



COCKATOO ISLAND / WAREAMAH MASTER PLAN

AUGUST 2024

PREPARED FOR SYDNEY HARBOUR FEDERATION TRUST



Harbour
Trust



TYRRELL
STUDIO

ACKNOWLEDGEMENT OF COUNTRY

The Harbour Trust acknowledges the Traditional Custodians and Owners of the lands, waters and skies of Sydney Harbour, including the places under our stewardship.

We respectfully acknowledge the Traditional Owners of Sydney Harbour, including those belonging to the Borogegal, Birrabirragal, Cammeraygal, Gadigal, Gayamagal, Wallumedegal and Wangal clans.

We acknowledge this Country, the custodianship of its people, and the ongoing connection to culture, lands and waters. We pay our respects to all surrounding clans of the region and honour their Elders past, present and emerging.

The project team recognises we are working within a cultural landscape and understand designing with Country is a privilege that comes with responsibility. We are guided by the inspiration of Country and the knowledge it contains.

The project team acknowledges the Traditional Owners and knowledge holders to this place. We understand that the relationship between the Harbour Trust and Traditional Owners is a shared journey at its beginning – a journey requiring the long-term development of an enduring understanding of Country that is based on deeply held knowledge of place.

Terminology and dual naming:

The term Wareamah is the First Nations name for Cockatoo Island. The term is registered with the Geographic Naming Board of NSW. The Harbour Trust has opted to use the term within this master plan noting that naming requires further research and consultation with Traditional Owners and the community.



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Bangawarra, led by Traditional Owner Knowledge Keeper Dr Shannon Foster, provided Connecting with Country Spatial Co-Design for the draft masterplan, Rowena Welsh- Jarrett and Gujaga Foundation – representing Traditional Owners, knowledge holders and the First Nations community – provided further First Nations cultural guidance for this final master plan.

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Foreword

Established in 2001, the Sydney Harbour Federation Trust (Harbour Trust) manages Cockatoo Island / Wareamah, North Head Sanctuary in Manly, Headland Park in Mosman, Sub Base Platypus in North Sydney, Woolwich Dock, the former Marine Biological Station at Watsons Bay, and Macquarie Lightstation in Vaucluse.

These sites are unique places, each possessing extraordinary natural beauty and rich heritage values. Layers of First Nations, convict, colonial and military heritage, together with diverse and endangered ecological habitats, characterise the sites.

While originally intended to be a transitional body, we have evolved into a permanent agency, responsible for supporting a range of activities. This includes management of sites, adaptive re-use of the assets and initiatives to activate public domain. Conservation, protection and interpretation of these nationally-significant places are our primary objectives.

We annually welcome around two million visitors to our sites with a mix of recreational activities, events, cultural partnerships and commercial enterprise. We provide public access to 145 hectares of land on or near Sydney Harbour.

This is one of three master plans created and consulted on with the community in 2023, the others being Middle Head / Gubbuh Gubbuh and North Head Sanctuary.

This master plan for Cockatoo Island / Wareamah examines the site's cultural and natural heritage values, its constraints and opportunities. It presents our long-term vision of place.

Our exhibition of the draft master plan from November to December in 2023 revealed strong community support for this long-term vision.

Many individuals, community groups and organisations contributed to the conversation. We thank those who provided their generous time and valuable input to get us to this important milestone – the publication of the Cockatoo Island / Wareamah Master Plan.

This document concludes the master planning process. Within the context and controls of the statutory framework, this master plan will guide future design decisions and actions for Cockatoo Island / Wareamah.

Master planning for this significant site marks considerable change for the Harbour Trust. It has required enhanced engagement with community, state and local government.

This has included engagement with Traditional Owners, Elders and knowledge holders – a process that is contributing to a deep and enduring relationship that enriches our stewardship of the lands.

Janet Carding
Executive Director



Fig 1. Cockatoo Island / Wareamah from the air with cadastral boundary shown. Source: Six Maps

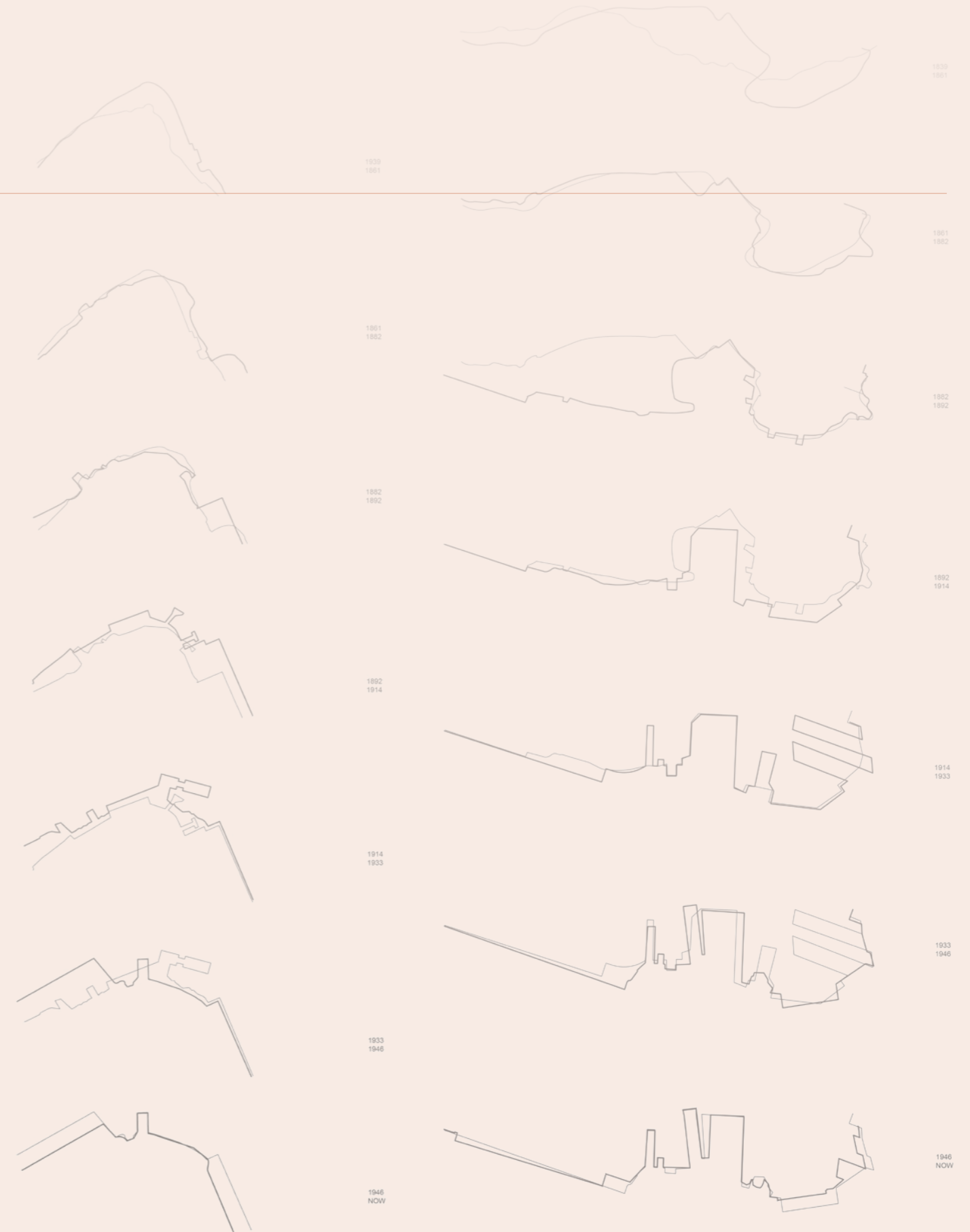
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Executive summary

1.1 Executive summary

1.2 Master plan

1.3 Aerial views – present day and artist impressions



1.1 Executive summary

The Cockatoo Island / Wareamah Master Plan presents a new vision for the island to be reactivated and transformed as the vibrant and connected heart of Western Sydney Harbour.

It offers a sympathetic spatial response to Cockatoo Island / Wareamah's layers of heritage and complexity, with authentic places and spaces re-imagined to enable new and expanded visitor experiences, and adaptive re-use and place transformation over time. The vision for the island is set out more fully in section 2.1 of the master plan.

Importantly, the master plan will reconnect this somewhat isolated place to the cultural fabric of the city and of the nation, and restore and give new purpose to its many closed and unused buildings. As a UNESCO World Heritage site, Cockatoo Island / Wareamah can be proactively positioned as a platform for the Australian story to be better understood, and to become a premium Australian heritage experience. It can also be central to Sydney Harbour tourism, maritime ecology and ecosystem restoration, part of pre-eminent festivals and major events, and connected with whole-of-harbour First Nations experiences.

The Harbour Trust defines a master plan as two things: firstly, a robust analysis of an area to establish key constraints and opportunities; secondly, a mechanism to use these insights to inform a spatial design response. This design response helps to ensure a coordinated approach to future renewal, underpinned by a set of key actions and guiding principles. Key actions are further supported by design and delivery strategies.

In short, a master plan proposes a future vision of place. It outlines the full potential, rather than what current funding permits, so future decisions on projects and staging can be made strategically. This proposal is not a finished solution to the island; rather – consistent with the island's history of transformation – it enables a new chapter of change, attracting visitors, families, tourists, artists, businesses and workers to rediscover and enjoy Cockatoo Island / Wareamah as a must-visit destination on Sydney Harbour.

The master plan has been created within the statutory framework for the island, including the World, Commonwealth, and National heritage listings, together with the Harbour Trust's 2003 Comprehensive Plan and 2018 Cockatoo Island Management Plan.

The master plan is the product of extensive and ongoing community consultation, underpinned by First Nations engagement. In 2019 the Harbour Trust took on board community feedback through its 'Cockatoo Island dialogue'. This was followed in 2021 with further consultation on a draft concept vision for the island.

This feedback informed the preparation of the draft master plan, which the Harbour Trust exhibited for public comment in late 2023. The draft master plan attracted a high level of support reflecting the depth of consultation undertaken. Feedback from the exhibition was carefully considered and is reflected in this final version of the master plan. Outcomes reports on the range of consultation undertaken since 2019 are available online at:

<https://www.harbourtrust.gov.au/have-your-say/>

Detailed analysis and feasibility studies have examined the island from a variety of perspectives, and the results have been synthesised into a multi-faceted collage of context and character that starts with the resilience of its sandstone foundations.

By working with the fundamental spatial, material and cultural characteristics of the island, the design response clarifies and weaves together four distinct layers of history and heritage, and fuses them with improved circulation, better land use, and supporting infrastructure to create a master plan of 18 key elements, which emerges from the unique qualities of place.

The four historic themes that map out natural and cultural heritage journeys around the island are:

1. Natural history of the island
2. Connecting with Country
3. Convicts, prisoners and schoolchildren
4. Dock working, shipbuilding and defending Australia

This will begin with an enhanced arrival journey via water within a new arrival square and orientation hub in the convict-built Convict Workshop. Here visitors can choose their route to explore the island supported by digital guides, new lifts and improved wayfinding.

For each of the journeys, the master plan details the activities and interpretation that visitors will experience including:

- Exploring Caring for Country through the replanting of native species and reconnection of the escarpment to the water at the enhanced northern parkland
- Rehabilitating the waters of the island so marine life returns and swimming is possible from the slipways
- Canoe-making as cultural practice and kayak hire that supports First Nations business
- Exploring the Barracks Precinct, with the kitchen, mess and sleeping quarters for convicts interpreted to learn their stories of resilience, rebellion and escape
- Discovering the history of the girls and boys reform schools that once isolated young people on the island
- Visiting Fitzroy Dock, which may, after investigation, be emptied of water and displayed so visitors can appreciate the achievement of convicts excavating its vast volume by hand and its use to repair and maintain ships and submarines
- Taking part in hands-on experiences about maritime engineering and design
- Learning how the island helped to defend Australia through two world wars and beyond
- Enjoying an immersive evening program that, through a looped walk, tells the story of the island's transformation, uses and occupants over time, weaving together the historic themes through sound, light and projections.

The focus is on transforming the visitor experience, so the island attracts new and repeat visitors with more reasons to visit and return, and encourages visitors to extend their stay into the evening and overnight.

Importantly, the island will continue to be used for maritime activities and over time this will grow through collaborations, boat building and repairs, and First Nations-owned businesses. Cultural and creative activities will also be expanded across the island, along with the Harbour Trust's ongoing event programming.

The master plan also considers opportunities for a wider range of food, beverage and accommodation offerings, able to mature and evolve as visitation grows.

The master plan sets out the technical constraints relating to infrastructure, utilities, transport and access, and asset renewal, and how to address them so that visitors, tenants and those hosting and attending events and conferences will have better access, power, data, water, back of house and other supporting services. Long-term environmental sustainability and resilience has been considered throughout.

Through this transformation, Cockatoo Island / Wareamah has a future as significant as its rich past. The transformation will build on the island's bedrock of resilience, and the natural and cultural values that contribute to Australia's history and the world's heritage.



Fig 2. Cockatoo Island / Wareamah

1.2 Master plan

The master plan provides further details on each of the illustrated long-term proposals numbered below.

1. Arrival square – An additional ferry wharf at the Ruby Steps will welcome visitors into the island's new arrival and orientation square. Heritage features will be highlighted and the square activated with events, educational and creative activities, Country and cultural activities, and signature food and beverage.

2. The Convict Workshop – A significant convict-era building will be restored to be the main visitor hub of the island, offering visitor services, tours, island information and general assistance. Its beautiful sandstone façade will form a dramatic backdrop to the new arrival square.

3. Fitzroy Dock – Carved from sandstone by convict labour and the largest engineering project in Australia when it was completed in 1857 – Fitzroy Dock is currently flooded. The potential to drain this extraordinary structure will be considered, adding unique interpretive and light shows to become a premium island experience.

4. The industrial and turbine halls – These cathedral-scale spaces will be restored to support culture, creative arts, exhibitions and First Nations and events programming. They will be linked to lifts to the upper plateau, new food and beverage offerings and new supporting infrastructure that will enable more frequent, diverse uses. Rooftop solar power will support clean energy for the island.

5. Eastern Apron – The island's major event space will be retained and enhanced with permanent enabling infrastructure, new access stairs to the upper plateau, shade trees and ground plane interpretation of the original waterline.

6. Potential cafe/restaurant – Signature venues will be considered within restored heritage buildings. A wider food and beverage strategy will be implemented over time and in partnership with industry to support growing visitor numbers and experiences across the island.

7. Northern parkland – The campground will be relocated to enable the creation of a significant new harbour park, reconnecting ancient remnant cliffs to the harbour; restoring native landscapes, trees and wildlife; and teaching people about collective care for Country (both land and water) within a place of recreation, play and rest.

8. Marine ecology – Living seawalls will be established on the eastern and northern edges of the island to support harbour biodiversity and enhance rehabilitation of the waters around the island.

9. Recreation and camping – The island-stay experience will be refreshed with new camping, cabins and camp facilities, plus new recreational opportunities including a harbour public pool and non-powered recreational boating and kayaking in the slipways.

10. Superintendent's Precinct – Reconnected to the lower plateau with lifts and stairs, this precinct will be enhanced with interpretive and heritage activations, upgraded gardens, space for small events and conferencing, and refreshed accommodation.

11. Silos and tent embassy – This will be a contemporary First Nations meeting place for past, ongoing and new traditions and ceremonies. The layers of natural and cultural heritage including remnant sandstone, Country, the convict silos and the Aboriginal Tent Embassy will be interpreted.

12. Plateau Industrial Precinct – Adaptive re-use will enhance interpretive, conferencing and educational opportunities such as a maritime design learning centre.

13. The Barracks Precinct – Best practice visitor and interpretive experiences will bring alive the complex histories and stories of the island's convict past, supported by adaptive re-use of existing structures and a decluttered public domain.

14. The Mould Loft – This will continue to be used for public programs, enhanced with displays about the convict system, and industrial and reform schools, covering people's stories of resilience, escape and rebellion.

15. Enhanced maritime facilities – Infrastructure upgrades will support maritime uses and businesses (for example, boat repair, storage, chandlery and First Nations boat building).

16. Restoration workshops – The workshops will be enhanced as part of ongoing restoration and maintenance of the island's heritage assets through community and volunteer activities.

17. Accommodation – This is a long term proposal for new accommodation when visitor demand exceeds capacity that will be consistent with the statutory management plan and international precedent for a World Heritage place.

18. Parramatta Wharf – The wharf will be retained and will support more frequent services.



Fig 3. Cockatoo Island / Wareamah Master Plan (Source: Tyrrell Studio)

1.3 Aerial view looking west Present day



Fig 4. Aerial view looking west. Present day

1.3 Master plan aerial view looking west Artist impression

KEY

- 1. New ferry wharf
- 2. Arrival square
- 3. The Convict Workshop
- 4. Fitzroy Dock
- 5. The industrial and turbine halls
- 6. Eastern Apron
- 7. Marine ecology living seawalls
- 8. Potential cafe/restaurant
- 9. Accommodation



Fig 5. Artist impression of the master plan aerial view looking west. Source Tyrrell Studio/Doug & Wolf

1.3 Aerial view looking east Present day



Fig 6. Aerial view looking east. Present day

1.3 Master plan aerial view looking east Artist impression

KEY

- 1. Northern parkland
- 2. Marine ecology living seawalls
- 3. Recreation and camping
- 4. Slipways pool
- 5. Slipways small vessel access
- 6. Southern Apron



Fig 7. Artist impression of the master plan aerial view looking east . Source Tyrrell Studio/Doug & Wolf

2.0

Introduction

- 2.1 Harbour Trust strategic direction, objectives and purpose of master plan**
- 2.2 Statutory framework**
- 2.3 World Heritage status**
- 2.4 Connecting with Country**
- 2.5 Heritage significance**
- 2.6 2021 Draft Concept Vision and community feedback**
- 2.7 Master planning for a self-sustaining future**
- 2.8 Approach, methodology and project team**



2.1 Harbour Trust strategic direction, vision, objectives and purpose of the master plan

Harbour Trust strategic direction

The Harbour Trust is responsible for the management of sites of nationally and internationally significant cultural, natural, industrial and heritage value located around Sydney Harbour. These places reveal Australia's rich stories and their ongoing connection to First Nations history and provide examples of Australia's first defence fortifications, as well as the nation's colonial and industrial past. Many carry Commonwealth, National and World Heritage listings. They also provide critical links between the marine harbour habitat and the remnant bushland of Sydney.

The *Sydney Harbour Federation Trust Act 2001* specifies a series of objectives; with recent amendments, these objectives are no longer time-limited but ongoing in perpetuity. The Harbour Trust aims to enhance appreciation and understanding of the natural and cultural values of Sydney and the nation for all visitors, through the remediation, conservation and adaptive re-use of, access to and sharing stories of Harbour Trust sites.

To achieve this, the Harbour Trust actively researches and makes accessible knowledge of a multi-layered history and stories, including their importance to First Nations peoples. Through remediation and use, both the sites and their buildings are enlivened through the creation of communities that encourage a sense of place and belonging.

The Harbour Trust also develops relationships and collaborations with community organisations, partners, funders and supporters. Fostering such long-term relationships requires the Harbour Trust to be responsive, transparent and consistent in its discussions with stakeholders.

Harbour Trust operational mission

To better link its high-level objectives and outcomes to tangible every day work, the Harbour Trust developed an operational mission in 2021–22, with significant input from staff. Its eight key tenets are:

1. Be trusted to manage these iconic sites, and to be relied upon and do what we say
2. Be authentic and knowledgeable about our sites' cultural, natural and heritage values
3. Enliven our sites by their remediation, use of the buildings, and by building a community around them
4. Share stories to enhance, amplify and make accessible the values of our sites and encourage a sense of place and belonging

5. Partner and collaborate to deliver mutually beneficial outcomes with community, that foster long-term relationships
6. Raise revenue through our sites, and with our partners, funders, and supporters to sustain our activities
7. Strive to be an employer of choice, with enabling systems and processes
8. For First Nations peoples, develop and create a universal place of welcome, supported by deep, long-term trusting relationships and exchange of knowledge.

Vision and objectives

This master plan envisions a future for Cockatoo Island / Wareamah that:

- Acknowledges the traditional ownership of First Nations peoples to the lands and waters of Wareamah, establishing, protecting and interpreting First Nation values of place
- Conserves, interprets and protects the outstanding universal values of place as stated under the site's UNESCO World Heritage listing
- Rehabilitates the lands and conserves the built form to retain and enhance the unique character of Cockatoo Island / Wareamah
- Revives the working harbour industrial site, transforming the island to support a range of new and appropriate uses that connect the island into the fabric of day-to-day Sydney life
- Supports and enhances Sydney's cultural and creative life, providing capability that drives significant and sustainable visitation and tourism
- Evolves to provide an economically resilient and self-sustaining long-term future for the island as a highly valued nationally significant cultural heritage asset.

The master plan objectives are to:

1. Establish, conserve and protect First Nations values of place (cultural heritage objective)
2. Conserve, protect and interpret the World Heritage Outstanding Universal Values under listing (cultural heritage objective)

3. Rehabilitate the island's lands, waters and built assets for use and benefit of future generations (environmental and community objective)
4. Enhance access to connect the island and its precincts into the fabric of day-to-day Sydney life and a whole-of-island visitor experience (urban context and public benefit objective)
5. Establish Cockatoo Island / Wareamah as a place of significant visitation and tourism, sought after food and beverage, accommodation, events, creativity and employment (statutory, economic and commercial objective)
6. Establish complementary uses, revenue streams and partnerships that evolve to ensure a financially sustainable long-term future (financial objective).

Purpose

Government Architect NSW (GANSW) provides general guidance as to the purpose of master planning:

Master planning is a method for defining clear strategies for the physical, economic, and social transformation of places. Planning for change in the physical, social, and economic fabric of places requires an integrated process achieved through the efforts of many – clients, professionals and local communities. Master planning is a fluid and iterative process, with many people contributing to the initial investigations, the proposals as they develop and to their delivery. People – residents, visitors and ultimate users of the spaces and buildings – are at the heart of any master plan.

A successful master plan must:

- Raise aspirations and provide a vehicle for consensus amongst stakeholders
- Take into account likely implementation staging
- Fully integrate with the land-use planning system
- Enable new uses and opportunities that fulfil the potential of a site without diminishing core site attributes or values
- Result from a participatory process, providing stakeholders with the means of expressing their priorities for regeneration
- Guide and determine all key future regeneration decisions including stage investment.

A successful master plan will embody a community's collective vision and values to create sustainable places for living, working and recreation.

Source: GANSW Advisory note V2. 2018

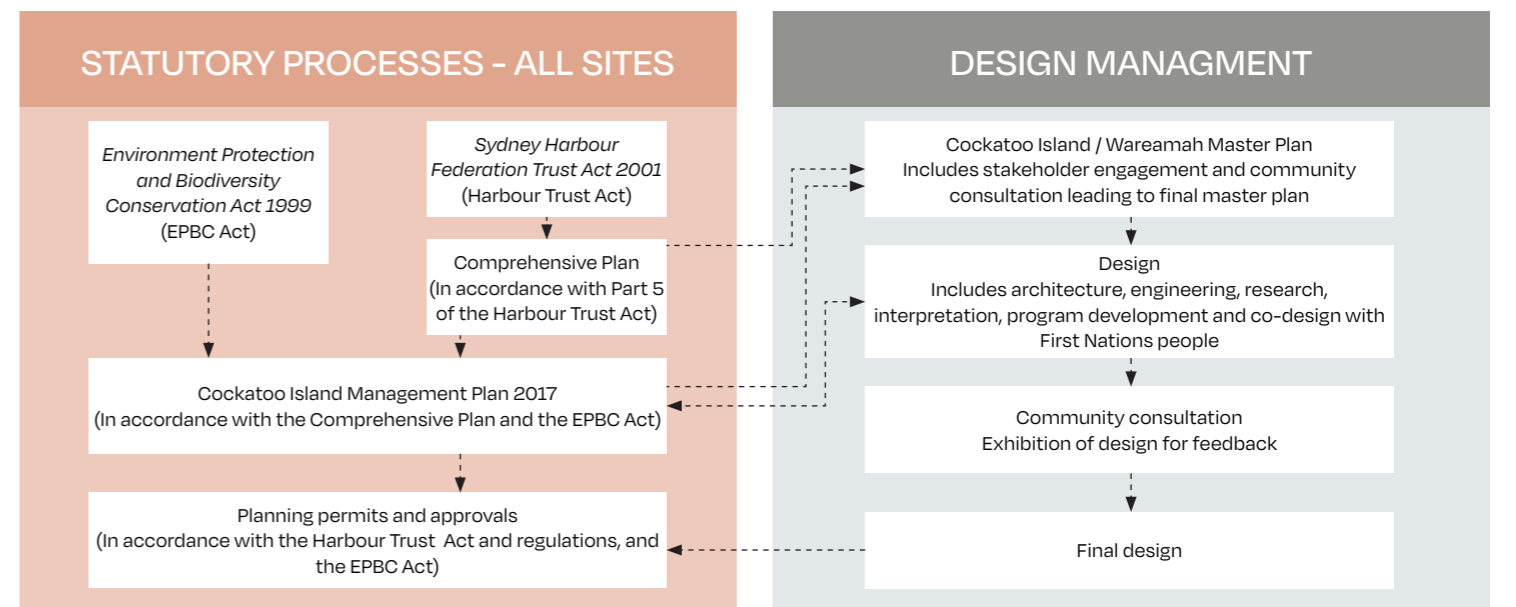


Fig 8. Role of the master plan within the statutory framework

2.2 Statutory framework

This section outlines the planning framework that will guide the future use of Cockatoo Island / Wareamah.

Sydney Harbour Federation Trust Act 2001

The objects of the Harbour Trust are set by the *Sydney Harbour Federation Trust Act 2001* (Harbour Trust Act), which are to:

- Ensure that management of Trust land contributes to enhancing the amenity of the Sydney Harbour region
- Protect, conserve and interpret the environmental and heritage values of Trust land
- Maximise public access to Trust land
- Establish and manage suitable Trust land as a park on behalf of the Commonwealth as the national government
- Co-operate with other Commonwealth bodies that have a connection with any harbour land in managing that land
- Co-operate with New South Wales, affected councils and the community in furthering the above objects.

The Harbour Trust Act requires the Harbour Trust to prepare a plan for the lands it manages, known as the Comprehensive Plan, as discussed below.

Harbour Trust Comprehensive Plan

The Comprehensive Plan was made under the Harbour Trust Act and was approved in 2003 by the then Minister for the Environment.

The Comprehensive Plan is a broad strategic plan that sets out a vision for all Harbour Trust sites and includes a process for preparing more detailed management plans for specific places, such as Cockatoo Island / Wareamah.

Section 5 of the Comprehensive Plan sets out the Harbour Trust's vision for Cockatoo Island / Wareamah. It identifies the island's potential to be a special place to visit, where its distinct elements are developed as a collection of complementary attractions. The Comprehensive Plan proposes the revival of working maritime facilities, and the realisation of the island's potential as a cultural venue at a landmark harbour location.

Section 3 of the Comprehensive Plan sets out overarching objectives and policies for all of the Harbour Trust sites.

Environment Protection and Biodiversity Conservation Act 1999

Cockatoo Island / Wareamah is listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as a World Heritage place, a National Heritage place and a Commonwealth Heritage place (refer to sections 2.3 and 2.4).

At the strategic level, the EPBC Act requires heritage management plans to be made for places on the World, National and Commonwealth heritage lists.

At the implementation level, all actions on Harbour Trust land must be considered in accordance with the EPBC Act. For actions on Commonwealth land, or by a Commonwealth agency, sections 26 and 28 of the EPBC Act respectively require approval for actions that have, or are likely to have, a significant impact on the environment.

Cockatoo Island Management Plan

As required under the Comprehensive Plan 2003, the Harbour Trust prepared subsidiary statutory management plans that provide further refinement and detail about the planned outcomes for sites. Management Plans identify desired outcomes, suitable uses, and how a sites environmental and heritage values should be protected and interpreted.

The Cockatoo Island Management Plan was also made to satisfy the requirements of the EPBC Act for the management of a World, National and Commonwealth heritage place. The current Management Plan for Cockatoo Island / Wareamah took effect from 24 January 2018.

Related Harbour Trust policies and guidelines

The Harbour Trust has a number of general policies and guidelines that guide works and activity at Cockatoo Island / Wareamah. This master plan has been prepared with regard for these policies.

Cockatoo Island / Wareamah Master Plan

Whilst not a statutory document, the Cockatoo Island / Wareamah Master Plan will inform the direction of the place. The implementation of works and activities will be subject to the assessment process described below.

Assessment of actions

The Harbour Trust assesses and approves actions on its lands in accordance with the Harbour Trust Act and Regulations, the EPBC Act, the Comprehensive Plan and the Cockatoo Island Management Plan.

The Harbour Trust will consult with the community about significant proposals. In the rare circumstance where a proposed action has the potential to pose a significant impact on the environment or heritage values, then it would also be referred to the Minister for the Environment for further assessment and approval under the EPBC Act.

Plans and policies made under state legislation

The Harbour Trust Act excludes any land owned by the Harbour Trust from the operations of state planning law. This includes state environmental planning policies (SEPPs) and regional environmental plans (REPs) prepared by the NSW Government and local environmental plans (LEPs) prepared by councils (as unincorporated land, Cockatoo Island / Wareamah does not fall within any local government area).

The Harbour Trust considers plans and policies made in accordance with state legislation to ensure consistency and best practice. This includes district plans prepared by the NSW Government; SEPPs related to Sydney Harbour and coastal management; and supporting policies and plans related to protection of the environment as well as the Government Architect NSW's Connecting with Country Framework.

2.3 World Heritage status

Cockatoo Island / Wareamah is a place of exceptional cultural, historical and social heritage values – it is unique, layered with complexity, and an iconic destination within Sydney Harbour. Cockatoo Island / Wareamah is one of 11 penal sites, known collectively as the Australian Convict Sites World Heritage Property, which together constitute an outstanding and large scale example of the forced migration of convicts who were condemned to transportation to distant colonies of the British Empire.

The common feature of all properties inscribed on the World Heritage List is that they meet the requirements for Outstanding Universal Value. To be considered of Outstanding Universal Value a property needs to meet one or more of the 10 criteria set, meet the conditions of integrity and authenticity, and have an adequate system of protection and management to safeguard its future.

Together, the 11 complementary sites contained within the Australian Convict Sites World Heritage Property meet conditions of authenticity and integrity and satisfy two of the 10 criteria for World Heritage listing:

- Criterion (iv): to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history
- Criterion (vi): to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

Australia is a signatory to the World Heritage Convention. By doing this Australia recognises that the identification and safeguarding of heritage located in its territory is primarily its responsibility and agrees to do all it can with its own resources to protect its World Heritage properties.

The system of statutory protection is held within the EPBC Act. This obliges Commonwealth agencies such as the Harbour Trust to protect World Heritage properties in their remit as matters of national environmental significance.

Management of Cockatoo Island / Wareamah is assisted through heritage and conservation documents and technical studies. Heritage design guidelines, developed as part of this suite of studies, have consolidated the recommendations contained within each to guide the master plan.

The following objectives established in the heritage design guidelines reflect the recommendations of the World Heritage Convention and the assessed heritage values of the island:

- Recognise and distinguish between the structural components of the periods of development and use
- Recognise rarity and representativeness
- Recognise authenticity and integrity
- Recognise the cultural landscape of Cockatoo Island / Wareamah and respect its visual integrity
- Recognise significant character and defining form within individual precincts
- Recognise that change is part of the significance of the place
- Recognise that adaptive re-use is preferred to new structures as one the best methods to ensure the ongoing preservation and conservation of heritage fabric.

Part of



unesco
Australian Convict Sites
World Heritage since 2010

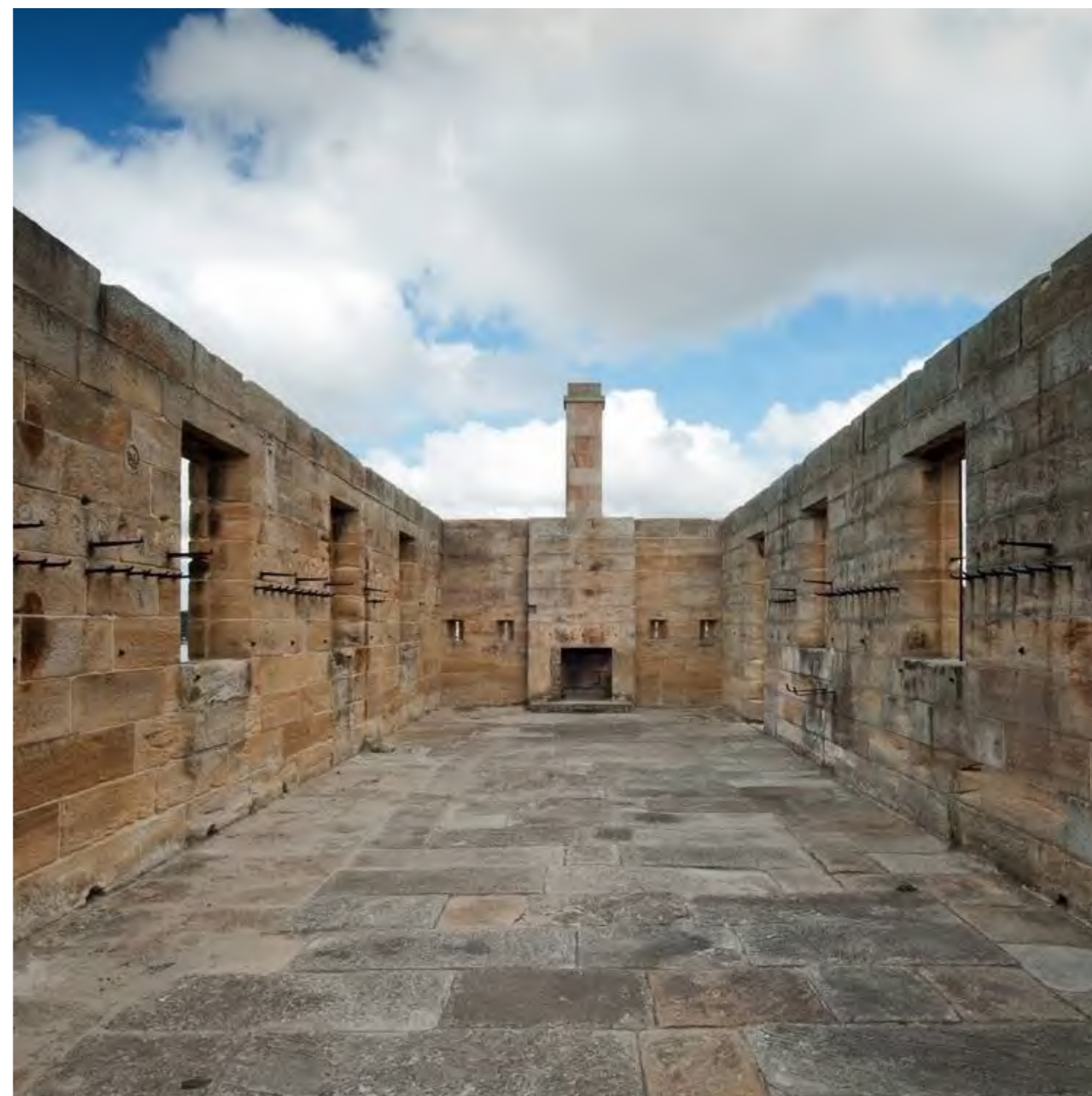


Fig 9. Interior of the Military Guard House. Source: Sydney Harbour Federation Trust

2.4 Connecting with Country

Connecting with Country frameworks

Connecting with Country frameworks provide opportunity for local First Nations peoples – the Gadhungal (saltwater people) – to assert their cultural rights and activate their cultural responsibility. This means they tell stories of Country – encompassing land, sea and sky – when designing built environments.

At Cockatoo Island / Wareamah this creates an opportunity for truth telling and embedding cultural and historical stories into master planning and future development. This will enhance the understanding of these islands within the sea Country landscape.

Cockatoo Island / Wareamah sits in the broader cultural landscape of coastal Sydney, surrounded by sea within Sydney Harbour. These waters hold immense cultural importance to local First Nations peoples, the broader Australian community and people around the world.

The First Nations peoples of coastal Sydney come from multiple coastal clan groups. The cultural area spans from Shoalhaven River in the south to the northern shores of Sydney Harbour. The coastal clans cared for these lands and waterways for thousands of years, never taking more than what was needed from Country.

The harbour and connecting waterways were the highways. People moved freely on and around the lands and water following fishing seasons and fulfilling cultural responsibilities to ensure future generations could continue to live on and to thrive on Country.

Master planning recognises that Country is experienced high into the atmosphere, deep into the ground and far into the oceans. It is experienced through the senses and seared into memory, keeping everything in balance and connected as kin. Country holds everything including human and non-human, land and products of land, knowledge, stories, dance and song. Traditional Owners will always have a cultural responsibility to Country; it is Country that sustains us.

Cultural Heritage values

UNESCO states:

Cultural heritage includes tangible culture (such as buildings, monuments, landscapes, books, works of art, and artefacts), intangible culture (such as folklore, traditions, language and knowledge), and natural heritage (including culturally significant landscapes, and biodiversity). The values embodied in cultural heritage are identified to assess significance, prioritise resources, and inform conservation decision-making.

The island provides the opportunity to tell a unique Australian historical narrative with layers of First Nations, convict, colonial and military heritage alongside a responsive approach to endangered ecological habitats and connection to Country.

Phases of establishing the First Nations heritage will include accessing the Aboriginal Heritage Information Management System (AHIMS), which holds more than 100,000 records and information about Aboriginal places, objects and other significant sites across NSW.

This will be part of a multidisciplinary methodology to identify tangible cultural values and uses in the area. Cultural sites may include middens, engravings, hand stencils or isolated cultural objects.

Engagement with Traditional Owners may also garner cultural stories to enhance master planning and meet Connecting with Country objectives.

Ancient Country

First Nations cultural heritage is considered as tangible and intangible cultural heritage. On adjacent lands there is evidence of tangible heritage, primarily evidence of shelter and occupation typical to the protected waters of Sydney Harbour. As Sydney has developed, much of this evidence has been buried or submerged, or are yet to be discovered. In places like Middle Head / Gubbuh Gubbuh, North Head and Sydney Harbour National Park tangible evidence makes it clear that these places have been home to First Nations peoples for millennia.

This extends to 20,000 years ago when there was no Sydney Harbour. Both archaeology and geology provide guidance to understanding that the First Nations perspective and experience of Sydney Harbour relates to geological time and that First Nations peoples witnessed the formation of Sydney Harbour. This is significant. The First Nations connections to land and its change in geological time are critical to understanding and protecting First Nations values. First Nations intangible values of place are considered of national significance.

Cockatoo Island / Wareamah, as well as Snapper and Spectacle islands, would have been joined to the Drummoyne Peninsula in the last Ice Age. First Nations peoples would have been living in Sydney as these hills turned into islands. From about 18,000 years ago the sea levels slowly rose turning Freshwater Country to Saltwater Country.

Tangible values

Investigations suggest there are no recorded Aboriginal sites on the island, given the extensive quarrying and industrial activity. However, evidence of sites on the mainland indicate similar sites showing occupation are likely to have existed on Cockatoo Island / Wareamah. Many of these sites are registered on AHIMS.

Intangible values

First Nations intangible cultural heritage values are critical elements of conservation decision-making, interpretation planning and implementation. However, this master plan does not define nor articulate the sensitive ancestral stories that relate to these lands, waters and skies.

While the concept of Country is a dominant theme, site-specific ancient intangible values may not be immediately accessible as written text or as recorded oral histories. The telling of ancient story, The Dreaming or tradition requires research, validation and consultation with knowledge holders.

With the permission of Traditional Owners, the Harbour Trust has included a known Dreaming story in the public programs section of the master plan. (Refer Section 5.3)

Establishing intangible values and stories of place requires a trusted and equitable long-term relationship with Traditional Owners and enduring relationship with knowledge holders with connection to these lands and waterways. The Harbour Trust will engage with the appointed First Nations Advisory Group, knowledge holders, Traditional Owners and the First Nations community.

First contact

First Nations peoples were all around the coastline as early Europeans arrived. The area was explored in the week after the first fleet arrived by Bradley and Hunter.

On the shores near Cockatoo Island / Wareamah, Bradley recorded the following.

3 February 1788

In a cove to the NW, 3 miles above the ship, we saw several natives, some sitting round a fire. Others were just landing with their canoes. The moment they perceived us, they ran off in great confusion and hurry, not taking time to make the canoes fast or haul them ashore. These people had a dog with them. We found muscles on the fire, others in their canoes and some dropped between both. Their fright was so great that they went off without taking their fishing lines, spears or anything with them. These we suppose to be of the number who fled up the harbour when we arrived. We left strings of beads, cards, pieces of cloth etc. about their fire and in the canoes and were very particular not to move any one of their things.

4 February 1788

As we proceeded up the harbour, the natives all fled in their canoes as far and as fast as they could. About 4 mile higher than where the ship lay, the country was open and improved. The farther we went up, and in most places, not any underwood, grass very long.

4th, pm. Followed many openings to the NW and passed a narrow channel into a wide space which would not be in our power to survey before night. There was assembled up here an astonishing number of the natives, all armed. Flats on which the boats might ground in this channel, and put us much in their power. Not having any people but the boats crews with us, and being 8 miles from the ship, Captain Hunter thought that taking the necessary precautions would employ too many of our people for us to go on with the plan we were prosecuting. We therefore returned and moored the boats for the night at Dawes Island [Spectacle Island].



Fig 10. Nearby sites of cultural importance

2.4 Connecting with Country

Cockatoo Island – the name

Cockatoo Island is now part of Sydney Harbour vernacular and was first identified in a colonial listing from 1792. Early maps show it as Bird Island then Banks Island before returning to Cockatoo Island. Presumably, colonists observed sulphur crested cockatoos on the island.



Fig 11. 1788 map showing Cockatoo Island as Bird Island



Fig 12. 1826 map showing Cockatoo Island as Banks Island

Wareamah – the name

At the time of colonisation, Dharawal people belonging to coastal Sydney used place names that described the nature or characteristics of that place. For example, the Dharawal word for freshwater is banabi. While a place with a freshwater source

would be referred to as banabi, it would no longer have that name if the source of water dried up. This means Dharawal place naming evolved.

The name Wareamah is registered with the Geographic Names Board of NSW as the official dual Aboriginal name for Cockatoo Island. However, there is some uncertainty on its origins, largely due to unclear records from First Nations peoples in the late 1700s to early 1800s. Their spoken terminology was phonetically transcribed.

There are two sources to the name Wareamah: Dawes (1790–91) and Phillip Gidley King via Governor Phillip and David Collins (1792). The Aboriginal source was not recorded, and the initial colonial authors had no expertise in linguistics, anthropology or related fields. As a secondary author, Dawes also lacked expertise and took a less than rigorous approach to gathering language information. However, the two sources may be independent of each other, which may increase reliability.

It is likely that transcribed terminology carries some accuracy as these are harbour islands and unlikely to be confused for somewhere else. Further assessment of naming and associated acknowledgments from a First Nations cultural perspective is required.

Cultural heritage and ethics

Post-colonial and historical experiences of First Nations peoples alongside historical landmarks and events supports the notion of truth telling and the opportunity to chronologically place First Nations peoples into their rightful place within Australian history and the built environment.

This can help to realise an end to continued perpetuation of colonial (and contemporary) myths by both First Nations and non-First Nations peoples. These myths erode First Nations cultural heritage and undermine accuracy of fact and an evidence based methodology.

The master plan determines Aboriginal cultural heritage and history must be researched, told or written and communicated to the ethical standards applicable to other forms of cultural heritage and history; that is, research by recognised authorities and academia, consultation with Traditional Owners and knowledge holders, rigorous standards of validation and the time and resources to carry out this critical work.

Enhancing the built environment by activating the layers of story and place provide opportunities for interpretation and complementary development. Accurately securing the stories that belong to Country and the people of the land will enrich place and Country in perpetuity.

Truth telling

Preliminary research conducted by the Harbour Trust has identified stories about First Nations peoples experiences on Cockatoo Island, including those of First Nations convicts. These findings have been presented to the First Nations Advisory Group and a pathway has been identified to seek guidance from First Nations communities. These communities will determine if and how these stories may be told as part of the process of truth telling and healing.

Country-centred methodology

Aboriginal culture is the oldest continuous living culture in the world and the culture of this place. A multidisciplinary approach allows historical and cross-cultural events and encounters to incorporate post-colonial experiences and stories of First Nations peoples. This establishes that Aboriginal culture is ongoing.

Connections to Country are intricate, deep and enduring.

Colonial history dramatically changed how First Nations peoples interacted with Country and place. Archival and historical research will help shape stories of pre- and post-colonial interactions with Country to create a robust, culturally accurate and appropriate narrative and a genuine Country-centred approach.

Country-centred design

Country-centred design works from the premise that the lands are ancient and that ancestors witnessed and adapted to dramatic shifts in water levels and landscape formations. Aboriginal cultural knowledge has been accumulated over thousands of years and held within communities' cultural data systems and retold through cultural practice.

Interpretations, cultural practice spaces, meeting and event spaces, and wayfinding can be informed by natural elements or indicators still prominent in the landscape. Stories that come to light from relevant cultural groups (both contemporary and old stories) that tell of ancestral beings that governed spiritual, social and environmental interactions are applicable in a modern context to address environmental sustainability .

One example of First Nations communities caring for Country are the Gamay Rangers. The rangers collaborate with stakeholders on land and marine conservation projects within coastal Sydney environments – one such partner is the Sydney Institute of Marine Science, which contributed to this master plan.

2.5 Heritage significance

Heritage is all the things that make up Australia's identity – our spirit and ingenuity, our historic buildings, and our unique, living landscapes. Our heritage is a legacy from our past, a living, integral part of life today, and the stories and places we pass on to future generations.

Source: Department of Climate Change, Energy, the Environment and Water, Australian Convict Sites, August 2022.

Cockatoo Island / Wareamah's rich and varied history has resulted in a legacy of extant physical elements associated with its use as a convict jail, government institution and dockyard, and other maritime and industrial purposes over its history. Together these form an exceptional cultural landscape.

Cockatoo Island / Wareamah stands with Port Arthur and Norfolk Island as a key part of Australia's convict history and demonstrates the life and work of convicts transported to Australia. This prison, unlike the others, continued to operate as a colonial jail till the turn of the 20th century, and accommodated bushrangers, abandoned children, prostitutes and pickpockets. Both male and female prisoners were incarcerated for crimes that, with hindsight, illustrate the historical movements of the era, including the peasant diaspora from Scotland, Ireland and rural England and the influx of gold seekers from many parts of the world. Relationships to First Nations peoples are also traced in the history of these institutions.

Cockatoo dockyard contributed to NSW's growth in the 19th century, as the workshops of the state's public works department. Its evolution in the 20th century matched that of Australia as a nation. It became the national naval dockyard in the first part of the 20th century when Australia was an outpost of the British Empire and the British navy dominated.

The Great Depression left its mark at the dockyard. By the Second World War, Australia supported the Royal Australian Navy (RAN) and the navies of many allies.

Locally, it was an engineering powerhouse and a centre of excellence in industrial manufacturing.

Cockatoo Island / Wareamah reflects many threads of Australian history over the last 240 years. The uniqueness of this landscape is evidenced in the modified landform. Early colonial associations are represented through the quarrying of the sandstone upper plateau and land reclamation for dockyard purposes.

The diversity of remaining buildings, their settings and range of auxiliary physical elements contribute to understanding the site's evolution. When integrated with non-tangible characteristics – historical associations, cultural values, views and vistas – a landscape that has existed for millennia is defined, connecting Australia's history from Aboriginal foundations to today.

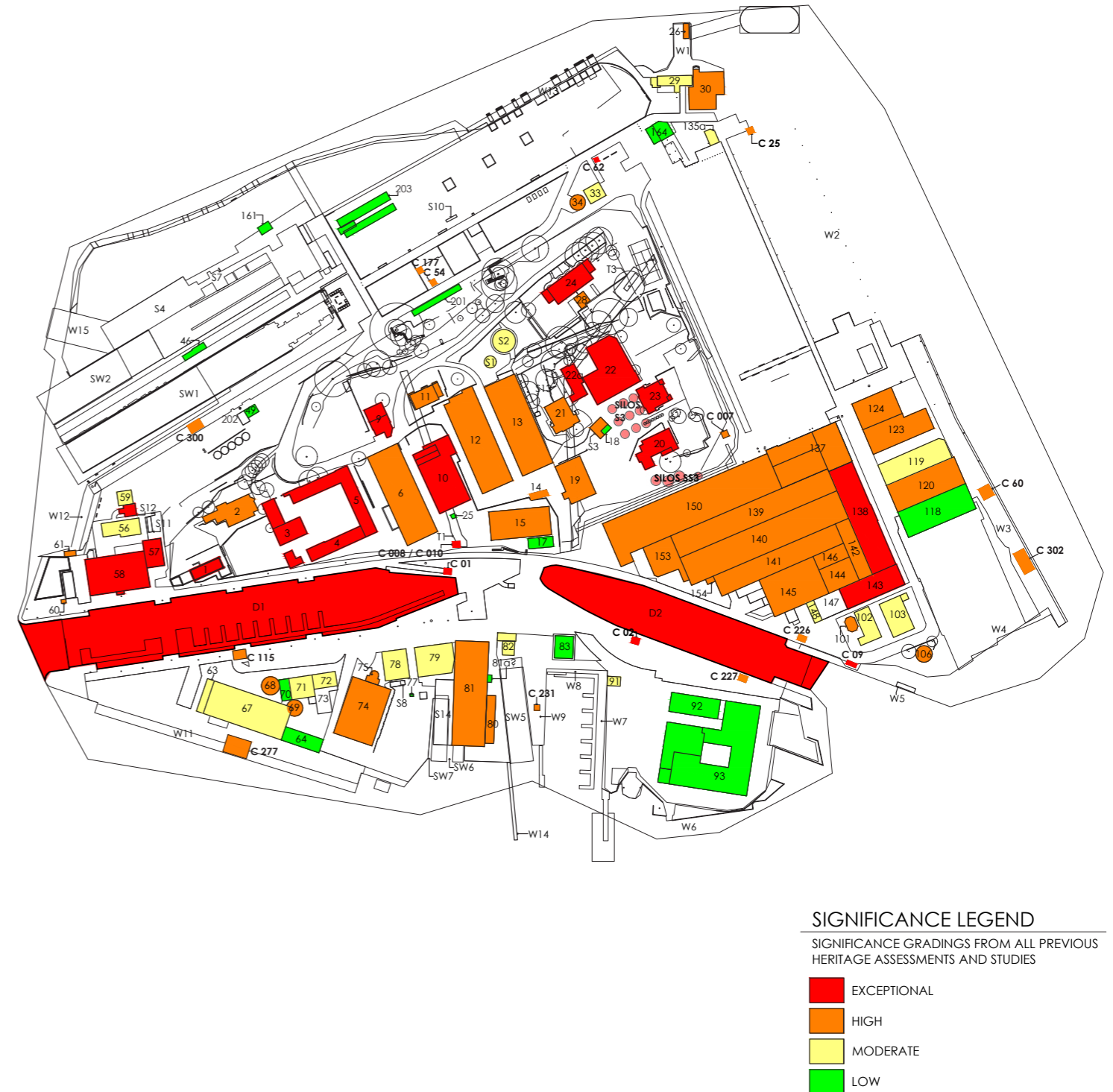


Fig 13. Summary of gradings of significance. Source: Mott Macdonald

2.6 2021 Draft Concept Vision and community feedback

2021 Draft Concept Vision

In early 2021, the Harbour Trust developed and exhibited a Draft Concept Vision for the island which was a high level conceptual approach.

The feedback process clarified a desire to respect and honour history and heritage – both of First Nations people and Australia's history post colonisation.

The community wants to see every facet of the island's history respected, celebrated and learned through experience and story telling that is living, vibrant and truthful.

Feedback was generally positive and a number of key insights relating to the Draft Concept Vision emerged in feedback received during the engagement process:

- Stakeholders generally agreed on values for planning the future.
- There was support for Cockatoo Island / Wareamah to offer a broad range of experiences and accommodation options for both locals and international visitors.
- There was strong support to maintain the island's unique qualities including its layered heritage, essence of place and authenticity of experience.
- People want to visit Cockatoo Island / Wareamah as not only a vibrant place for arts, creativity, entertainment and tourism, but also innovation and creation.
- People want to see re-greening, re-wilding and more opportunities for children to enjoy the island.
- There was broad support for First Nations culture and storytelling to be recognised and celebrated across the island.
- Stakeholders want to see a stronger focus on maritime heritage and industries, and how this will be appropriately accommodated and brought to life across the island.
- There was strong recognition and support for the preservation and interpretation of convict history – including retaining the island's UNESCO World Heritage status.
- More consideration should be given to improving transport/ access to the island and to infrastructure to support future use.

Community feedback - themes of response

Feedback on the Draft Concept Vision can be summarised into the following themes:

Country

- Greening and representing Country
- Providing an authentic and welcoming space for community

Character

- Maintaining rawness and brutality
- Providing tranquil, quiet and places for reflection
- Creating a more nuanced, less imposed character
- Balancing activation, restoration and preservation

Heritage

- Preserving and interpreting colonial history and UNESCO World Heritage Listing
- Representing maritime heritage and industries

Experience

- Improving food and beverage options to encourage length of stay
- Hosting festivals, events, hospitality and educational opportunities
- Improving transport for daily users, workers and events



Fig 14. Cockatoo Island / Wareamah Draft Concept Vision

2.7 Master planning for a self-sustaining future

High-level market, visitation and self-sustainment assessments tested opportunities with the market. This informs whether the master plan is viable and whether the island can be in a financially stable self-sustaining position in the long term.

The foundation of this self-sustainable financial position is increased visitation based on a broader offering that utilises the island's proximity to the city and leverages its uniqueness.

Within the context of financial sustainability, the master plan can be considered a crafted response to a set of markets – tourism, food and beverage, events, conferencing and accommodation. The design response extensively modelled alternative scale proposals via multi-criteria assessment (MCA) modelling. This modelled both constraints and opportunities, and informed the design response and balanced critical heritage parameters with development imperatives.

The master plan can retain this balance while retaining consistency with the statutory management plan and obligations under the World Heritage listing.

Current visitation to Cockatoo Island / Wareamah is around 230,000 per year (232,000 visits in 2022–23). This is relatively low compared to similar tourism sites in Sydney and heritage sites across Australia. Prior to recent uplifts, previous trends showed a decline in weekend annual visitor numbers since peaking in 2016, and weekday visitation static and low over the past 10 years. Additionally the winter and early spring months of July, August and September have the lowest visitation across the year.

Current visitation on an hour-of-day basis (excluding major events) shows a peak around 10am on weekdays and reducing throughout the rest of the day. The weekend and public holiday peaks occur around 2:30pm with most arrivals between midday and 3pm. This data highlights opportunities to offer new attractions to increase visitation from midday through to late afternoon/early evening on weekdays. On weekends there is an opportunity to draw visitation before noon and into evenings.

This analysis of the current visitation position acted as a baseline. Further studies including international benchmarking of similar sites and redevelopments found the following:

- Viable and sympathetic uses and visitor experiences include new and expanded creative and cultural presentations, maritime activities, reconfigured accommodation, events, conferences, enlivened food and beverage offerings, educational uses, active and passive recreation. This includes First Nations creative and commercial opportunities.
- There are opportunities for new and innovative visitor, heritage and interpretive experiences.
- Strategies will be needed to expand visitor experiences and activations to attract more visitors, extend quality and duration of visitor stays (including overnight) and support additional funding streams.
- Various technical constraints (such as limited access and ageing utilities) will need to be addressed.
- There is significant collective value in bundling opportunities across Cockatoo Island / Wareamah, Sydney Harbour and wider tourism and visitor destinations.

Collective success, synergetic outcomes and a cohesive, distinctive whole of island experience will require:

- A culture of experimentation and change
- A whole-of-island approach to management and integrating outcomes
- Complementary commercial, cultural, tourism and First Nations partnerships.



Fig 15. 2022 performance of Carmen on Cockatoo Island / Wareamah. Source: Opera Australia

2.8 Approach, methodology and project team

Overview

The master plan was developed by the Harbour Trust with a consultant team led by Mott MacDonald, an international multidisciplinary firm engaged as lead consultant. The Harbour Trust team and its consultant project team together constituted a broad multidisciplinary group with specific areas of expertise directly relating to redevelopment of an internationally significant heritage place.

The consultant team worked with the Harbour Trust and were informed by a range and depth of expertise and extensive existing documentation and study.

Significantly, the Harbour Trust convened stakeholder discussions and targeted forums early in the design stage to inform the formulation of the master plan.

The Connecting with Country outcomes in the Cockatoo Island / Wareamah Master Plan is attributable to two discrete sets of Aboriginal participation. In the interests of correct attribution of culturally informed knowledges and outcomes the two phases of co-design and engagement are:

- Spatial co-design with Bangawarra, led by Dr Shannon Foster Traditional Owner Knowledge Keeper, with Tyrrell Studio, Mott MacDonald and the Harbour Trust as client who together developed the spatial proposition of this master plan including key design moves, Connecting with Country principles and spatio-economic initiatives. This document includes drawings of the spatial co-design.
- Following broad community consultation, the finalisation of the master plan included additional research by Rowena Welsh-Jarrett Traditional Owner Knowledge Keeper on the Aboriginal cultural heritage of the area and Connecting with Country framework.
- The Harbour Trust First Nations Advisory Group was consulted during the development of the Master Plan, including consultation on the outcomes of the Spatial Co-Design Process.

Approach and methodology

The approach to developing the plan for exhibition and finalisation was shaped around three core areas of expertise.

1. Precincts advisory

Transforming nationally significant places with complex political, stakeholder, technical, heritage, financial and delivery challenges and interdependencies. This included:

- Focusing on collective outcomes and value creation
- Examining a self-sustaining future informed by market studies, benchmark reviews and visitation assessments
- Consolidating multiple inputs and managing complex interdependencies
- Proposing an incremental delivery strategy developed around viability and buildability.

2. Market viability and feasibility

Ensuring the master plan is feasible and viable:

- Gathering insights from more than 200 Harbour Trust studies
- Completing new specialist market assessments to gather market insights on viable land uses and activation opportunities across maritime, accommodation, food and beverage, tourism, conferencing, cultural and creative opportunities
- Benchmarking analysis of global comparator sites and visitor experiences
- Undertaking detailed technical assessments across key risk areas including transport and access, utilities and infrastructure, strategic assets management and cost reporting.

3. Integrated design – place, Country and heritage

Creating an aspirational vision for the future of Cockatoo Island / Wareamah, bringing together its multiple layers of complexity and opportunity into a spatial design response, interwoven with expertise across:

- Place, landscape architecture and urban design
- Connecting with and designing for Country
- Spatially representing the findings and insights from multiple studies, and preceding work
- Heritage assessment and design, with industrial archaeology.

The multidisciplinary team comprised the following specialists:

Harbour Trust engaged project team

- First Nations Advisory – Gujaga Foundation
- First Nations cultural review – Rowena Welsh Jarrett
- Historian – Ian Hoskins
- Major capital works advisor – Michael Pender
- Asset assessment and management – Duratec Pty Ltd
- Marine ecology – Sydney Institute of Marine Science
- Financial and capital cost planning – MBM Pty Ltd
- Accommodation market and feasibility – Dransfield Pty Ltd

The Harbour Trust also acknowledges the input of John Jeremy (former CEO of Cockatoo Island Dockyard) in providing advice and insight in development of the master plan.

Consultant team

Lead consultant – Mott MacDonald

- Precinct advisory
- Project management
- Asset analysis (transport, infrastructure, utilities, climate resilience)
- Heritage architecture
- Industrial archaeology

The sub consultants to Mott MacDonald were:

Financial sustainability modelling – KLOK Advisory

Lead designer – Tyrrell Studio

- Urban design
- Landscape architecture
- 3D visualisation (with Doug & Wolf)

Connecting with Country design response – Bangawarra

Technical advisory and market studies

- Heritage – OCP Architects
- Maritime industry – Thompson Clarke Shipping
- Public programs and visitor experience – Left Bank Co.

3.0

Context and character

3.1 Cockatoo Island / Wareamah

3.2 Geological formation of Sydney Harbour

3.3 Harbour context

3.4 Snapper Island

3.5 Cockatoo Island / Wareamah's position in the harbour

3.6 Microclimate and environmental conditions

3.7 Modification over time

3.8 The changing form of the island

3.9 An island of continuing collage

3.10 Spatial structure



3.1 Cockatoo Island / Wareamah

The island was a point of high ground in a river valley during the last Ice Age from around 100,000 to 10,000 years ago. Over the following 4,000 years, sea levels rose and the valley was drowned to become what is now known as Sydney Harbour and its estuarine extension, the Parramatta River. The high ground became an island. The warming climate and rising salt water created conditions for dry sclerophyll coastal forest dominated by *Angophora*, certain species of *Eucalyptus*, smaller trees such as *Banksia integrifolia*, and understory plants such as *Xanthorrhoea* and *Lomandra*.

People almost certainly lived around the outcrop as it was slowly transformed into an island. However, little is known of the island's cultural/social significance at this time. With no running water it is unlikely to have been permanently occupied. The lack of freshwater may have deterred use by the British, for the island was barely mentioned before the 1830s. The two colonial names for the place, Bird Island and Cockatoo Island, give a clue as to the forest cover and the animal life within. Possibly birds flourished in the absence of terrestrial predators making it an avian sanctuary.

The island was declared a UNESCO World Heritage Site in 2010, along with 10 other places associated with convict transportation in Australia. These are known as the Australian Convict Sites. The island was part of a colonial convict archipelago. There are two distinct periods in the island's convict history from 1839 to 1869. This begins between 1839 and 1848, which most directly relates to colonial convictism as it is generally understood. It was then that grain silos were cut into the sandstone and the first barracks built. Most of the island's convicts had been transported from Britain. The important exception was the incarceration of at least 13 First Nations men. Five (probably Kamalaroi men) were imprisoned as a result of frontier warfare near the Namoi River. Eight more were jailed for attacks in the Brisbane Water area in 1835 having had their death sentences commuted. That their incarceration was characterised as 'transportation' is significant and requires further research.

From 1848 the island was the responsibility of NSW rather than Britain's colonial office. There were residual transported convicts but increasingly the population was made up of local criminals. The island became a 'colonial gaol' rather than a 'convict establishment' associated with transportation from Britain to Australia, although that term was used in official documents for another decade. The population ballooned accordingly.

Transportation from Britain to NSW ended in 1840, leaving the colonial administration to deal with a penal system in flux. The island was one of the last options open to governors. The end

of transportation was prompted by changing attitudes to crime and punishment based upon reform and deterrence. The lash was used occasionally until 1843, but hard labour and solitary confinement were more characteristic of the regime. These were manifestations of a new penology that eschewed the lash, however inhumane they may seem in retrospect.

The island's convict history was shaped by colonial endings and beginnings in other ways. The assignment of convicts to work for free settlers – a form of 'prison without bars' – ended in 1838. The experience of convicts on the island was, therefore, different to those who had worked as servants, shepherds and 'mechanics' in households or on farms from the 1790s. The year 1838 also saw the last deployment of British army units on the colonial frontier in NSW. Violence between armed, undisciplined colonists and First Nations peoples ensued. The Kamalaroi men were jailed because of this frontier warfare. At this time, colonial society was being changed by free immigrants, among them Henry Parkes who impacted the island's development and the consolidation of colonial liberalism and democracy.

After 1869 came the often brutal incarceration of orphaned and wayward girls in a reform school on the newly re-named Biloela. The experience of boys in the corresponding institution aboard docked reform ships was less traumatic. Both were a direct result of child welfare reforms introduced by Henry Parkes.

Convict involvement in the construction of the Fitzroy Dock and the ruination of the natural island notwithstanding, the story that follows is more easily celebrated. It begins with the engineering achievement of the Fitzroy and Sutherland graving docks, and moves through the island's role in the creation of the Royal Australian Navy.

The new Commonwealth of Australia was eager to establish its own naval force despite misgivings within the Royal Navy, which argued against divided command. Australian concerns were directed towards Asia – the rising power of modernising Japan in particular. Their navy defeated the Russians in 1904. Japan was a Pacific power.

The Pacific was both a threat and natural sphere of influence. Upon creation in 1901, the Commonwealth perceived itself as an incipient Pacific power.

After Britain signed a defence pact with Japan in 1902, a somewhat nervous and disillusioned Australia looked to the US as cousins and potential protectors across the ocean. The arrival of the American Great White Fleet in 1908 in Sydney Harbour was celebrated by hundreds of thousands on and around the water. The British were unimpressed as their former colony courted a new large and powerful friend. It was from that time

that Australia agitated for the creation of its own navy, despite the fact that it had no authority to make separate foreign policy. The British relented and the Royal Australian Navy (RAN) was established in 1911.

Cockatoo Island / Wareamah was given over to servicing the RAN in 1913. The Sutherland Dock could accommodate the impressive heavy cruiser HMAS *Australia* that steamed into the harbour with other British-built warships in 1913. That year saw the construction of the destroyer *Warrego*, the first RAN vessel built on the island. The cruiser *Brisbane* followed in 1915. The First World War added impetus to the naval program.

The island was pivotal in the Second World War. The luxury liners *Queen Mary*, *Queen Elizabeth* and the *Mauritania* and *Aquitania* were converted to troop ships. They would take Australian men to fight in Crete and North Africa. With the outbreak of the war in the Pacific from December 1941, the island was much closer to the fighting. That is borne out by the repairs carried out on Australian, British and American ships damaged by action against the Japanese.

The post-war years from 1947 were characterised by continuity and relative stability under the management of Vickers Ltd – called Vickers Australia Ltd from 1956. In the years to 1980, seven combat vessels were built on the island along with dozens of service craft for the RAN and Royal Australian Air Force. In 1964 and 1967 repairs were carried out on RAN flagship, the aircraft carrier HMAS *Melbourne*. By that time Australia had reactivated its submarine service. The island was refitted as the refitting and maintenance facility for six Oberon-class submarines bought from Britain. Their base was nearby HMAS *Platypus*.

The last major naval build was also the largest – HMAS *Success*. It was slipped in 1986 – the year that Vickers relinquished control of the facility to Australian National Industries.

Text by Ian Hoskins – Historian



Fig 16. Cockatoo Island / Wareamah in 1869. Source: State Library of NSW

3.2 Geological formation of Sydney Harbour

Sydney Harbour estuary

The ancient river, which is now Port Jackson, meandered across a flat plain 80 million years ago. During periods of uplift, the river eroded the elevated coastal plain, forming steep-sided banks and at times cutting through some of the meanders. During interglacial periods, sea levels rose and the 'river' flooded, leaving the breached meanders as islands, of which there are 14 under present sea level conditions.

Flooded river valleys can contain many islands, due to the deposition and erosion of sediment throughout the preceding geological periods. This process of formation can inform understanding of the hydrography, including where deep areas lie, the nature of the estuary floor, water currents and tidal velocity. This can show which edges could engage with particular ecologies, where to retrofit eco-habitat such as seawalls, and most suitable areas for swimming.

Sydney Harbour has always been a gathering place, teeming with activity above and below the surface, sustaining life of all kinds. It is a physical record of changing attitudes to water over time: a bountiful resource, dumping ground, playground, battle ground. Australia's evolving society, politics and attitudes to nature continue to influence people's relationship with the harbour, revealing new aspects and determining new uses.

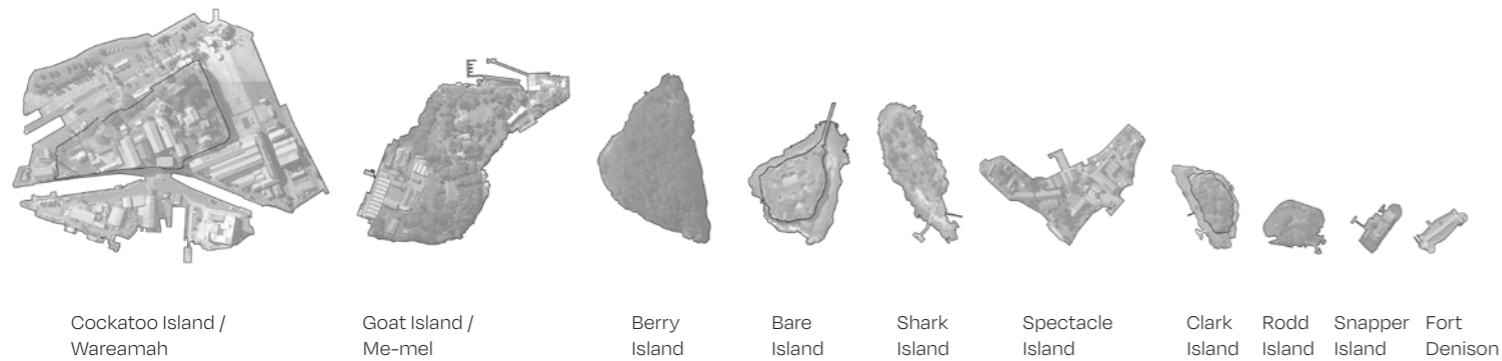


Fig 17. Cockatoo Island / Wareamah is the largest island of Sydney Harbour. Source: Tyrrell Studio



Fig 18. Each island related to its nearby harbour headlands. Source: Tyrrell Studio

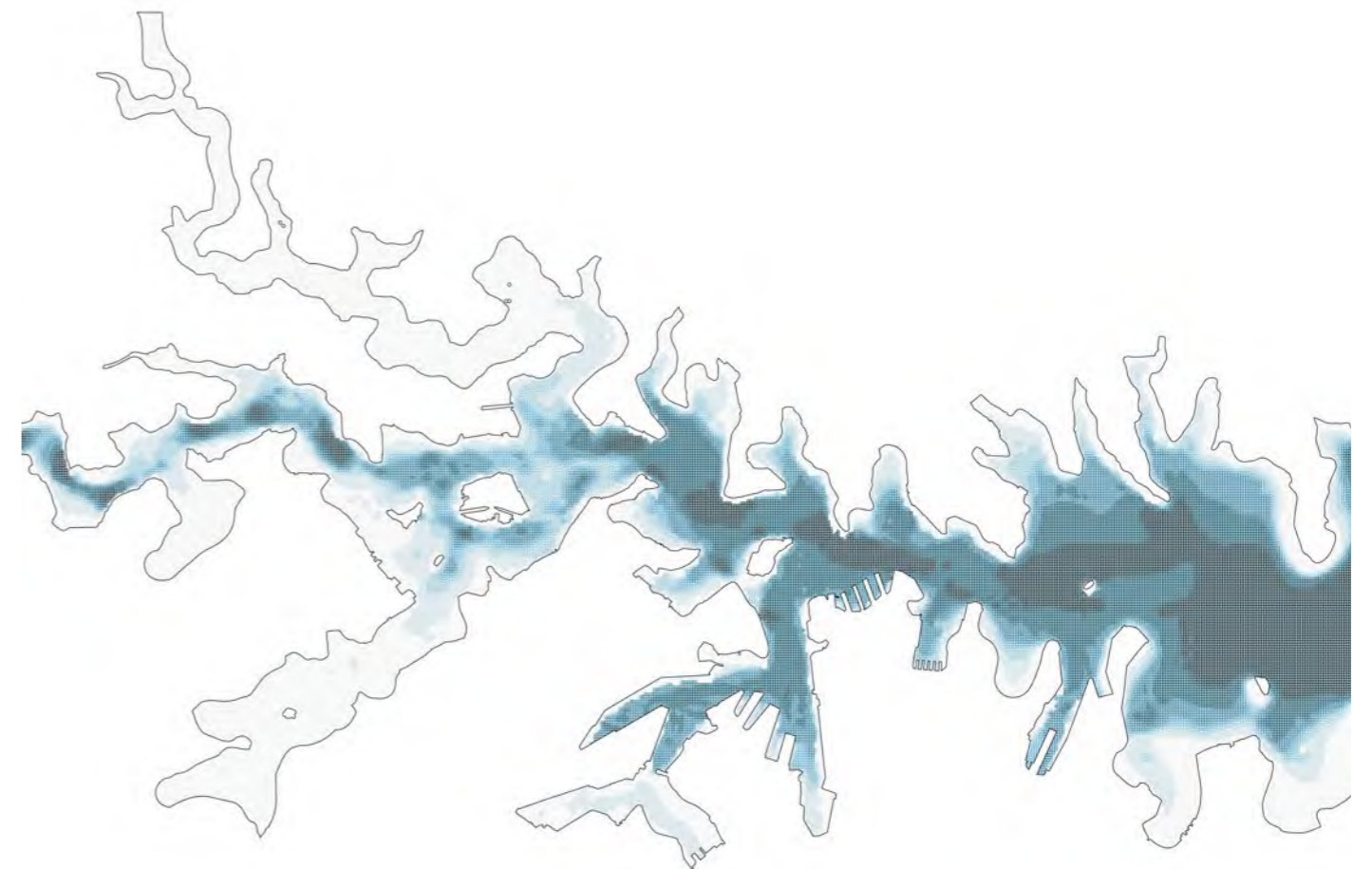


Fig 19. Tides and currents have eroded the harbour over thousands of years, creating deep channels on the north and east edges of the island. More protected shallow edges have evolved on the south and west. Source: Tyrrell Studio

3.3 Harbour context

Cockatoo Island / Wareamah sits at a critical moment of transition between the Parramatta River's estuarine character and the more open waters of Sydney Harbour. The mixed waters of saltwater and freshwater have the potential to support diverse marine life. Throughout time, this prime position in the harbour has informed the island's uses and marine character.

The southern bays west of the Harbour Bridge to Homebush Bay are typified by large, complex bays composed of many subsidiary bays and islands (or former islands). These bays have a number of creek lines that drain into them from the south. The topography around the foreshore of these bays is typically low lying, flat or undulating, often being reclaimed marshlands or mangrove swamps. Significant alteration to the harbour edges have occurred in many of these bays, due to reclamation, industrial uses and transport infrastructure. The current character of these bays are very distinct and different from each other with a variety of uses and water edge conditions.

– GANSW NSW Study of Sydney Harbour

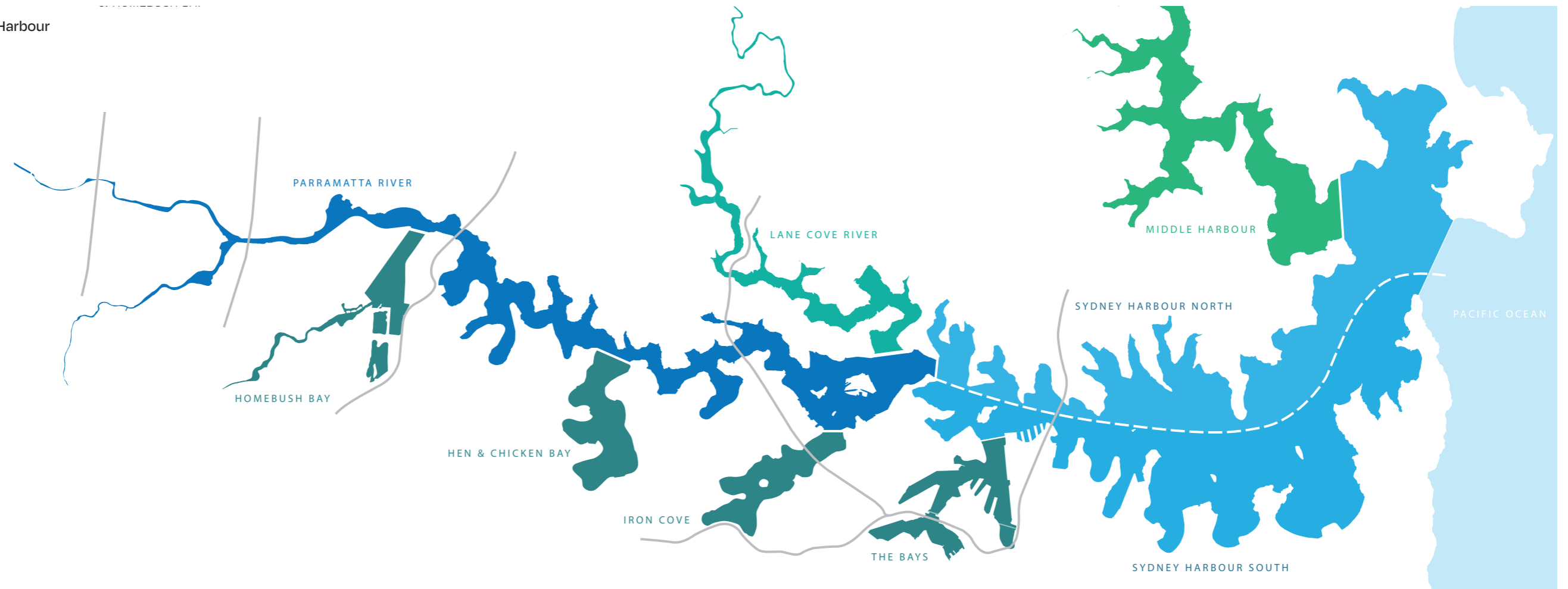


Fig 20. Cockatoo Island / Wareamah sits at the transition from the Parramatta River and Lane Cove River, to the main water body of Sydney Harbour. Source: GANSW

3.3 Harbour context

Proximity to the city; access by water only

Cockatoo Island / Wareamah is 3.5 km from Circular Quay, the primary ferry access point to Sydney's central business district. Access to the island is by water only. Visitors and staff access is by ferry, goods and services access is by barge. The island's proximity to the central business district, Circular Quay, Darling Harbour and Barangaroo allows access on the ferry network.

Harbour arterial

Sydney ferries move approximately 15 million passengers per year. One of the primary arterial routes is the east-west ferry lanes from Circular Quay to Parramatta. This is depicted in the Figure 21.

Urban, social and historical context

Surrounded by harbour the urban context of Cockatoo Island / Wareamah today is residential, albeit separated by a 150–200m harbour curtilage. During its industrial shipbuilding era, the adjacent suburbs housed the working population of the island. This proximate relationship informs the social and historical context of the island to the city.

The island's organised labour force pioneered many workplace reforms, provided beginnings for thousands of apprentices, and the nearby working-class communities at Balmain, Glebe and Birchgrove had families with a long association with maritime work. Despite being an island nation dependent upon shipping, Australia's enduring identity was created at a pivotal time in the creation of the nation by writers, artists and photographers interested in documenting the remarkable interior that set the place apart from its European counterparts. Sailors, shipwrights and dockworkers have never had the same place in the popular imagination as drovers, stockmen and shearers.

Hoskins, 2023

The island is an historic industrial remnant with deep social ties to the fabric of this harbour city. Today, water-only access and the scale of the island itself present an isolated character despite being a few kilometres from the city.

The changing harbour

In a generation, Sydney Harbour has changed and continues to change. Closure of harbourside industrial facilities (primarily shipyards or factories), gentrification of harbourside suburbs and significant growth of the city to the west has seen dramatic change to the maritime and industrial nature of the harbour.

The end of maritime operations at Wareamah / Cockatoo Island in the 1990s was followed by the closure of various oil depots and the departure of Patricks from east Darling

Harbour a decade later. The harbour is known internationally for its beauty, bridge, Opera House and fireworks. Our industrial maritime heritage has never been so remote. Sydney Harbour has been a post-industrial waterway for 20 years now.

Hoskins, 2023

Current day surrounding waterway uses

The waterway to the north of the island is a primary thoroughfare, utilised by vessels of varying size including the east-west ferry arterial. Additionally, the waterways surrounding Cockatoo island / Wareamah are now primarily used for passive or active recreation – sailing, kayaking, rowing or boating. Balmain, Hunters Hill and Greenwich sailing clubs use the waterways around the island for sailing programs and regattas.

The primary mainland barging point lies to the north of the island adjacent to Woolwich Marina and Hunters Hill Sailing Club. In subsequent stages of island redevelopment these uses and functional servicing of the island must be further examined particularly in planning for implementation.

Woolwich Dock, Spectacle Island and Snapper Island

Three historic places are closely related to the harbour context – to the north Woolwich Dock, to the west Spectacle Island and to the south west Snapper Island.

Woolwich Dock is a former dry dock and shipyard. When it was officially opened in 1901 it was the biggest dry dock in Australia and in its day employed more than 1,500 people. Today the dock remains in use for maritime industry and is managed by the Harbour Trust.

Spectacle Island is historically significant as it is the oldest naval explosives manufacturing and storage complex in Australia. It was added to the Commonwealth Heritage List in 2004. Spectacle Island remains a Navy facility and not open to the public.

Snapper Island

Snapper Island, one of the smallest islands in the harbour, shares an important historic relationship with Cockatoo island / Wareamah. When the island was passed to the RAN in 1913, Snapper Island was included in its 'naval waters', and as such subject to naval control. During the First World War, the island was leased to the Cockatoo Island Dockyard. From the 1930s to the 1950s the island was extensively modified and used for training. Currently the island is closed to the public. While Snapper Island is included within the Harbour Trust Comprehensive Plan 2003, the island remains under the ownership of the Department of Finance.

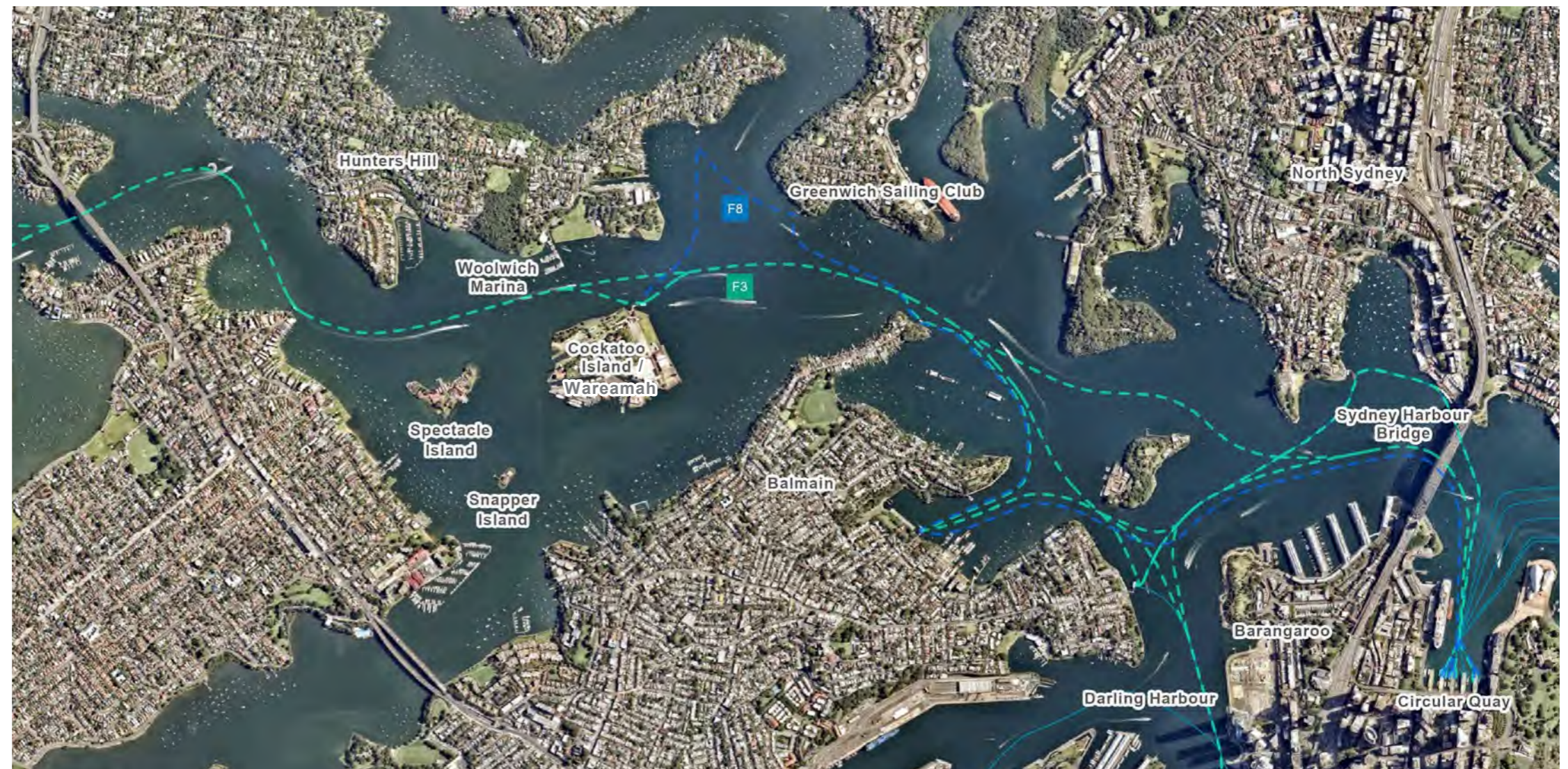


Fig 21. Harbour contexts and ferry connections with Cockatoo Island / Wareamah. Source: Mott Macdonald

3.4 Snapper Island

Snapper Island is owned by the Department of Finance. The Harbour Trust's Comprehensive Plan sets out a vision for the renewal of Snapper Island based on its intended transfer to the Harbour Trust. An overview of Snapper Island is provided here as an important part of Cockatoo Island / Wareamah's context.

Snapper Island intersects the homelands of the Wallumedegal, Wangal, Cammeraygal and Gadigal People.

Snapper Island, near Drummoyne and Balmain, is part of a grouping with Cockatoo and Spectacle islands known as the 'Hen and Chickens'.

The Harbour Trust's Comprehensive Plan proposes the repair, maintenance and enhancement of this extraordinary facility, and its re-use for maritime training activities, potentially in partnership with naval history organisations.

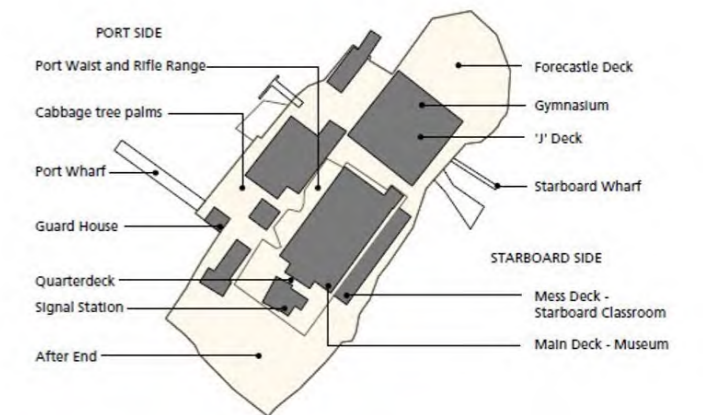
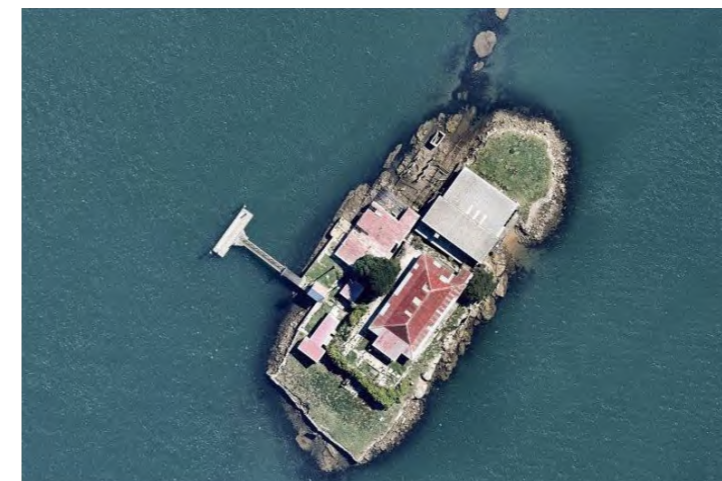
The 2020 Independent Review of the Harbour Trust noted that while Snapper Island is included in the Harbour Trust's Comprehensive Plan, any handover of this site to the Harbour Trust will need to be accompanied with sufficient funding to allow for remediation and ongoing maintenance and management of the site. This remains the Harbour Trust's position.



Fig 22. Above: Aerial photograph of Snapper Island, showing proximity to Cockatoo Island / Wareamah and Spectacle Island. Source: Nearmap, 2020

Fig 23. Bottom left: Aerial photograph of Snapper Island. Source: Nearmap, 2020

Fig 24. Bottom right: Snapper Island, site features. Source: Comprehensive Plan 2003



3.4 Snapper Island

History

Snapper Island is a lozenge-shaped island about 100m long by 50m wide, with a grouping of buildings, slipways, boat storage, jetties and lawn areas.

Originally a rocky outcrop, it was recorded in early colonial records as a place used by local First Nations peoples for fishing.

In 1879, it was declared a public recreation reserve but remained a rarely visited rocky outcrop. The island was leased to the Cockatoo Island Dockyard for additional storage during the First World War.

From 1931–32, it was flattened and expanded to resemble the form of a ship and became the Sydney training depot for naval cadets under the leadership of Leonard Forsythe, the founder of the Navy League in NSW.

The training depot originally included many items from HMAS *Sydney* when it was stripped at Cockatoo Island / Wareamah in 1932. This collection formed the basis of a museum, which has since been relocated from the island.

Snapper Island was the headquarters of all Sydney's Navy League units for 45 years. While the training depot was inactive in later years, the Sydney Training Depot Snapper Island Ltd was the tenant until 2006, at which time the island was vacated and transferred to the Department of Finance.

The island is listed as a Commonwealth Heritage Place, primarily for its history as a training depot for the Navy League Cadets.

Current conditions

The island has minimal natural vegetation and is home to a colony of seagulls. Contamination is present from previous land reclamation materials. The buildings that remain are generally in very poor condition and contain hazardous materials. Some buildings have been demolished in recent years by the Department of Finance for safety reasons. There are no service connections (such as water, sewer, telecommunications and electricity) to the island.



Fig 25. Naval league cadets at boat ramps, Snapper Island circa 1938. Source: State Library of NSW, Sam Hood Collection FL1375016



Fig 26. Site conditions. Source: ERM



Fig 27. Naval league cadets at Snapper Island circa 1935. Source: Australian National Maritime Museum, Samuel J Hood Studio Collection Object ID00024966



Fig 28. Site conditions. Source: ERM

3.5 Cockatoo Island / Wareamah's position in the harbour

The act of crossing water is integral to the experience of the island. It involves departing the mainland, navigating tides, wind and currents on the journey, followed by the process of arrival and berthing. Stepping onto the island brings a sense of distance from the mainland, with new perspectives across the water, windward and leeward breezes, marine sounds and smells, along with opportunities for interaction with the water's edge.

The views from the island back across the harbour are distinct in each of the four areas or 'rooms' identified in the diagram, right.

The Eastern Apron opens to a vast harbour water body with the backdrop of the city centre and Harbour Bridge.

The Northern Apron opens to a narrower river character water body, with a green treed backdrop of harbour parklands in Woolwich.

The Southern Apron opens to a smaller water body that feeds into Iron Cove with views across the intensely developed residential waterfront edge of the Birchgrove, Balmain and Rozelle peninsula.

The western views are mixed with industrial character of Snapper and Spectacle islands, with Birkenhead Point, Drummoyne and Gladesville Bridge.

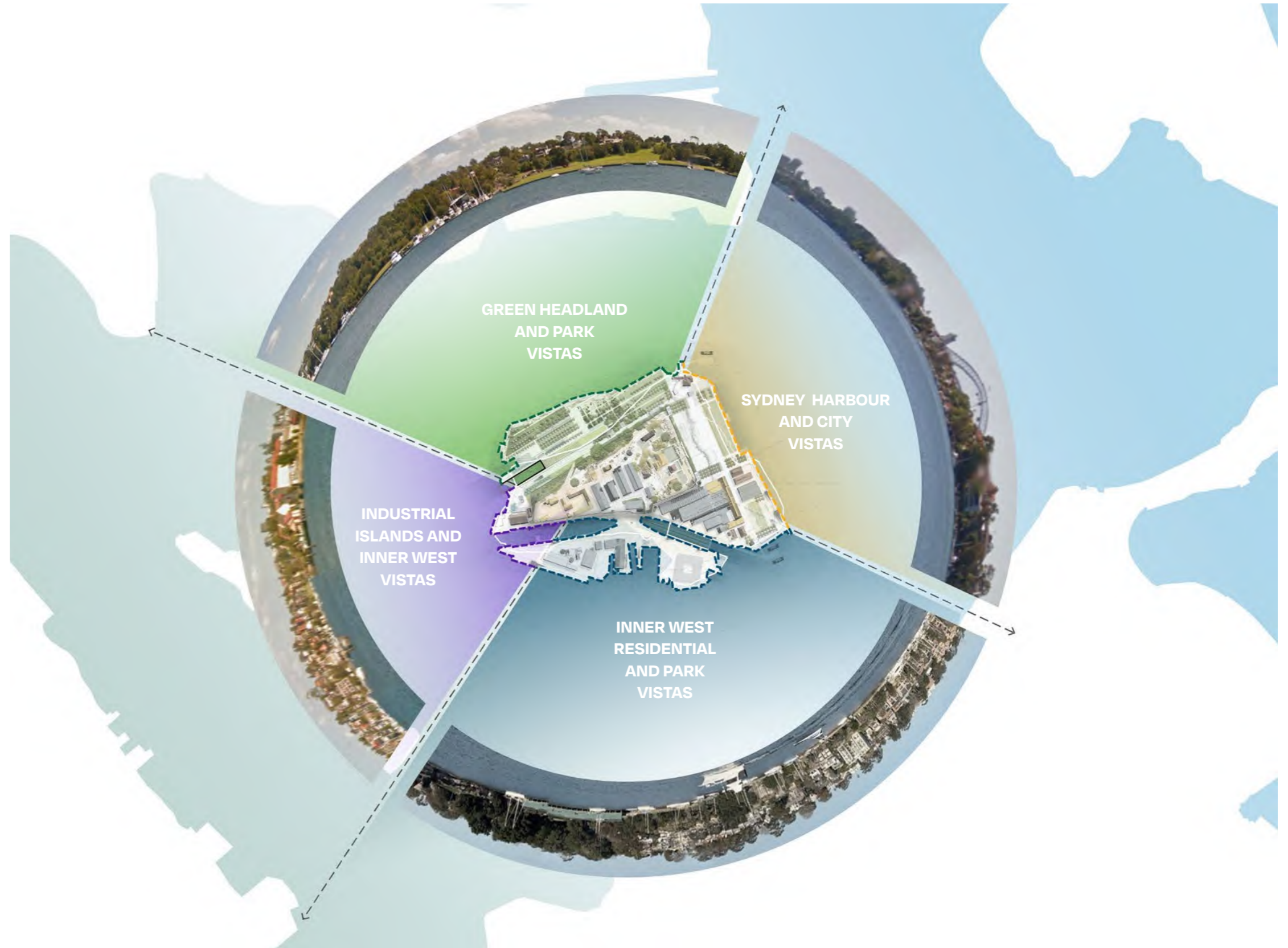


Fig 29. The four harbour rooms of Cockatoo Island / Wareamah have different characteristics. Source: Tyrrell Studio

3.6 Microclimate and environment

Areas of exposure and protection

Cockatoo Island / Wareamah is an exposed island in Sydney Harbour, making climate a dominant element of people's experience. The island has areas exposed to summer heat, winter cold and strong winds, all impacting how people use the island and how long they stay. The microclimatic conditions are enhanced compared to the mainland, often hotter in summer and colder in winter.

The scale of the sandstone cliff landforms and buildings accelerate wind patterns, as wind is cut and funnelled into smaller streams and channels following these edges. Changing microclimates around the island create areas of high exposure and more sheltered areas become key to user comfort.

The island has been modelled and its exposure to weather systems through the year have been tested. The master plan responds to these environmental conditions.

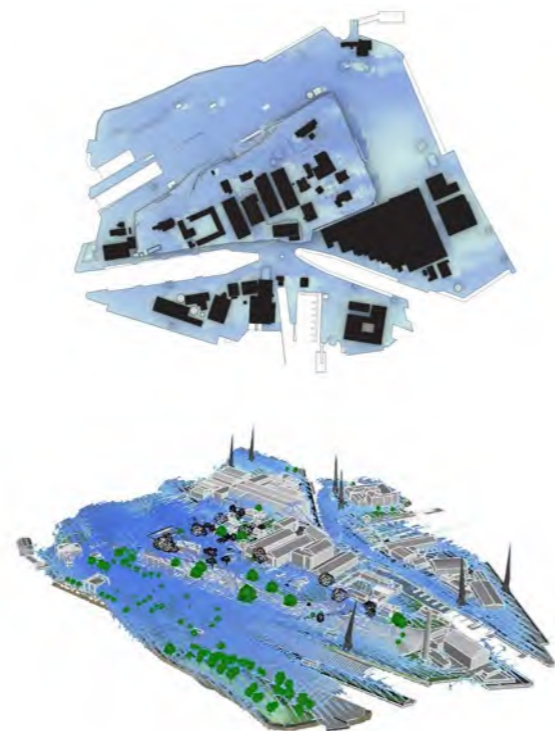
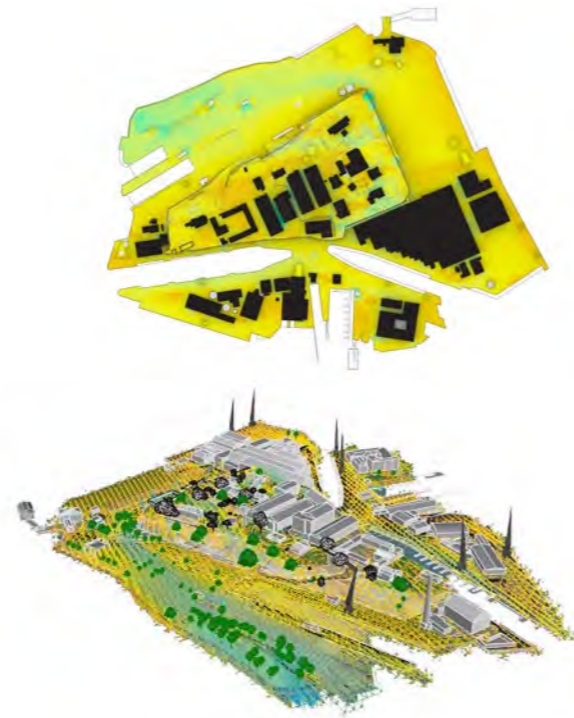


Fig 30. Winds and temperature define comfort factors at different times of the year on the island. Source: Tyrrell Studio

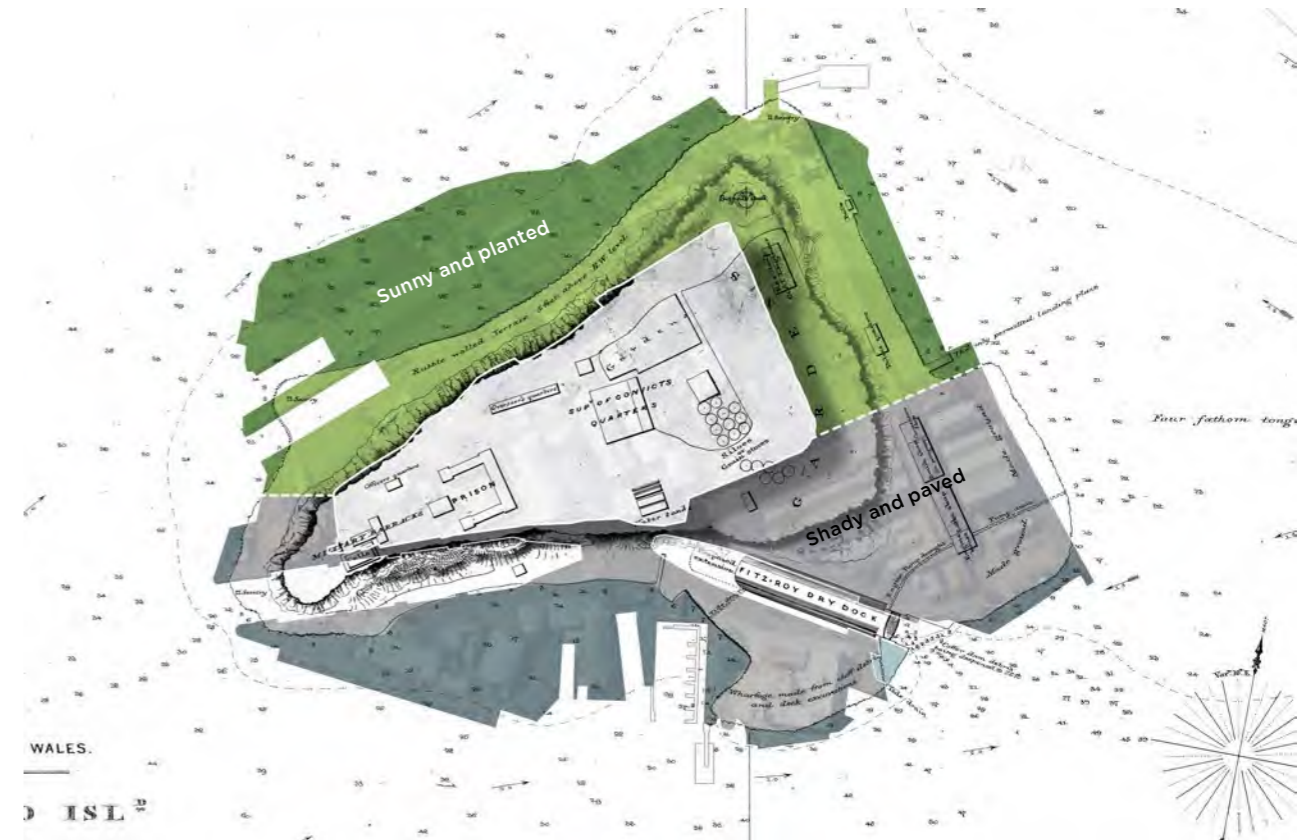


Fig 31. The sunny and green northern side of the island vs the shady hardscape of the southern island. Source: Tyrrell Studio

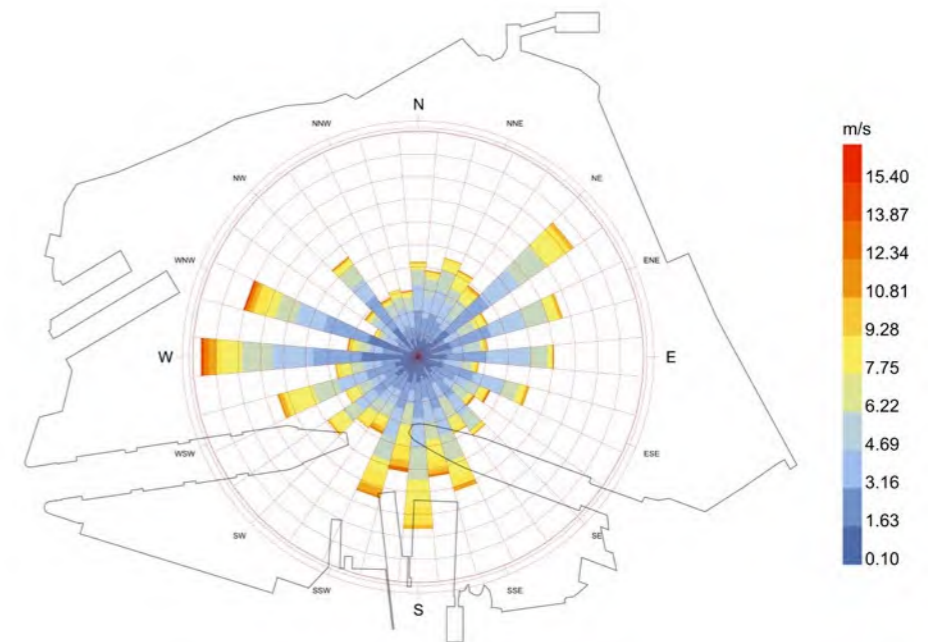


Fig 32. There are three dominant wind directions: Strong, cold westerly winds, cool north easterly breezes and some southerlies. Source: Tyrrell Studio

3.7 Modification over time

Cockatoo Island / Wareamah has been in a state of constant change and adaptation across its geological and human history. Since colonisation, this speed of change has increased dramatically. The constant heavy use has reshaped the island extensively.

Beyond the fundamental evidence of geological formation, the island now bears the traces of the convict period, the later 19th century economic boom and expansion of the colony, Federation nationhood and development of Australia as an outpost of the British Empire, two World Wars and intensive maritime use throughout the 20th century. It reflects the advancement of technology and industry, as well as the changing nature and self-perceptions of the nation.

1842



1864



1870



1847



1857



1857



1861



Fig 33. Historic phases timeline. Source: Compiled by Tyrrell Studio

3.7 Modification over time sandstone extraction

The current landscape character of Cockatoo Island / Wareamah is framed by the two main topographic features.

The upper plateau character is defined by the sandstone escarpments and remaining sandstone outcrops. Built form on the upper plateau is set atop the escarpment, or set on terraced sandstone ledges.

The lower plateau, though highly modified, is characterised by its relationship to the water's edge. The large flat aprons of land extend the flatness of the surrounding water. Incised by docks and slipways it has a constant relationship with the harbour.

This stark contrast between the flat character of the lower plateau and the rugged character upper plateau creates a fascinating range of experiences for the visitor as well as some navigational and accessibility challenges which the master plan addresses.

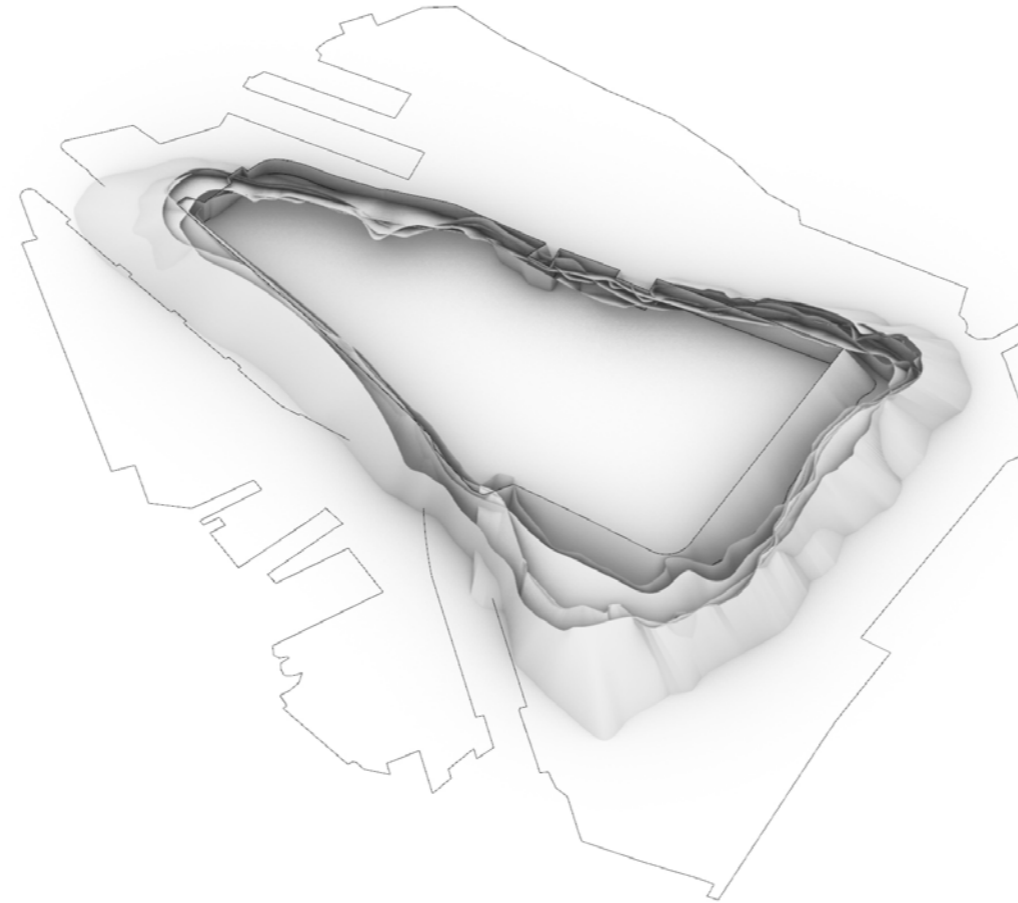


Fig 34. Drawing illustrating the extent of quarrying and cutting back of sandstone of the eastern and southern escarpment. Source: Tyrrell Studio



Fig 35. Cockatoo Island circa 1864 / unknown artist. Source: State Library of NSW

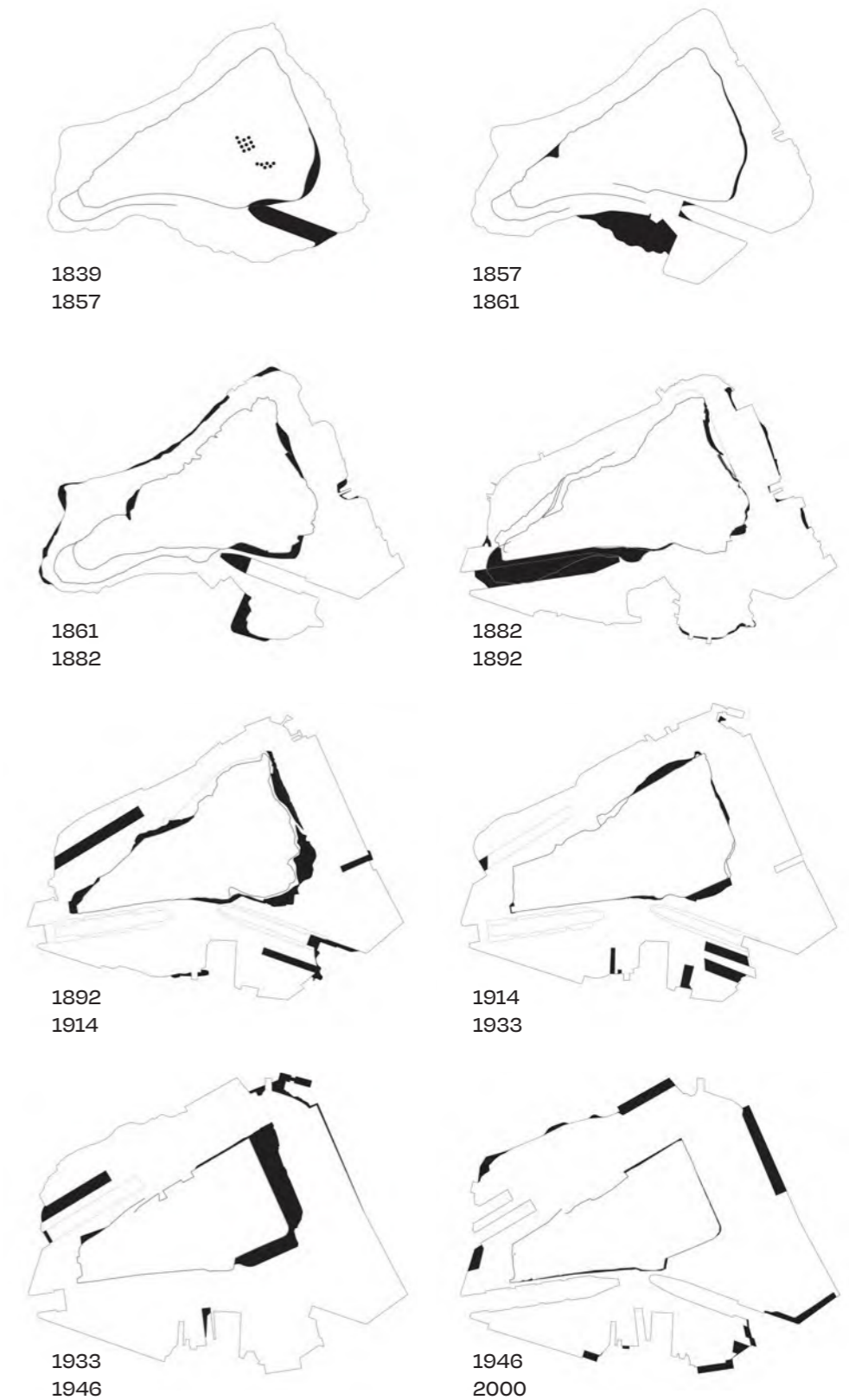


Fig 36. The cutting and shaping of the island over time. Source: Tyrrell Studio

3.7 Modification over time progressive development

While not immediately obvious, there is evidence of distinct architectural styles from different time periods allowing key historic themes to be understood through materiality and texture. These threads of history rarely stand alone and new buildings often incorporated and adapted existing buildings, creating an overall effect of collage. The layering of history, from the sedimentary layers of sandstone to the progressive layers of built form, are a special attribute of the island and help to tell the often interwoven stories of this place.

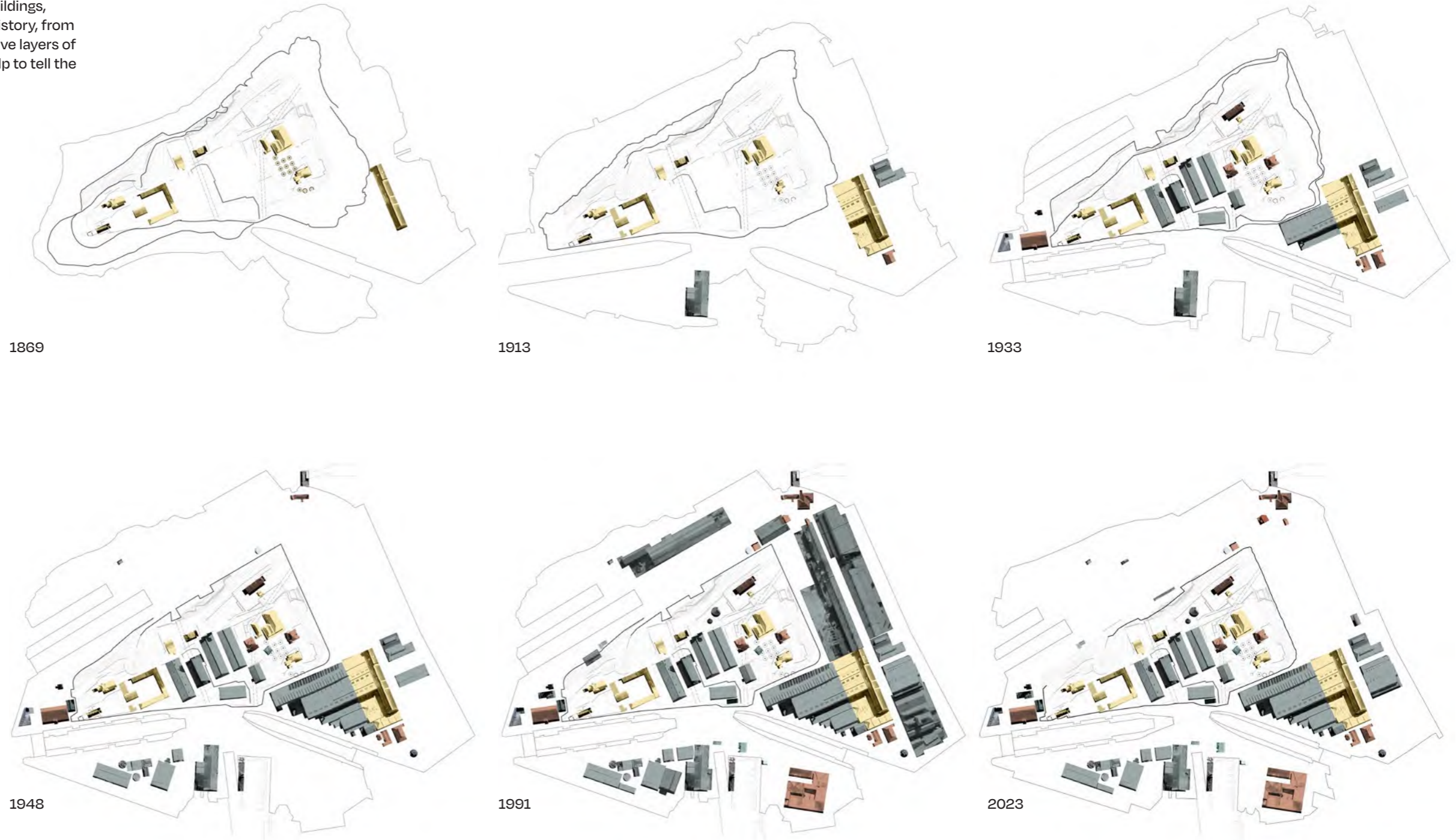


Fig 37. Mapping of the progressive evolution of built form. Source: Tyrrell Studio

3.8 The changing form of the island

Initially, the island was shaped by tides and the environment for millions of years, managed by First Nations people for tens of thousands of years, and manipulated for colonial and industrial use for hundreds of years.

As the periods of use became shorter, the intensity of the adaptation of the island increased. One of the more fascinating outcomes of this layered history of use is the imprint and overlay of multiple stages of use creating a trace backward in time, legible in the fabric of the island. All headlands and bays, for example, although heavily modified, can still be identified across the morphology of the island, despite the high level of manipulation of the landform over the centuries.



Fig 38. A map overlaying the progressive evolution of the island's shape. Source: Tyrrell Studio

3.8 The changing form of the island

Making history legible

The changing forms show a clear progression throughout history, headlands become expanded and become more prominent, bays have been straightened and compressed, transitional edges between land and water have become elongated into large flat aprons and cliff tops have been cut and become more vertical and sheer.

Mapping, reading and working with these conditions will ensure that as the island continues to change, this linear thread of time remains traceable.

These mappings show that despite the significant change in form over time, the bays and headlands of the island, of Country, still exist and can still be understood. Such is the resilience of this remarkable sandstone island.

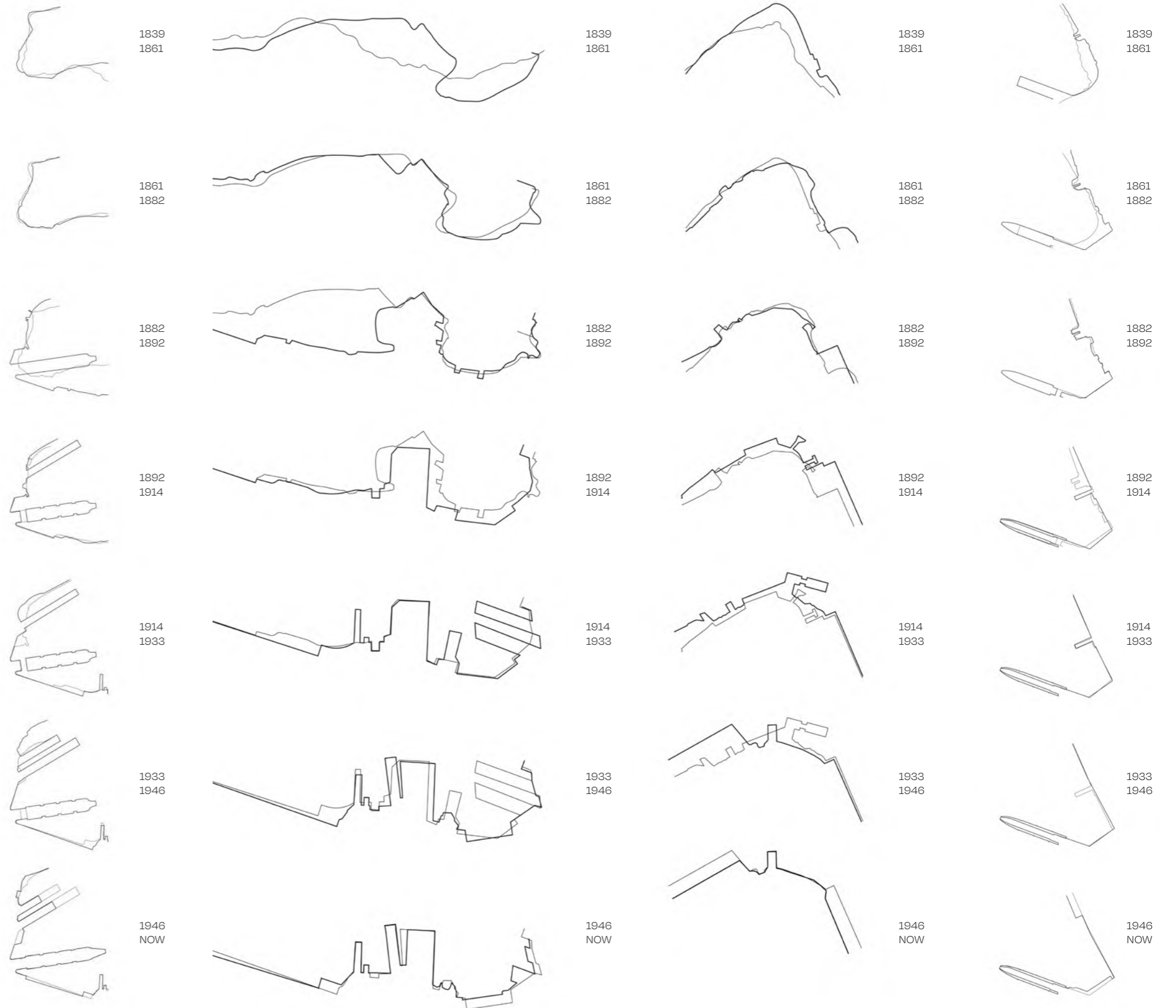


Fig 39. Mapping of the progressive evolution from natural bays to constructed bays. Source: Tyrrell Studio

3.9 An island of continuing collage

A collaged character of different scale and materials

Aside from the importance of the island's history in a national and international context, the unique and beautiful collage of materiality alone provides a unique visual experience. Many buildings have been adapted, built on top of, or totally transformed into new structures with major additions. This results in unique architectural styles on the island that fuse multiple layers of history into 'collaged buildings'.

The distinct materials used in each of the major eras of the island allow for a clear reading of these changes over time. This approach to the island is an important aspect of the heritage significance of the island, and is referred to in the Universal Outstanding Values of the UNESCO World Heritage listing.

Key materials and characteristics include:

- Sydney sandstone and Australian timbers
- Dry-pressed bricks
- Wrought iron, cast iron and steel
- Corrugated cladding and roofs
- Concrete and asphalt
- Trees and gardens.

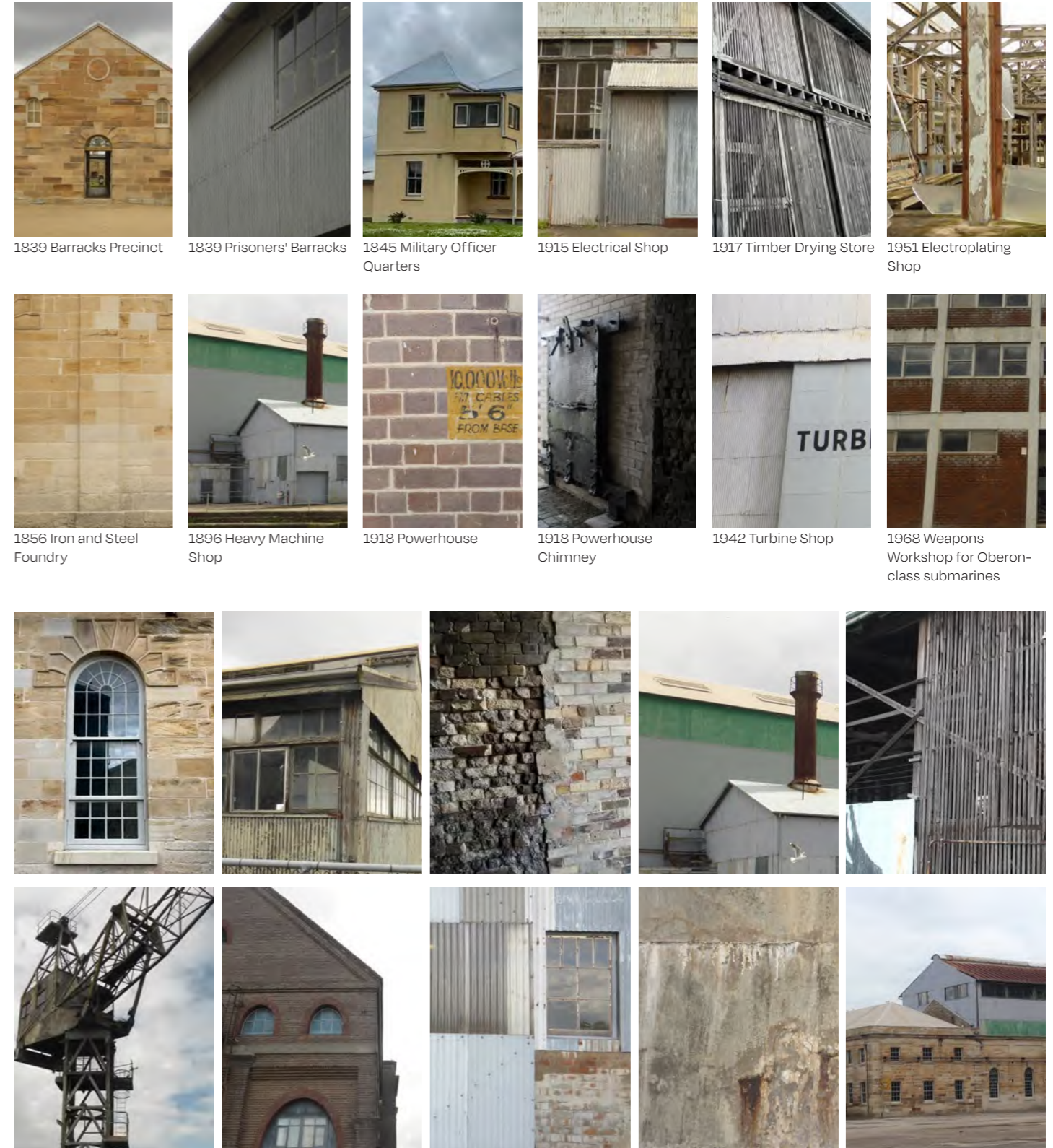


Fig 40. Collage of material textures on the island. Source: Tyrrell Studio

3.9 An island of continuing collage

A collaged character of different scale and materials

Examples of layering and overlay offer interesting ways into the layered history of this place. Materiality and the remnant threads of former use will become the key to unpacking the key historic themes of the island.



Fig 41. Layers upon layers over time create fantastic elevations recording changing use. Source: Tyrrell Studio



Fig 42. One of the most important elevations of the Convict Workshops, with subsequent layers of maritime use in starkly different materiality and form. Source: Tyrrell Studio



Fig 43. The sedimentary layering of place. First layers of sand, then layers of buildings create legible cross-sections of time and history. Source: Tyrrell Studio

3.10 Spatial structure

Working with the structure of the island

As described, Cockatoo Island / Wareamah went through many stages of development, where built form intensity varied. Each phase of history had its own spatial logic and structure, but each has been eroded over time. The somewhat random collection of remnant elements from multiple additions and demolitions over many years is both interesting and confusing for the uninitiated visitor. The seemingly random sequences can lead to a sense of disorientation.

Some of the defining spatial patterns of the island as it exists today are:

Harbour rooms

The island itself sits within the context of the drowned river valley. It is a fragment of sandstone, a beacon of resilience. It still has a strong relationship with the surrounding geographies of the harbour. Each side of the island relates to its own harbour room, with its own unique character.

Large-scale spaces

Large-scale open spaces, while not historically a feature of the island given its intense activity, are now a key part of the experience of the Northern and Eastern Aprons. These spaces have the best orientation for solar access and some of the most beautiful harbour outlooks.

Human-scaled spaces

There is an east-west band of human-scaled buildings and spaces across the island. These are all remnants from different time periods, so they are a collage of historic themes. They are, however, united by their scale, grain and their experience as sequences of courts and walkways.

Islands within the island

The Southern Apron is unique in that the two dry docks essentially cut these aprons off from the sandstone island creating two smaller islands with the evolved bay between.



Fig 44. Four distinct harbour rooms with unique characters that add to the character of the island. Source: Tyrrell Studio

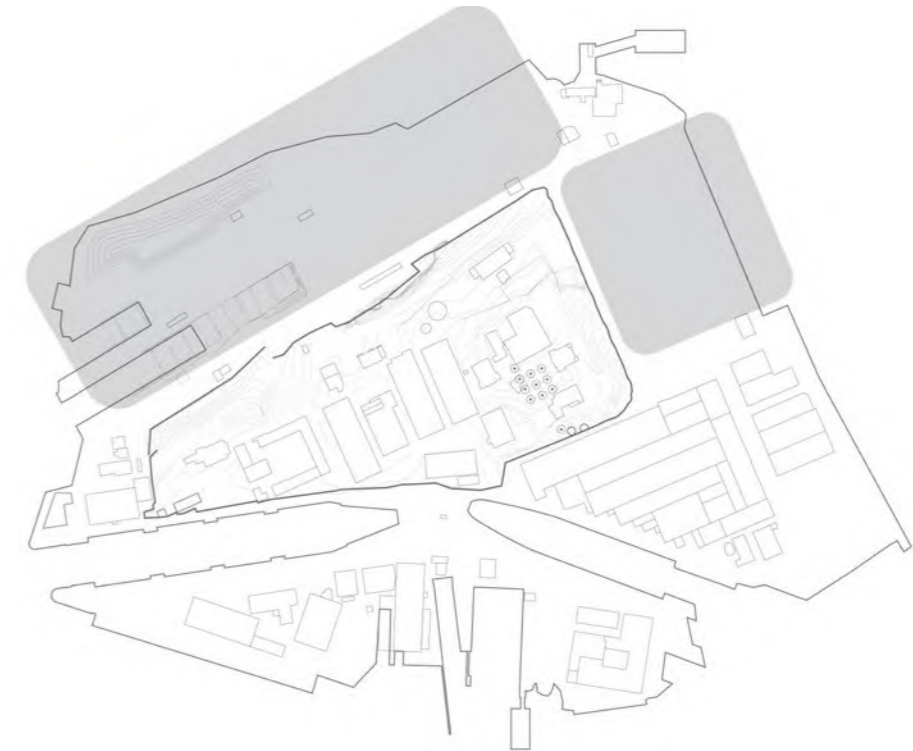


Fig 45. Two large spaces remain following the removal of large industrial buildings. The scale of the concrete aprons and traces of the buildings foundations remain as the memory of former large-scale use. Source: Tyrrell Studio

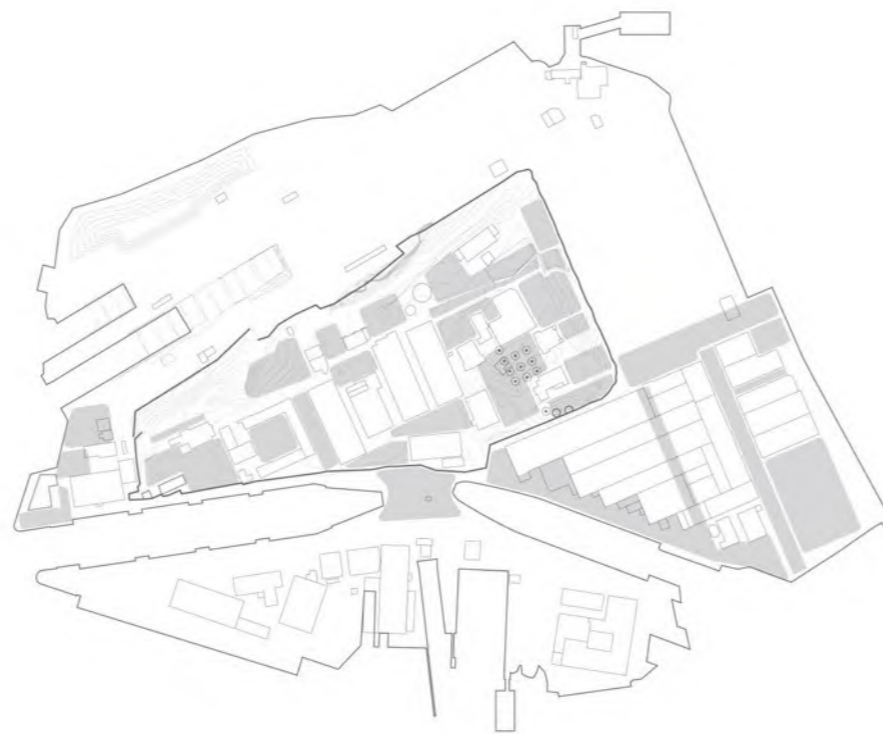


Fig 46. Central band of small intricate spaces in and around buildings of the Powerhouse, upper plateau and Turbine Shop. Source: Tyrrell Studio

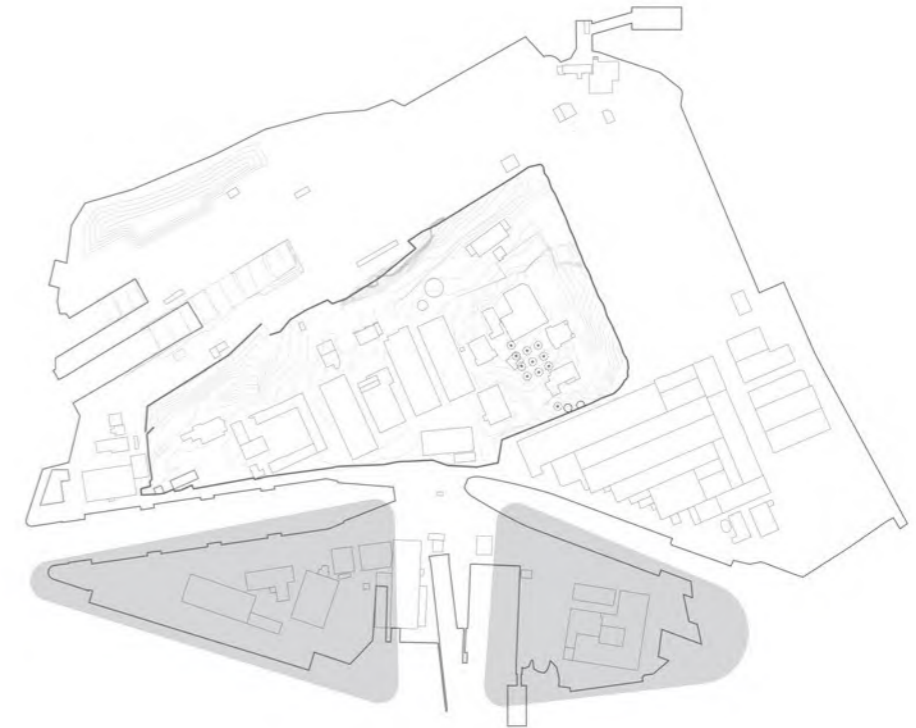


Fig 47. The Southern Aprons are separated from the rest of the island by Sutherland and Fitzroy docks. They are almost islands within the island. Source: Tyrrell Studio

3.10 Spatial structure

The spatial character of the existing island structure suggests particular uses:

1. The band of large sunny green open spaces north and north east are sheltered from cold southerly winds and are suitable as passive, green park like areas with the Eastern Apron as the largest event space.
2. The band of human-scaled buildings and spaces east-west across the centre have the highest built heritage value and the most potential for activation through adaptive re-use, interpretation and events. In particular, the south east collection of built form on the aprons have the highest potential for visitor orientation and programmatic activation.
3. The southern most aprons are almost islands of land cut off by the two docks. They are nearly exclusively paved and with clusters of buildings of lower heritage value than other parts of the island. The south western island has a southerly orientation and is often overshadowed by the sandstone escarpment. It is also exposed to cold southerly winds making it less useful as open space for visitors to spend time outdoors.

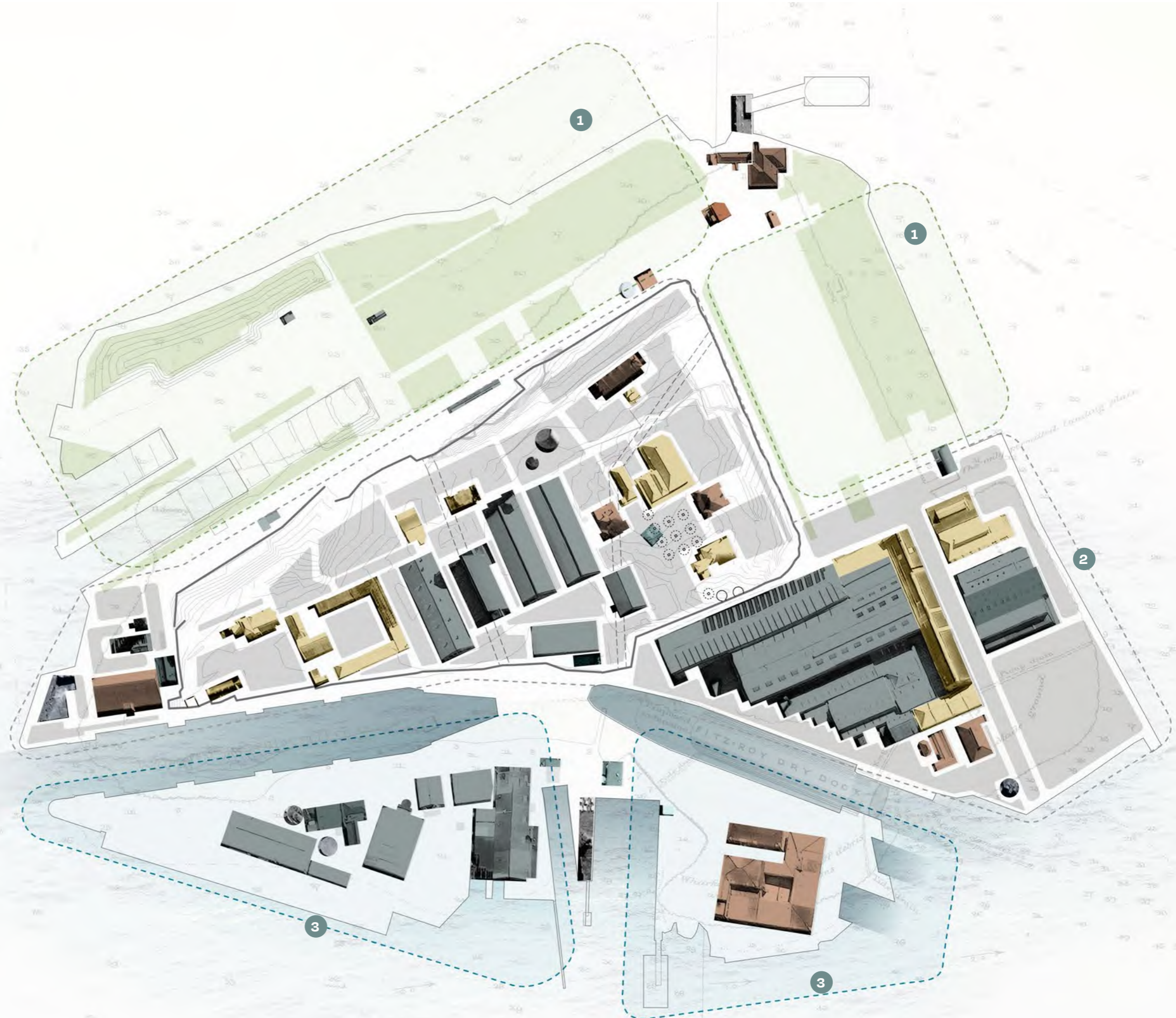


Fig 48. The structure of the present day island. Fragments of many different eras of history. Source: Tyrrell Studio

4.0

Master plan overview

4.1 A plan of many layers

4.2 Four journeys guide the master plan design response

4.3 Future use guided by land form, heritage and appropriate activation

4.4 Arrival, access and circulation

4.5 Master plan



4.1 A plan of many layers

The master plan works with the fundamental spatial and material characteristics of the island outlined in section 3. It weaves together many individual considerations as a whole, creating a diverse, engaging and highly unique Cockatoo Island / Wareamah experience.

The master plan values and promotes its UNESCO World Heritage status while making more legible the full spectrum of history.

It respects the layers of history and fuses them with a circulation and land use structure that emerges from the unique qualities of place.

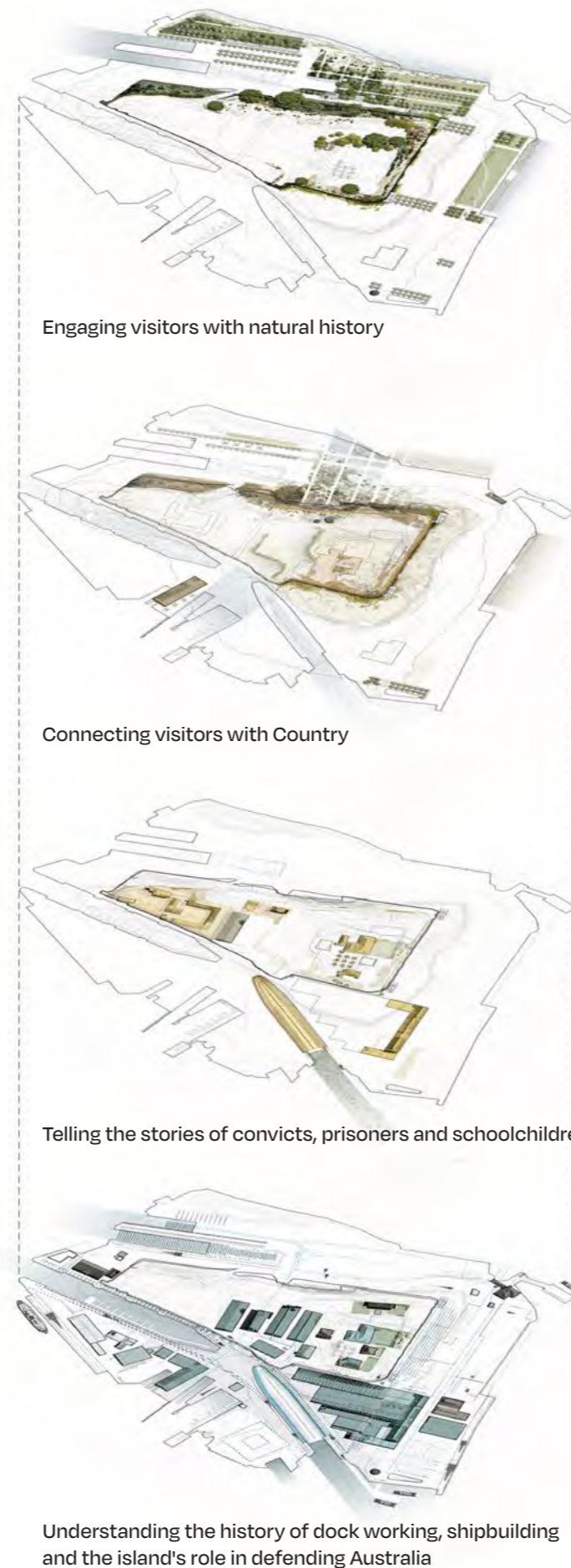
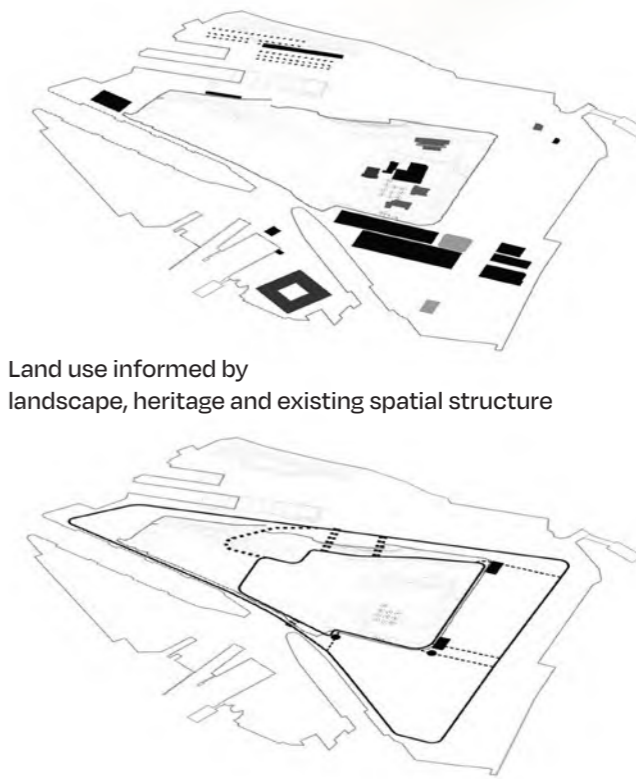


Fig 49. Many journeys as layers to inform the master plan. Source: Tyrrell Studio



Access and circulation considered as a curated experience of place

Fig 50. Exploration of land use and circulation. Source: Tyrrell Studio



Fig 51. Many layers combine to create the master plan. Source: Tyrrell Studio

4.2 Four journeys guide the master plan design response

The master plan emerges from the islands heritage and creates space for its interpretation. It identifies four historic themes.

As a critical part of intuitive wayfinding strategy, the themes are developed as a language of materials, textures and geometries that are clearly associated with each theme. This provides an opportunity for beautiful detailed design of unique places that interweave with the fragments of history. It reduces the reliance on interpretive signage.

The four themes have guided the design response. Critical components of each theme are tied to key places across the island. This allows for themes to be developed in a site-specific way, allowing each story to find its own place on the island. The circulation strategy then ties these moments into clear sequences where the diversity of the island's history can be encountered by the visitor as they move from place to place.



Fig 52. Natural history of the island. Source: Tyrrell Studio



Fig 53. Connecting with Country. Source: Tyrrell Studio

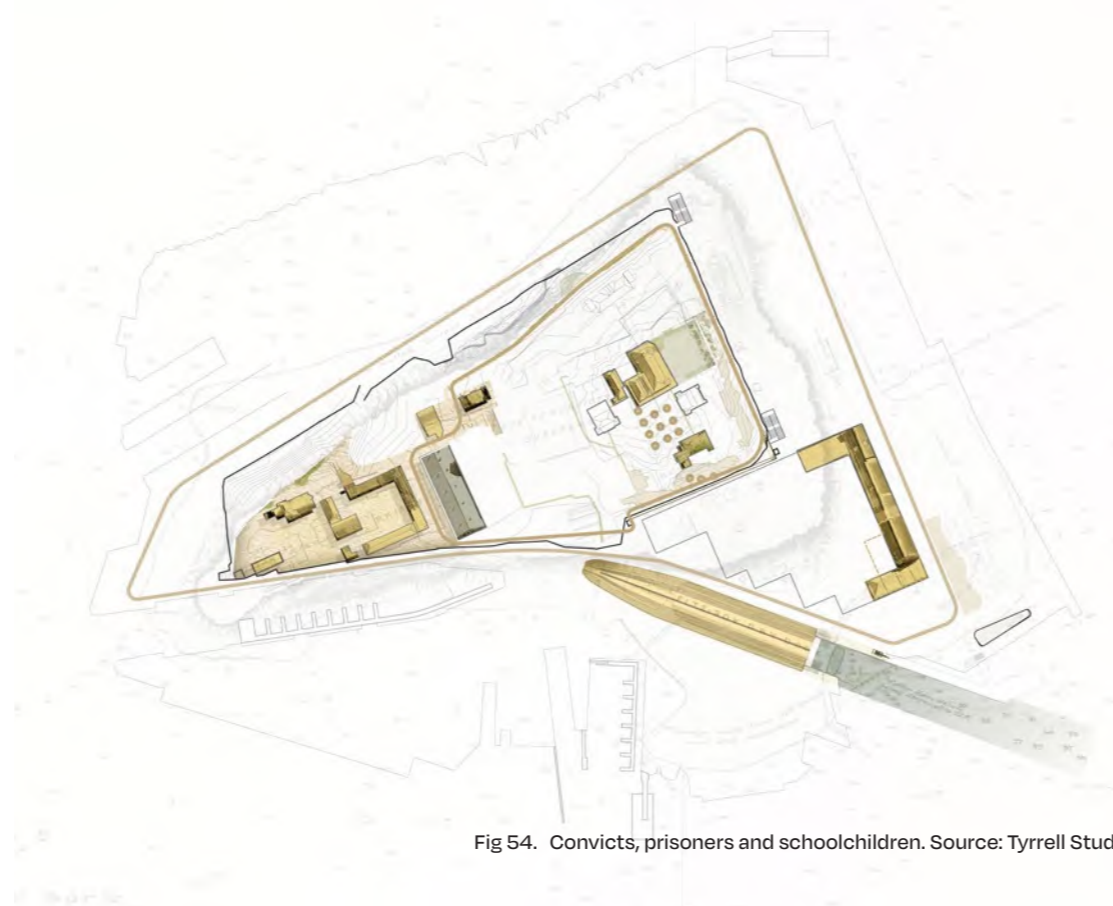


Fig 54. Convicts, prisoners and schoolchildren. Source: Tyrrell Studio

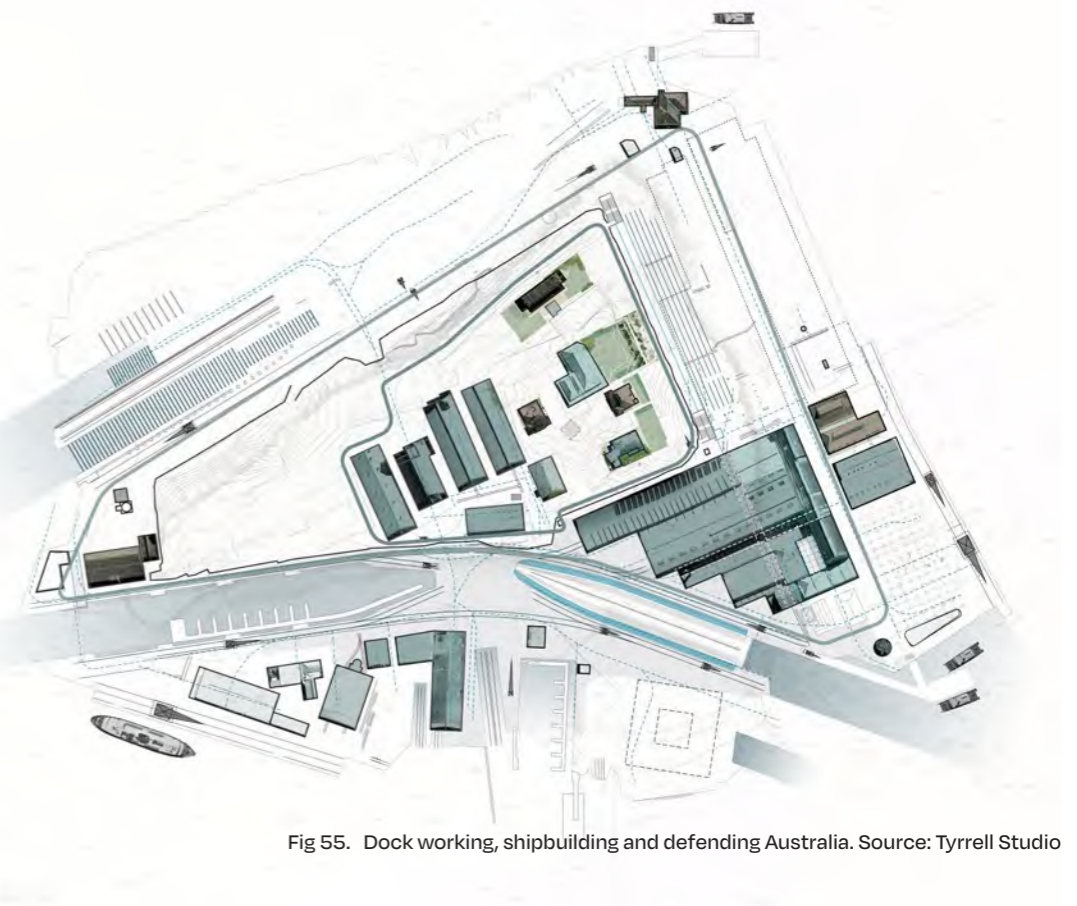


Fig 55. Dock working, shipbuilding and defending Australia. Source: Tyrrell Studio

4.3 Future use guided by land form, heritage and appropriate activation

Cockatoo Island / Wareamah will attract visitors because of its world-class heritage experience, its natural beauty and its diversity of activities for a wide range of people.

The position of proposed land uses and activities have emerged from a deep understanding of the historic and contemporary landscape of the island and are sited in a way sympathetic to the four key journeys as well as the arrival and circulation logic.

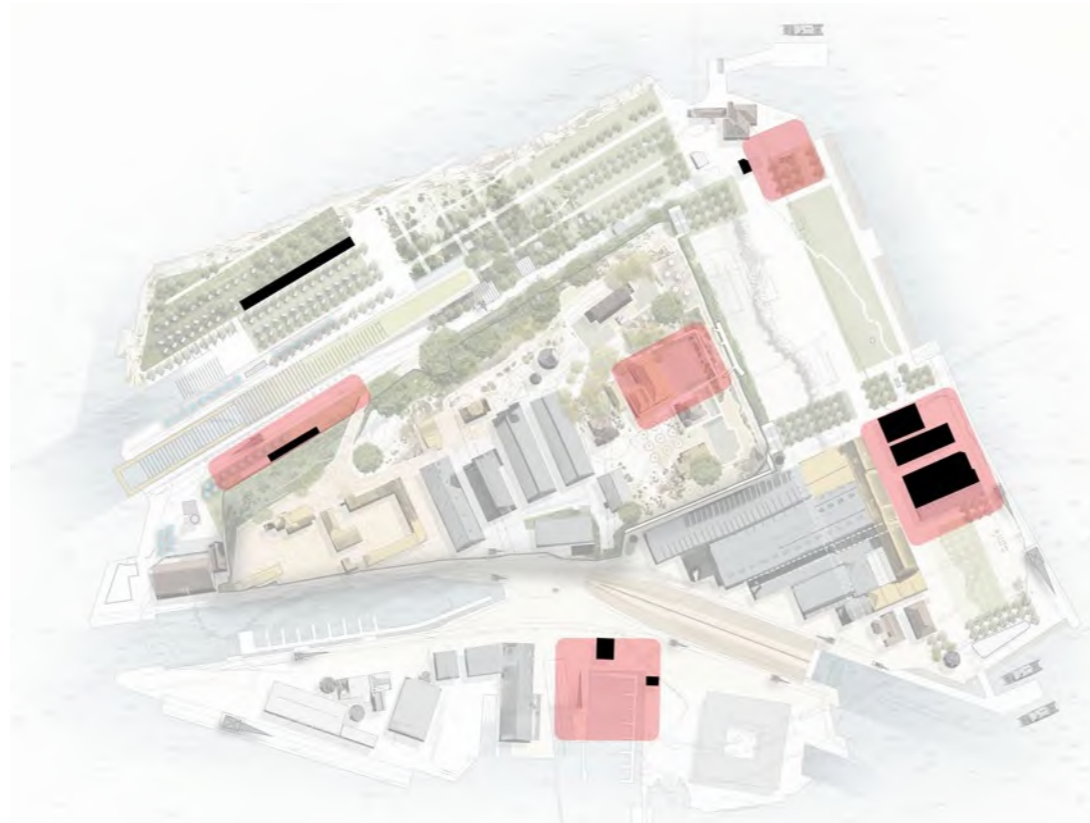


Fig 56. Food and beverage options are positioned to suit a range of visitors across day and night. Source: Tyrrell Studio

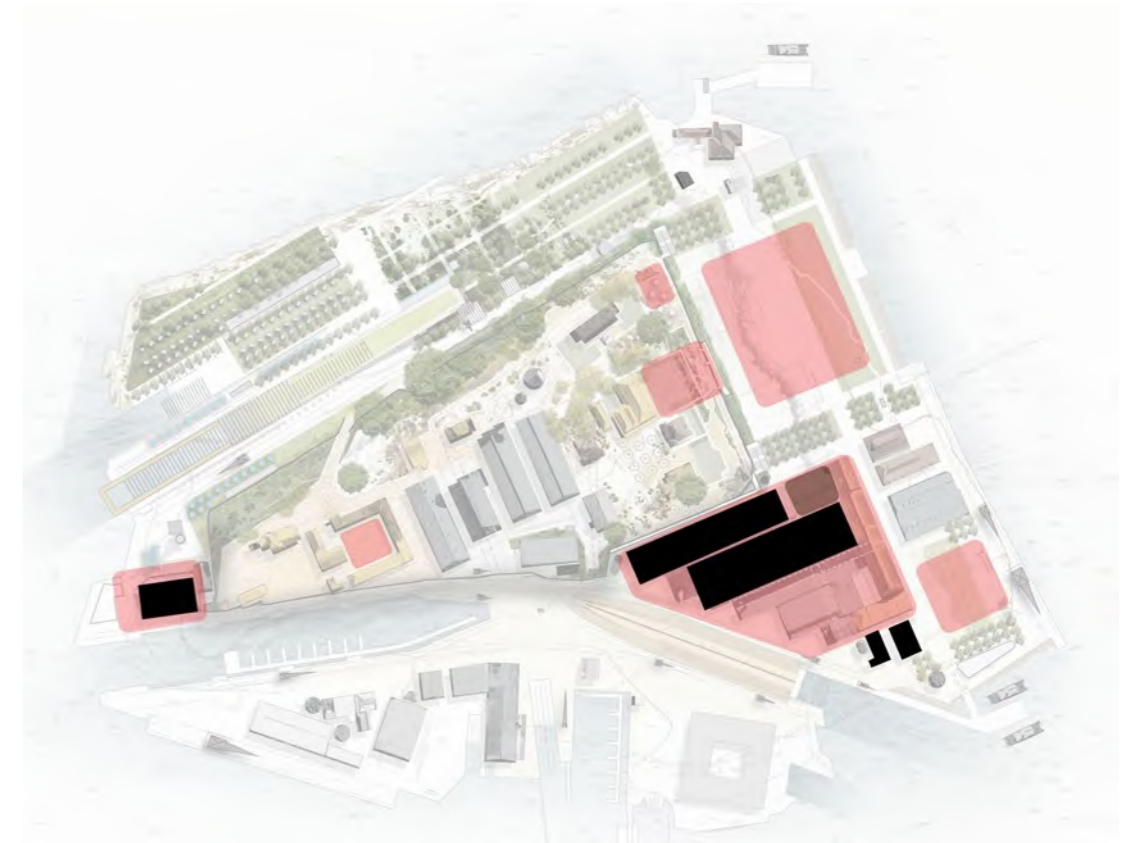


Fig 57. Event spaces, function spaces and event infrastructure activate the existing buildings. Source: Tyrrell Studio

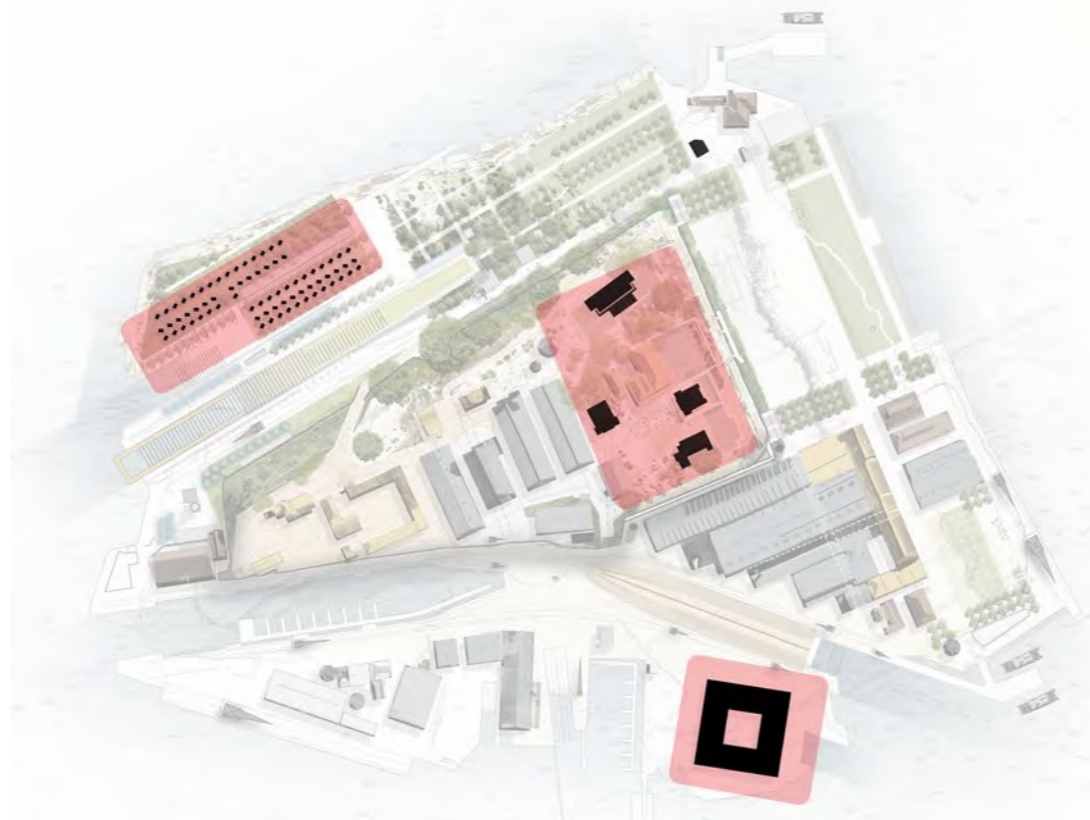


Fig 58. A broad range of accommodation options from camping, cabins, historic house or hotel allow an extension of stay on the island, positioned carefully away from the key public experiences. Source: Tyrrell Studio

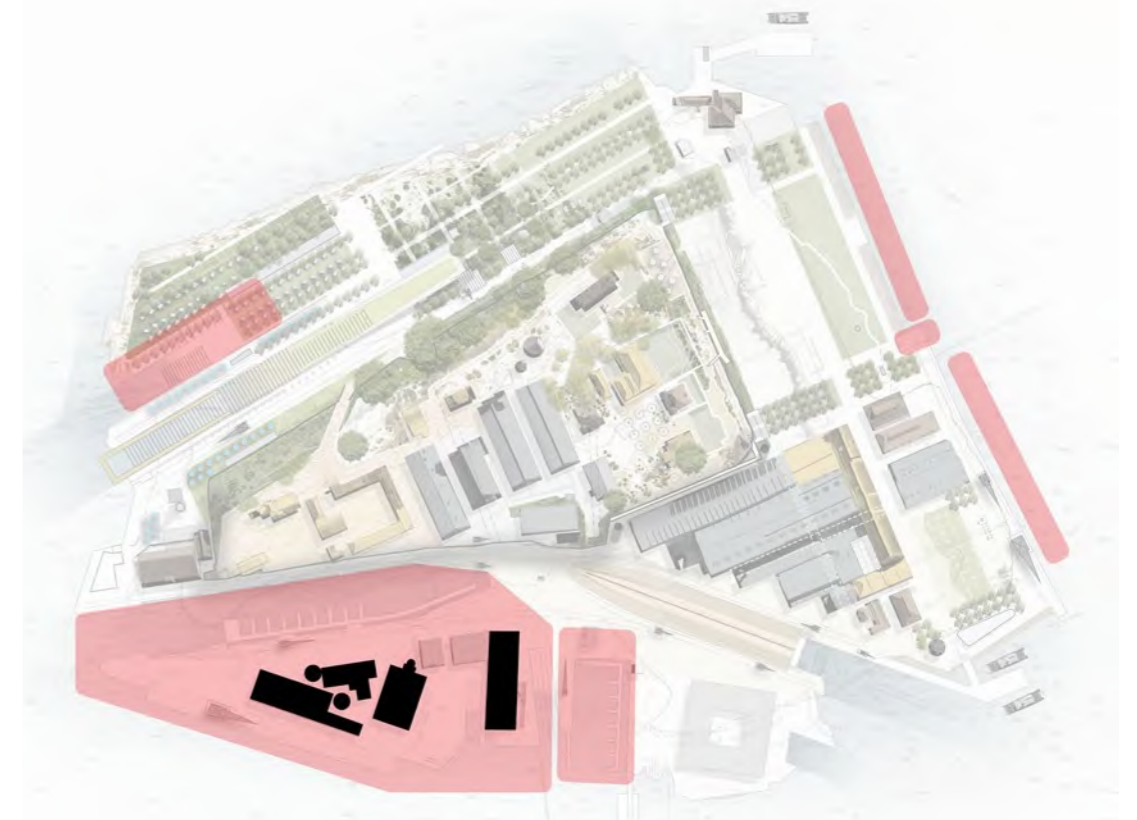


Fig 59. Everyday creative and maritime activity is supported by the master plan. This includes a continuation of the rich boat building and industrial history of the island. Source: Tyrrell Studio

KEY:

- Buildings/structures
- Areas/zones

4.4 Arrival, access and circulation

Cockatoo Island / Wareamah can be difficult to navigate, both due to its difficult terrain as well as its confusing fragmentation of spaces.

Clear, compliant and equitable access and circulation across the island is considered critical to the overall long-term plan; equally, in the process of making access compliant, the raw nature of place should not be sanitised. The key elements of access and circulation are proposed to comprise:

- Pedestrian movement and wayfinding providing clarity of circulation that is directly related to interpretation and understanding of the island's core heritage values
- New ferry wharf located next to a new public arrival square that activates heritage buildings through uses such as a visitor orientation hub, food and beverage outlets and educational uses
- Two wharves operating concurrently in major event mode to provide expanded peak capacity during events
- Two new lifts and stairs providing direct and equitable access to the upper plateau precinct.

Lower loop

The lower loop is flat, offering clear and unimpeded access around the island. It gives an understanding of the island as a whole, particularly the detail of the sandstone and the scale of the cliffs. This loop will, where possible, follow the original edge of the island before quarrying. This key historic thread will be texturally indicated in the ground plane.

Upper loop

The upper loop circulates visitors around the island taking in the most significant convict heritage and the most beautiful views. The loop is atop the sandstone and therefore covers some ground of uneven surface and will need to be designed to ensure equality of access.

Points of vertical circulation

In the past, transition between water level and top of island occurred in many different places. These points of intuitive connection have been lost as the island has been modified. It has left lower aprons and the upper plateau disconnected for much of the eastern half of the island. Two new lifts and two new stairs are proposed to enable excellent connectivity between these two key levels (shown red).

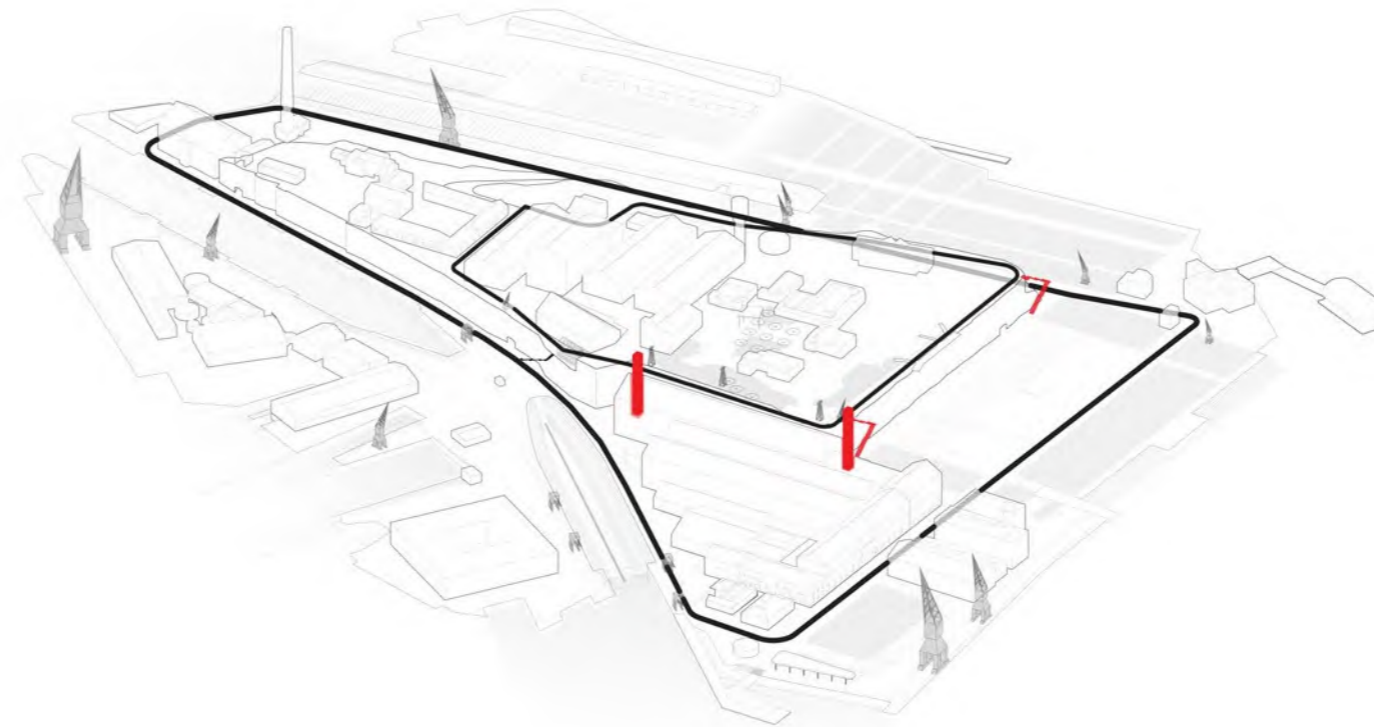


Fig 60. A clear network of circulation is proposed to overcome the difficulties presented by level changes. Source: Tyrrell Studio

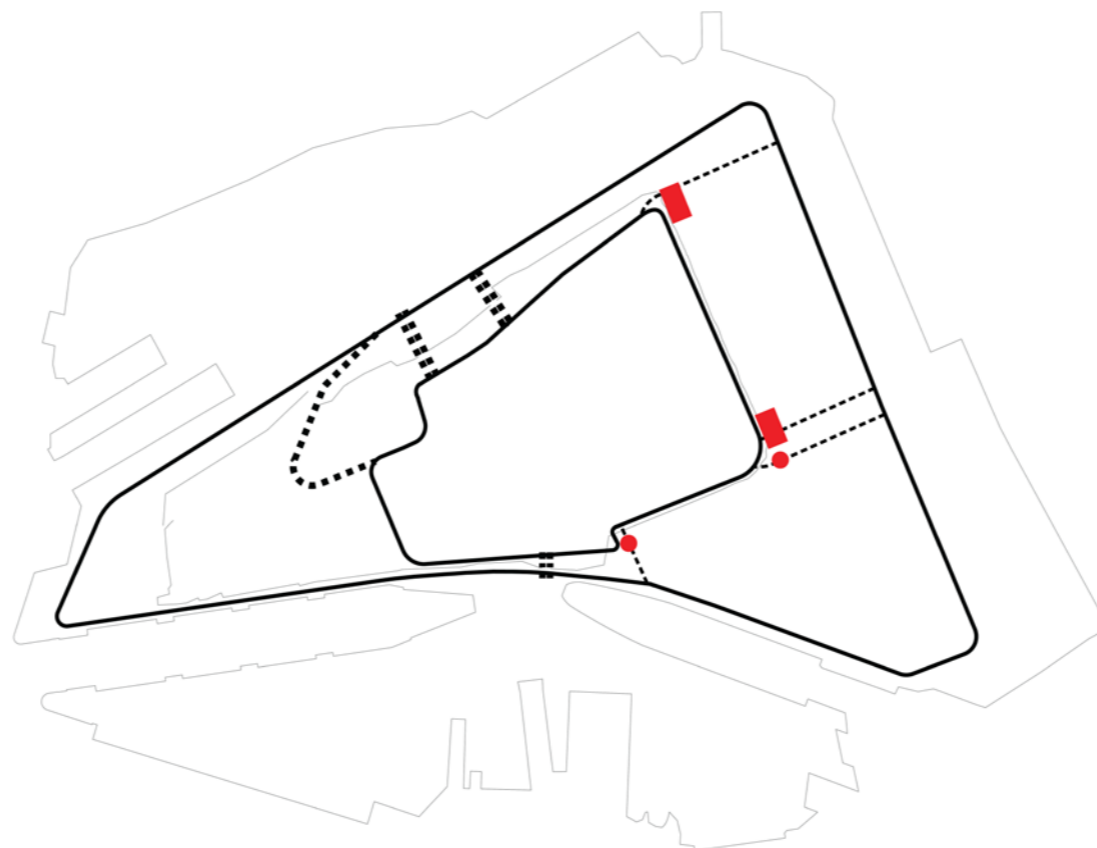
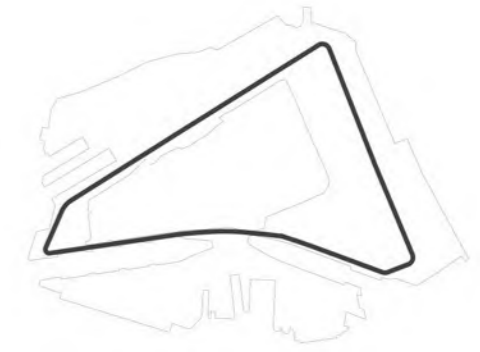
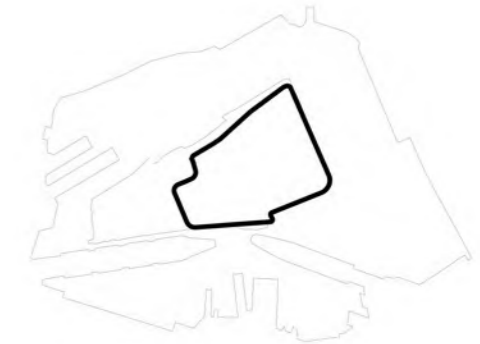


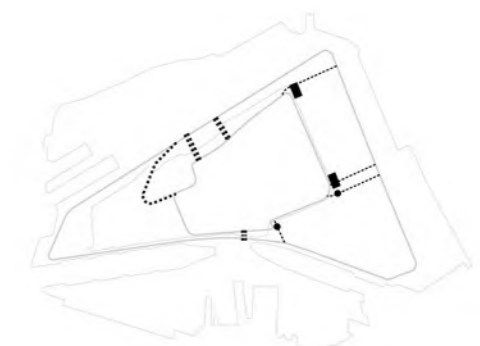
Fig 61. Loops, lines and nodes create a clear circulation network. Source: Tyrrell Studio



LOWER LOOP



UPPER LOOP



VERTICAL CIRCULATION

Fig 62. Greater circulation networks. Source: Tyrrell Studio

4.5 Master plan

The master plan provides further details on each of the illustrated long-term proposals numbered below.

1. Arrival square – An additional ferry wharf at the Ruby Steps will welcome visitors into the island's new arrival and orientation square. Heritage features will be highlighted and the square activated with events, educational and creative activities, Country and cultural activities, and signature food and beverage.

2. The Convict Workshop – A significant convict-era building will be restored to be the main visitor hub of the island, offering visitor services, tours, island information and general assistance. Its beautiful sandstone façade will form a dramatic backdrop to the new arrival square.

3. Fitzroy Dock – Carved from sandstone by convict labour and the largest engineering project in Australia when it was completed in 1857 – Fitzroy Dock is currently flooded. The potential to drain this extraordinary structure will be considered, adding unique interpretive and light shows to become a premium island experience.

4. The industrial and turbine halls – These cathedral-scale spaces will be restored to support culture, creative arts, exhibitions and First Nations and events programming. They will be linked to lifts to the upper plateau, new food and beverage offerings and new supporting infrastructure that will enable more frequent, diverse uses. Rooftop solar power will support clean energy for the island.

5. Eastern Apron – The island's major event space will be retained and enhanced with permanent enabling infrastructure, new access stairs to the upper plateau, shade trees and ground plane interpretation of the original waterline.

6. Potential cafe/restaurant – Signature venues will be considered within restored heritage buildings. A wider food and beverage strategy will be implemented over time and in partnership with industry to support growing visitor numbers and experiences across the island.

7. Northern parkland – The campground will be relocated to enable the creation of a significant new harbour park, reconnecting ancient remnant cliffs to the harbour; restoring native landscapes, trees and wildlife; and teaching people about collective care for Country (both land and water) within a place of recreation, play and rest.

8. Marine ecology – Living seawalls will be established on the eastern and northern edges of the island to support harbour biodiversity and enhance rehabilitation of the waters around the island.

9. Recreation and camping – The island-stay experience will be refreshed with new camping, cabins and camp facilities, plus new recreational opportunities including a harbour public pool and non-powered recreational boating and kayaking in the slipways.

10. Superintendent's Precinct – Reconnected to the lower plateau with lifts and stairs, this precinct will be enhanced with interpretive and heritage activations, upgraded gardens, space for small events and conferencing, and refreshed accommodation.

11. Silos and tent embassy – This will be a contemporary First Nations meeting place for past, ongoing and new traditions and ceremonies. The layers of natural and cultural heritage including remnant sandstone, Country, the convict silos and the Aboriginal Tent Embassy will be interpreted.

12. Plateau Industrial Precinct – Adaptive re-use will enhance interpretive, conferencing and educational opportunities such as a maritime design learning centre.

13. The Barracks Precinct – Best practice visitor and interpretive experiences will bring alive the complex histories and stories of the island's convict past, supported by adaptive re-use of existing structures and a decluttered public domain.

14. The Mould Loft – This will continue to be used for public programs, enhanced with displays about the convict system, and industrial and reform schools, covering people's stories of resilience, escape and rebellion.

15. Enhanced maritime facilities – Infrastructure upgrades will support maritime uses and businesses (for example, boat repair, storage, chandlery and First Nations boat building).

16. Restoration workshops – The workshops will be enhanced as part of ongoing restoration and maintenance of the island's heritage assets through community and volunteer activities.

17. Accommodation – This is a long term proposal for new accommodation when visitor demand exceeds capacity that will be consistent with the statutory management plan and international precedent for a World Heritage place.

18. Parramatta Wharf – The wharf will be retained and will support more frequent services.



Fig 63. Cockatoo Island / Wareamah Master Plan. Source: Tyrrell Studio

5.0

Public programs and visitor experience

5.1 Public program and visitor experience

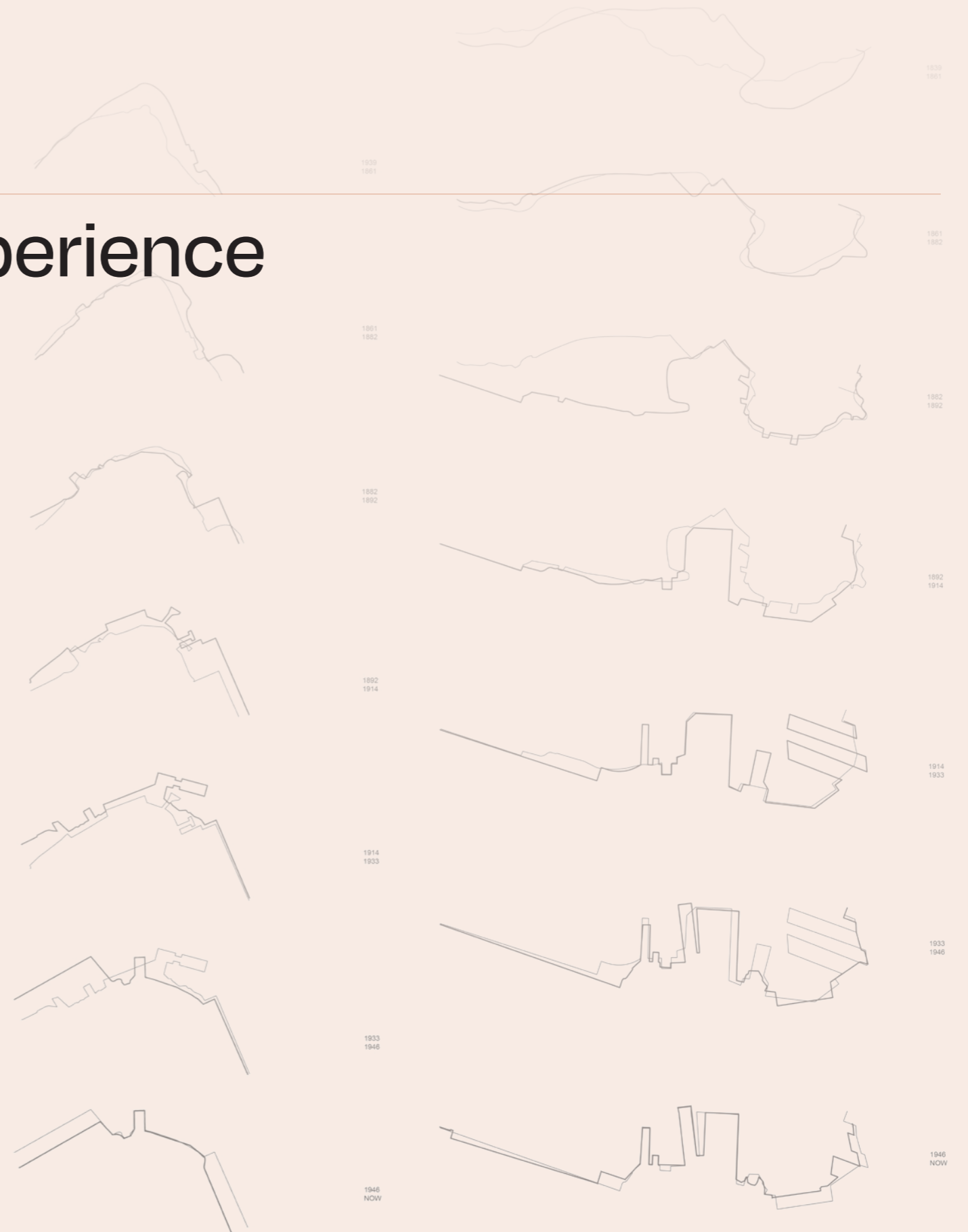
5.2 Natural history of the island

5.3 Connecting with Country

5.4 Convicts, prisoners and schoolchildren

5.5 Dock working, shipbuilding and defending Australia

5.6 Snapper Island



5.1 Public program and visitor experience

Interpretation strategy centred around four journeys

Interpretation overview

The island can be overwhelming, particularly for first-time visitors, so an overall interpretation strategy will be adopted as part of the master plan that introduces the layers of natural and cultural heritage, supports orientation soon after arrival, and encourages active engagement with Cockatoo Island / Wareamah as a place. Visitors can choose how they prefer to move around and explore. Around the island, physical wayfinding and interpretation signage will be integrated with a digital guide and support the four key themes:

1. Natural history of the island
2. Connecting with Country
3. Convicts, prisoners and schoolchildren
4. Dock working, shipbuilding and defending Australia

Interpretation will cater for different audiences' needs including experiences for locals, tourists and younger visitors, as well as those with a connection to the island through a relative or ancestor, or with an interest in maritime, military, convict or First Nations cultural heritage. This will use the interpretive approach of catering for different people, sometimes called 'paddlers, swimmers and divers'. Paddlers are recreational visitors who may carry a discretionary interest in heritage, swimmers are visitors who have casual interest in understanding and engaging with the interpretation of themes and divers are dedicated, informed and interested visitors who are highly engaged in heritage interpretation.

The layered approach will provide a richness and variety that will encourage visitors to extend their stay and return.



Fig 64. The Fitzroy ferry. In early 2024 the Harbour Trust took ownership of the Fitzroy ferry and relocated it to Cockatoo Island / Wareamah from Pittwater, where it had been in private use for decades. The wooden vessel once played a vital role in the island's maritime operations. Source: Australian Register of Historic Vessels

Orientation

The orientation experience will introduce the island and its layered history through models that show its transformation over time, and introduce the different themes and journeys visitors could take. Recognising that some visitors will prefer to skim the highlights and others follow a specific theme or dive deep into the detail, visitors will be able to choose whether they wish to explore on their own, with a digital guide or take a guided tour.

Boat trips

While all will arrive at Cockatoo Island / Wareamah by boat, there will be options for additional boat trips such as a circumnavigation, or deep dive into the maritime history including a visit to the Woolwich dry dock nearby.

Site-specific art commissions

Art and creativity are integral to Cockatoo Island / Wareamah. As the master plan is implemented, the different themes would be explored by artists through a residency including a stay on the island, and then the creation and installation of site-specific work. Potential locations include the living seawalls, harbour park, Barracks Precinct, slipways and industrial precinct.

Immersive evening program

Cockatoo Island / Wareamah will come alive at night when light, sound and technology will be used to create an immersive program that tells the story of its transformation and uses over time as visitors take a looped walk around the island. Key experiences would include the resilient sandstone of the cliff faces; connecting to Country at the harbour park; the activity and voices of the Barracks precinct; projected ships in the docks; or the sights and sounds of the mighty Turbine Shop. Visitors could combine the evening program with a meal and boat trip, or stay overnight and then explore more the next day.

A major destination for schools and education

Building on the current schools program, Cockatoo Island / Wareamah will become a premier destination for school students and will also cater for tertiary educational opportunities. Students will be able to access programs from First Nations cultural practice and Caring for Country through to history, and STEM (science, technology, engineering, mathematics) subjects, with the option of an overnight stay as part of the experience.

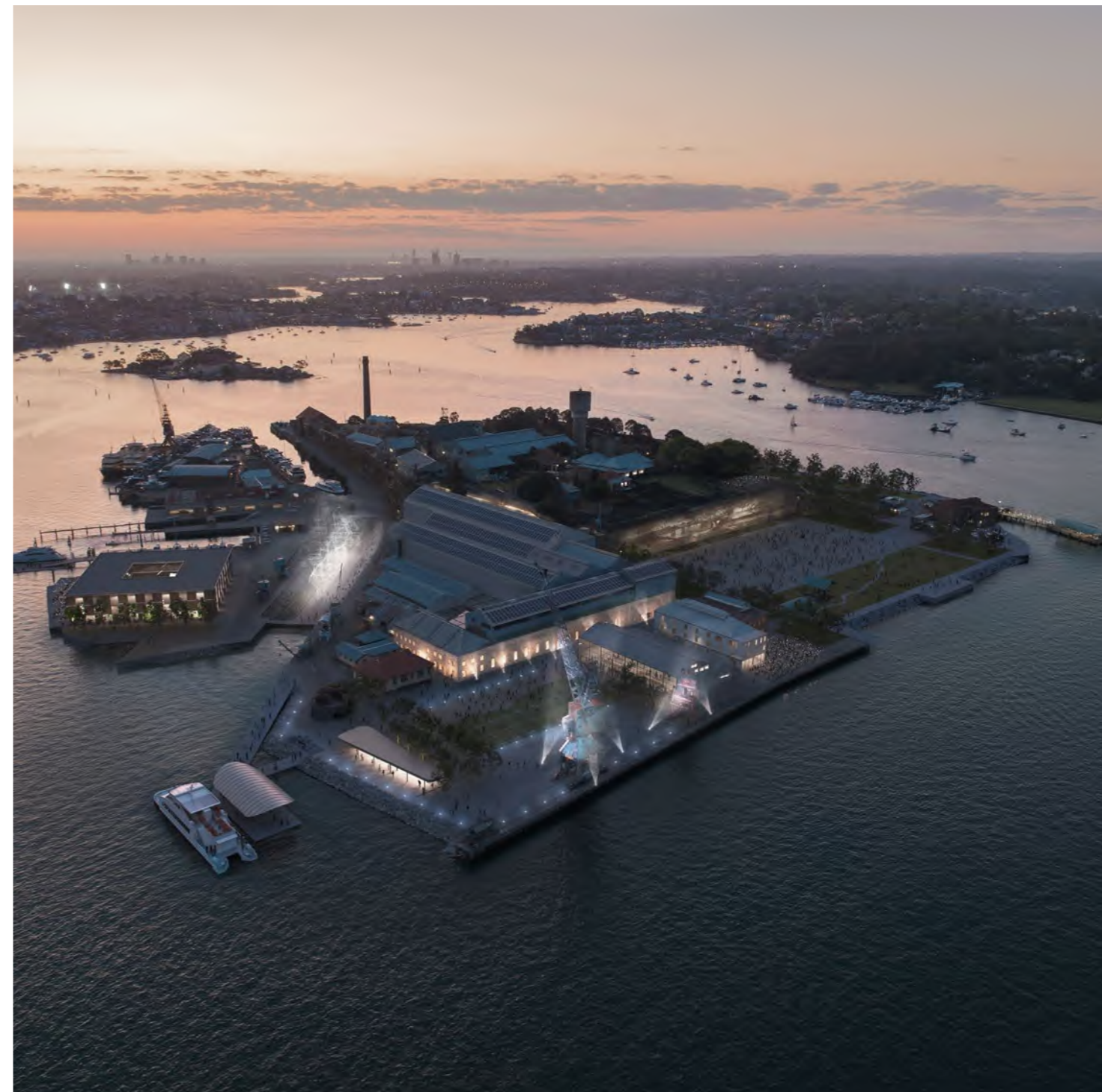


Fig 65. Artist's impression of an immersive evening program underway. Source: Tyrrell Studio + Doug & Wolf

5.2 Natural history of the island

Cockatoo Island / Wareamah will present a unique perspective for understanding Sydney Harbour's natural values in a post industrial context. Sydney's renowned natural beauty is on display both from the island as a viewing point, and within the island. This is an opportunity for audiences to connect with Australia's deep history as a continent, the resilience of landscapes and contemporary discussions of environmental conservation.

While its surface has been transformed by human activity, Cockatoo Island / Wareamah resiliently stands as a rocky island surrounded by saltwater. Visitors will be able to explore the natural values and how – with assistance – they are reasserting themselves.

Exploring the island's natural values focuses on listening, touching, seeing and smelling, the master plan considers the following elements as key to visitor understanding and engagement with this theme.

Orientation space

1. Introducing the natural values of the island and putting them in context

Experiencing geology

2. Exploring the deep history of the harbour via the visible sandstone geology at sites of cutting or tunnelling
3. Walking the shape of the island before 1788

Experiencing terrestrial ecosystems

4. Seeing the intact areas of escarpment with their established plants and returning biodiversity
5. Engaging with plant and animal communities including *Angophora costata* canopy which is a known cockatoo habitat
6. Investigating the micro forests of the island up close on the cliff faces
7. Relaxing in the harbour park with its transect of planting from cliff to coast that interprets how the island once was
8. Learning about the power of plants to remediate contaminated land (phytoremediation)

Experiencing marine ecosystems

9. Seeing marine life growing on the living seawalls

Experiencing the dynamic island environment

10. Watching the changing tides
11. Exploring the interactive indicators of wind, weather and seasons at the water tower



Fig 66. The natural history of the island elements. Source: Tyrrell Studio

5.2 Natural history of the island Material expression

This theme is about revealing the island's and Sydney Harbour's natural heritage. Moments of delight in the environment will encourage visitors to lean in and look more closely at the natural materials that are the foundation of the island. This theme will look back at the lost natural systems of the past and engage visitors with a future focused on regeneration of the health of these systems as constructed landscapes.



Fig 67. The natural history of the island can be understood through the threads of materiality that exist. These can be strengthened to draw visitors into a journey of discovery along this theme of natural history. Source: Tyrrell Studio

5.2 Natural history of the island Experiencing geology

Exploring the deep history of the harbour via the visible sandstone geology at sites of cutting or tunnelling

Once a 40m high outcrop of sandstone which had survived erosion in the river valley, Wareamah became an island after sea level rise created Sydney Harbour between 10,000 and 6,000 years ago. Visitors can explore the sandstone at the eastern cliff face, which reveals the layers of sediment initially laid down over 200 million years ago, and the recent cuts that have exposed them. By entering the Dog Leg Tunnel that is cut from the rock, visitors can explore the subterranean geology deep inside the island.

Walking the shape of the island before 1788

The shape of the island has changed and will continue to change due to changes in sea level. The most significant and rapid changes to the shape have been through quarrying and cutting back the sandstone since the convict era. There are many opportunities to trace the former shape of the island on the concrete aprons that now surround the remnant sandstone. These threads of natural history will allow visitors to read the other layers of the island in relation to the changes made to the geology of the island.

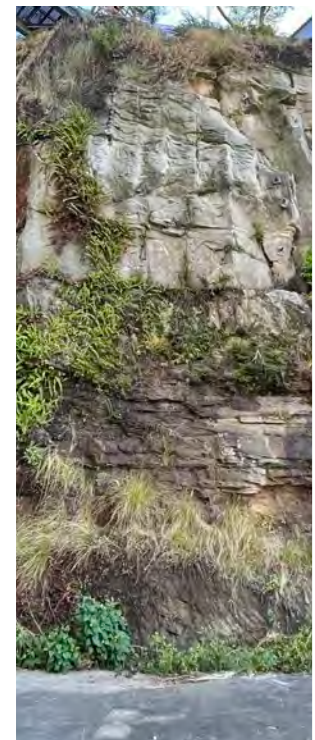


Fig 68. Sandstone cliffs of the island. Source: Tyrrell Studio



Fig 69. The Dog Leg Tunnel. Source: Sydney Harbour Federation Trust

Seeing and caring for the intact areas of northern escarpment with its established plants. Regenerating plant and animal communities including *Angophora costata* canopy, a known cockatoo habitat.

Before Europeans reshaped it, the island probably shared the coastal sandstone forest flora that is visible on nearby Berry Island: a magnificently tall canopy of *Angophora* and *Eucalyptus*, and an understorey of *Acacia*, *Lomandra* and *Dianella*. Its European names – Bird Island and Cockatoo Island – suggest that the outcrop was a haven for the local bird species including the sulphur-crested cockatoo, yellow-tailed black cockatoo and wattle birds. The master plan proposes that visitors can explore the areas of the northern escarpment that are thought to be largely unchanged through the colonial history of the island.

Areas of the plateau and northern parkland will be replanted with *Angophora costata* canopy, a long-term investment in rebuilding the biodiversity, to encourage the return of cockatoos. Visitors will be able to track this initiative and explore what is needed to encourage the regeneration of plant and animal life in an urban setting.

LEGEND

- Eucalyptus trees
- Fig trees
- Cottage tree planting
- Sandstone cliff planting
- Cottage planting
- Native shrub and grass planting
- Turf



Fig 70. Existing ecological communities. Source: Tyrrell Studio

Investigating the micro forests of the island up close on the cliff faces

On the moist and shady southern cliff faces, best viewed up close from the elevated walkway, visitors will be encouraged to explore the tiny ecosystems in clefts and gullies of the cliff. Of special note is the relatively high number of ferns and fern allies growing in areas where water regularly seeps through the cliff face. These outcrops include rarer species such as skeleton fork fern and slender club moss.



Fig 71. Creating an *Angophora* forest that returns biodiversity to the island and helps to return Cockatoos and other birds to the island. Source: Bangawarra



Fig 72. Layers of sandstone on display in the massive cutting of the Eastern Apron. Source: Tyrrell Studio

Relaxing in the harbour park with its transect of planting from cliff to coast that communicates how the island once was

The remnant plants of the north cliff show the characterful former ecologies of the cliffs around the harbour. This planting will be extended and enhanced along the cliff edges and out into the parklands on the Northern Apron.

The new park will retain the industrial remnants of the past, but will enhance the current green aspect of this part of the island, in the best microclimate for public use, that connects with the green outlook of Woolwich to the north. It will provide public recreation, including native gardens, shady play and passive spaces.



Fig 73. The master plan of the harbour park. Source: Tyrrell Studio



Fig 74. Southern cliff fern gardens. Source: Tyrrell Studio



Fig 75. Remnant figs and ferns on the northern cliff. Source: Tyrrell Studio

5.2 Natural history of the island Interpreting marine ecosystems

Seeing plant and animal life growing on the artificial reef

Supporting and repairing biodiversity is as important below the waterline as it is on land. The master plan proposes constructing artificial reef areas to create an example of the island's role in supporting healthy marine habitat. This is particularly viable along the northern and eastern edges of the island. Here, artificial reefs would reinstate and support diverse marine ecosystems. They will allow visitors to access the waters edge and to experience real marine ecologies up close.

Designed and pioneered by research scientists at the Sydney Institute for Marine Sciences (SIMS), living seawalls are starting to improve the environment in the harbour. There is an opportunity to collaborate with SIMS on a pilot project to test the viability of artificial reefs at Cockatoo Island / Wareamah and their potential to reinvigorate the western harbour. Visitors could attend educational programs to learn about the life of the harbour.

The waters of Sydney Harbour are an invaluable asset. It is imperative to care for and heal Water Country.

Coastal wetlands can store carbon up to 40 times faster than rainforests and can remain there for thousands of years (The Nature Conservancy, Australia). The restoration of coastal wetlands hold the potential to improve the quality of both water and air. They can also demonstrate extraordinary efficiency as carbon sinks.

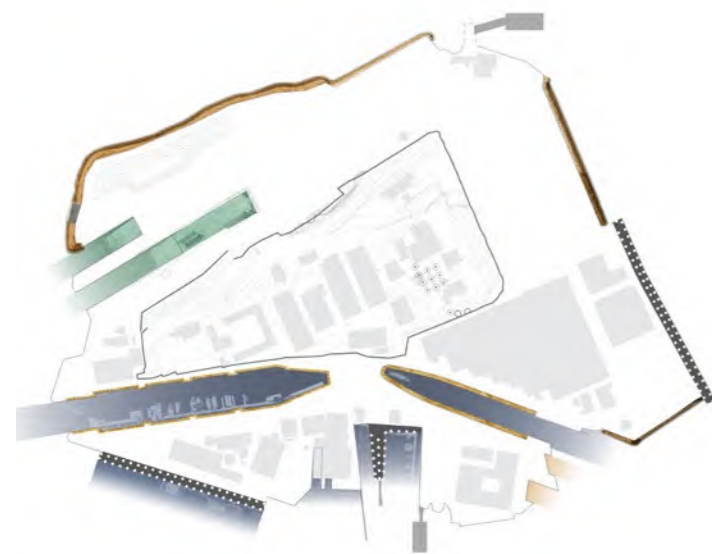


Fig 76. Map of opportunity sites for supporting marine ecological communities on Cockatoo Island / Wareamah. Source: Tyrrell Studio

Example project: Sydney rock oysters Indigenous ARC project, First Nations marine knowledge

Dr Laura Parker, Indigenous Scientia Fellow at the UNSW School of Biological, Earth and Environmental Sciences, studies the impact of global environmental change on the survival of Australia's oyster industry. Dr Parker is combining the sciences of genetics, physiology and ecology to identify the traits of resilient oysters. Her research is now a key part of the Sydney rock oyster breeding program to help climate-proof the largest aquaculture industry in NSW, worth \$40 million annually.

<https://www.unsw.edu.au/news/2021/11/indigenous-arc-project-hopes-to-reverse-decline-of-sydney-rock-o>

<https://100climateconversations.com/laura-parker/>

<https://vimeo.com/467678334>



Fig 77. Artificial reefs can be formed from various materials including marine-grade steel or concrete. Source: Reef Design Lab and SIMS



Fig 78. Precast concrete tiles provide natural habitat against typically flat seawalls. Source: Reef Design Lab and SIMS

Watching the changing tides

The island's interface with the surrounding water is its most fascinating condition. The master plan creates comfortable pause points to allow time to observe the changing tides and many moods of the water. In particular, the slow transition between land and water offered by the slipways in the northern parkland allows safe and direct engagement with the water's edge, allowing for the launching of kayaks as well as paddling and swimming.

Tidal terrace steps will increase access to the water's edge and into the harbour, and can be set within the existing rocky edges that currently create a barrier between people and the water. Tidal terrace steps provide moments of understanding of the flux of the harbour environment, set within the industrial character of the area.

Exploring the interactive indicators of wind, weather and seasons at the old water tower

The island has dynamic and sometimes extreme weather conditions. Often one part of the island is significantly colder than another part of the island. An island weather report could be part of an online visitor experience, using available weather forecasts to identify the best times to visit different parts of the island. This could help to create better visitor experience and encourage return visits.

Citizen science: Creating opportunities for visitor involvement to improve the health of the island's natural systems

Visitors can engage with the island's natural processes. This may include initiatives around recording or monitoring bird or marine species. There is also potential to observe the process of phytoremediation, as plants clean the soil in cycles of flowering and reseeding.



Fig 79. Phytoremediation Project, NHP Newcastle. Source: Megan Murray

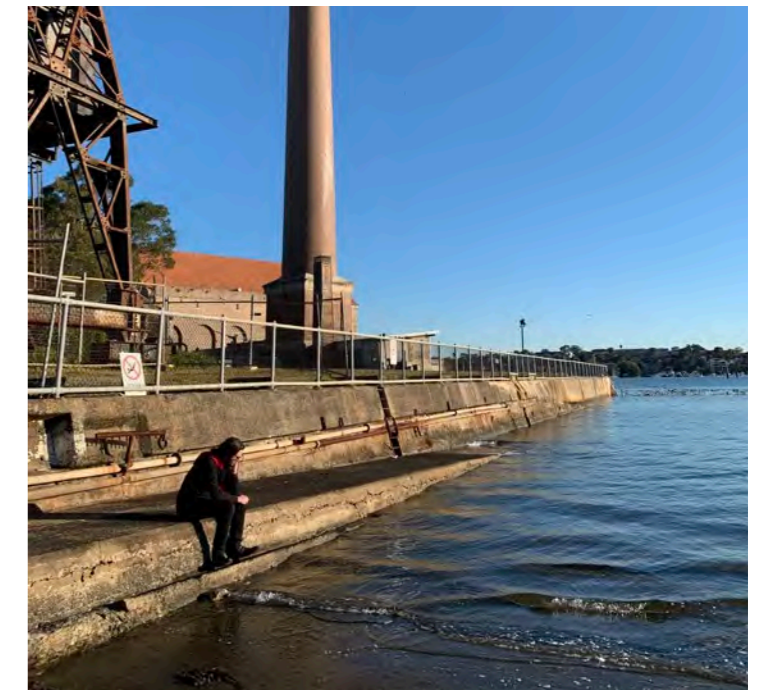


Fig 80. Mesmerising tidal shifts in the western slipway. Source: Dan Sharp

5.3 Connecting with Country

The public programs and visitor experiences proposed within the master plan will be informed by the cultural values explored earlier in this document. This is an ongoing process that requires deep understanding and an enduring relationship with Traditional Owners and knowledge holders.

This section of the master plan examines the public programs and visitor experience proposals to support connecting with Country.

Creating awareness and understanding of Country can enable a permanent and enduring First Nations presence on the island through business and cultural practice. In this sense the master plan aims to propose First Nations-focused public programs that sensitively bring an ancient culture to life, speak to an evidence-based truth and present a contemporary and vibrant culture.

The following elements outline interventions and proposed activities to reinstate and communicate the significance of Country with continued cultural knowledge, practices and exchange through ceremony, story and enterprise.

Welcome to Country

1. Welcome to Country at key arrival points
2. Orientation space – introducing First Nations values, Traditional Owners and the concept of connection with Country through story and world-class interpretation

Ceremonial spaces

3. Providing ceremonial and gathering places overlooking the northern parkland
4. Revealing the remnant sandstone that can tell ancient stories of Country

Caring for Country

5. Understanding caring for Country through enduring native planting and rehabilitation of the lands including reconnecting the cliffs to the water
6. Caring for Country through the replanting of *Angophora costata* canopy to create cockatoo habitat
7. Creating water ecologies that reconnect Water Country and rehabilitate the waters around the island

First Nations enterprise

8. Highlighting First Nations cultural practice and business in canoe-making and traditional craft
9. Supporting First Nations business in cultural heritage and water tours, traditional boating and canoe hire
10. Creating Gamay Ranger tours



Fig 81. Connecting with Country elements. Source: Tyrrell Studio

5.3 Connecting with Country

An experience of landscape is possible across the island from the sandstone to the living systems, the systems of weather and views beyond the island. First Nations culture can be connected with this landscape and become a key part of the visitor experience to the island.

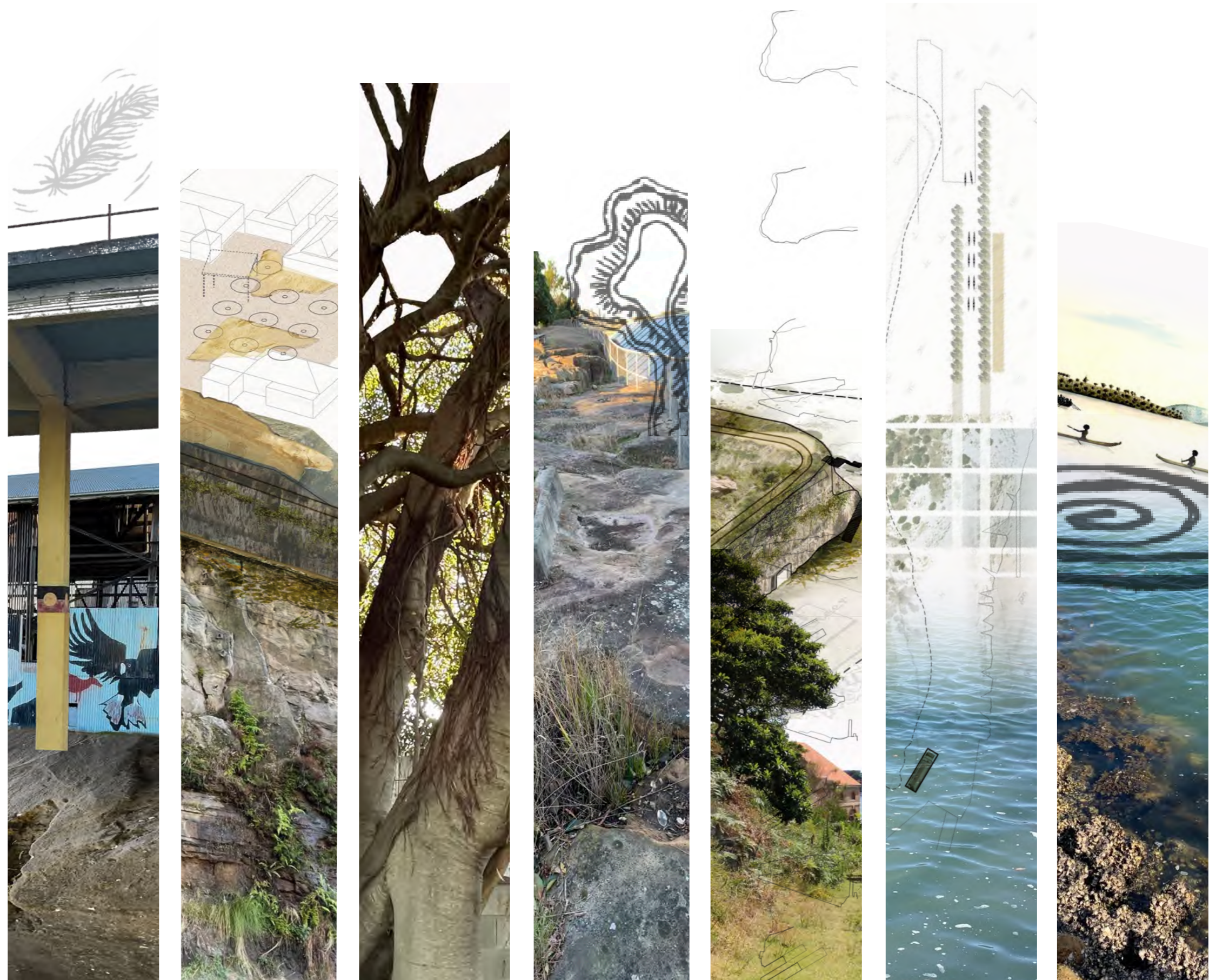


Fig 82. The deep time of Country and of First Nations culture can be drawn out of the island over many years. Culture can be appropriately shared with visitors to Cockatoo Island / Wareamah. Source: Tyrrell Studio

5.3 Connecting with Country

Welcome to Country at key arrival points

The welcome experience will create opportunities for everyone to connect with Country on the island, within the built fabric and disturbed landscape(s).

Cultural practices of welcoming have defined how people move through Country for millennia. Smoking ceremonies, language, song, dance and storytelling (among others) have welcomed newcomers to Country.

These cultural practices ensure people visiting neighbouring (and afar) nations and Country are safe and aware of the local lore/laws.

This welcome will draw on ancient practices together with contemporary ceremonial and culturally appropriate knowledges.

The master plan anticipates that the welcome to Country will be part of the online experience, part of the boat trip to the island and part of the process of landing and setting foot on the island.

Orientation to First Nations place and Country

The orientation experience forms a critical element within the master plan's proposals for public programs and visitor experience. It will communicate Country and First Nations values to a diverse audience.

Located adjacent to the wharf and arrival square, this element must be considered within the context of introducing the harbour the island and Country to the visitor.

At a conceptual level the master plan sees an orientation experience for the visitor – it may be a space with world-class audio visual; a space capable of performance, dance and ceremony; or partly an exhibition and display gallery.

In setting guiding principles master planning is not seeking to define or curate a narrative for this critical element; rather, it is presenting and articulating the opportunity and its critical relationship to the overall public programming.

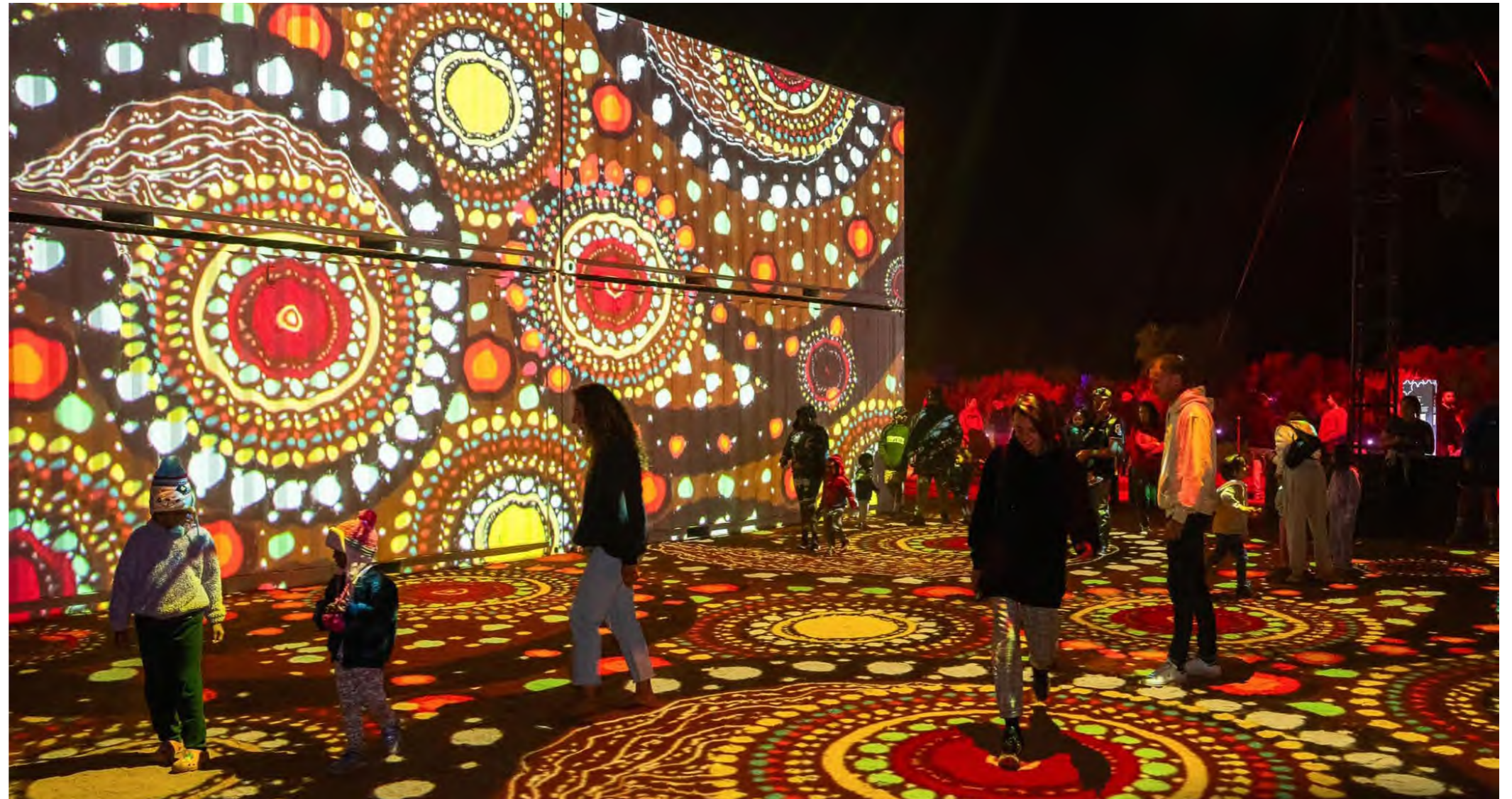


Fig 83. Image from Parrtjima 2023. Source: Northern Territory Major Events

5.3 Connecting with Country

Ceremonial places

Dedicated places of ceremony are to be considered within the overall connecting with Country framework. Specific locations will require further analysis and consultation with Traditional Owners.

The design phase will consider the nature of place as it is one of the undisturbed and natural places on the island and will overlook of the proposed parkland and harbour.

This phase will also consider the silos. These are hand carved from solid rock as caverns in accessible spaces. They could be dramatic spaces to tell and celebrate stories such as the sandstone story of the island or the relationship of First Nations peoples to geological time.



Fig 84. The silos. Source: Tyrrell Studio

Caring for Country

Caring for Country principles will guide design of the proposed northern parkland. Replanting of the *Angophora costata* canopy will create cockatoo habitat and waters will be rehabilitated through constructed reef ecologies.

The northern parkland will reflect local, endemic flora that celebrates the ancient essence of Country as a carefully managed landscape.

Design of the northern parkland should embrace and embed the beauty of native landscapes while honouring the cultural practices and resources that define this Country.

Appropriate trees can also be reintroduced to support the practices of canoe-making and tree scarring as a meaningful way to reconnect First Nations peoples with the island through cultural knowledge reclamation.



Fig 85. Replanting Country. Source: Bangawarra

Enterprise

The master plan aims to support First Nations enterprise by fostering traditional practice and business. This could include traditional craft, traditional canoe-making, on-water tours, kayak and canoe hire, ranger tours, and education.

On the Southern Apron and within the boat building facilities of the Southern Apron, a dedicated space will be allocated for ongoing cultural practices associated with the harbour. The Southern Apron location offers appropriate space to design a custom workshopping space for cultural practices connected with the water and shore. Master planning sees this dedicated facility as a program of curated uses and functions that facilitate other cultural activities.

The northern slipway proposes small boat facilities and the operation of kayak and canoeing tours to, from and around the island. Master planning considers this a First Nations enterprise.

Dedicated First Nations ranger programs could include land and harbour rehabilitation or tours. There are opportunities for collaborations with organisations such as the Australian National Maritime Museum, University of Technology Sydney, Museums of History NSW and Tribal Warrior to enable educational, boat building and ranger programs.



Fig 86. Supporting cultural practice – fishing and watercraft construction. Source: Allison Page

5.3 Connecting with Country

Significant intangible cultural heritage

Significant intangible cultural heritage

Aboriginal Dreaming and story is vital to Connecting with Country. Within the context of the master plan, story is regarded as a domain of significant intangible value of place.

UNESCO's Convention for the Safeguarding of the Intangible Cultural Heritage proposes five broad 'domains' in which intangible cultural heritage is manifested:

- Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage
- Performing arts
- Social practices, rituals and festive events
- Knowledge and practices concerning nature and the universe
- Traditional craftsmanship.

First Nations ancestral story

Presenting ancestral stories can be sensitive. The master plan does not present the method nor location of how these intangible values are presented nor how or what story is to be told. This is for future design requiring careful consideration by Traditional Owners and knowledge holders.

These stories should express the richness of intangible values inherent in The Dreaming to First Nations peoples and their relationship to coastal Sydney and the harbour. Presentation of story can enrich the interpretation of place, connecting people with Country through intangible cultural heritage.

Ancestral beings

One of the many stories held within our community is the story of our ancestral being, Buriburi, the humpback whale. Buriburi is depicted in many engravings throughout the coastal Sydney cultural area and holds great significance within our cultural teachings and practices.

We, as coastal Sydney peoples, have dances that honour Buriburi and retell elements of the role Buriburi played in the creation of our waterways and island formations.

Further consultation with Traditional Owners and knowledge holders will guide the protocols and strategies to ensure the culturally appropriate parts of the Buriburi story and songlines are shared and embedded into the future of Cockatoo Island / Wareamah.

Rowena Welsh Jarrett

The Buriburi story is provided by Gujaga Foundation under license to the Harbour Trust. The Harbour Trust acknowledges the Gujaga Foundation as the source of the Buriburi story. The use of the story for this site has been endorsed by the Harbour Trusts' First Nations Advisory Group as part of a broad cultural mapping project.

Buriburi dreaming

The story of the whale dreaming is told by Ray Ingrey as it was taught to him.

'Our old people talked about a land in the distant east, Ngarawan, a long time ago, it was once occupied by our very old people. The land was no good for hunting and it was decided that they look for better hunting grounds. The people knew that their small canoes wouldn't make it and there was only one vessel big enough to take them all safely across the sea.

Whale, who was a large person had the only vessel that could make the journey, but he was greedy and wouldn't share with anyone. The people kept watching Whale and his vessel in hope that he may leave it for just enough time for everyone to get in it and start their journey. But Whale never left his big vessel. The people held a secret meeting, and it was decided that Starfish, being a great friend of Whale would distract him enough for everyone to get in and row away. The next morning Starfish said to Whale "come over here and let me go through your hair and get all the lice for you".

Whale was annoyed by the lice in his hair, so he tied his big canoe to a rock nearby and laid down to allow Starfish to go through his hair. Starfish signalled to the other people to start getting in Whale's vessel. As Starfish was scratching near Whale's ears so he couldn't hear the boat being taken, whale asked "Starfish, is my barangga ok?" which Starfish replied, using two pieces of wood nearby, "yes can you hear, I am tapping on it". This continued and as Whale's vessel was nearly out of sight. Whale lifted his head and realizing he had been betrayed by his friend, went into a great rage and had fought Starfish. The fight lasted a little while with Starfish striking Whale with one of the sticks he was using to tap together, piercing it into the top of Whale's head.

Whale fought and beat Starfish until he couldn't move anymore. Because of that battle Starfish fell to the bottom of the sea and turned into the starfish we know today. Whale jumped into the sea and started to take pursuit of his vessel. As he was swimming, he started turning into the humpback whale and still furious at Starfish he spurted blood, then water, from the hole that Starfish made. The pursuit lasted days and days and towards the end when everyone started to get tired and was too exhausted to row, Koala continued to row, showing off his big arms. As he kept rowing his arms got stronger and he started to get grey fur everywhere on his body.

Eventually they saw new land and Whale was close behind, and in his excitement, Crane started to dance and grew feathers and a beak. As his long legs started to appear he put holes in the bottom of Whale's vessel, bringing water into it. As they reached land, and the people now animals hopped out of the vessel, Koala pushed it out into the sea, and it turned upside down and turned into a large island off Lake Illawarra called Gangmangang.

Koala, was so exhausted he crawled up into a tree where he slept, hanging onto the trees with his large arms. Crane continues to dance when he gets excited. Whale and his ancestors continue to look for his canoe, spurning water from the hole starfish made, swimming up and down our coastline and within our Country. We can tell where whale and his ancestors have been by the islands in our country (harbours and bays) stretching from Sydney Harbour and down the coast to the Shoalhaven.'

The Harbour Trust acknowledges the Gujaga Foundation as the source of the Buriburi story.



Fig 87. Humpback whale. Source: Phillip Thurston

5.4 Convicts, prisoners and schoolchildren

Cockatoo Island / Wareamah was used in two distinct modes during the convict era, then as a location for a girls industrial school and a boys reformatory, and later as a prison once more. As an important place within the colonial system, Cockatoo Island / Wareamah was part of a complex network that saw convicts moved around the colonies, First Nations peoples removed from their traditional lands and incarcerated, and children confined and trained for colonial life. Some of the tangible fabric of this theme is still highly legible across the island, which presents opportunities for audiences to be immersed in the changing conditions of its inhabitants through these periods, as well as viewing the distinct languages of the island's architectural development from afar as they approach on the water.

Exploring the convict and colonial cultural heritage of the island includes a journey through the tangible sandstone remnants of the prisons, houses and workshops, together with learning more about the hard labour of quarrying and the excavation of the Fitzroy Dock. Importantly, it also uses interpretive technology to encourage visitors to explore Cockatoo Island / Wareamah as a node in the convict system of the colony, and connect with the stories of the people – the convicts, prisoners, children and their overseers, many of whom were ancestors of today's Australians.

Orientation

1. Introducing the convict system, colonial uses of the island and stories of the people, including First Nations peoples, who were incarcerated or lived on it, in the convict-built former steam workshop

The silos and plateau

2. Exploring the grain silos and imagining the hard labour involved in digging them by hand
3. Seeing the harbour views and considering the isolation of the island from the city

Superintendent's residence

4. Exploring the Superintendent's Precinct and the different approaches of Ormsby and Mann to the convicts
5. Exploring the layout of the island during the colonial era at the overseers cottages

The Barracks Precinct

6. Exploring the Barracks Precinct, and the hospital, kitchen, mess and sleeping quarters for convicts, soldiers and officers, with selected fitout to evoke how it was used

Labour and transport

7. Engaging with displays on the convict system, transportation, stories of resilience, escape, confinement and rebellion
8. Exploring Fitzroy Dock, a 10-year project to excavate and hone a dry dock using convict labour

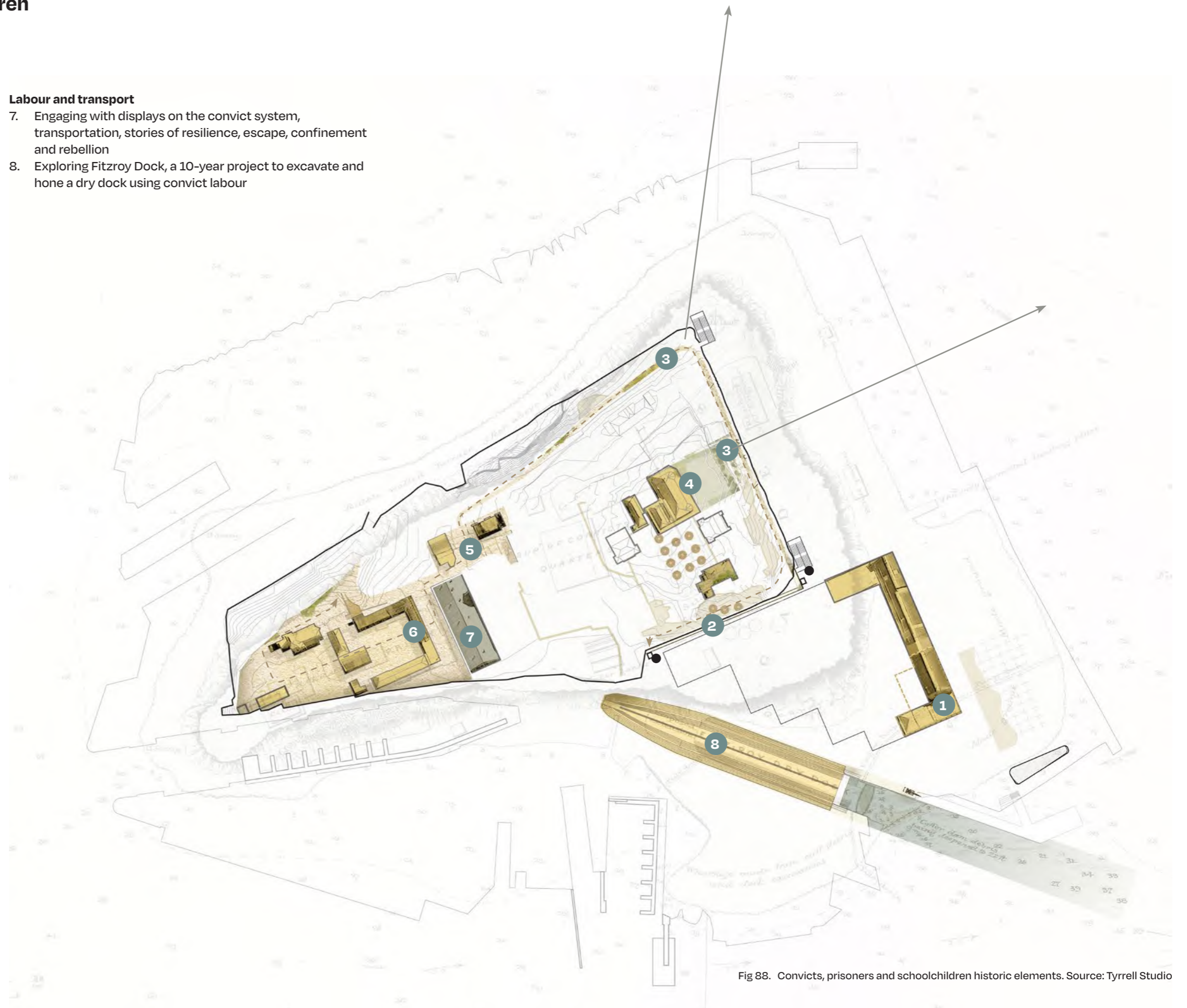


Fig 88. Convicts, prisoners and schoolchildren historic elements. Source: Tyrrell Studio

5.4 Convicts, prisoners and schoolchildren Material expression

Cockatoo Island / Wareamah was part of an archipelago of colonial incarceration that includes Norfolk Island, Tasmania, Hyde Park Barracks and the Parramatta Female Factory and Industrial School. It was originally a place for housing secondary offenders, 're-transported' between colonies, and saw many stages of review and reform as expectations of and approaches to incarceration and 'care' changed.

Across its time as a convict prison, free society prison and industrial school, living conditions and labour expectations were cruel and dangerous. While there were political leaders that brought reform, even the humane options were harrowing by modern standards. The island's time as a jail is also linked to Australia's frontier violence by the imprisonment of Kamalaroi men Sandy, Billy, Jemmy, Cooper and King Jackey following the massacre of 28 Kamalaroi people at Myall Creek in 1838.

Later, children and teenagers were brought to the island to be educated at the industrial girls and reformatory schools. Their experiences were little better, experiencing violence and abuse at the hands of their caretakers. This dark period in the island's history is a lens through which people can consider the resilience of those who fought for change, and the contemporary approach to reform and justice.

As visitor experiences, the treacherous terrain of the island's dark history should be treated with historical integrity and sensitivity so as not to succumb to what landscape architect Jacky Bowring has termed, 'voyeurism and commodification.' 'While some aspects of the island's built heritage speak for themselves, visitors will have the opportunity to put the barren cells and buildings into context with the introduction of the stories and experiences of those forced to live there – including the reformatory girls.'

There are opportunities for collaborations with a number of organisations including Museums of History NSW and the National Museum of Australia to research and develop this theme.

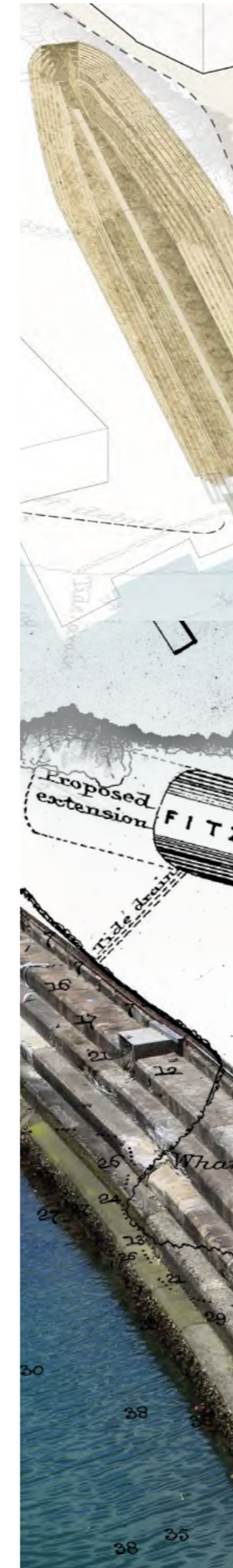
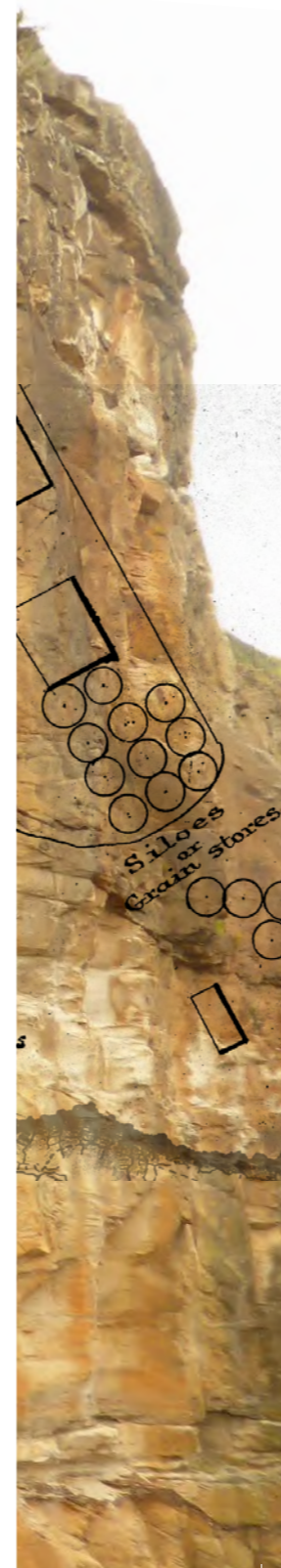
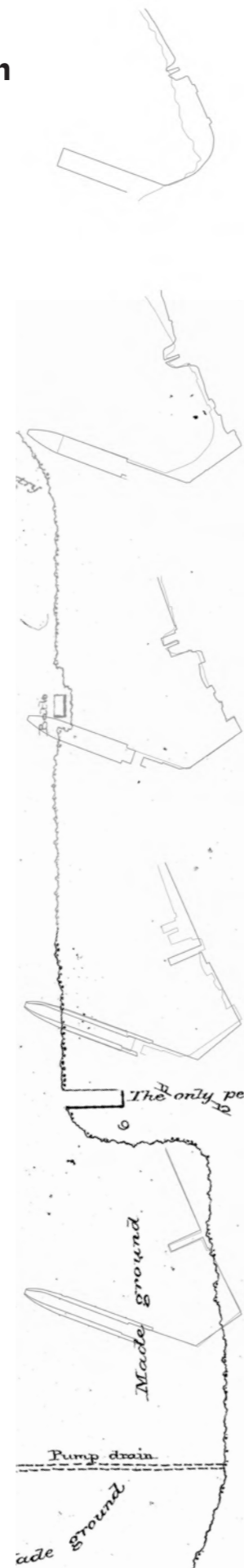


Fig 89. Convicts, prisoners and schoolchildren historic elements. Source: Tyrrell Studio

5.4 Convicts, prisoners and schoolchildren

Exploring the grain silos and imagining the hard labour involved in digging them by hand

The master plan proposes lifts that connect the apron and plateau. The lifts will bring visitors close to the steep sandstone escarpment from which stone was quarried to build the semi-circular quay and all the island's convict-era buildings and infrastructure. This journey offers insight into the density and monumentality of the sandstone as an introduction to the harrowing story of the grain silos.

The lifts will arrive at the grain silos, offering the opportunity to see the openings of the silos from above, and then to traverse along the elevated walkway to explore several silos in cross-section. Seventeen were carved from solid rock using hand tools by candlelight, only to have colonial administrators in London put an end to the project, and three men die trying to empty them of grain. They show a careless disregard for convict labour. The silos surviving in cross-section make the story understandable and technology could recreate a convict in one of the silos, providing a compelling vision to help visitors imagine what it would have been like to carve a silo out of solid rock.

Seeing the harbour views and considering the isolation of the island from the city

The master plan proposes an upgraded circulation path on the upper plateau, from the lifts around the east towards the city north with views to the Parramatta River and then west to the Barracks Precinct. While surrounded by the modern city, during the convict era the island was isolated, while within easy reach of the colonial settlements. Visitors will be invited to consider this isolation for those who were stationed here, and those incarcerated who tried to escape across the deep waters.

Exploring the layout of the island during the colonial era at the overseers cottages

Today, the two overseers cottages look radically different, drawing attention to the use and re-use of buildings by their successive occupants. During the convict era they would have looked very similar and formed part of the link between the barracks and superintendent's residences at opposite ends of the plateau, and been the threshold to the prison area. There are opportunities to use technology for visitors to explore the convict layout of buildings, and the nearby quarry.

Exploring the Superintendent's Precinct and the different approaches of Ormsby and Mann to the convicts

The Superintendent's Precinct was once a clearly demarcated area – elevated with a garden and views to the east. It was chosen according to convict custom because it was the highest point on the island. The choice was at once symbolic, as an indication of status, and practical, as it enabled the superintendent to have the best view of what was going on.

Inside the house visitors will discover the different approaches of its superintendents to managing the convicts, with a focus on Ormsby – who was subject to five enquiries into his treatment of the men, and ran a series of private enterprises – and Gother Kerr Mann – who extended the residence to accommodate his wife and 10 children, and designed the Fitzroy Dock.



Fig 90. Quarrying on the island to construct sandstone buildings. Source: State Library of Australia



Fig 91. The interior of the Convict Workshop. Source: Sydney Harbour Federation Trust



Fig 92. 1898 Main walk from the governor's quarters. Source: Department of Corrective Services Album HM Gaol Biloela

5.4 Convicts, prisoners and schoolchildren

Exploring the Barracks Precinct, and the hospital, kitchen, mess and sleeping quarters for convicts, soldiers and officers, with selected reconstructions and fitout to evoke how it was used.

Visiting the Barracks Precinct is one of the major experiences of Cockatoo Island / Wareamah. To assist visitors the precinct will be unified in a singular crushed sandstone ground plane, to create a stronger sense of the harsh, cleared landscape of incarceration. The kitchen, hospital, mess and sleeping quarters will include cues to encourage visitors to explore and evoke their different uses.

Nearby the soldiers' quarters with their splayed loopholes will also be reinterpreted so that visitors can imagine them with soldiers sleeping next to their charges.

In the former Mould Loft Building, displays on the convict system, and how Cockatoo Island / Wareamah as a secondary prison was a key point for convicts who were moved from other points within the colony, or a destination for those involved in frontier violence. Similarly the soldiers and overseers moved throughout the system, sometimes serving at multiple sites.

Stories would include how after 1848 the responsibility of running the island was transferred to NSW, and during this later period some inmates were convicts from the period of transportation but increasingly the unfree workforce was made up of men convicted of colonial crimes.

Recent research on the significance of Cockatoo Island / Wareamah and the other convict sites in defining Australian democratic traditions would also feature, together with the results of big data projects that have enabled historians to create detailed biographies for individual prisoners from their convict records, and help understand their individual journeys through sentencing, incarceration and after their release.

Cockatoo Island / Wareamah has also been an educational institution for wayward children and importantly the stories of the Biloela Industrial School for Girls and the Biloela Reformatory will also be told here, giving a voice and a visibility to some of the lesser known of the island's inhabitants. While no images of the girls have been found, careful research has enabled some to be identified, and visitors will be able to learn about their time on the island, the harsh living conditions, the domestic training at the industrial school, and the lives they went on to lead.

For boys, the Vernon and later the Sobraon were moored off Cockatoo Island / Wareamah from the 1870s and became a nautical school ship, and visitors will be able to learn more about the many boys who were housed there, and their comparatively better conditions than the girls, with access to a piano, and a pet emu.

Fitzroy Dock

The completion of the Fitzroy Dock in 1857 with a mix of paid and coerced labour greatly expanded the harbour's maritime capability, although the penal imperative to use prisoners for this public work added greatly to the time taken to complete the job.

The Fitzroy Dock is an engineering marvel, and the master plan proposes that the Harbour Trust investigates whether the Fitzroy Dock could be displayed empty of water, to show the vast work of the convict labourers which is currently hidden beneath the water. The ability for the visitor to go into the dock to experience the vast scale would add an appreciation of the scale of hard labour required of the convicts.



Fig 93. Exploring the Barracks Precinct. Source: Sydney Harbour Federation Trust



Fig 94. 1898 Image of the Barracks Precinct. Source: Department of Corrective Services Album HM Gaol Biloela



Fig 95. The Barracks Precinct. Source: Sydney Harbour Federation Trust



Fig 96. Drained Fitzroy Dock. Source: John Jeremy

5.5 Dock working, shipbuilding and defending Australia

In the 20th century, Cockatoo Island / Wareamah became a military dockyard that in the 1950s was one of Australia's largest employers.

As the colony became more aware of its strategic position and vulnerability to Pacific threats, the Royal Navy sought to establish a stronger presence and capability to construct and maintain its fleet locally. The island and nearby Woolwich Dock became a giant factory for making and repairing ships, and thousands of workers, apprentices, designers and managers worked in its offices and workshops, often adapted from earlier convict uses. In the 1930s the RAN leased Cockatoo Island / Wareamah as a dockyard, and over the next 60 years worked with the companies that ran the island, building and repairing ships, designing aeroplanes and maintaining Australia's Oberon class submarine fleet during the Cold War, in conjunction with what is now the Harbour Trust's Sub Base Platypus.

The tangible remnants of this transformation of the island are throughout the island and the journey will build awareness of the shipbuilding process from design through to manufacture and assembly; and the large-scale buildings and machinery involved including the workshops, dry docks, slipways and cranes. Importantly, interpretation of this theme across the island will also bring visitors closer to Sydney's evolution as an industrial city as a result of the hands, hearts and heads of the people who worked here, highlighting the skill, tenacity and ingenuity of the engineers and labourers.

Boat journey and orientation

1. Circumnavigating the island by boat, together with visit to Woolwich Dock
2. Introducing the maritime history, the system of shipbuilding embedded in the island, and scale of process undertaken to move materials around the island

Fitzroy Dock and the turbine shop

3. Exploring Fitzroy Dock's role in shipbuilding, repairs and submarine maintenance – potentially drained
4. Exploring the turbine and other workshops, and their role in the shipbuilding process, including interpretation of the large machinery, together with stories of the island's workers, where they lived, the skills they gained, and where they are now

The slipways

5. Understanding the story of the slipways, and the ships launched from here

Sutherland Dock and maritime activities

6. Maintaining Sutherland Dock so that there could be future opportunities for ships to visit the island.
7. Providing opportunities to view maritime activities

The design shops and engineering

8. Exploring the history of ship and aeroplane design at Cockatoo Island / Wareamah
9. Potential for engaging STEM and maritime design learning centre for families

Boat building and making

10. Exploring Cockatoo Island / Wareamah during wartime
11. Potential for heritage boat building, restoration and First Nations businesses in canoe making

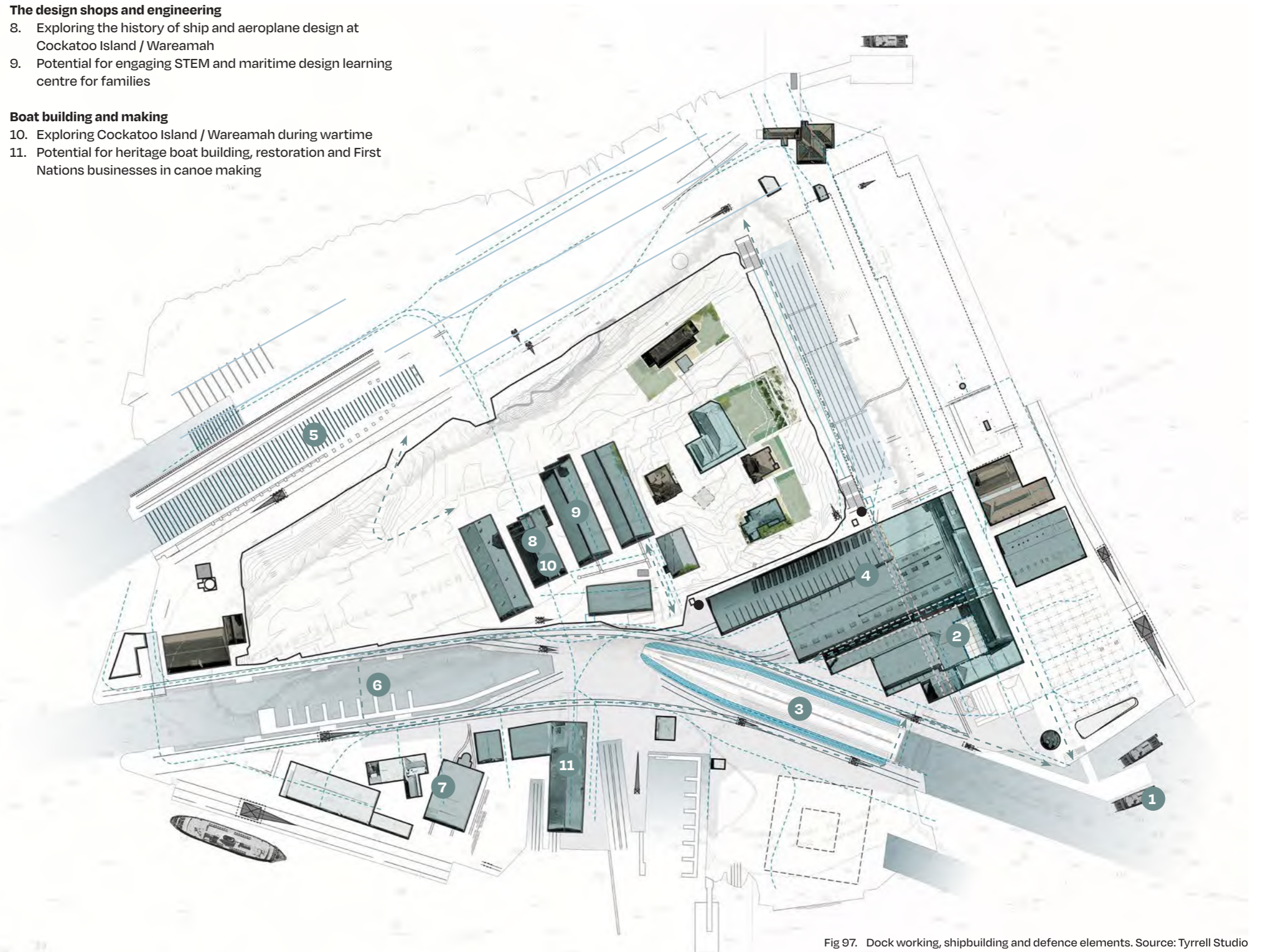


Fig 97. Dock working, shipbuilding and defence elements. Source: Tyrrell Studio

5.5 Dock working, shipbuilding and defending Australia

Cockatoo Island / Wareamah is at the heart of the Sydney's old industrial harbour, and the construction of the island docks heralded this time of productivity, growth, strategy and defence.

With the Fitzroy Dock constructed with convict and paid labour by 1857 and the Sutherland Dock added in 1890, the operations of Sydney's working harbour were enabled by the island's repair, maintenance and construction of vessels in the decades leading up to the First World War. By the time the docks were required for wartime defence, Cockatoo Island / Wareamah was given over to servicing the new Royal Australian Navy, for whom it played a pivotal role in both World Wars.

An island-wide system of making and developing ships began with design and pattern-making on the plateau and manufacture and assembly on the aprons, with the island including everything from foundries to its own powerhouse, together with facilities for the thousands of workers.

The docks were leased in the 1930s, but continued to service the RAN through the 20th century, sustaining the nearby working-class communities at Balmain, Glebe and Birchgrove where families often had a long association with maritime work. These communities fought for improved working conditions across varied disciplines at a time when organised labour and industrial action led to the questioning of their loyalty. But their struggle was not in vain: awards won on the island have flowed on to improvements in other sectors. The island's working-class legacy has produced ripple effects far and wide.

The island played a pivotal role in the Second World War. The luxury liners *Queen Mary*, *Queen Elizabeth* and the *Mauritania* and *Aquitania* were converted to troop ships. They would take Australian men to fight in Crete and North Africa. With the outbreak of the war in the Pacific from December 1941, the island was much closer to the fighting, borne out by the repairs carried out on Australian, British and American ships damaged by action against the Japanese.

The post-war years from 1947 were characterised by continuity and relative stability under the management of Vickers Ltd – called Vickers Australia Ltd from 1956. In the years to 1980, seven combat vessels were built on the island along with dozens of service craft for the navy and airforce. In 1964 and 1967 repairs were carried out on RAN flagship, the aircraft carrier HMAS *Melbourne*. By that time Australia had reactivated its submarine service. The Island was refitted as the refitting and maintenance facility for six Oberon class submarines bought from Britain. Their base was at nearby HMAS *Platypus*.

The last major naval build was also the largest – HMAS *Success*. It was slipped in 1986 – the year that Vickers relinquished control of the facility to Australian National Industries.

Collaborations with the Australian National Maritime Museum and National Museum of Australia will enable this theme to be contextualised to tell Cockatoo Island / Wareamah's contribution to the history of Australia.



Fig 98. The textures, traces and materiality of dock working and shipbuilding can be elevated to help visitors explore this theme. Source: Tyrrell Studio

5.5 Dock working, shipbuilding and defending Australia

Fitzroy Dock

Following its construction, Fitzroy Dock remained in service for more than 130 years, with thousands of ships and submarines repaired and refitted. With technology, visitors can explore its central role in the industrial era, its engineering and design, and the many ships that docked there, and their role in empire, war and defence.

The master plan proposes that the Harbour Trust investigates whether the Fitzroy Dock could be displayed empty of water. As well as increasing awareness of the convict-era carving out of the dock, the interpretation would also enable visitors to understand its functioning and engineering including how the caisson worked, and how ships were located in the dock prior to draining; and the role of the cranes around the dock – including regular operation of the restored cranes by volunteers.

Advice received and feasibility assessment undertaken during the development of the master plan suggested that a working dry dock is unlikely to be possible, or economically viable.

Further investigations into emptying Fitzroy Dock for display or on a regular basis will be made when the master plan is implemented, to confirm potential uses.

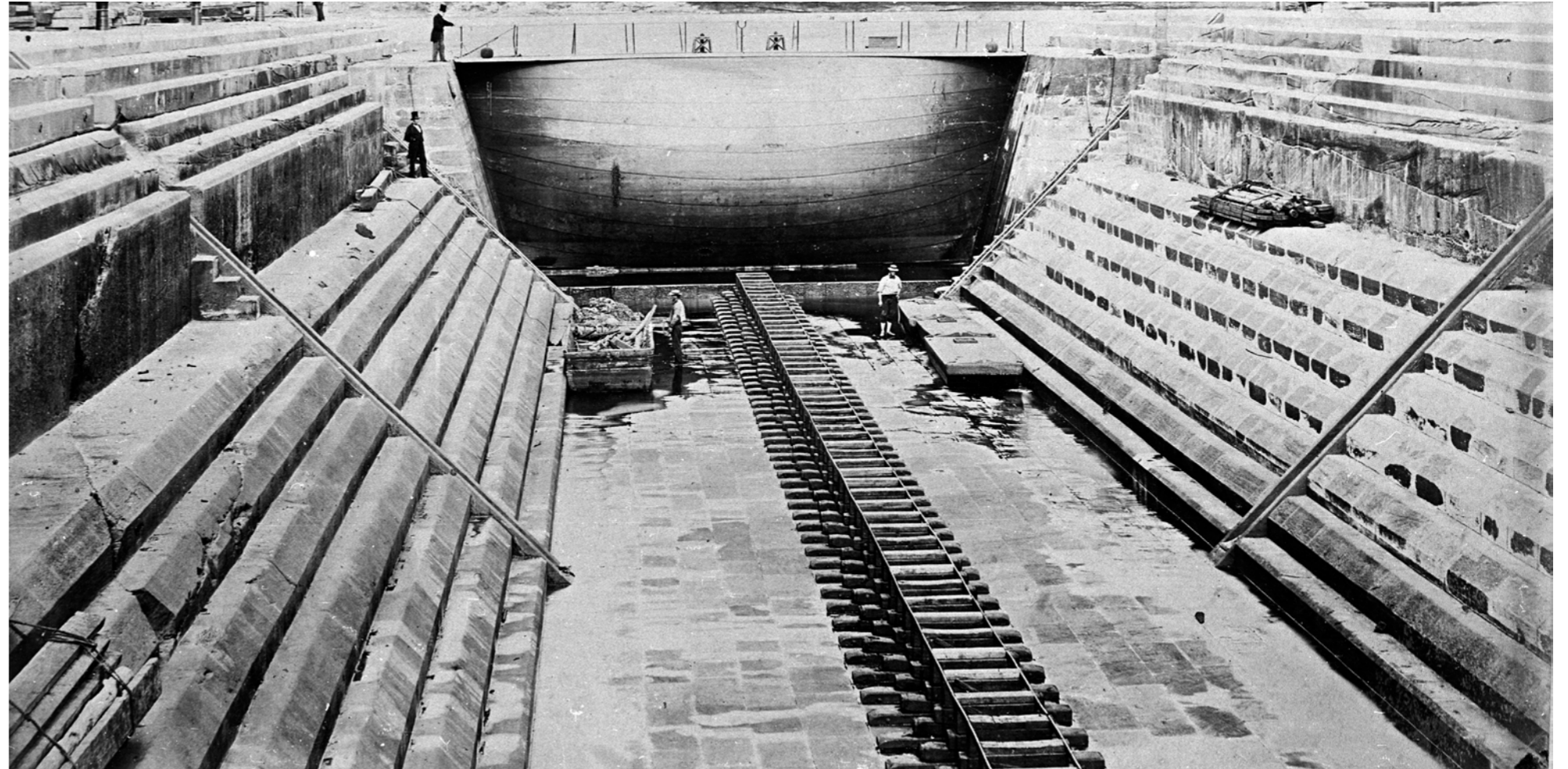


Fig 101. Fitzroy Dock. Source: State Library of NSW



Fig 99. Fitzroy Dock being refilled is a dramatic show of the engineering marvel of the docks. Source: John Jeremy

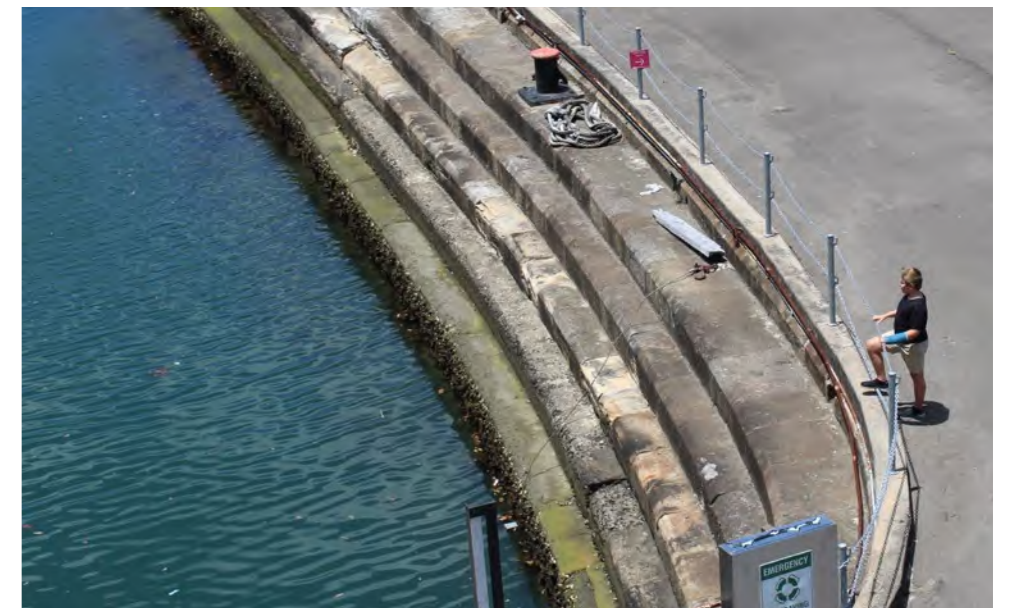


Fig 100. Visitors are drawn to the dock architecture, evidence of the scale of construction

5.5 Dock working, shipbuilding and defending Australia

The Turbine Shop

Interpretation of the larger elements in situ, using technology so visitors can explore their use through archival images and first person narratives will be supported by more detailed displays and opportunities to dive into the island-wide system of shipbuilding and the skills involved, and the inner harbour as a place to work, to apprentice, and to organise in times of industrial strife.

The volunteer restoration hub will enable visitors to learn more about the important work to bring key machinery such as the cranes back into working order, and the connections to the dockyard workers who have handed down their experience and knowledge.

The cranes

The cranes are significant and evocative elements of the island's maritime industrial heritage. This cranescape is a fundamental part of the island's character.



Fig 102. The landmark scale of cranes. Source: Sydney Harbour Federation Trust



Fig 103. Entering the Turbine Shop through the vast doors gives a sense of the scale of the shipbuilding. Source: Sydney Harbour Federation Trust



Fig 104. The awe inspiring scale of the Turbine Shop. Source: Sydney Harbour Federation Trust

Sutherland Dock

Constructed in 1890, the larger of the two dry docks shifted the focus of the island firmly towards a dockyard. Continuing to be used for maritime activity, opportunities to berth larger vessels on special occasions will be investigated, including the repairs and engineering required to dock larger vessels safely.

Maritime activities

Sydney Harbour is now used for recreation, access and transport for the city's commuters and the Southern Apron continues to be used to service and support the harbour.

Ship, aeroplane design and STEM learning centre

The plateau area was the brain of the dockyard, where designs for ships and even aeroplanes were created and used to make the drawings and patterns for manufacture on the apron below. The master plan proposes that Building 10 gives visitors the opportunity to explore the history of design on the island, and next door to create an interactive centre focused on STEM for families, school students, and all with an interest to explore principles and how they have been used in the past, and now in making and manufacturing.



Fig 106. Engine Drawing Office. Source: TBCG John Jeremy Paper

First Nations canoe-making and heritage boat building

See sections 5.3 and 6.6



Fig 105. Sutherland Dock. Source: Sydney Harbour Federation Trust

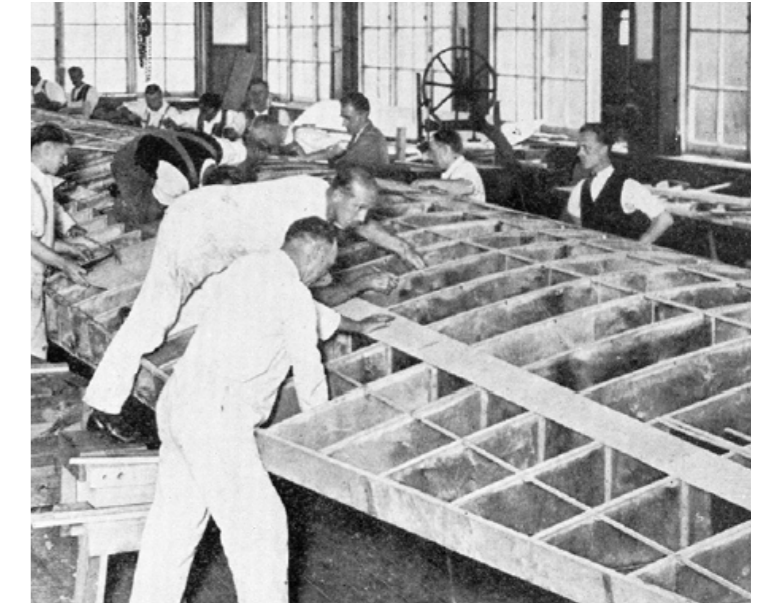


Fig 107. Building Southern Cross. Source: TBCG John Jeremy Paper

5.5 Dock working, shipbuilding and defending Australia

During two World Wars and the Cold War, Cockatoo Island / Wareamah was a vital part of the war effort, the defence of Australia, and also an enemy target. There will be opportunities for visitors to learn how wartime once again transformed the island, adding buildings, reinforcing structures and installing searchlight and gun positions. The peak of the island's activity came during the Second World War when ships including the *Queen Mary* and *Queen Elizabeth* were refitted as troop ships, and the island played a key role in supporting the Australian, British and US navies in the Pacific theatre.

Collaborations with the Australian National Maritime Museum and National Museum of Australia will enable this theme to be contextualised to tell Cockatoo Island / Wareamah's contribution to the history of Australia.

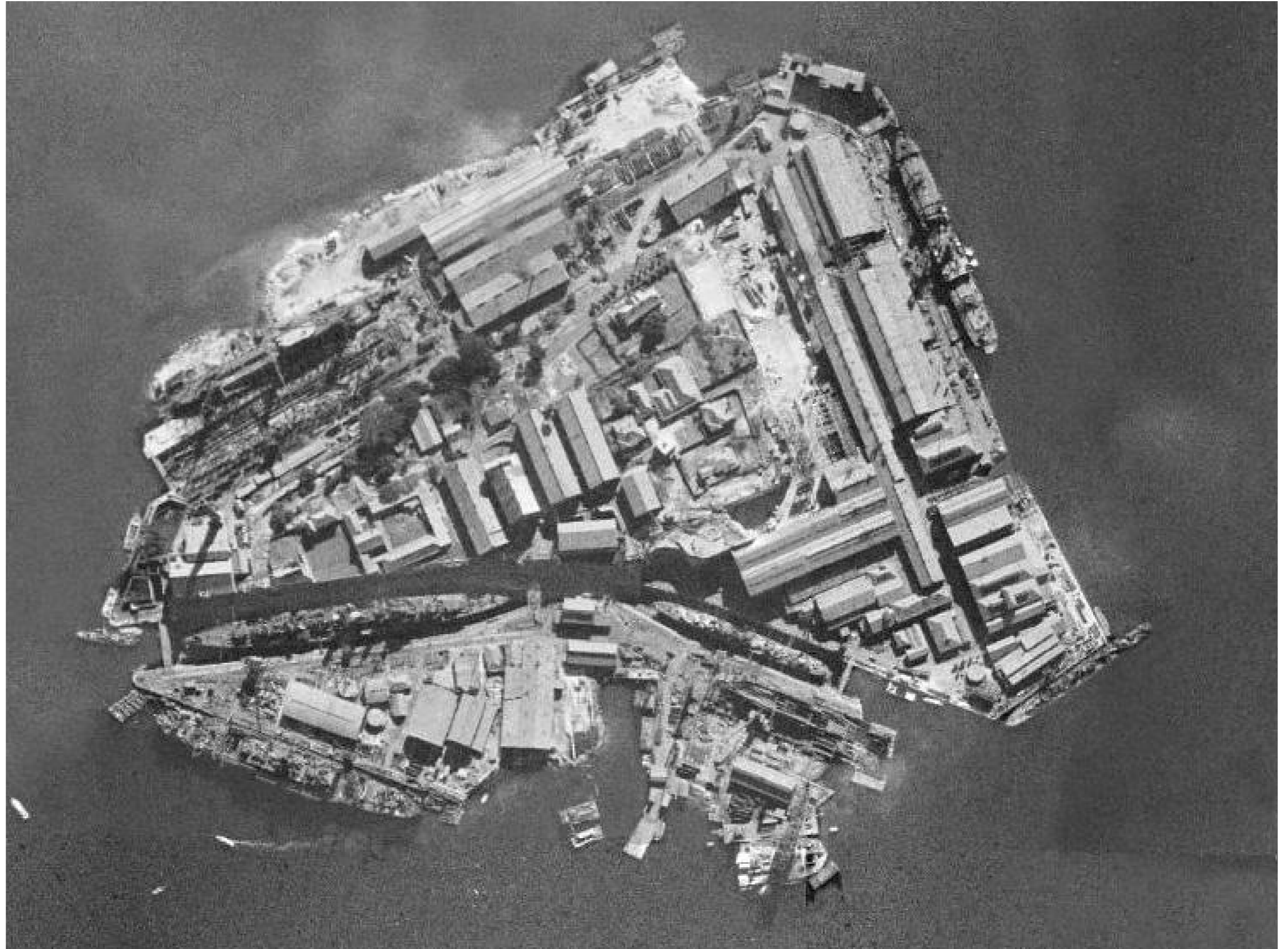


Fig 108. Cockatoo Island / Wareamah from the air in 1943. Source: Six Maps

5.6 Snapper Island

Activation and public programs

Harbour Trust's vision for Snapper Island

The Harbour Trust's Comprehensive Plan covers a number of sites around Sydney Harbour including Snapper Island. The Comprehensive Plan proposes the following outcomes for Snapper Island:

The Harbour Trust's plan for Snapper Island proposes the repair, maintenance and enhancement of this extraordinary facility. The continuation of maritime training activities will be encouraged.

The Harbour Trust is keen for professional curatorial assistance. Partnerships could be encouraged, such as with naval history organisations, the Australian National Maritime Museum and Spectacle Island.

Programs and activities could be developed for the interpretation and appreciation of the island, its buildings, workshops and collection.

Improvements to the island require the preparation of a remediation strategy and environmental management plan.

Repairs and maintenance will be required to:

- Manage tidal erosion of fill to seawalls
- Make good the surface cover that currently exists over the island
- Upgrade services on the site
- Ensure structural soundness of buildings
- Ensure occupational health and safety requirements are met

Given its proximity to Cockatoo Island / Wareamah, and the constraints of its size, Snapper Island's revival would be best supported as a satellite of Cockatoo Island / Wareamah, rather than as a self-sufficient place.

This would facilitate public access with limited need for supporting infrastructure, where activities such as guided tours, educational programs and kayak hire could be provided at an appropriate scale. This would only be possible with the implementation of the Cockatoo Island / Wareamah master plan and associated programs.

In November 2020, the Harbour Trust exhibited a Discussion Paper about Snapper Island's future. More than 200 responses were received from the community, with strong support for the vision contained in the 2003 Comprehensive Plan.

In February 2024 the Department of Finance exhibited a draft Heritage Management Plan (HMP) for Snapper Island, in accordance with the EPBC Act. The HMP provides guidelines for the ongoing heritage management of the site and will be used to inform discussions between the Department of Finance and the Harbour Trust on the potential transfer of Snapper Island.



Fig 109. Snapper Island. Source: Sydney Harbour Federation Trust

6.0

Key supporting initiatives

6.1 Transport and island access strategy

6.2 Accessibility and circulation

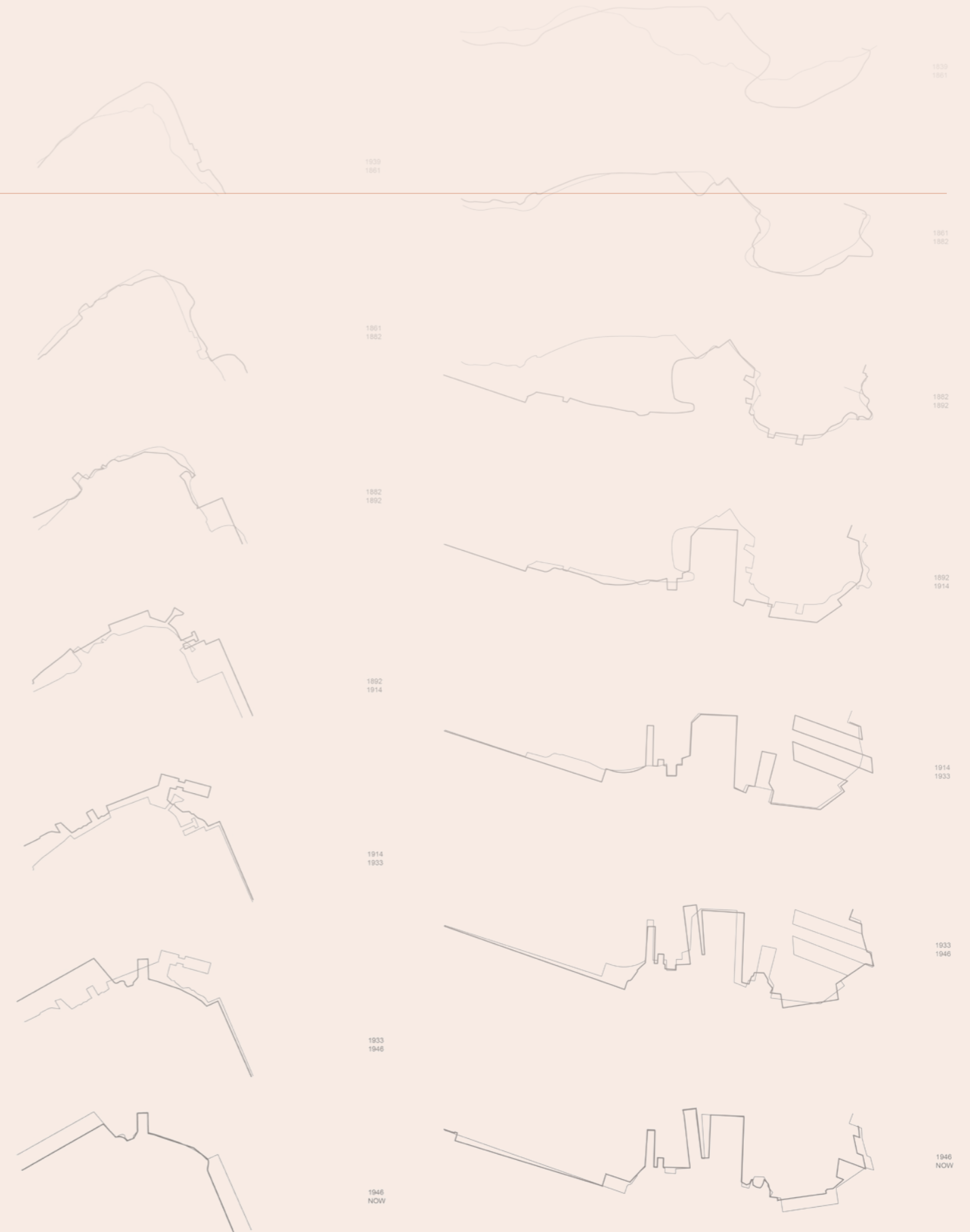
6.3 Maritime uses

6.4 Food and beverage

6.5 Activation, events and supporting infrastructure

6.6 Accommodation

6.7 Service and back of house functions



6.1 Transport and island access strategy

Cockatoo Island / Wareamah is located just a few kilometres west of Sydney's CBD. Despite this proximity, there are relatively low levels of access due to infrequent transport services.

Two public ferry routes that provide service to Cockatoo Island / Wareamah:

- F3 Parramatta River Route – headways of approximately 30 minutes during both the weekday and weekends
- F8 Cockatoo Island Route – headways of approximately 30 minutes through the weekday peak and 60 minutes for weekends and weekday off-peak.

Cockatoo Island / Wareamah provides three passenger vessel wharf and marina facilities:

- Parramatta Wharf is the main passenger wharf facilitating passenger vessel loading and unloading over two berths.
- Camber Wharf is an alternative passenger wharf facilitating passenger vessel loading for water taxis and/or commercial charter vessels.
- Marina Wharf facilitates private short-term/overnight vessel berthing.

A typical visitor experiences a travel time of over an hour to arrive at Cockatoo Island / Wareamah if they depart without consulting a public transport timetable. While the ferry ride to Cockatoo Island / Wareamah is relatively short, connections to the broader Sydney public transport system or car parking mean overall journey and waiting time typically exceeds one hour. Access is also predominantly from the eastern parts of the city.

Ease of access will be a critical component to a viable, restored and reactivated Cockatoo Island / Wareamah. Visitation demand and the supply of transport services work in lockstep with one another to sustain or constrain growth and reactivation. The growth of visitation anticipated in the master plan will require ongoing planning and flexibility.

Cockatoo Island / Wareamah also faces unique goods movement and servicing conditions. The current goods and servicing transport arrangements and schedule will be improved to support expanded future uses and businesses.

Community connections

Population growth continues to occur in Western Sydney, Parramatta, and other centres north and south of the harbour. As well, the broader public transport network continues to evolve with the implementation of Sydney Metro. These factors provide momentum to support further evolution of the network currently serving Cockatoo Island / Wareamah. The master plan advocates for new multi-modal connections to Sydney Metro West to better serve populations west of Cockatoo Island / Wareamah or not living in the inner suburbs. These opportunities will increase frequencies to/from Cockatoo Island / Wareamah while unlocking connectivity to these communities.

The master plan also considers learnings from benchmark sites such as The Presidio (San Francisco), which provides bus access to/from lower socio-economic areas. This will be considered in the future, with bus and ferry services supplemented by the Harbour Trust, from Western Sydney or key agreed locations.

Supplementary services

Island-specific services will add another prospective experience for visitors, making the boat ride journey to the island part of the excitement and experience – similar to the ferry ride to MONA in Hobart. The island experience will commence at the point of departure rather than just on arrival to the island. This not only reduces the friction of travelling to the island but better connects the island to broader Sydney landmarks and other tourism opportunities. Consideration should be given to a dedicated island ferry service (either Harbour Trust run or in private partnership) that directly connects this tourist market to the island.

In terms of goods movement and servicing, increased service frequency will be required to provide more flexibility for existing/new uses and businesses, to better support future retail, hospitality, accommodation, arts and events uses. Further opportunities to be explored at design stage include:

- Working with the current barge operator to promote 'right-sized' delivery vehicles, including (electric) cargo-bikes.
- Working with public ferries (and other operators) to support light-goods transport particularly on the F8, which has ample spare capacity.
- Exploring Harbour Trust or third party (in partnership) operated services that can accommodate both goods and passenger movement.

New wharf

A key design response to support more frequent services to the island is the new Ruby Steps Wharf to complement the Parramatta Wharf with new and/or additional public, private, event, and/or dedicated Harbour Trust ferries with increased frequency. Additional mooring sites in other locations around the island may increase access for private vessels but will require further investigation at design stage noting curtilage constraints. Opportunities to add new Harbour Trust (or other private) operated island services will be increasingly possible once visitation and on-island drawcards are seen as effective and valued by prospective visitors.

Purposeful partnerships

Over time, the most meaningful way to address the key access challenge is to provide more frequent ferry services, (every 10 minutes). Many of the critical transport and access considerations contemplated in the master plan will require collaboration with Transport for NSW, transport operators, and other partners around Sydney Harbour. The Harbour Trust will continue to explore partnership opportunities with Transport for NSW for advancing shared services between other tourism and visitor destinations around Sydney Harbour.

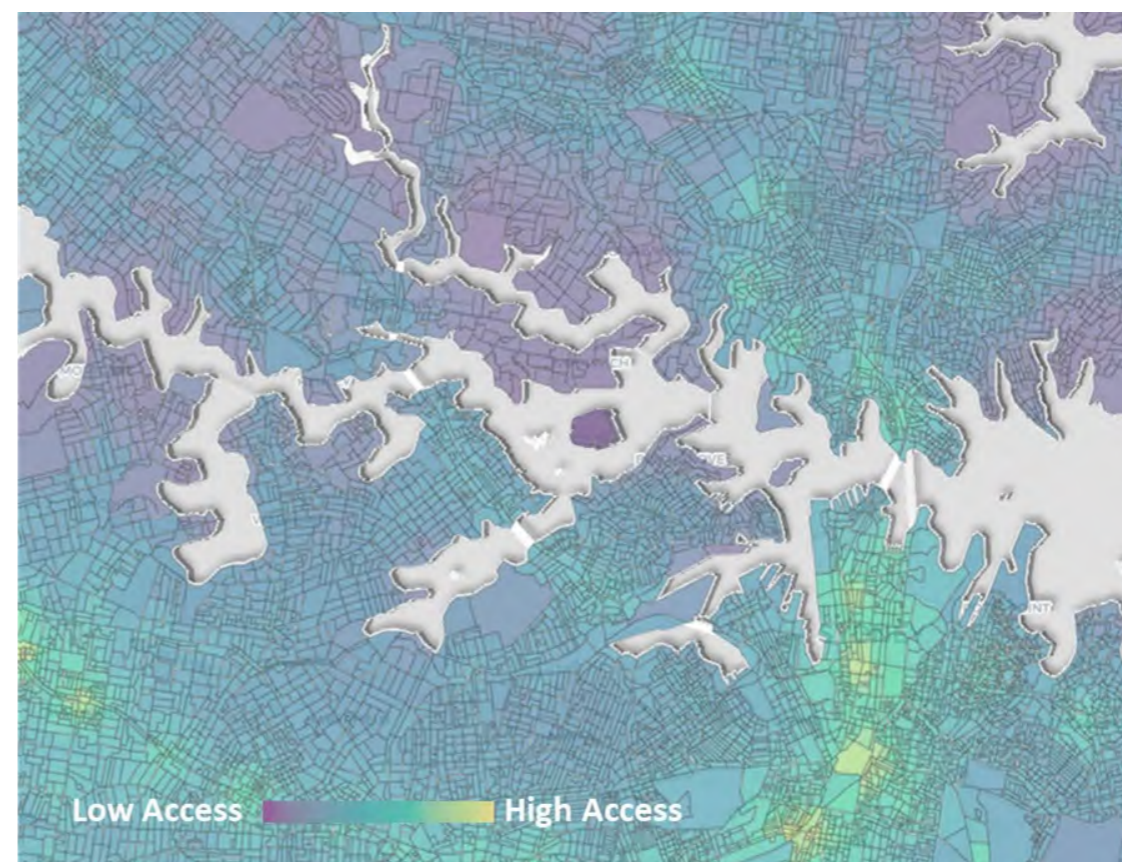


Fig 110. This image illustrates ease of access across different areas of Sydney. Cockatoo Island / Wareamah is much more difficult to access than other locations close to the CBD. Source: Mott Macdonald

6.2 Accessibility and circulation

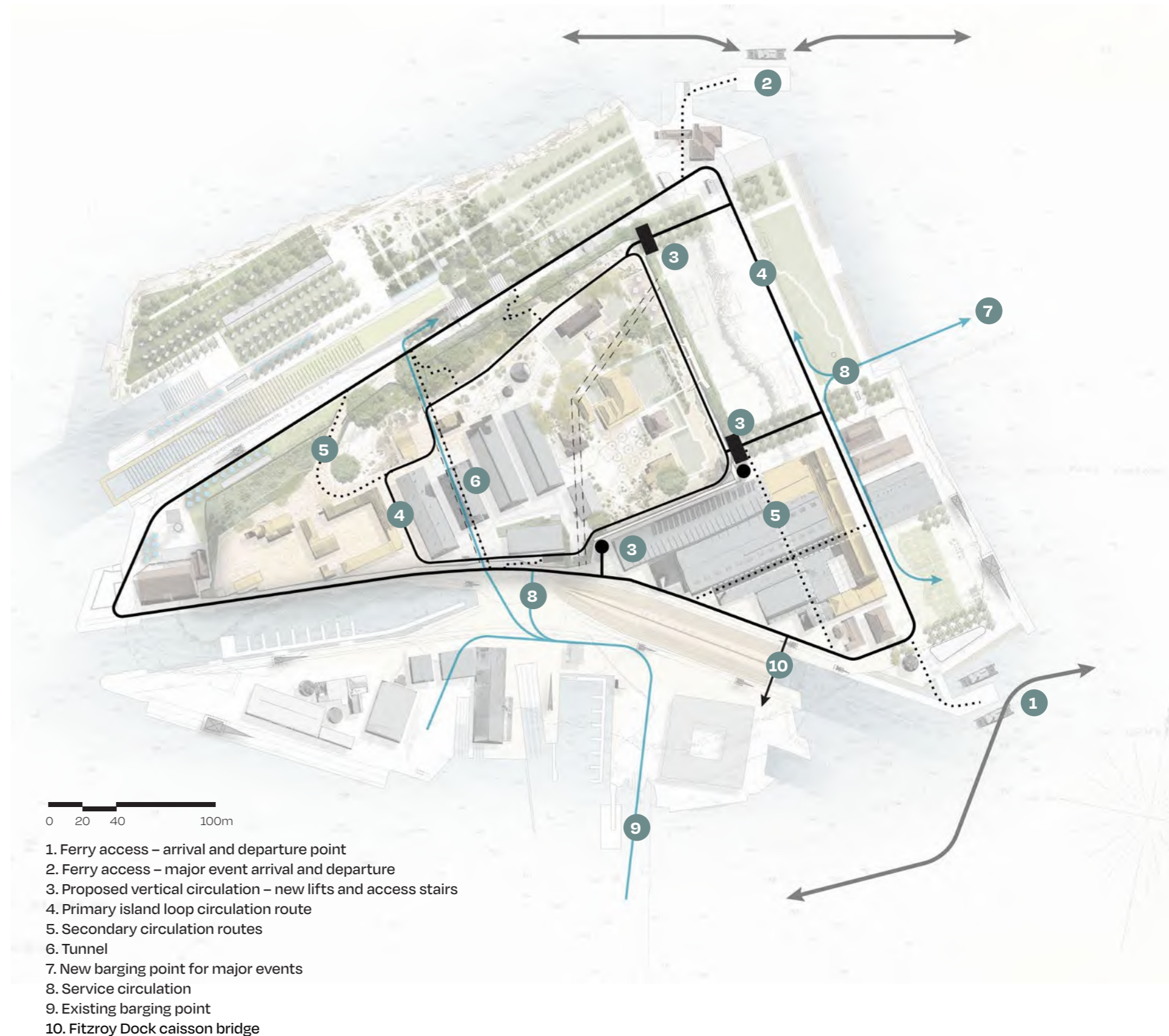
In 1904, an elaborate hand pushed or horse drawn light rail system was established on the island. The system and vertical lifts and cranes were so effective that the a road to the top of the island wasn't constructed until the 1940s. It is notable that the experimental use of electric propulsion occurred in 1907.

The system was largely abandoned and obsolete after the Second World War. Today, limited remnant evidence remains. Study of the system undertaken for the master plan informs the proposed access and circulation strategy.

Walking from the existing Parramatta Wharf to the Fitzroy Dock takes 10–15 minutes, a loop of the island about 50 minutes. While the waterside areas are generally flat, access to the plateau is either by non-compliant stair or via the original 1940s built steep road. For the visitor, circulation around the island is wandering a remnant, raw industrial landscape.

Clear, compliant and equitable access and circulation across the island is considered critical to the overall long-term plan; equally, the raw nature of place should not be sanitised. The key elements of access and circulation will comprise:

- Improvement of surfaces and creation of walking tracks for all abilities
- Pedestrian movement and wayfinding providing clarity of circulation that is directly related to interpretation and understanding of the islands core heritage values (see Section 5)
- New ferry wharf located near the activated public square, visitor orientation, Fitzroy Dock and food and beverage outlets
- Two wharves operating concurrently in major event mode to provide expanded peak capacity during events
- Two new lifts and stairs providing direct and equitable access to the upper plateau precinct
- Proposed new barging point providing direct major event logistics and support access.



This diagram illustrates the overall access and circulation proposal. Detail of the proposed structure and interpretive framework relating to circulation is outlined in Section 5

Fig 111. Major access and circulation pathways. Source: Tyrrell Studio

6.2 Accessibility and circulation

This section details the proposal to establish a new ferry wharf and its strategic relevance to activation of the island. In subsequent design phases, it is recommended that further detailed investigation and consultation with relevant authorities be undertaken.

1. Proposed primary ferry access – arrival and departure point

A new ferry wharf is proposed at the Ruby Steps. This strategic position offers direct access and proximity to the proposed primary activated assets of the island. The location is considered the key point of orientation with clear view and site line to the significant Convict Workshop building, Fitzroy Dock and the Barracks Precinct.

Additionally, the visitor arriving at Ruby Steps will enter a proposed activated public square framed by the large cranes that are high heritage value assets and considered iconic elements of the island. In repositioning the primary arrival and departure point to Cockatoo Island / Wareamah the Convict Workshop becomes the focus of activation supporting the visitor experience.

Further, the proposed waterfront food and beverage offering is next to public transport. This is considered critical to an island visit simply to enjoy a meal, on the waterfront. This would be a discretionary trip that bolsters the objectives of Cockatoo Island / Wareamah becoming part of the social fabric of the city.

2. 'Arrival Square' – Public domain urban plaza

The master plan proposes transforming the industrial hardstand known as Bolt Wharf into an urban public square. It will have activity on three sides with the waterfront on the fourth side. The historic crane is to be restored and kept in place. At night it could be sensitively lit as an iconic industrial artefact providing a dramatic centrepiece to the square and destination marker from the harbour.

3. Convict Workshop – Adaptive re-use for orientation

The Convict Workshop building with its handsome sandstone facade forms a dramatic and historic backdrop to the square. The master plan proposes this building is used for visitor orientation, visitor services, interpretation and front of house site management.

4. Fitzroy Dock

Due to its significance, the dock could be revealed to illustrate its sheer size. Its proximity to arrival square could help to bring the precinct alive.

5. Access and circulation to the upper plateau

The master plan proposes two new lifts and access stairs connecting the upper plateau to the primary circulation pattern route, close to the proposed arrival point.

6. Proposed food and beverage

These waterfront buildings are earmarked as food and beverage with proximity to both the arrival square and the major events space to the north.

Serving to activate the square further, a waterfront food and beverage offering is allocated near public transport will encourage discretionary and new social trips.

7. Improved accessibility

In design phase it is the intention to review all circulation paths so that they are inclusive and barrier free for all users regardless of their ability.

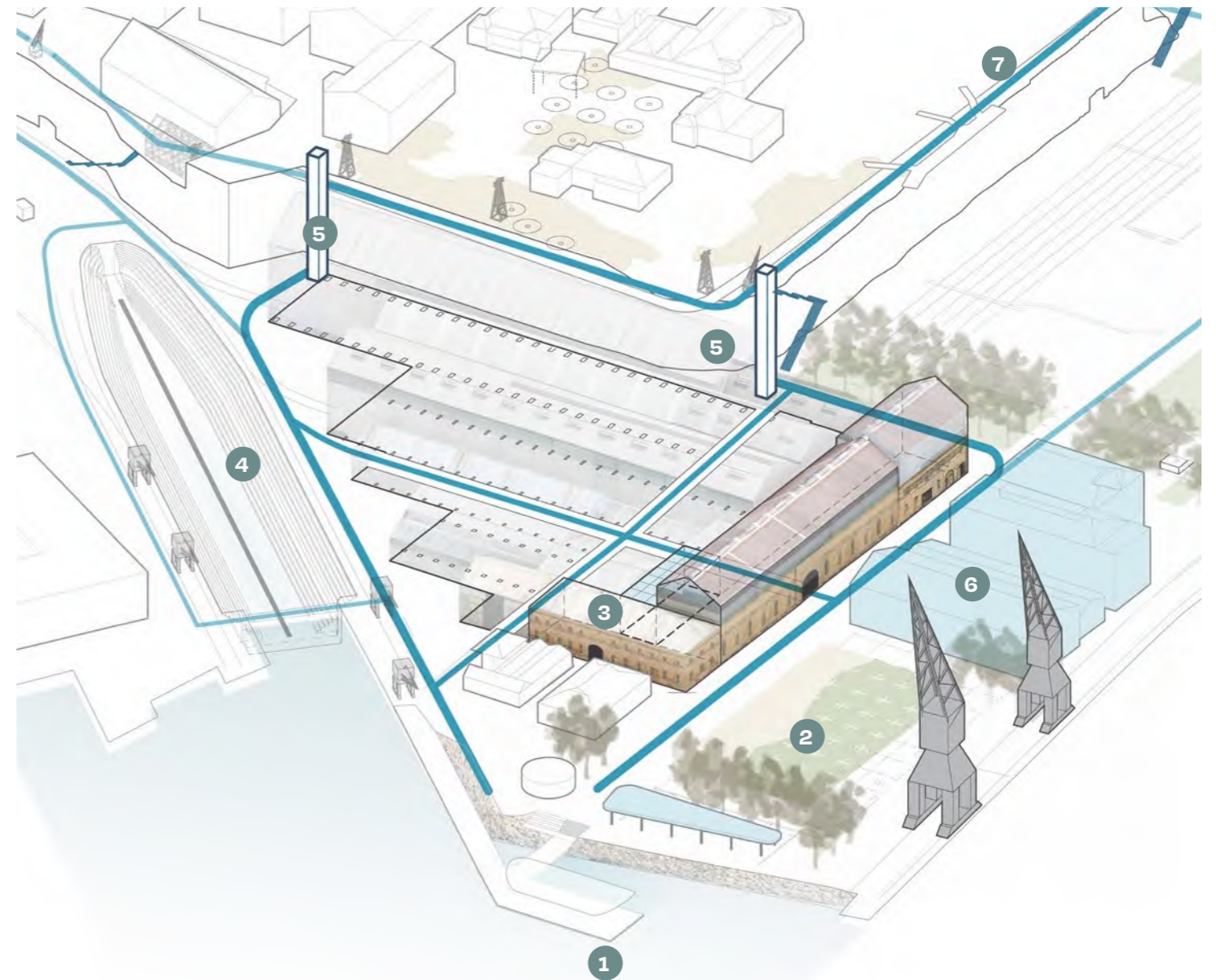


Fig 112. New point of arrival on the island. Source: Tyrrell Studio

6.3 Maritime uses

The master plan considers maritime use as a key continued objective. Maritime uses span recreational to industrial opportunities comprising:

- Maintaining Sutherland Dock and Southern Apron for maritime industry uses
- Maintaining the existing Camber Wharf facilities for small boat access and day berthing (refer section 7.4)
- Enhancing capacity for small non-powered recreational vessels to safely land including visiting kayakers to the Northern Apron
- Enhancing capacity to use or rent kayaking or sailing vessels for recreational use
- Supporting recreational non-powered boat and kayak use as a hub within Sydney's inner harbour
- Enhancing capacity for the island to host regattas or boat festival events.

The following provides an overview where guidelines are provided for further consideration in future design phases.

1. Sutherland Dock and Southern Apron retained for maritime use and industry

The current maritime use is supported into the mid term. In the long term the master plan considers an enhanced maritime industry approach and offering. This is likely to be an evolutionary process requiring industry consultation and partnership. In design phase, master planning recommends further review of market potential and response. In design phase, consideration must be given to adaption or alteration of the existing built form to better serve maritime functions.

2. Sutherland Dock

The dock itself is a significant heritage asset. Future uses must not erode these values. The dock itself is capable of berthing larger vessels and this potential will be preserved. The visual appearance of the Sutherland Dock and generally the Southern Apron is to be considered in early design stages where maritime uses may obscure original heritage fabric.

3. First Nations and heritage boat making

This designated maritime use aims to set aside space for specific traditional boat making uses and craft. This will be a makers' workshop with public-facing cultural and educational capabilities.

4. Enhancing Camber Wharf small boat access facilities

The design phase will examine the scope of day berthing for small to medium vessels visiting the island.

5. Enhanced capacity for small non-powered vessels

Small non-powered vessels could safely launch and land in the Northern Apron slipway. Back of house functions to service capacity for island visitors to rent and use primarily kayaks, canoes or rowing vessels will be examined in design phase. This could potentially be a First Nations business.

6. Enhanced capacity for the island to host maritime related regattas, small boat related festivals.

Cockatoo Island / Wareamah has been home to regattas and events in the past. The proposed event and food and beverage infrastructure will enhance this capability. In design phase this capability will be considered to ensure event infrastructure enhances capacity for maritime event use. Additionally, in design phase the proposed barging point will be considered for its potential for walk-in regatta launch and landing use (skiff or small boat sail racing).

7. Small to mid size vessel tie up points

The design phase will examine day berthing/short-term tie up points for small to medium vessels visiting the island.

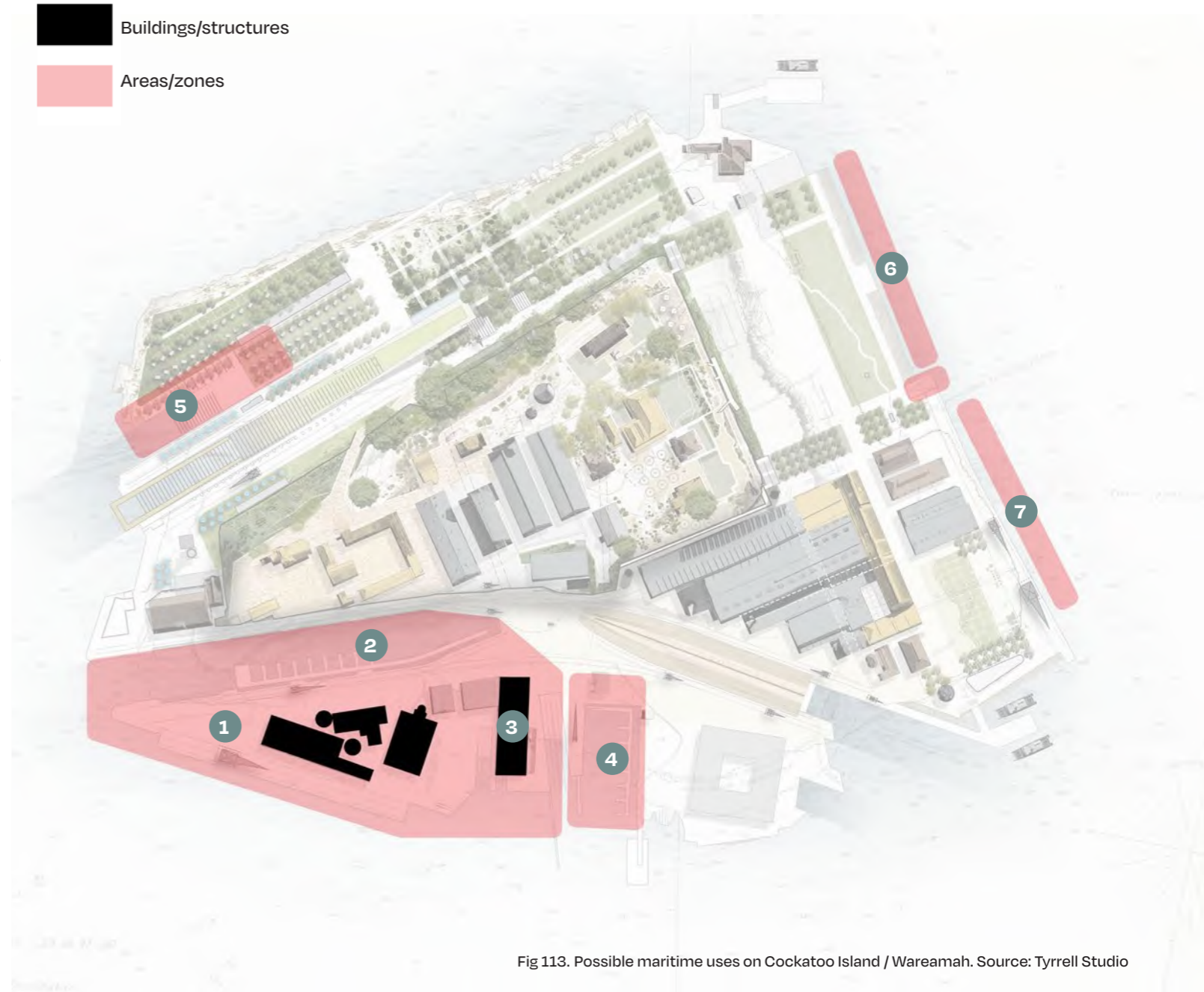


Fig 113. Possible maritime uses on Cockatoo Island / Wareamah. Source: Tyrrell Studio

6.4 Food and beverage

With increased visitation, significantly enhanced and new food and beverage outlets are required to support the new and upgraded experiences on the island. The outlets would also serve regular visitors, campers and island staff, offering a range of staples to meet the needs of a diverse range of regulars and guests.

A signature food and beverage offering in the Ruby Steps Wharf new arrival area is recommended as a drawcard such as a distillery style bar and quality restaurant offering a unique viewpoint over the harbour and the Harbour Bridge.

During the early stages of master plan implementation outlets may complement established food and beverage offerings and support high visitation. Given the low infrastructure needs for such facilities, they can be flexible seasonally and in support of events and programming.

A complementary signature facility could also be programmed for either/both the Powerhouse and/or Coal Store in the later stages of re-activation once successful outlets have traded well in the initial years of trade.

To encourage early uptake by food and beverage operators there will be an establishment period where operators may require support in the form of financial and other operating incentives. These short-term support mechanisms will be considered during subsequent business case and design phases.



Food and beverage options to suit a range of visitors day and night

1. Expanded cafe capacity with Harbour views
2. Arrival food and beverage and anchor tenant bar and restaurants near the arrival and harbour views, including dark kitchen for conference catering
3. New food and beverage around Camber Wharf supporting nearby accommodation and Fitzroy Dock display
4. Cafe kiosks supporting the park and swimming spot
5. Camping Kitchen and BBQs camping supplies from nearby cafes
6. Function space at superintendent's house supported by catering

Fig 114. New food and beverage options across the island. Source: Tyrrell Studio

6.5 Activation, events and supporting infrastructure

Purpose of activation and events

Activations and events have been an important part of Cockatoo Island / Wareamah since it first opened for public access over 15 years ago. Already established as a place for connection and celebration on Sydney Harbour, Cockatoo Island / Wareamah will continue to be the Harbour Trust's primary site for events.

The intention of the master plan is to establish the island as a new premier destination on Sydney Harbour with a focus on creating:

- A location for flagship Sydney events (Vivid, Biennale and Sydney Festival), conferences and touring large scale exhibitions
- A destination for domestic and international visitors to attend festivals, sporting events, concerts, performances, exhibitions and attend daily tours
- A destination to host more schools and students at greater frequency throughout the year.

The Harbour Trust will further explore opportunities for cultural and creative spaces, including 'meanwhile' uses. Increasing capacity and creating suitable facilities will be necessary to achieve this ambition.

Supporting infrastructure

The conservation, reactivation and improvement of the identified heritage buildings and assets will create up to date and competitive multi-functional spaces. Improvement of services, structures, equipment availability and better access to transport through the secondary ferry wharf will be prioritised.

A new dark kitchen and back of house dedicated area will be constructed near the turbine shop to allow for high volume events and conferences to be fully catered.

As the success of these multi-functional and conferencing spaces produces demand greater than supply on the island, additional facilities including the Pattern Shop and Timber Drying Shed on the upper plateau could supplement this purpose in later stages.

Curation

The Harbour Trust will curate a program of events and experiences that connect people, place and story and provide a contemporary lens on the island's key themes. These themes will ensure public-facing activities enhance and build on the existing community, cultural and commercial activities around the harbour.

Activation and event thresholds

To inform the master plan the Harbour Trust has set thresholds for activation and events on Cockatoo Island / Wareamah with the expectation that the number will increase over time with investment in infrastructure.

Small activations	Medium events	Large events
Historical/ environmental/ ghost tours, school groups, ceremonies, exhibitions, displays and performances	Conferences, community festivals, sporting events, concerts, exhibitions and markets	Seasonal performance series, large music/arts festivals, conference
Low impact to the site	Visitation 500 to 2000 people per event day	Visitation 2,000 to 10,000 people per event day
Visitation up to 500 people/day	Duration 3 days or less	Duration 3 days or less
No cap on activity	Up to 22 events per annum	Up to 10 events per annum



Flexible event spaces. Source: Sydney Harbour Federation Trust

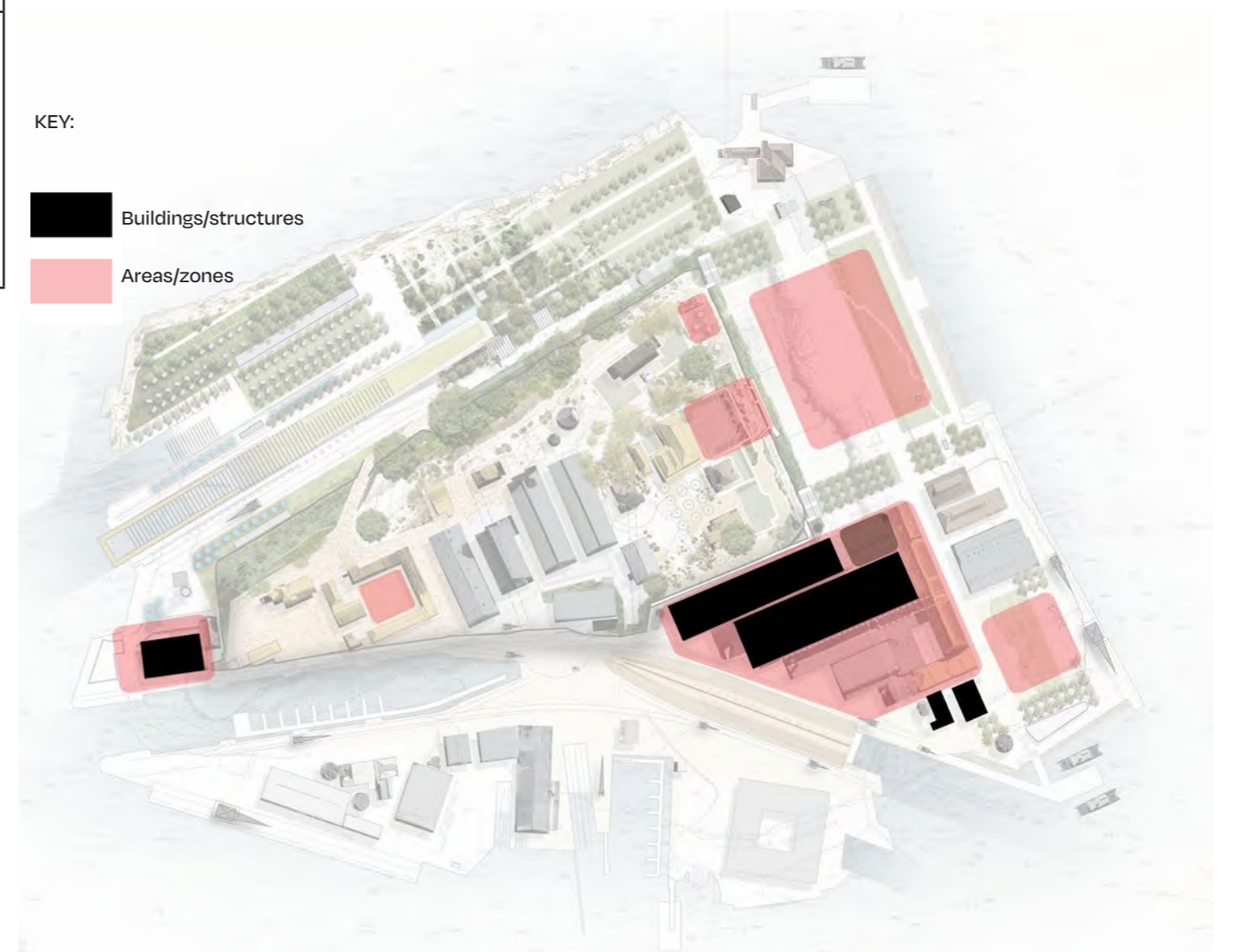


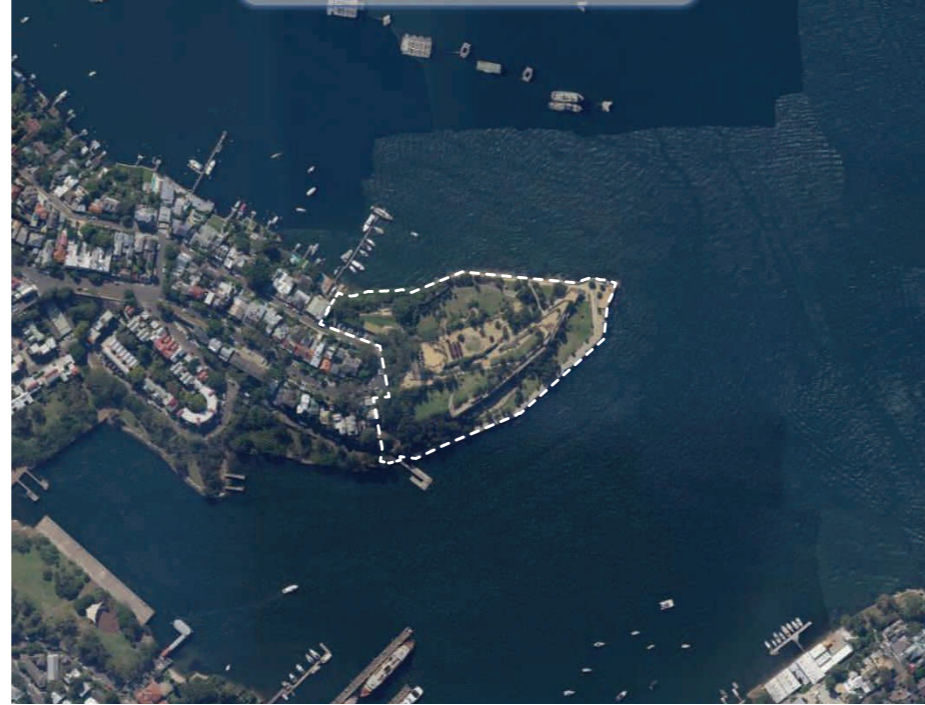
Fig 115. Flexible event spaces of different scales distributed across the island. Source: Tyrrell Studio

6.5 Activation, events and supporting infrastructure

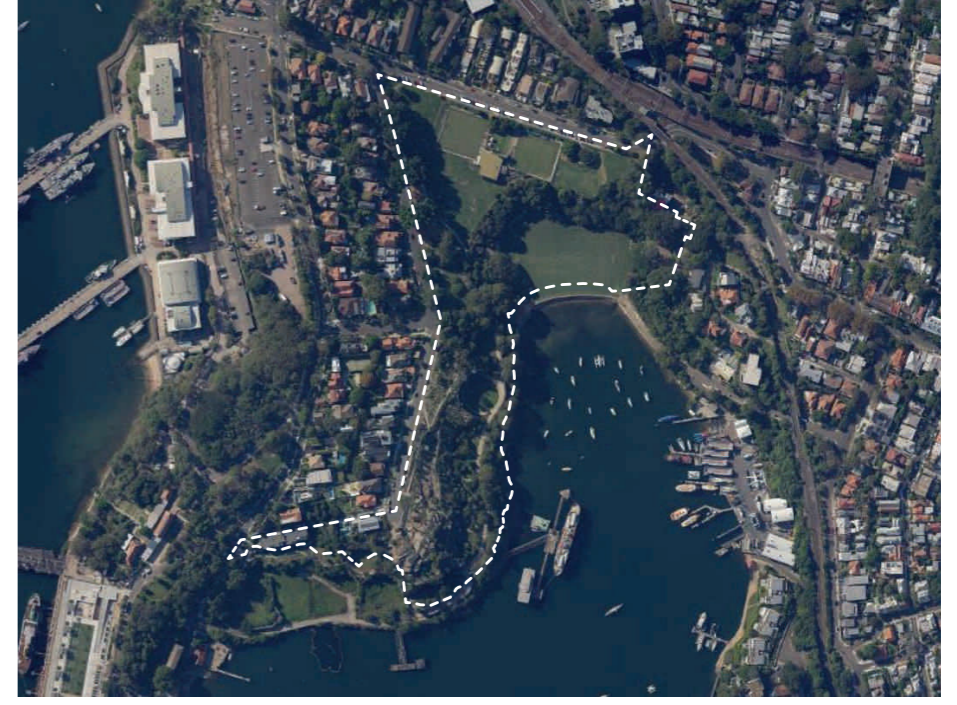
Open space sizes along Sydney Harbour



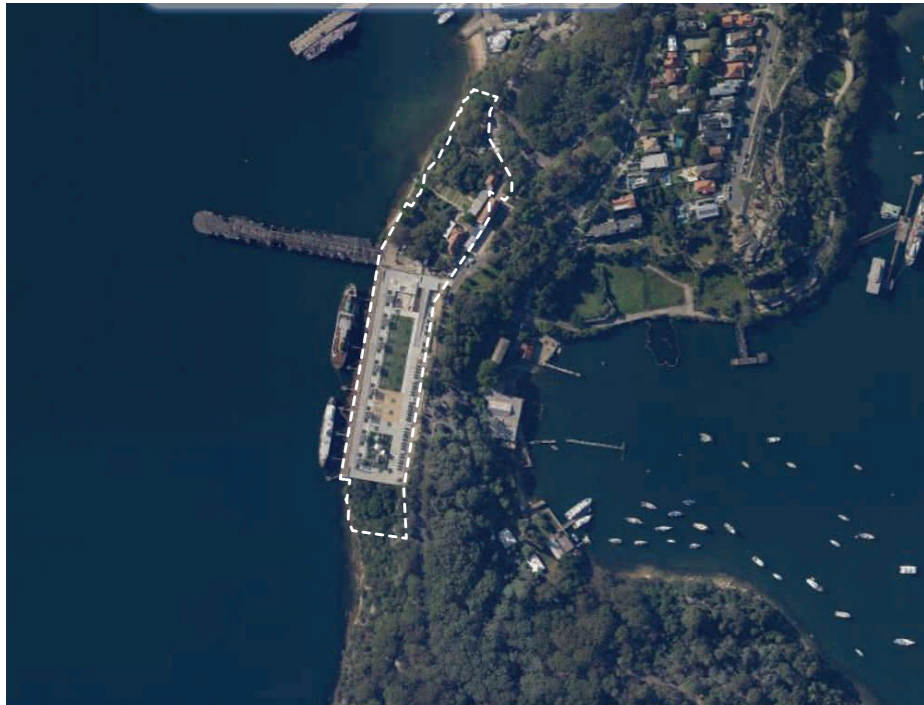
Cockatoo Island / Wareamah
18 ha (3.3 ha Northern Apron)



Ballast Point Park
2.7 ha



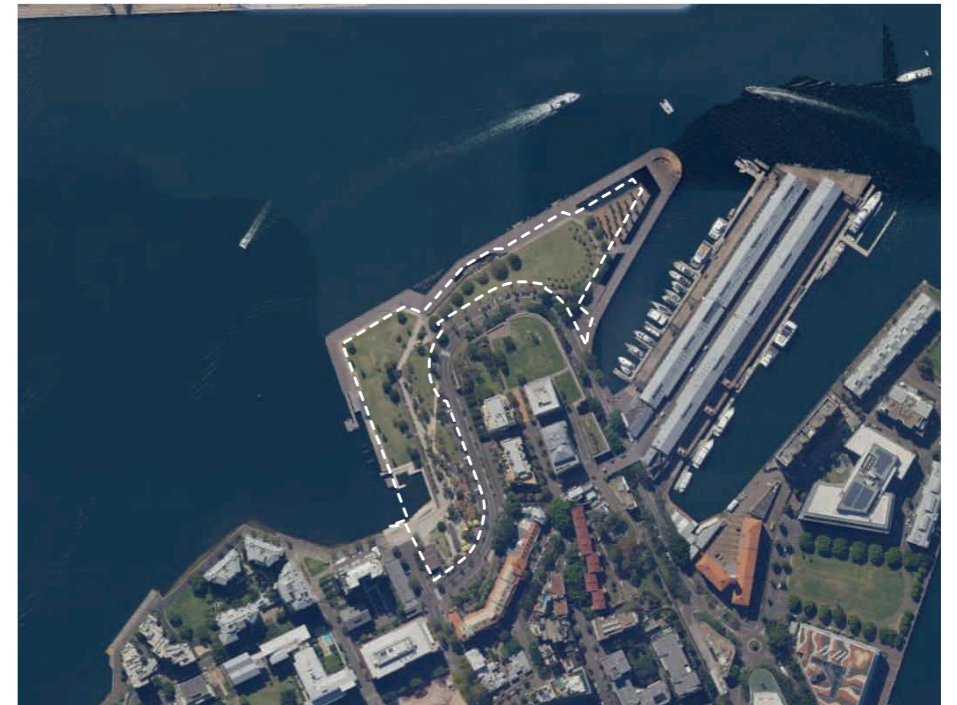
Carradah and Waverton Park
6.4 ha



Coal Loader Park Waverton
2 ha



Mrs Macquaries Point Park
7.9 ha



Pirrama Park
2.5 ha

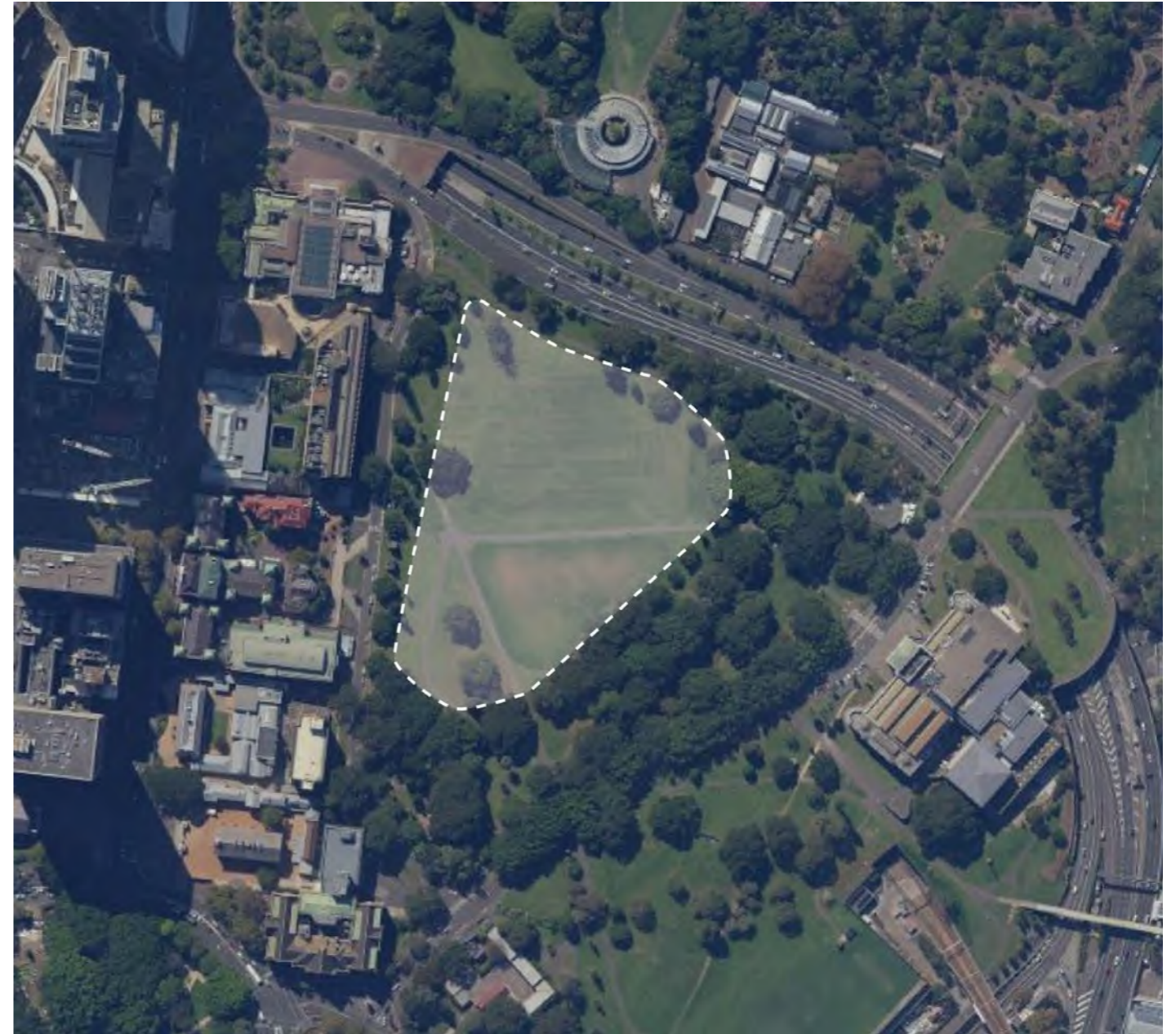
Fig 116. Park size comparisons. Source: SIX Maps

6.5 Activation, events and supporting infrastructure

Scale comparison: The Domain



Cockatoo Island / Wareamah Eastern Apron
1.65 ha
Width: 100m
Length: 165m



The Domain
2.9 ha
Width: 175m
Length: 200m



Fig 117. Comparison of event space size. Source: SIX Maps

6.6 Accommodation

The master plan accommodation strategy supports heritage, visitation and self-sustainment objectives. Analysis found market gaps and opportunities in diversity of offering and potential. The master plan considers accommodation developed on an evolutionary demand basis noting that short-term accommodation beyond the current offering is important to the overall long-term plan and to comprise:

- An expanded offering for a broader budget range developed in stages over a long-term (10 years +) as visitation to the island grows
- An enhanced offering to a wider market ranging from families with children to boutique destination experiences
- Enhanced overnight visitation to the island for events, conferencing and food and beverage supporting Sydney's night economy
- School student accommodation in support of education objectives.

There are several accommodation offerings.

1. Camping in the heart of the city

The Harbour Trust operates a campground on Cockatoo Island / Wareamah that provides a unique accommodation offering on the harbour. The campground is located next to Parramatta Wharf on the Northern Apron. The master plan continues this unique offering, enhanced and in a more private location to the west of the current site. In design phase, the western site will be examined to support camping and associated activities. The relocation will:

- Release the Northern Apron to new public parkland
- Re-locate the campground to a more private location.

Cabin accommodation

The master plan also recommends consideration of cabin style accommodation to be co-located with the tent campground. This initiative intends to broaden the user market, providing modest and unique waterfront short-term cabin style accommodation.

2. Boutique restored heritage houses

The Harbour Trust operates boutique accommodation within restored houses on Cockatoo Island / Wareamah. These provide a unique accommodation offering on the harbour. The master plan continues this unique offering, enhanced with additional houses being restored with complementary food and beverage functions servicing the overnight offering.

3. Hotel accommodation

Consistent with the Harbour Trust Management Plan 2018, hotel accommodation remains a long term aspiration that will support unique accommodation at a World Heritage place in the heart of Sydney Harbour. The design phase will examine the land parcel and zone south of Fitzroy Dock for accommodation use. This requires further industry consultation, and partnership in implementation.



Fig 119. Lane Cove National Park camping. Source: NPWS

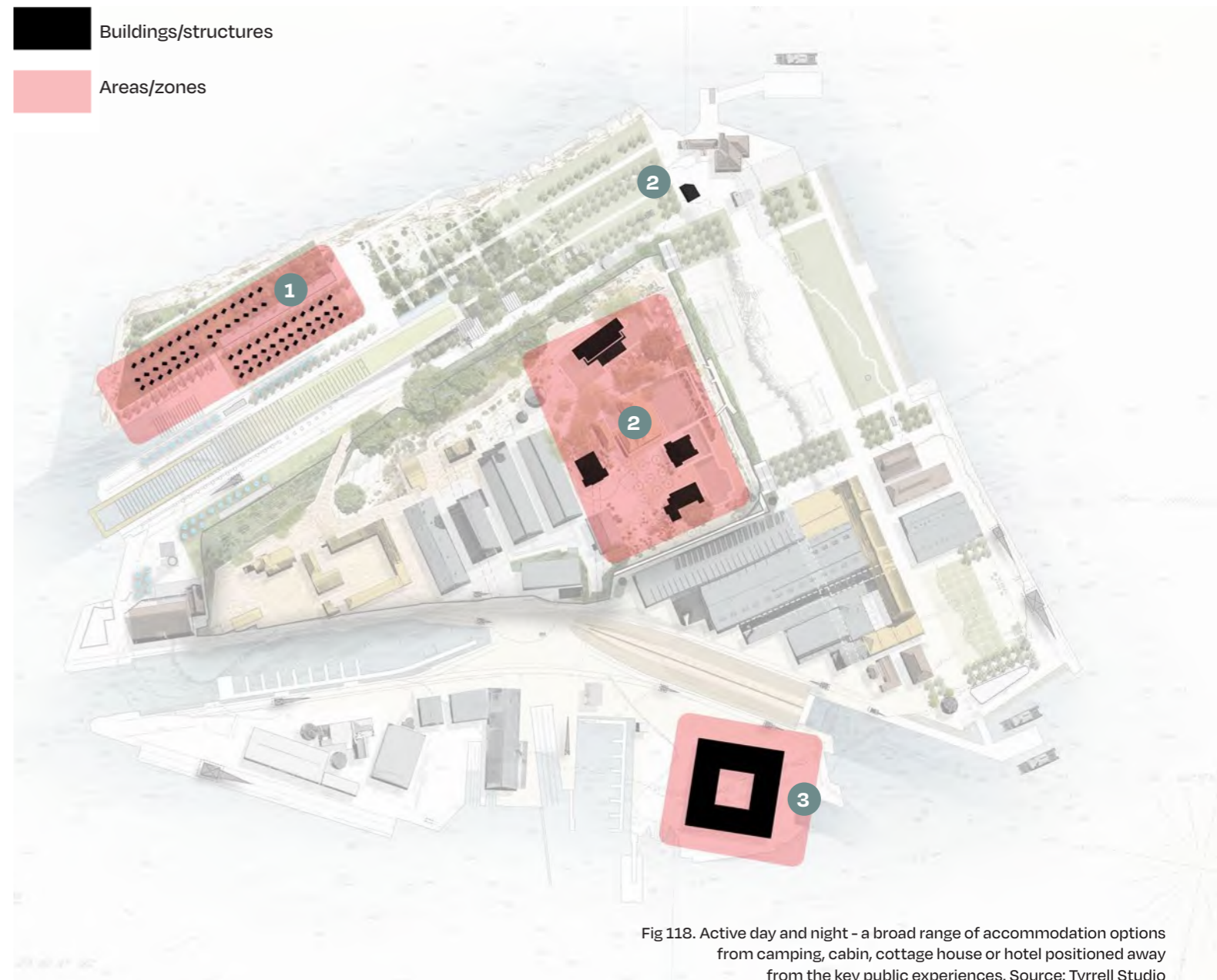


Fig 118. Active day and night - a broad range of accommodation options from camping, cabin, cottage house or hotel positioned away from the key public experiences. Source: Tyrrell Studio



Fig 120. Lane Cove National Park glamping. Source: NPWS

6.7 Service and back of house functions

Operating the island successfully with larger visitation will require storage and back of house functions including:

- Proposed supply/barging points
- off island supply chain
- Emergency management/medical
- Back of house functional areas
- Waste management and safe storage.

The following provides an overview for further consideration in design phase.

1. Existing barging facilities to be retained

2. Proposed new barging facility to service large events

Examine requirement to achieve truck barging directly into event zone with capability of truck standing area. New structures that may obscure the site lines and vista both on and off island would not be considered.

3. Emergency and medical management

Examine emergency management requirement of island in both day to day and large event mode. The location of this facility should consider the functional requirement and proximity to event population. An emergency and medical response strategy will form part of initial technical design in relation circulation and servicing.

4. Back of house function

Examine back of house functions to service day to day operation and event mode. This is likely to comprise storage and back of house servicing capability for event mode.

5. Operational service function

Examine operational requirements and service functions to the plateau area. This is likely to comprise storage and staffing function.

6. Primary operational and service facilities

Examine this zone within the maritime area as the primary storage, service and island maintenance depot. As a significant activated heritage site the island will require considerable maintenance support resources. This capability and its technical requirements for appropriate workshops, staffing facilities, relevant machinery and plant is considerable. Functional programming of this critical operational and service requirement must be considered a high order of priority in early design.

7. Secondary operational and services modules

Examine satellite modules as secondary storage, service and waste management facilities. These facilities should be modest and concealed either within existing structures or new purpose design/built modular structures.

8. Restoration workshop

Enhance the general workshop facilities to support ongoing restoration and maintenance of the island's heritage assets.

9. Restoration workshop - timber

Enhance the timber workshop to support ongoing restoration and maintenance of the island's heritage assets.

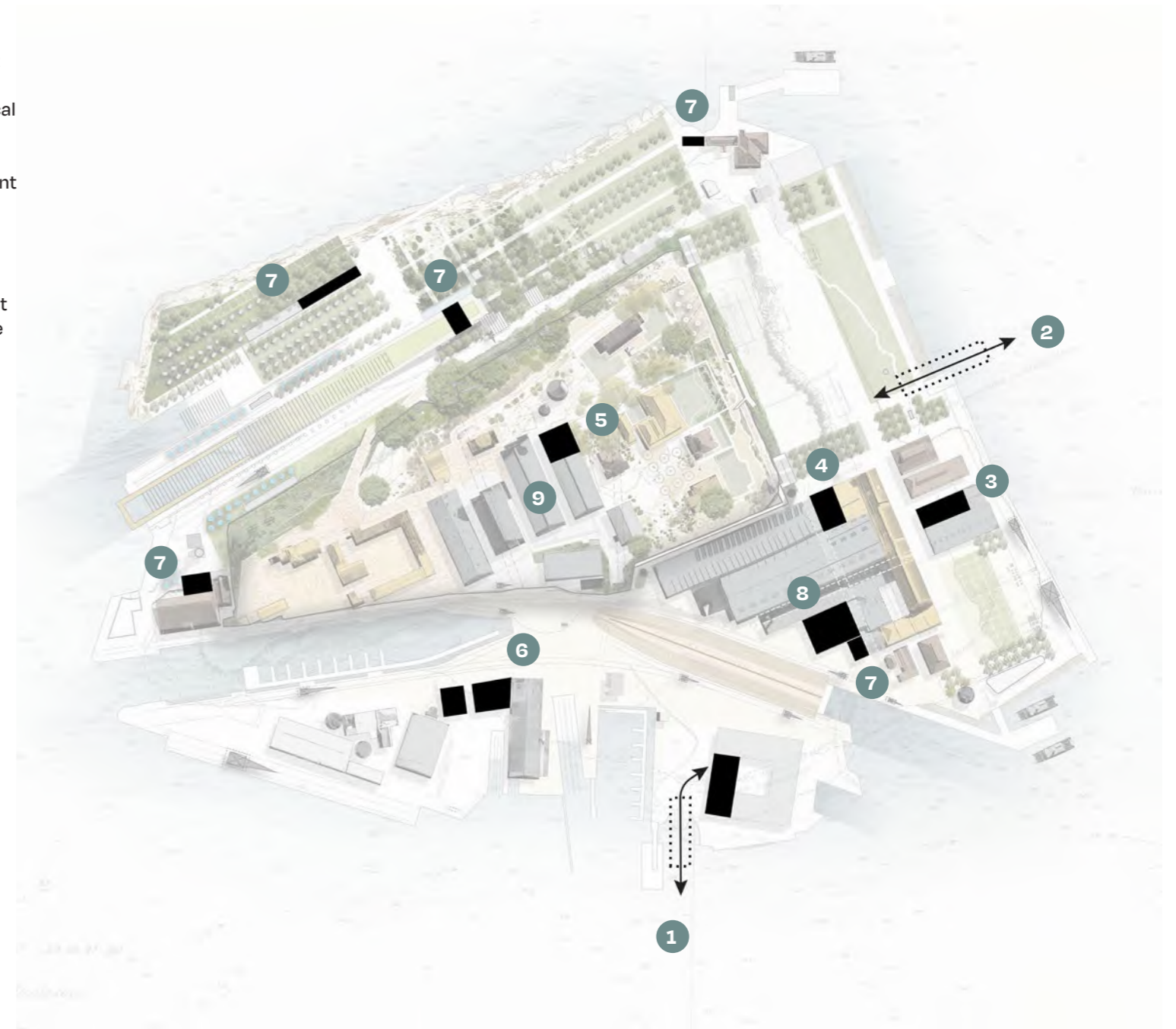


Fig 121. Service and back of house functions on the island. Source: Tyrrell Studio

7.0

Supporting works and infrastructure

- 7.1 Climate change resilience**
- 7.2 Asset management plan**
- 7.3 Building and asset restoration**
- 7.4 Utilities and service infrastructure**



7.1 Climate change resilience

Global temperatures are already more than 1°C above the pre-industrial average, disrupting climatic patterns, damaging ecosystems, causing sea level rise and impacting communities, businesses and governments. Even with reductions in global emissions that align with the Paris Agreement goals, the global average temperature will continue to rise for decades, with worsening physical impacts.

As an island in the middle of Sydney Harbour, Cockatoo Island / Wareamah is especially vulnerable to the impacts of climate change. Some climate change risks that are associated with this site include:

- Sea-level rise and increased storm-surge which may impact the site as outlined in Section 7.4
- Increased temperatures causing more heatwaves and urban heat island effect
- Higher frequency and severity of storm events including rain inundation, hail, and high winds, resulting in flood and inundation of buildings and utilities, and asset damage
- Increased risk of fire on the island, resulting in fire damage and smoke impacts.

This is not an exhaustive list of risks, and it is recommended that a detailed climate change adaptation and resilience plan (climate plan) be developed early in the design phase including assessment of physical, transitional and supply chain risks (dependencies and interdependencies) associated with the island and its intended operations.

A climate plan should consider key national and state objectives outlined within the Australian and NSW climate change adaptation strategies and be updated at regular frequency to ensure alignment with the current understanding of climate change science, legislation, and associated risks for the site and its uses.

In June 2024, the Harbour Trust adopted an Emissions Reduction Plan (ERP) in keeping with the Australian Governments Net Zero in Government Operations Strategy. At this stage the ERP is aimed at emissions from the Harbour Trusts activities, but may be broadened in the future to also encompass other activities on Harbour Trust land.

7.2 Asset management plan

Cockatoo Island / Wareamah has numerous physical assets inclusive of wharves, cranes, infrastructure and more than 100 buildings which if not maintained will further decline, either becoming non-functional or derelict and dangerous.

The Asset Management Plan for Cockatoo Island / Wareamah (AMP) supports and guides the asset management of the island's physical assets in accordance with the Strategic Asset Management Plan (SAMP) to achieve the Harbour Trust's organisational objectives. It was completed in late 2022 along with AMPs for the eight other Harbour Trust sites, combining to form the SAMP. The AMP only considers current use of the assets in terms of maintenance requirements and does not consider adaptive re-use or upgrades. The AMP provides asset renewal and maintenance expenditure estimates from 2023–2032.

Cockatoo Island / Wareamah assets under the AMP consist of the following elements. It does not take into account residential buildings, open spaces (for example, bushland, signage, gardens and lawns, ovals, etc.), intangible assets or software systems.

- Buildings and building services – commercial, public access and heritage buildings
- Marine assets – seawalls, ramps, wharves, revetments, slipways, marinas, docks
- General structures – retaining walls, fences, canopy structures, staircases, ramps, lookouts, elevated walkways, boardwalks, pits, stack, cranes
- Tunnels and cliffs – tunnels, natural cliffs, slopes and cliff cuttings
- Site services – electricity, gas, water and wastewater, communications and fire systems
- Roads, paths and tracks – roads, hardstands, paths and walking tracks, both natural and paved

Current state of the Cockatoo Island / Wareamah assets

Failure of a critical asset on the island will likely result in significant consequences to Cockatoo Island / Wareamah. A combination of condition and criticality was used to determine the strategy for how the assets are managed. The overall condition of assets, by replacement value and criticality, notes that almost half of the most critical assets are in a poor condition. While the number of the most critical assets on the island is low with respect to the total number of all assets, (24 out of 261 assets) they are significant structures such as wharves and docks that represent a large portion of the total asset value of Cockatoo Island / Wareamah. A major portion of the island's marine structures are in poor condition and cannot be accessed by the public due to this poor condition.

AMP relationship to master plan

The master plan reviews the AMP and incorporates its findings.

The AMP proposes significant investment from 2023 required to maintain the assets in a condition that will support services on Cockatoo Island / Wareamah.

The types of planned works to be undertaken would include:

- Critical backlog works
- Other backlog works
- Lifecycle renewal works
- Routine maintenance.



Fig 122. Cranes and chimneys. Source: Sydney Harbour Federation Trust

7.3 Building and asset restoration

Noting that a master plan is a strategic process, detailed building feasibilities were excluded its scope. The current phase of work has been informed by the Heritage Design Guide which spatially mapped the heritage significance of buildings and assets (deeply informed by the range of conservation management plans completed to date) and identified a tolerance for change to enable adaptive reuse and activations.

The SAMP 2022 noted the following:

- There are 98 buildings, 134 general structures, 19 marine structures, roads, paths and tracks (including tunnels).
- Annual maintenance expenditure accounts for 0.3% of asset replacement costs which is below the typical expenditure rate of 1–2%. As a result, there are several critical assets representing a large portion of total asset value (particularly structures such as wharves and docks) that are in poor condition.
- Of the 98 buildings, 29 are not currently in regular use. Of the 59 buildings in use, 10 are used for storage only. Other building uses include cafes, events historic exhibits, warehousing, storage, short-stay accommodation, tenanted workshops, administration, information office, boat shed and amenities.

The focus of this stage of work was considering how to optimise clustering of buildings within precincts and sub-precincts in response to heritage parameters and use potential. The market studies highlighted areas where buildings and assets would complement and enable new and expanded uses with a sympathetic response to heritage precincts and heritage fabric.

Included within the above assets are the 18 external cranes, most of which are related to the shipyard and dockyard facilities. Each crane has individual historical and technological heritage values and collectively, they are important aesthetically in presenting a skyline of large cranes with jibs pointing skywards that defines the island as a dockyard and as a major industrial centre within Sydney Harbour. Ten cranes have been restored, to varying degrees, by volunteers, over the last two decades, including the most significant steam-powered cranes. Conservation works have been designed and will be implemented shortly for another seven external cranes, with the remaining crane to be moved into secure storage.



Fig 123. Views of varied character. Source: Tyrrell Studio

7.3 Building and asset restoration

Building removal plan

Consistent with the sensitivity relating to a World Heritage site, the following section addresses the rationale for the removal of a small number of buildings from the island. The planned removals are consistent with the Comprehensive Plan and Management Plan. All other buildings are retained and re-used under the master plan.

Building 142 - this building, a roof structure, was an internal workshop relating to shipbuilding functions and post-war industry. It was constructed as an infill temporary structure and is considered of lower heritage significance to the adjacent Convict Workshop. Removal creates the potential for naturally lit or atrium space, consistent with the 2017 Plan of Management.

Building 145 South and 154 - these are lean-to structures identified for removal due to end-of life structural condition. Removal also releases space directly adjacent the Fitzroy Dock.

Building 118 - this is a waterfront shed on the northern side of what is proposed to become the main arrival square. Originally an electrical assembly workshop, the shed is now occasionally used for storage. It has low heritage value. Removal would enhance the presentation of the Convict Workshop buildings and support the establishment of the new arrival square as a civic space.

Buildings 92, 93 - this is a large concrete and masonry building on the eastern portion of the Southern Apron. Initial geotechnical investigations indicate foundational subsidence, plus the building structure presents concrete cancer and contamination. The building is unused due to HAZMAT restrictions. The 2017 Plan of Management identifies the building for removal. The design phase will further investigate removal. Consistent with the Management Plan, the master plan proposes long-term future accommodation.

Building 56 - this is a former sewer treatment plant (circa 1970), redundant for many years. It has low heritage value and is in poor condition. The Comprehensive Plan allows for a new replacement building in its location. Its removal will enable the installation of infrastructure to support the reactivation of the powerhouse precinct for public-facing activity.

Service and amenities buildings - Buildings 33, 201, 49, 202, 203 and water tanks - these are existing amenities, services, shower block and toilet buildings. They service the current campground and arrival of visitors off Parramatta Wharf. The water tanks provide storage and grey water use. The master plan identifies these buildings for possible future removal or retention and upgrade to be explored in design phase.

Building 161 - this is a former substation (circa 1954). It has minimal heritage value and is in poor condition. The Conservation Management Plan notes it may be removed.

Canopy structure - these structures were a movie prop and should be removed.



Fig 124. Building removal plan. Source: Tyrrell Studio

7.4 Utilities and service infrastructure

The master plan considers a vibrant future for Cockatoo Island / Wareamah supported by reliable and resilient utilities and service infrastructure.

The proposed infrastructure servicing solution supports the master plan land use change and increased visitor numbers, and comprises extensive replacement of ageing services infrastructure, increased storage onsite, longer-term amplification of mainland connection points, and new and augmented island utility systems.

Further detailed investigations of the services connection from the mainland is required as part of the detailed design. At this stage it appears that new island utility systems could potentially mitigate pressure on existing mainland connections, noting that new submarine feeder cables may be required.

Infrastructure upgrades are proposed to cater for planned events and activations, including:

- Repair of existing water towers and/or addition of new potable water storage
- Addition of an overflow wastewater surcharge tank adjacent to wastewater pump station
- Installation of a 1MW containerised generator adjacent to an existing substation
- Upgrade of the existing telecommunications mobile phone base station.

This event mode infrastructure will help reduce reliance on the current single point of connection to the mainland and could also be supplemented with island utility systems, such as water recycling, to provide back-up utility supply in the event of disruption.

During detailed design, integration and assessment of the fire protection strategy will be undertaken to assess any upgrades and to provide redundancy of the current fire protection network.

Portions of the site are vulnerable to the changing climate and the coastal protection of critical assets will be explored in detailed design.

Potable water

The site is currently serviced from the mainland through a submarine connection to Balmain consisting of two 75mm high density polyethylene pipes. These connect to a Sydney Water pumping station at Elkington Park.

Onsite there is a concrete water tank and water tower near the centre of the site, however these do not currently contain potable water and are suffering from concrete cancer making them unsuitable for use without extensive repairs.

Key potable water upgrades identified in the master plan include:

- Maintaining the existing mainland connection while exploring onsite water re-use systems
- Introducing new potable water storage to account for peak demand and for events
- Replacing and upgrading the internal reticulation network that is nearing end-of-life
- Considering the introduction of additional booster systems for firefighting.

Electrical

The site is supplied via the Ausgrid network through an underwater connection to Balmain. This supplies three-phase high voltage power to four substations throughout the island.

From the four substations, two low voltage networks extend across the island to supply power to the buildings and public domain. There is also an installed 65 kW grid-connected photovoltaic array that is currently not functioning.

Key electrical upgrades identified in the master plan include:

- Repair or replacement of current solar PV arrays
- Spatial provision for longer-term harbour heat rejection
- Installation of container generators adjacent to an existing substation for redundancy and to cater for events
- Replacement and upgrade of the internal reticulation network that is nearing end-of-life.

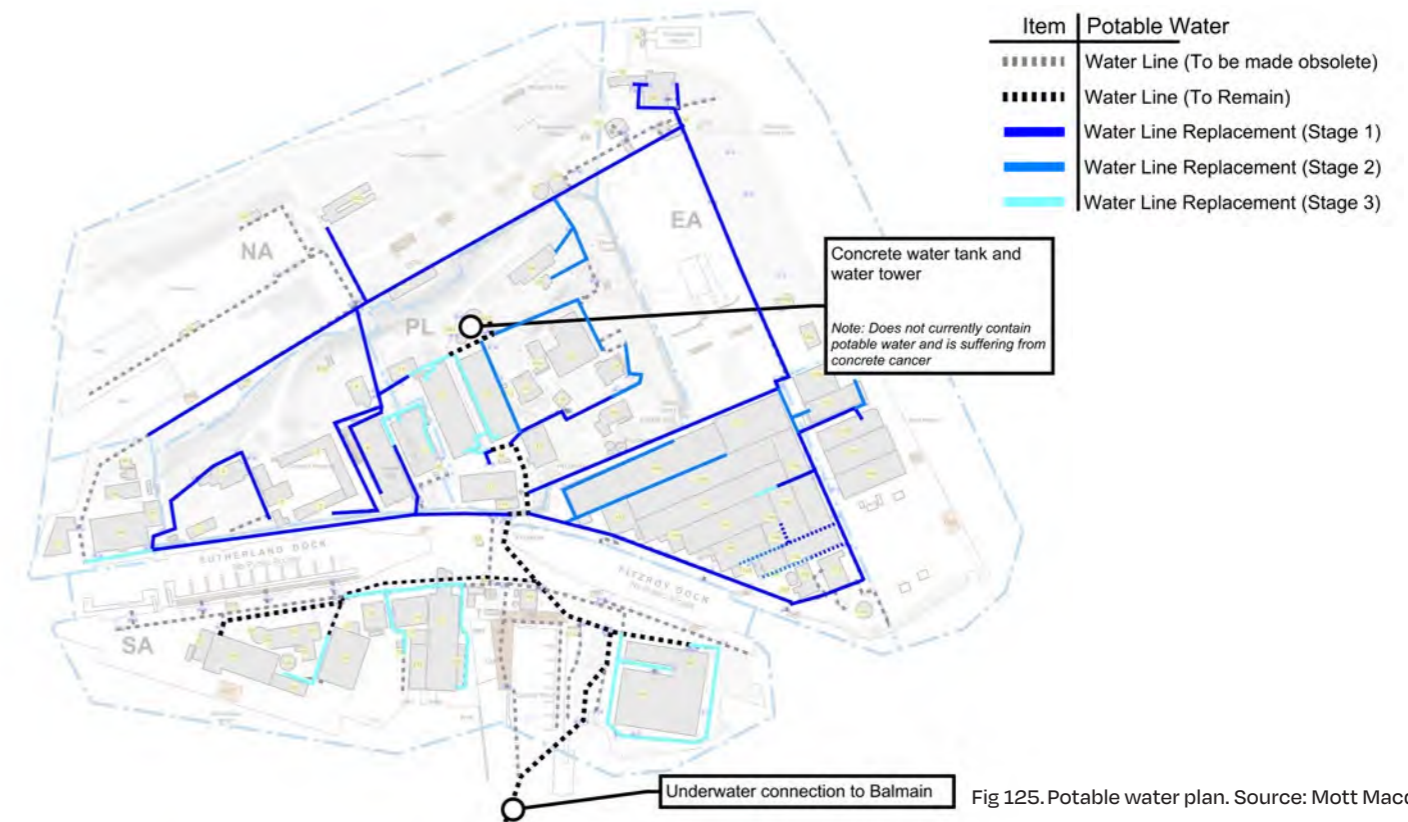


Fig 125. Potable water plan. Source: Mott Macdonald

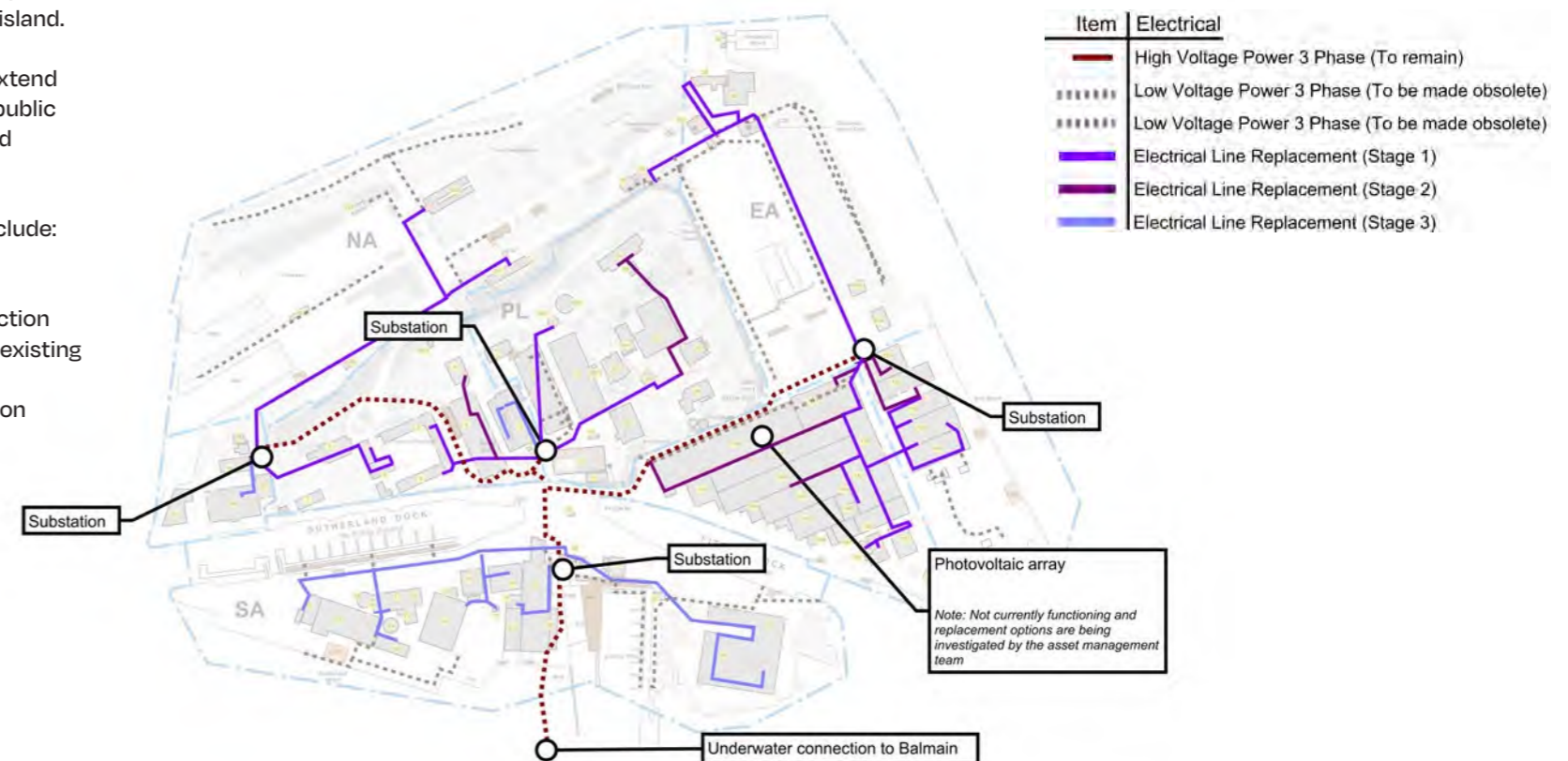


Fig 126. Electrical plan. Source: Mott Macdonald

7.4 Utilities and service infrastructure

Sewer

The island sewer system includes a macerator that treats wastewater prior to connection to the Sydney Water wastewater system in Elkington Park, Balmain via a 63mm high density polyethylene rising main. There are also existing wastewater pipes that drain via gravity to the pumping station that range in size and condition. Key sewer upgrades identified in the master plan include:

- Upgrades to the existing pump station
- Increased storage for the sewer pump station
- Replacement and upgrade of the internal reticulation network that is nearing end-of-life.

Telecommunications

There is a telecommunications connection to Balmain that generally follows the line of the bundled submarine cables. The original copper lines have been replaced with fibre-optic cabling (approximately 144 pairs) and there is a mobile telecommunications base station at the base of the water tower to improve service for mobile telephones which covers Optus, Telstra and Vodafone.

This includes an installed fibre ring-main to future-proof telecommunications connections across the island installed as part of a previous upgrade to the fire protection equipment (FPE). There is also public Wi-Fi available, along with signage advertising this service.

Key telecommunications upgrades identified in the master plan include:

- Upgrades to the existing base station by the telecommunications providers
- Connection of new works to the existing fibre ring main.

Event mode

There are four main event types considered within the master plan:

- Large events (2,000 to 10,000 people)
- Medium events (500 to 2,000 people)
- Small activations (up to 500 people)
- Community and not-for-profit events.

Some of the infrastructure required to support these events will also support day-to-day usage.

Key upgrades identified in the master plan to cater for events include:

- Potable water: allowance for a water storage tank to manage peak flows on large events and provide some redundancy of supply for the potable water network
- Electrical: provision of a containerised generator system to cater for large events, provide redundancy, and as a back-up to mainland power supply
- Sewer: installation of a wastewater overflow/surcharge tank adjacent to the existing pump station to manage large events and provide extra capacity
- Telecommunications: as all three providers perform regular upgrades to this infrastructure it is probable that planning for 5G services is already underway. Any upgrade by the communications providers will be undertaken with increased visitor numbers in mind, and to provide a range of frequencies for a wide variety of phones.

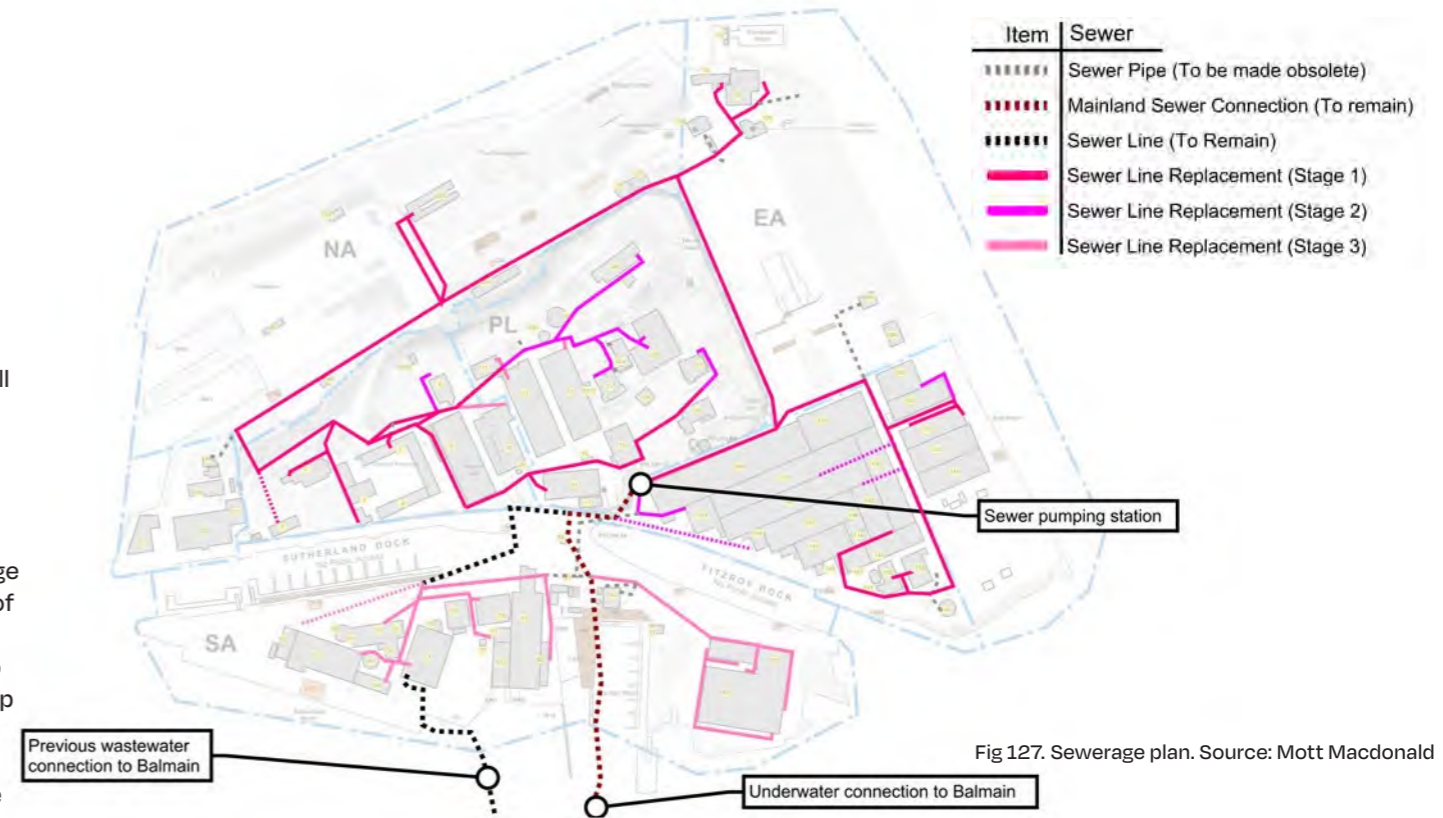


Fig 127. Sewerage plan. Source: Mott Macdonald

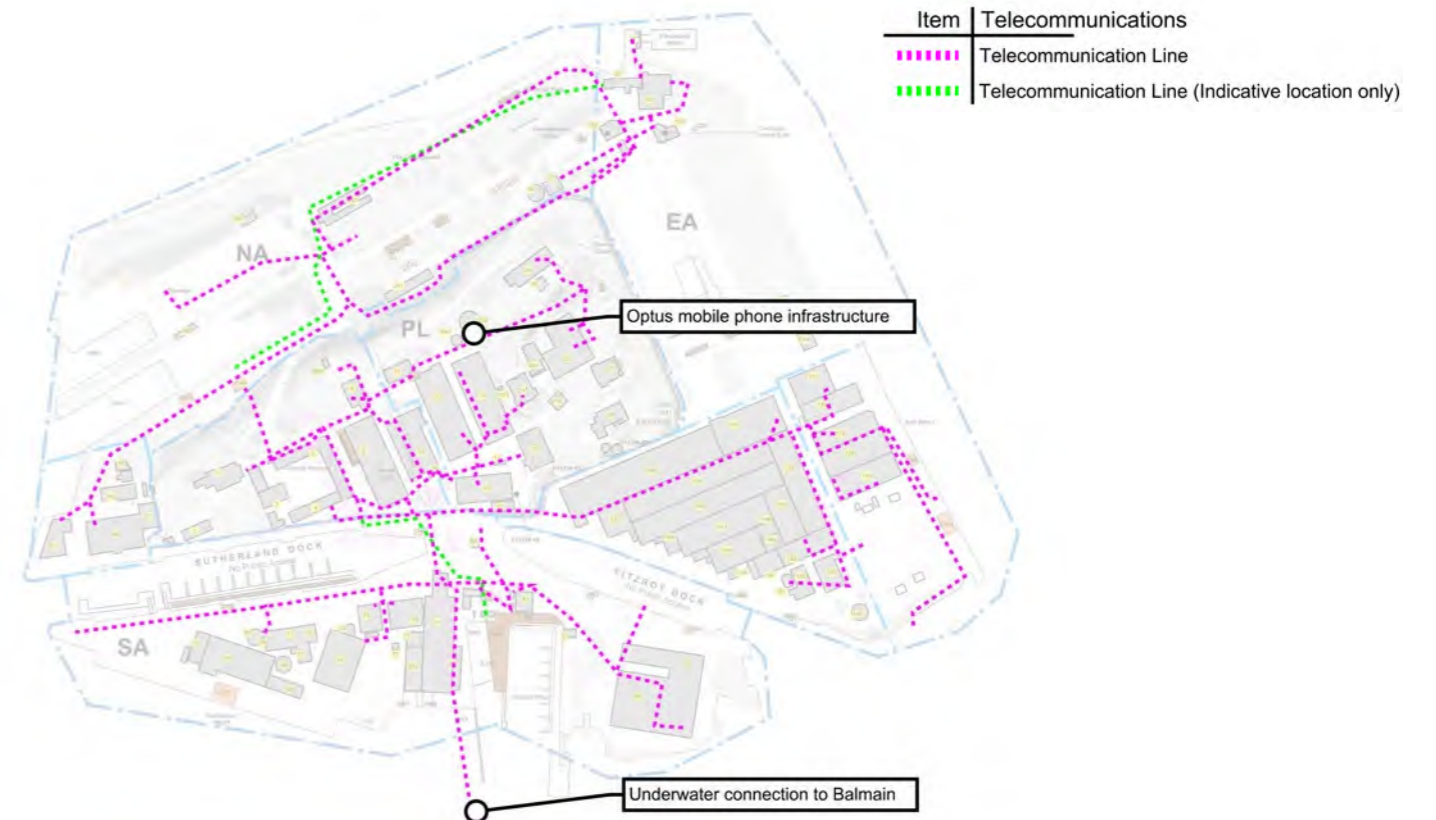


Fig 128. Telecommunications plan. Source: Mott Macdonald

7.4 Utilities and service infrastructure

Stormwater

Historically, stormwater from Cockatoo Island / Wareamah discharged directly into the harbour and floor drainage from many of the buildings drained into the stormwater system. Surface run-off from other potentially contaminated areas also entered the stormwater system.

In 2010, eight rainwater harvesting systems were installed across the island. Rainwater and stormwater are now collected from roofs and hard stand and are reticulated for use in toilets and urinals. While the rainwater harvesting system is not currently functional, works are progressing to resolve this.

There is a treatment plant adjacent to the stormwater storage tanks to re-use water for irrigation. This is the only water sensitive urban design (WSUD) on the island, and some areas still discharge into the harbour.

Future detailed design will consider:

- Regrading localised low points that cause nuisance ponding and blocked pipes
- Preventing stormwater discharge into the sewer network leading to wastewater overflow
- Incorporating water sensitive urban design, particularly in new landscaping areas
- Coordinating new stormwater works with flood protection requirements identified within the climate change resilience work.

Sea level rise

The master plan considers future sea level rise, consistent with the assessment of other sites and infrastructure around the harbour.

Analysis of likely coastal flooding conditions at the site indicates that a flood protection elevation of between 2.85m Australian Height Datum (AHD) and 3.35m (AHD) is reasonable and appropriate for the protection of critical assets during this master plan phase using a 2100 climate scenario. During detailed design, it may be feasible to reduce these levels.

The plan to the right shows areas of the island that are below AHD 3m and are considered vulnerable to future sea level rise. This covers a significant portion of the site.

Within these areas, detailed design will:

- Ensure that all critical assets and potentially sensitive uses are appropriately protected to account for mainstream flooding, sea level rise and storm surge with appropriate finished flood levels (FFLs) in line with relevant floodplain management policies
- Include flood evacuation plans with appropriate access and egress to higher ground
- Investigate the condition of the existing seawall, its remaining design life and the risks of any island subsidence
- Consider protection of existing critical infrastructure such as the wastewater pumping station, existing substations and areas of potential contamination.

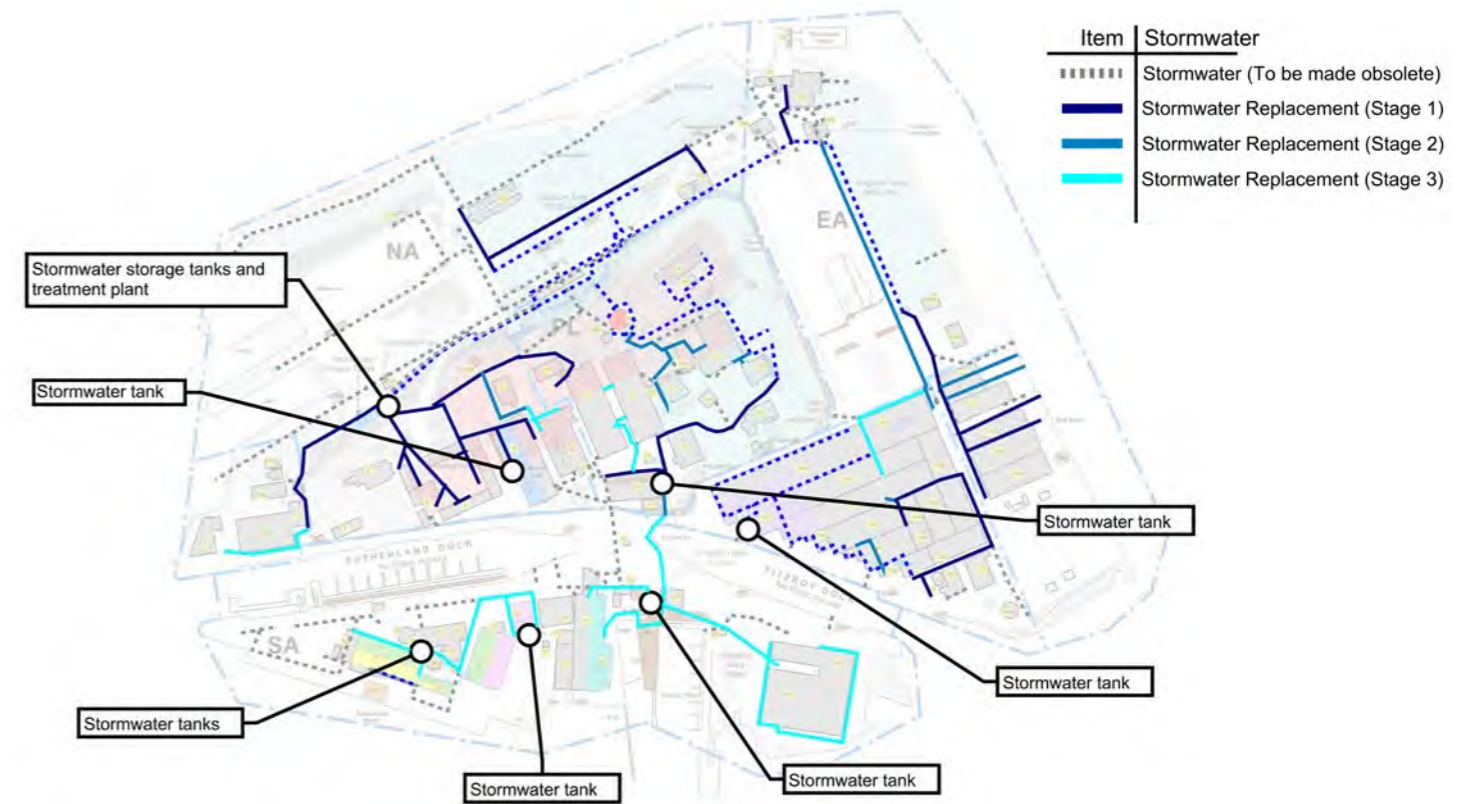


Fig 129. Stormwater plan. Source: Mott Macdonald



Fig 130. Areas under AHD 3m. Source: Mott Macdonald

7.4 Utilities and service infrastructure

Proposed above-ground infrastructure

While the majority of proposed island infrastructure works comprise replacement of existing reticulation services, the master plan also identifies locations and spatial allowances for key utility upgrades. As shown on the plan to the right, these include:

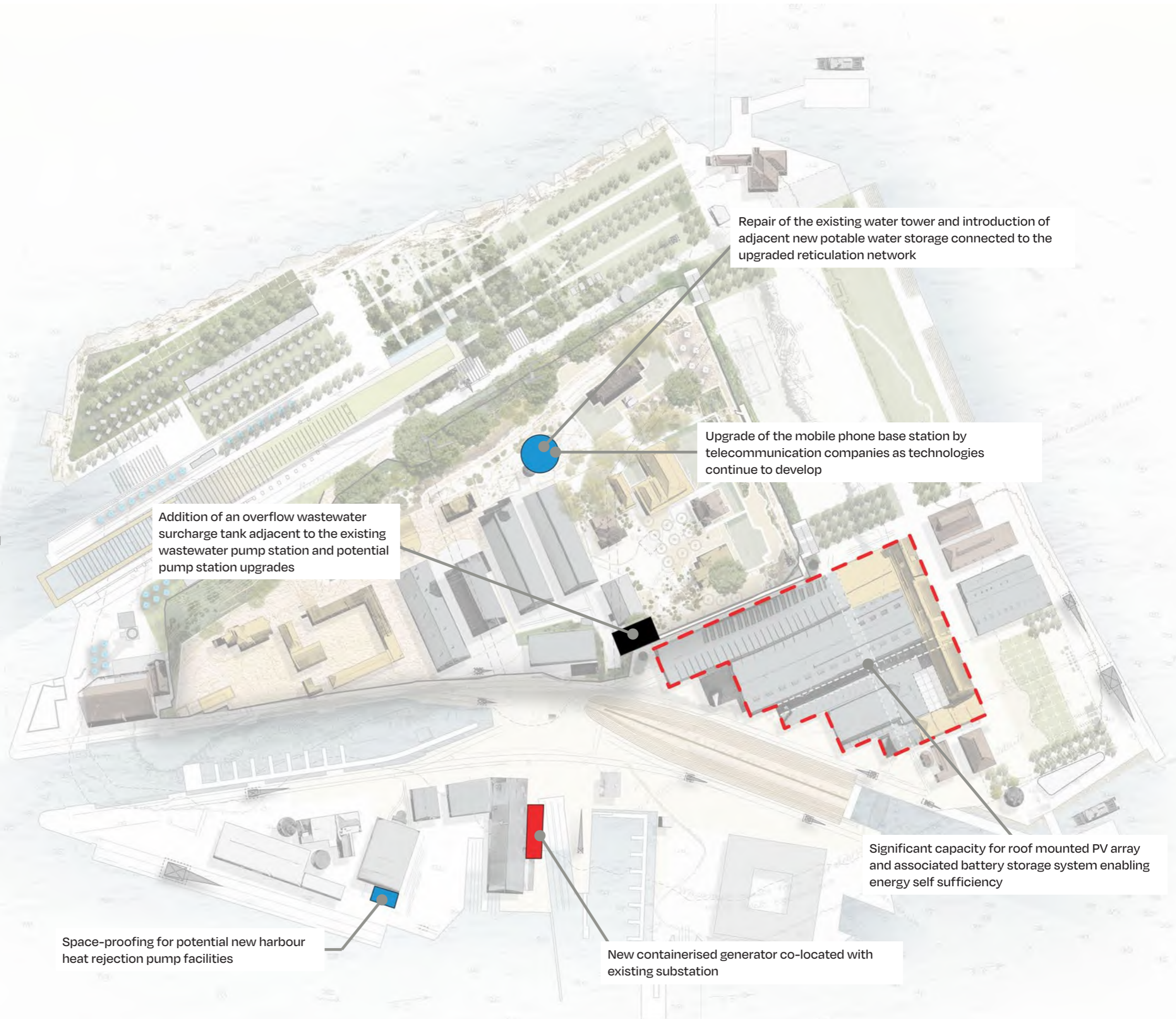
- A new potable water storage tank
- Future upgrades to the mobile phone tower
- Addition of a wastewater surcharge tank
- Expanded solar PV
- Installation of a containerised generator
- Potential future harbour heat rejection.

These will be further developed in detailed design, along with enhanced island utility systems to reduce the reliance on mainland connections.

The master plan has been developed to be flexible with future technologies. For example, the containerised generator could be replaced in the future with battery storage connected to an expanded solar PV system.

Future detailed design of utilities and services infrastructure will include:

- Coordination with external utility suppliers
- Monitoring and condition assessments of key utility infrastructure such as the sewer pump station
- Coordination of utility connection points with proposed event locations
- Further demand assessments.



Repair of the existing water tower and introduction of adjacent new potable water storage connected to the upgraded reticulation network

Upgrade of the mobile phone base station by telecommunication companies as technologies continue to develop

Addition of an overflow wastewater surcharge tank adjacent to the existing wastewater pump station and potential pump station upgrades

Significant capacity for roof mounted PV array and associated battery storage system enabling energy self sufficiency

Space-proofing for potential new harbour heat rejection pump facilities

New containerised generator co-located with existing substation

Fig 131. Utilities and service infrastructure on the island. Source: Tyrrell Studio

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Fig 123. Views of varied character. Source: Tyrrell Studio

Fig 124. Building removal plan. Source: Tyrrell Studio

Fig 125. Potable water plan. Source: Mott Macdonald

Fig 126. Electrical plan. Source: Mott Macdonald

Fig 127. Sewerage plan. Source: Mott Macdonald

Fig 128. Telecommunications plan. Source: Mott Macdonald

Fig 129. Stormwater plan. Source: Mott Macdonald

Fig 130. Areas under AHD 3m. Source: Mott Macdonald

Fig 131. Utilities and service infrastructure on the island. Source: Tyrrell Studio

