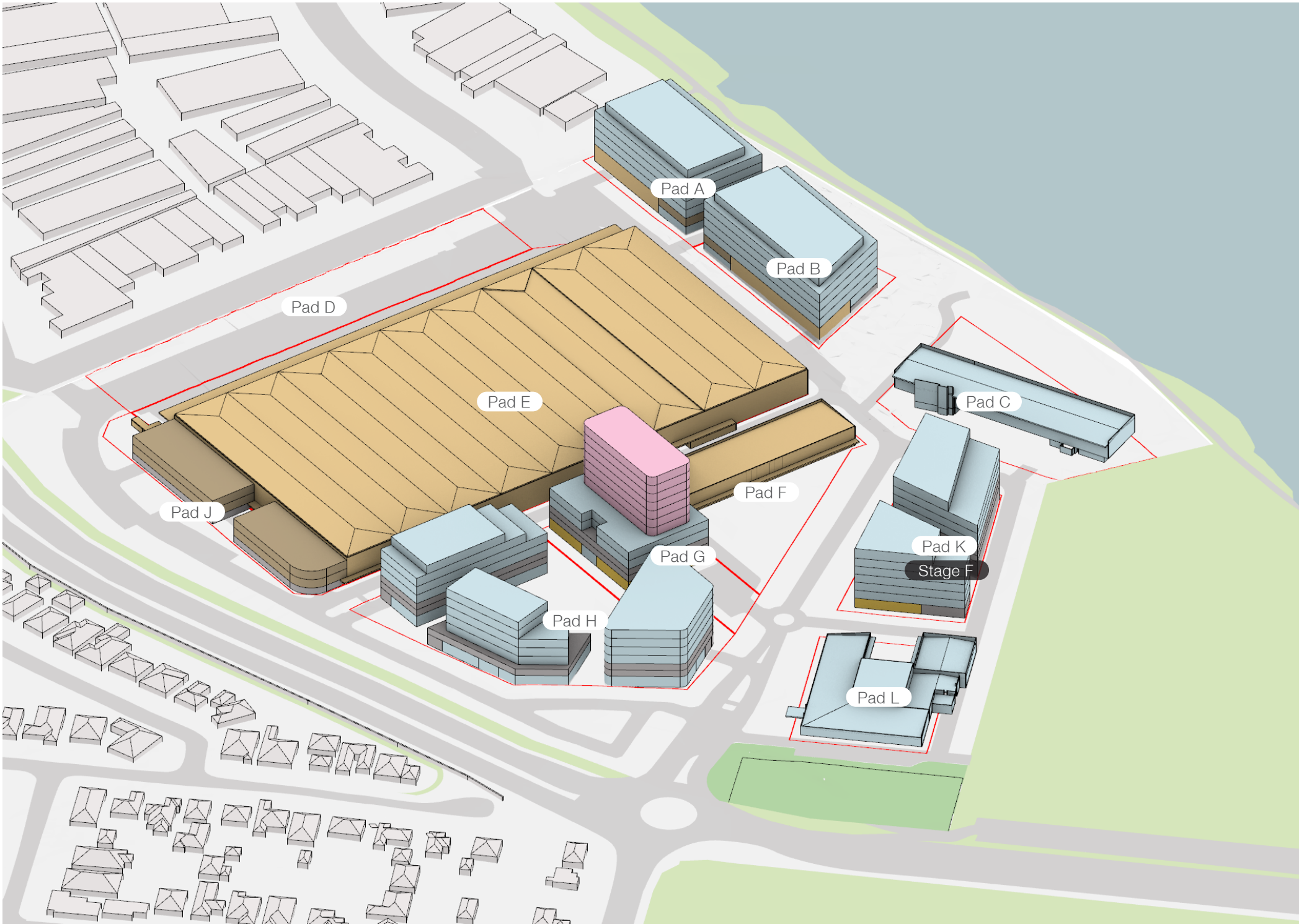
The indicative massing shows recreation and food and beverage at ground with the remainder of the building providing car parking and commercial floorspace.

Meanwhile uses on Pad K may provide additional stacked car parking that is temporary in nature.

Car Parking	94 Spaces
Surface Car Parking	53 Spaces
Total Car Parking	147 Spaces

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



Indicative Site Evolution

7.11 Indicative Stage G



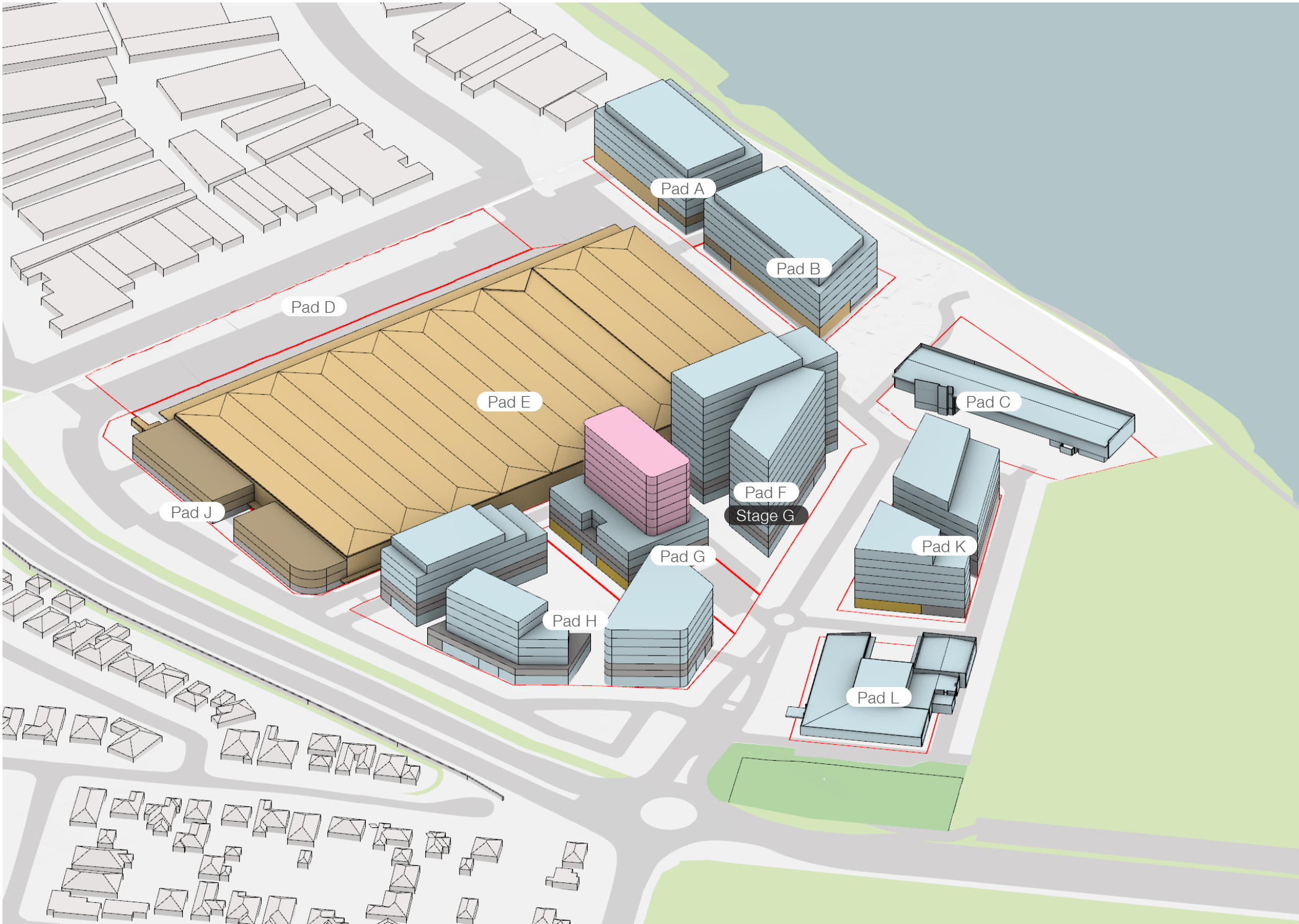
Pad F would require the demolition of The Hub and once constructed would complete the built form fronting the internal service road to its west.

The indicative massing shows commercial at ground, car parking at the lower levels and then commercial as the balance of the building. This site also has the opportunity for significant height given its significant distance away from public thoroughfares or vantage points.

Car Parking	134 Spaces
Surface Car Parking	34 Spaces
Total Car Parking	168 Spaces

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



Indicative Site Evolution

7.12 Indicative Stage H



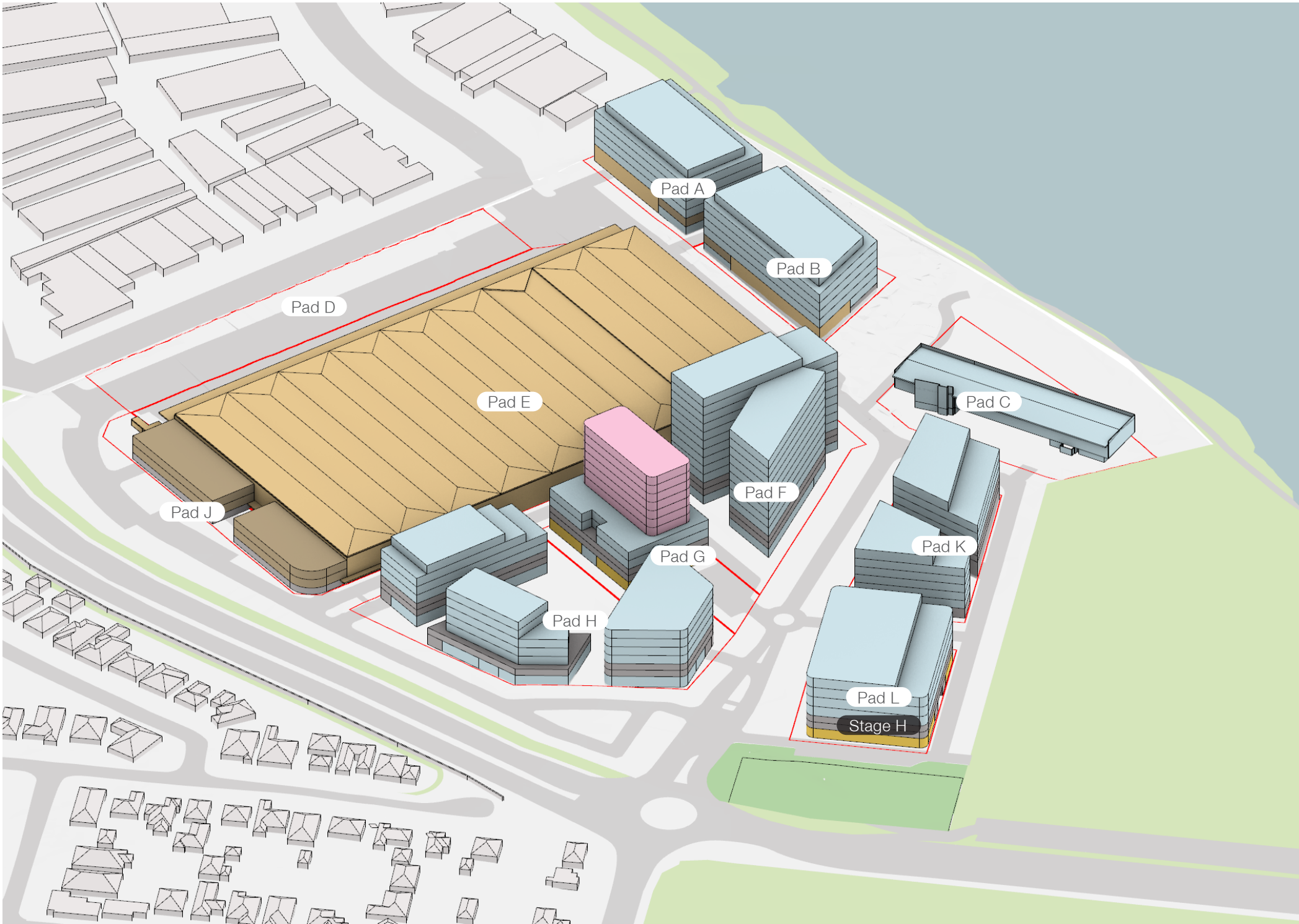
Pad L would require the demolition of the existing Toyota Institute in the south eastern corner of the site. The built form proposals in this part of the site must carefully consider the retention value of the trees as well as the interface with Solander Fields.

The indicative massing shows food and beverage at ground with the remainder of the building providing car parking and commercial floorspace. The building heights step down to Captain Cook Drive and the Playing Fields / residential inreface to the south.

Car Parking	157 Spaces
Surface Car Parking	56 Spaces
Total Car Parking	213 Spaces

KEY

- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking



Indicative Site Evolution

7.13 Indicative Stage J

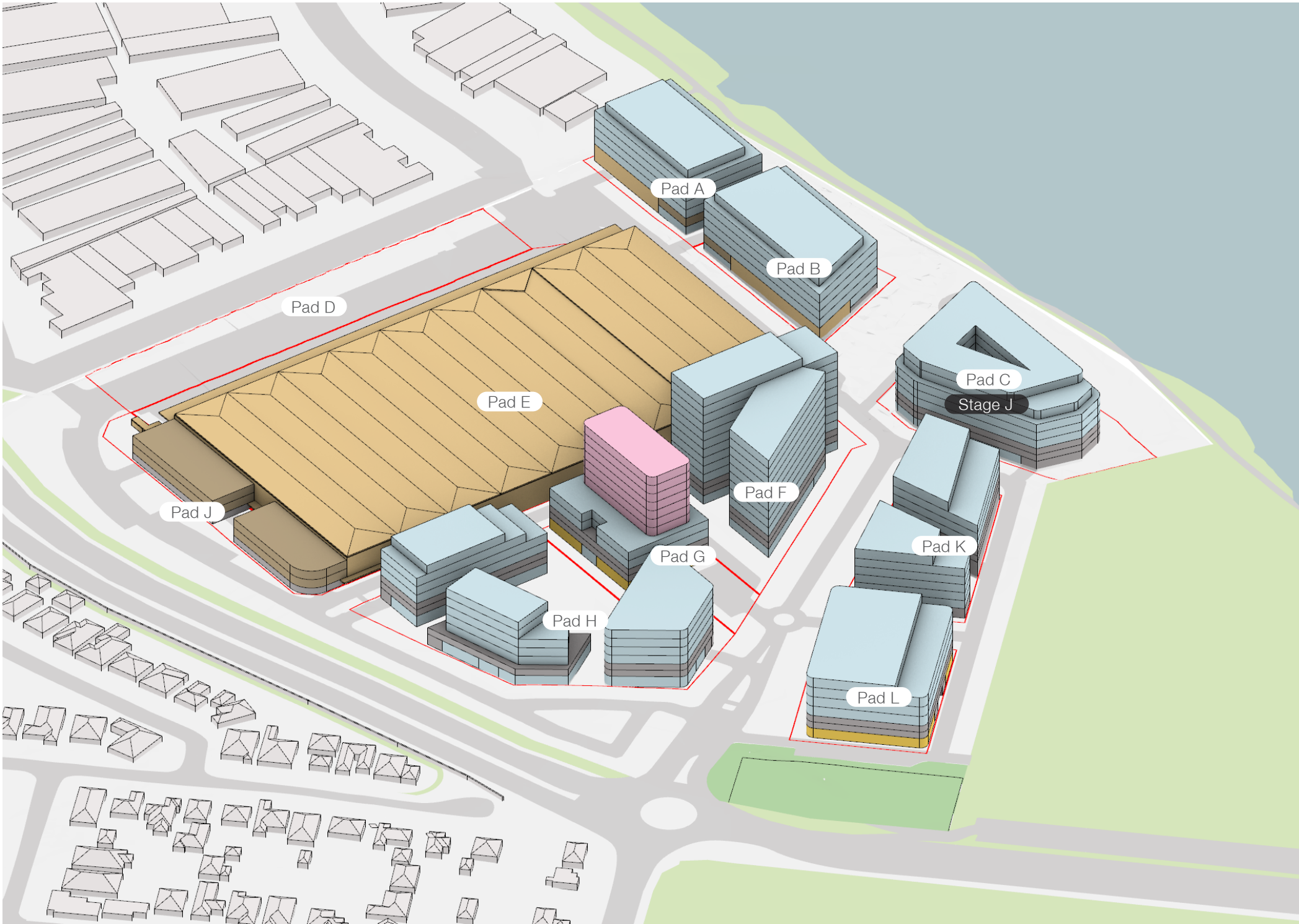


Pad C may be the last to be delivered and would replace the existing Toyota House. The built form proposals in this part of the site must carefully consider the necessary setbacks to the foreshore / Woollooware Bay, the Ausgrid easements to the transmission lines as well as the interface to Solander Fields.

The indicative massing shows an office / commercial ground plane with car parking over the next two storeys and the remainder of the building providing additional commercial floorspace. This building - located overlooking the foreshore and Solander Fields, as well as being positioned at the northern end of Toyota Avenue also has potential for significant height.

Car Parking	184 Spaces
Surface Car Parking	14 Spaces
Total Car Parking	198 Spaces

- KEY**
- Industrial / Warehouse
 - Ancillary Industrial / Warehouse Office
 - Office and Business Premises
 - Food & Beverage
 - Recreation
 - Hotel
 - Car Parking



Indicative Site Evolution

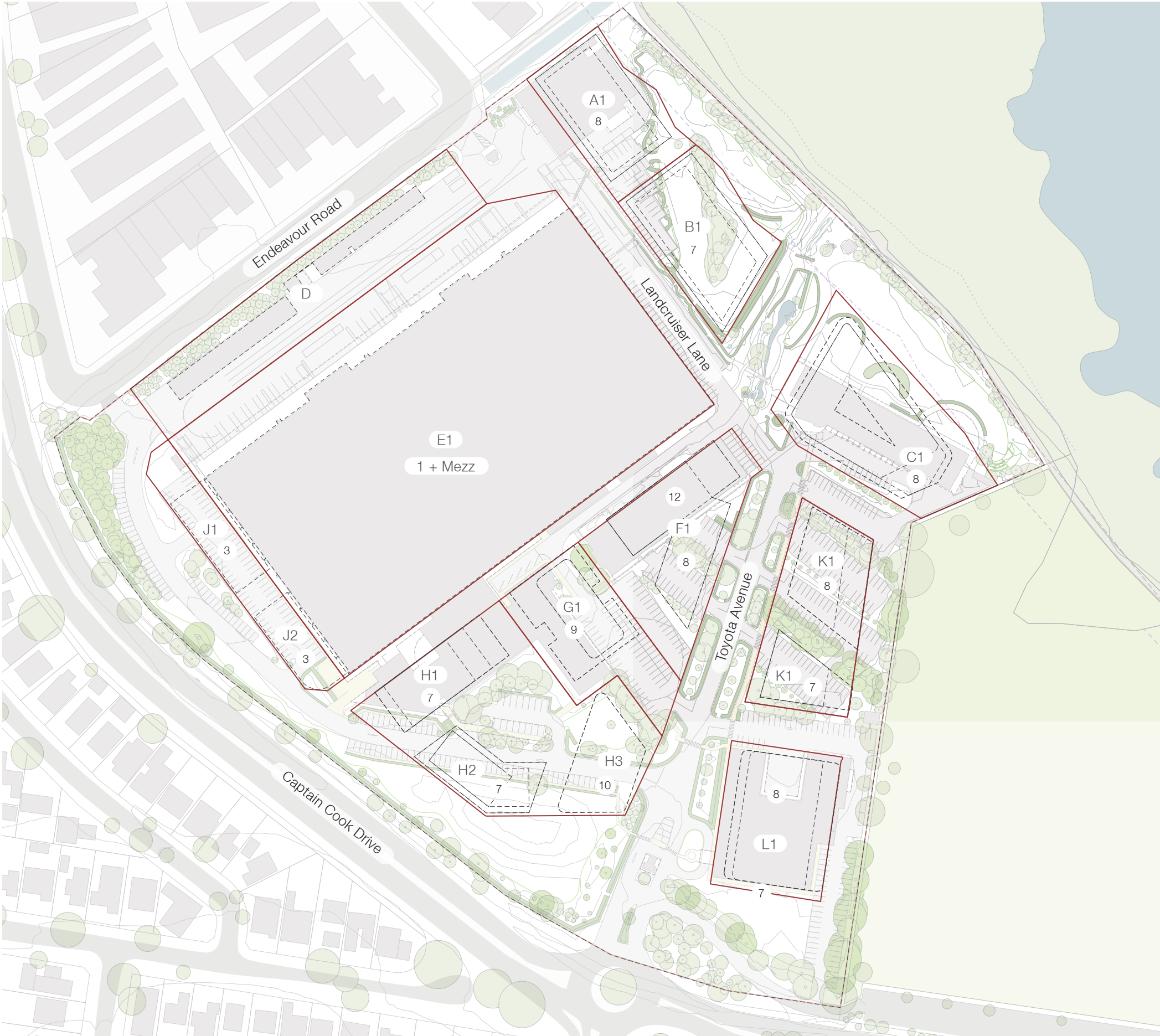
7.14 Indicative Structure Plan

Use	GFA
Industrial	1,824 sqm
Ancillary Industrial Office	3,941 sqm
Warehouse	24,032 sqm
Ancillary Warehouse Office	7,284 sqm
Office and Business Premises	97,172 sqm
Food & Beverage	3,706 sqm
Recreation	860 sqm
Hotel	5,188 sqm
Total	144,007 sqm
FSR	1.16:1
Car Parking	937 Spaces
Surface Car Parking	511 Spaces
Total Car Parking	1,448 Spaces

KEY

- (X)

Storey Height
- Industrial / Warehouse
- Ancillary Industrial / Warehouse Office
- Office and Business Premises
- Food & Beverage
- Recreation
- Hotel
- Car Parking / Storage



1:2,000 @ A3

Indicative Site Evolution

7.15 Indicative Stage K

A potential future stage may see the warehouse site (Pad E) redevelop into a mix of industrial, office and supporting floorspace. The below is the indicative area schedule after this potential stage.

Use	GFA
Industrial	30,685 sqm
Ancillary Industrial Office	24,662 sqm
Warehouse	0 sqm
Ancillary Warehouse Office	0 sqm
Office and Business Premises	120,067 sqm
Food & Beverage	3,706 sqm
Recreation	860 sqm
Hotel	5,188 sqm
Total	185,168 sqm
FSR	1.49:1
Car Parking	1,252 Spaces
Surface Car Parking	511 Spaces
Total Car Parking	1,763 Spaces

KEY

Industrial / Warehouse

Ancillary Industrial / Warehouse Office

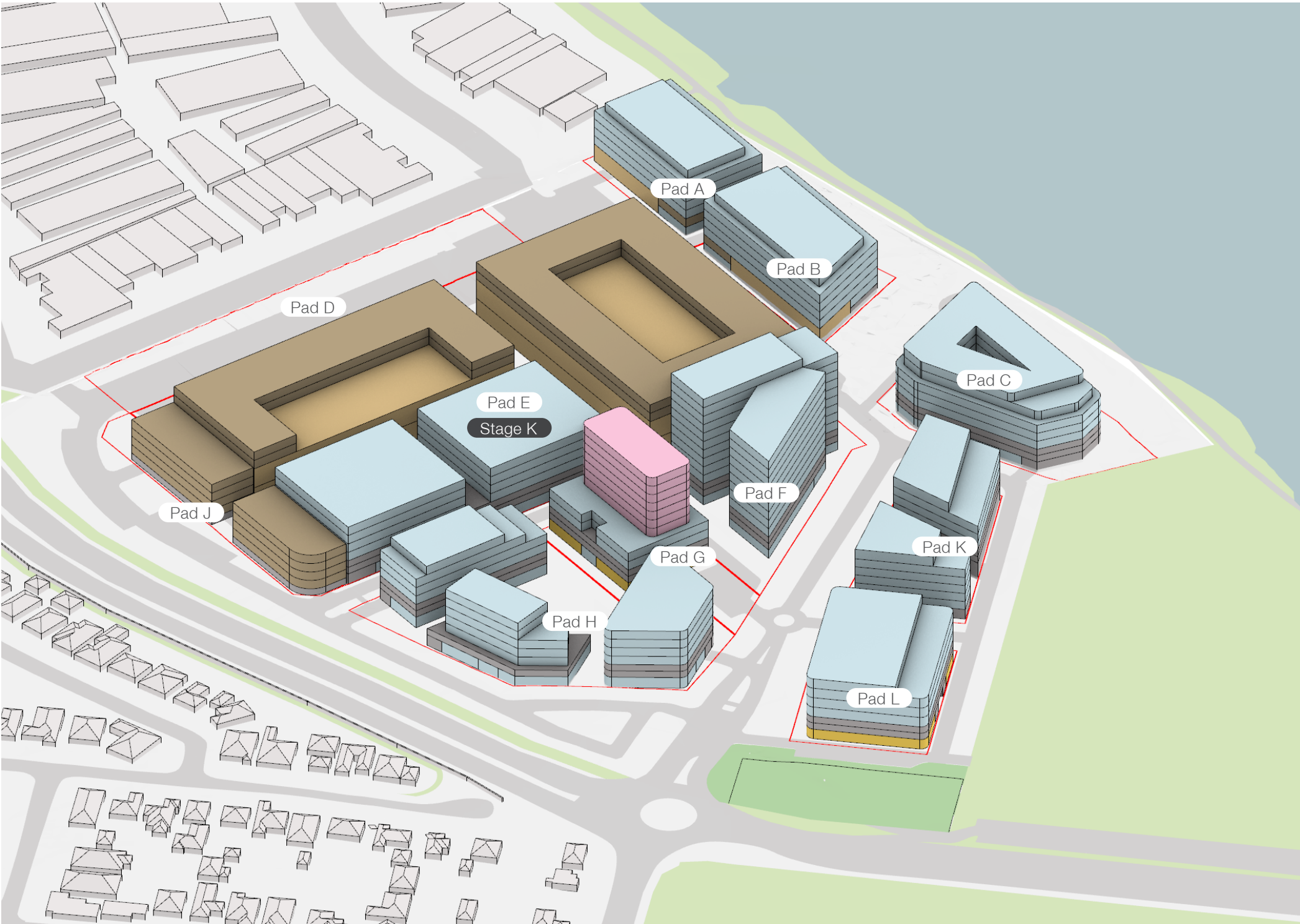
Office and Business Premises

Food & Beverage

Recreation

Hotel

Car Parking



8.1 Purpose of the Images

The following pages have been prepared to support the Urban Design Report (UDR) for the site located at 13 Endeavour Road and should be read in conjunction with the wider Planning Proposal documentation.

The images outline how the proposed development may affect the views from a number of locations in the vicinity of the proposal.

The analysis is a statement of fact, with limited assessment of the magnitude of impact and sensitivity of the view. In preparing this report, input from the project team were used to inform the photomontages and selection of views.

Preparing the Photomontages

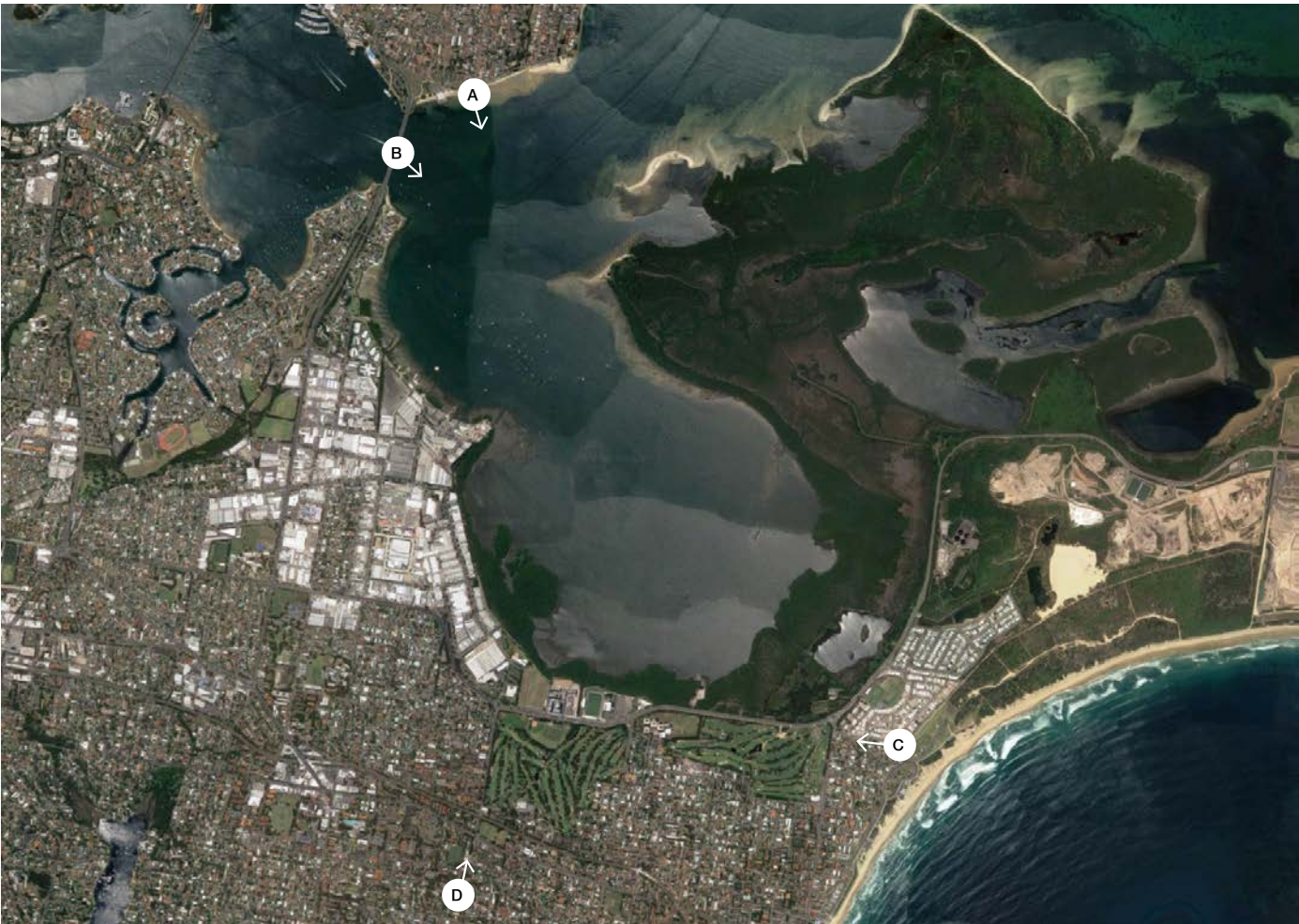
The approach to visual analysis adopted by SJB Urban has been guided by advice from the NSW Land & Environment Court on the use of photomontages in assessing development - often referred to as ‘verifiable images’.

Available topographic information of the surrounding connect has been gathered to inform the location of the photos and ensure their accuracy in relation to the modelling of the proposed scheme.

The following steps were taken in the preparation of the preliminary visual assessment:

- 3D digital model of the proposed scheme, the site, and surrounding area was constructed, based on existing GIS information, architectural drawings, modelling of the building envelopes, aerial photography and cadastral data
- Photographs were taken from the nominated view point locations). The focal length of the lens used was standardised at 35mm.
- These locations were then added to the 3D model and used to locate the views relative to the photographs. Images of the proposed scheme from these points were then obtained as closely as possible.
- In matching the 3D model with the photograph, the existing buildings, as well as the surrounding context, were used as reference points.
- In composing the photomontages, the proposal is shown as a simple 3D form without any architectural detail

8.2 Selecting Appropriate Views



During the initial site visits and urban analysis stage of the project, the following views and vistas were selected and reviewed with the project team for the purpose of the view analysis. The key characteristics of these views include:

- Public areas with view of site, such as parks, bus stops, and major streets.
- Consideration was given to the topography, foliage cover, proximity to residential area or commercial activity
- The site may not be directly visible, though consideration was given to the likelihood of the proposal being visible in the photomontage

Four views were chosen further away from the site that contribution of the proposal of major views from public domain and lookout points.

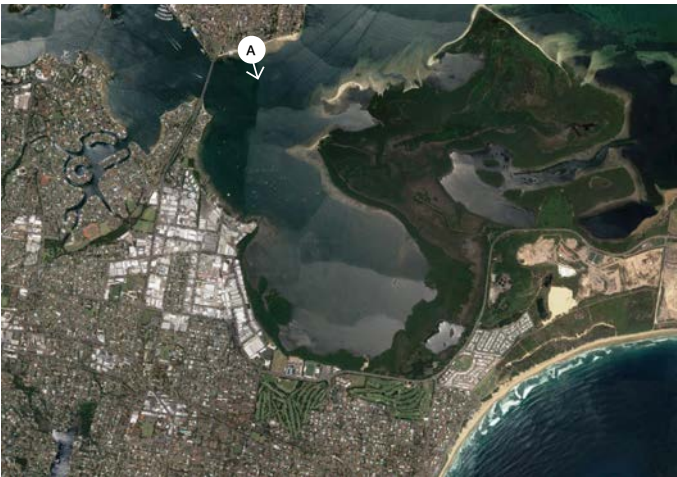
Ten views were chosen that predominately focus on the public views towards the site, this includes the approach to the site along Captain Cook Drive, both north and south, from the surrounding public open space, the foreshore shared path as well as the surrounding residential streets.

The diagrams above show the location of the proposal relative to these study sites that may be affected. Photomontages on the subsequent pages highlight the proposed impact of the built envelope.



Visual Assessment

8.3 View A



Photograph location



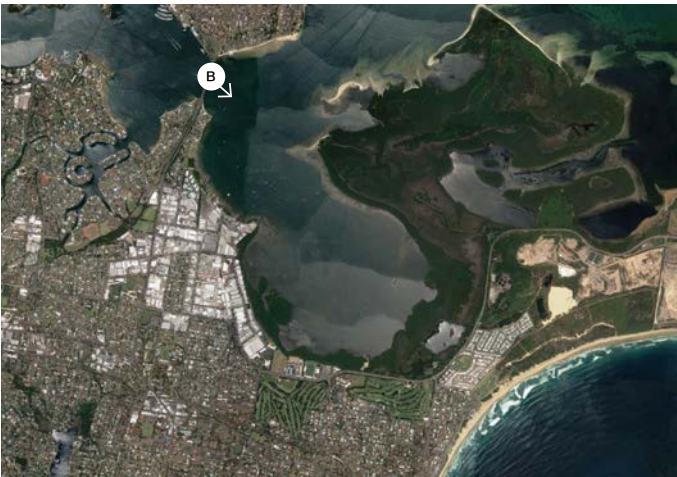
Existing view



Proposed view

Visual Assessment

8.4 View B



Photograph location



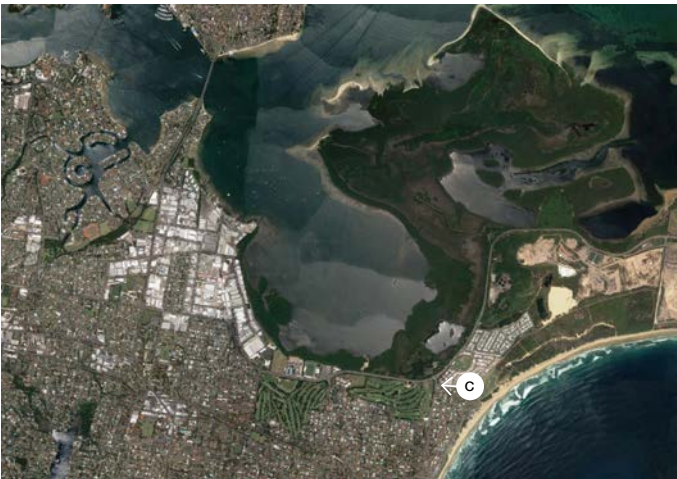
Existing view



Proposed view

Visual Assessment

8.5 View C



Photograph location



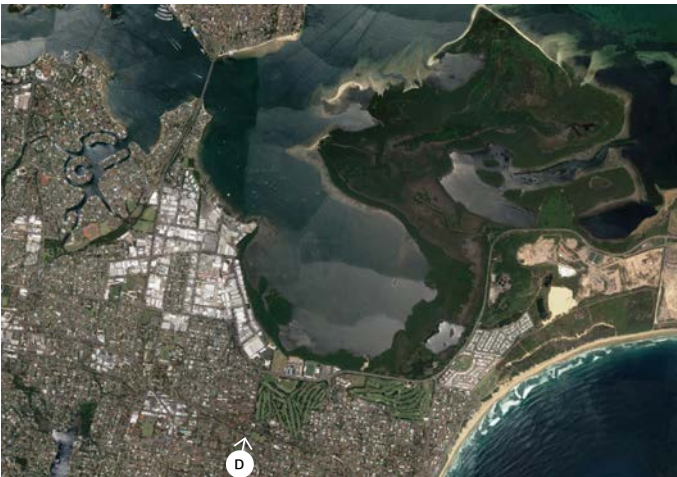
Existing view



Proposed view

Visual Assessment

8.6 View D



Photograph location



Existing view



Proposed view

Visual Assessment

8.7 View 1



Photograph location



Existing view



Proposed view

Visual Assessment

8.8 View 2



Photograph location



Existing view



Proposed view

Visual Assessment

8.9 View 3



Photograph location



Existing view



Proposed view

Visual Assessment

8.10 View 4



Photograph location



Existing view



Proposed view

Visual Assessment

8.11 View 5



Photograph location



Existing view



Proposed view

Visual Assessment

8.12 View 6



Photograph location



Existing view



Proposed view

Visual Assessment

8.13 View 7



Photograph location



Existing view



Proposed view

Visual Assessment

8.14 View 8



Photograph location



Existing view



Proposed view

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