02. Context Analysis

This section provides an overview of the analysis conducted around the site and its surrounding area, including the natural and built environments, historical heritage, landscape character, transportation networks, land use, topography, geology, and open space.





2.0 Context analysis

This chapter provides a comprehensive overview of the contextual analysis undertaken at the site. The contextual analysis has informed the development of the design and delved into the various natural, built, and community aspects, including:

- Land use
- Connectivity
- Topography and geology
- Open spaces and amenities
- Soil landscapes
- Non-Aboriginal heritage
- Aboriginal heritage

2.1 Aboriginal history and heritage

Berrys Bay is on Cammeraygal Country. The land was traditionally inhabited by people of several language groups, including Darug (Dharug), Dharawal (Tharawal), and at least 36 subgroups. Gamaragal, Cammerragal, Cameeragal, Camera-gal, and Kamarigal are all variations used while referring to the Cammeraygal people. They were thought to have occupied the north west side of the harbour, "from Cremorne in the east, to Woodford Bay in the west, and probably to Middle Harbour which forms a natural boundary to the north" as noted by Governor Arthur Philip.¹

Carbon dating of archaeological material provides evidence of inhabitation for as long as 5,800 years.¹ The waters of Warrane were a bountiful food resource, the Cammeraygal people traversed the water with bark canoes called Nawi. In earlier years when there was more sand in Berrys Bay, it was a traditional place to collect cockles for food. Quarantine Cave, in the vicinity, was used as shelter.¹ Traces of these old living patterns can be seen through shell middens, rock engravings, axe grinding grooves, carved trees, fish traps, and stone arrangements.² A sandstone carving of a large whale and other figures can be seen 100 metres west of the project site.



Figure 13: Map of key places in the vicinity of the project site.1

0	19th century. Numero griding grooves are a
2	Waverton Park Centre
3	Waverton Park Midde
4	Whale rock engraving
5	Coal Loader 1 - shelte
6	Quarantine Cave - use remains within the ca
0	Balls Head - One of the Includes a culturally in wallabies and pengui
8	Deep waters off Balls times.
9	Berrys Bay - tradition more sand in the bay.

Berrys Bay Connection to Country Principles, Dec 2022 Berrys Bay Urban Design Report 30% Detailed Design, 2 Dec 2023



Berry Island Reserve - traditional fishing, hunting and camping site, imerous middens, a giant carving, a waterhole, and axe are also featured.

Centre - important shelter with midden nearby.

Midden - broader cultural area and occupation site.

raving - recorded as early as the 1840s.

shelter with midden, cultural area and occupation site.

- used as a shelter and has evidence of midden he cave.

of the finest Gamaragal sites on the lower north shore. rally important spring and used to be a habitat for enauins.

Balls Head - whale birthing location in pre-colonial

ditional place for cockle gathering, back when there was



Figure 14: Carving of a whale figure located 100m west of Berrys Bay



Figure 15: Benelong Point from Dawes Point showing Aboriginal Nawis and European ships, watercolour by John Ayre, 1804. Source: State Library of NSW



Figure 16: Balls Head Sydney 1803. Engraving - Charles Alexandre Lesueur

2.2 Non-Aboriginal history and heritage

Occupation of the land began in the 1820s when a grant of 202 hectares was given to Edward Wollstonecraft, business partner of Alexander Berry. Berry and Wollstonecraft used the wharf in the bay to unload goods from their trade ship. The maritime operations on site expanded to accommodate growth in demand over time, with a stone wharf and warehouse constructed to house a clerk's office. Berry and Wollstonecraft leased space within the store and wharf to multiple businesses throughout the 1800s.

The deep waters of the Bay offered an ideal setting for shipbuilding and other industrial activities. Numerous shipbuilding yards started to pop up in the bay and Woodley's Shipyard was established in 1906. The use of Berrys Bay as a maritiime industrial hub persisted well into the 20th century.

In 1922, BP acquired the site, using the northern portion of the bay to house oil storage tanks through the 1990s. During this time, industrial use was intensified, leading to site contamination. The bund wall, constructed from the demolished 1830s warehouse to prevent oil flowing into the harbour in the event of tank ruptures, is an important remnant from this period. Several wharves and docks established during this industrial phase were left on site after use and their deteriorating remains are evident to this day.

Residential development in the vicinity resulted in advocacy for open space and amenity. Once operations of both oil storage and the coal loader were closed by 1996, the North Sydney Council endorsed public open space proposals. By 2005, remediation efforts were underway to decontaminate the land and establish parklands.

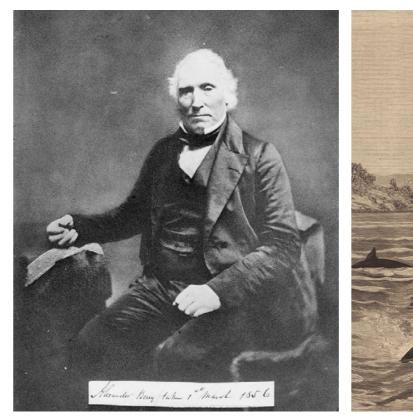


Figure 18: Alexander Berry. Source: State Library of NSW

Figure 19: The Battle of Berry's Bay - a battle with sharks in Sydney Harbour 7 March 1886. Source: State Library of NSW

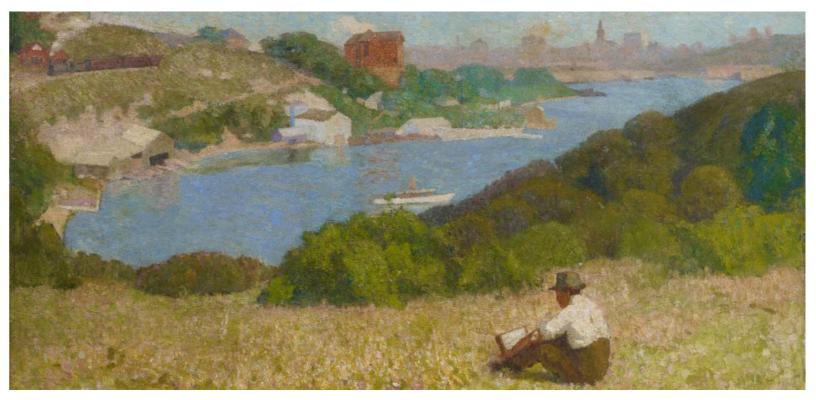


Figure 17: Down the hills to Berry's Bay, 1916, Roland Wakelin. Source: Art Gallery of NSW





1820 - Wollstonecraft land grant 1853 - used as a coal depot for ships by Alexander Berry and Edward Wollstonecraft

2 3

a

Balls Head bushland remains intact

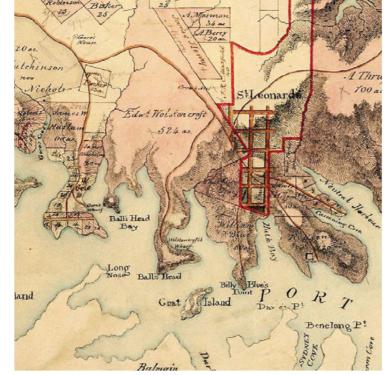


Figure 20: Willoughby parish map circa 1800s showing Wollstonecraft land grant. Source: NSW State Register



Figure 21: Sydney from Berrys Bay, 1880. Source: Stanton Library Historical Services



Figure 22: 1910 Berrys Bay engineering workshop and extended jetty. Source: Stanton Library Historical Services

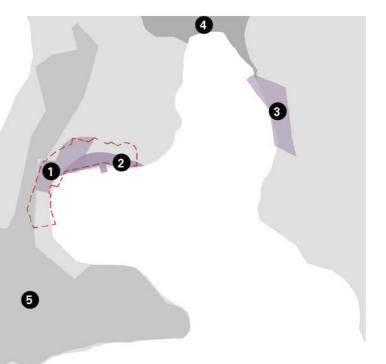






Figure 23: Wharf of seawall under construction at Berrys Bay 1917. Source: State Library NSW



Figure 24: Coastal Steamers at Berrys Bay Samuel J Hood Studio (1899 - 1953). Source: Australian National Maritime Museum



Figure 25: Aerial image 1943 - Woodley's boatshed, BP storage tanks and Coal Loader present. Balls Head bushland visibly degraded. Source: Historical Imagery NSW

0

8

Waverton Park

1996

ends in 2009

Ferry services, remaining land redeveloped as residential

Government intervention around 1978 led to establishment of Sawmillers Reserve

1992 - Coal Bunker decommissioned

Dock for Australian National Maritime Museum Heritage Fleet till 2004

Woodley's Boat Building company terminates in 1995 and the land lease

BP Oil Refinery decommissioned in

Balls Head regenerated bushland

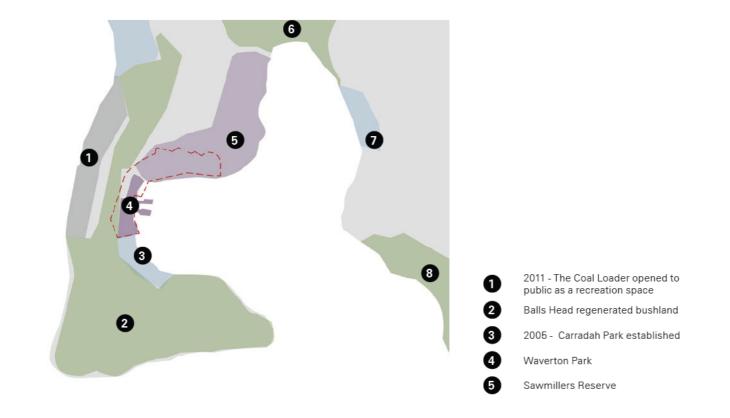




Figure 26: Aerial image 1971 - BP and Coal Loader expanded. Source: Historical Imagery NSW

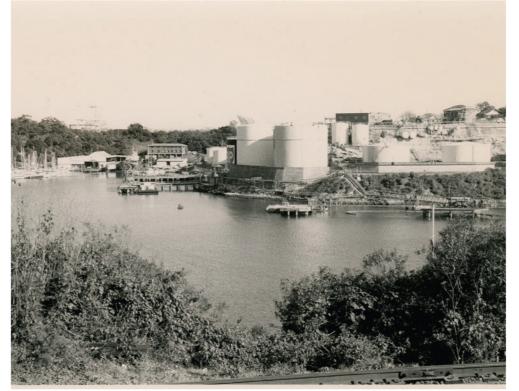
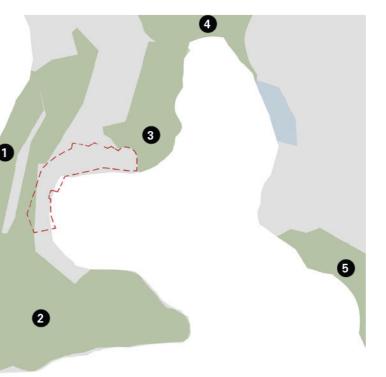
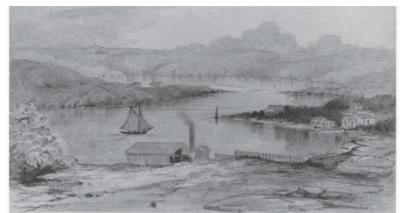


Figure 27: Woodley's Pty Ltd and BP oil terminal in Berrys Bay, 1980. Source: Stanton Library Historical Service



Figure 28: Aerial image 2004 - BP oil storage decommissioned and storage tanks demolished. Source: Historical Imagery NSW









First grant

Ò

Ň

C

The area is named after Alexander Berry, a Scottish surgeon and entrepreneur who, along with Edward Wollstonecraft, acquired large tracts of land on the North Shore of Sydney Harbour in the early 19th century. Berry and Wollstonecraft were instrumental in the development of the area, establishing farms and other enterprises.

Berry and Wollstonecraft started to use the Berrys Bay site as a depot for produce from their Coolangatta Estate in the Shoalhaven and constructed a stone wharf, warehouse and a cottage.

Pre-colonial occupation



1840

1830 New stone wharf

1836 Two storey warehouse and cottage

> Parts of the sandstone cliffs were quarried during the 1840s and an area was flattened for work yards











Woodley's Boatyard

Woodley's Boatyard was established in Berrys Bay on the lower North Shore after relocating from Millers Point, where the previous site had been resumed by the government following the outbreak of plague in Sydney.

Maritime Industries

Watty Ford's boatshed

Walter McFarlane Ford's shipbuilding yard, established in 1878, also played a crucial role in the bay's maritime history. Ford's yard produced a wide range of vessels over 40 years, including pearling schooners, island and mission vessels, surfboats, and racing yachts

Until the mid-20th century, Berrys Bay was an important industrial hub for maritime activities. It housed shipyards, boat repair facilities, and storage areas, reflecting its key role in Sydney's shipping industry. Several maritime industries, including boat builders and ship repairers, operated in Berrys Bay, contributing to the economic development of the area.



66

Excavation of cliffs to add more tanks. The cliffs were excavated to add more tanks in 1935-37. By 1961, the facility featured extensive infrastructure with thirty-one above-ground tanks and over thirty kilometres of pipelines. It also included bund walls, an administration building, roads, and wharves, remnants of which are still visible in varying states today.

Oil storage facility

Between 1922 and 1993, the site operated as a major oil storage facility, managed successively by the Anglo-Persian Oil Company, Commonwealth Oil Refineries, and BP Australia.

As the leases from the NSW Government to BP, the nearby coal loader, and the Caltex depot expired in the mid-1990s, North Sydney Council, prompted by the Waverton Precinct, formed the Waverton Peninsula Planning Taskforce, including representatives from the Department of Planning and the Sydney Harbour Foreshores Committee. While the Government pushed for major residential development on the site, local representatives advocated for public open space along the harbourside. Following this, in 1995, North Sydney Council endorsed the public open space proposals.



Remediation works on the site began soon afterwards and parklands next to the subject BP Site, now known as Carradah Park, were opened in March 2005.

BP site development

922

The first storage tank was installed in 1923



1932



Closure of operations

In 1994, operations at the site

were scaled back, and it was

dismantled, with the last one

eventually closed. The

waterfront tanks were

removed in 1996.

1970



New master plan

In 1999, The Waverton Peninsula Strategic Master Plan was developed by the Council. The masterplan outlined reuse strategies for the former working waterfront, transforming the ex-industrial BP, Caltex, and coal loader sites.



Berrys Bay Landscape Master Plan released as part of Western Harbour Tunnel.

Public open space



Berrys Bay PDLP, outlining the design of the park and community spaces, released for public exhibition.



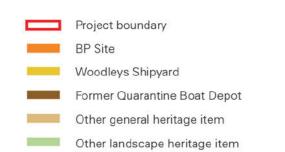
Elements of Heritage Significance within the study area

- Location of 1843 Berry's warehouse/store
 Location of 1843 stone cottage
 - Small Commonwealth Oil Refinery storehouse
- 4 Large Commonwealth Oil Refinery storehouse
- 5 1930 possible funicular tramway
- 6 Stone and concrete foundations
- 2 Large 1923 fuel tank
- 8 Remnants of 1930 western wharf
- 9 Site of Berry's sandstone block wharf
- 10 Sandstone block wall
- 1936 bund wall
- Remnants of 1960 timber T-wharf
- 13 Slipways

3

- 14 Woodley's Shipyard
- 15 Southern seawall
- 16 Northern seawall
- 1 Winch
- 18 Vegetated Ssetting
- 19 Derelict timber wharf

Data source: Western Harbour Tunnel and Warringah Freeway Upgrade Technical working paper: Non-Aboriginal heritage, Berrys Bay 30% Detailed design - sensitive area mapping



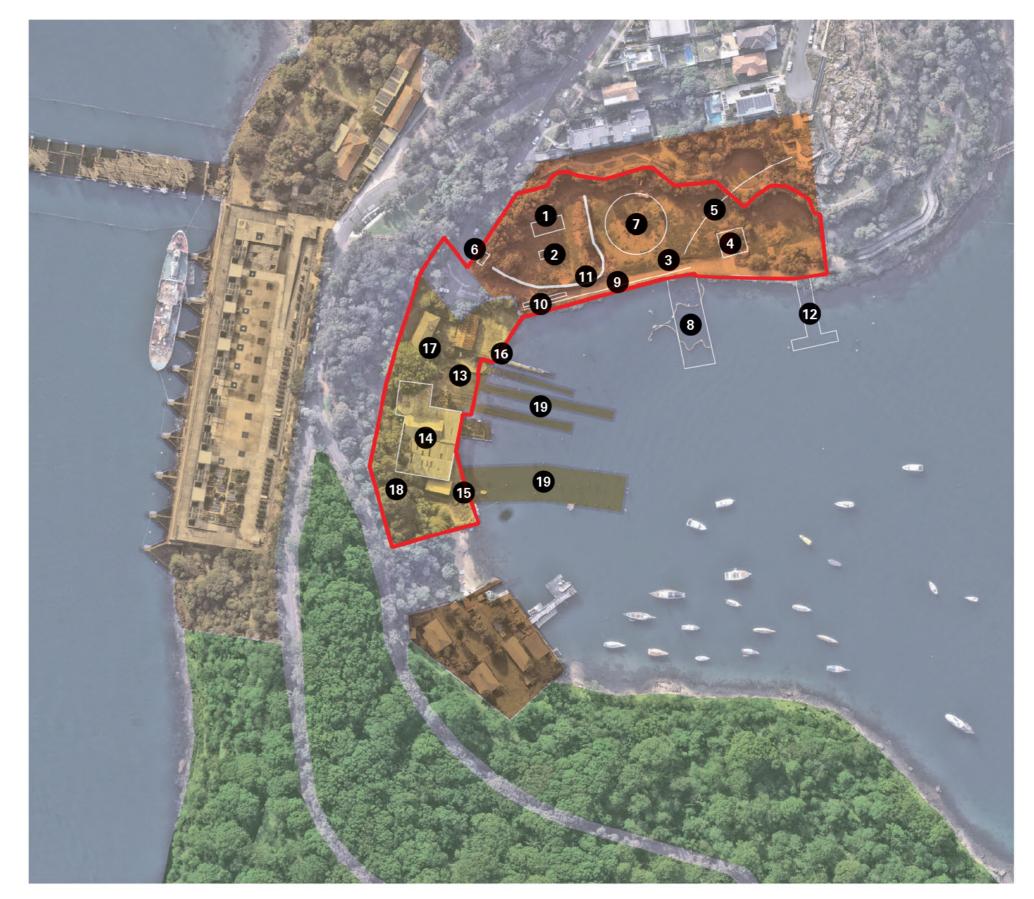


Figure 29: Non-Aboriginal heritage map





Figure 30: Winch

Figure 31: Slipways





Figure 34: Remains of 1930 Western Wharf and sandstone block wharf



Figure 32: Stone and concrete foundations



Figure 35: 1936 bund wall



Figure 38: Derelict timber wharf



Figure 36: Woodley's Shipyard and Woodley's Shed







Figure 33: Location of large 1923 fuel tank

2.3 Topography

Berrys Bay comprises two distinct coves—one oriented to the north and one oriented to the west of the bay. The scope for this project sits along the northern and eastern shore of the western bay, opposite Balls Head Reserve. The land along the bay is relatively flat, elevated just above the water level of the Harbour, with land rising steeply to the north to a prominent at Crows Nest and North Sydney, around Pacific Highway. Balls Head Reserve peninsula is one among a series of similar landforms and is located between McMahons Point and Berry Island. A ridge runs along Balls Head Reserve to Waverton, the land on either side slopes to the coast.

The northern edge of the bay features a relatively flat, wide terrace closer to coast level, framed by steep Hawkesbury sandstone cliffs further north. The old BP oil storage facility has left its mark on the terrain in the form of levelled circular foundations.

A stairway is presently used to traverse between the levels. Woodley's Shed sits on the water's edge and the land behind slopes steeply up to the existing road on the ridge line. This crescent-shaped arrangement positions Berrys Bay with prominent views to the Harbour Bridge and Balls Head Reserve, particularly from higher vantage points along the sandstone cliff edges.

Design considerations:

- The natural slope of the land can be leveraged for water-sensitive urban design strategies
- The cliffs, combined with dense vegetation, form a strong visual and physical barrier from the surroundings. While this enhances the site's character, it also poses challenges for surveillance and security, limiting opportunities for additional entry points
- The exposed rock cuttings serve as a striking visual feature and could be retained and celebrated in the design
- Key viewpoints to the Harbour Bridge and Balls Head Reserve should be identified, with activities and movement patterns planned to enhance and frame these views
- The lookout points from Carradah Park offer a comprehensive view of the site—the view of the park from above should be considered in the final design
- Compared to the surrounding terrain, the site features relatively flat land, providing opportunities for open and flexible public spaces
- Access to the site is challenging due to the level difference with Balls Head Road, requiring thoughtful integration of pathways and connections



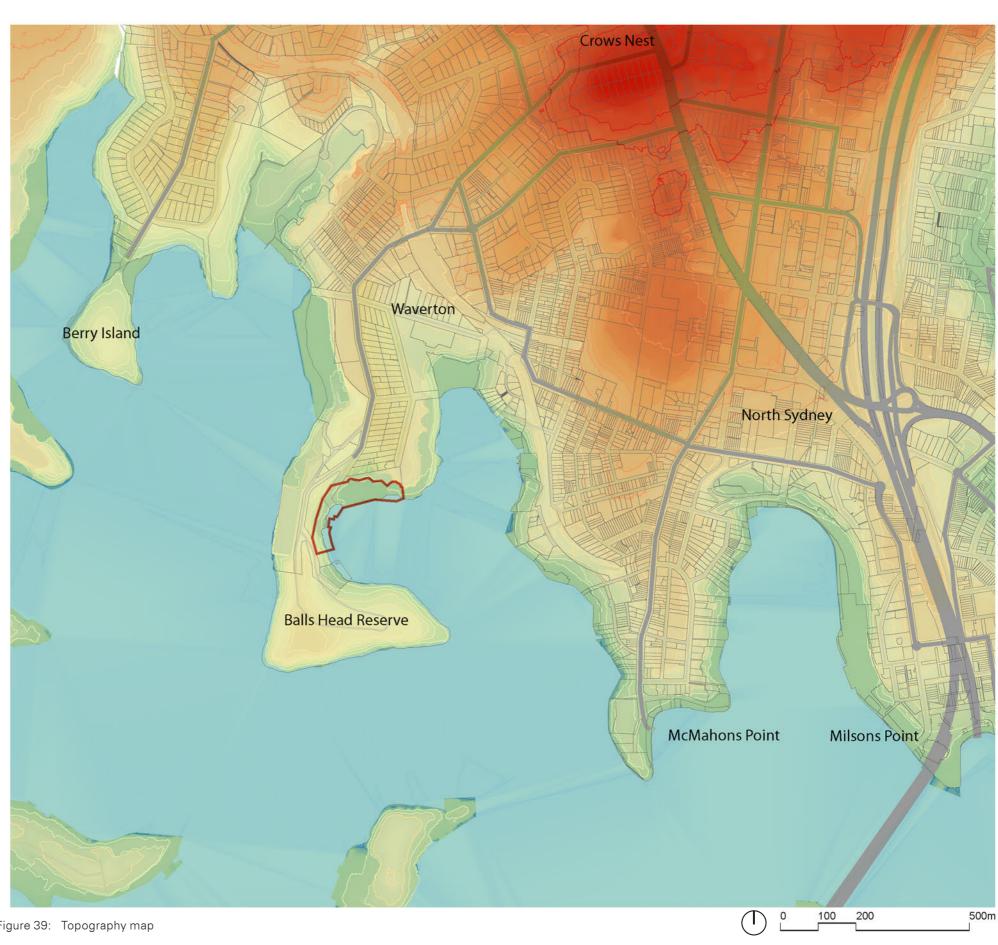


Figure 39: Topography map

2.4 Transport and connectivity

Presently, there are limited transportation options to reach the site.

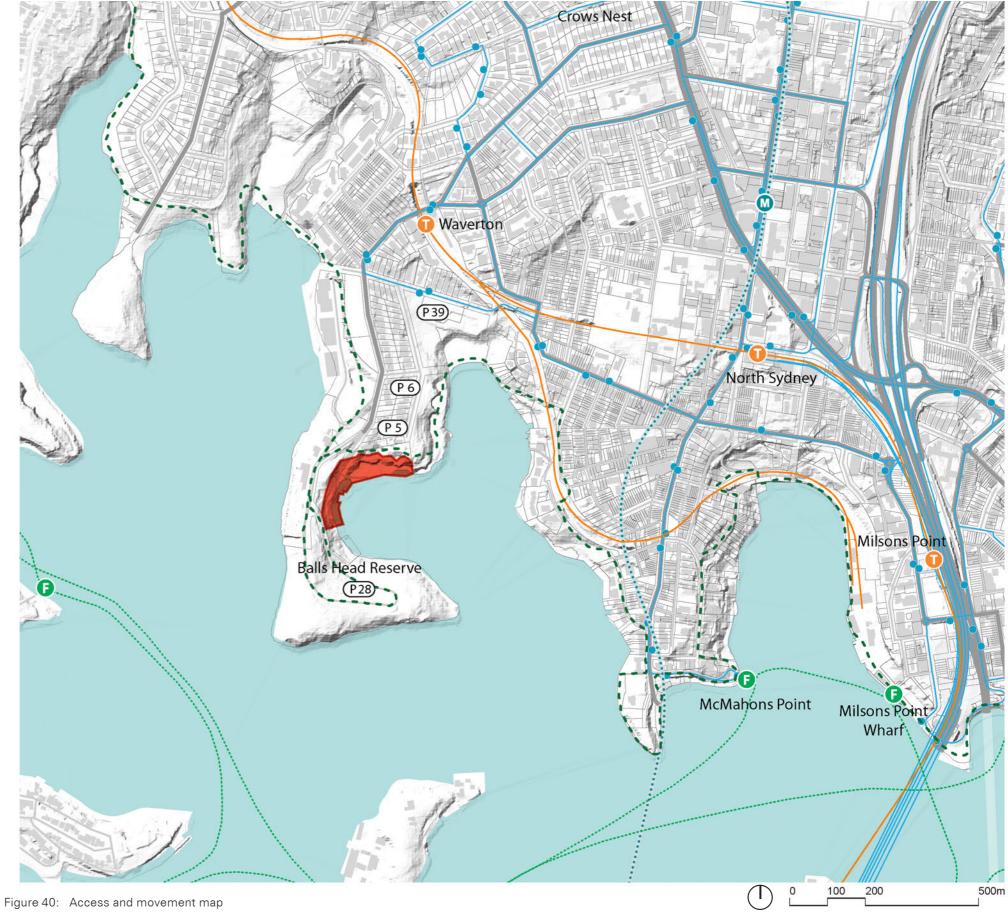
- » Waverton Station on the North Shore Line is the closest train station, within an 800m catchment. The North Sydney train station and Victoria Cross metro station are further north west, outside of the walking catchment
- » One bus route, between Lane Cove and North Sydney, services Woolcott Street and provides the closest point of public transport access from the site
- » While ferry routes dominate the harbour, Balls Head Reserve does not feature a wharf; the closest ferry wharf is McMahons Point
- » Balls Head Drive is the only road connecting the peninsula to Waverton and beyond
- » The North Sydney Foreshore Walk forms a continuous loop of access for pedestrians along the coastline

Currently, there is no dedicated parking for the area, however on-street parking is available along Balls Head Road

Design considerations:

- Public and private transport access is limited on the site, with access further
- challenged by topography; this condition lends the park to local use, serving primarily those in the walking catchment
- Strengthen the connection to the Coal Loader to enhance accessibility and integration with the broader precinct
- Explore opportunities to increase accessible parking where feasible
- Complete the missing link in the Foreshore Walk, ensuring a seamless connection with the existing pedestrian tracks
- Plan service vehicle paths efficiently and consider alternative solutions to minimise or eliminate the need for on-site vehicle movement
- Implement a clear and prominent wayfinding system, both on-site and off-site, to guide visitors effectively to the park and its key entry points





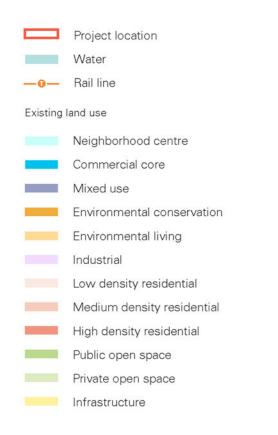
2.5 Land use and character

Berrys Bay and Balls Head Reserve evolved from old industrial land. This is apparent in Figure 41, where a majority of the immediate context and peninsula is classified as environmental conservation land with small pockets of industrial use still identified, throughout the proposed site area and further south at the former Quarantine Boat Depot. Residential clusters sit further north, which have grown from the first significant settlement at Waverton, with a small local centre and a much larger commercial centre at North Sydney.

Beyond the low-density residential context of the Balls Head peninsula, the suburbs of North Sydney, and McMahons Point feature areas of high-density residential, contributing to significant density of residents in the broader walking catchment of the park. Waverton remains a medium- to low-rise suburb despite its zoning. Within these residential clusters, there are few open spaces established and the existing parks are relatively small. The reserves and environmental conservation land along the Harbour waterline are the main supporting green spaces; namely Berry Island Reserve, Balls Head Reserve, Carradah Park, Waverton Park, and Blues Point Reserve.

Design considerations:

- Design multifunctional spaces that accommodate various activities, including play facilities, community gardens, and flexible open areas for events
- Strengthen connections with the Coal Loader and the Coal Loader Centre for Sustainability to enhance the site's role as a key destination
- Introduce amenities that attract diverse user groups beyond local residents, such as picnic areas and gathering spaces, while considering the access challenges and prioritising access for pedestrians
- Integrate green infrastructure, native vegetation, and wildlife habitats to create an ecological space that supports biodiversity and appeals to nature enthusiasts
- Apply Crime Prevention Through Environmental Design (CPTED) principles to enhance safety, considering potentially lower usage on weekdays



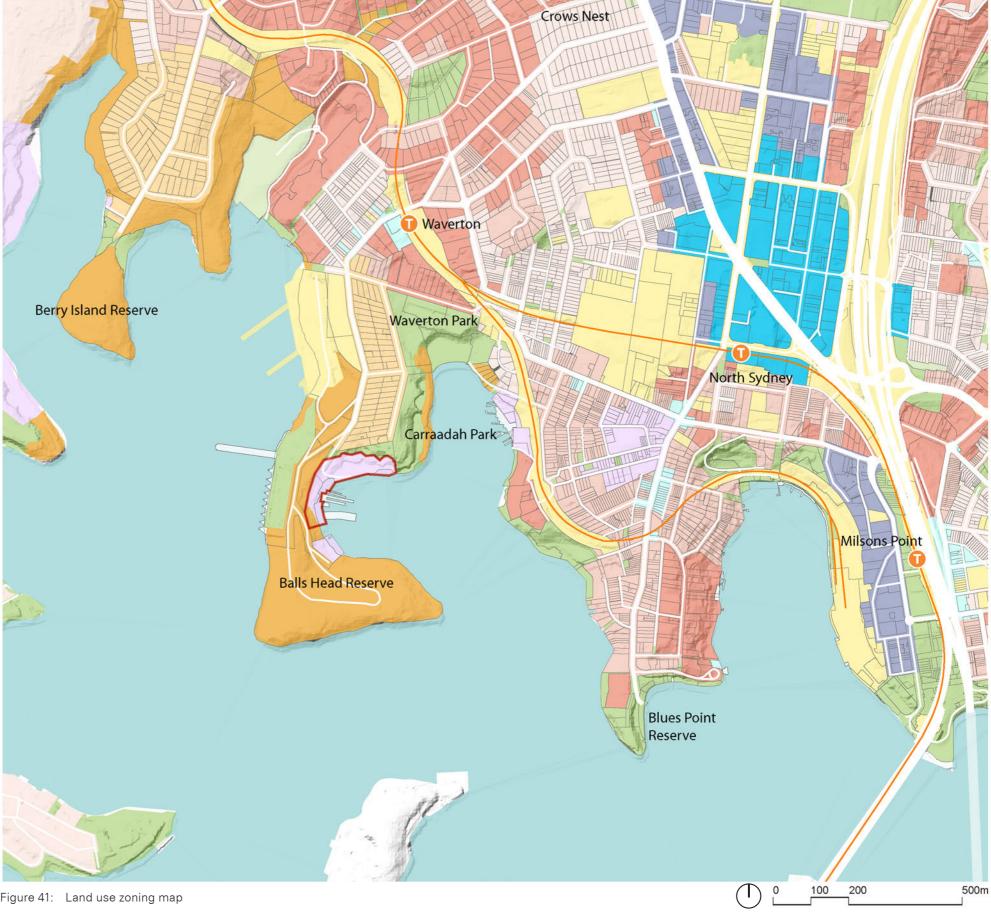


Figure 41: Land use zoning map

2.6 Open space network and amenities

The site is located among a series of public spaces along the northern foreshore of the Harbour , including Waverton Park, Carradah Park, Balls Head Reserve, and the Coal Loader. These spaces feature different recreational amenities like sports grounds, play spaces, and lookout points. The North Sydney Foreshore Walking trail connects most of these existing green spaces.

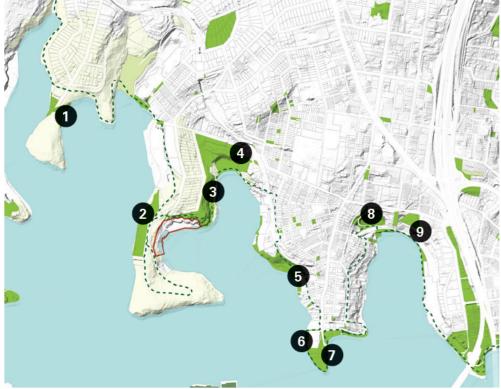
Design considerations:

- Consider the character of the surrounding open spaces to have visual and experiential continuity
- Play space provision for the suburb could be enhanced by adding play features in the new open spaces
- Explore opportunities for future-proofing connections to the harbour from the park to allow for water-based recreational facilities
- Express the site's unique character and history, creating a distinctive offering that ties in with the Coal Loader
- Provide spaces for larger gatherings and sheltered community areas, addressing a gap in the surrounding amenities





Figure 42: Open space network map

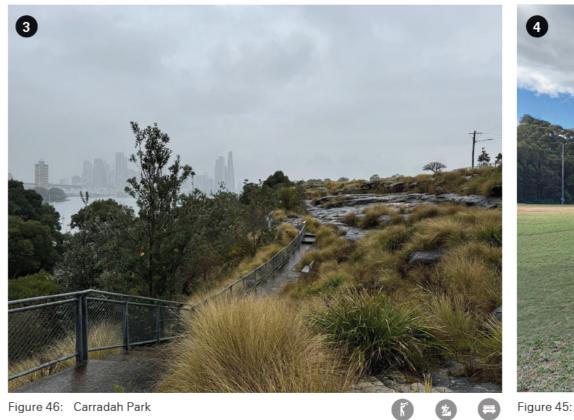








2









.....

G

#

(ii)

ß

8

Ţ

汔

6

÷.

Open gathering space

Drinking fountain

Look out points

Playground

Sports field

Fitness equipment

Workshop and learning spaces

Water access / slipways

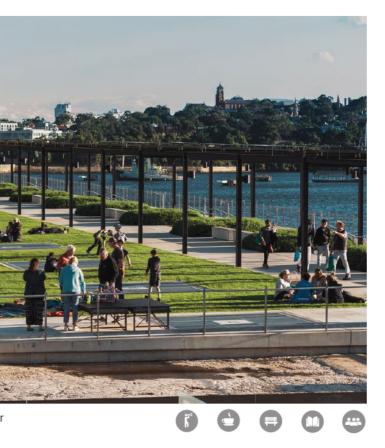
Bushwalk / trail

Cafe

Picnic and BBQ facilities

Seating

Toilets





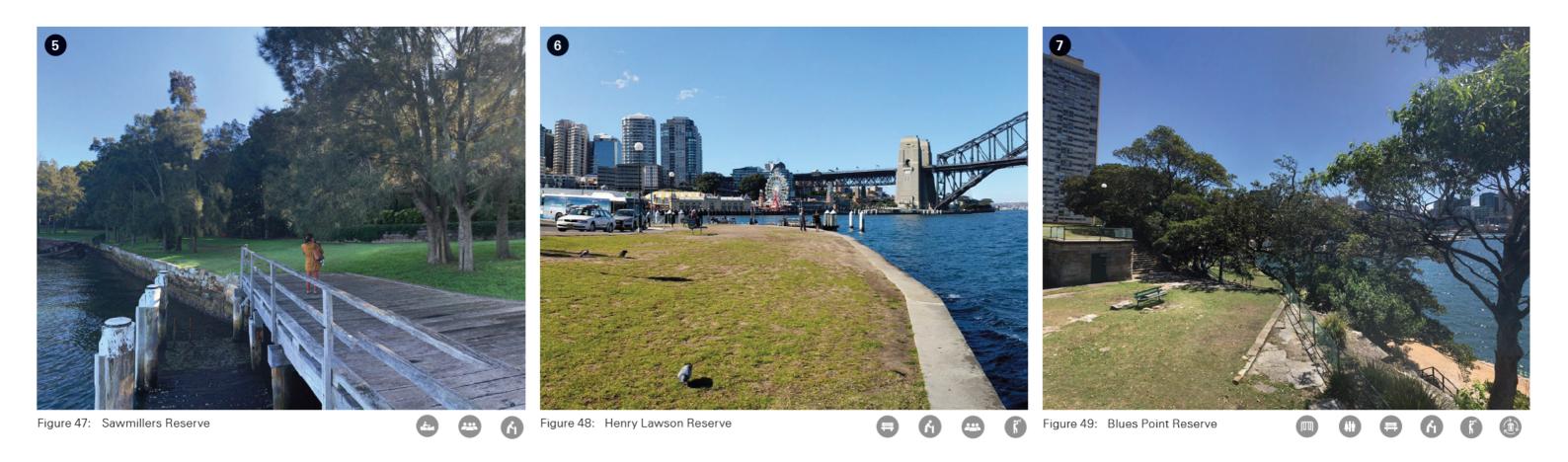




Figure 50: Quibaree Park (Lavender Bay Parklands)

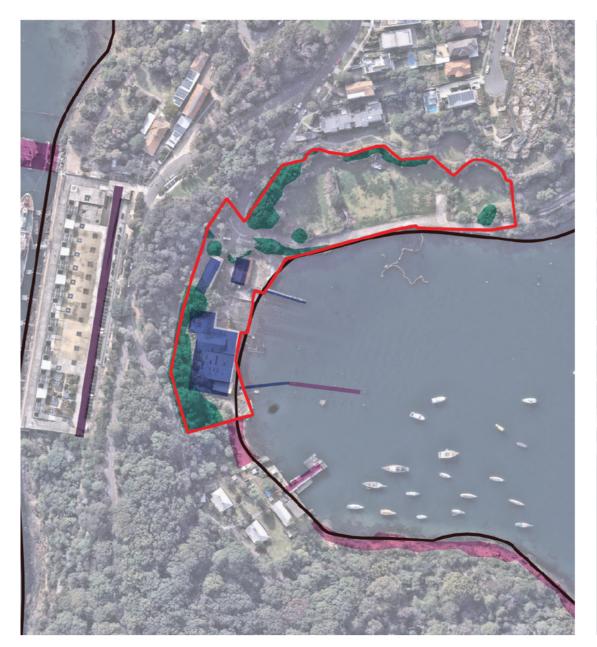
Figure 51: Clark Park (Lavender Bay Parklands)

2.7 Environment

An assessment of environmentally sensitive areas was undertaken as part of the 30% concept design phase. The outcomes from the assessment led to the identification of sensitive habitat for microbats, native vegetation and planting clusters, and varied intertidal and subtidal habitats.

Design considerations:

- Protection and enhancement of mudflat and rocky shore habitat.
- Opportunity to express tidal narrative and relationships with the land.
- Incorporation of native species in landscape design.







	Project boundary
	Urban Exotic/Native
	Native Plantings
	PCT 3594: Sydney Coastal
XXX	Former PCT 1778 / BVT ME Foreshores Forest

I Sandstone Foreshores Forest E65 - Coastal Sandstone



Project boundary

Highly sensitive key fish habitat (Type 1)

- Seagrass
- Subtidal rocky reef

Moderately sensitive key fish habitat (Type 2)

- ---- Intertidal rocky shore
- Intertidal sand and mudflat

Minimally sensitive key fish habitat (Type 3)

Shallow and deep soft sediment habitat

2.8 Opportunities and constraints - Precinct 1

Precinct 1 was identified in the master plan as providing open recreation zones, play spaces, and flexible gathering spaces, while maintaining heritage elements and views to the Harbour. The existing conditions outlined in the preceding analysis create opportunities and constraints to be addressed through the final design for the parklands. The imagery on this page, and map overleaf, highlight the key opportunities and constraints identified through analysis.



Figure 53: Existing bund wall



Figure 54: The sandstone escarpment is a prominent feature across the precinct



Figure 55: Water channels running along the escarpment edge create conditions suitable for frog habitation



Figure 56: Existing Sydney Water Pump Station on site



Figure 57: Existing Marine Workshop



Figure 58: Remnants of the industrial heritage

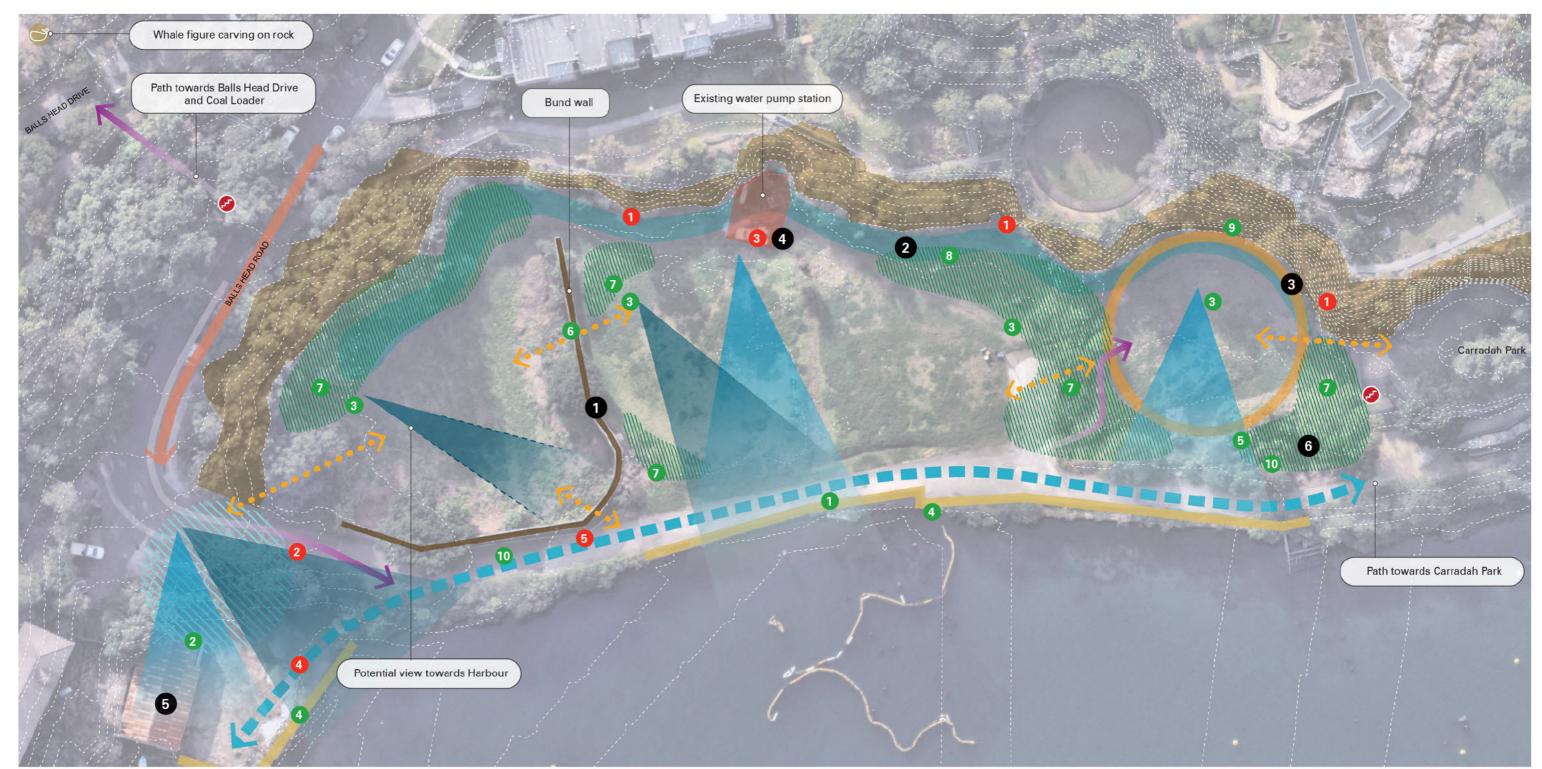


Figure 59: Precinct 1 opportunities map

Constraints

- Rock cuttings and dense vegetation resulting in strong visual and physical barrier
- 2 Steep path of access into the site from Balls Head Road
- Existing water pump station
- 4 Difficulty in creating accessible paths across level differences
- Existing bund wall dominates landscape and blocks views to Harbour and 5 Reserve

Oportunities

- Create a continuous Foreshore Walk, connecting Carradah Park to Council 0 Beach.
- Demolish the Marine Workshop to create a vibrant Foreshore Plaza, opening 2 up space for public gathering
- Maximise viewing opportunities by aligning spaces and movement paths with key sightlines. Provide seating opportunities gathering spaces 3
- Express block sandstone wharf elements along the coast line, integrating it 4 with the Foreshore Walk
- Integrate the maritime and industrial heritage of the land through traces of oil 5 storage cylindrical foundations
- Integrate the 1930s bund into public space design

6

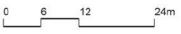
8

9

10

- Improve canopy cover and introduce native planting 7
 - Enhance habitat and biodiversity through integration of existing water movement patterns and native planting along escarpment
 - Express sandstone rock cutting as a distinct visual feature
 - Celebrate the industrial history of the site through creative heritage
 - interpretations and adaptive reuse of existing structures





2.9 Opportunities and constraints - Precinct 2

Similarly to Precinct 1, Precinct 2 features several existing conditions that lead to opportunities and constraints in the realisation of the parklands. Precinct 2 is dominated by existing dilapidated buildings, which offer potential in the transformation of the precinct from remnant industrial to public recreation. The opportunities and constraints are outlined through photos and the map overleaf.



Figure 60: Woodley's Shed and slipways



Figure 62: Protruding sandstone inside Woodley's Shed



Figure 63: Existing access to the site from the south side



Figure 61: Existing seawalls in poor condition

Constraints

0	The rock cuttings and dense vegetation create a strong visual and physical barrier, limiting permeability
2	Access to the west and south side of the site is poor, with the existing path being steep and in deteriorated condition
3	Safety concerns due to overgrown vegetation
4	Dilapidated condition of Woodley's Shed
5	The significant level changes across the site present challenges in achieving accessible paths
6	The existing seawalls are in poor condition, necessitating potential reinforcement

Flooding and sea-level rise issues

Opportunities

- 1 New accessible Foreshore Walk as the spine
- 2 Demolish the Marine Workshop to create a vibrant Foreshore Plaza, opening up space for public gathering
- 3 Maximise viewing opportunities by aligning spaces and movement paths with key sightlines. Provide seating opportunities gathering spaces
- Demolish the existing administration building to allow for revegetation of hillside
- Provide a combination of outdoor, indoor and covered community spaces diverse activities and social interactions
- 6 New forecourt and access-way for maintenance and emergency vehicles, ensuring functionality without disrupting public spaces
- Leverage the boatyard's strong visibility from both its immediate surroundings and wider areas to highlight its distinctive form. Enhance its architectural presence, establishing it as a landmark that reinforces the site's
- identity and sense of place
 Provide space for new formal kayak storage closer to the Council Beach access, enhancing convenience for water-based activities

Extend the foreshore landscape, integrating it seamlessly with built elements

Incorporate the existing site features including the protruding sandstone and rock cuttings to the design

Celebrate the maritime industrial history of the site through creative heritage interpretations and adaptive reuse of existing structures, integrating historical narratives into the built environment and public spaces

- Harbour Bridge View
- Balls Head Reserve View
- Parklands view
- IIIIIIIII New landscape
 - Steep path
 - Vehicle access
 - Forecourt

()

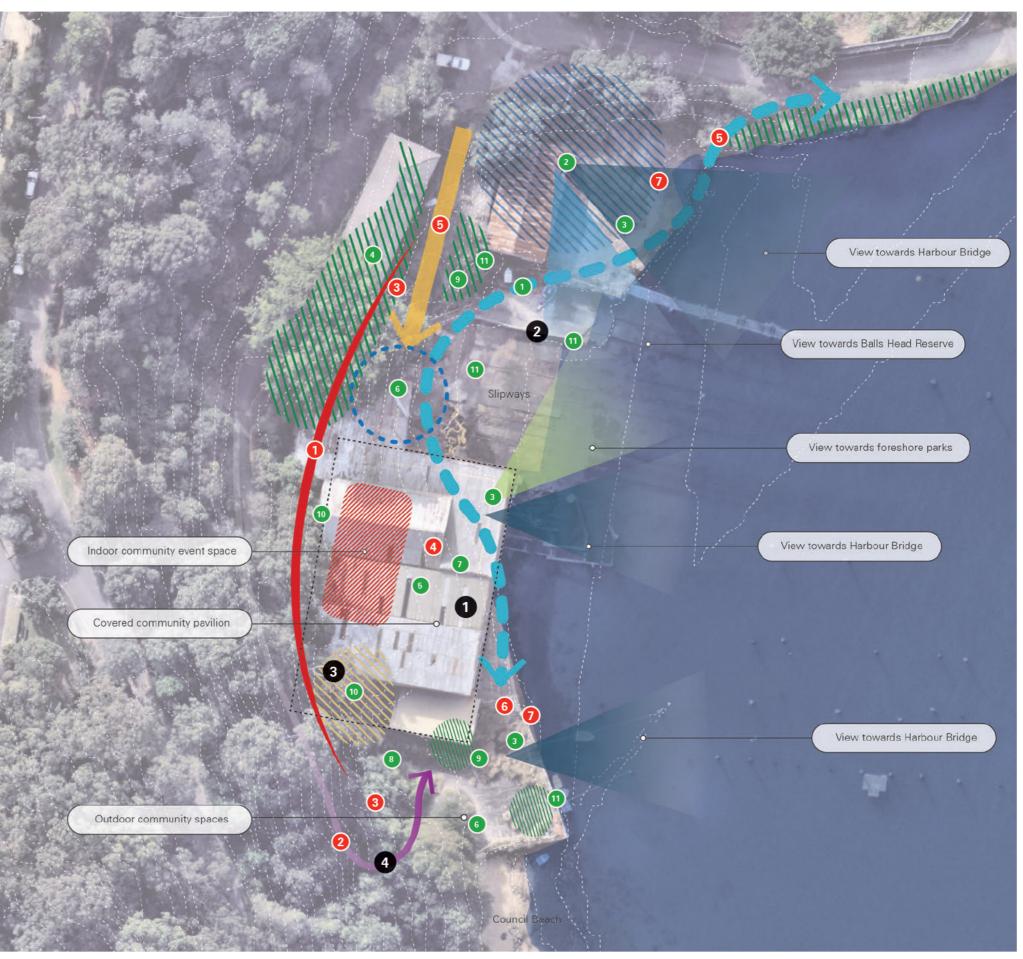


Figure 64: Precinct 2 opportunities map