





7.0 APPENDIX A _STRATEGIC CONTEXT

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7.1 METROPOLITAN PLANNING CONTEXT

The proposal demonstrates strategic merit, through its alignment of key State and Local Government Policies, as outlined in this chapter.

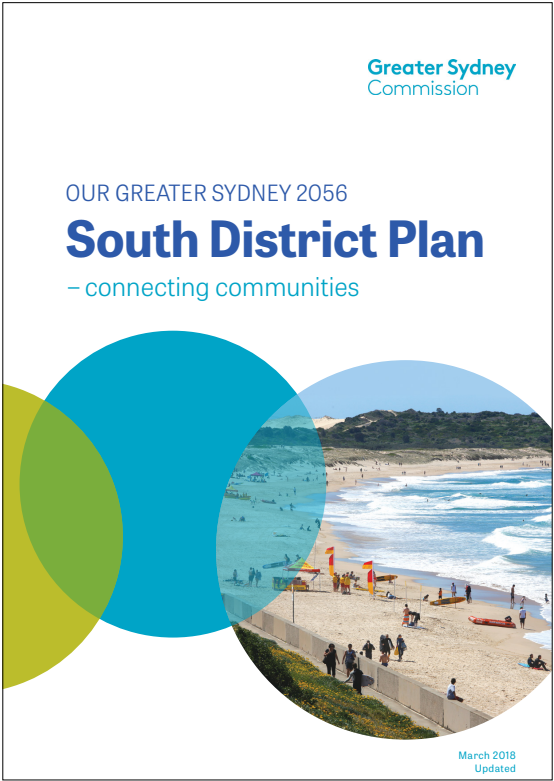
Metropolis of Three Cities: Our Greater Sydney 2056 South District Plan

A 20-year plan to manage growth in the context of economic, social and environmental matters for the Southern City to fulfill the vision of the Greater Sydney Region Plan.

The subject site is located in the Sutherland Shire, which is identified as requiring additional housing and services to accommodate the region's population growth in coming years.

This proposal aligns with a number of Planning Priorities identified in the South District Plan. These include (and are itemised in order of relevance to the proposal);

- Providing housing supply, choice and affordability, with access to jobs, services and public transport (S5).
- Providing services and social infrastructure to meet people's changing needs (S3).
- Creating and renewing great places and local centres and respecting the District's heritage (S6).
- Fostering healthy, creative, culturally rich and socially connected communities (S4).
- Protecting and enhancing bushland, biodiversity and scenic and cultural landscapes and better managing rural areas (S14).
- Increasing urban tree canopy cover and delivering Green Grid connections (S15).
- Delivering high quality open space (S16).
- Delivering high quality open space (S16).
- Supporting growth of targeted industry sectors (S11).
- Planning for a city supported by Infrastructure (S1).
- Delivering integrated land use and transport planning and a 30-minute city (S12).
- Protecting and improving the health and enjoyment of the District's waterways (S13).
- Reducing carbon emissions and managing energy, water and waste efficiently (S17)
- Adapting to the impacts of urban and natural hazards and climate change (S18).
- Reducing carbon emissions and managing energy, water and waste efficiently (S17)
- Adapting to the impacts of urban and natural hazards and climate change (S18).
- Retaining and managing industrial and urban services land (Planning Priority S10).



Future Transport Strategy 2056

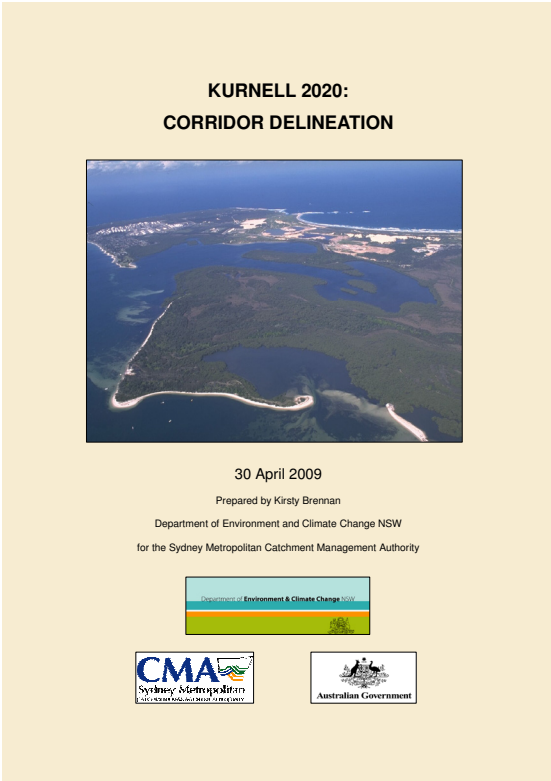
The 40 year vision, directions and outcomes framework for customer mobility in NSW. The proposal aligns with the below outcomes identified in the Strategy;

- Transport enhancing the liveability, amenity and economic success of communities to create great places (Outcome 2).
- Transport supporting economic activity and productivity (Outcome 3).
- Improved customer experience (Outcome 1).
- A safe, high performing, efficient, transport network (Outcome 4).
- Accessible, inclusive transport (Outcome 5).
- An economically and environmentally sustainable transport network contributing to emissions reductions (Outcome 6) .



7.2 NSW STATE PLANNING CONTEXT

Strategic planning within Sutherland Shire is informed by a number of planning policies released by, or developed in collaboration with NSW State Government, which consider issues likely to impact the master plan.



Kurnell 2020: Corridor Delineation

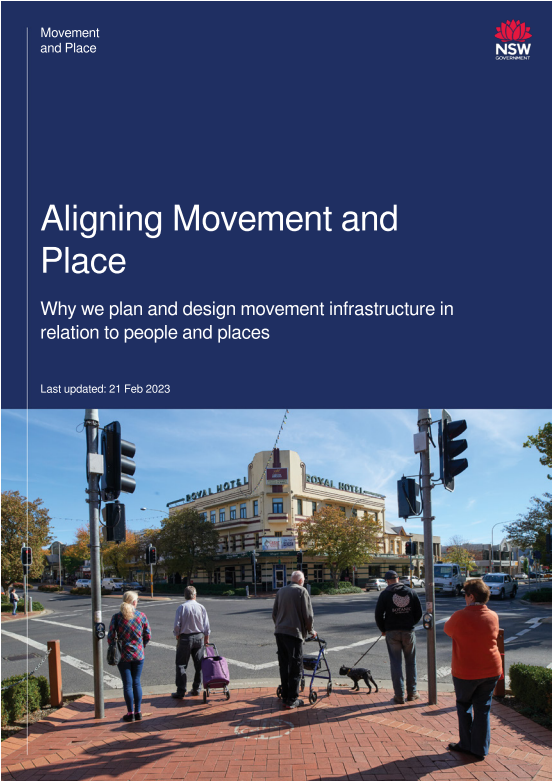
An integrated management plan prepared to ensure collaboration between the NSW government and land-owners in the management and protection of the Kurnell Peninsula’s unique biodiversity.

The plan prioritises the identification and protection of at-risk or significant ecological communities throughout the Kurnell Peninsula in order to understand the location and breadth of existing ecological corridors in-case of future development.

The primary ecological corridor identified along the peninsula extends along its northern coastline, linking Towra Point to Kamay Botany Bay National Park via the Kurnell township.

Secondary ecological corridors extend along the peninsula’s south-coast, though significantly impacted by historic and ongoing sand extraction operations.

The proposal aligns with the Corridor Delineation and embeds a key opportunity to reinstate pre-European landscape and the regeneration of lost ecology. It also aligns with the recommendations to rehabilitate the dune interior to ensure ample land for the movement of fauna and for the re establishment of endemic ecological communities.



Aligning Movement and Place

Sets out a better approach to aligning movement and place in the design, planning, construction and operation of NSW’s overall transport network.

The framework aims to support the planning, design and delivery of a well-designed built environment that provides for the movement of people and goods as well as the needs of places and communities.

The framework will build on a body of interstate and international work. It will ensure the network delivers effective and efficient movement while delivering the maximum social and economic benefits for the people of NSW through the consideration of better places.

Movement and Place is aligned with policies undertaken by GANSW and the NSW state government, informed by the Better Placed framework, Future Transport Strategy, and wider Metropolis of Three Cities Plan.

The Movement and Place framework will inform the development of street typologies and the master plan road hierarchy, integrating various forms of transport within road corridors, and how to connect the future master plan to the surrounding Kurnell Peninsula and Sutherland Shire context.

The master plan will utilise the Movement and Place approach to the classification and use of its road hierarchy, distinguishing between high-movement main roads, low-movement local streets and high-place civic spaces.

The street typologies have been categorised using TfNSW Movement and Place Framework in this document. The street typologies identify the extent of road reserve available for pedestrian priority initiatives, determine its dominant function, and how best to provide high quality public domain, whilst remain relevant to its context and function. These place based elements are key to contributing and embedding a local character into the master plan that is appropriate to the Kurnell context.

7.3 GANSW DESIGN GUIDELINES



Better Placed

Better Placed is a framework and design policy undertaken by Government Architect New South Wales to inform designers, developers, and local council of the role that good design has in the outcome of existing and emerging communities.

Better Placed is underpinned by seven key objectives which high quality architectural and urban design projects are expected to meet, to ensure that communities benefit from urban development at a multitude of scales.

Better Placed is supported by 'Implementing Good Design' and 'Evaluating Good Design', which guide practitioners understanding of the design policy and how best to integrate it into the built environment.



OBJECTIVE 1 Better Fit

contextual, local and of its place

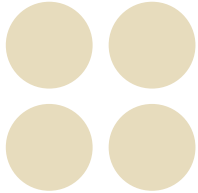
- The proposed master plan aims to reintroduce Indigenous species of flora to the site, rehabilitating the sand extraction mine.
- The proposed open space strategy prioritises re-linking north-south ecological corridors, connecting Quibray Bay to Bate Bay.
- The proposed height strategy tapers towards the surrounding bushland, immersing the site within its landform.
- The proposed local character will mirror the coastal lifestyle of Sutherland, with convenient access to the coast and landscaped boulevards.



OBJECTIVE 2 Better Performance

sustainable, adaptable and durable

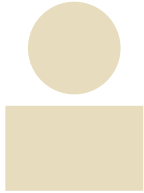
- An internal 'green web' of parklands, wetlands, and bio-retention swales will minimise overland flow towards Bate Bay and Quibray Bay, reusing rain-water for irrigation of landscaped areas.
- Proposed built form is primarily aligned north-south to maximise solar access and minimise the surface area of facades receiving nil sunlight, reducing the reliance on artificial heating and lighting methods.



OBJECTIVE 3 Better Community

inclusive, connected and diverse

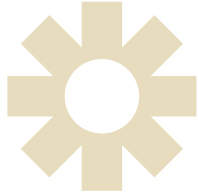
- The master plan includes a wide variety of housing options to accommodate for a slew of future residents, including differing dwelling densities, building heights, and age groups.
- Up to 7.5% of the total RFB residential yield will be reserved for affordable housing.
- Specialised Indigenous seniors housing under management of La Perouse LALC to ensure local Indigenous community retain a presence and ownership of the Kurnell Peninsula.
- A cultural facility within the Boat Harbour provides a space for residents and tourists to engage with the wider community and local Indigenous culture.



OBJECTIVE 4 Better For People

safe, comfortable and liveable

- Street typologies include ample landscaping and wide pavements, ensuring an amiable public domain which prioritises the safety and comfort of pedestrians.
- An extensive network of recreational open spaces, including re-naturalised parks, playgrounds, and civic spaces, ensures a high level of amenity throughout the master plan.
- Commercial offers include an anchor supermarket and supporting retailers within walking distance of the wider precinct.
- Various social facilities provide for local residents and tourists, including a school and surf life saving club, providing opportunities to engage with the wider community.



OBJECTIVE 5 Better For Working

functional, efficient and fit for purpose

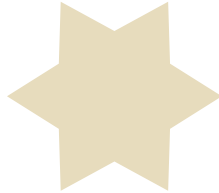
- Optimal building locations to maximise solar access satisfies the developments function as a mixed use residential precinct
- Open spaces are fit for purpose, each with a clear intent, appropriate location and scale relative to use
- Community facilities efficient access to daily needs within close proximity of similar civic spaces.
- Ground floor retail space utilises key central setting to provide for growing local community.



OBJECTIVE 6 Better Value

creative and adding value

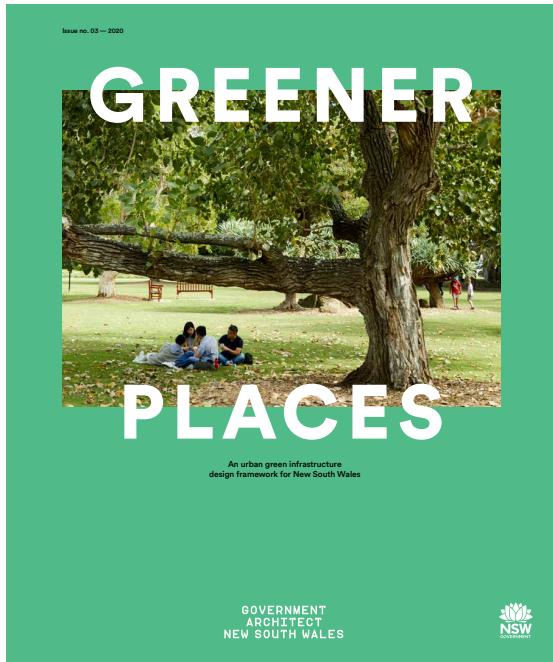
- The proposal offers new amenities for the existing and future community through the introduction of a new open space network, retail offers, and a school.
- The proposed retail floor space in the podiums will generate economic and social benefits for the wider Kurnell community, reducing travel time for residents of the Kurnell township.
- Cultural attractions and tourism accommodation to contribute to Sutherland Shire's tourism sector.



OBJECTIVE 7 Better Look And Feel

engaging, inviting and attractive

- The proposed open space network has been prepared in consultation with the local Indigenous community, ensuring it is representative of the Indigenous ecology of the Kurnell Peninsula.
- Views towards Bate Bay and Quibray Bay have been integrated into the fabric of the master plan, tapering building heights north-south, and aligning roads to face the coastline.



Greener Places

Greener Places provides information on how to design, plan, and implement green infrastructure in urban areas throughout NSW.

Greener Places is informed by four key principles, which outline the methods in which open space and ecology may be integrated into design projects to contribute to the health and success of our communities.



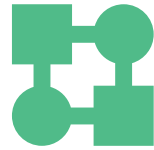
PRINCIPLE 1 Integration

- Local and district level parks distributed throughout the master plan creating internal green walking links.
- Landscape setbacks, swales, and urban canopy integrated into proposed street typologies, blurring the transition between the urban and the ecological.
- Bio-retention swales, aquifers, and the use of existing and proposed wetlands utilise WSUD principles alongside conventional water managements methods.



PRINCIPLE 3 Multi-functionality

- Integrating wetlands into the water management system to reduce impact of overland flow and contribute to the ecological grid.
- Utilise Indigenous flora to strengthen the ecological grid, while providing learning opportunities.
- North-south environmental corridors to Quibray Bay to Bate Bay.



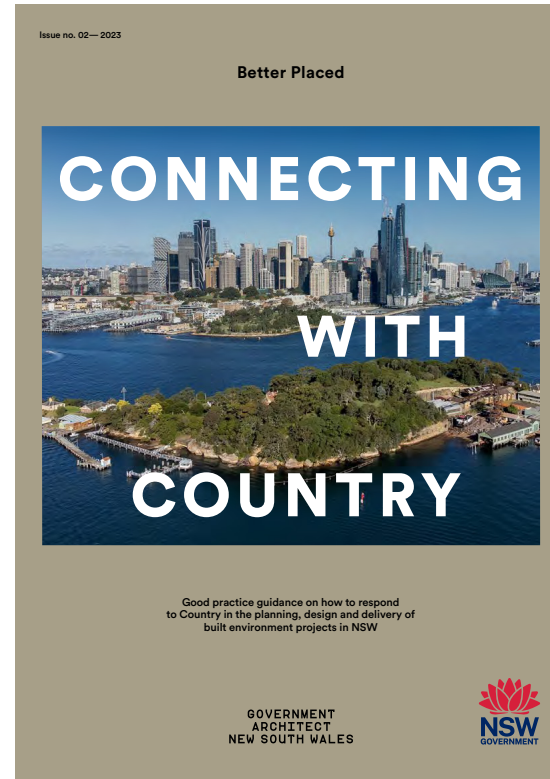
PRINCIPLE 2 Connectivity

- Local and district level parks are located throughout the master plan, providing a diversity of open spaces
- Urban areas are immersed within a mosaic of open space and habitat which surrounds residential areas and transitions into recreational spaces.
- Precincts linked by a network of pedestrian walking tracks which traverse ecological areas, integrating the surrounding environment into the wider circulation.



PRINCIPLE 4 Participation

- Indigenous nursery to be managed by and informed by La Perouse LALC and IndigiGrow, involving the local Indigenous community in co-management of the community.
- Open space distribution and functionality to respond to the needs of a particular precinct.



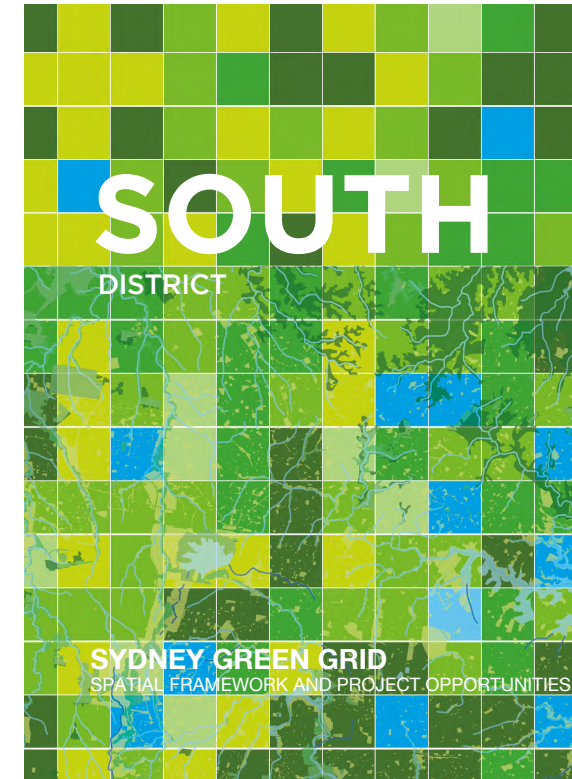
Connecting with Country

The purpose of the Framework is to help project development teams; advocating ways they can respond to changes and new directions in planning policy relating to Aboriginal culture and heritage, as well as place-led design approaches.

It also aims to help project teams gain a better understanding of, and to better support, a strong and vibrant Aboriginal culture in our built environment.

Connecting with Country Framework is a set of pathways, commitments, and principles for action intended to help form, design, and deliver government infrastructure including building projects such as roads, transport, and major public facilities.

This proposal provides an unrepeatable opportunity to correct the imbalance in how Australia's history is memorialised and represented. This will be achieved through close consultation with First Nations people and through collaboration with the local Indigenous community to guide and develop agreed cultural outcomes.



Sydney Green Grid South District

Sydney Green Grid is a spatial framework which identifies opportunities throughout the Sydney metropolitan area to extend and rehabilitate the city's ecological and recreational spaces.

Project opportunities to inform future development and management of open space throughout Sydney are identified as either hydrological, ecological, recreational, or transport, which impact the suggested improvements and who is to achieve them.

The site is identified as a key hydrological opportunity for 'Boat Harbour, Greenhills, and North Cronulla Beaches' with a recognised ecological and hydrological value.

A suggested minor green link is proposed within the framework to extend from north-south through the site, linking ecological corridors which run along the north and south of the peninsula.

7.4 SUTHERLAND SHIRE COUNCIL STRATEGIES

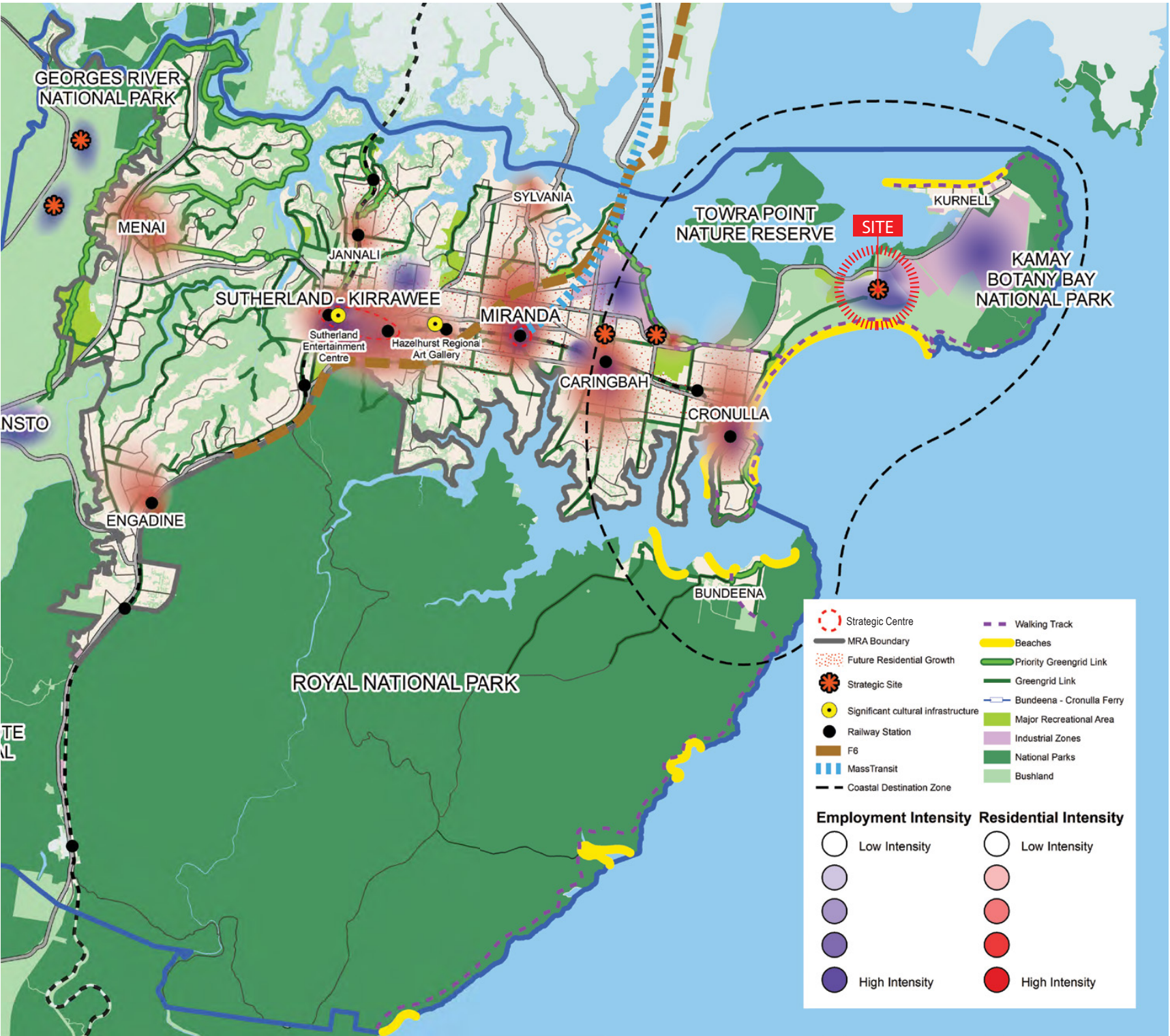
Sutherland Shire Local Strategic Planning Statement

Sutherland Shire Council's Local Strategic Planning Statement (LSPS) 2020 sets out the vision and guiding principles informing land use within Sutherland Shire for the following 20 years. The LSPS identifies priority areas including housing, infrastructure, employment, transport, and the environment, where changes are to be implemented, and within what timeframe.

Underpinning the LSPS is council's desire to accommodate continued growth within the Sutherland Shire region, while responding to the needs of its existing communities.

The site is identified as a 'Strategic Site' within the LSPS, for rehabilitation and re-use following the culmination of sand extraction operations on the Kurnell Peninsula. The proposal will support Council's 20 year vision for the Shire, through alignment with the following Planning Priorities;

- Housing choice (Planning Priority 10).
- Attractive and distinctive centres and places (Planning Priority 11).
- Grow tourism (Planning Priority 17).
- Respect local character (Planning Priority 7).
- Open space and sporting needs (Planning Priority 8).
- Community connections (Planning Priority 9).
- Aboriginal heritage, natural habitats and landscape (Planning Priority 19).
- Urban Tree Canopy (Planning Priority 20).
- Green Grid connections (Planning Priority 21).
- Efficiency and Innovation (Planning Priority 22).
- Connected transport networks (Planning Priority 16).
- Managing traffic congestion and parking (Planning Priority 2).
- Collaborative partnerships (Planning Priority 6).
- Align Planning to Existing Infrastructure (Planning Priority 1).
- Grow industrial and urban service jobs (Planning Priority 15).
- Waterways and beaches quality (Planning Priority 18).
- Manage risks from hazards (Planning Priority 23).





Sutherland Shire Housing Strategy

The Housing Strategy aims to achieve Sutherland Shire's future housing needs by identifying, modifying, and rezoning areas of opportunity.

An estimated 83,500 additional dwellings are predicted to be required throughout the Metropolis of Three Cities South District to accommodate the region's growing population by 2036. To ensure that Sutherland Shire is able to contribute to regional growth while improving its local housing stock, a greater quantity and diversity of housing will be required.

To achieve and support the region's growth, the Housing Strategy will identify opportunities to rezone areas of interest, where residential development and higher density options are suitable.

The Housing Strategy also highlights retirement and aged care living options as at a serious deficit within Sutherland Shire currently, with a greater proportion of adaptable and seniors housing required.

A number of objectives identified in the strategy, the below have informed the development of the master plan design and briefing process;

- To meet the current and future needs of an ageing population.
- To deliver Council's 'Ageing Well Strategy'.
- To meet the current and future needs of smaller sized households.
- To meet the community need for increased housing choice.
- To consider environmental constraints in nominating locations for additional housing
- To facilitate the use of public transport and the efficient utilisation of existing and future infrastructure



Sutherland Shire Open Space Strategy and Implementation Plan

The Open Space Strategy and Implementation Plan is a 10 year plan to enhance Sutherland Shire's existing recreational and ecological network, to meet community needs and future growth.

The Strategy outlines four key areas of focus centred on planning for open spaces. These support Sutherland Shire's community needs and lifestyles, now and into the future, by providing open space for everyone, protecting the local environment, and preserving significant heritage spaces.

Council has expressed the desire to improve upon the region's existing open space network, providing additional local and regional scale parks to respond to ongoing demographic and urban changes which ensure:

- 90% of all houses should be within 800 metres of quality open space and preferably 400 metres for high density areas.
- Regional park should be located within 5km of most homes
- District park should be located within 2km of most homes.
- Local park within 800m from most homes and preferably within 400m in high density areas

Additionally it is expressed that an aging population, a trend towards denser forms of housing, and desire to further integrate Indigenous cultural heritage into the way open space within Sutherland Shire is managed is required in future open space and urban development.

Council's open space vision as outlined in the strategy is supported by:

- Extending the Kurnell Peninsula's existing open space network with an array of regional, district, and local parks positioned throughout the master plan.
- Strengthening the Kurnell Peninsula's ecological grid, creating north-south environmental corridors and conserving areas of existing high ecological value.
- Maintaining council's desire to ensure all residents within Sutherland Shire are within walking distance of open space.
- Reducing the impact of urban heat island effect by integrating required landscaping and tree coverage into proposed street sections and throughout the residential master plan.

7.5 LOCAL ENVIRONMENTAL PLAN

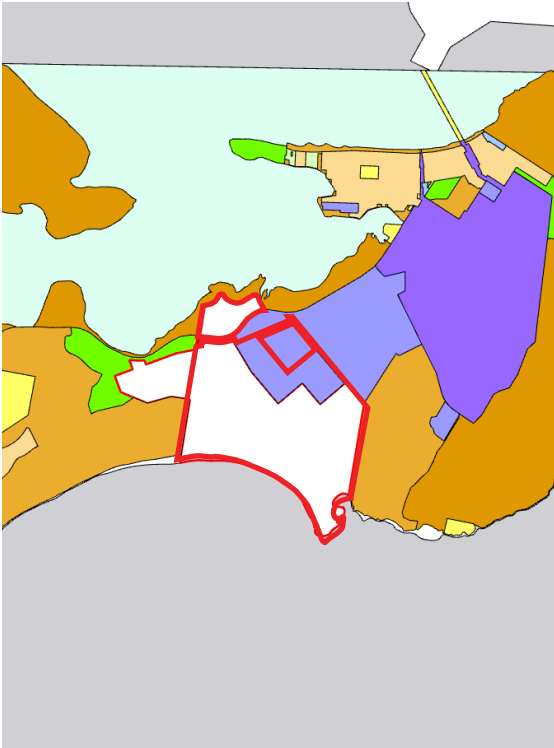
Sutherland Shire Local Environmental Plan 2015

The site is subject to planning controls as regulated by the Sutherland Shire LEP 2015 and the SEPP (Precincts - Central River City) 2021.

The SEPP (Precincts - Central River City) 2021 had superseded the SEPP (Kurnell Peninsula) 1989 which had identified the site as a 'deferred matter' not subject to regular planning controls as outlined in Standard Instrument - Principle Local Environmental Plan. The SEPP applied irregular land zone controls to the site.

As part of the master plan process, conventional land zone controls will be applied to the site and integrated into the SEPP (Kurnell Peninsula) 1989 to reflect existing land zones present in Sutherland Shire LGA.

Land Use



Land Zoning

C1	National Park	E5	Heavy Industrial
C2	Environmental Conservation	SP2	Infrastructure
C4	Environmental Living	RE1	Public Recreation
E4	General Industrial	DF	Deferred Matter

Much of the site is zoned as a 'Deferred Matter' referring to SEPP (Precincts-Central River City) 2021 Chapter 5 Kurnell Peninsula, which superseded the SEPP (Kurnell Peninsula) 1989.

As part of the master plan approval process it is proposed that conventional land use zones drawn from the Standard Instrument - Principle Local Environmental Plan are applied to the site.

Lot 8 is currently zoned E4 General Industrial, reflecting existing adjacent land uses but has never been developed.

Height of Buildings



Maximum Height of Building

9m	9m Max. HOB
12m	12m Max. HOB
16m	16m Max. HOB

Currently no maximum height of buildings applies to much of the site, with the exception of Lot 8 which is restricted to a maximum building height of 16m.

Floor Space Ratio

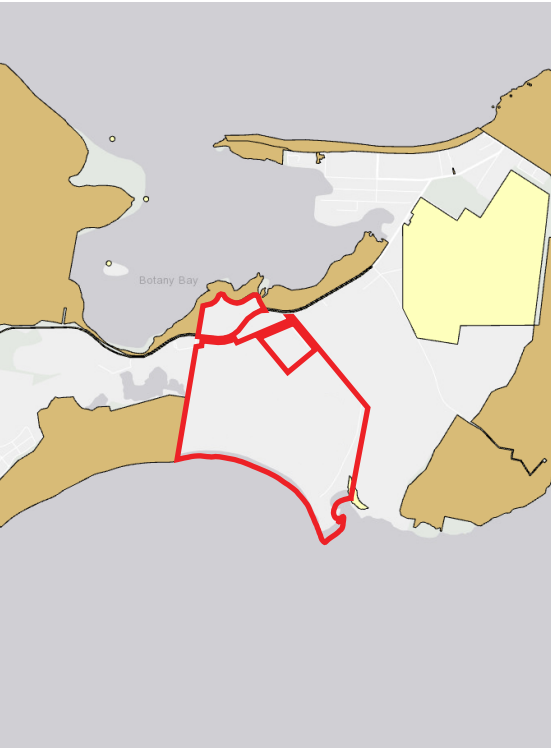


Floor Space Ratio

0.45:1	0.45:1
0.55:1	0.55:1
1:1	1:1

Currently no floor space ratio applies to much of the site, with the exception of Lot 8 which is restricted to a maximum floor space ratio of 1:1.

Heritage



Heritage

Brown	Heritage Item - General
Yellow	Heritage Item - Archaeological

The Kurnell Peninsula is rich with heritage items including those of general and archaeological significance, though there are no heritage items located within the site boundary.

The Towra Point Nature Reserve and Quibray Bay heritage item run along the north of the site, extending from Towra Point to the Kurnell township.

To the site's west, the Cronulla Sand Dune and Wanda Beach Coastal Landscape heritage item of state significance.

Additionally, there is a heritage item of archaeological significance to the site's south-east concerning the Boat Harbour houses.

[Redacted]





8.0 APPENDIX B _CONTEXT ANALYSIS

B

8.1 COUNTRY

The Gweagal people are a clan of the Dharawal nation, whose traditional lands extended throughout today’s Sutherland Shire, from the Kurnell Peninsula west as far as Liverpool.

The Kurnell Peninsula is rich in Aboriginal history and plays a key role in Gweagal dreamtime and cultural practices.

The Gweagal people lived mainly by the salt water bays and estuaries of the Port Hacking River. They used the fresh water resources of the upper river, Heathcote Creek and the Woronora River.

The Gweagal were regarded as the guardians of the sacred white clay pits on their territorial land now known as the Kurnell Peninsula, the clay was used to make body paint, medicine and mixed with local berries as a dietary supplement.

In the Sydney Basin the three major totems are the whale, the kangaroo and the snake. The whale was the totem (dreaming figure) for the Dharawal and an integral part of their community.

The Gweagal people believed the whale played a role as 'bringers of vast foods' in hunting activities. Carvings of Dharawal Whale still exist on the plateaus where the elders once looked out for the whales to arrive.

In daily life, it is recorded in the studies that women/ megababang did most of the food gathering. Women would learn as young girls/guragalungalyung where all the best vegetables, yams and fruits could be found and of course how to survive from what the sea provided.

A lot of time, energy and traditional knowledge was involved in making and maintaining the tools and weapons for fishing, hunting and ceremony. The grass tree/goolgadie (xanthorrhoea) was essential for many resources.

Being the place of first recorded contact between British and Indigenous Australians in eastern Australia, Kurnell also plays a significant role in Australia's history as a site of deep sadness for Indigenous Australia.

Yerrabingin has been engaged to ensure that the design process considers Country in an approach which is accurate, sensitive, and meaningful to place.



Engraving of Burriburri the whale, a dreaming ancestor, in Royal National Park, source: NSW National Parks



Rock art of a gecko located in traditional Dharawal land, Royal National Park



Map of approximate traditional lands, source: Dharawal: The story of the Dharawal speaking people of Southern Sydney

8.2 REGIONAL CONTEXT

The site represents a unique opportunity for the revitalisation of the Kurnell Peninsula as a key site of regional significance.

Once dominated by heavy industry, the Kurnell Peninsula's old industrial core is undergoing transition into a new urban precinct with proposed parklands, commercial development, and ecological rehabilitation.

Urban and Development Context

The peninsula is home to a small population of approximately 2,250 people which are concentrated in the singular settlement of Kurnell to the site's north-east, alongside a variety of industrial lots and commercial estates.

Sutherland Shire's urbanised areas are characterised by their high level of residential and commercial development distributed between an array of local centres, the most populous of which is Cronulla to the site's south-west.

Sutherland Shire is expected to undergo significant population growth in upcoming decades, requiring further urban densification and brownfield development.

The site represents a key opportunity to achieve Council's housing targets in the face of significant demographic growth, as the region's largest amalgamated brownfield development site.

Environment and Ecology

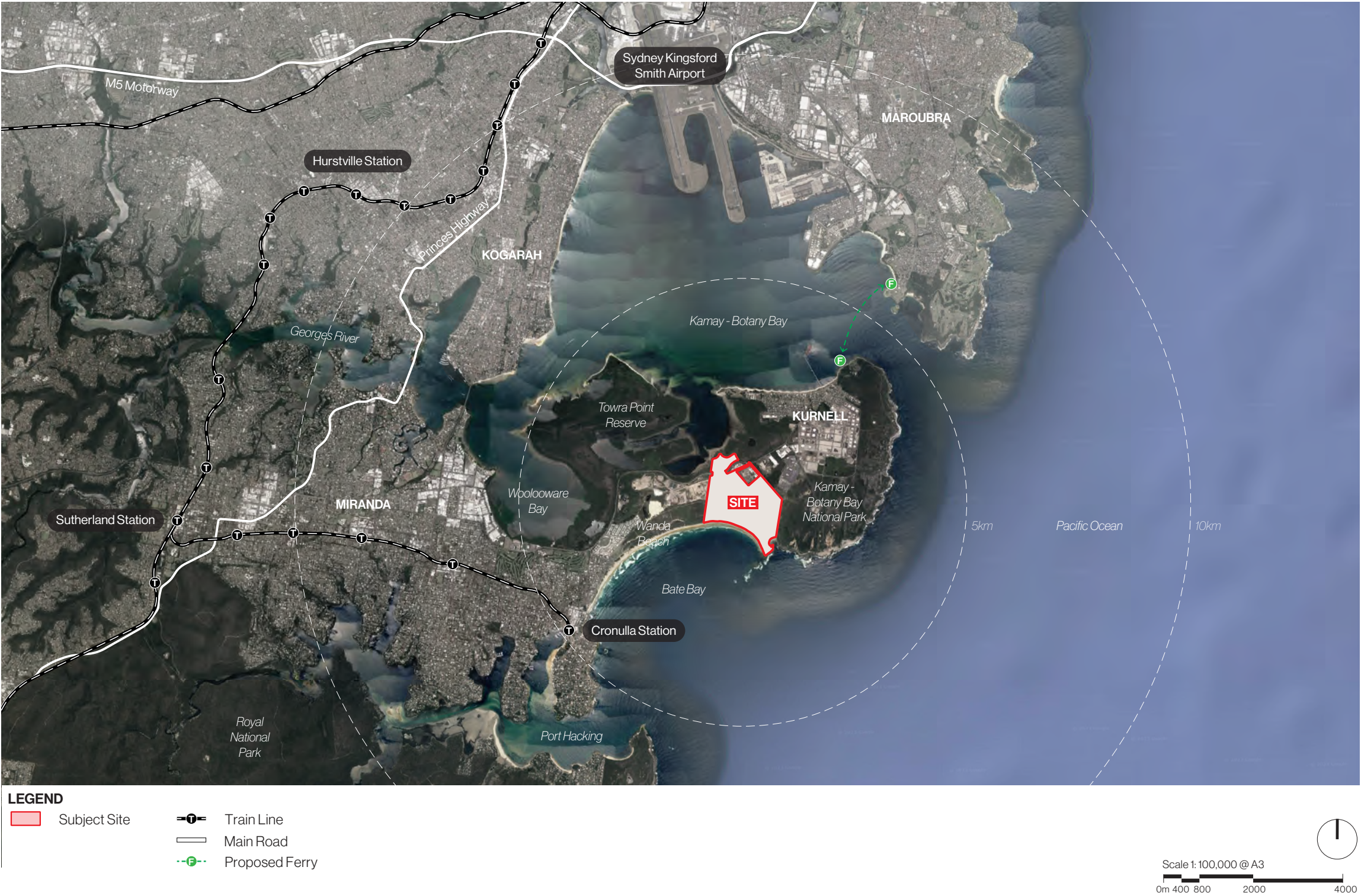
The Kurnell Peninsula is a significant environmental asset with opportunity to re-establish north-south ecological corridor linking Towra Point Reserve to Kamay-Botany Bay National Park.

Kurnell benefits from its unique surrounding landscape character, capture of key metropolitan and coastal views, and convenient connectivity to the existing urban centres of Sutherland Shire.

Transport Connectivity

The site benefits from convenient access to public transport links, with Cronulla Train Station 6.8km to the site's south-west on the T4 line to the Sydney CBD.

The site is connected to Cronulla via the 987 bus, with bus stops situated along Captain Cook Drive directly adjacent to the site.



8.4 ECOLOGY

“The Soil wherever we saw it consisted of either swamps or light sandy soil on which grew very few species of trees, one which was large yielding a gum much like sanguis draconis, but every place was covered with vast quantities of grass.”

Joseph Banks, April 1770, describing the coastal environment of Botany Bay.

Ecological rehabilitation of Kurnell has been ongoing since the peninsula was cleared of vegetation in the early decades of settlement, re-introducing endemic coastal heath and wetlands.

Heaths support faunal species, pygmy possums, honey-eaters and many species of reptile. Small patches of wetlands present in the project area in addition to the mangrove ecosystem to the north are essential for waterbirds, eels and fish.

The character of the site has changed repeatedly over the past 160 years due to early vegetation clearance, the subsequent formation of mobile sand dunes, and the rehabilitation of the peninsula’s coastal ecosystem.

Rehabilitation efforts to re-connect Kurnell’s key native habitats will allow free movement of fauna throughout the peninsula, rejuvenating its struggling ecosystem.

The plants identified in the 1770 expedition were numerous and included many species of Acacia, Banksia, Boronia, Grevillea, Isopogon and Syzygium (refer to the gazettal notice for the complete list of plants recorded by Banks and Solander).

Native birds, reptiles and mammals occupy the landscape while an abundance of freshwater, estuarine and marine species including fish, molluscs (eg shellfish, squid and octopus) and arthropods (e.g. crabs) inhabit its shallow waters.

The site has been clear of vegetation since it was cleared for agricultural use in the early decades of settlement, resulting in the formation of a mobile sand dune which prevented plant growth.

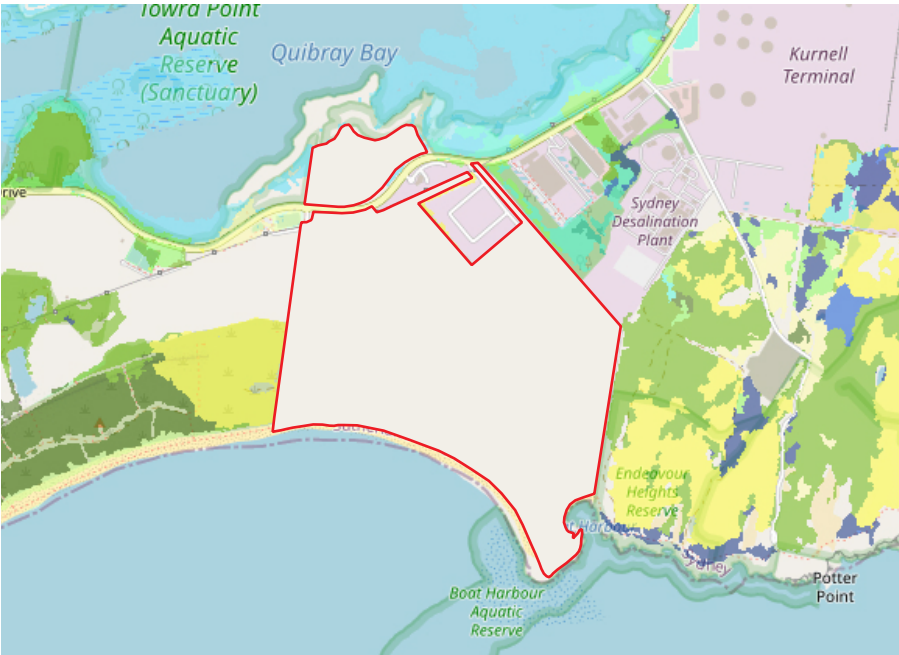
Invasive species including Bitou bush have been identified along the peninsula’s coastline, with efforts commenced by the Holt Estate to manage and reintroduce stabilising ecological communities to its dunes.

In order to reinforce the ecological biodiversity of the site and the wider peninsula, the protection and reinforcement of significant native communities will strengthen local environmental corridors.

Opportunities include reinforcing coastal ecological corridors, integrating native vegetation communities into internal open space, and supporting the growth of endangered flora species.



Coastal heaths dominated by Coastal Wattle (*A. Sophorae*) and Coast Tea (*L. Laevigatum*)



Ecological communities of the Kurnell Peninsula, site in red, source: NSW Department of Planning and Environment



Wetlands dominated by Salt Marsh Rush (*J. Kraussii*) and Sand Couch (*S. Virginicus*)

8.5 GEOLOGY

The natural landscape of Kurnell constitutes a combination of marine and aeolian soils, disturbed by decades of industrial activity.

Efforts to rehabilitate the peninsula have seen the introduction of virgin excavated natural material (VENM) to the site, which is more fertile, stable, and suitable for development.

Research undertaken by NSW Environment, Land and Water indicated that the Kurnell Peninsula is formed from a number of different soil landscapes, which sit upon a thick bedrock layer of Hawkesbury Sandstone.

Hawkesbury Sandstone is noted for its stable formation and thick bed, providing an excellent foundation material for heavy structures.

The site's historic soils, identified as 'WG', were deep calcerous sands, which were exposed due to extensive clearing of land during the early decades of settlement.

Due to its high permeability, vulnerability to extreme wind erosion, and low fertility, these soils were not conducive to vegetation growth once cleared, featuring only a light grassland at its transitional edges.

As only the southern most and largest lot of the site was historically quarried for sand extraction, its northern most lot still retains its natural soil landscape, though stabilised with light ground-cover.

A process of rehabilitation of former sand extraction sites has been ongoing since the 2010s, with primarily VENM materials used on-site. VENM consists of a mix of various soils resourced from uncontaminated lands.

Soil mapping information sourced from NSW Department of Planning and Environment: Soil Landscapes of Central and Eastern NSW.

Soil Types

Wollongong (WG)

Landscape - beaches, coastal fore-dunes and hind-dunes on Quaternary marine and windblown sands.

Soils - deep (>200cm) Calcarerous sands on beaches, Siliceous Sands of fore-dunes.

Limitations - extreme wind erosion hazard, non-cohesive, highly permeable soils, very low soil fertility, localised flooding and permanently high water tables.

Disturbed Terrain (XX)

Landscape - varies from level plains to undulating terrain and has been disturbed by human activity to a depth of at least 100cm.

Soils - includes foreign and local soil, rock, building and waste material.

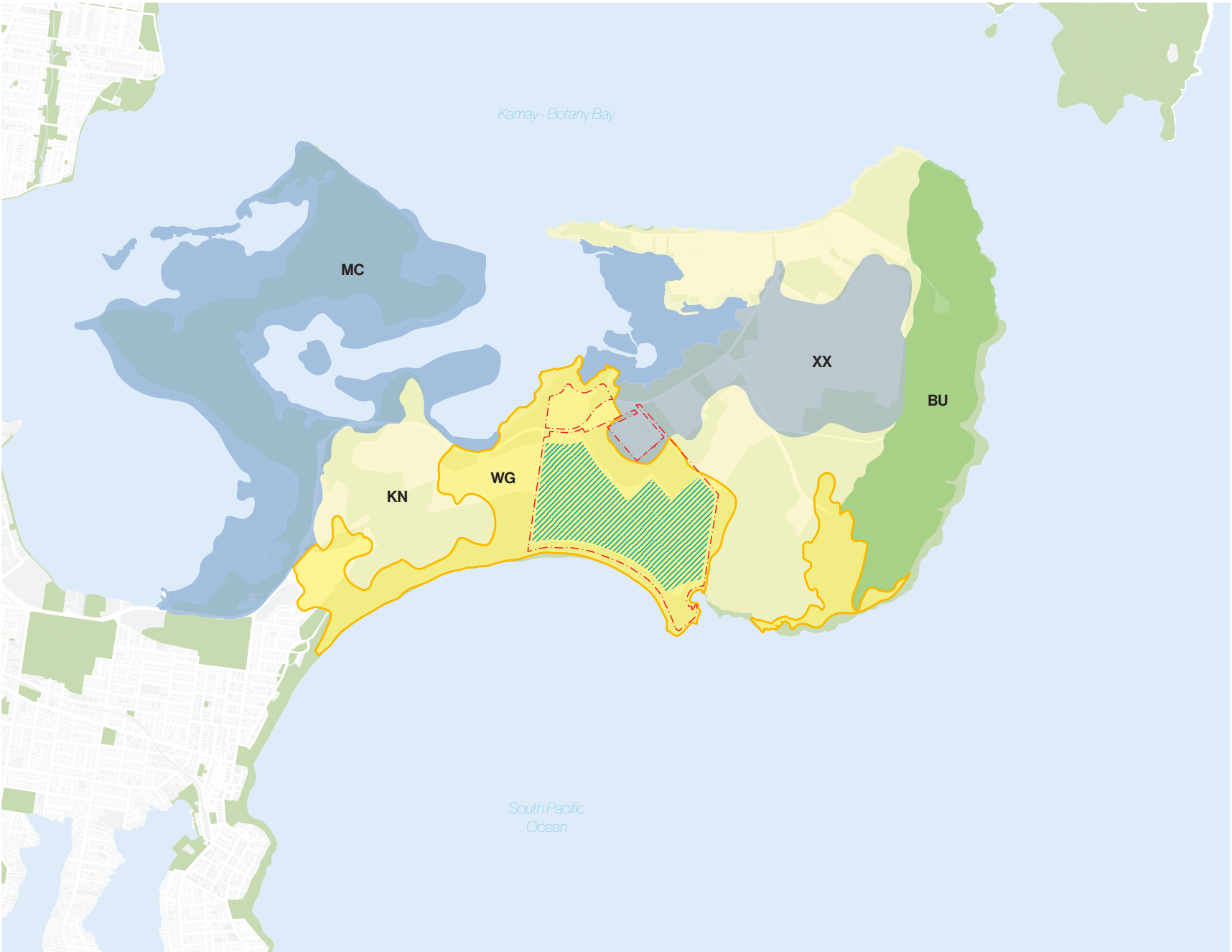
Limitations - soil impermeability leading to poor drainage, low fertility, and possibly the presence of toxic material.

Source: NSW Environment, Land and Water

Virgin Excavated Natural Material (VENM)

VENM describes soils, gravels, clays, or sand which have been excavated or quarried from areas not contaminated with industrial or agriculture process residues, sulfidic ores or waste.

As it is uncontaminated, VENM is a chemically and physically stable foundational material, which has been used to fill the site, otherwise composed of loose WG type sands.

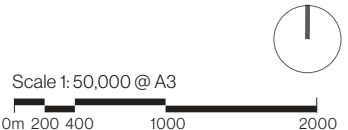


LEGEND

- Subject Site
- Open Space
- Lots
- Water

Soil Types

- Wollongong (WG)
- Kurnell (KN)
- Mangrove Creek (MC)
- Bundeena (BN)
- Disturbed Terrain (XX)
- Area subject to VENM fill



8.6 CONTEXT ANALYSIS

The Kurnell Peninsula is currently undergoing a process of considerable change, transitioning away from historical industrial use, to a rehabilitated, sustainable residential and recreational precinct.

This transition towards residential, recreational, and commercial uses is changing the peninsula's relationship with the wider regional context, with the potential to become a destination, employment centre, and community.

Ecological Context

The site is situated within an environmental context of high ecological value, with the potential to link Towra Point Nature Reserve to Kamay Botany Bay National Park which constitute large tracts of remnant native wetland/ heathland.

Currently the link between Towra Point Nature Reserve and Kamay-Botany Bay National Park has been severed, which would benefit from re-instating this key regional ecological link through the site.

There is opportunity to restore north-south ecological corridors which have been disturbed due to historic clearing and industrial activity in future use of the site.

Access and Connectivity

Captain Cook Drive is a major east-west thoroughfare intersecting Taren Point Road and Princes Highway to its west, which provides access through the extent of the Kurnell Peninsula.

Connectivity with the wider region is aided with public transport options including the 987 bus route to Cronulla Train Station.

This provides the site a high degree of connectivity with the surrounding region, linking Cronulla through to Kurnell, and towards a number of public transport options.

A ferry wharf route proposed by NSW Government will link Kurnell to La Perouse for tourism purposes, uniting Sydney's east coast into an accessible wider tourism precinct.

Land Uses

Historically dominated by agricultural and subsequently heavy industrial, Kurnell's land use is transitioning to concentrate on residential and commercial, integrating it more effectively into Sutherland Shire's urban grid.

Kurnell town and the recently developed Greenhills Beach community represent the existing extent of residential development on the Kurnell Peninsula, with opportunity to link these communities through the site.

Including the site and the adjacent Breen land-holdings to the site's west, a process of rehabilitation currently ongoing will revitalise previously industrial lands, and transition towards a network of recreational and residential areas.

To support future residential development, a variety of land uses will be required to ensure the creation of viable, thriving communities, including social infrastructure, retail offers, and housing diversity.

As of 2023 rehabilitation has resulted in the Marang Parklands complex expected to reach completion by mid 2026, and revitalisation of coastal ecological communities by Holt Estate.



8.7 EMPLOYMENT AND TOURISM

Kurnell Peninsula is identified as a key Strategic Site under the South District Plan, as a potential employment hub and tourism destination.

The Coastal Destination Zone (SSC LSPS 2020) describes a cluster of existing and proposed tourism opportunities located throughout Sydney's south-east coast, including the Kurnell Peninsula.

Located at the peninsula's centre, the site has the opportunity to play a key role in the development of the Coastal Destination Zone, linking the urban centre of Cronulla east to the beach-side town of Kurnell, while also being a destination in its own right.

Desire for greater tourism opportunities within Sutherland Shire is described in the Sutherland Shire Council LSPS 2020, which identifies Kurnell as a key asset, due to its abundant ecological features and strong connections to Sydney's heritage.

There is opportunity to introduce a higher employment density than the historically heavy industrial land uses could accommodate, including commercial, retail and urban services supporting a residential community.

Integrating retail to support a residential community alongside tourism opportunities will ensure that Kurnell Peninsula remains a key employment hub within Sutherland Shire.



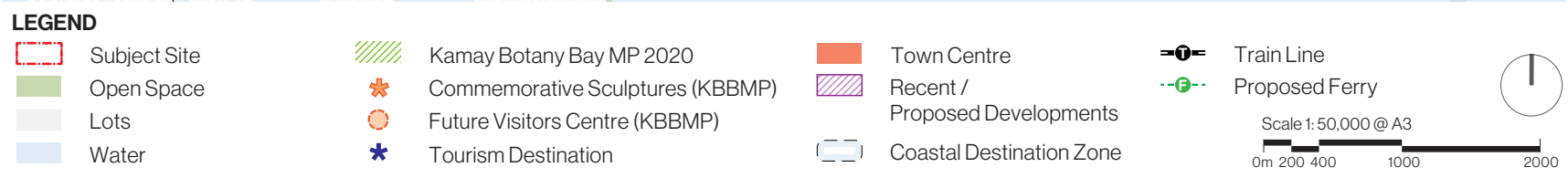
1. Marang Parklands currently undergoing construction



2. Approved concept design for Kurnell Visitors Centre



3. Bronze sculptures installed in 2020



8.8 LANDFORM AND TOPOGRAPHY

The Kurnell Peninsula features an undulating topographic landform, with relatively level land along its northern coast-line.

The Peninsula

This region of relatively level topography extends from Kurnell village along the northern coast-line to the site, and towards Towra Point Nature Reserve.

The site is situated between two hilly clusters which constitute Cronulla Sand Dunes and the edge of Kamay Botany Bay National Park. Within the National Park is the peninsula's topographic peak at 62m above sea level (AMSL)

Landform generally slopes towards the coast forming valleys north-west and gaps where they meet the ocean.

Historic land clearance during the early decades of settlement caused the formation of mobile sand dunes which significantly altered the natural landscape of the Kurnell Peninsula.

The Site

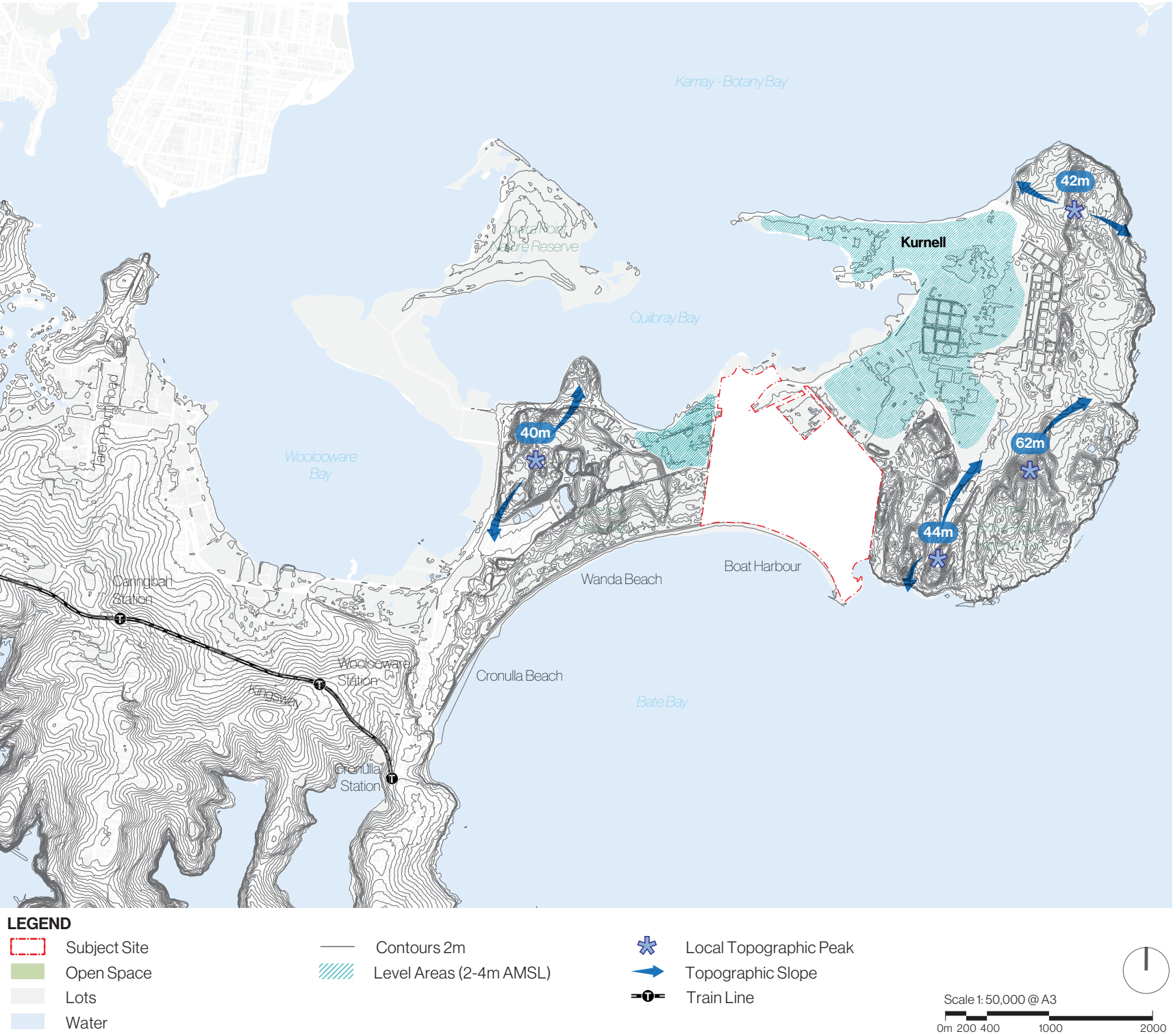
Sand dunes which formed on site after land clearance created unsecured top soil has been excavated, creating a relatively level landscape between Quibray Bay and Bate Bay.

Lot 2 North is relatively flat descending towards Quibray Bay with a current maximum landform height of approximately 4m AMSL.

There is a sudden topographic change along the site's eastern interface with Kamay Botany Bay National Park Reserve.

An understanding of the site's interface with the surrounding landscape will inform a sensitive approach to the character of the area, and the typology of open space, built form, and roads at the site's boundary extents.

The natural topography of the site has been disturbed due to historic land uses, with opportunity to reintroduce an accessible landscape during future rehabilitation.



8.9 SURROUNDING VIEWS

Views from within the site of the surrounding context consist of sprawling bushland and untouched coastline which can be accessed from its edges.

Surrounding Views

Views from the site and from the peninsula are characterised by the sweeping south coast of Cronulla Beach and Bate Bay, and the coastline of Botany Bay including Towra Point.

To the site's north-west and east, views of Towra Point and Kamay Botany Bay National Park feature low lying coastal scrub and pockets of wetland, immersing the site in its natural landscape.

Quibray Bay and Bate Bay are visible to the site's north and south, with the Cronulla Dunes and Wanda reserve to the site's immediate south-west.

Accentuating prominent coastal and ecological views will better relate residents to the environmental context of the site and its unique features, strengthening sense of community.



1. Quibray Bay facing north towards Botany Bay



2. Boat Harbour facing Bate Bay



Projecting eastwards out of Sydney's south coast, the site is afforded a panorama of high quality views, consisting of oceanic, environmental, and urban vistas.

Distant Views

Surrounded by water bodies to its north, east, and south, the site is afforded views which extend far beyond its immediate locality, towards points of interest at a regional scale.

The skyline of the Sydney CBD and the west coast of Botany Bay including Brighton-le-Sands and Ramsgate are visible to the site's north-west

La Perouse and Royal National Park to the site's north-east and south-west are key regional environmental features, highlighting existing ecological corridors.

The Georges River is visible to the site's west, while the South Pacific Ocean constitutes views to its south-east.

Views of Sydney's CBD, Cronulla, and the site's wider urban context should be captured to accentuate its prominent location and relation to other active areas.



1. Sydney CBD viewed from Quibray Bay



1. Royal National Park viewed from Boat Harbour



8.10 OPEN SPACE ANALYSIS

The Kurnell Peninsula features an expansive network of recreational and ecological spaces, with opportunity to extend through the site.

The site is in close proximity to a variety of open spaces and natural areas used for recreation. There are an abundance of ecological green spaces along the peninsula which forms a connected coastal walking trail. A number of parks in surrounding area leads to Cronulla including Wanda Reserve and Don Lucas Reserve.

The proposed Marang Parklands is undergoing an approvals process by Sutherland Shire Council. It will provide significant open space with a VPA in place for additional parklands, offering up to 50ha of recreational open space, including natural parklands, playgrounds, and bushland. The Parklands will constitute a regional park within 5km of the site servicing the wider peninsula.

Towra Point Nature Reserve and Kamay Botany National Park are within proximity of the site and provide amenity for recreation trails for walking. They do not feature accessible and recreational spaces and cannot contribute formally to the Council's open space requirements.

It is expected that district parks will be required on the site to service residential development.

A series of varied open spaces should be distributed throughout the site to service a residential community, alongside embedded ecological corridors restoring environmental links.

SSC Open Space Strategy and Implementation Plan 2021

As part of Sutherland Shire Council's Open Space Strategy and Implementation Plan it is expected that residential development on-site is to be accompanied with access to a regional park, district park, and local parks within specified distances.

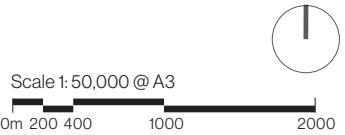
- 90% of all houses should be within 800 metres of quality open space and preferably 400 metres for high density areas.
- Regional park should be located within 5km of most homes
- District park should be located within 2km of most homes.
- Local park within 800m from most homes and preferably within 400m in high density areas

	Description	Distribution	Public Transport	Land Size
Regional Park	Destination or long-stay parks serving a regional catchment, including accessible and recreational spaces.	<5km from most homes	Within 500m of public transport stop	At least 5ha
District Park	Destination or long-stay parks serving a suburb catchment, including accessible and recreational spaces.	<2km from most homes	Within 500m of public transport stop	At least 2ha
Local Park	Everyday short-stay parks serving a walkable catchment, including accessible and recreational spaces.	<800m from most homes <400m from high-density areas.	No requirement.	Ideally 0.15-0.5ha



LEGEND

- Subject Site
- Open Space
- Lots
- Water
- Open Space owned or managed by Sutherland Shire Council
- NSW National Parks Land
- Approved Open Space
- Green Grid Opportunities (South District)
- Train Line



8.11 LOCAL CHARACTER

Character 1. Coastal Landscape

The site is bound by the Towra Point Nature Reserve and Estuarine Wetland and Quibray Bay in the north and Bate Bay and the Boat Harbour Aquatic Reserve in the south.

The southern boundary extends for 1.5km and comprises one quarter of the 5km beach front known as Cronulla Beach or Bate Bay, featuring a long stretch of sand backing with Coastal Heaths along the ridge line .

The beach front area is currently accessed by members of the public through a controlled ticketing arrangement managed by Besmaw with four-wheel drive access available from Lindum Road.

A rehabilitated dune has been maintained along the rear of Boat Harbour Beach to reduce further historic degradation of the site's top-soils due to land clearance and tides.

The eastern-most portion of the site includes a small sandstone headland which creates Boat Harbour and a small outlying reef. Extended vistas are available from within the site to the north and south and from the beach front towards the Royal National Park and Bundeena Township.

The site's southern interface and Boat Harbour benefit from proximity to ecological areas of high value and coastal headland views, with opportunity to implement a fine-grain urban form responsive to the precinct's delicate landform.



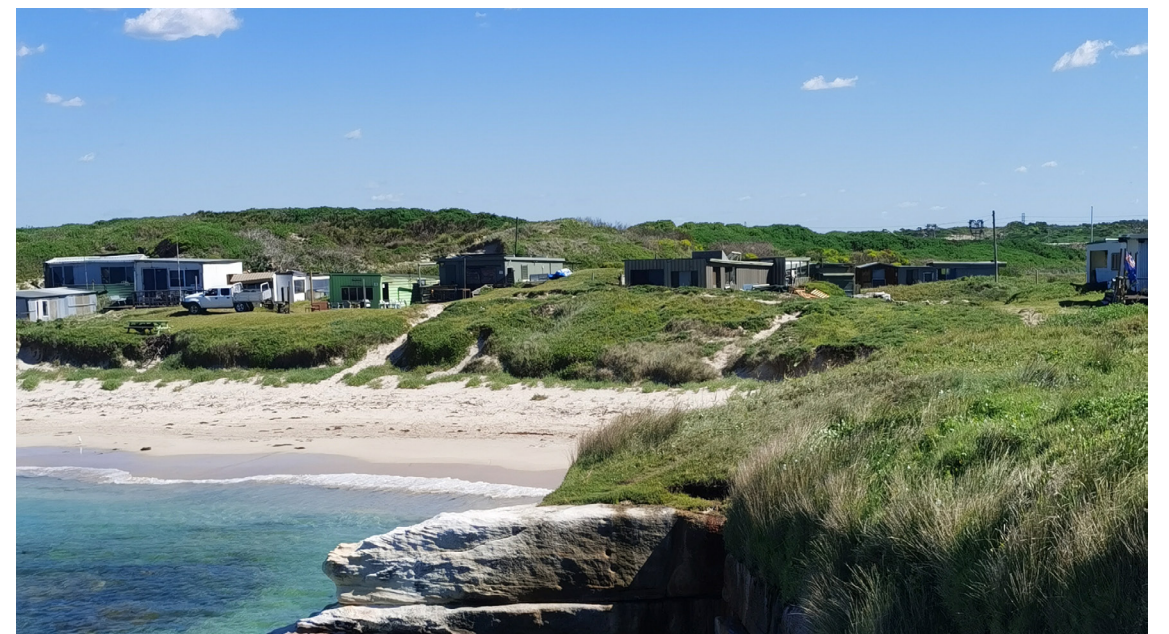
1. Boat Harbour Beach



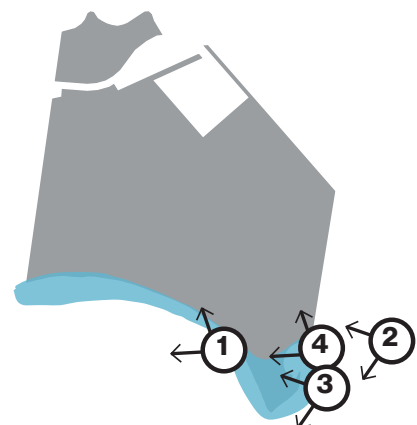
2. Aquatic Reserve area with planted Coastal Fore-dune Wattle Scrub along the ridge line



3. Boat Harbour is a sheltered bay with complex rocky intertidal area.



4. Twenty six dwellings, known as the Boat Harbour Cabins, are located in the south eastern corner of the site



Character 2. Low lying vegetated area

Lot 2 North is nestled between Quibray Bay and the Towra Point Nature Reserve, with views extending across Botany Bay to the Sydney skyline and beyond.

The area has an altered landscape modified by historical land use practices. It features large areas of stabilising grasses with horse riding facilities, low lying vegetation including, saltmarsh and rehabilitated coastal freshwater wetlands in an area that is identified having limited historical vegetation clearance.

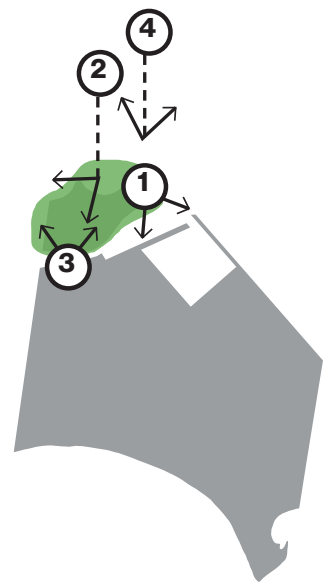
Lot 2 North's relatively level landform, low-rise vegetation, and separated allotment will accommodate a unique residential community which will respond to the modest scale of the Quibray Bay coastline.



1. Small section of wetland with boundary planting.



2. Grassland in Lot 2 North.



3. Horse riding and boarding facility



4. Quibray Bay high tide. Sydney skyline in the background.

Character 3. Disturbed landscape - brownfield

Lot 2 South is constituted largely by the existing sand extraction operations on site, to be further rehabilitated in future with VENM fill and landscaping. The landform slopes from approximately RL9 within rehabilitated areas along the coastal frontage to between RL3 and RL4 adjacent to Captain Cook Drive.

As a result of the existing sand extraction, the majority of this character area is vegetation free. The predominant landform has been altered repetitively since settlement, with agricultural land clearance creating mobile dunes which limited vegetation growth.

Lot 2 South presents a significant opportunity for urban renewal and revitalisation of the site, benefiting from its central location, capture of surrounding views, and wide extents suitable for redevelopment.



1. Sand mining in operation



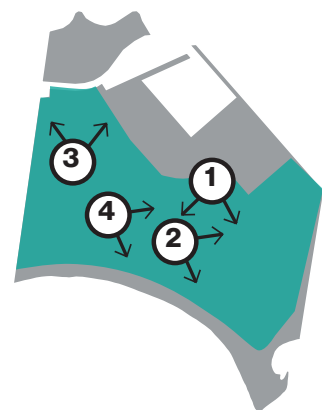
2. Sand mine dredging activities within freshwater extraction lagoon



3. Shades of topography layers



4. Altered landform with sands extraction and storing on site



Character 4. Coastal heathland landscape

This area including much of Lot 8 features a blend of rehabilitated native vegetation and invasive bitou bush and weeds. The vegetation comprises native and invasive vegetation communities including Forested Wetlands, Heathlands and Coastal Swamp Oak Scrub.

It has both environmental and Indigenous significance. An Aboriginal midden is located in the north western corner. Loose shells are observed scattering in the sand and soil.

The ongoing rehabilitation of the peninsula's ecological network will be driven within, and by existing vegetation on site, with opportunity to integrate Lot 8 into the master plan landscape strategy.



1. Rehabilitated native boundary planting



2. Casurina, Swamp Mahogany and Coastal Swamp Oak Scrub



3. Rehabilitated native boundary planting.



4. Low lying coastal planting

