Bank Street Park
Blackwattle Bay / Tjerruing

SSD-53386706

Appendix J

Design Report (Oculus & Collins + Turner)

December 2023

OCULUS

Bank Street Park
Design Report

Date of Issue
23 November 2023

Prepared for
Infrastructure NSW

We acknowledge the Traditional Custodians of the places we work, and honour Elders past and present, whose profound knowledge systems can teach us much about how we design and care for Country.

Prepared by

OCULUS

Prepared for
Infrastructure NSW

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Rev	Issue	Date	By	Checked
A	Draft	28.08.23	Simon Bond	Roger Jasprizza
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G	SSDA	23.11.23	Simon Bond	Roger Jasprizza

Contents

1.0
Introduction

1.1 Introduction

Introduction

The purpose of this report is to outline the landscape and architectural design response, to support a State Significant Development Application (SSDA) for a new waterfront public park within Blackwattle Bay, to be known as Bank Street Park (SSD-53386706). Bank Street Park is located at 1A-19 Bank Street, Pyrmont on the shoreline of Tjerruing Blackwattle Bay and adjacent areas of Blackwattle Bay.

Blackwattle Bay Precinct

Bank Street Park forms part of the Blackwattle Bay Precinct, which is an area of predominantly government owned land located on the western edge of the Pyrmont Peninsula and adjoining the waters of Blackwattle Bay (Figure 1).

The precinct was rezoned in December 2022 to facilitate a new mixed-use community, providing for around 2,000 new residents and 5,600 new jobs and creating a vibrant 24/7 economy. Updated planning and land use controls were incorporated into the Sydney Local Environmental Plan 2012, along with site specific design guidance in the Blackwattle Bay Design Guidelines.

A critical part of the Blackwattle Bay Precinct is the high quality public domain which includes a series of parks and open spaces connected by a foreshore promenade. Bank Street Park will bring new active and passive recreation uses into a unique park environment, catering for both existing and future communities in the vicinity.

Figure 1. Blackwattle Bay Precinct (Source: INSW)

Figure 2. Bank Street Park site location within Blackwattle Bay State Significant Precinct
The indicative site location is outlined in red. (Source: Blackwattle Bay Design Guidelines with OCULUS edits)

1.2 Site Description

Bank Street Park is located at 1A-19 Bank Street, Pyrmont NSW within the City of Sydney local government area (LGA) and includes harbour development in Blackwattle Bay. The site area is approximately 1 hectare. The relevant lot and deposited plans and the respective ownership for the site are detailed in Table 1 and shown in Figure 3.

Bank Street Park is located on Gadigal Land, one of the twenty-nine clans of the great Eora Nation. It adjoins the foreshores of Glebe to the west and Pyrmont Bridge Road and Wentworth Park to the south.

Table 1 Summary of land title details of the site

Street address	Lot and Deposited Plan details	Ownership
1A Bank Street, Pyrmont NSW 2009	Lot 1 DP 85206 Lot 1 DP 188671	Transport for NSW
1-3 Bank Street, Pyrmont NSW 2009	Lots 1-2 DP 1089643 Lot 1 DP 439245	Infrastructure NSW
5 Bank Street, Pyrmont NSW 2009	Lot 20 DP 803159	Transport for NSW
7 Bank Street, Pyrmont NSW 2009	Lot 19 DP 803159	Transport for NSW
9 Bank Street, Pyrmont NSW 2009	Lot 21 DP 803159	Transport for NSW
11 Bank Street, Pyrmont NSW 2009	Lot 22 DP 803159	Transport for NSW
17-19 Bank Street, Pyrmont NSW 2009	Lots 5-6 DP 803160	Transport for NSW
Sydney Harbour	Lot 5 DP 1209992	Roads and Maritime Services (Transport for NSW)
Sydney Harbour	Lot 107 in DP 1076596	Transport for NSW
Part Bank Street road reserve	N/A	City of Sydney Council

Figure 3. Site Context Map. The indicative site is outlined in red (Source: SixMaps with Architectus edits 2023)

1.3 Proposed Development

Overview

+ Site preparation works, including tree removal, earthworks and remediation to facilitate the proposed use;
+ Demolition of three existing buildings at 1-3 Bank Street;
+ New and adapted facilities for community use, including:
  - New single storey building to accommodate flexible community space, café, and marina office/store facilities, with green roof and photovoltaics;
  - Adaptive reuse of Building D for public amenities, bin and other storage;
  - Boat launching ramp and pontoon for passive watercraft, including dragon boats and kayaks;
  - Boat storage building with change facilities for dragon boat users with publicly accessible rooftop deck;
+ Public domain works, including:
  - 'Interpretation Garden' in existing building 'ruins' at 1-3 Bank Street;
  - Split level foreshore promenade;
  - Multi-purpose court with edge seating and partial fence;
  - Nature-based inclusive playspace for ages 2-12;
  - Fitness equipment;
  - Public plaza and grassed open space areas;
  - New tree plantings and planter beds;
  - Public art, wayfinding and interpretative signage, lighting, bike parking and seating;
+ Harbour works including:
  - Overwater boardwalk;
  - Land/water interface works, including sandstone terracing into water and support structure, to improve marine habitat;
  - Demolition and construction of a new timber launching ramp for dragon boats;
  - Kayak/passive craft pontoon; and
  - Restoration, repair and alterations to the existing seawall for new stormwater outlets.
+ Works to Bank Street road reserve, including:
  - Road space reallocation to provide separated cycleway;
  - Cycleway transition to Bank Street to continue south as part of future works;
  - Reinstatement of existing on-street parallel parking;
  - Tree planting;
  - Accessible parking space; and
  - Loading zone adjacent 1-3 Bank Street.

Key area schedule and calculations

Built Form

Table 2 Buildings and structures schedule and calculations

Building D	**Area (GFA)**
Bin store	35m²
Placemaking store	37m²
Amenities	61m²
Total	133m²
Marina / Community Building	
Café/kiosk	58m²
Marina store	120m²
Marina office	71m²
Community space	133m²
Amenities	33m²
Plant	10m²
Total	425m²
Dragon Boat Building	
Boat store	420m²
Equipment store	64m²
Total	464m²

Landscaped Areas

Table 3 Landscaping schedule and calculations

Note: percentages based on Park Area

Item	**Description**
Site area	19,1440m²
Park area (excludes Bank Street road reserve and harbour)	11,456m²
No. of existing trees	23
No. of trees proposed for removal	17
No. of trees proposed to be retained	6
No. of trees proposed for planting	114
Total no. trees	120
Existing tree canopy cover	760m² (7%)
Proposed tree removal canopy cover	396m² (3%)
Proposed tree canopy cover as part of landscaping works	4244m² (37%)
Total tree canopy cover	4608m² (40%)
Proposed pervious area	5204m² (45%)
Impervious area (court, paths etc)	6252m² (55%)
Proposed Deep Soil (as per ADG definition)	4105m² (36%)

Hours of Operation

Bank Street Park will be accessible to the public 24 hours a day, however some of the amenities will only be available during daylight hours (e.g., amenities). Other proposed hours of operation include:

Table 4 Hours of operation

Item	**Hours of Operation**	**Days**
Dragon boat storage and amenities	Daylight hours (approx. 6am – 7pm)	7 days
Community space	7am – 6pm	7 days
Café/kiosk	7am – 6pm	7 days
Marina office	7am – 1am	7 days

1.4 Planning Secretary's Environmental Assessments Requirements

Overview

This report has been prepared in response to the relevant requirements outlined within the Planning Secretary's Environmental Assessments Requirements (SEARs) issued on 11 May 2023 for application SSD-53386706. Table 5 addresses the relevant SEARs requirements and provides a project response.

Table 5 Secretary's Environmental Assessments Requirements

Item	SEARs	Relevant report section(s)
3. Design Quality	Demonstrate how the development will achieve: + design excellence in accordance with any applicable EPI provisions + good design in accordance with the seven objectives for good design in Better Placed	1.5 Design Review Summary 2.0 Design response
	Demonstrate that the development will be carried out in accordance with an endorsed Design Excellence Strategy and has been reviewed by the State Design Review Panel (SDRP) consistent with the NSW SDRP: Guidelines for Project Teams.	1.5 Design Review Summary
	Recommendations of the jury and Design Integrity Panel (where a competitive design process has been held) and the SDRP are to be addressed prior to lodgement.	1.5 Design Review Summary
4.Landscape Design and Public Domain	Explain and illustrate the proposed landscape design including a detailed site, context, and historical analysis to justify the proposed site planning and design approach.	2.0 Design Response 3.0 Site Analysis
	Consider how the design responds to local and strategic open space, cultural, community and recreational infrastructure needs.	2.1 Overview
	Demonstrate how the development aligns with the Blackwattle Bay Design Guidelines.	2.0 Design Response
	Consider how the proposal responds to and integrates with the existing and future public domain network.	2.0 Design Response
	Assess the number, location, condition and significance of trees to be removed and retained and note any existing canopy coverage to be retained on-site.	2.6 Planting Strategy Arborist Report Landscape Plans
	Consider how the proposed design responds to the context, site constraints (land contamination, hydrology, flooding, wind etc) site opportunities, access and circulation, heritage, character and visual amenity, character and spatial qualities for play and recreation, streetscape and existing and future character of the locality, including the interface with the water and future development of the Blackwattle Bay Precinct.	2.0 Design Response
	Consider how the design responds to the canopy cover targets for public open space in the City's Greening Sydney Strategy 2021 and Urban Forest Strategy 2022.	2.0 Canopy Cover
4.Landscape Design and Public Domain (continued)	Provide plans that show: + the proposed site planting including the location, number and species of plantings, heights of trees at maturity using large and medium sized trees for shade, amenity and the proposed canopy coverage (as a percentage of the site area). + location and details of any tree pits in deep soil, structural soils, strata cells or continuous soil trenches. + park program, functional relationships and area requirements for active and inclusive play. + details of surface finishes, material selection with a focus on climate positive design, and the use of natural materials to reduce radiated heat island effects and carbon footprint. + details of built shade structures and UV mitigation. + details all structures including any street furniture, lighting, seating, boat storage and launching, play equipment, shade structures, and sculptural elements including public art, water features or other decorative features. + details of tree species appropriate for the site, fit for purpose and will cope with future climate and/or environmental changes, with consideration of City of Sydney's Tree Species List 2022.	2.0 Design Response Landscape Plans Civil Plans
	Provide public domain plans if dedicating land to Council or directly interfacing with Council land with reference to the latest City of Sydney technical specifications, design codes, policies and action plans where relevant such as Sydney Streets Code 2021, Sydney Streets technical specifications, Sydney Lights: Public domain design code, Cycling Strategy and Action Plan 2018-2030, Urban Forest Canopy Plan, Inclusive and Accessible Public Domain Policy, and Public Domain Manual.	Landscape Plans
	Demonstrate how the proposed development would: + contribute to long term landscape setting in respect of the site, sense of place, quality of open space for all ages, abilities, sensory and streetscape. + contribute to and enhance the setting of surrounding built or planned built, streets and open spaces. + mitigate the urban heat island effect and ensure appropriate comfort levels on-site. + contribute to the cultural experience of the place. + maximise opportunities for green and blue infrastructure, consistent with Greener Places and having regard to any climate impacts and flooding.	2.0 Design Response

Planning Secretary's Environmental Assessments Requirements

Table 5 Secretary's Environmental Assessments Requirements (continued)

Item	SEARs	Relevant report section(s)
5. Built Form and Urban Design	Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach.	2.13 Design Response
	Detail the land use/s of any new or retained buildings including their intended operation.	2.13 Design Response
	Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.	2.13 Design Response
	Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, activation, roof design, materials, finishes, colours, any signage and integration of services.	2.13 Design Response
	Assess how the development complies with the relevant accessibility requirements.	Refer DDA Report
8. Environmental Amenity	Address how good internal and external environmental amenity is achieved, including access to natural daylight and pedestrian movement throughout the site and connections with the wider area.	2.12 Design Response
	Assess amenity impacts on the surrounding locality including lighting impacts, wind, noise and vibration.	2.12 Design Response Wind Report Noise and Vibration Impact Assessment
	Assess how the development complies with the relevant accessibility requirements.	2.12 Design Response Accessibility Report
	Provide a solar access analysis of the site (during summer and winter solstice and spring and autumn equinox) at hourly intervals between 9am and 3pm, taking into consideration surrounding future built form.	2.12 Design Response

1.5 Design Review Summary

Design Excellence

Infrastructure NSW is seeking to achieve design excellence for Bank Street Park. This will be achieved through an endorsed Design Excellence Strategy that includes, as part of 'Ensuring Design Excellence during the Design Process', the following:

+ Undertaking a competitive tender process to select a designer for the park.
+ Development of concept options. These options were evaluated using a project specific development tool and tested with the community and stakeholders. A prefered concept option was developed based on outcomes of the evaluation and stakeholder feedback.
+ Engagement of two members of the State Design Review Panel (SDRP) to provide independent advice during the tender evaluation and concept development phases
+ Two rounds of community engagement
+ First Nations engagement
+ Promotion of design excellence
+ Inclusion of Infrastructure NSW's Design Objectives
+ State Design Review Panel review

The SDRP has been engaged at all phases of the project, including the tender evaluation and concept development phases, which the panel would not typically be involved in. In addition, the SDRP has undertaken a formal role in the project throughout the development application phase.

Two members of the SDRP have been engaged by Infrastructure NSW to provide expert design advice during the tender evaluation of the lead designer of the park. This includes one member with a landscape architecture background, Oi Choong, and another with a First Nations focus, Craig Kerslake.

Infrastructure NSW also engaged the services of these same panel members throughout the concept development phase of the project, to provide advice and input to the design team in developing a preferred concept option for the park.

Concept Development Phase

Two design reviews were undertaken by the Design Review Panel (DRP) as part of the Concept Development Phase:

DRP #01:

+ 11 November 2022
+ Content: Site analysis, benchmarking and design framework
+ Panel: Oi Choong, Craig Kerslake

DRP #02:

+ 16 January 2023
+ Content: Concept Design Options
+ Panel: Oi Choong, Craig Kerslake

Development Application Phase

Once the project commenced the State Significant Development process, the SDRP undertook a formal role in reviewing and advising on the project at key milestones. The same panel members involved in the early phases of the project were also involved in the development application phase.

Three design reviews were undertaken as part of the Development Application Phase:

SDRP #01:

+ 20 April 2023
+ Content: Concept Design Options
+ Panel - Darlene van der Breggen (Chair), Oi Choong, Craig Kerslake, Chris Major, Ken Maher

SDRP #02:

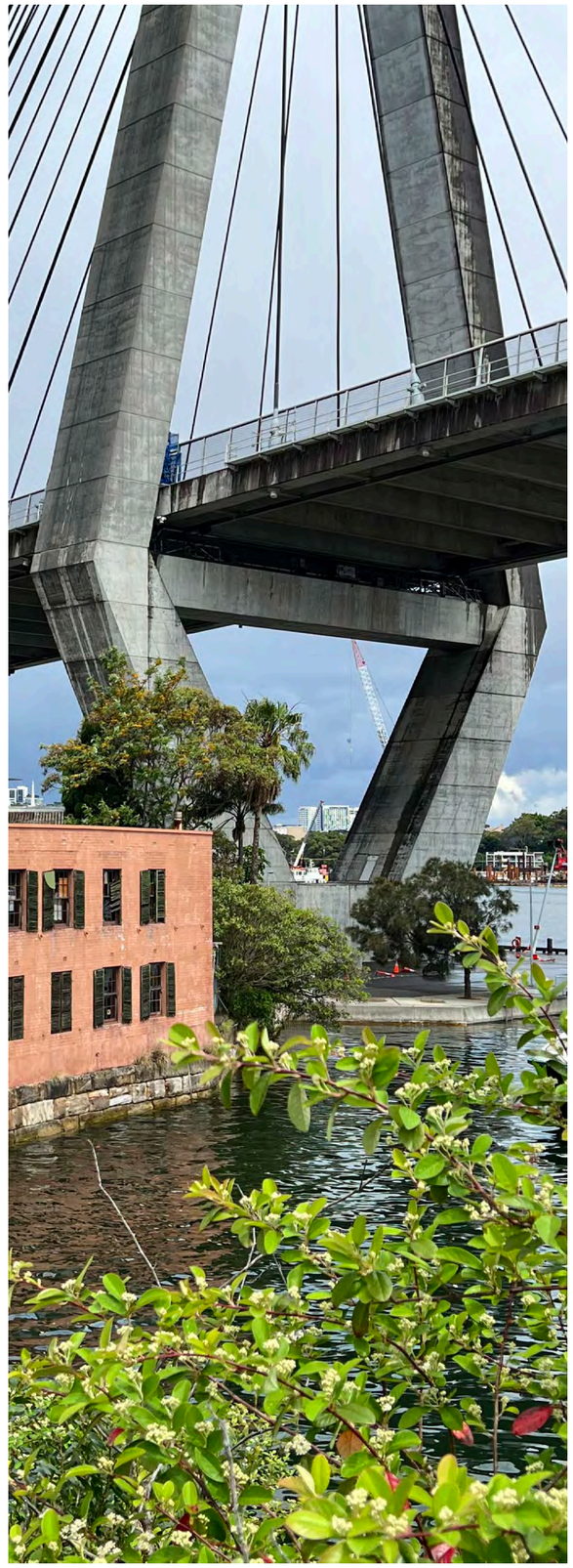
+ 29 June 2023
+ Content: Preferred Concept Design
+ Panel - Darlene van der Breggen (Chair), Craig Kerslake, Chris Major

SDRP #03:

+ 10 August 2023
+ Content: Developed Design
+ Panel - Darlene van der Breggen (Chair), Oi Choong, Craig Kerslake, Chris Major, Peter John Cantrill (City of Sydney)

The SDRP Design Advice has shaped the design outcomes and greatly assisted the design team in achieving an exemplary design for Bank Street Park.

Over the three SDRP presentations the panel was extremely positive regarding the development of the design and the design teams response to their comments. The final comments received in SDRP #3 have also been either incorporated into the final design or investigated to their viability and future proofing the design. SDRP Design Advice and response to SDRP #3 are provided in the Appendix.



1.6 Blackwattle Bay Design Guidelines

Overview

The design responds to the relevant requirements outlined within the Blackwattle Bay Design Guidelines.

Specific guidelines have been addressed under relevant sections of this report. See Blackwattle Bay Design Guidelines Assessment Table appended to the Environmental Impact Statement for full response to Design Guideline criteria.

1.7 Design Excellence

Overview

The design addresses Design Excellence in accordance with the Sydney Local Environmental Plan 2012 (LEP) as outlined in Table 6.

Table 6 Blackwattle Bay Design Excellence Response

Clause	Response
6.21C Design excellence *(1) Development consent must not be granted to development to which this Division applies unless, in the opinion of the consent authority, the proposed development exhibits design excellence.* *(2) In considering whether development to which this Division applies exhibits design excellence, the consent authority must have regard to the following matters—*	-
(a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved,	Design Excellence has been achieved for the architectural design as part of the Government Architects design review panel process. Refer to *2.15 1-3 Bank Street Buildings* and *2.17 Dragon Boat Storage Building* for further information on architectural design and detailing.
(b) whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain,	The external appearance and architectural design has been developed to achieve high quality facade and building design with materials that are consistent and appropriate across existing and new built form elements in the park
(c) whether the proposed development detrimentally impacts on view corridors,	The proposed development of the park and buildings do not detrimentally impact view corridors particularly water views across Blackwattle Bay. There are no defined view corridors under the LEP/DCP affecting this area. New built form is appropriately scaled to retain and frame existing views.
(d) how the proposed development addresses the following matters—	-
(i) the suitability of the land for development,	The proposed park is located on the northern side of Blackwattle Bay adjacent future residential development sites providing direct waterfront access to the park from new development as well as the surrounding area of Pyrmont. The proposal opens up the site which is already zoned RE1 Public Recreation for public access with provision of embellishment and amenity. For further discussion on site suitability, refer to the EIS.
(ii) the existing and proposed uses and use mix,	Many of the existing uses of the site will be retained and incorporated into the new design. New facilities will be provided for dragon boats and marina with a new purpose built community building, cafe and marina facilities and amenities.
(iii) any heritage issues and streetscape constraints,	None of the existing buildings on-site are heritage listed and the existing Building D on Bank Street will be adaptively reused, and there will be heritage reinterpretation of Building A. There are also no constraints with regard to the streetscape and the majority of the existing kerb and alignment will be retained.
(iv) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers, existing or proposed, on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,	There are no towers proposed for the development.
(v) the bulk, massing and modulation of buildings,	The bulk, massing and modulation of the buildings have been considered with respect to the original grouping of the buildings. The proposed dragon boat storage building has been nestled into the landscape.
(vi) street frontage heights,	The height of the existing street building on Bank Street will be retained.
(vii) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity,	As per the design guidelines there will be no net gain in overshadowing of the park and solar access will be improved. Other potential environmental impacts such as wind, privacy and reflectivity will be mitigated with new tree planting and material selection.
(viii) the achievement of the principles of ecologically sustainable development,	ESD has been considered as part of the overall design of the park (refer Sustainability Report)
(ix) pedestrian, cycle, vehicular and service access and circulation requirements, including the permeability of any pedestrian network,	Pedestrian and cycle permeability will be significantly improved with a new dedicated cycleway along Bank Street, interconnected path system and new waterfront promenade and board walk.
(x) the impact on, and any proposed improvements to, the public domain,	The existing public domain will be significantly improved with the design of the new park and community facilities.
(xi) the impact on any special character area,	The character of the Blackwattle Bay area will be retained and improved with the new park.
(xii) achieving appropriate interfaces at ground level between the building and the public domain,	The interface between the landscape and built form embraces and utilises the topography to provide a seamless connection between both. The northern plaza has a direct interface to community uses in the adjacent building, while the cafe area spills out to the interpretive garden and southern seating area, providing passive surveillance and activation to the park. The Dragon Boat building is embedded within the landscape, allowing public use of the deck above, and easy access between dragon boat storage and the water.
(xiii) excellence and integration of landscape design.	The design of the landscape integrates new and existing built form with a focus on 'First Nations' design and embedding public art in the park. Landscape and built form have been designed together to emphasise the primacy of landscape across the park and create a sense of buildings in a continuous park setting. Design excellence has been further achieved through the design review panel process and community and stakeholder engagement.

1.8 Better Placed

Overview

The design addresses the principles of Better Placed as outlined in Table 7.

Table 7 Better Placed Response

Principle	Response
Better fit	
Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, heritage and communal aspirations. It also contributes to evolving and future character and setting.	The design of Bank Street Park and the adaptive reuse and new built form at 1-3 Bank Street recognises and respects the local character of the area. The project will provide significant community benefit and will contribute and enhance its waterfront location as new accessible open space.
Better performance	
Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.	Sustainability is at the forefront of the design for Bank Street Park including social, economic and environmental sustainability. The project facilitates new active transport connections with climate responsive selection of endemic plant species and robust, natural materials.
Better for community	
The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.	The design for the landscape of Bank Street Park incorporates a series of 'landscape rooms' of different sizes that can be used in different ways. This includes a well-connected pathway system and waterfront promenade, play spaces and multipurpose court, viewing platforms and open areas of grass for passive recreation or for people to sit and enjoy the view.
Better for people	
The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support.	Bank Street Park public realm caters for a wide spectrum of public uses including active and passive recreation, community uses and meting spaces through the design of spatial layouts, furniture, materials, planting and adaptive reuse of existing and new buildings.
Better working	
Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to change. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.	The project has been designed to be functional, efficient responding to people's daily needs with a range of recreational opportunities with the potential to change and adapt over time. The various landscape spaces have been appropriately sized to accommodate different activities throughout the day and into the evening.
Better value	
Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.	The project supports ongoing value for people with the incorporation of new purpose designed community facilities, kiosk and amenities. It also supports local business with marina offices and dragon boat storage as well as the potential for kayak hire operation.
Better look and feel	
The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.	The project will transform a non accessible degraded former industrial site into a new well connected waterfront park with new community facilities that will incorporate 'First Nations' design and integrated public artwork. It will be of its place and be inviting and engaging which significantly improves the visual environment of the site and will establish a new place for public engagement and recreation.

2.0
Design Response

2.1 Overview

Bank Street Park is unique.

It is a missing link within a public waterfront extending from Blackwattle Bay around Pyrmont to Circular Quay and beyond.

It is part of the Bays Precinct urban renewal, complimenting existing and proposed waterfront parks around Rozelle Bay and Blackwattle Bay in an urbanised and active context.

It provides local open space within the Blackwattle Bay Precinct, serving the cultural, community and recreational needs of existing and future residents and workers of the area.

The site itself is bounded by the Pyrmont sandstone escarpment to the east and Blackwattle Bay to the west, with the Anzac Bridge providing a dramatic canopy above.

At its most fundamental level, it is an opportunity to heal the land, connect to the water, and provide a welcoming green space for respite, gathering and recreation.

Design Process

The design brief was set by the Blackwattle Bay Design Guidelines, which ensures the park will deliver on the recreational needs of the local community and integrate with the future high quality public domain of the wider precinct.

Extensive site analysis was undertaken to explore and understand the site's characteristics, opportunities and constraints. This included preliminary community and stakeholder consultation on the character and provisions within the park.

With the site and community values as a starting point, three park concepts were developed and taken back to the community and stakeholders for further input. Each option presented a different approach to the layout of the park, character of spaces and response to built form. Out of this process the design team was able to progress the preferred concept design, piecing together the attributes of each option that had the strongest local support.

In addition to ongoing dialogue and review between the design team, stakeholders and Infrastructure NSW, the design was periodically reviewed by members of the SDRP, both as part of the concept development and more formally as part of the SSDA development phase.

Design Response

Bank Street Park delivers on a diverse range of functions, choreographed across the site in a logical and legible manner.

In the north of the site, an adaptively reused building serves as an amenities block next to a new building containing a cafe, marina facilities and community room. The cafe and community room spills out into the surrounding landscape areas, while the landside marina facilities are provided easy access to the existing marina.

Deliberately close to the cafe and amenities lies the play space in the centre of the park, catering to younger children of all abilities, with summer shade and winter sun facilitated by the bridge overhead.

Also underneath the bridge adjacent the street, the multi-purpose court and exercise equipment provides an active recreation zone within the park.

Open lawn areas with park shelters nestled into planting make the most of the solar access in the northern corner of the site, and the views out across the harbour in the western edge of the site, providing areas to relax and gather that capitalise on the unique site conditions.

Closer to the water, the dragon boaters are provided with upgraded facilities that support their continued use of the site, with an accessible rooftop providing exceptional views and extending the usable area of the park.

The promenade provides for waterside seating and the future connectivity along the waters edge from the south before cutting across the site to facilitate primary pedestrian movement.

Care has been taken to integrate and consolidate uses to ensure the park as a whole doesn't feel cluttered or disjointed. The buildings have been designed as parts of a single family fully entwined with and expressed as part of the surrounding landscape. This has been aided by the selective demolition and retention of existing built form to ensure a cohesive park setting.

The rich history of the site as colonial industry and fishing is expressed subtly in the retained and reused fabric of the site and robust materiality rather than explicitly through signage or interpretation. These elements recede into the landscape to give way to the defining narrative of the park; the primacy of Country.

Going beyond interpretation, the design seeks to *heal, reveal* and *care* for Country.

Local plants and trees cover the site; the colours of country are revealed in materials and building façades; new connections to the water are created; safe spaces for gathering and meeting are provided for use by all; and histories and truths are revealed through curated public artworks.

2.2 Designing *for* | *of* | *with* Country
Process and Engagement

Designing *for, of* and *with* Country has been integral to the design process for Bank Street Park, and is reflected throughout the design response.

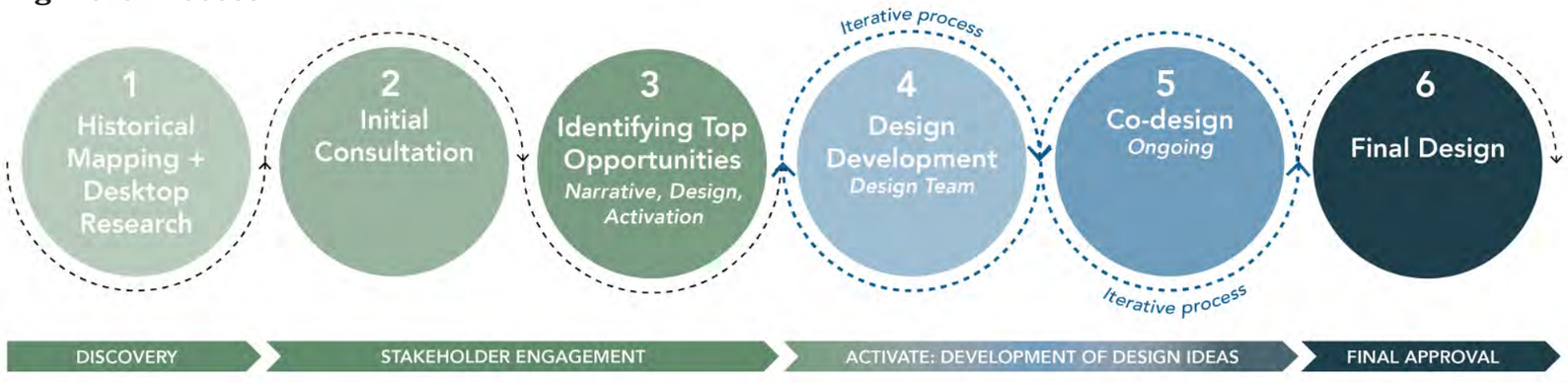
Lead by Greenshoot Consulting x Greenaway Architects, our engagement approach invites Traditional Owners and Knowledge Holders to assist in the design translation of Aboriginal History and Culture to meaningfully and respectfully embed within the design opportunities of the project.

Both Greenshoot Consulting and Greenaway Architects and in particular Jefa Greenaway have been embedded in the design team from the outset of the project. This has ensured that First Nations voice has been at the forefront of the design philosophy for Bank Street Park.

The Metropolitan Local Aboriginal Land Council (MLALC) and Blak Diggers representatives have also been consulted to date as part of this process.

Greenshoot Consulting x Greenaway Architects and INSW met with MLALC representatives on 2nd of March and 15th of April 2023. Key themes from the consultation are outlined here and summarise the initial aspirations and feedback provided by MLALC representatives regarding the design development of Bank Street Park.

High-level Process



Summary of Key Engagement Activities

1. Project Context	2. Cutural & Historical Mapping Research	3. Desinging for | of | with Country Approach	4. Desinging for | of | with Country Principles	5. Bank Street Park Concept Design
				
6. Initial Stakeholder Consultation MLALC + Blak Diggers	7. Key Insights from Initial Stakeholder	8. Designing with Country Key Design Opportunities	9. Co-Design Development Stakeholder Blak Diggers representatives	10. Key Insights from Design Development Stakeholder
				

Designing *for | of | with* Country
Key Design Opportunities

The Designing for | of | with Country strategy revolves around three Principles:

Healing Country

+ Use of endemic Indigenous planting species
+ Re-naturalisation of the edge condition and opportunities for support improvement of ecological system on the edge of the water.
+ Removal of gravel to support a new landscape condition.
+ Opening sight lines to be able to orientate line of sight to Country, including relationship to water.
+ Managing overland flow, site filtration and permeability to through soft landscaping
+ Embedding language within the park wayfinding
+ Embracing cultural expression (art) to embed Healing Country narrative

Revealing Country

+ Embedding the colours of Country
+ Inclusion of climate adapted species
+ Creation of new view points and sight lines, opening up view corridors to support the ability to orientate to Country
+ Revealing the layers of history and memory of place
+ Enveloping historic remnants within Indigenous planting
+ Incorporating cultural narratives co-designed with First Nations Voices

Caring for Country

+ Inclusion of ESD principles
+ Reuse of reclaimed materials
+ Water Sensitive Urban Design strategy
+ Low embodied energy material selection
+ Alignment to sustainability targets and aspirations
+ Adaptive reuse of existing built form
+ Inclusion of places of respite, contemplation and gathering

The desire to achieve all of these outcomes ensures an integrated approach providing clear social and environmental benefits and a rich embedding of culture across the site.

Designing *for* | *of* | *with* Country
Key Stakeholder Consultation Activities Summary

Our engagement approach seeks to invite Aboriginal and Torres Strait Islander stakeholders, Traditional Custodians and Knowledge Holders to assist in the design translation of Aboriginal History and Culture to meaningfully and respectfully embed within the design opportunities of the project.

The following key stakeholders have been engaged with throughout this process. These stakeholders have been identified and validated with Infrastructure NSW and selected in consideration with Cred Consulting's previous engagement undertaken.

Due to ongoing advice consultations were undertaken separately between the different stakeholders outlined in order to respect the sensitivity of stakeholder relationships.

Blak Diggers Representatives

Uncle Harry Allie
AM BEM

Uncle David Williams

Initial Consultation

20.03.2023
(Via phone call)

Uncle Harry Allie
Uncle David Williams

06.05.2023
(follow up)

Uncle Harry Allie

Design Development Consultation

22.09.2023

Uncle Harry Allie

Metropolitan Local Aboriginal Land Council

Nathan Moran
CEO

Rowena Welsh-Jarrett
Cultural & Heritage Officer

Jacqueline Gibbs
Cultural & Heritage Assistant

Initial Consultation

02.03.2023

Rowena Welsh-Jarrett
Jacqueline Gibbs

13.03.2023
(follow up)

Nathan Moran
Rowena Welsh-Jarrett
Jacqueline Gibbs

Designing *for* | *of* | *with* Country

Key Insights from Initial Stakeholder Consultation with Metropolitan LALC & Blak Diggers representatives

Key themes from the Initial Consultation are outlined below and summarise the initial aspirations and feedback provided by Metropolitan Local Aboriginal Land Council representatives regarding the design development of Bank Street Park.

Revealing Blak Diggers History

The first Blak Diggers March was conducted at Redfern Park and MLALC have a lot of information and knowledge on the Blak Diggers.

Revealing History of Women & Fishing

Gadigal women and their mastery of fishing is a significant narrative surrounding Blackwattle bay.

Intellectual Property

Aboriginal & Torres Strait Islander people deserve the right to their own stories and history. It belongs to First Peoples.

Truth Telling

All stories connect First Peoples and it is critical that truth-telling is embedded through all actions to represent and acknowledge the continuation of culture.

Self Determination

Opportunity to effectively develop respectful relationships with local Aboriginal & Torres Strait Islander people to ensure support their decision-making.

Ways of Working

Develop consistent and respectful ways of working to ensure longevity and maintenance of culture.

Changing Narratives

There is a need to change the narrative around 'finding' artefacts. They are not found, First Peoples have granted access.

Representation of Country

Representation of local landscape and flora (e.g. Mangroves, bush tucker) and fauna (e.g. Eels, sharks) to reflect the deep history and stories of Country.

Key themes from the consultation are outlined below and summarise the initial aspirations and feedback provided by Blak Diggers representatives regarding the design development of Bank Street Park.

Revealing Blak Diggers History

Important to akcnowledge and represent Blak Diggers in the park design due to its unique location and close proximity to the Anzac Bridge

Honouring Significant Blak Diggers

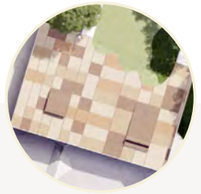
Significant figures such as Douglas Grant and Rod Holtham should be honoured and represented in the park

Self Determination

Ensure on-going consultations and conversations support Blak Diggers self-determination and their aspirations to inform design outcomes

Designing *for* | *of* | *with* Country
Key Insights from Design Validation Consultation with Blak Diggers representatives

Feedback for each Cultural Design Translation Opportunity identified is outlined below and summarises the validation and endorsment from Blak Diggers representatives for the design development of Bank Street Park.



Opportunity 1 | Plaza over dragon boat shed

Feedback

The design is unique and respectful, responding directly to feedback previously provided. The depth of thinking is evident and provides a platform to tell Blak Diggers stories for all visitors to experience and learn.

Important to consider

Important to consider truthtelling within this opportunity for people to understand the history and background of Blak Diggers story. Such as the racial context and lack of equality Blak Diggers experience, i.e. Blak Diggers not being being recognised by the RSL and Blak Diggers' inability to vote when signing up to war.

Next steps

1. Develop design to support cultural interpretation and truthtelling through interpretive design elements.

Opportunity 2 | Cultural gathering spaces

Feedback

The selection of materials and colours is culturally appropriate and significant. The reference of fishing hooks and shields within the design is strong and an artistic quality within the design is encouraged.

Important to consider

Ensure culture is visible and being reclaimed, creating strong cultural awarness within visitors. Support this through interpretive material and storytelling that showcases the design and cultural story behind it. Showcase the mutliple points of views of Blak Diggers (army, navy & airforce).

Next steps

1. Contact Roy Mundine, Charlie Mundinem, Ken Zulumovski and Pastor Ray Milliecon (Blak Diggers representatives) to contribute to interpretation & storytelling within this opportunity.
2. Develop design to support cultural interpretation and storytelling through interpretive design elements.

Opportunity 3 | Community building

Feedback

The form and materality sit well within the context of the building and provide a balanced contrast between old and new. The selection of ceramic respectfully represents the colours of Country, and provide a counterpoint to the surrounding 'grey' of the city context.

Important to consider

Consider the inclusion of flora and fauna motifs within the facade design to enhance the cladding design of the building. Use Belinda Mason photography exhibition of Blak Diggers' portraits as a precedent for visual representation and acknowledgment of Blak Diggers.

Next steps

1. Develop the facade design exploring the use of flora & fauna motifs as well as design elements to represent and acknowledge Blak Diggers within the Community Building.

Opportunity 4 | Indigenous planting species selection

Feedback

The selection of Indigenous planting species is culturally appropriate, in particular the selection of a wide variety of species, form and textures that create a unique landscape.

Important to consider

Consider the inclusion of flowering plants to create an enhanced and engaging environment.

Next steps

1. Proceed with Indigenous planting species selected.

2.3 Inclusive Design

Bank Street Park is to be a welcoming and inclusive place for all to enjoy.

Gender Sensitive Urban Design

Blackwattle Bay has a historical association with Gadigal women and through the consultation period there was a strong desire from community groups to ensure Bank Street Park caters to all women, including girls, teenagers and mothers.

Adopting the principles of gender sensitive urban design has ensured women will feel safe, included and welcome in the Park, and free to enjoy the range of social and recreational opportunities available. Gender sensitive design recognises that people experience public spaces differently based on gender. When applied, these principles inherently create safer, more engaging and more inclusive spaces for all park users.

Sociability

Sociable places make people feel comfortable about being themselves. Public spaces that are welcoming, friendly, and encourage positive social interactions between people tend to be highly regarded by the community.

Bank Street Park is a place for gathering and meeting, with something for everyone.

Visibility

Visibility is about having clear sight lines to see what is happening within a place. This gives people a sense of control and confidence to make decisions about their safety. Passive surveillance, provided by other people using a space, overlooking a space, and shopkeepers with eyes on the park also made people feel safer.

Bank Street Park provides secure, semi-private gathering spaces defined by planting and landscape, that allow users to see and be seen, without being over observed and feeling judged for using public space.

Accessibility, Legibility & Connections

Emphasises the importance of being able to get around easily and safely with confidence. It is important that spaces are easy to get to, easy to enter, and easy to navigate by foot, with a pram, by scooter or bike.

Bank Street Park circulation is legible, generous and accessible. Adjacencies have been carefully considered to ensure easy access between complementary uses.

Comfort & Image

Comfort and image considers the sensory qualities of urban spaces and how they impact on people's experience. This includes having adequate access to sunlight, shade, and shelter from harsh weather conditions. Importantly it also means not being too exposed to unpleasant noise, wind, heat, rain, traffic or pollution.

Bank Street Park is comfortable and attractive. Planting, canopy trees and park shelters provide shade and protection from wind and sun where needed, while open lawn areas make the most of solar access.

Identity

Identity is the expression of social values and culture in the urban design fabric, providing a sense of belonging. Acknowledging women, gender diverse people and cultural diversity through identity legitimises their right to the city and helps build a more inclusive and safe place.

Bank Street Park will contain public art reflecting local stories and values, and have a uniquely local identity embedded in Country.

Scale

Urban design operates on many scales from the macro-scale of the city structure to the human scale of the public space, with outcomes that can have either negative or positive impacts on people's lives, in particular women, girls, gender diverse and vulnerable people.

Bank Street Park includes a variety of spaces at different scales suited to use and context. Tree canopy and shelters will add a human scale to the park sitting below the dramatic Anzac Bridge above, and all spaces are provided wide and multiple entries.

2.4 Concept Plan

Legend

1	Glebe Island Bridge - potential pedestrian and cycle connection
2	Existing vegetation retained and supplemented
3	Stair access to Glebe Island Bridge
4	Widened verge
5	Amenities and storage in adaptively re-used building
6	Plaza
7	Loading zone on Bank Street
8	Seating and planting in existing building 'ruins'
9	New building with community facilities cafe kiosk and marina facilities
10	PV and planting on roof
11	Graded walkway access to plaza
12	Substation retained
13	Seating shelters amongst planting
14	Outdoor seating area to cafe
15	Bank Street with parallel parking and separated cycleway
16	Open lawn area
17	Primary pathway across park
18	Cycleway transition to street - to continue south as part of future works
19	Nature-based inclusive playspace for ages 2-12
20	Fitness equipment
21	Multi-purpose court
22	Edge seating and fence to court
23	Substation and bridge pylons
24	Marina
25	Potential future kayak storage / kiosk
26	Anzac Bridge pylon
27	Deck over dragon boat storage
28	Boardwalk
29	Kayak launch jetty
30	Dragon boat ramp
31	Sandstone blocks terracing into water to improve marine habitat
32	Split level promenade with trees and seating
33	Existing mature trees retained with embankment down to adjacent property
34	Future boardwalk and promenade connection (outside of scope)
35	Pedestrian link as part of future development (outside of scope)

2.5 Access and Circulation

Pedestrian Environment

Bank Street Park will include a highly legible network of pedestrian connections, accommodating safe and comfortable movement within and through the park.

Access into the park and to the waterfront is provided in multiple locations as part of a series of pathways of differing widths, hierarchy and character.

All areas of the park will be accessible, with regular seating opportunities along journeys. Where stair access is provided, alternative accessible pathways are provided nearby.

Future pedestrian connectivity to the south is identified based on the Design Guideline requirements for this land, including connecting into the foreshore promenade and boardwalk, and provision for a secondary pedestrian connection into the park partway along the frontage, in line with the future colonnade to the south.

Foreshore Promenade

Bank Street park provides the northern access point to the future foreshore promenade that will run the length of the Blackwattle Bay precinct. From the south, the 10m on-land promenade continues along the water's edge past the dragon boats and marina and through the 1-3 Bank Street plaza.

The promenade connection is narrower between the new building and water than the remainder of the site, which is a reflection of site constraints and acknowledging the diagonal connection through the site as the primary pedestrian desire line heading north, which is provided a generous 6m width.

The boardwalk that connects with the new Fish Market site to Bank Street Park will be built in the future to allow continuous pedestrian access along the waterfront prior to the adjacent sites being developed. It will be subject to a separate planning approval.

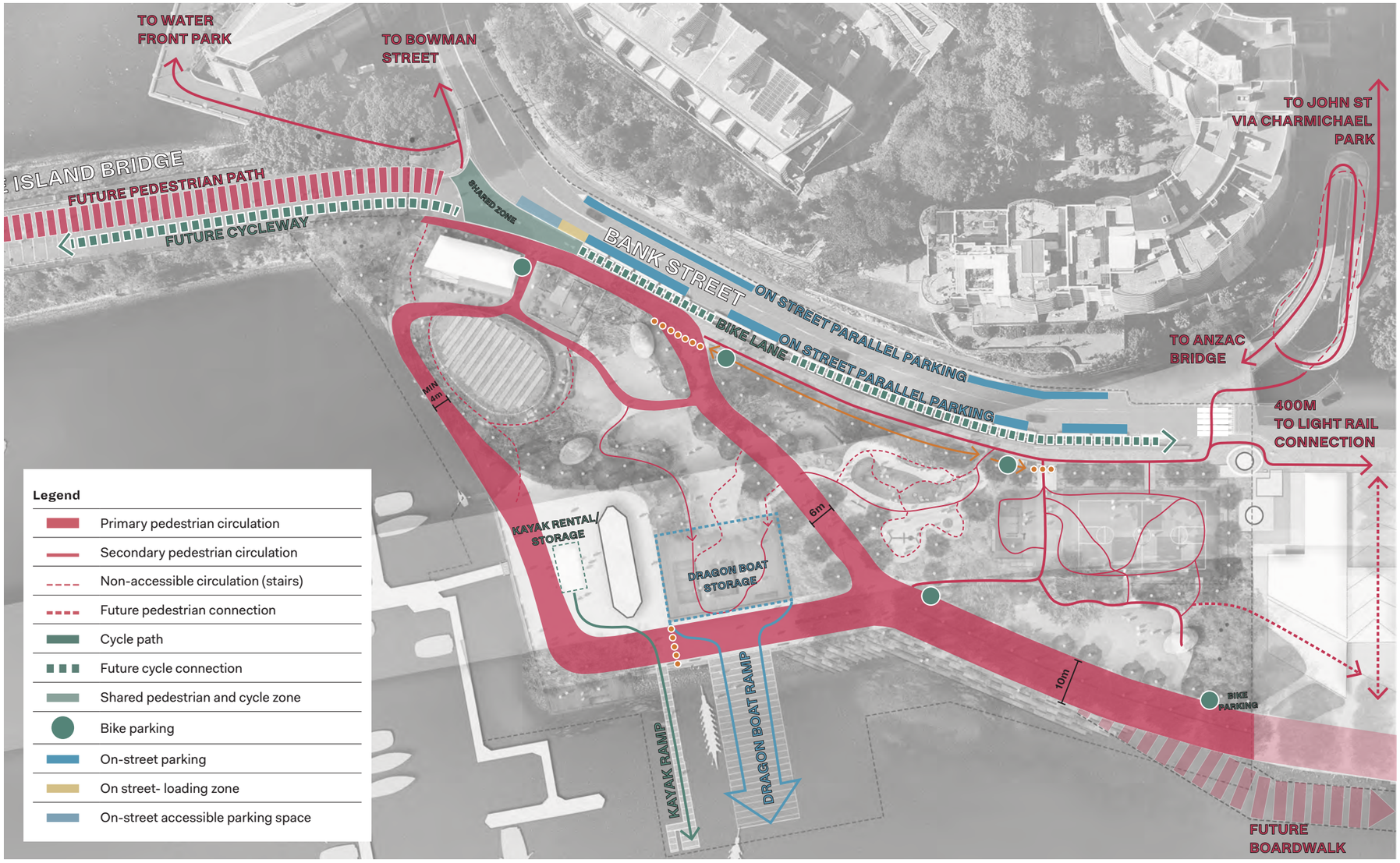


Figure 4. Access and Circulation

Cyclist Provision

The first segment of a dedicated cycleway from Glebe Island Bridge to the new Sydney Fish Markets is provided on Bank Street adjacent the site, achieved through the narrowing of parking and vehicle lanes on the street. A shared pedestrian and cycle zone to the north allows for safe movement of pedestrians and cyclists, with the ability to connect into a future dedicated cycleway over Glebe Island Bridge. To the south the cycleway connects back into the street as an interim connection until the full Bank Street cycleway is realised. The City of Sydney (CoS) has been consulted as part of the design process. The cycleway will be designed in accordance with the CoS Public Domain Manual 2021.

The future connection south will require moving the verge against the bridge pylon to accommodate the cycle and traffic lanes, and would maintain pedestrian priority across the pedestrian crossing in this location (to be delivered as part of this SSDA).

Within the park, the promenade and diagonal connection provide a shared route for slower speed cycling, with bollards slowing cyclists at the Bank Street end of the connection.

A total of 30 bike parking spaces will be provided along these connections at key locations,including waterfront, 1-3 Bank Street buildings and the playground / recreation area.

Access and Circulation

Vehicle and Maintenance Provisions

The design seeks to limit vehicle access into the park as much as possible, to maintain pedestrian priority and safety.

All parking and loading is accommodated on Bank Street. An accessible parking bay and loading zone are provided in the north to service the 1-3 Bank Street facilities, with 36 parking spaces retained on Bank Street. The reduction of vehicle travel lane and parking widths on Bank Street will also support a low speed, cyclist / pedestrian safe environment.

Restricted vehicle access will be provided into the park for maintenance vehicles servicing both the park and Transport for NSW (TfNSW) infrastructure. 5m width of clear paving is provided to either side of the pylon for maintenance access and security. Pathways and spaces have been designed to accommodate a boom lift in order to provide access to the underside of the bridge should it be needed for maintenance or repairs, as indicated in the adjacent plan.

Restricted vehicle access into the park for Dragon Boat loading and unloading will also be provided and subject to operational guidelines.

Restricted access will be accommodated through driveway crossovers and removable bollards along Bank Street, as well as a secondary bollard line near the bridge pylon for TfNSW access only noting that the majority of the existing kerb will be retained and disused crossovers will have the kerb reinstated.

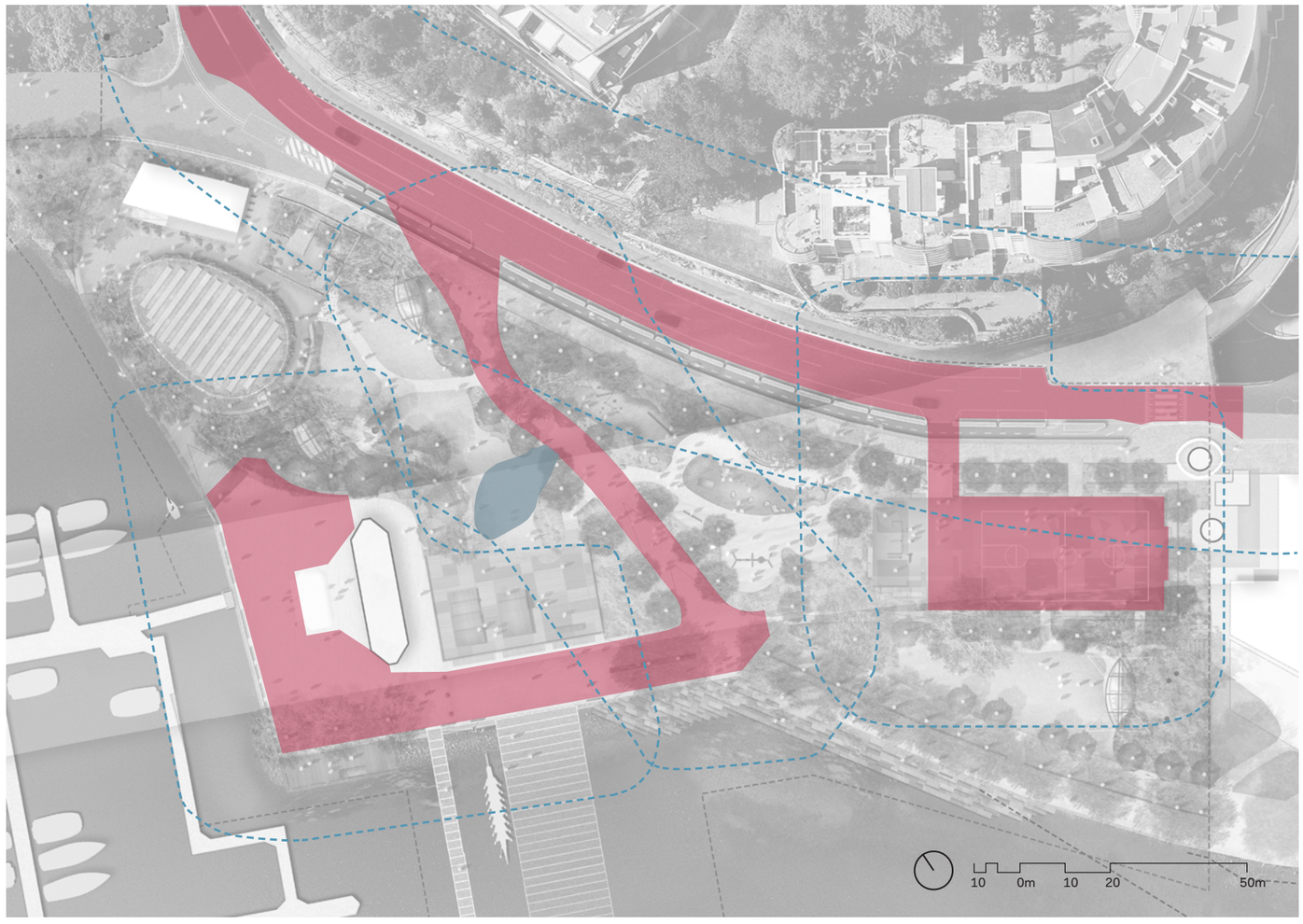


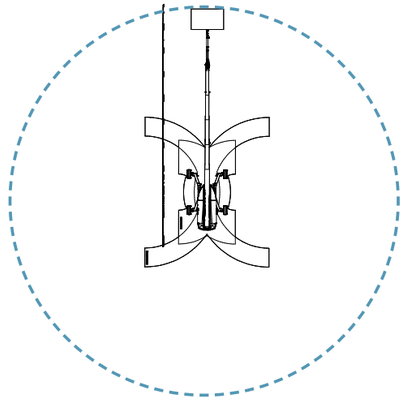
Figure 5. Bridge Access Study

Legend

	Boom lift access routes
	Maximum reach based on access routes
	Additional access area to provide full bridge access

Note:
Boom lift access indicative only and requires further testing throughout design development

Study based on JLG 1850SJ Ultra Series Telescopic Boom Lift



Access and Circulation

Bank Street Design

The design of Bank Street itself is focused primarily on providing the new cycleway for the length of the park, and minor upgrades to support access to the park.

The upgrade works, including installing the cycleway, resurfacing the asphalt footpath, and kerb / crossover adjustments are being designed in consultation with the CoS, and in accordance with the Sydney Streets Code 2021 and Public Domain Manual.

Additional embellishments including street trees, lighting upgrades and street furniture outlined in CoS strategies have not been included within the scope of works.

Future works to Bank Street outside of the scope of this DA will include the continuation of the cycleway south, as indicated in the diagram below.

Refer Enspire Drawings SK0009-220067-00 and SK0010-220067-00

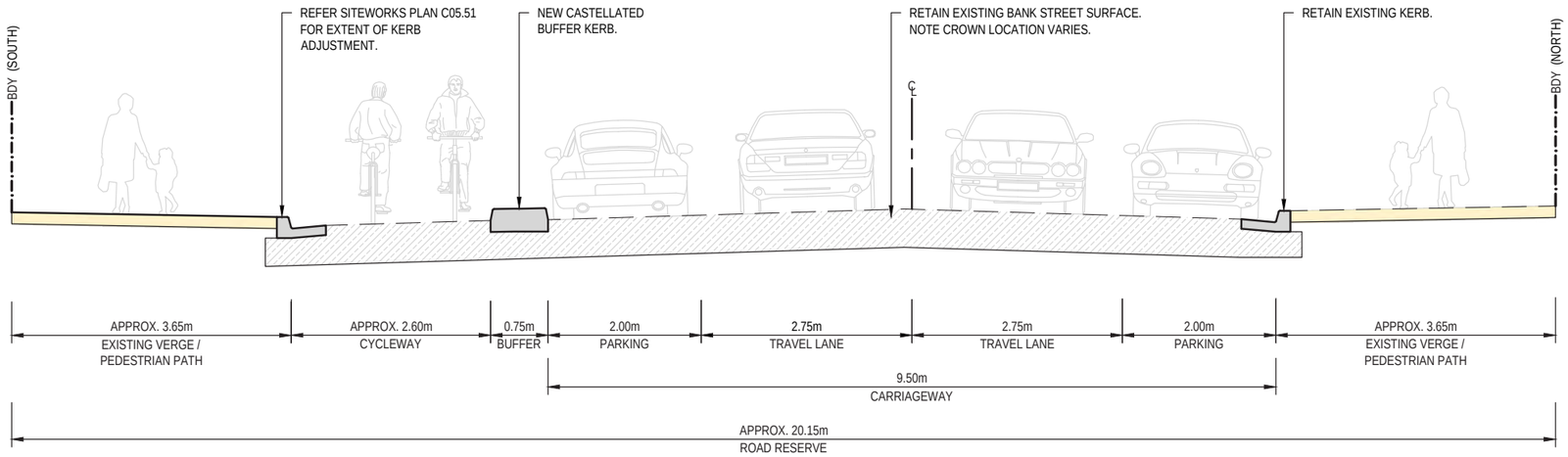


Figure 6. Bank Street Cycleway - Typical Section

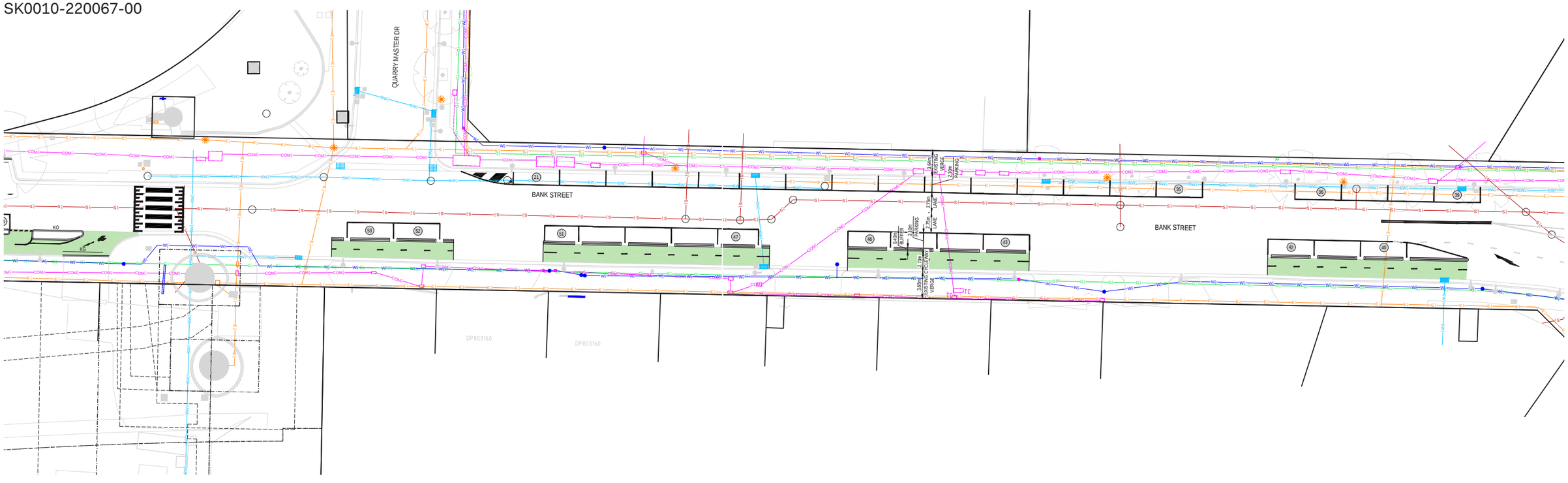


Figure 7. Bank Street Cycleway southern continuation (outside of scope)

2.6 Planting Strategy

Bank Street Park planting strategy will utilise plant species that would once have occurred naturally on the Pyrmont peninsula and respond to micro-climatic conditions including aspect, topography, wind and available moisture.

Vegetation will provide a diversity of habitat for fauna and avi-fauna and provide shading and cooling in summer and wind protection in winter. Bank Street Park will comprise vegetation that works in unison with the proposed constructed soils to create a circular system which would have occurred naturally.

The planting strategy has been developed according to the following principles:

+ Retain existing mature trees in good condition
+ Acknowledge pre-colonial indigenous plant communities
+ Recreate the various plant communities as an education tool and to re-establish Country
+ Use a palette of predominantly endemic native species
+ Encourage flowering, edible and traditional medicinal plants in consultation with Traditional Owners
+ Plant species that will encourage biodiversity and provide habitat for native species
+ Observe and utilise First Nations cultural and maintenance techniques
+ Prioritise species that are fit for purpose and will cope with future climate and/or environmental changes, recognising the local microclimate conditions including winds, salt tolerance, and the bridge overhead.
+ Utilise layered planting and low shrubs to provide wind protection and a sense of partial enclosure to seating areas

Six mature trees including 5 Eucalyptus salignas and 1 Pittosporum undulatum are being retained on site.

The planting has been designed to achieve a self-sustaining system with minimum maintenance. However, the initial period of plant establishment will be critical to its success. The Maintenance Establishment Period is likely to be 24 months, but after this time, continued maintenance will be necessary to ensure that the planting thrives during its vulnerable first few years and becomes a self-sustaining planting system.

Plant Communities

- Gully
- Rainforest
- Woodland
- Meadow
- Heath
- Aquatic Brackish
- Rain Garden
- Rooftop

Figure 8. Planting Communities

Figure 9. Planting Communities Transect

Planting Strategy
Plant Schedule


Ficus rubiginosa_Port Jackson Fig


Grevillea oleoides_Red Spider Grevillea


Actinotus helianthi_Flannel Flower


Glochidion ferdinandi_Cheese Tree


Ceratopetalum apetalum_Coachwood


Brachyscome multifida_Cut-leaved Daisy (

PM01 HEATH									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Exotic	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
TREES																					
CG	*Corymbia gummifera*	Red Bloodwood	N	30	10	Y	Green	White													Used as herbal remedy with oils releving coughs, colds, sore throats and other infections, flower nectar used to create sweet drink (bool)
EuR	*Eucalyptus racemosa*	Scribbly Gum	N	15	6		Blue-Green	Cream													Tolerant of poor sandstone soils and drought
FR	Ficus rubiginosa	Port Jackson Fig	N	40	25	N	Dark Green	Yellow/Red													Fruiting
SHRUBS																					
	Darwinia diminuta	Darwinia	N	1.5			Green	Pink													Leaves aromatic when rubbed
	Grevillea oleoides	Red Spider Grevillea	N	3	1.8	Y	Dark Green	Red/Pink													Bird attracting, nectar used to make sweet drink
	Hakea teretifolia	Dagger Hakea	N	4	2	N	Green	Cream													Provides shelter for small birds
	Leptospermum squarrosum	Pink Teatree	N	3	2	Y	Dark Green	Pink													Salt resistant, dried leaves used in tea and as food flavouring
ALL OTHER COVER																					
	Actinotus minor	Lesser Flannel Flower	N	0.5	0.5	N	Blue-Green	White													Attracts butterflies, used in skin care
	Dampiera stricta	Blue Dampiera	N	0.4	0.3		Green	Purple/Blue													Attracts butterflies
	Goodenia stelligera	Spiked Goodenia	N	0.7	0.4	N	Green	Yellow													
	Entolasia stricta	Wiry Panic	N	0.8		N	Light Green	White													
	Lepidosperma filiforme	Common Rapier-Sedge	N	0.8	0.4		Light Green	N/A													Use around waterways
	Ptilothrix deusta	Fluke Bogrush	N	0.6	0.5	Y	Light Green	N/A													Edible seeds

PM02 GULLY									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Exotic	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
TREES																					
AS	Acmena smithii	Lilly Pilly	N	8	3	Y	Light Green/Red	White													Erosion control, attracts nectar and seed eating birds, bees and butterflies, bird nesting plant, pollution tolerant, edible fruit
CA	Ceratopetalum apetalum	Coachwood	N	25	8	Y	Green	Pale Pink													Wood usd for building, provide roosting sites for owls, edible leaves
FR	Ficus rubiginosa	*Port Jackson Fig*	N	40	25	N	Dark Green	Yellow/Red													Fruiting
GF	Glochidion ferdinandi	*Cheese Tree*	N	20	10	N	Light Green	Green/Yellow													Fruit attracts native birds, supports bird nesting, pollution tolerant
SHRUBS																					
	Antidesma erostre	Wild Currant	N	5	2.5	Y	Light Green	Cream													Edible berries that can be eaten raw or in cooking, full sun/dappled shade
	Baeckea imbricata	Spindly Baeckea	N	4	3		Light Green	White													Full sun/part shade, attracts bees and butterflies
	Leptospermum petersonii	Lemon tea tree	N	2	1.5	Y	Light Green	White													Low maintenance, attracts bees and butterflies, edible
	Melaleuca hypericifolia	Hillock Bush	N	2	1.5	Y	Green	Orange													Fragrant oils, attracts bees, butterflies and nectar eating birds, leaves used to make soothing tea and sweet drinks
	Pimelea linifolia	Slender Rice-Flower	N	1	0.8	N	Green	White													Attracts bees and butterflies, bark rocessed into string (Bushman's Bootlace) used to catch the bogong moth
	Prostanthera rotundifolia	Round-leaved Mintbush	N	2	1	Y	Dark Green	Purple													Used for treating headaches and colds, substitues for common oregano, attracts bees, butterflies and lizards
ALL OTHER COVER																					
	Brachyscome multifida	Cut-leaved Daisy	N	0.3	0.5	Y	Green	Light Purple													Attracts bees and butterflies, flowers all year, edible flowers
	Chrysocephalum apiculatum	Everlastings	N	0.3	0.5	N	Silver Green	Yellow													Attracts bees and butterflies, flowers all year
	Dendrobium speciosum	Sydney Rock Orchid	N	0.7	1	Y	Green	Cream													Edible stems
	Dichondra repens	Dichondra	N	0.15	2	Y	Dark Green														Tolerates light foot traffic, edible leaves
	Hardenbergia violacea	False Sarsaparilla	N	3	3	Y	Dark Green	Purple													Leaves can be used to make tea, attracts bees and butterflies
	Hibbertia scandens	Golden Guinea flower	N	2.5	5	N	Dark Green	Yellow													Salt tolerant, used for erosion control, attracts bees, butterflies and lizards
	Viola hederacea	Native Violet	N	0.2	1	Y	Dark Green	Purple													Edible flowers, suitable in heavy shade

Note: Refer to landscape plans for tree and plant numbers

Planting Strategy
Plant Schedule

Angophora costata_Sydney Red Gum

Callicoma serratifolia_Black Wattle

Schizomeria ovata_White Cherry

Adiantum formosum_Giant Maidenhair

Tasmannia insipida_Brush Pepperbush

Blechnum cartilagineum_Fishbone Water Fern

PM03 RAINFOREST									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Exotic	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
TREES																					
AC	*Angophora costata*	Sydney Red Gum	N	25	15	Y	Dark Green	White													Habitat tree for birds and possums, resin from the trunk an astingent used medicinally
ArC	*Araucaria cunninghamii*	Hoop Pine	N	40	20	Y	Dark Green	N/A													Edible seed
BC	*Backhousia citriodora*	Lemon Scented Myrtle	N	15	5	Y	Dark Green	White/Cream													Used for culinary and medicinal purposes
CS	*Callicoma serratifolia*	Black wattle	N	12	4	N	Green	Yellow													Used by European settlers to make buildings
DA	*Diospyros australis*	Black Plum	N	10	7	Y	Green	Yellow													Attracts bees and insects, edible fruits
DS	*Doryphora sassafras*	Sassafras	N	30	5	Y	Dark Green	White													Strong wood, edible fruit
FR	Ficus rubiginosa	*Port Jackson Fig*	N	40	25	N	Dark Green	Yellow/Red													Fruiting
SO	*Schizomeria ovata*	White cherry	N	15	8	Y	Dark Green	White													Uses as food and wood
SHRUBS																					
	Antidesma erostre	Wild Currant	N	3	2	Y	Green	Cream													Edible berries, natural pesticide properties, attracts bees and birds
	Notelaea longifolia	Mock olive	N	5	3	Y	Dark Green	Yellow													Fruit attracts birds, fruit edible but very bitter
	Tasmannia insipida	Brush pepperbush	N	3	3	Y	Green	White													Leaves have peppery flavour when crushed, edible seeds
	Trochocarpa laurina	Tree heath	N	4		N	Green	White													Used to make Waddies (hunting sticks)
	Wilkiea huegeliana	Veiny wilkiea	N	6			Dark Green	Yellow													Attracts butterflies
ALL OTHER COVER																					
	Adiantum formosum	Giant maidenhair	N	1.2	2	N	Green	N/A													
	Asplenium australasicum	Birds nest fern	N	1.5	1.5	Y	Green	N/A													Leaves edible when cooked, fronds used as garnish
	Blechnum cartilagineum	Fishbone water fern	N	1.5	1	Y	Dark Green	N/A													Frog habitat, rhizome eaten raw or roasted
	Crinum pedunculatum	Swamp Lily	N	3	3	N	Green	Pink													Frog habitat, sap used to treat jellyfish stings, poisonous if ingested
	Gymnostachys anceps	Settlers' twine (Boorgay)	N	2		N	Dark Green														Fibred used to make fishing line (recorded use by Eurpoeans as string)
	Smilax australis	Native sarsparilla	N	7	10	Y	Green	Green/Yellow													Fruit edible when ripe, leaves used medicinally in teas (blood cleanser)

Note: Refer to landscape plans for tree and plant numbers

Planting Strategy
Plant Schedule

Allocasuarina littoralis_Black She-Oak

Elaeocarpus reticulatus_Blueberry Ash

Acacia longifolia _Sydney Golden Wattle

Dianella caerulea_Flax-lily

Pandorea pandorana_Wonga Wonga Vine

Kennedia rubicunda_Dusky Coral Pea

PM04 WOODLAND									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Exotic	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
TREES																					
AL	*Allocasuarina littoralis*	Black She-Oak	N	12	7	Y	Green	Red													Erosion control, attracts seed eating birds, nitrogen fixing, good windbreak, edible cones and gum
AC	*Angophora costata*	Sydney Red Gum	N	25	15	Y	Dark Green	White													Habitat tree for birds and possums, resin from the trunk an astingent used medicinally
DA	*Diospyros australis*	Black Plum	N	10	7	Y	Green	Yellow													Attracts bees and insects, edible fruits
DS	*Doryphora sassafras*	Sassafras	N	30	5	Y	Dark Green	White													Strong wood, edible fruit
FR	*Ficus rubiginosa*	Port Jackson Fig	N	40	25	N	Dark Green	Yellow/Red													Fruiting
PP	*Pararchidendron pruinosum*	Monkeys Earring	N	15	8	N	Green	Yellow/White													Ornamental fruit
SHRUBS																					
	Acacia longifolia subsp. longifolia	Sydney Golden Wattle	N	8		Y	Light Green	Yellow													Edible flowers, seeds and seedpods
	Baeckea imbricata	Spindly Baeckea	N	4	3		Light Green	White													Full sun/part shade, attracts bees and butterflies
	Breynia oblongifolia	Coffee Bush	N	3	1		Green	Green													Host to Common Grass Yellow and Large Grass Yellow Butterfly
	Elaeocarpus reticulatus	Blueberry Ash	N	10	5		Dark Green	White													Pollution tolerant, attracts bees, nectar and seed eating birds, and butterflies
	Grevillea linearifolia	Linear-leaf Grevillea	N	3	2	Y	Green	White													Nectar used to make sweet drink
	Leucapogon parviflorus	Coastal beard heath	N	3	2	Y	Green	White													Edible fruit
	Monotoca elliptica	Tree Broom-heath	N	6	4	Y	Dark Green	Cream													Edible orange fruits
GRASSES AND COVERS																					
	Billardiera scandens	Apple Berry	N	1.5	3	Y	Green	White													Use as bushtucker, Decorative Fruit, Pollution tolerant, honey producing plant, ttracts bees, nectar eating birds, butterflies
	Commelina cyanea	Native Wandering Jew	N	0.5	2	Y	Dark Green	Blue													Used by Eurpoean settlers to avoid or alleviate scurvy, attracts native bees
	Dianella caerulea	Flax-lily	N	1	2	Y	Green	Blue													Edible, decorative fruit, good for erosion control, attracts seed eating birds
	Entolasia stricta	Wiry Panic	N	0.8		N	Light Green	White													
	Eustrephus latifolius	Wombat Berry	N	6	6	Y	Light Green	Pink													Orange berries, attracts seed eating birds and mammals, edible young shoots and fruit
	Kennedia rubicunda	Dusky coral pea	N	3	4	Y	Green	Red													Edible nectar
	Macrozamia communis	Burrawang	N	2	2	Y	Dark Green	Green/Brown													Seeds edible after intensive preperation, good for erosion control
	Mentha australis	River Mint	N	0.7	1	Y	Light Green	White													Edible leaves, attracts bees and butterflies
	Oplismenus aemulus	Basket Grass	N	0.3	1		Dark Green	Pale Brown													Host plant for the Lilac Grass-skipper and the White-brand Grass-skipper and other butterflies
	Pandorea pandorana	Wonga Wonga Vine	N	15	7		Green	Cream													Attracts bees and butterflies
	Pteridium esculentum	Bracken	N	2.5	1	Y	Green	N/A													New fronds used as remedy for stinging ants, rhisome roasted and pulped

Planting Strategy
Plant Schedule

Eucalyptus resinifera_Red Mahogany

Ficinia nodosa_Knobby Headed Club Rush

Hardenbergia violacea_False Sarsaparilla

Chrysocephalum apiculatum_Everlasting Daisy

Poa affinis_Tussock Grass

Wahlenbergia communis_Tufted Bluebell

PM05 MEADOW									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Exotic	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
TREES																					
ER	*Eucalyptus resinifera*	Red Mahogany	N	30	15	Y	Light Green	White													Flowers attract Grey Geaded Flying Foxes and nectar eating birds, strong wood, sweet drink made from sap, medicinal uses
GRASS																					
	Austrostipa pubescens	Tussock Grass	N	1.5	0.4		Light Green	Purple													Possible use as native lawn alternative
	Dianella caerulea	Flax-lily	N	1	2	Y	Green	Blue													Edible, decorative fruit, good for erosion control, attracts seed eating birds
	Ficinia nodosa	Knobby Headed Club Rush	N	1	1	Y	Green	Brown													Edible seed
	Patersonia glabrata	Purple Flag	N	0.8	0.4	Y	Dark Green	Purple													Fruit roasted to extract edible seeds, fruit eaten when cooked (small quantities)
	Poa affinis	Tussock Grass	N	1.2	0.4	Y	Light Green	Red-Green													Base of leaf stalk edible
	Themeda triandra	Kangaroo grass	N	1.5	0.5	Y	Brown Green	N/A													Attracts bidrs, nesting materials, leaves used for string in net making, seeds ground to make flower, palatable when young
ALL OTHER COVER																					
	Actinotus helianthi	Flannel Flower	N	1	0.5	N	Grey Green	White													Requires some wind protection, attracts bees, butterflies and other insects, used in skincare
	Brachyscome multifida	Cut-leaved Daisy	N	0.3	0.5	Y	Green	Light Purple													Attracts bees and butterflies, flowers all year, edible flowers
	Chrysocephalum apiculatum	Everlastings	N	0.3	0.5	N	Silver Green	Yellow													Attracts bees and butterflies, flowers all year
	Crinum pedunculatum	Swamp Lily	N	3	3	N	Green	Pink													Frog habitat, sap used to treat jellyfish stings, poisonous if ingested
	Hardenbergia violacea	False Sarsaparilla	N	3	3	Y	Dark Green	Purple													Leaves can be used to make tea, attracts bees and butterflies
	Hibbertia aspera	Rough Guinea Flower	N	0.6	0.5	N	Light Green	Yellow													External medicinal uses
	Microseris lanceolata	Yam Daisy	N	0.3	0.3	Y	Green	Yellow													Edible roots and leaves, attracts bees and other insects
	Pycnosorus globosus	Billy Buttons	N	1	0.5	N	Green	Yellow													Attracts bees, butterflies and other insects
	Wahlenbergia communis	Tufted Bluebell	N	0.3	0.15	Y	Dark Green	Light Purple													Edible flowers

PM06 AQUATIC BRACKISH									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Indigenous	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
SHRUBS AND COVERS																					
	Aegiceras corniculatum	Black Mangrove	N	5	3	Y	Light Green	White													Used in oyster cultivation
	Baeckea diosmifolia	Fringed Baeckea	N	1	2	N	Green	White													Aromatic leaves, attracts birds
	Juncus kraussii	Salt Marsh Rush	N	1	1.5	N	Green	Brown													Used for fibre for sting, fishing lines, woven rugs and woven baskets
	Sarcocornia quinqueflora	Beaded Samphire	N	0.5	0.5	Y	Green-Purple	N/A													Source of calcium, iron and vitamin A
	Suaeda australis	Seablite	N	0.5	1	Y	Light Green	Pink													Attracts bees and lizards, edible
	Tetragonia tetragonioides	Warrigal Greens	N	0.2	2	Y	Green	Yellow													Used as a spianch substitue

Planting Strategy
Plant Schedule

Backhousia citriodora_Lemon-Myrtle

Doryphora sassafras_Sassafras

Dianella caerulea_Flax-lily

Schizomeria ovata_White Cherry

Juncus kraussii_Salt Marsh Rush

Tetragonia tetragonioides_Warrigal Greens

PM07 RAIN GARDEN									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Indigenous	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
TREES																					
BC	*Backhousia citriodora*	Lemon Scented Myrtle	N	15	5	Y	Dark Green	White/Cream													Used for culinary and medicinal purposes
DS	*Doryphora sassafras*	Sassafras	N	30	5	Y	Dark Green	White													Strong wood, edible fruit
ER	*Eucalyptus resinifera*	Red Mahogany	N	30	15	Y	Light Green	White													Flowers attract Grey Geaded Flying Foxes and nectar eating birds, strong wood, sweet drink made from sap, medicinal uses
FR	*Ficus rubiginosa*	Port Jackson Fig	N	40	25	N	Dark Green	Yellow/Red													Fruiting
SO	*Schizomeria ovata*	White cherry	N	15	8	Y	Dark Green	White													Uses as food and wood
GRASS																					
	Dianella caerulea	Flax-lily	N	1	2	Y	Green	Blue													Edible, decorative fruit, good for erosion control, attracts seed eating birds
	Ficinia nodosa	Knobby Headed Club Rush	N	1	1	Y	Green	Brown													Edible seed
SHRUBS AND COVERS																					
	Juncus kraussii	Salt Marsh Rush	N	1	1.5	N	Green	Brown													Used for fibre for sting, fishing lines, woven rugs and woven baskets
	Sarcocornia quinqueflora	Beaded Samphire	N	0.5	0.5	Y	Green-Purple	N/A													Source of calcium, iron and vitamin A
	Suaeda australis	Seablite	N	0.5	1	Y	Light Green	Pink													Attracts bees and lizards, edible
	Tetragonia tetragonioides	Warrigal Greens	N	0.2	2	Y	Green	Yellow													Used as a spianch substitue
PM08 ROOFTOP									J	F	M	A	M	J	J	A	S	O	N	D	
Code	Botanical Name	Common Name	Native / Exotic	Mature Height	Mature Width	Edible (Y/N)	Foliage colour	Flower colour													Notes
SHRUBS AND COVERS																					
	Actinotus minor	Lesser Flannel Flower	N	0.5	0.5	N	Blue-Green	White													Attracts butterflies, used in skin care
	Brachyscome multifida	Cut-leaved Daisy	N	0.3	0.5	Y	Green	Light Purple													Attracts bees and butterflies, flowers all year, edible flowers
	Chrysocephalum apiculatum	Everlastings	N	0.3	0.5	N	Silver Green	Yellow													Attracts bees and butterflies, flowers all year
	Dampiera stricta	Blue Dampiera	N	0.4	0.3		Green	Purple/Blue													Attracts butterflies
	Hibbertia aspera	Rough Guinea Flower	N	0.6	0.5	N	Light Green	Yellow													External medicinal uses
	Microseris lanceolata	Yam Daisy	N	0.3	0.3	Y	Green	Yellow													Edible roots and leaves, attracts bees and other insects
	Pycnosorus globosus	Billy Buttons	N	1	0.5	N	Green	Yellow													Attracts bees, butterflies and other insects
	Wahlenbergia communis	Tufted Bluebell	N	0.3	0.15	Y	Dark Green	Light Purple													Edible flowers

2.7 Canopy Cover

Tree Canopy Cover is essential for climate resilience, biodiversity, urban heat island mitigation, microclimate and local character.

Bank Street Park achieves the 30% minimum tree canopy cover target as noted in the Blackwattle Bay Design Guidelines for parks within 10 years, with the proposal having an anticipated 40% canopy coverage at maturity.

The City's Greening Sydney Strategy 2021 sets a higher target of 46% canopy cover for parks by 2050, and the Urban Forest Strategy 2022 allocates a 55% canopy cover target for Neighbourhood Parks. The site achieves a 47% canopy coverage based on City of Sydney assessment criteria, which excludes hard courts and building.

While every effort has been made to maximise canopy coverage across the park, a number of constraints to tree planting have meant the design is unable to achieve these higher targets, most notably the Anzac Bridge above.

Species have been selected based on solar access, and will need to be supported by piped and passive irrigation where rainfall is impeded by the bridge above.

Percentage cover has been calculated based on the park extents shown in grey in the diagrams below, and estimated growth rates for the various tree species selected. Overlapping canopy and canopy extending beyond the site boundary are excluded from calculations.

Tree size distribution varies from the recommended percentages in the Design Guidelines in providing a more even mix across the various tree sizes, and a greater percentage of extra large trees suited to the park setting.

Tree size	Radial Crown spread	Height	Recommended Distribution - Design Guidelines	Proposed Distribution
Small	<4m	3-5m	10%	21%
Medium	4-7m	5-10m	45%	30%
Large	7-15m	10-20m	35%	29%
Extra Large	15m+	20m+	10%	20%

Figure 10. Tree Size and Distribution

Canopy Cover at 5 years

+ Park area: 11,456m²
+ Canopy cover: 1301m²
+ Percentage of park area: 11%

Canopy Cover at 10 years

+ Park area: 11,456m²
+ Canopy cover: 3380m²
+ Percentage of park area: 30%

Canopy Cover at maturity

+ Park area: 11,456m²
+ Canopy cover: 4608m²
+ Percentage of park area: 40%

Canopy Cover at maturity - CoS calculations

+ Park area excluding buildings, pylon and court area (shown in yellow): 9,709m²
+ Canopy cover: 4608m²
+ Percentage of park area: 47%

2.8 Integrated Water Management and Deep Soil

Water is intrinsically linked to the park and it's context and will be expressed through the prominence of and access to the harbour, visible water treatment in the landscape, and a water play element in the playground.

Surface water will be managed through Water Sensitive Urban Design initiatives, using a combination of planted rain gardens, tree pits with filtration media and in-ground end of line systems.

Rain gardens and tree pit treatment systems will need to be contained to avoid contamination entering the water from existing soils. These areas have been designed to provide adequate soil volumes for the trees they contain, including the required 35m^3 for promenade trees as part of continuous soil trenches noted in the Design Guidelines.

Outside of the green roof, rain gardens and the promenade tree pits, all other planted areas are on natural ground.

Irrigation demand will be minimised through selection of climatically adapted species, however a lack of efficiency in rainwater capture potential and the loss of catchment created by the Anzac Bridge above will require that irrigation and toilets be connected to a future precinct recycled water line, rather than rainwater collected on site. Planting will also be passively irrigated wherever possible.

Flood levels, including climate change projections, are addressed through the design to ensure it is future-proofed. This includes raising the promenade to minimum RL2.5, including around the bridge pylon, and ensuring all habitable spaces are minimum RL3.0.

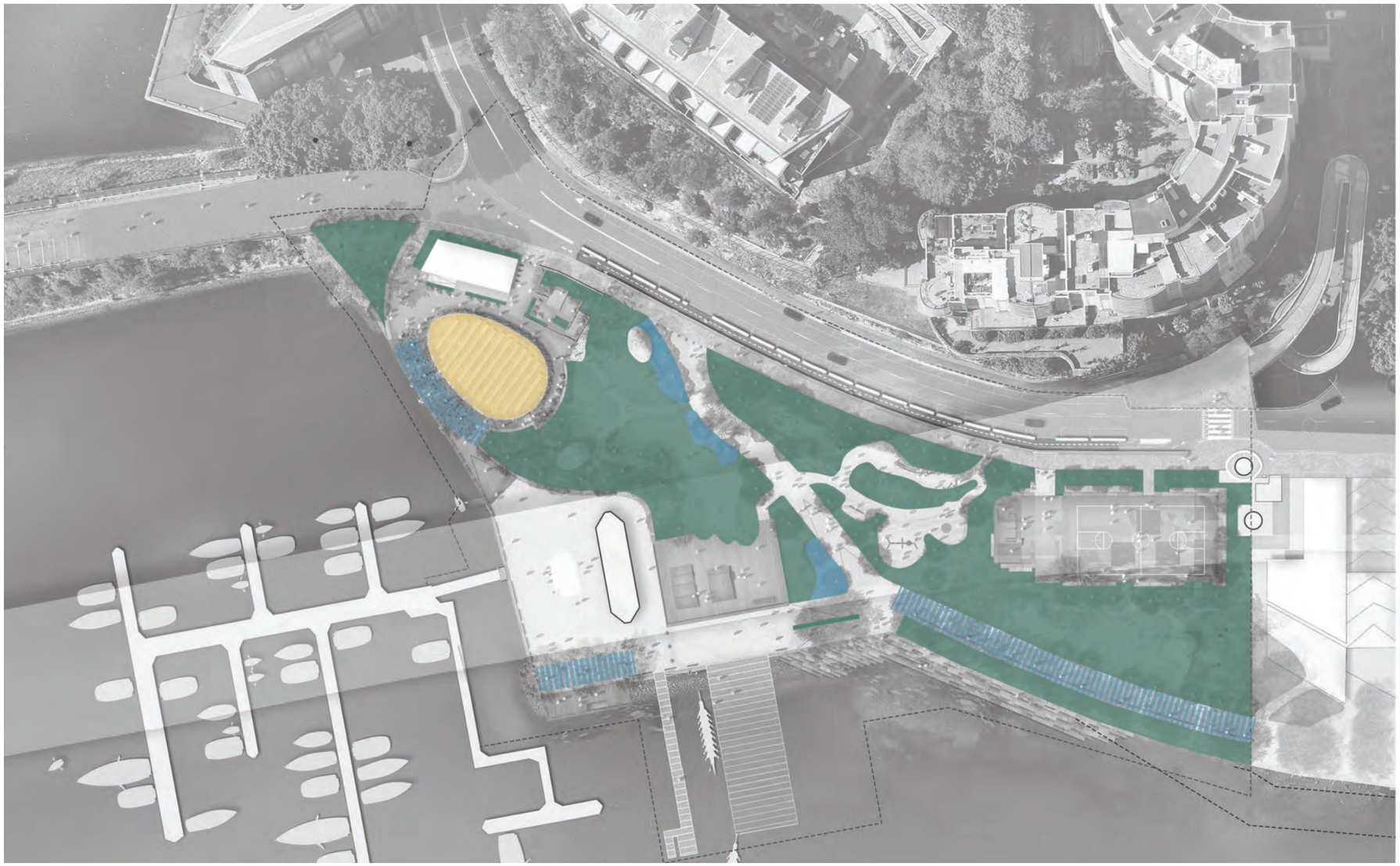


Figure 12. Integrated Water Management and Deep Soil

Legend

	Bioretention tree pit - 450m^2 (4% of park area)
	Bioretention rain garden - 200m^2 (2% of park area)
	Permeable surfaces - 5204m^2 (45% of park area)
	Green roof - 416m^2 (4% of park area)

2.9 Sustainability

Bank Street Park envisions a thriving and inclusive urban oasis that rejuvenates Blackwattle Bay's waterfront, harmoniously blending nature and community to create a resilient, vibrant, and sustainable haven for both people and wildlife.

Sustainability Principles

The sustainability ethos of Bank Street is structured around five core principles that underscore a commitment to meaningful and enduring sustainability:

Net Zero Carbon

Bank Street Park will lead the way in adopting a comprehensive low carbon approach that encompasses all stages of development, from design and construction to daily operations, setting a new environmental standard within its immediate precinct.

Resilient and Adaptable

Bank Street Park seeks to lead in forward-looking development, ensuring resilience and adaptability to thrive amidst challenges while fostering a strong community fabric.

Biodiverse and Regenerative

Forge a renewed connection with nature at Bank Street Park, remediating its industrial history to establish a haven for biodiversity and ecological renewal along Blackwattle Bay.

Integrated Mobility

Bank Street Park envisions a seamlessly sustainable mobility ecosystem, empowering residents with efficient, carbon-neutral transportation that harmonises with nature, enhancing daily life and urban resilience.

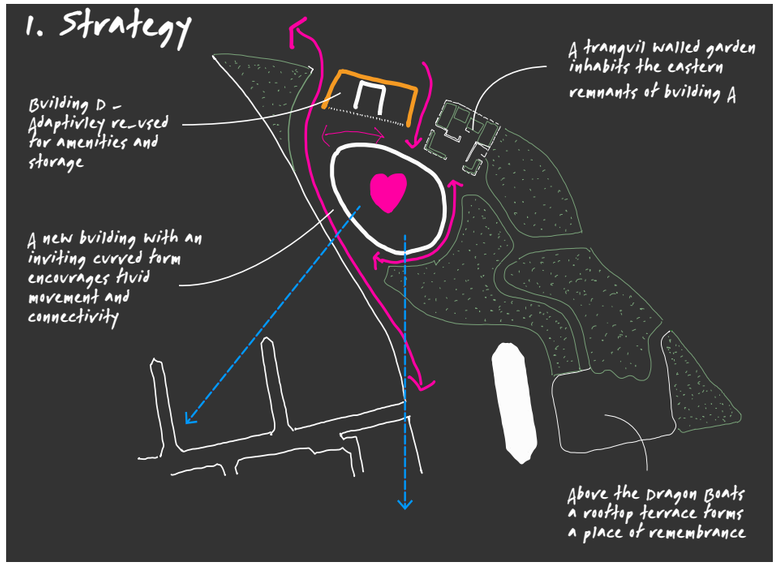
Healthy and Inclusive

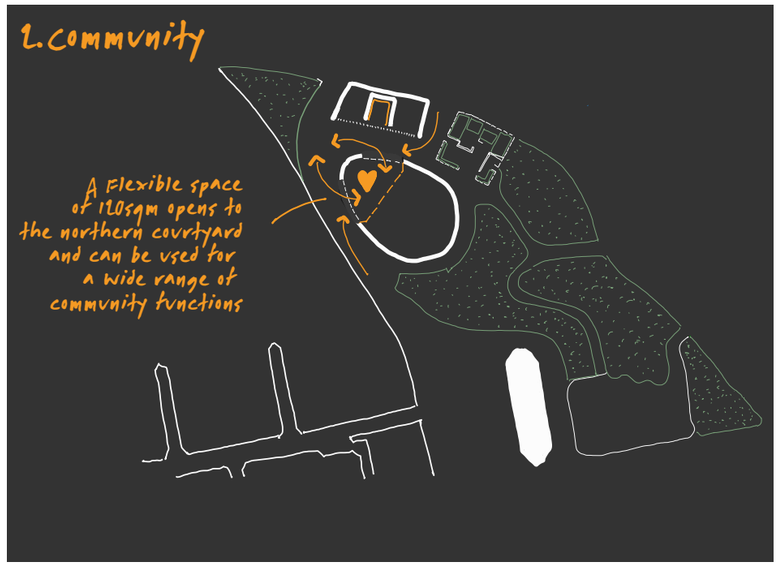
Bank Street Park will create a place that is welcoming to all people, regardless of their age, size, gender, culture, disability or ability, and enrich the health and wellness of visitors and the community.

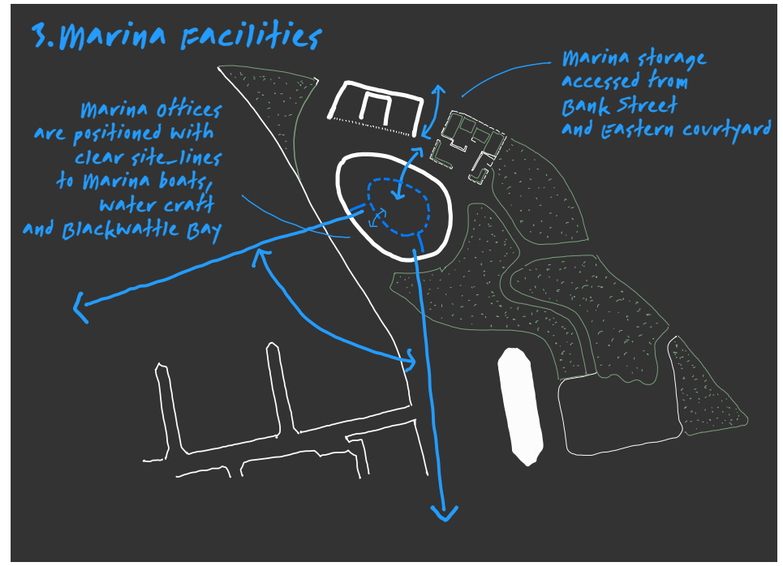
For further detail on the sustainability initiatives, refer to the Bank Street Park Sustainability Strategy.

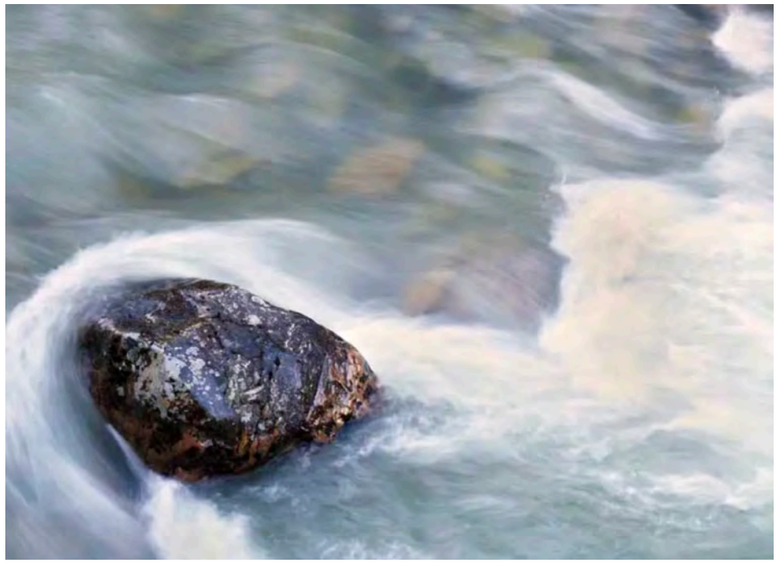
2.10 Built Form Overview

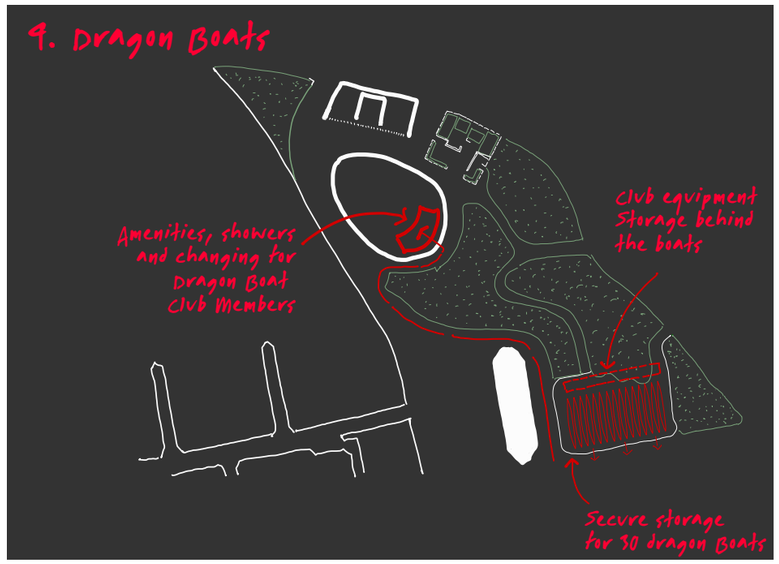
Concept Diagrams - Building Uses

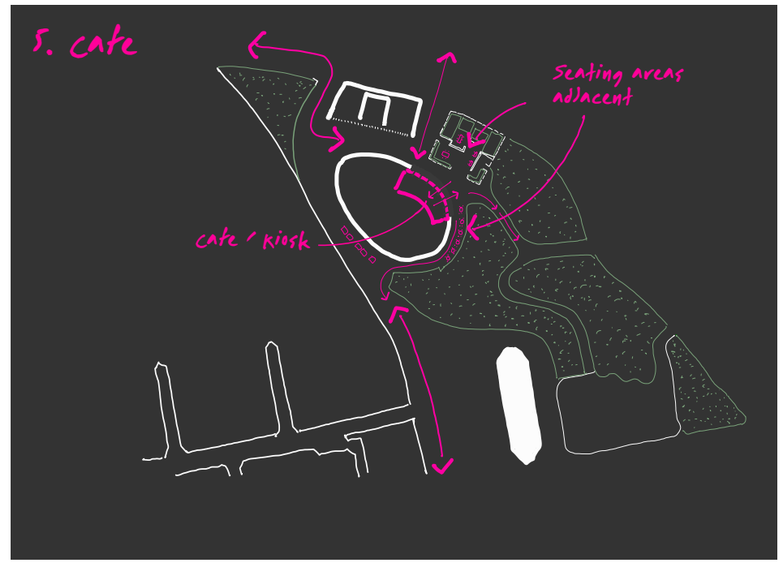








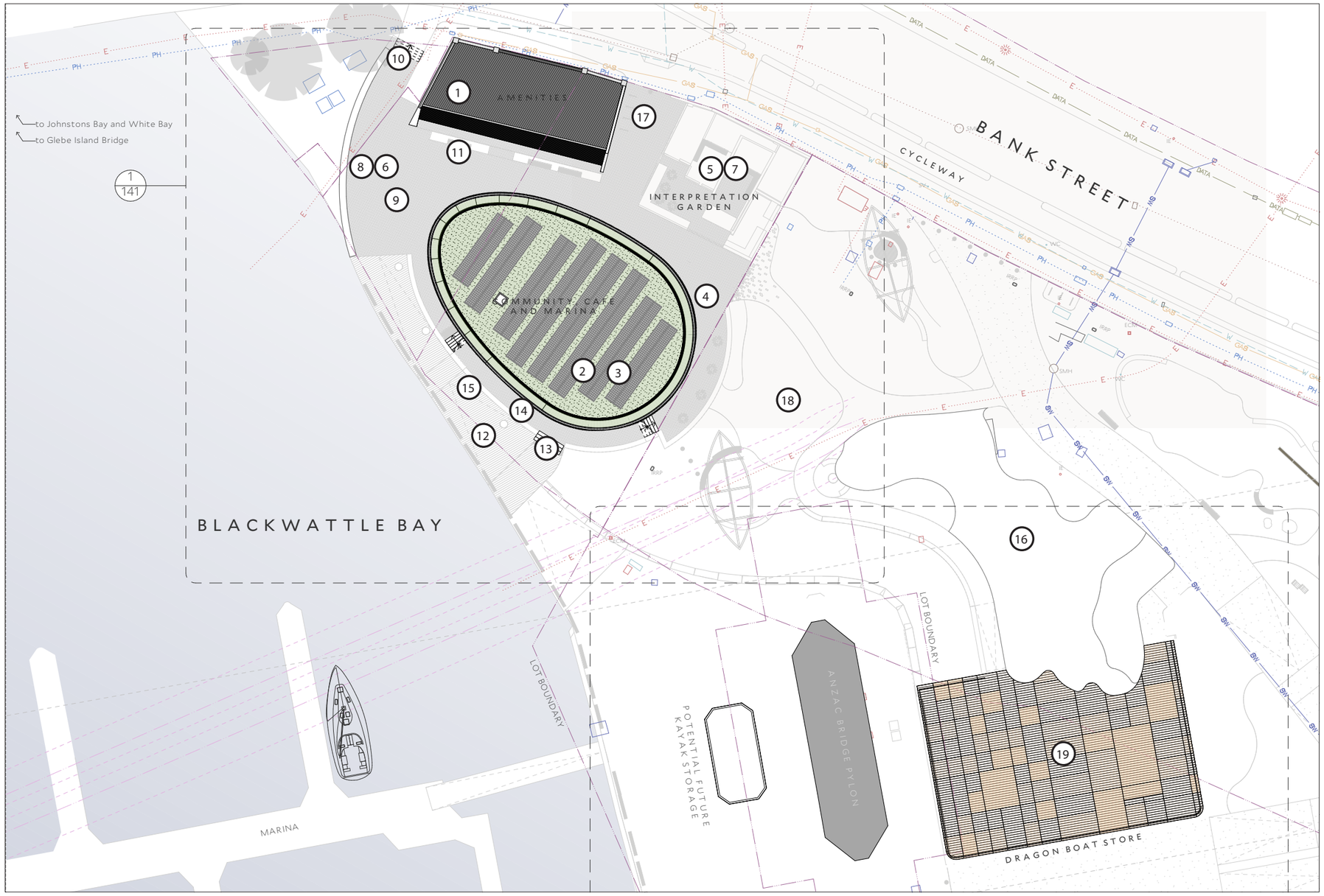




Built Form Overview
Architecture

Legend

1	Amenities and storage in adaptively re-used Building D
2	New community building, marina office and storage
3	Solar panels and green roof
4	Outdoor seating area associated with kiosk/cafe
5	Interpreative deconstructed garden and outdoor seating
6	Public plaza with cultural and heritage interpretation
7	Seating and indigenous planting in existing building 'ruins'
8	New feature wall with potential interpretation elements
9	Feature Angophora remembrance tree
10	Pedestrian stair access to Bank Street
11	Foundation planting to amenities
12	Timber boardwalk
13	Stair connection to marina office and storage
14	Marina ofice terrace
15	New tree planting to shade the western sun
16	Open lawn area
17	Cycle racks and equal access to Bank Street
18	Open lawn area
19	Dragon boat storage with deck over incorporating cultural memorial



2.11 Site Sections

Section A

Generally the existing grades across the new park will be retained with some excavation required to achieve proposed new levels along the waterfront.

1:250@A3

2 0m 2 4 10m

Site Sections
Section B

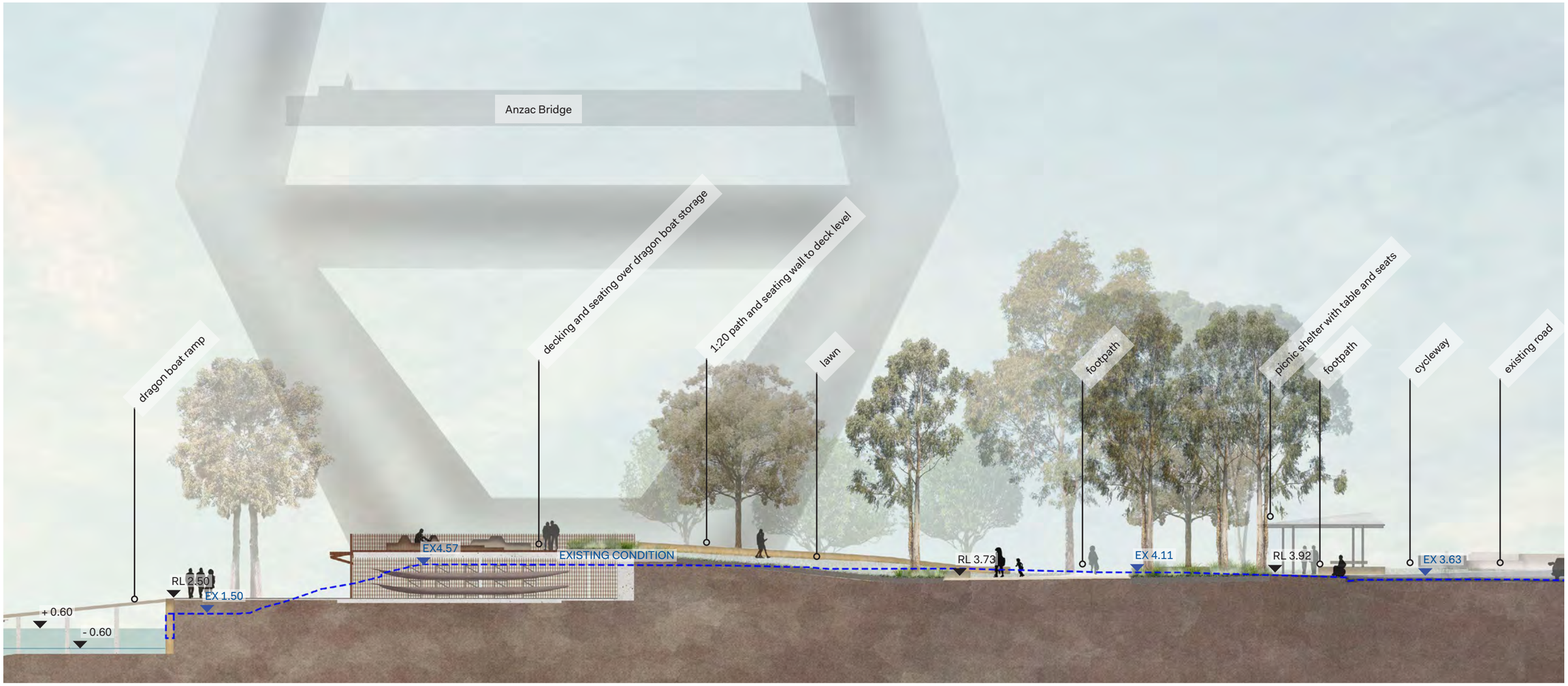
New sandstone blocks will be provided to enable increased biodiversity through intertidal zones and planting as well as allowing access to the water.

1:250@A3

2 0m 2 4 10m

Site Sections
Section C

The proposed dragon boat storage will be embedded into the landscape so as not to obstruct views from the park. It will also provide an observation deck to look out across Blackwattle Bay and the surrounding foreshore.



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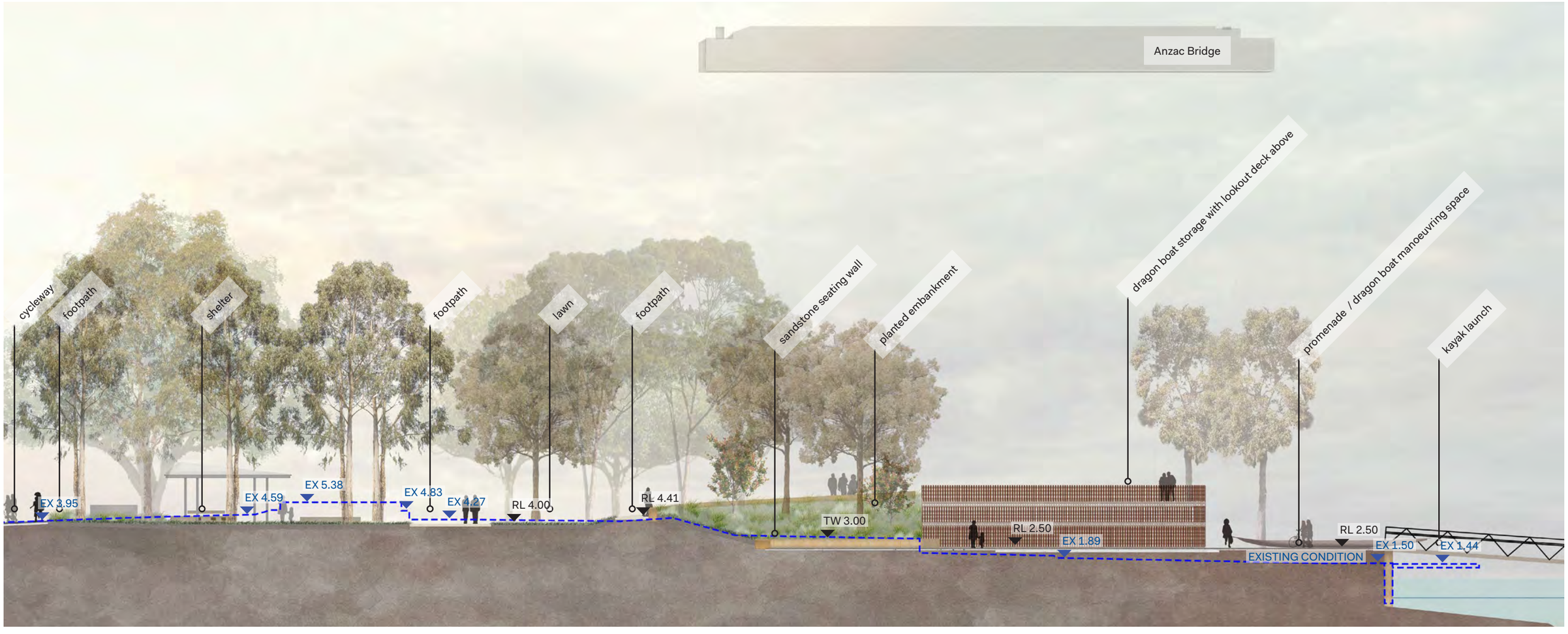
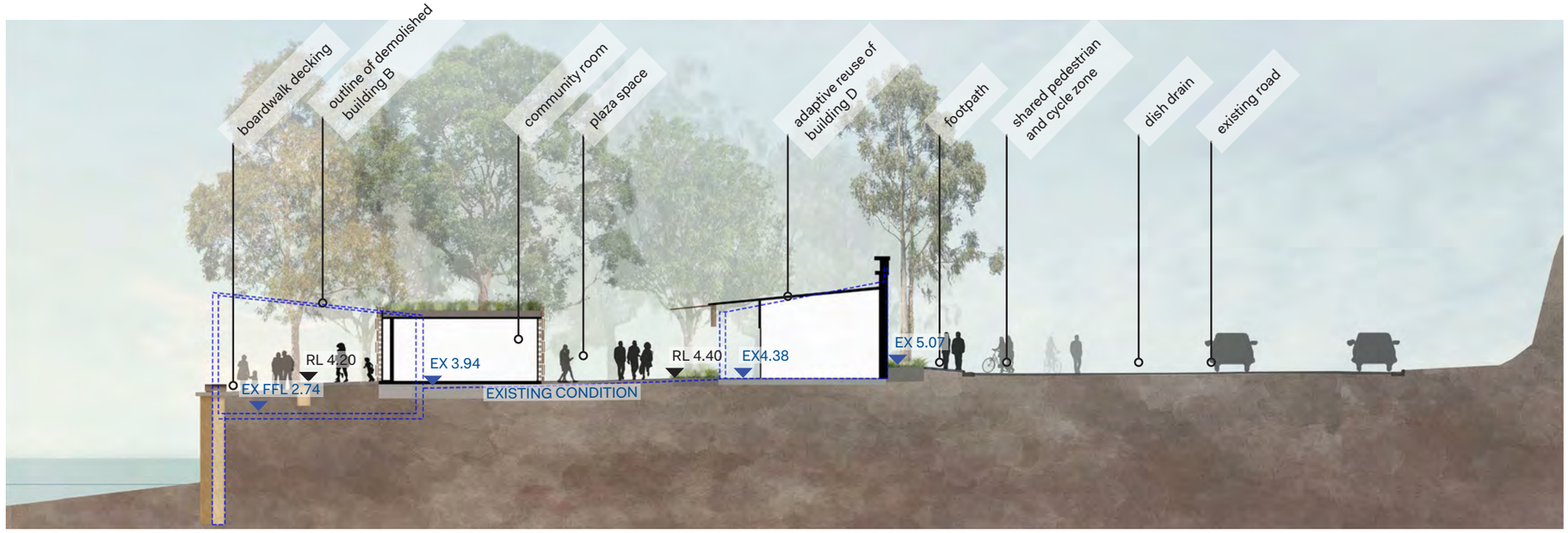
Site Sections
Section D

The existing gabion structures will be removed and the landscape regraded to provide an at grade connection with the deck over the dragon boat storage. The existing levels around the Anzac Bridge pylon will be elevated to RL 2.5 to match with the new waterfront promenade.



Site Sections
Section E

The existing Buildings B and C at 1-3 Bank Street will be demolished to provide pedestrian access along the waterfront with the new community building being at scale with the adaptively reused Building D along the Bank Street frontage.

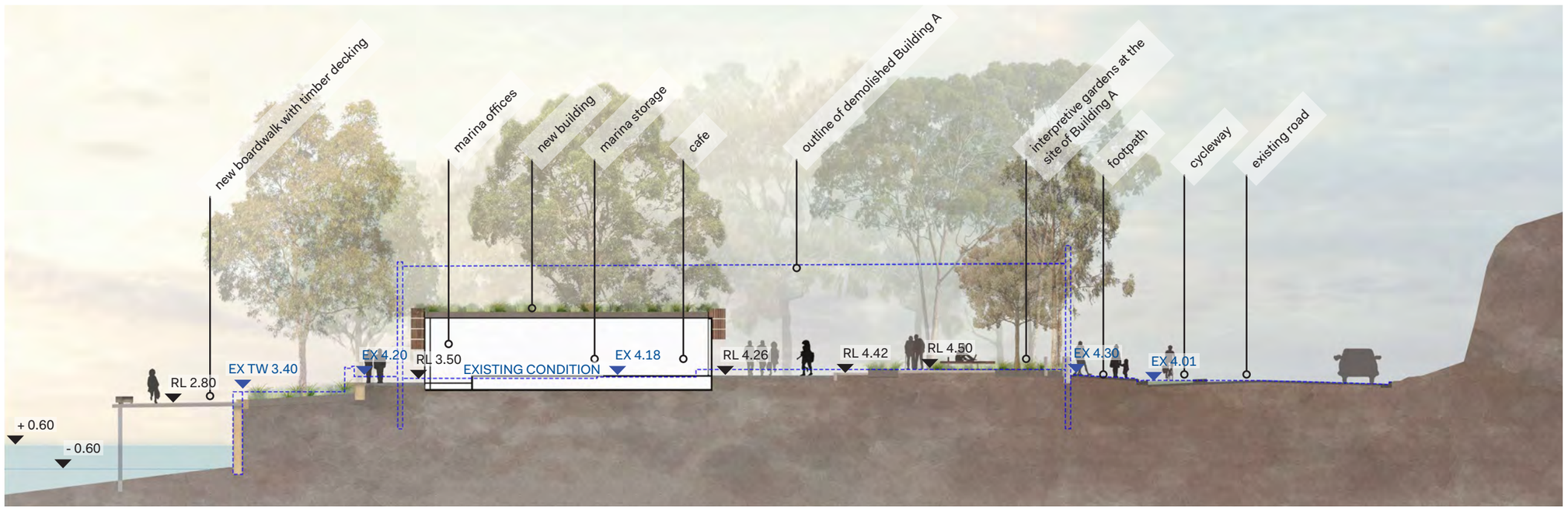


1:250@A3

2 0m 2 4 10m

Site Sections
Section F

A new board walk is proposed to allow continuous pedestrian access along the waterfront and around the new community, marina office and storage building. Building A will be partly demolished to provide both physical and visual connection between the new park and 1-3 Bank Street.



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2 0m 2 4 10m

Site Sections
Section G

Existing grades are retained in proximity to the southern boundary in order to retain existing mature trees. These grades provide a slope down to the southern boundary in the location of the future colonnade in the adjacent block that, along with the proposed park path network, allow for a secondary pedestrian connection into the park half way along the southern boundary.

This stair connection should be provided when the adjacent block is developed, as providing this connection as part of the current works poses a safety and legibility risk, given it will be stepping down to a property boundary fence.

The adjacent envelope also allows for a setback to the park that may accommodate a pathway along the park edge, in addition to the primary pedestrian link to be provided through this block.

1:250@A3

2 0m 2 4 10m

Site Sections
Section H

The southern boundary closer to Bank Street provides a more even grade transition to the adjacent development, however the bridge pylons and substation in this location would make it difficult to accommodate an active facade onto the park. For this reason, and given the active court near the boundary, a planted buffer is provided to contain the park edge and separate the court from the development.

1:250@A3

2 0m 2 4 10m

2.12 Landscape Views

Looking south from the cafe kiosk at 1-3 Bank Street

Looking south along the primary diagonal pathway towards the lookout deck and harbour

Looking south from 1-3 Bank Street towards the playground and lookout deck

Landscape Views

Looking north towards 1-3 Bank Street from within the park

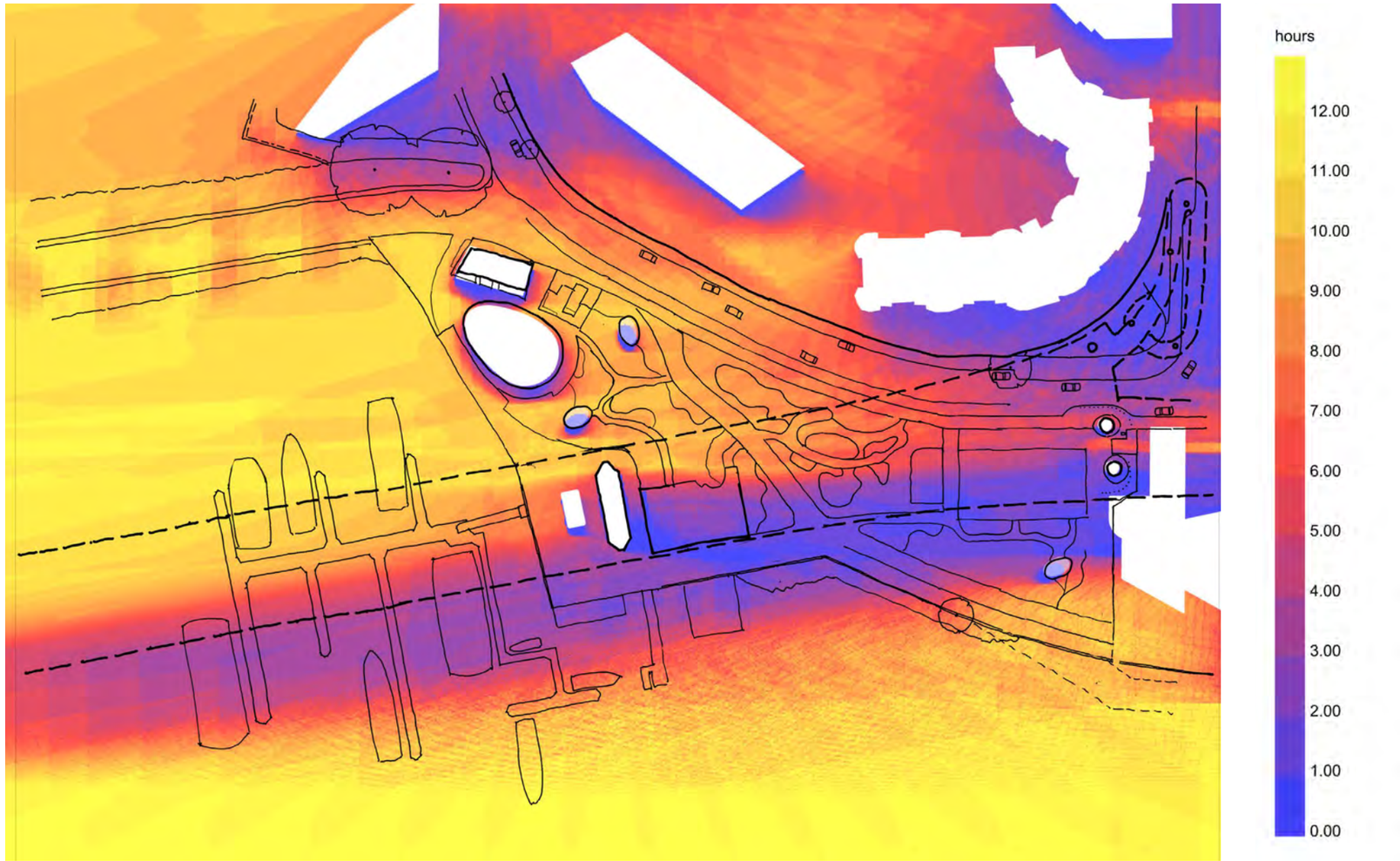
Looking north towards the harbour and multi-purpose court

Looking north from the southern boundary

2.13 Microclimate
Sunlight to Public Space

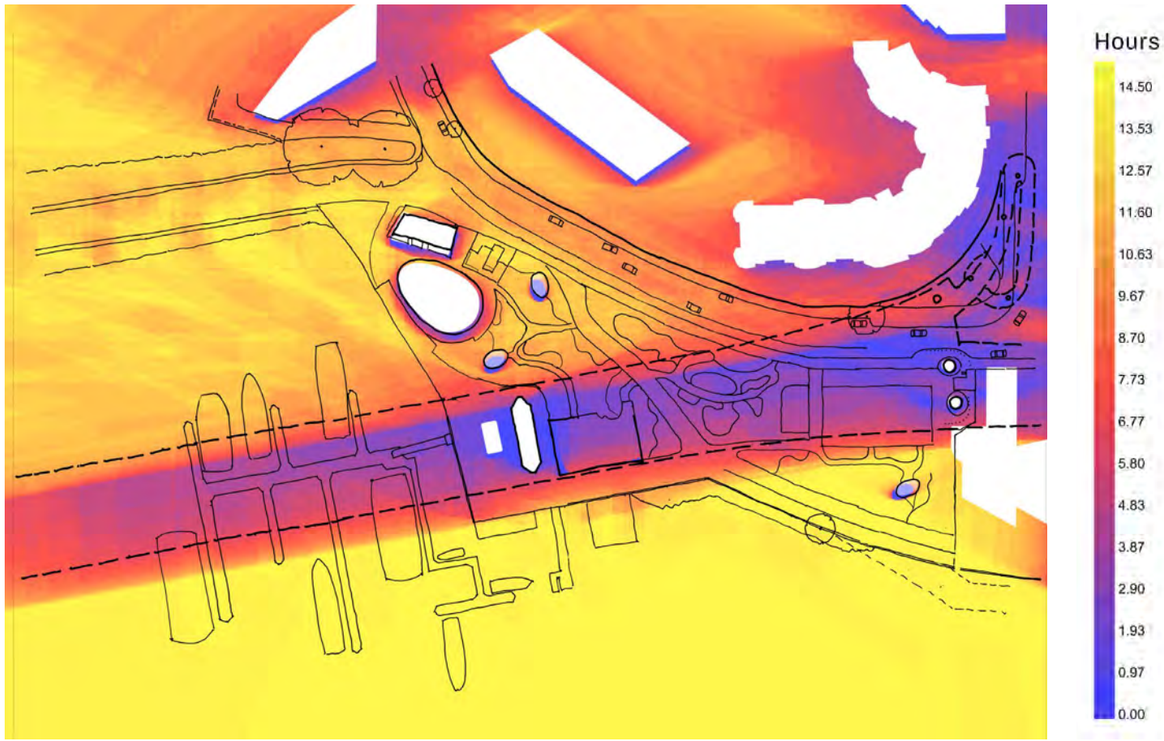
The Anzac Bridge is the primary feature impacting solar access to the site. The following diagrams illustrate the solar access at key times of the year, illustrating the significant variation of sunny versus shaded areas of the park based on seasonality.

The park layout is designed in response to solar access, with the playground and sports court receiving shade from the Anzac Bridge in summer and sun in winter. Shade is provided across passive recreation areas through tree canopy cover and additional landscape shelters.

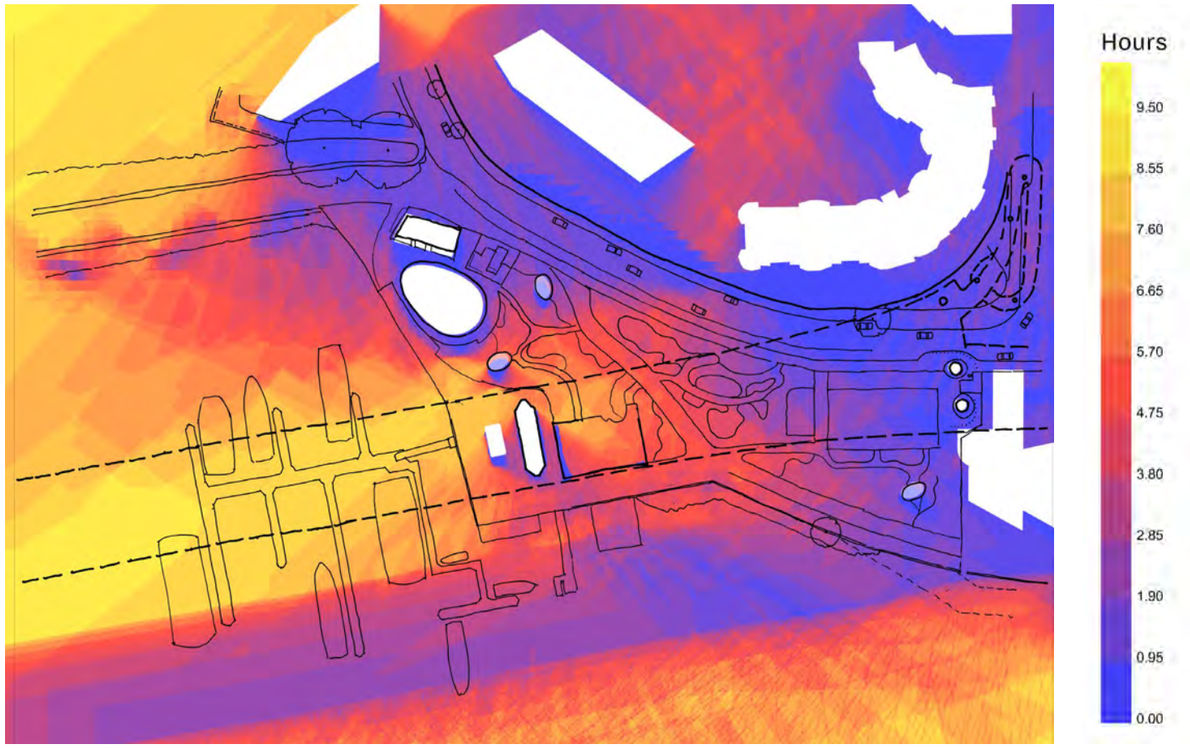


Solar Access: Spring and Autumn Equinox

Microclimate
Sunlight to Public Space



Solar Access: Summer Solstice



Solar Access: Winter Solstice

Microclimate
Overshadowing

By removing the existing building along the southern boundary of 1-3 Bank Street, solar access to the park is improved when compared to the existing condition, meeting the following Blackwattle Bay Design Guidelines and Clause 6.18 in the Sydney Local Environmental Plan criteria:

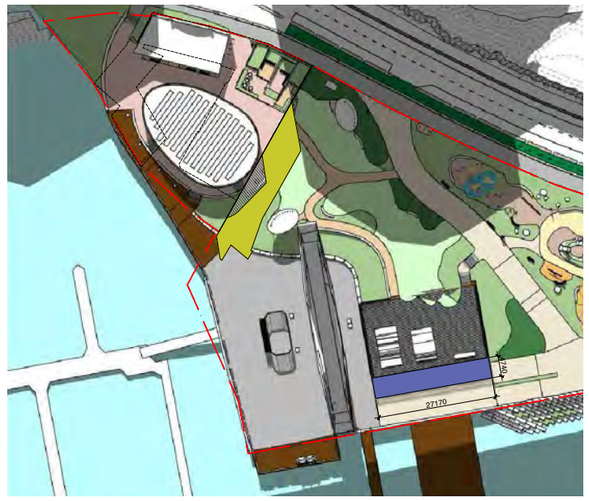
Buildings must not result in any additional overshadowing of Bank Street Park between 10am and 2pm all year.

Refer to overshadowing diagrams for further detail.

Clause 6:18 applies to the following area and excludes 1-3 Bank Street:

9am

10am

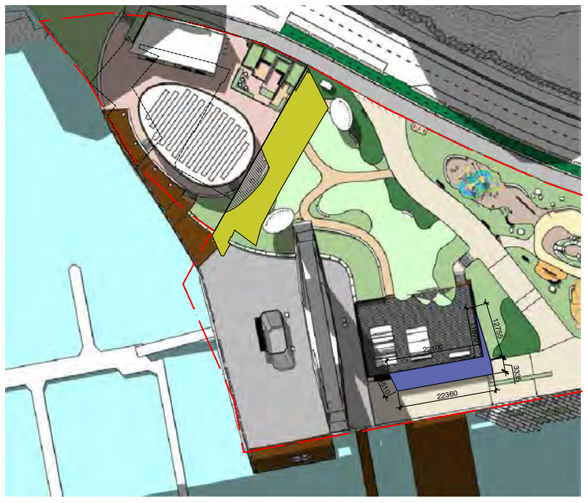


11am

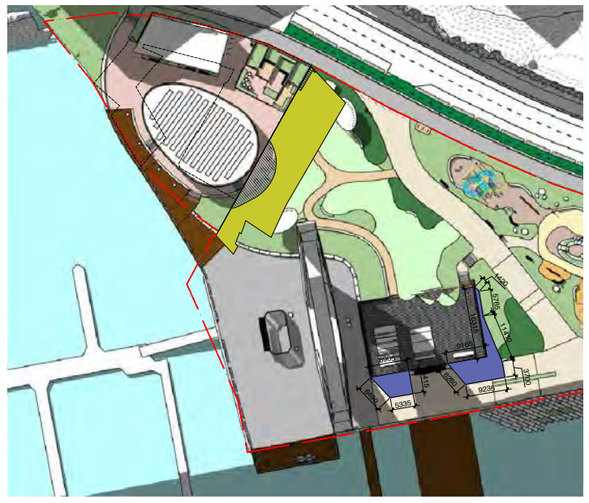
Winter Solstice - 21 June

Based on the analysis below and adjacent diagrams, there will be net reduction in overshadowing of the park between 10am and 2pm mid-winter compared to the existing condition.

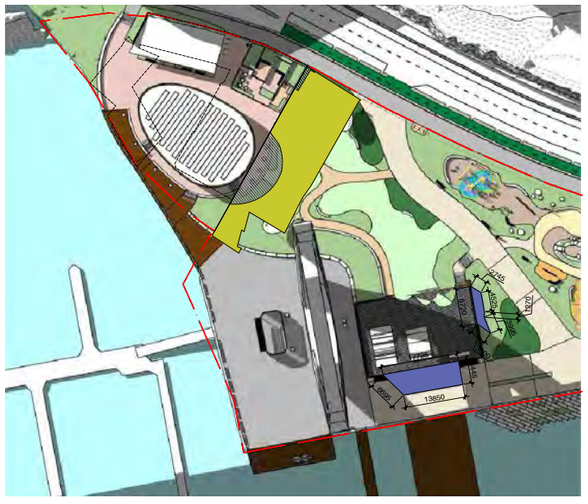
Note this excludes new tree planting and shade structures within the park from the calculations.



12pm



1pm



2pm

3pm

	Net change in overshadowing		
Time of day	**1-3 Bank Street***	**Dragon Boat Storage**	**Combined**
10am	0m^2	+175m^2	+175m^2
11am	-207m^2	+129m^2	-78m^2
12am	-312m^2	+107m^2	-205m^2
1pm	-369m^2	+119m^2	-250m^2
2pm	-458m^2	+105m^2	-353m^2

*1-3 Bank Street indicates net overshadowing of 5-19 Bank Street created by the new building and the removal of existing building

Legend

- Existing shadow retained
- Existing shadow removed
- New Shadow

Microclimate
Overshadowing

Equinox - 23 September

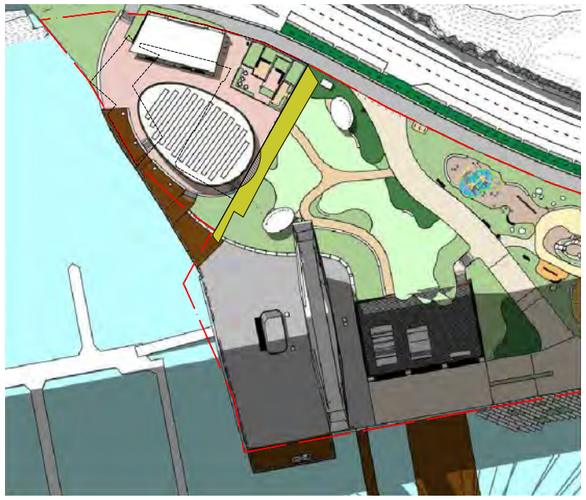
Based on the following analysis, there will be net reduction in overshadowing of the park between 10am and 2pm at the Equinox compared to the existing condition.

Note this excludes new tree planting and shade structures within the park from the calculations.

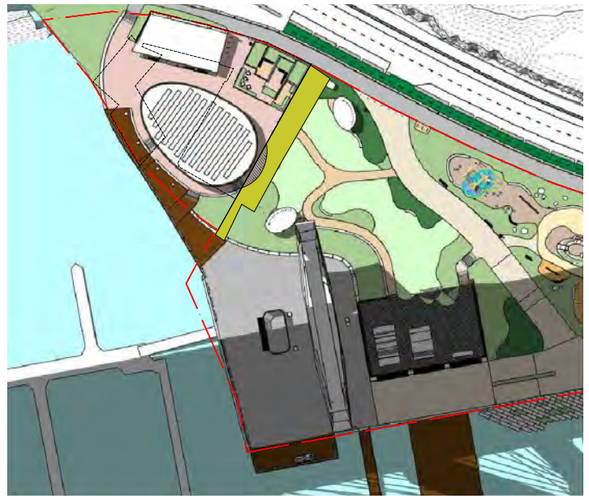
9am

10am

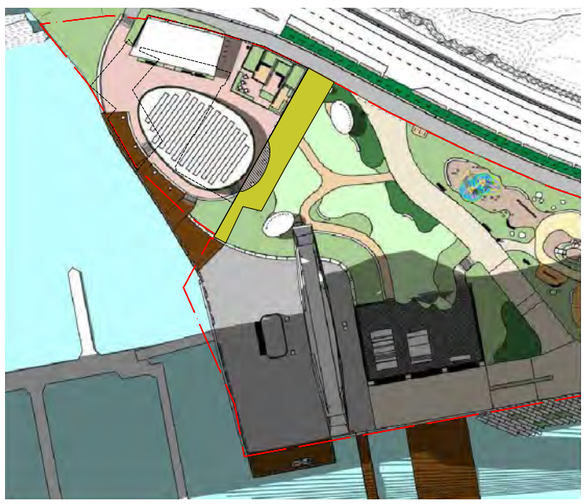
11am



12pm



1pm



2pm

3pm

	Net change in overshadowing		
Time of day	**1-3 Bank Street***	**Dragon Boat Storage**	**Combined**
10am	-57m²	+12m²	-45m²
11am	-105m²	0m²	-105m²
12am	-148m²	0m²	-148m²
1pm	-187m²	0m²	-187m²
2pm	-229m²	0m²	-229m²

*1-3 Bank Street indicates net overshadowing of 5-19 Bank Street created by the new building and the removal of existing building

Legend

- Existing shadow retained
- Existing shadow removed
- New Shadow

Microclimate
Overshadowing

Summer Solstice - 22 December

Based on the following analysis, there will be net reduction in overshadowing of the park between 10am and 2pm mid-summer compared to the existing condition.

Note this excludes new tree planting and shade structures within the park from the calculations.

9am

10am

11am

Time of day	Net change in overshadowing		
	1-3 Bank Street*	Dragon Boat Storage	Combined
10am	0m²	0m²	0m²
11am	0m²	0m²	0m²
12am	-39m²	0m²	-39m²
1pm	-71m²	0m²	-71m²
2pm	-97m²	0m²	-97m²

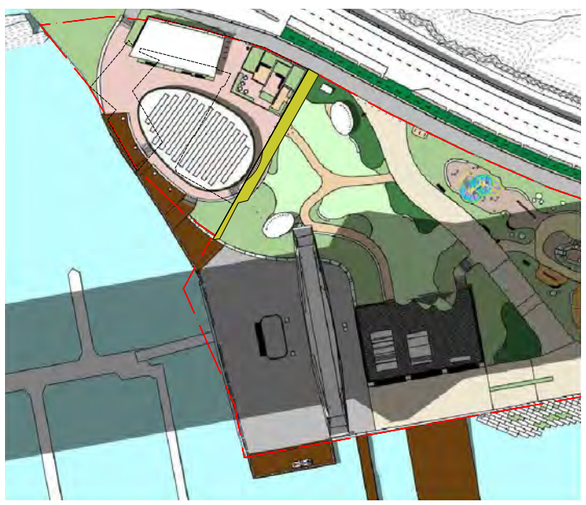
*1-3 Bank Street indicates net overshadowing of 5-19 Bank Street created by the new building and the removal of existing building

Legend

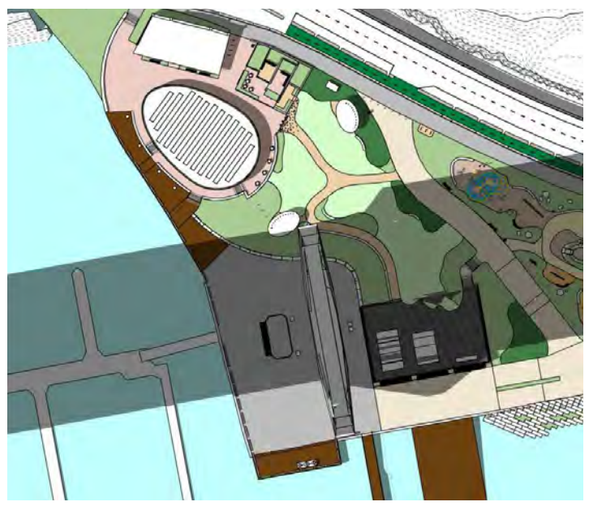
- Existing shadow retained
- Existing shadow removed
- New Shadow

12pm

1pm



2pm



3pm

Microclimate
Wind

Based on wind studies for Blackwattle Bay, Bank Street Park currently meets pedestrian safety and comfort criteria as per the Sydney DCP 2012 and Blackwattle Bay Design Guidelines. The study also demonstrated that wind speed direction and magnitude varied across the park based on local conditions, including openness to the harbour, and the effects of the cliff wall along the northern side of Bank Street.

The design for Bank Street Park looks to ameliorate adverse wind conditions to provide greater pedestrian comfort. Trees of various scales across the site will aid in reducing wind impacts, while planting including low shrubs is used to shelter seating areas and provide a buffer to the sports court.

An assessment of the design has been carried out by Windtech, concluding that it is expected that wind conditions for the various trafficable outdoor areas within and around the development will be suitable for their intended uses, and that the wind speeds will satisfy the applicable criteria for pedestrian comfort and safety.

Refer to the Bank Street Park Pedestrian Wind Environment Statement for more information.

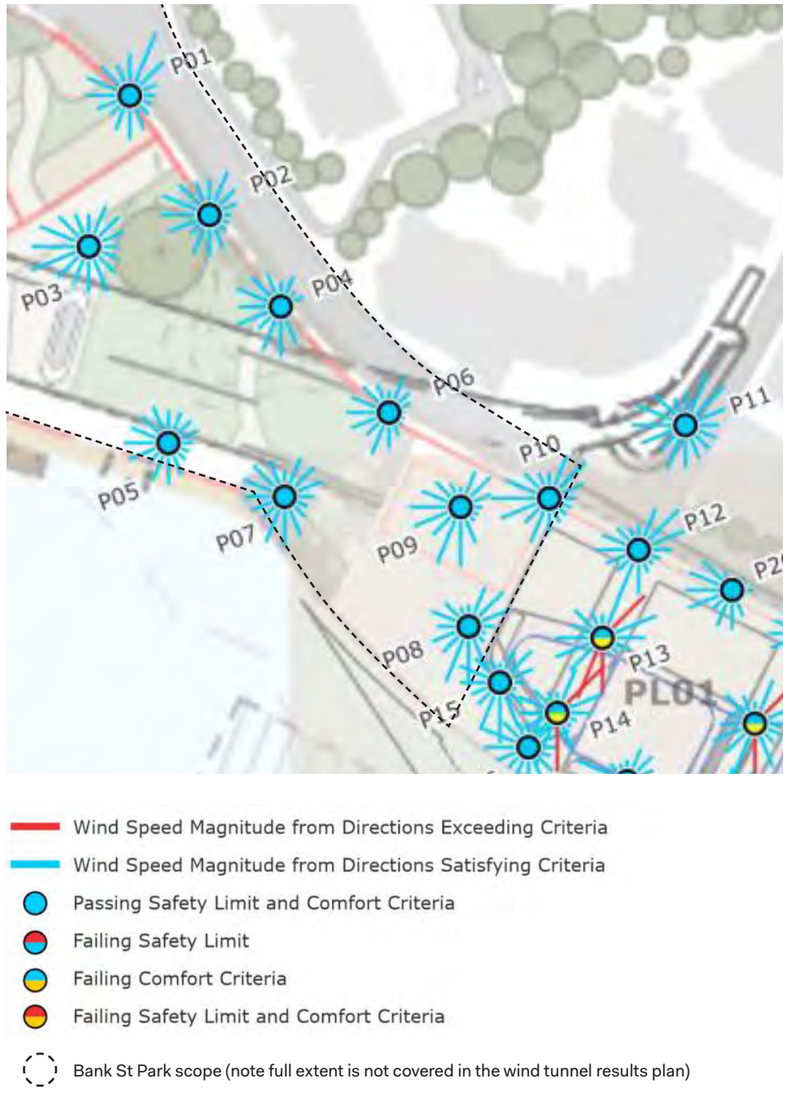


Figure 13. Wind Tunnel Results (Blackwattle Bay Pedestrian Wind Environment Report, Windtech, 2022)

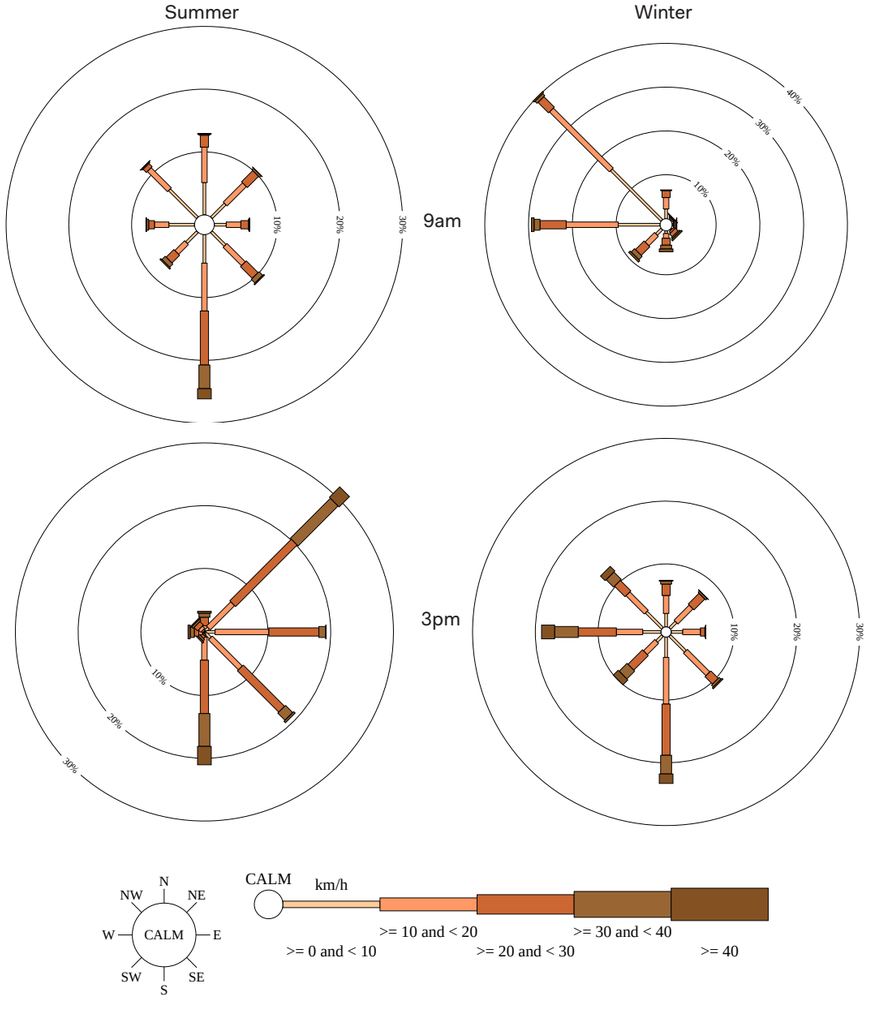


Figure 14. Seasonal wind direction and strength (BoM data for Sydney Airport)

2.14 1-3 Bank Street

1-3 Bank Street houses the primary built form of the site, with a mixture of old and new creating a rich and layered public domain. The buildings provide amenities, community room, cafe kiosk and marina facilities and are fully integrated into the surrounding landscape, nestled amongst a flexible plaza space, interpretive seating garden grown out of the remains of the previous building, and spill out areas to the cafe.

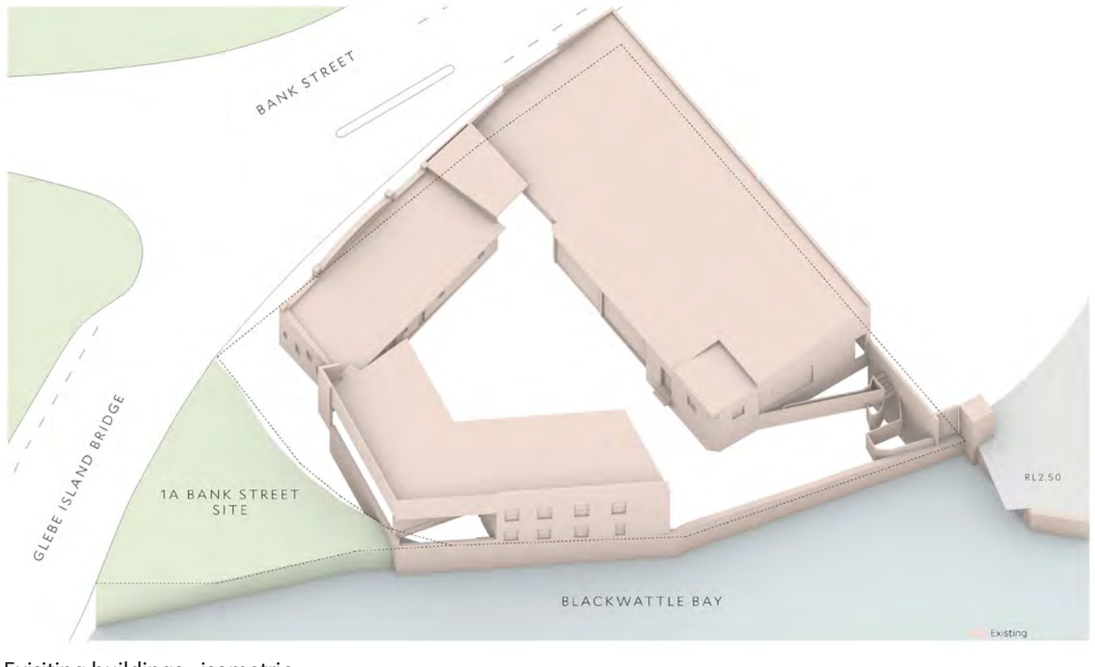
Legend

1	Amenities and storage in adaptively re-used Building D
2	New community building, marina office and storage
3	Solar panels and green roof
4	Outdoor seating area associated with kiosk/cafe
5	Interpretive deconstructed garden and outdoor seating
6	Public plaza
7	Seating and indigenous planting in existing building 'ruins'
8	Sandstone seating wall
9	New tree plantings in boardwalk along water's edge
10	Pedestrian stair access to Bank Street
11	Foundation planting and seating to amenities
12	Timber boardwalk
13	Stair connection to marina office and storage
14	Marina office terrace
15	New tree planting to shade the western sun
16	Open lawn area
17	Cycle racks and equal access to Bank Street
18	Separated cycleway
19	Existing vegetation retained and supplemented
20	Glebe Island Bridge abutments retained

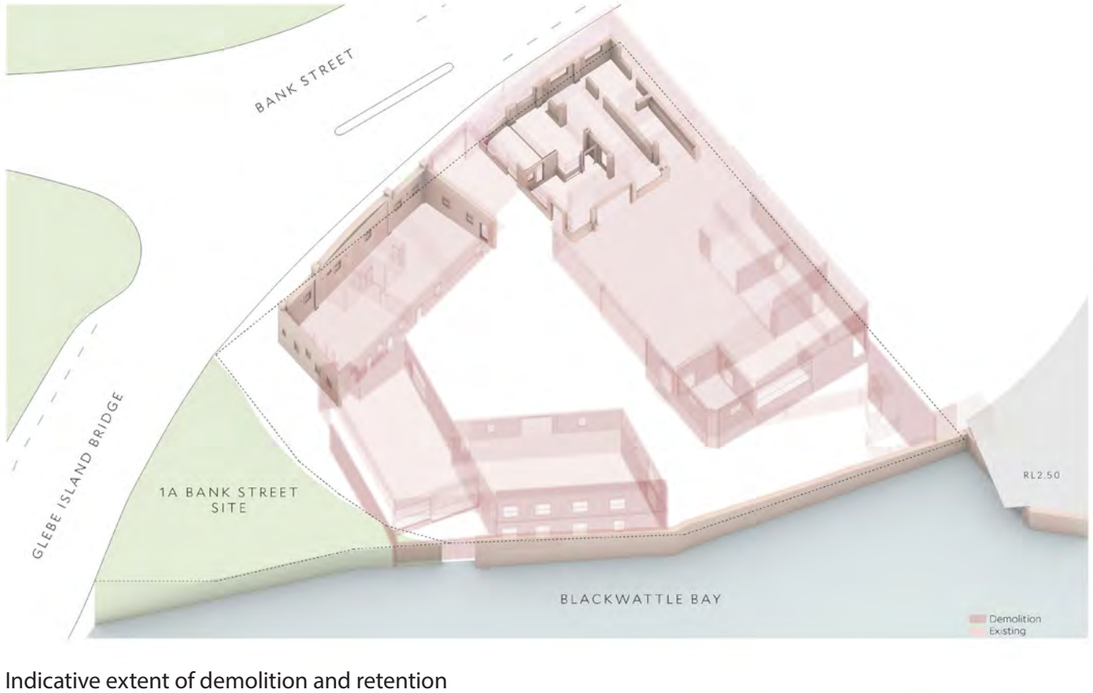
2 0m 2 4 10m

2.15 1-3 Bank Street Buildings

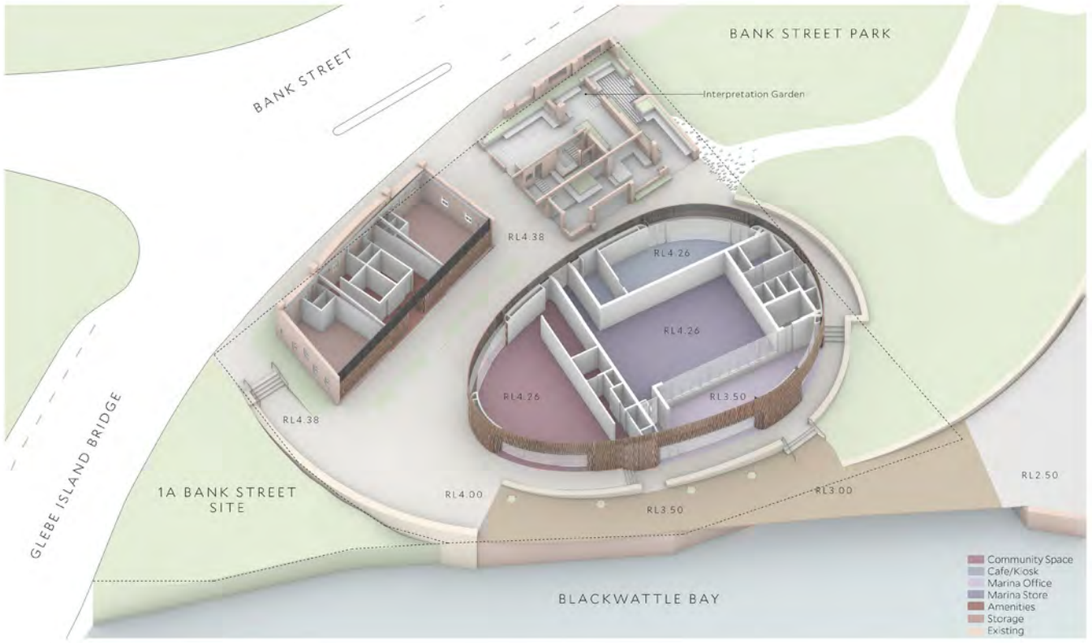
Isometric Diagrams



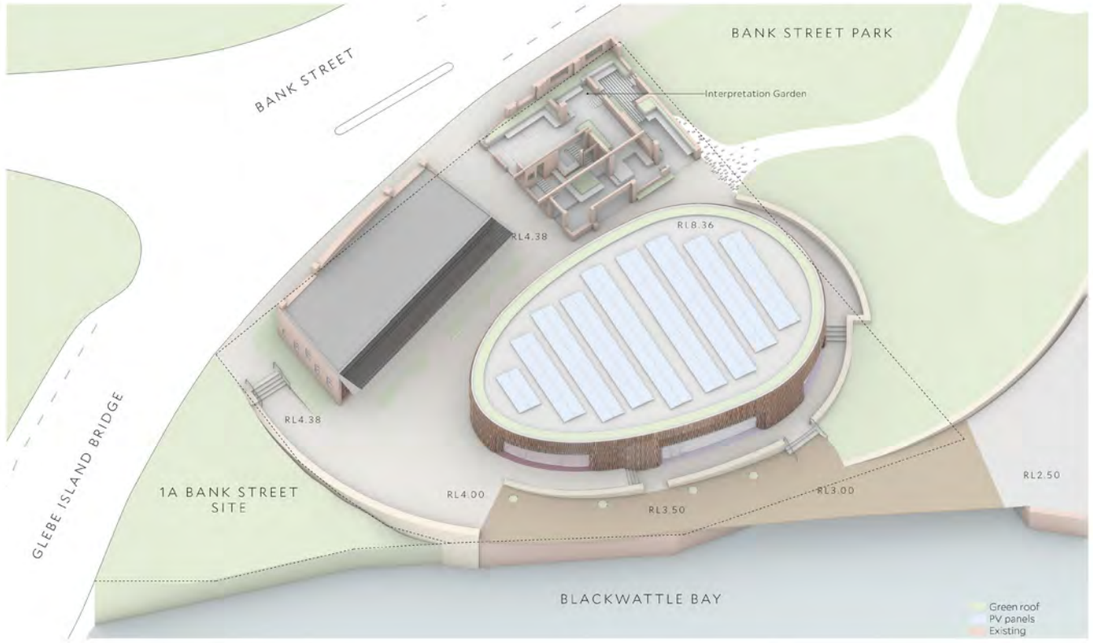
Exisiting buildings - isometric



Indicative extent of demolition and retention

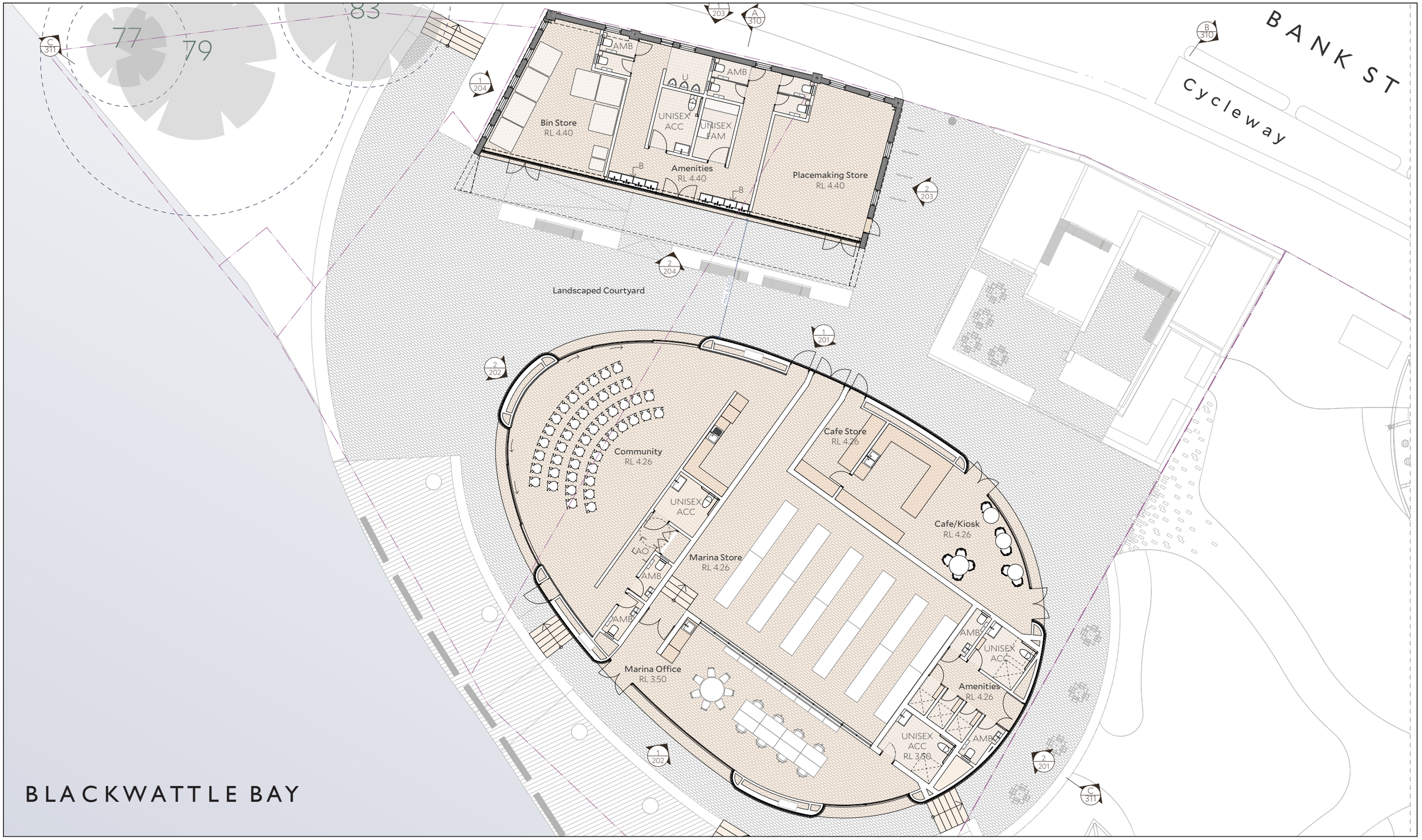


Overlay of proposed new works



Proposed completed building forms

1-3 Bank Street Buildings
Proposed Ground Floor Plan



1-3 Bank Street Buildings
Natural Building Materials

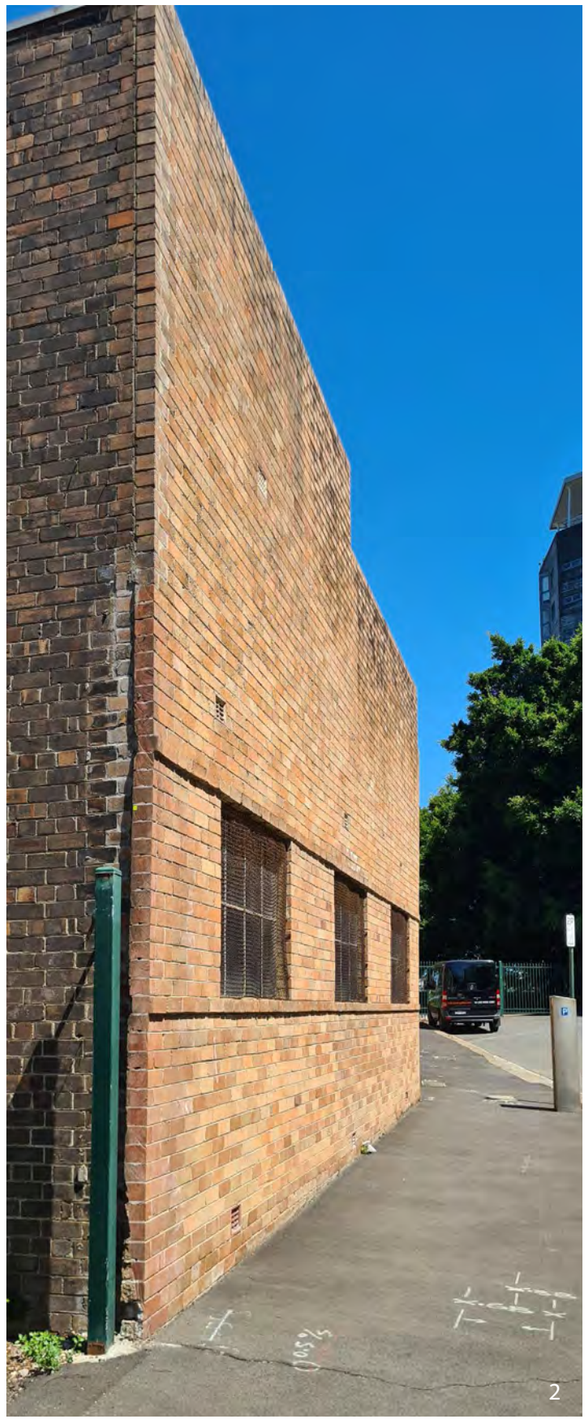
Materials selected for new building works at Bank Street Park have been selected to complement the proposed landscape works, as well as the industrial-maritime character of the existing forms and structures which will be retained at the water-front site.

The selective use of a consistent palette of materials will serve to contribute to a project-wide vision and holistic design language that brings together architecture, landscape, heritage and design for country into a coherent singular and unified urban experience.

Natural building materials like concrete and brick have a significant impact on cooling public spaces. Their high thermal mass helps regulate temperature by absorbing heat during the day and releasing it slowly at night, creating a cooling effect. In public areas, such as plazas or courtyards, the continuation of brick for use in paving surfaces will provide a comfortable, cool environment for people to gather. Additionally, their porous nature allows for better moisture absorption and retention, further contributing to cooling through evaporative processes.

By incorporating such materials into urban design, we can mitigate the urban heat island effect, reduce energy consumption, and create more comfortable and sustainable public spaces for communities to enjoy.

1


2


3


4

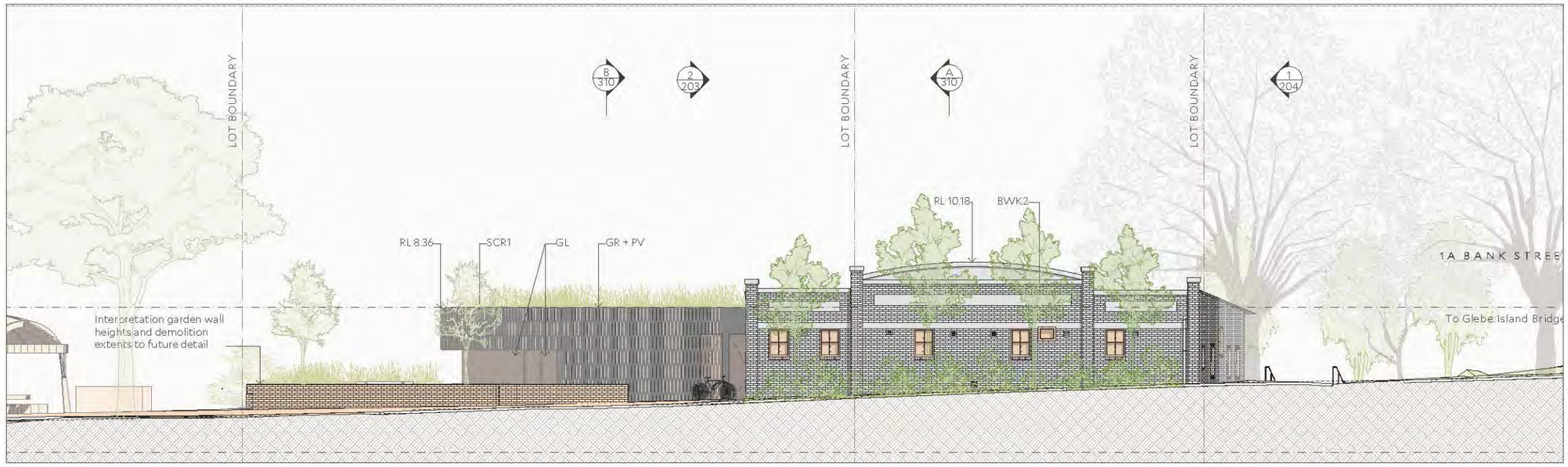

5


6

Existing site character - construction materials

1	Anzac Bridge Soffit - in-situ and pre-cast concrete
2	Existing Brickwork at 1-3 Bank Street
3	Bank Street elevation to be retained
4	Landscape character to northern area
5	Glebe Island Bridge -painted structural steelwork
6	Glebe Island Bridge - Sandstone Pier

1-3 Bank Street Buildings
Elevations



East Facade

Courtyard (North) Facade

1-3 Bank Street Buildings
Facade Systems and Materials

Our strategy for proposed elevational treatments for the new facades across the 3 buildings at Bank Street Park envisages a unified architectural response that enables the construction of a range of different facade typologies responding to the programmatic needs of individual buildings, using a consistent 'kit of parts'.

This systemised approach will enable the efficient configuration and construction of facades to all 3 buildings utilising a series of common components and finishes.

This integrated approach will visually connect the different structures, providing a coherent architectural language that links and unifies the forms whilst allowing for the specific technical requirements of each such as thermal performance, accessibility, security, transparency and operability to be provided in the locations required.

Core components of the systems will be a lightweight metallic framing system, designed to be exposed in some locations, alternatively provide or contribute the support of a combination of alternative masonry and ceramic profiles to provide a range of alternative cladding outcomes to solid walling surfaces.

The exact choice of finishes will be determined through detailed evaluation, testing and prototypes to best compliment existing masonry materials at the site, along with contrasting finishes such as the metallic surface finish to Glebe Island Bridge.

The strategy further allows for the incorporation of colour and feature inserts within the facade, allowing the facades to be treated as a canvas - a creative surface to potentially be developed in conjunction with an artist as part of a wider strategy for Connection with Country at the site.

Shared DNA

The three buildings have different uses but are connected by a shared DNA through the use of a family of facade elements.

Dragon Boat Storage

The dragon boat storage expands on the industrial and practical nature of the dragon boat racks and brings the punched galvanized and painted steel channels synonymous with industrial framing into the facade context. Arranged so as to provide a robust, durable facade but with an elegance and rhythm appropriate to the scale of the building these elements provide a secure envelope while allowing natural daylight and air to filter through. This facade treatment is self spanning and works with minimal sub-framing also making it ideal to integrate into the large bi-folding doors.

Amenities Building

The amenities building utilizes the same facade strategy as the dragon boat storage with punched galvanized and painted steel channels used to form the wall of the block facing the site. These again are structural elements which allow for natural daylight and air. On the lower section of the facade where more privacy is desired the channels are used to support vertically mounted ceramic battens.

Community, Cafe and Marina Facilities Building

The community, café and marina facilities building continues the ceramic facade treatment on the full perimeter of the building. For areas of facade in front of the structural perimeter walls a simple clip system will be used to support the battens but in areas where the facade extends beyond the walls, the steel system used on the amenity building and boat store will be used.

Facade Thermal Performance:

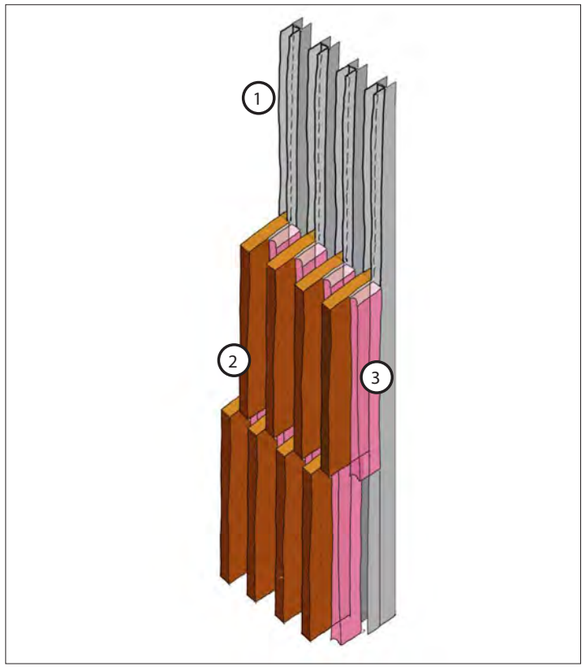
The mixed use community, café and marina building will see fluctuating usage times and population between the various spaces and benefits from the exposed thermal mass of the primary structure to help regulate the internal environment. The facade will align the insulation in the external wall with the double glazed openings to simplify the thermal envelope and ensure a straightforward pathway to compliance without complex interfaces. The recessed glazing line will help protect the glazing from high level sun and additional shading may be adopted for passive solar protection. The insulated glass will utilize a solar coating to further protect from solar overheating while allowing for a visually transparent glass.

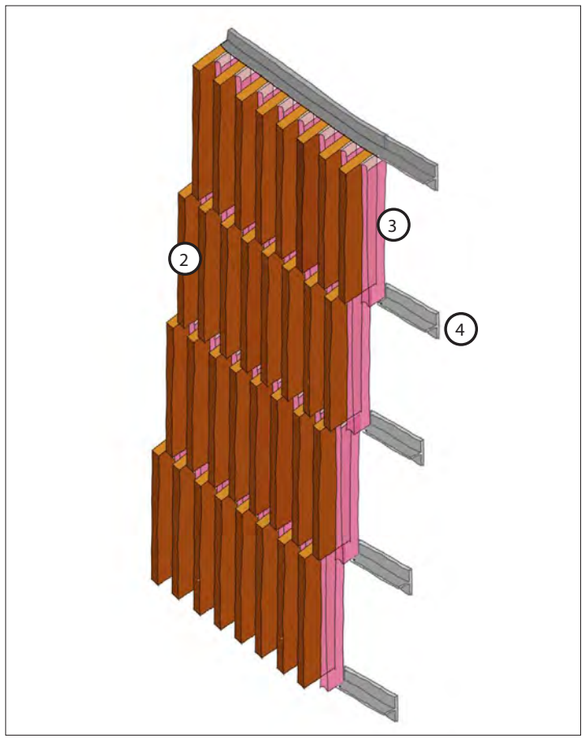
Dragon Boat Storage Building - Constructability / Structure

The structural strategy for the dragon boat shed is one of resilience and durability. The use of off form reinforced structural concrete for the primary structure follows crafted but semi-industrial aesthetic of the facade. With a relatively simple structural frame, spaced around the dimensions of the boat racks and the support of the large bi-folding doors. Longitudinal band beams run the length of the structure with sculpted slab spanning between. This slab could be formed on site or made of sculpted T-Profile pre-cast elements which can then be post tensioned on site. The concrete deck forms the roof of the boat shed but also a strong and stable platform for the viewing deck above allowing for a range of treatment options for the viewing area.

The primary structure of the community, café and marina building follows a similar strategy to that of the boat shed. In-situ concrete perimeter walls and slab provide a durable structure for this mixed use building. The sub-division of spaces means internal structure can be integrated into the walls between areas and asymmetrical plan and oval shape provide good stability. At roof level a continuous perimeter ring beam forms the parapet and outer edge of the roof system while supporting the slab and allowing the curved openings for the glazing.

All the concrete would have opportunities to integrate low embodied carbon / cement replacements alternatives for some if not all elements of the structural frame and the sculpting / void forms in the proposed design will minimize overall material volume.





Kit of Parts Approach

1	Verticall metallic framing profile for screen wall areas
2	Clay brick vertical profile
3	glazed ceramic vertical profile - colours vary
4	Horizontal fixing rail for solid walling areas

1-3 Bank Street Buildings

Community, Cafe & Marina Facilities Building - Materiality

For the community building, finishes have been selected that complement the existing materials found at the Bank Street site, along with those proposed for the new landscape works, reflecting also the maritime-industrial history and qualities of the wider Blackwattle Bay precinct beyond.

The perimeter facade of the building incorporates a combination of clay masonry brick units and glazed ceramic profiles in a vertically layered pixelated chequerboard pattern. It is intended that the colours of the glazed ceramic inserts can be developed in conjunction with an artist, with the resulting artwork potentially forming an important part of the precinct-wide Connecting with Country strategy. Detailed within this, coloured resin inserts provide a subtle jewel-like quality when illuminated at night, signifying entries to key spaces and assisting with way-finding.

Internally, construction will be robust, hard-wearing and low-maintenance. Off-form concrete will be used for the buildings structure, with a unique surface texture created with the use of orientated strand board timber form-work.

Key internal spaces offer the opportunity for additional visual warmth, with the potential for a wall-lining screens to the interior of the community room and cafe finished using textured Blackwattle timber (Acacia mearnsii) with the design developed to suit fabrication by Sydney based specialist carpenters and craftsmen.

Community, Cafe & Marina Facilities Building

1	Masonry brick facade element
2	Glazed ceramic profile
3	Straight and curved slimeline glazing with barrier-free threshold
4	Coloured resin - decorative and illuminated facade inserts.
5	Black wattle wood- Acacia mearnsii
6	Feature timber screen, e.g with Acacia mearnsii
7	Tooled decorative timber surface
8	Off-form concrete with OSB formed surface

1-3 Bank Street Buildings
Community, Cafe & Marina Facilities Building - Integrated Artwork Concept

Colours of Country

Glazed ceramic and resin inserts are positioned between the masonry brick profiles, set back from the surface resulting in a textile-like layered effect.

The resulting appearance of the facade will present the outer brick layer as a perforated surface, overlaid with a solid surface of changing colour behind.

This effect will reveal itself when viewed directly, being less visible when viewed obliquely. The colours will subtly change as visitors to the park move around the building.

Diagrams adjacent describe the desired effect of the layered colour, using as an example an artwork produced by Sydney artist Tiarna Herczeg - a Kuku Yalanji and Hungarian artist living and working on Gadigal land.

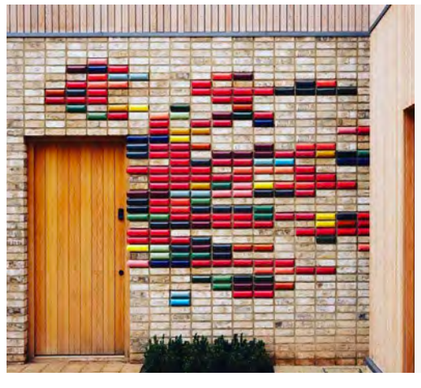
The internal wall to the back of the Community Space has the potential to be a curated art wall, continuing the Colours of Country approach within the building.

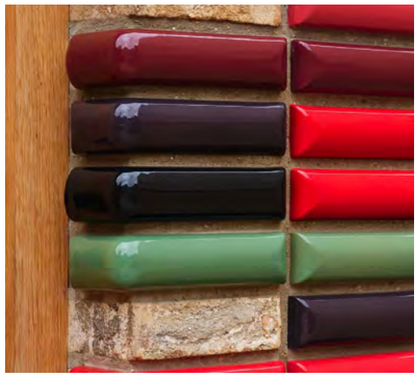
Reference project:

Private house, Guildford UK

Artist: Sophie Smallhorn

Artwork formed by combination of natural and coloured glazed brick.





1-3 Bank Street Buildings
Community, Cafe & Marina Facilities Building - Facade

The facade to the new community building is configured to enable a range of alternative requirements within the elevations, these include:

Community Space

Large format operable glazing with barrier free thresholds, maximising operability and visual connection between the community room and adjacent public space.

Solid walling to spandrels and column areas.

Marina Offices

Large format glazed walling including fixed and operable panels, enabling a strong visual connection between office staff, the marina adjacent and Blackwattle Bay beyond.

Dragon Boat Changing

Fixed and operable security screening allowing for good daylight, natural ventilation and locking of facilities out of hours.

Cafe

Large format fixed and operable glazing, potentially including an operable servery window

Fixed solid walling to BOH and storage areas.

Marina Storage

Fixed solid walling and large format operable doors for delivery access.

Reflectivity

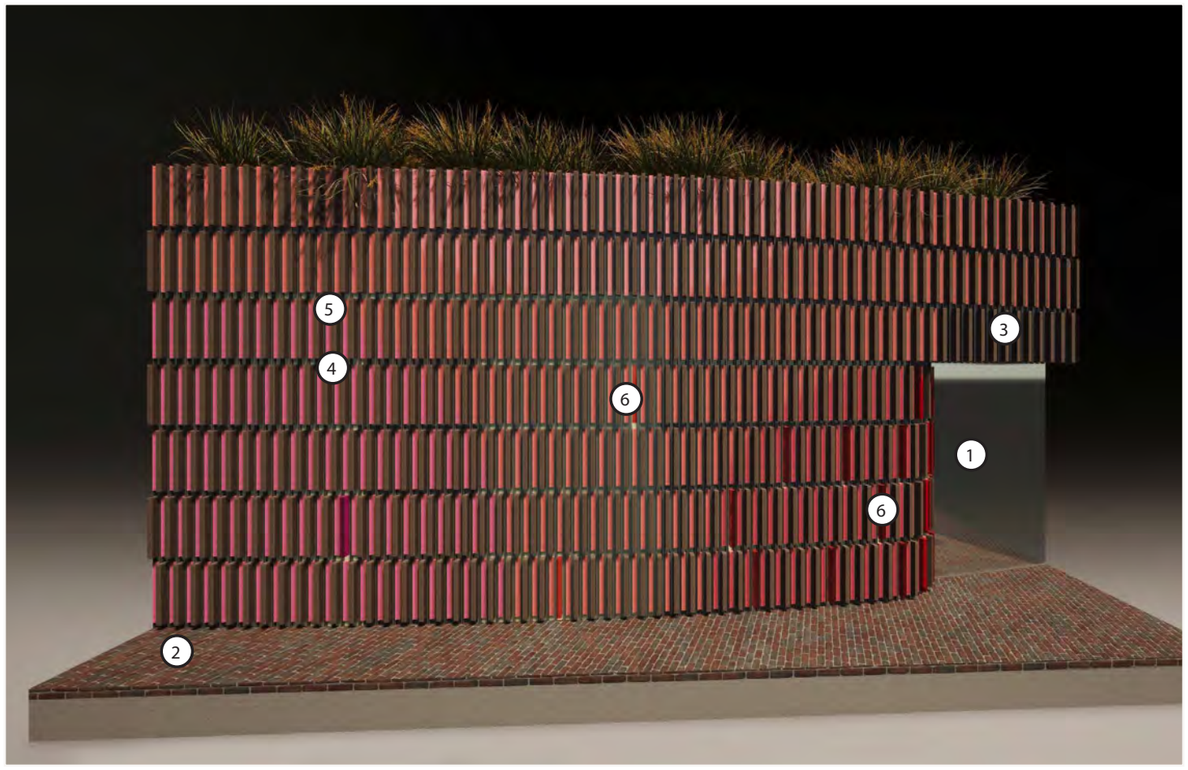
Large expanses of solid masonry walling as well as partial screening treatments to glass will ensure that relfectivity of the new façades will be minimal, and conform to the requirements of the Blackwattle Bay Design Guidelines which limit the use of reflective materials to less than 20% of facade area.

Glass specified will be clear and not utilise high performance reflective coatings.

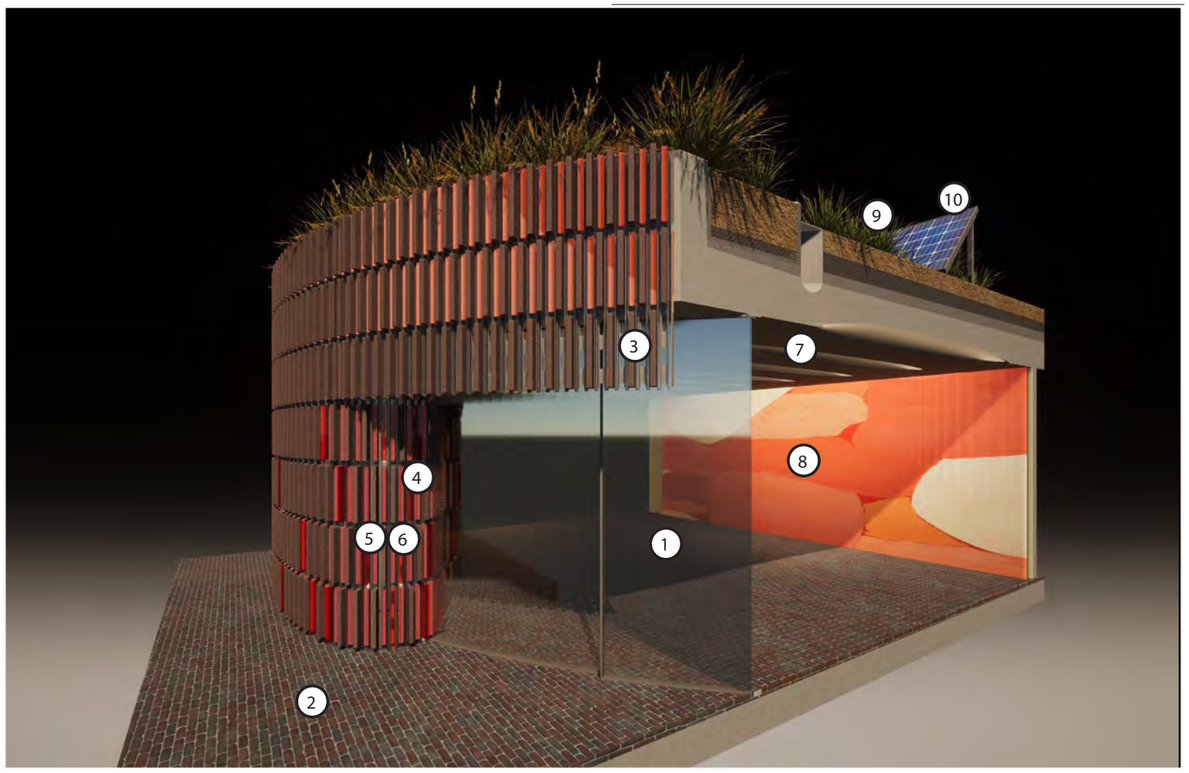
Matt finishes to masonry and metallic screening details are similarly consistent with this requirement, and also selected to minimise risk of urban heat island effect.

Key

1	Large format slimline framed solar control double glazing with barrier free threshold
2	Reclaimed Brick Paving
3	Metallic framed facade screen - open arangement at window edges
4	Metallic framed facade screen - brick insert for increased privacy
5	Metallic framed facade screen - coloured ceramic insert / artwork
6	Backlit resin insert
7	Off-form concrete soffit with cast-in lighting
8	Art wall
9	Lightweight green roof system (Elmlich or similar) comprising roof top insulation and waterproofing on top of RC slab as part of integrated green roof system, with accessible perimeter gutter and reticulated downpipes.
10	Photovoltaic installation



Community Building Facade- Part Elevation



Community Building Facade- Perspective View

1-3 Bank Street Buildings
Community, Cafe & Marina Facilities Building - Green Roof System

A green roof treatment is proposed as an integral component of the environmental strategy for the new community building at Bank Street Park. This inclusion is consistent with the Blackwattle Bay Design Guidelines, which encourage green roofs balanced with other complimentary sustainability and operational objectives such as photovoltaics.

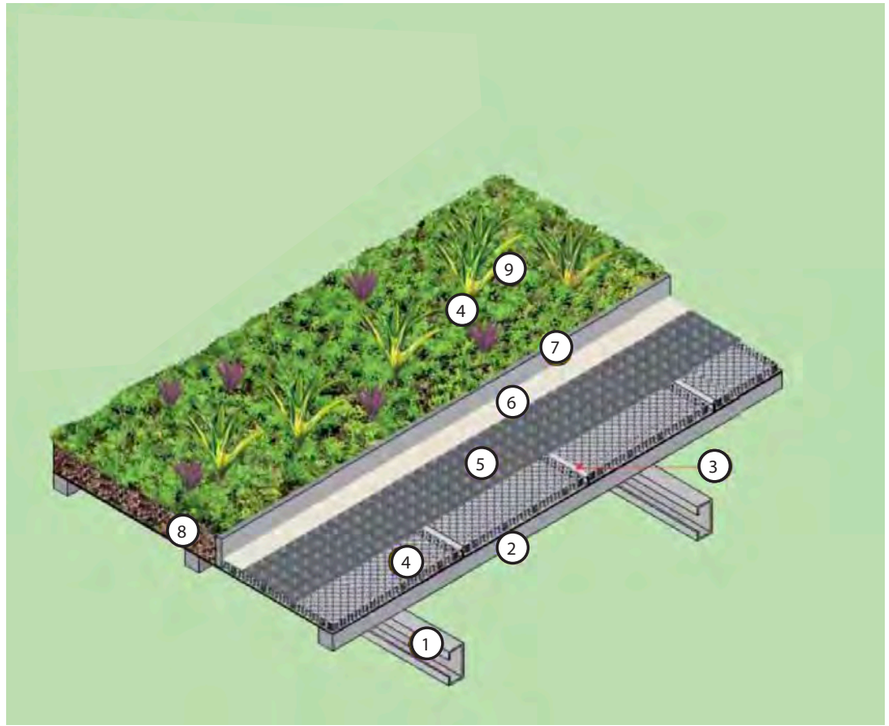
Directly viewable from adjacent apartment buildings as well as the Glebe Island Bridge, the green roof improves amenity and aesthetic quality of the urban environment, in accordance with the Blackwattle Bay Design Guidelines.

Green roofs provide shade, remove heat from the air, and reduce temperatures of the roof surface and surrounding air. Using green roofs in cities or other built environments with limited vegetation can moderate the heat island effect, particularly during the day. Green roof installations also act as natural air filters, improving air quality and supporting urban biodiversity. At 1-3 Bank Street, Green roofs will additionally serve to manage storm-water runoff efficiently.

Green Roofs with Photovoltaics

Green roofs with integrated photovoltaic arrays offer additional benefits, with micro-climates as a key advantage, generating renewable energy while reducing the urban heat island effect, creating cooler and more comfortable micro-climates. This enhances efficiency of the photovoltaics, whilst lowering energy consumption for air conditioning and further enhances environmental sustainability.

1	Steel Primary structure
2	Purlin
3	Metal deck roof
4	Drainage / Air insulation cell
5	Water retention tray
6	Geotextile
7	Metallic edge restraint profile
8	Soil Mix
9	Selected Plant Species
10	Photovoltaic installation on lightweighyt aluminium frame



Green roof system on lightweight roofing (Elmlich System)

Green roof system including photovoltaic installation

Green roof, First Unitarian Society of Madison Meeting, House Frank Lloyd Wright, 1946

Historic and contemporary green roof installations including native grasses.

Green roof including photovoltaics- Barangaroo NSW

1-3 Bank Street Buildings
Amenities and Storage Building (Former Building D) - Materiality

Materials proposed for the Amenities building (Former Building D) complement the retained northern, southern and eastern walls of the original structure, retained as part of the new works, and adaptively re-used as part of a coherent architectural vocabulary that celebrates the maritime heritage of the site.

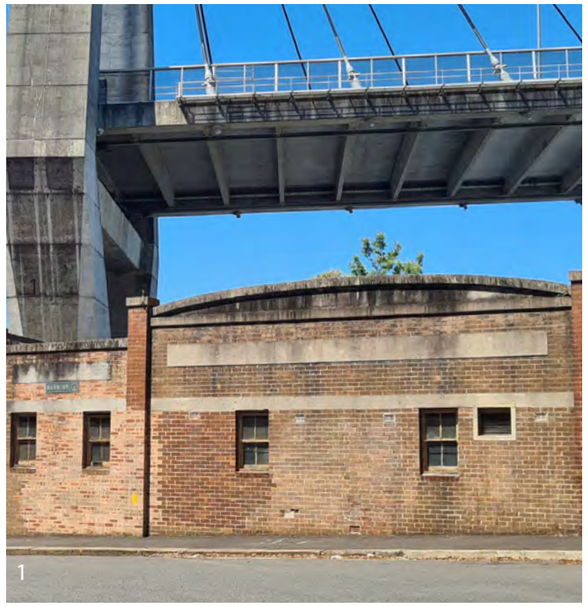
The new western facade will be constructed as a metallic screen incorporating vertical format clay brick inserts to lower levels, to provide partial privacy to open hand-wash areas in the public bathrooms. At higher level the screen will be open, allowing maximum daylight penetration as well as the benefits of natural cross ventilation.

Internally, indicative wall and ffinishes will combine glazed ceramic tiles with a complimentary toned terrazzo.

Fixtures and fittings to wet areas will provided in satin finished stainless steel to ensure a robust high-quality outcome requiring minimal maintenance.

Building D - Indicative Finishes

1	Existing east facade and Anzac Bridge
2	Metallic Screen - Western Facade
3	Terrazzo solid surface using recycled construction waste
4	Glazed ceramic tiling including terracotta colourway
5	Stainless Steel paneling and robust fixtures
6	Stainless Steel WC Pan
7	Mesh Signage with integrated LED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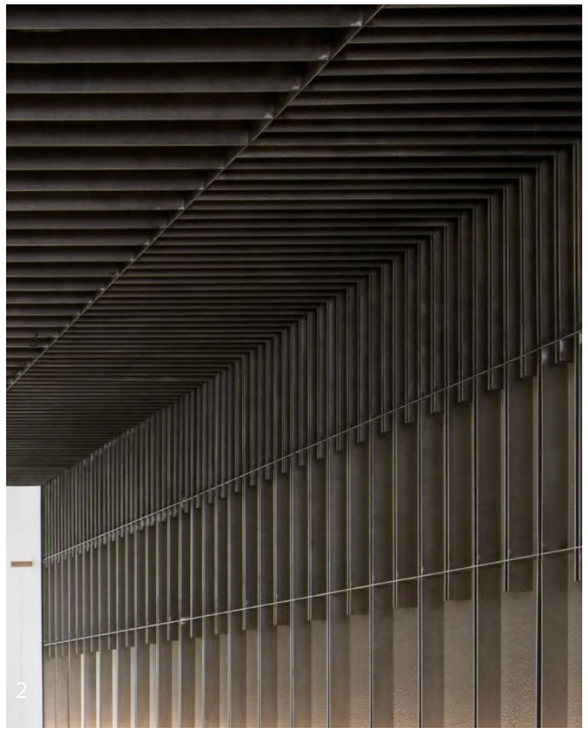
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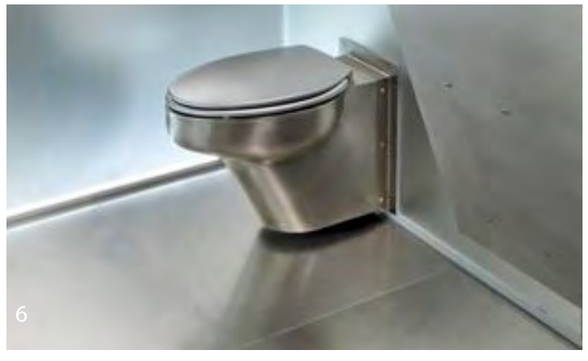
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1-3 Bank Street Buildings
Amenities and Storage Building (Former Building D) - Facade

Building D is the adaptive re-use of one of the former structures used for maritime operations at the site.

The reconfigured building will contain public amenities, PMNSW storage and a large bin store for marina use.

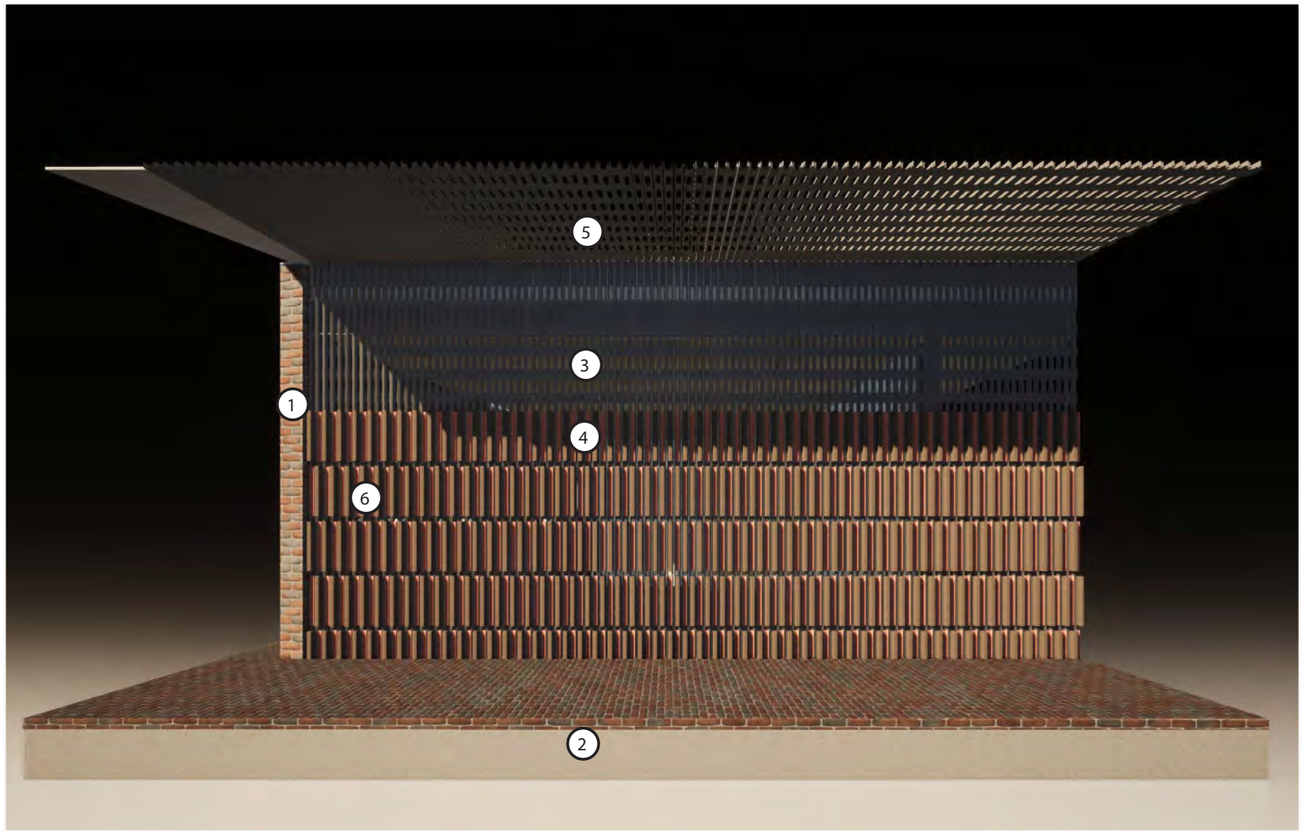
The adaptive re-use includes the retention of north, south and eastern facades. These facades will be repaired and detailing preserved in accordance with the heritage methodology decribed by GML. Window frames will be retained and refurbished with new translucent glazing replacing existing.

The western facade facing the new public space and community building will be constructed using the unitised facade system proposed for the project and include fixed and operable panelling, as well large surfaces desiged to enable daylight and natural ventilation of amenities areas.

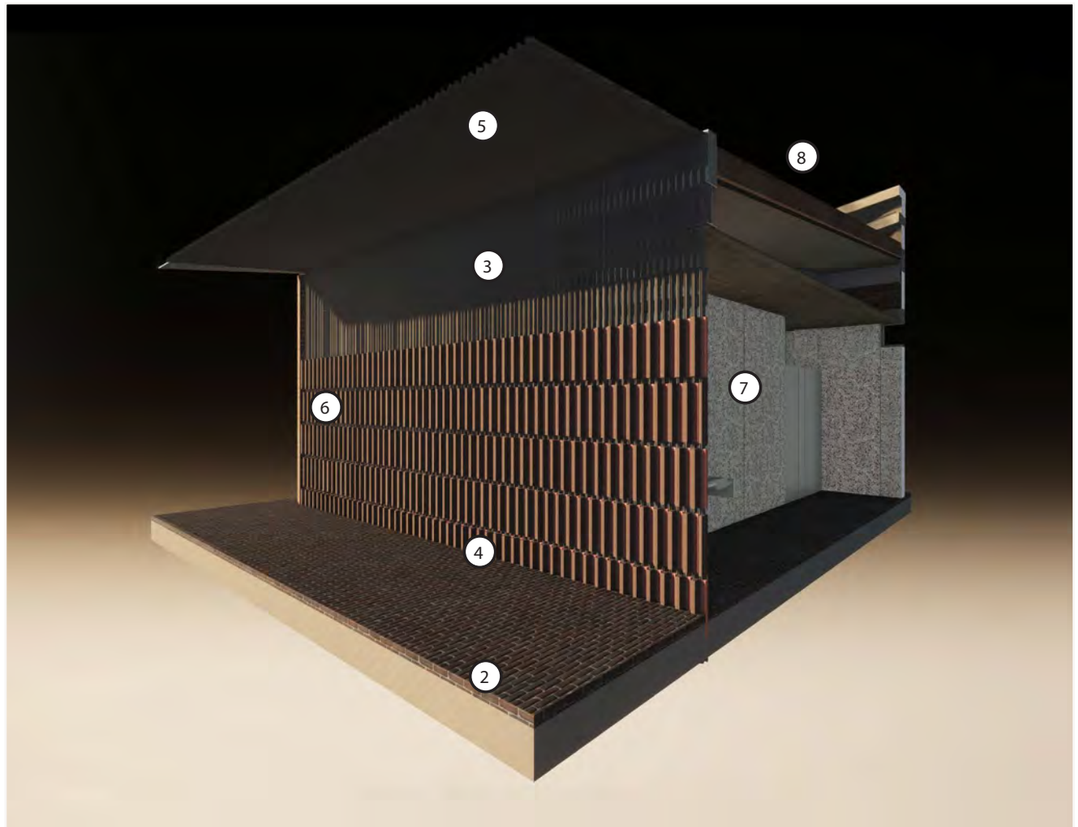
Metallic profiles will be used to create a semi-transparent screen allowing daylight and ventilation to public areas. The profiles will support a masonry insert to create a higher visual density and higher degree of privacy at bathrooms. Above the privacy screen areas the screen will be open allowing maximimum movement of fresh air in and out of the space.

Key

1	Existing masonry to north and South walls
2	Reclaimed Brick Paving
3	Metallic facade screen - Galvanized and painted, punched steel channels -open arangement allows natural light and air
4	Metallic facade screen - mechanically fixed brick insert for increased privacy
5	Metallic awning
6	Integrated access door
7	Internal wall finish: Terrazzo incorporating reclaimed building waste
8	Standing-seam zinc roofing system



Amenities and Storage Building - Part Elevation



Amenities and Storage Building - Sectional Perspective

1-3 Bank Street Buildings
Views

Proposed works at the 1-3 Bank Street site envisage the partial demolition of the southern structure - Building A.

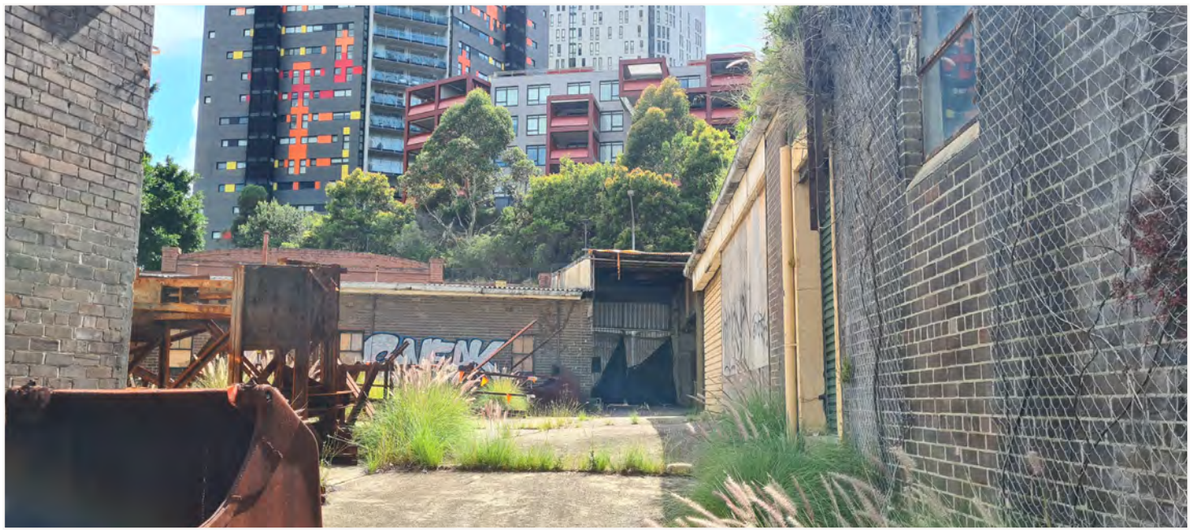
Our proposal includes the full demolition of the western portion of the building to make way for the new community building and associated pathways and public domain works.

The eastern area of the building presents the opportunity for partial retention of existing masonry walls and other building detail in the form of a unique walled interpretation garden that contributes to the legibility of the former marine uses of the site.

The interpretation garden will take the form of a series of interconnected landscape ‘rooms’ , constructed within the footprint of the existing internal planning. Interlinked via a networks of pathways and decks to each other as well as the park adjacent, the rooms offer interesting possibilities for the creation of a series of tranquil restful spaces, each uniquely programmed with site specific planting, integrated furniture and other elements, complementing the proposed external seating area adjacent to the cafe kiosk.

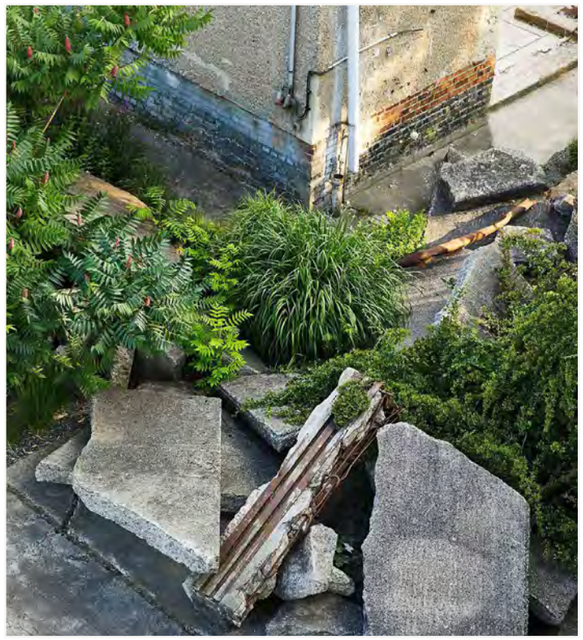
The exact scope for demolition and retention of detail will be determined during the design development, in conjunction with GML heritage and other project stakeholders.

Refer to the Bank Street Park View Analysis and Visual Impact Assessment (Architectus) for additional information.



1-3 Bank Street Buildings
Interpretation garden - Reference Project - Ruin Garden in Berlin

Retained walls and chimney with new planting and concrete paving



Planter detail including demolished masonry

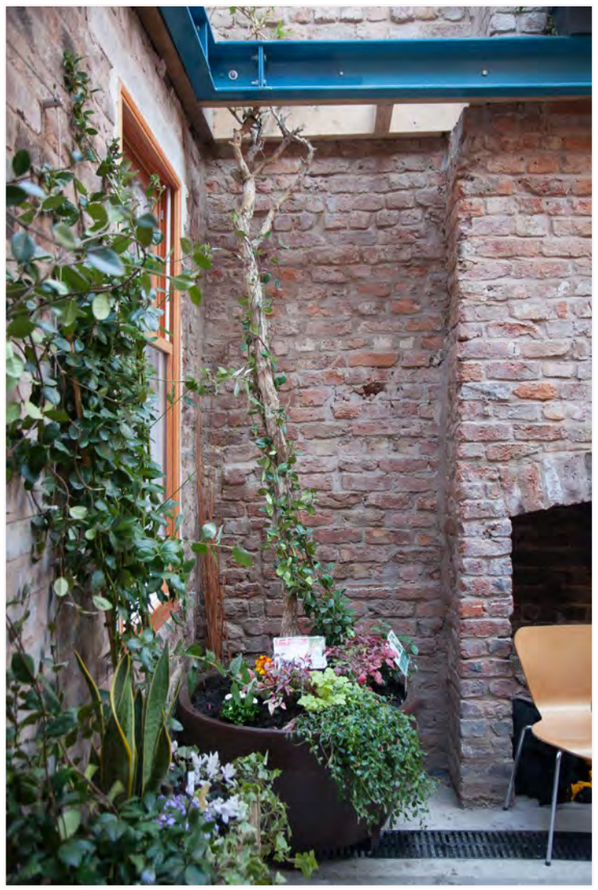
Retained doorway

Three dimensional composition retaining key elements of a formerly abandoned building.

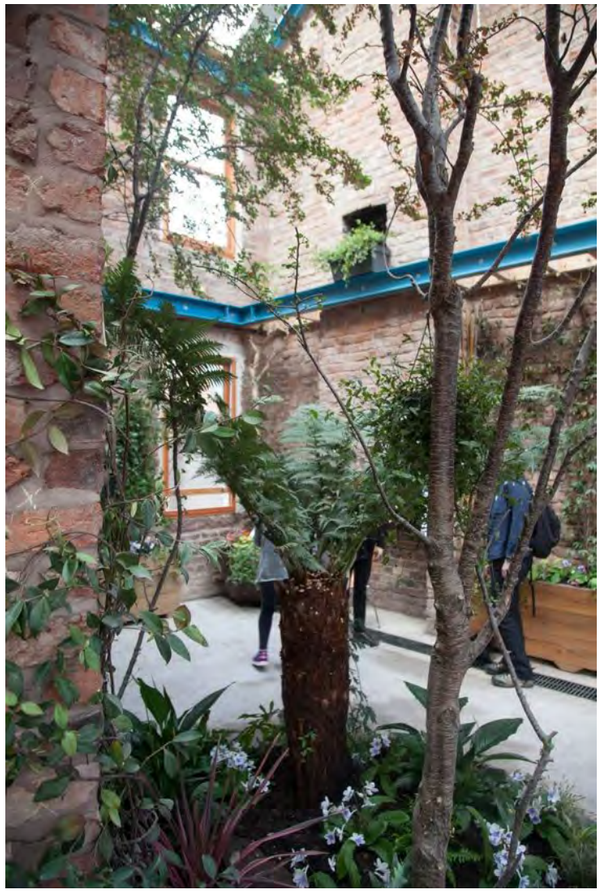
Ruin Garden in Berlin, Germany by Tanja Lincke and Anselm Reyle

https://www.architectural-review.com/places/berlin/reclaiming-the-ruins-ruin-garden-in-berlin-germany-by-tanja-lincke-and-anselm-reyle

1-3 Bank Street Buildings
Interpretation Garden - Reference Project - Granby Winter Garden, Liverpool UK

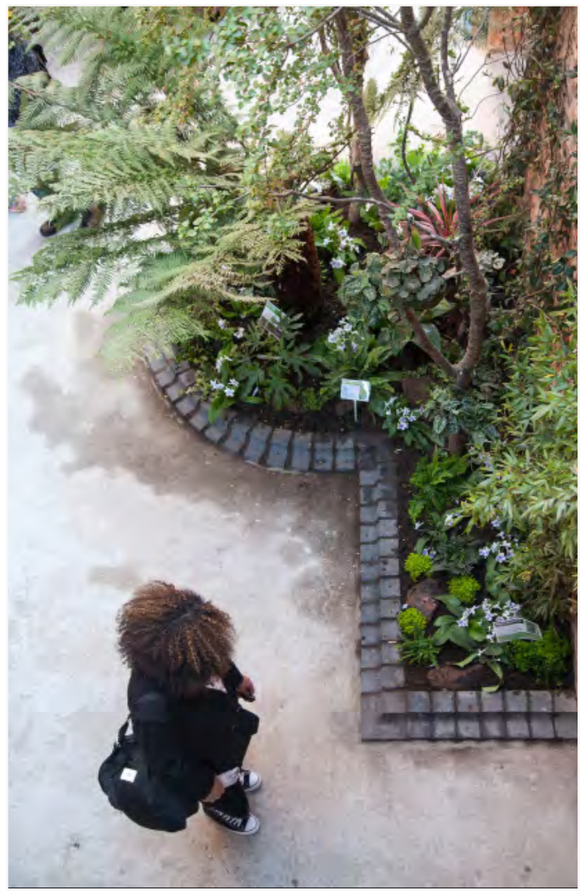


Retaiine existing walls with free-standing planter boxes. Expressed steel structural bracing.



Grass Tree

Loose seating for casual community gatherings



In-ground planter and concrete paving.

Granby Winter Garden , Liverpool UK- Assemble Studio

https://www.dezeen.com/2019/04/26/assemble-granby-winter-garden-architecture-liverpool/garden-architecture-liverpool

1-3 Bank Street Buildings
Interpretation garden - Indicative detail for new insertions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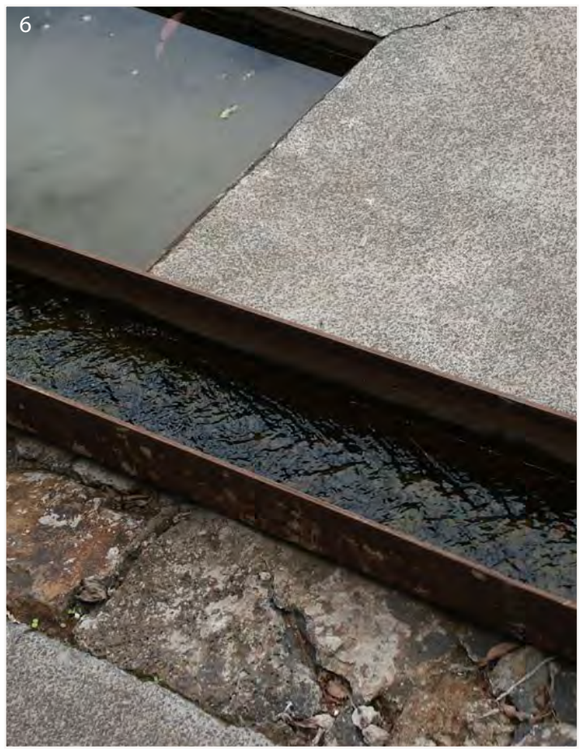
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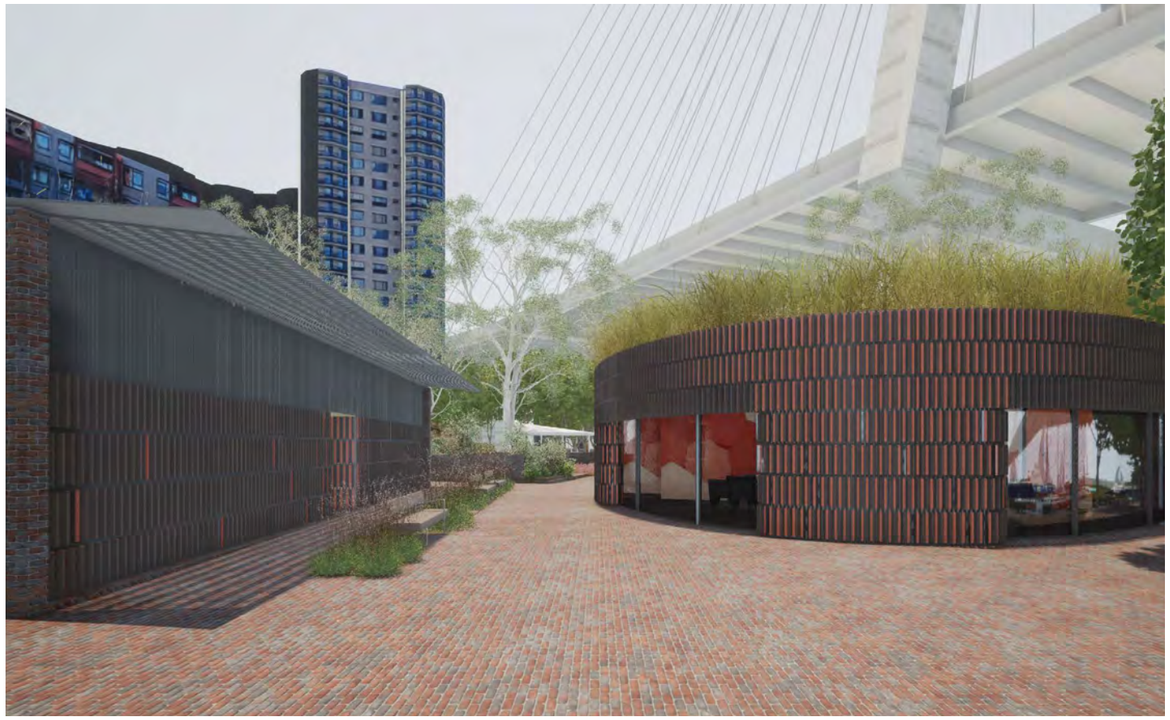
Key - Indicative Detail

1	Corten steel detailing to integrated seating within planter
2	Corten steel detailing to raingarden planter
3	Corten steel roadplate pathway
4	Planted Shade Structure using retained steelwork
5	Solid hardwood seatng within fern garden
6	Composition of different paving surfaces and water
7	Water journey through sculpted stone spillway


7

1-3 Bank Street Buildings
Views

1-3 Bank Street Buildings
Views



1-3 Bank Street
Views

Approach from Glebe Island Bridge

The interpretive garden provides seating and spill out space to the kiosk, with indigenous planting taking over the 'ruins' of the existing building

View from 1-3 Bank Street back towards the park

2.16 Water's Edge
Plan

Bank Street Park's harbourside location is at the forefront of the design, with connection to the water coming across as a strong theme throughout the consultation process.

Connectivity to the south is future proofed through the pedestrian promenade, with space provided for the future boardwalk to connect in.

A new stepped edge is provided through rough-cut sandstone blocks and pockets of planting, allowing people a means of getting closer to the water while supporting land and marine ecology.

The dragon boat facilities are given an upgrade, with direct access between boat storage and the dragon boat ramp.

New access is provided for non-powered personal craft via an accessible kayak launch, serviced by a nearby kayak storage / rental cage.

This harbour-side pedestrian access is continued for the full length of the park, with new boardwalk access linking up from the marina to the 1-3 Bank Street plaza and Bank Street. This link provides ample room for pedestrian movement to coincide with marina operations.

Water's Edge
Overwater structures and piling

The proposed works that form part of the project that will be undertaken within the marine environment include the following:

+ Restoration, repair and alterations to the existing sea wall.
+ Demolition and construction of a new timber boardwalk along a section of the sea wall.
+ Demolition and construction of a new timber ramp for dragon boat access.
+ Support structure for the new sandstone blocks terracing that extends into the water
+ Demolition of existing building structures in close proximity to the sea wall.
+ Construction of a new kayak jetty.

Legend

▬ ▬	Over water structure
●	Indicative pile location
1	Timber decking with timber piles at 3m centres along the edge
2	Timber decking with timber piles at 3m centres
3	Floating pontoon with gangway. Concrete piles at 6m centres to pontoon.
4	Timber structure dragon boat ramp with timber piles at 3m centres
5	Sandstone steps on concrete slab and piled structure. Concrete piles at 6m centres

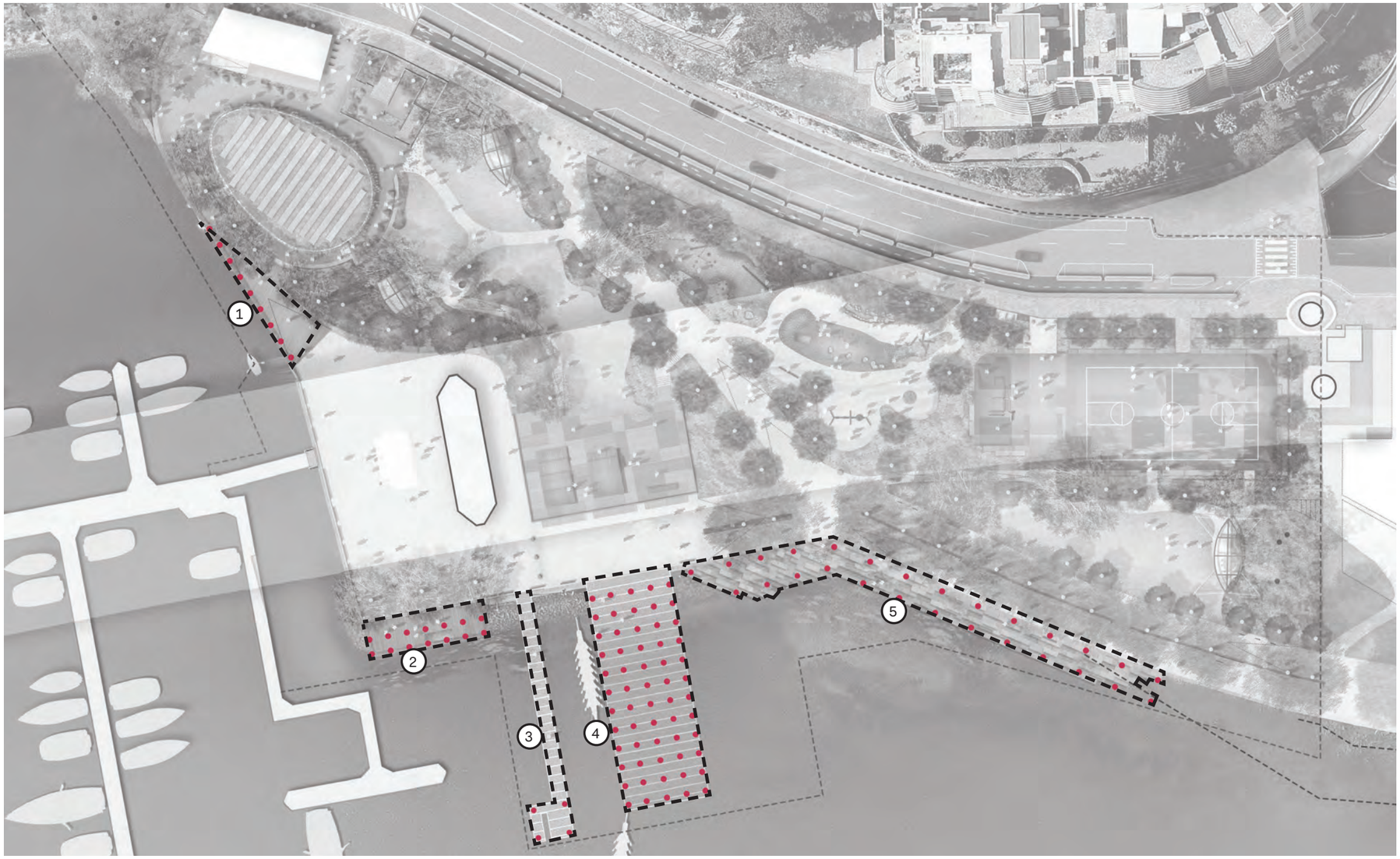
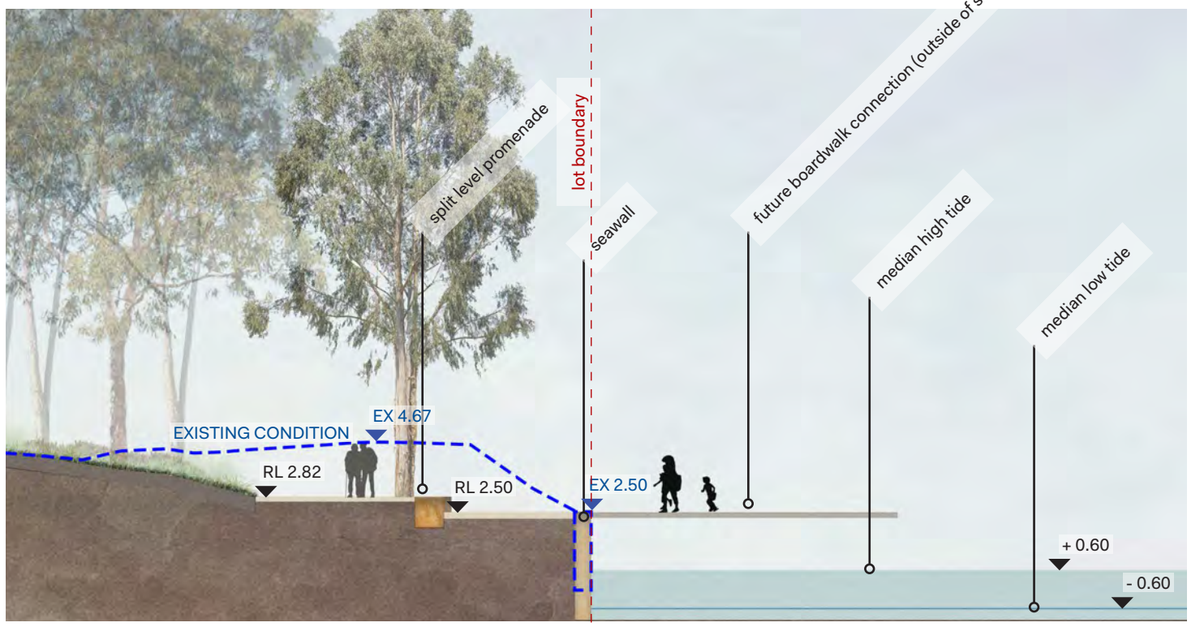
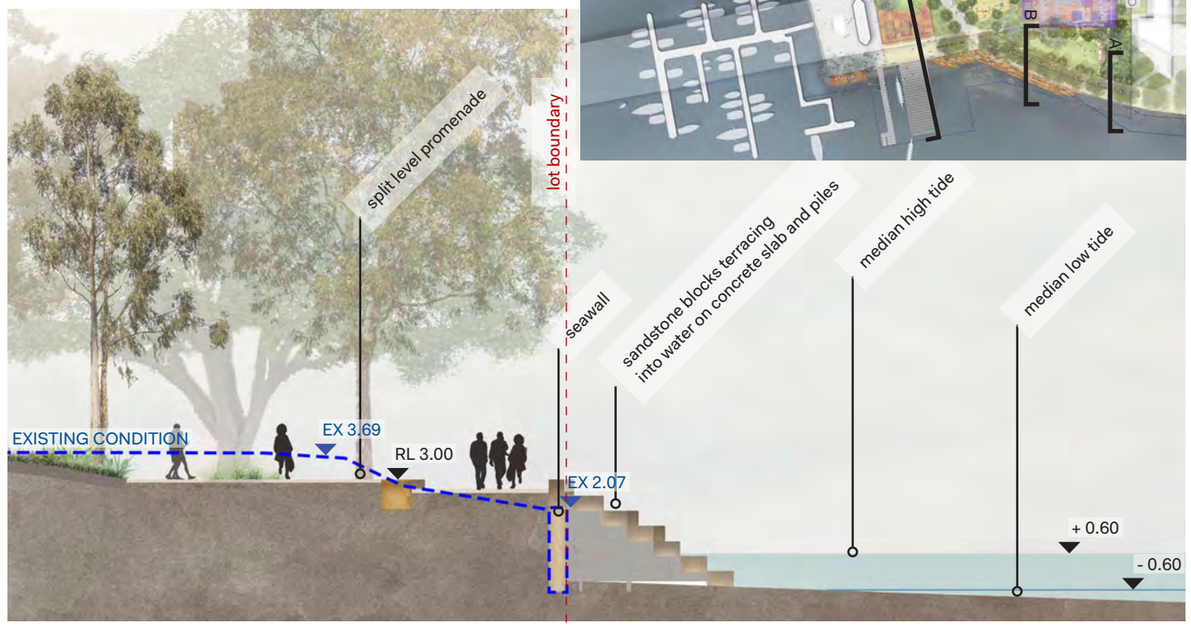


Figure 15. Over water structures and piles

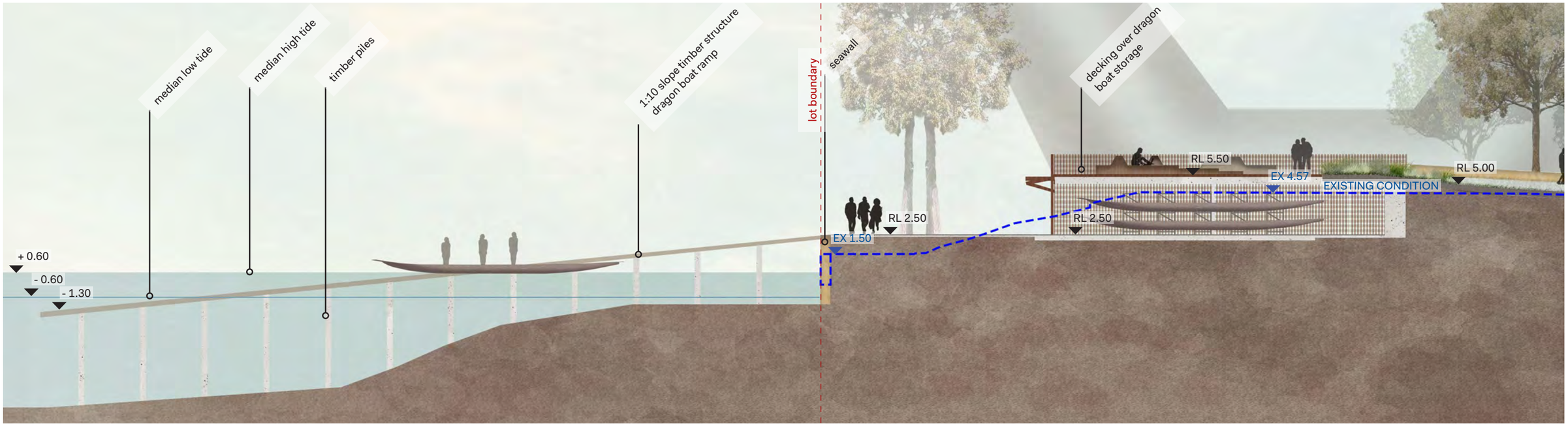
Water's Edge
Sections



Water's Edge Section A



Water's Edge Section B



Water's Edge Section C

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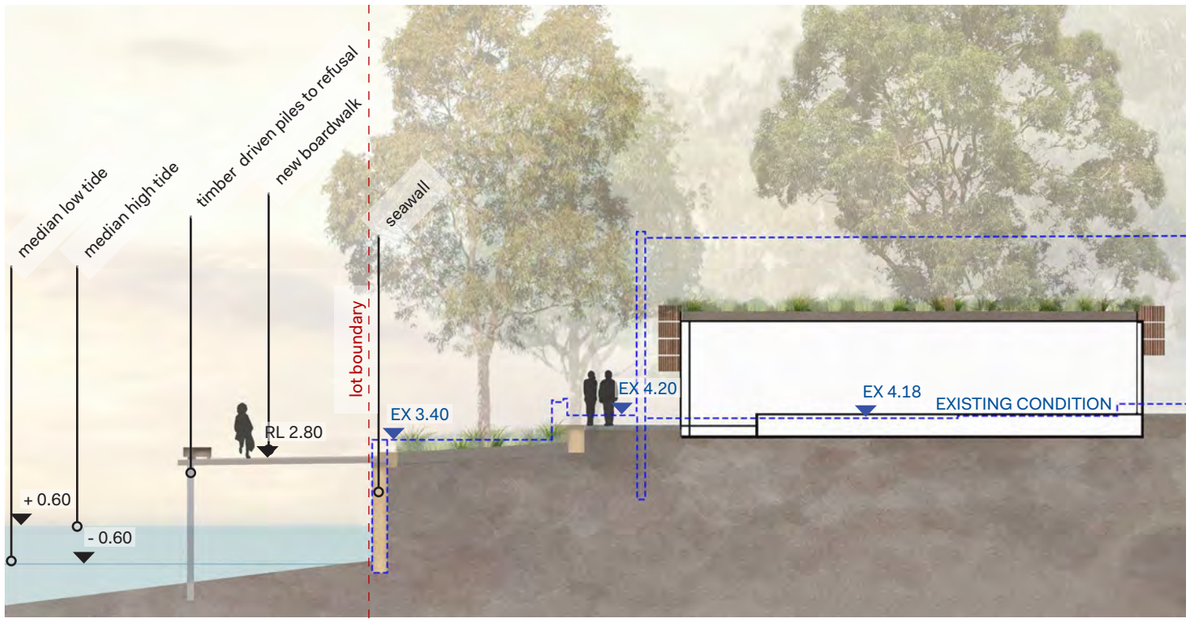
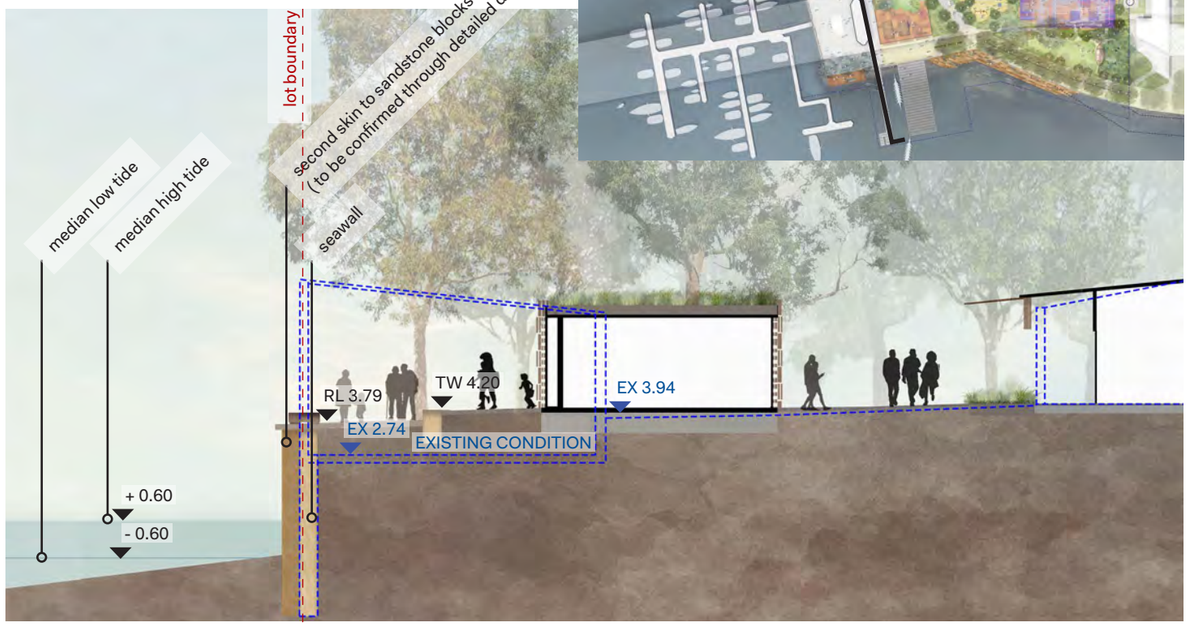
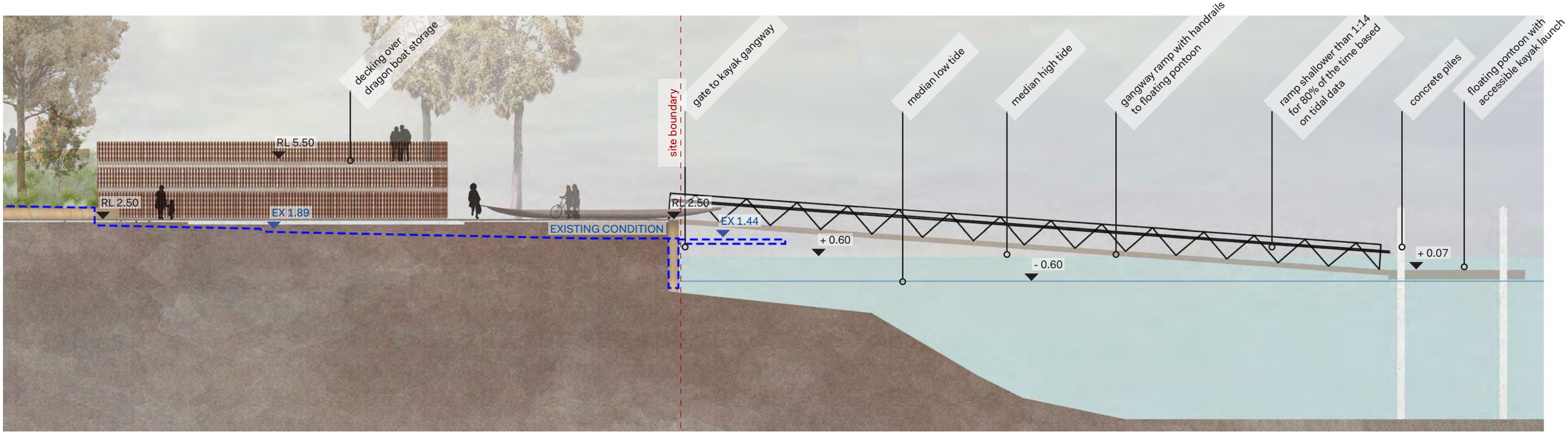
Water's Edge
Sections



Water's Edge Section D



Water's Edge Section E



Water's Edge Section F

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Water's Edge
Views

View from southern boardwalk connection (outside of scope) looking north

Stepped sandstone terracing and dragon boat storage and ramp

Kayak launch, dragon boat storage and ramp

Boardwalk connection adjacent 1-3 Bank Street building

Water's Edge
Viewing Deck - Design Precedent

Gadigal/Wangal Women Fishing

The accessibility to a number of waterways made fishing a major industry and occupation for both Aboriginal men and women. Colonial primary source material describes **Aboriginal women in the Sydney Harbour region fishing from canoes using shell hooks and fishing line**, which was spun from the stringy bark of trees, with rocks being used to sharpen the shell hooks to achieve the desired shape. Whitehouse (1788), Fowell (1788), and Nagle (1829) each described fishing line being made from the 'Cabbage Tree'. It is probable this would have been the Livistona Australis which grew in the area.

Whilst fishing, women sometimes carried a firestick which would be lit on a pile of sand, reeds, or mud and placed in the base of the canoe. The fire was a source of warmth during colder months but also meant that fish could be cooked as soon as they were caught. Colonial observations indicate that women sometimes fished with up to three children in the canoe, often singing as they fished. The skill of these women in providing for their families on the water, whilst also caring for their young is a reflection of their important and powerful position within their society.

The use of shells and bones for the production of tools also became widespread, with archaeological evidence suggesting **shellfish hooks** were used in the Sydney region approximately 1,000 years ago.

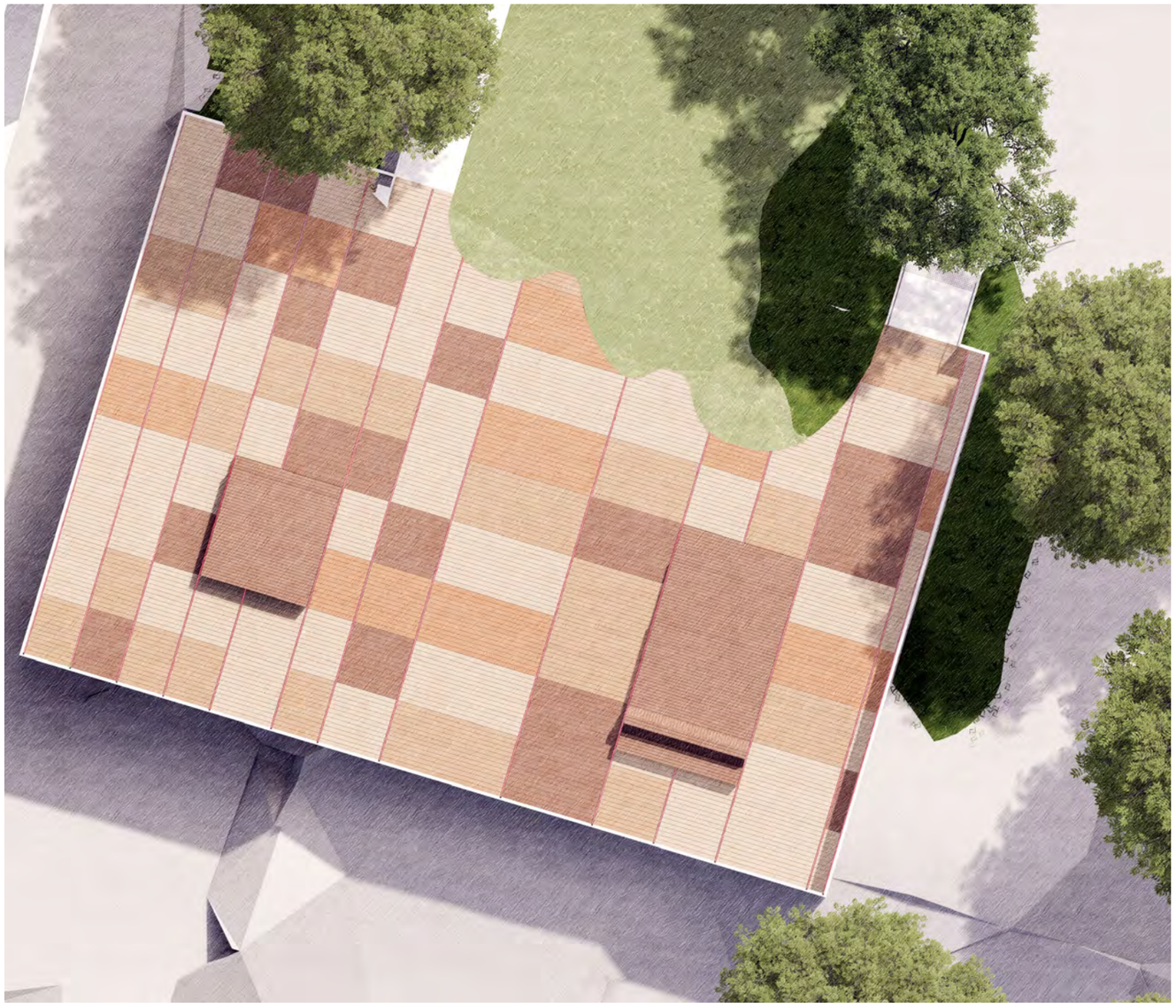
Water's Edge
Viewing Deck - Concept

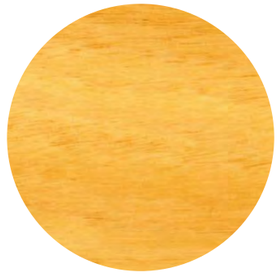
The idea of "prospect" in public parks harmoniously blends with the essence of community gathering, creating welcoming and unpretentious spaces. Instead of focusing solely on formal architectural concepts, the design prioritizes the natural, unstructured beauty of harbour views. This approach encourages people to come together in a relaxed, communal atmosphere, where they can appreciate the scenic vistas and engage in spontaneous interactions. Viewing decks, like atop the dragon boat store, become informal landmarks where people gather organically, forging connections while enjoying the harbour's beauty without feeling constrained by architectural formality. The result is a vibrant, inclusive, and community-centric space that celebrates the waterfront's serenity and the warmth of human interaction.

The design of the viewing deck over the Dragon Boat Shed has been developed based on the Historical and Cultural Mapping research undertaken as well as in response to key stakeholders' aspirations for Bank Street Park. The story of women and fishing is highlighted within the design, the fishing hooks used were made from sea snail shells found in the Sydney Harbour region. The snail shells' colours and patterns are translated in the paving pattern of the viewing deck over the Dragon Boat Shed.

The viewing deck is proposed to be made out of different types of Australian timber hardwood species to achieve varying colours. The seating within the deck area will also be made from timber to ensure a cohesive and integrated design.

There is an opportunity to acknowledge Blak Diggers by applying names within the balustrade of the viewing deck to create an honour wall.





ASH

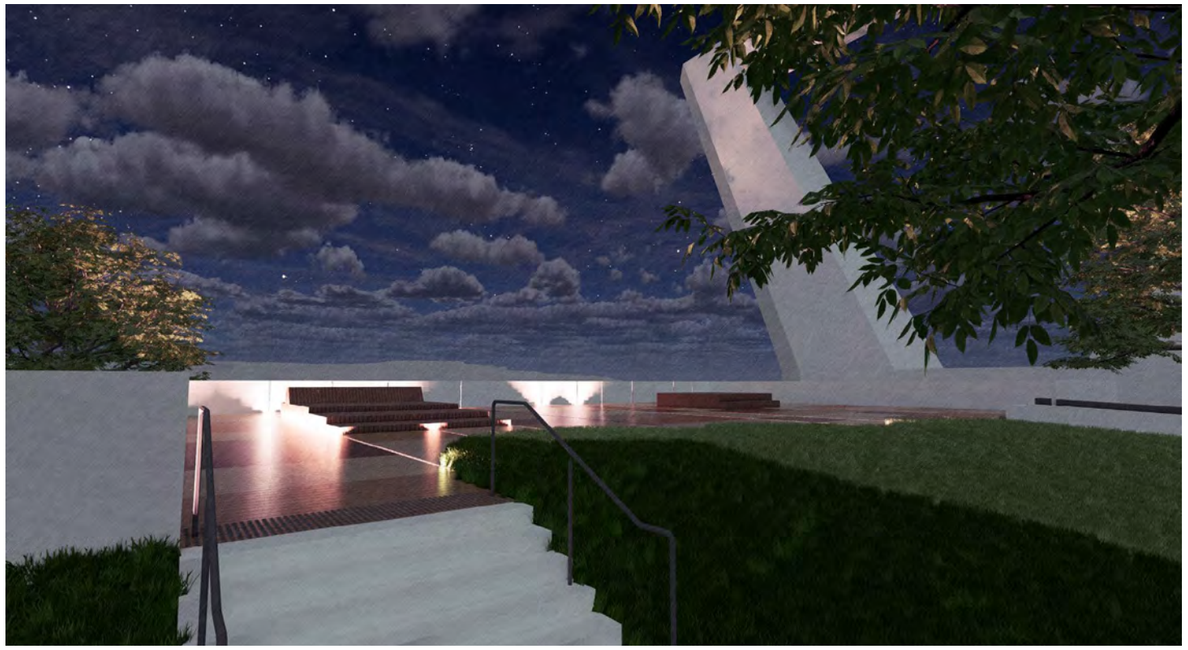
BRUSH BOX

SPOTTED GUM

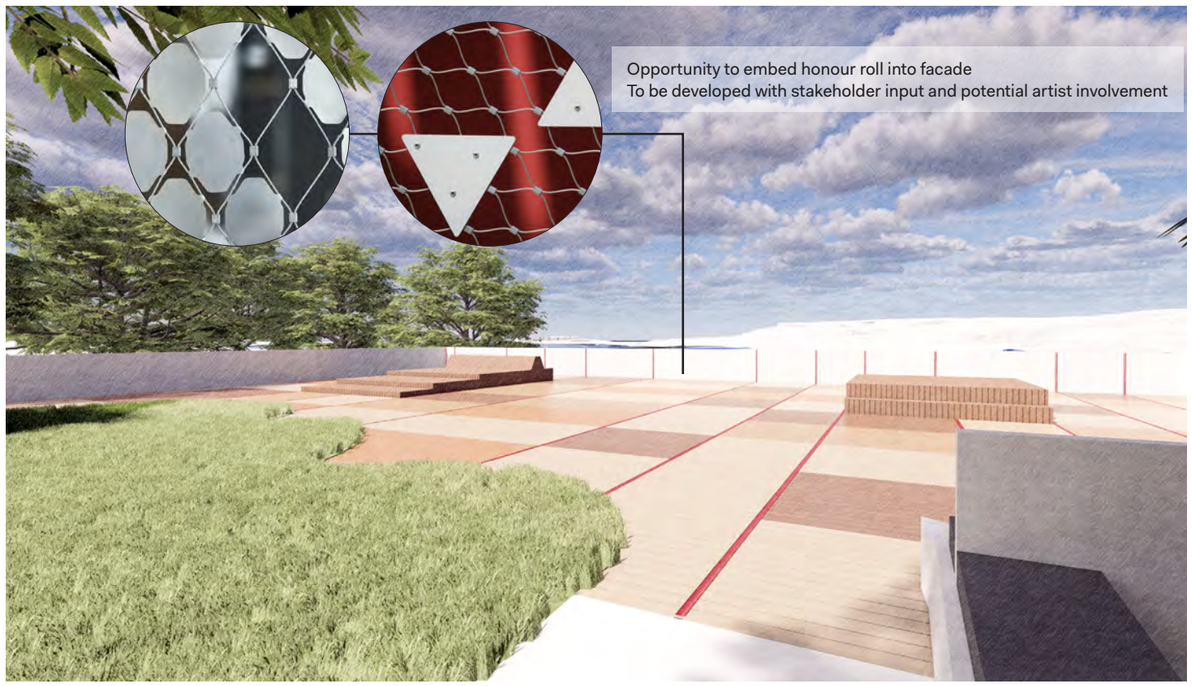
IRON BARK

Water's Edge
Viewing Deck - Concept

View looking north west across deck



View looking north west across deck (night)



View looking south west across deck

View looking south west across deck (night)

2.17 Dragon Boat Storage Building

Views

View looking north towards dragon boat storage

Dragon Boat Storage Building
Views

Dragon boat storage (looking east)

Dragon Boat Storage Building
Planning

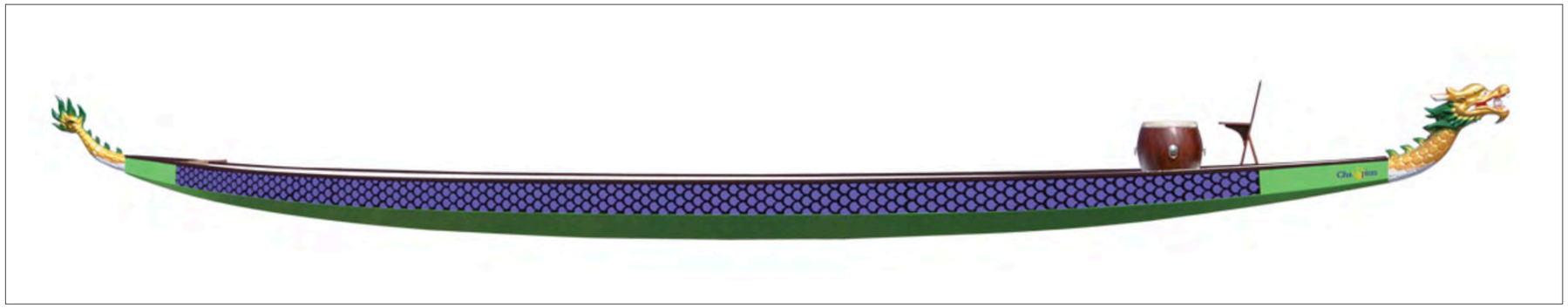
The Dragon Boat Storage Building will be a signature structure within Bank Street Park and the Blackwattle Bay precinct.

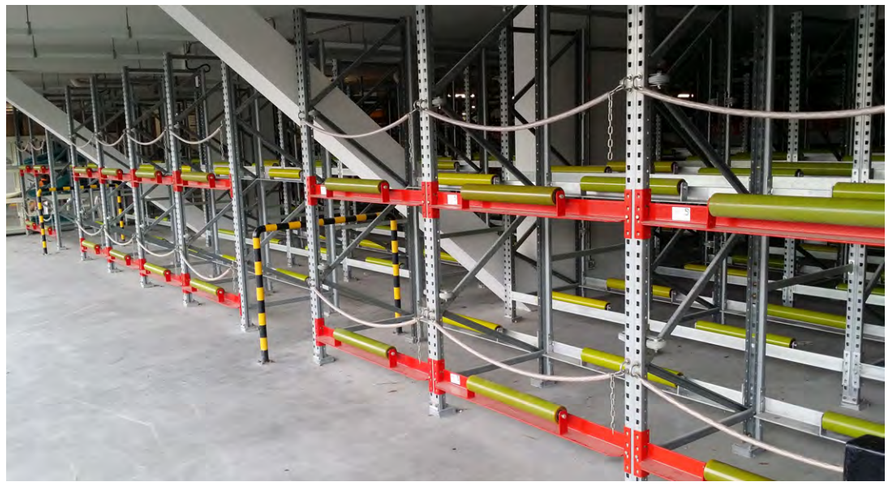
Managed by Dragon Boats NSW - the governing body for dragon boating in New South Wales, the building will enable storage of boats and equipment of 15 Dragon Boat Clubs who area based at Blackwattle Bay.

The building will provide a robust high quality enclosure ergonomically designed to enable ease of access and storage for Dragon Boats, as well as equipment such as paddles, seat pads and the deorative dragon heads that are used during competitions.

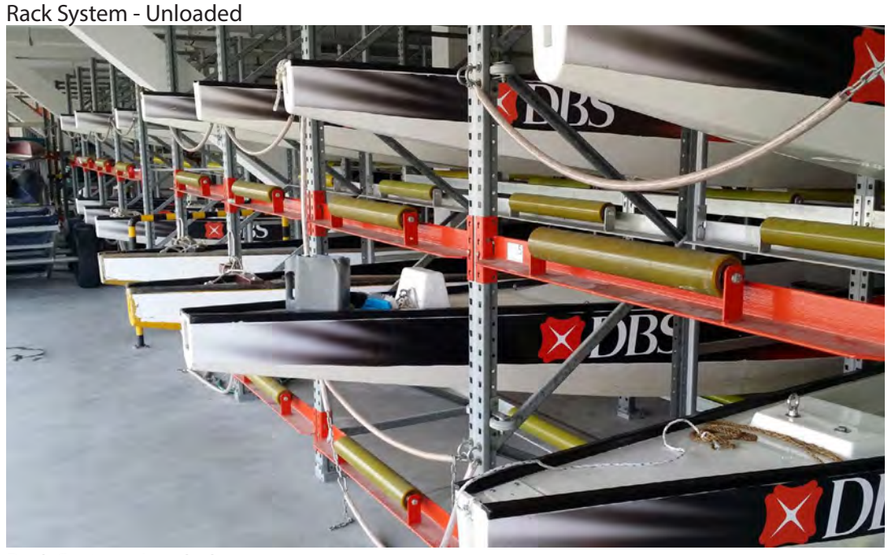
The internal arrangement of the building is determined by the standard module dimensions of the steel framed racking system that will provide storage for two boats per bay.

Around the perimeter of the racks, open storage corridors will enable circulation as well as access to a rear storage area containing storage lockers for the individual clubs.

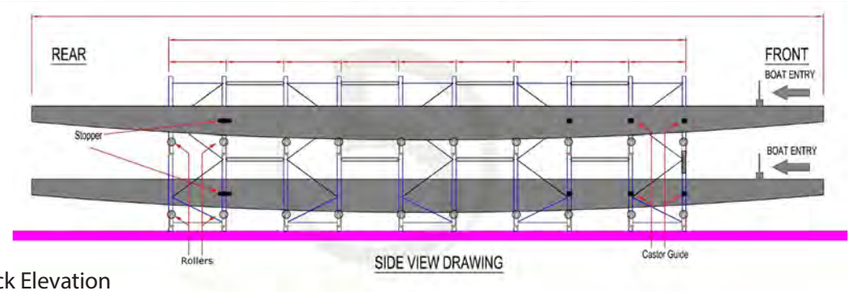




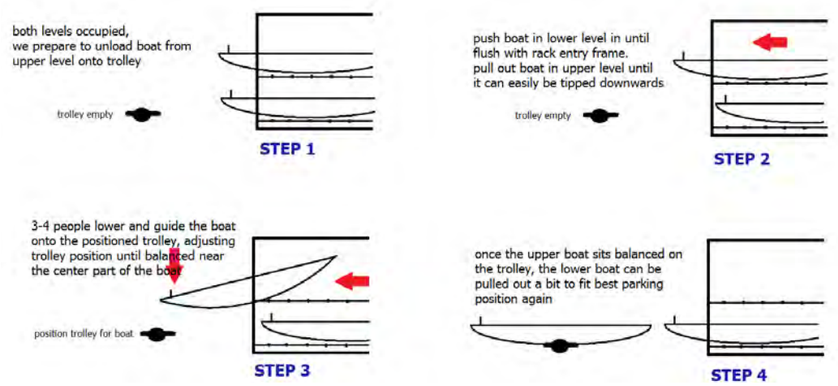
Rack System - Unloaded



Rack System -Loaded

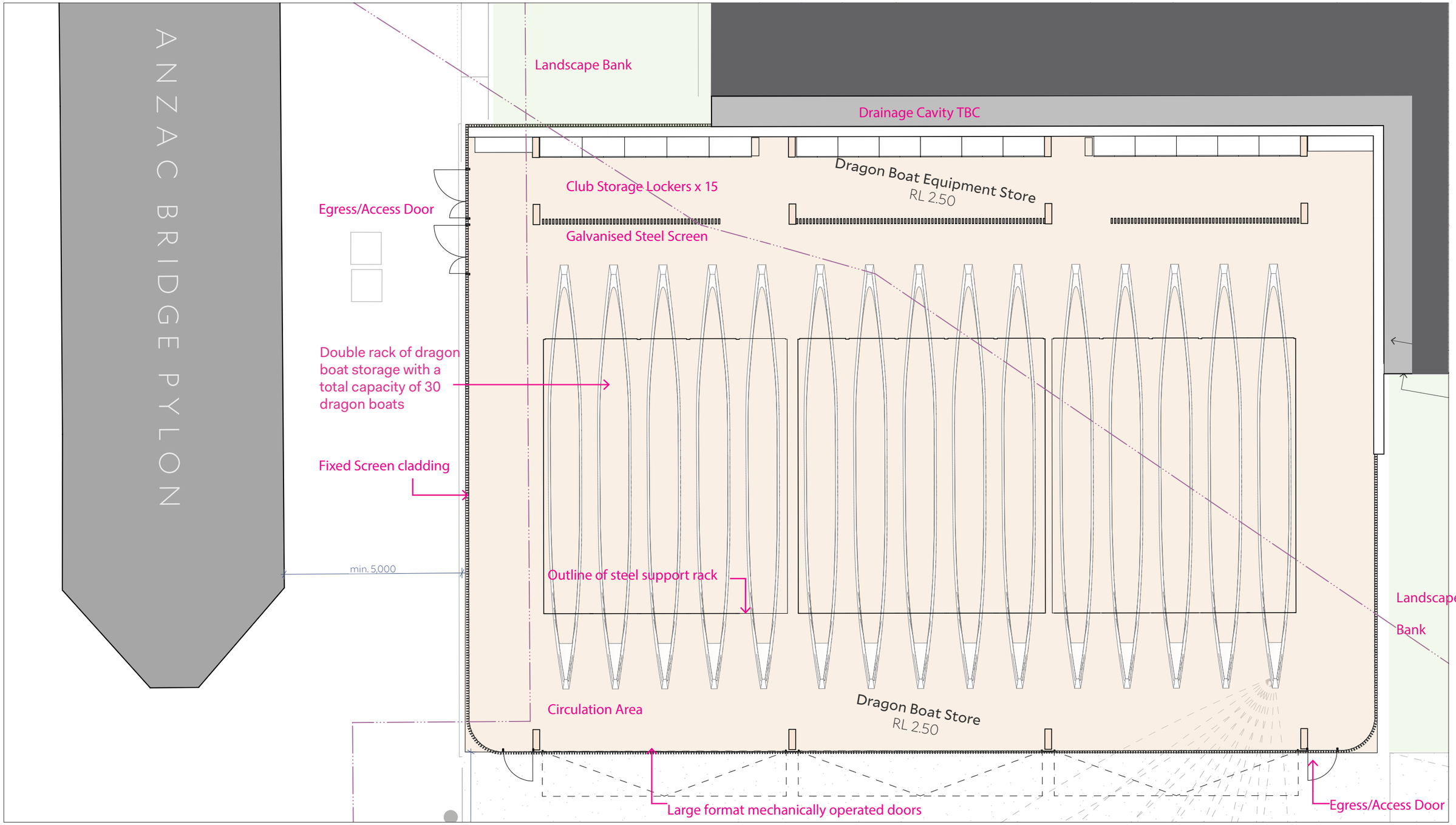


Rack Elevation



Boat Removal Diagram

Dragon Boat Storage Building
Plan



Dragon Boat Storage Building
Materiality

Durability and robustness are key considerations in the selection of finishes for the Dragon Boat Storage Building.

Externally, the structure is characterised by a screened metallic facade that incorporates fixed panelling, operable doors - both large format for garaging boats as well as conventional swing doors for egress. The screening system is also used for roof edge balustrading.

Internally, the space is characterised by a large column-free space designed around the optimum storage and manoeuvrability of the dragon boats.

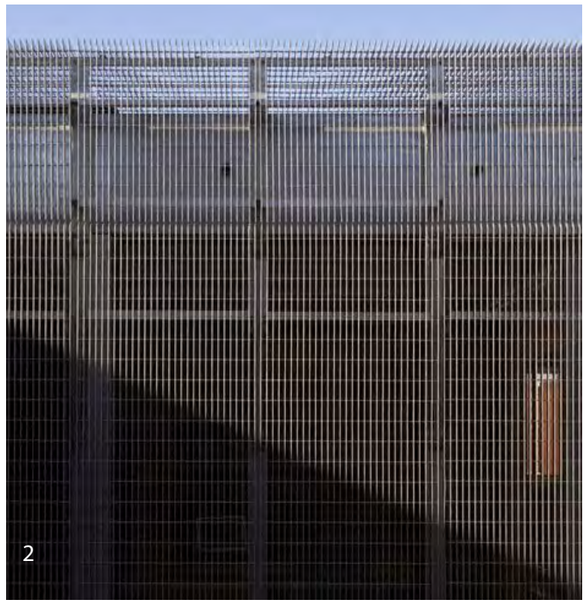
The trafficable roof-deck is supported by a concrete slab with a vaulted form planned to optimise beam depth and storage clearance height above the individual boats.

At the rear of the space galvanised steel grid-mesh is utilised as a screening system to the storage area which will incorporate individual lockets for the individual clubs.

Brick reclaimed from the demolition works will be used for flooring inside the space.

Dragon Boat Storage Building

1	Metallic Screen Facade including fixed and operable panels
2	Metallic Screen - internal club storage space
3	Vaulted concrete soffit - off-form finish
4	Galvanized mesh with painted signage - boat club storage lockers
5	Stainless steel gratings - internal floor drainage
6	Reclaimed brick floor with wide mortar joints



Dragon Boat Storage Building
Boat and Equipment Access

During operational hours, the Dragon Boat storage building will be accessed by club members and visitors. Outside of those hours, the building will be locked and equipment within stored securely.

Access to the boats will be provided via large format mechanised doors, integrated within the western facade.

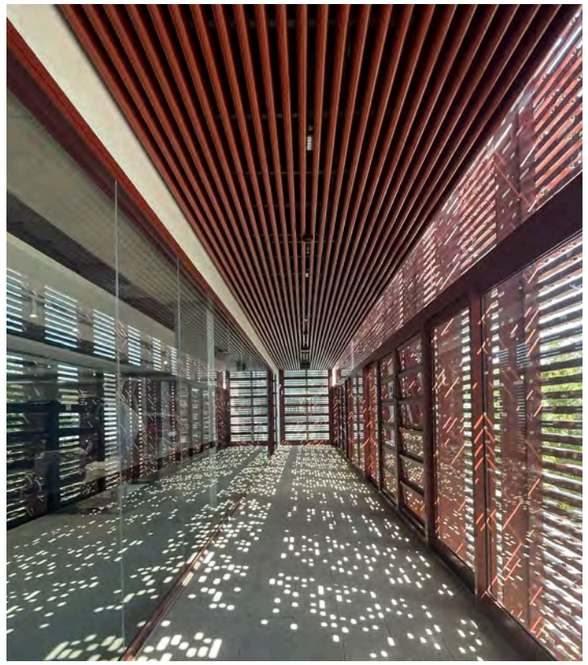
Similarly, pedestrian egress is provided by access doors at the north west and south western corners integrated into the facade.

Balustrading for the viewing deck will be similarly integrated to provide a contiguous surface appearance to all areas of the facade of the structure.

Security will be provided by a rhythm of interlocking metallic profiles, shaped and perforated to maximise visual transparency and provide daylighting minimising energy consumption.

At night, subtle illumination of the boats and internal space will create a lantern-like effect that will become an important contributor to the night-time signature of the Park.

Renlita facade system



Daylight - Collins and Turner - Donald Horne Building 2023

Facade Closed - Collins and Turner, Bondi House, 2018

Facade Open - Collins and Turner, Bondi House, 2018

Lantern facade - Hotel Ninja Black, Kyoto

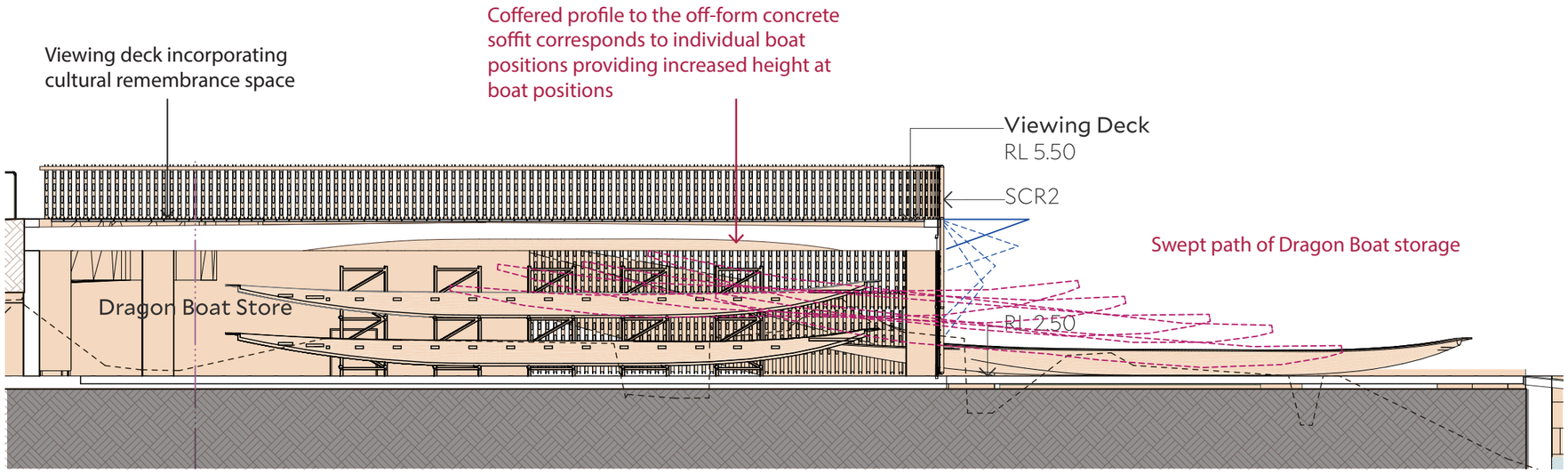
Dragon Boat Storage Building
Facade, Structure and Functionality

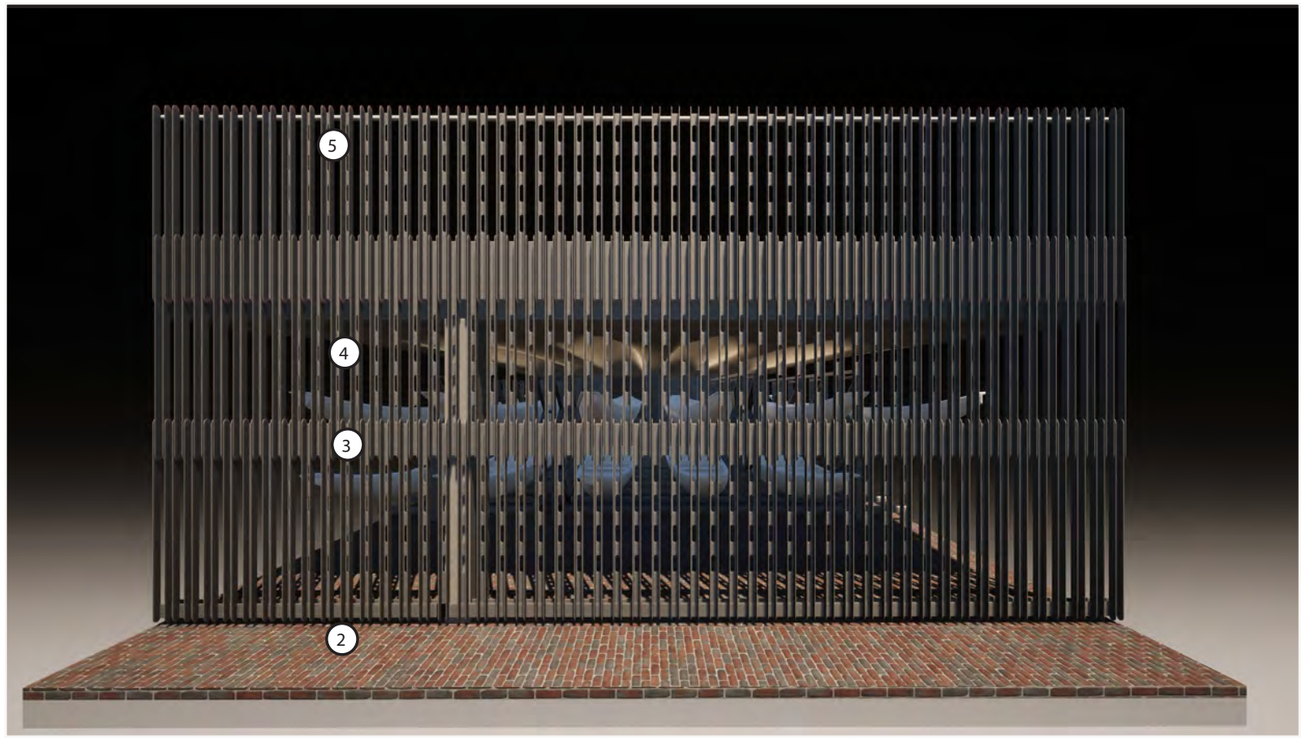
The geometry and opening arrangement of the operable facade to the storage building has been developed to enable ease of use and manoeuvrability for Dragon Boat Club members, moving the Boats in and out of the structure.

The proposed slab and off-form concrete soffit profiles provide additional height between east-west beams to enable manual positioning of the boats stored on the upper level of the rack. A structural opening height of 2.4m is achieved below the lowest beams, with an increased height of 2.65m within the raised coffers.

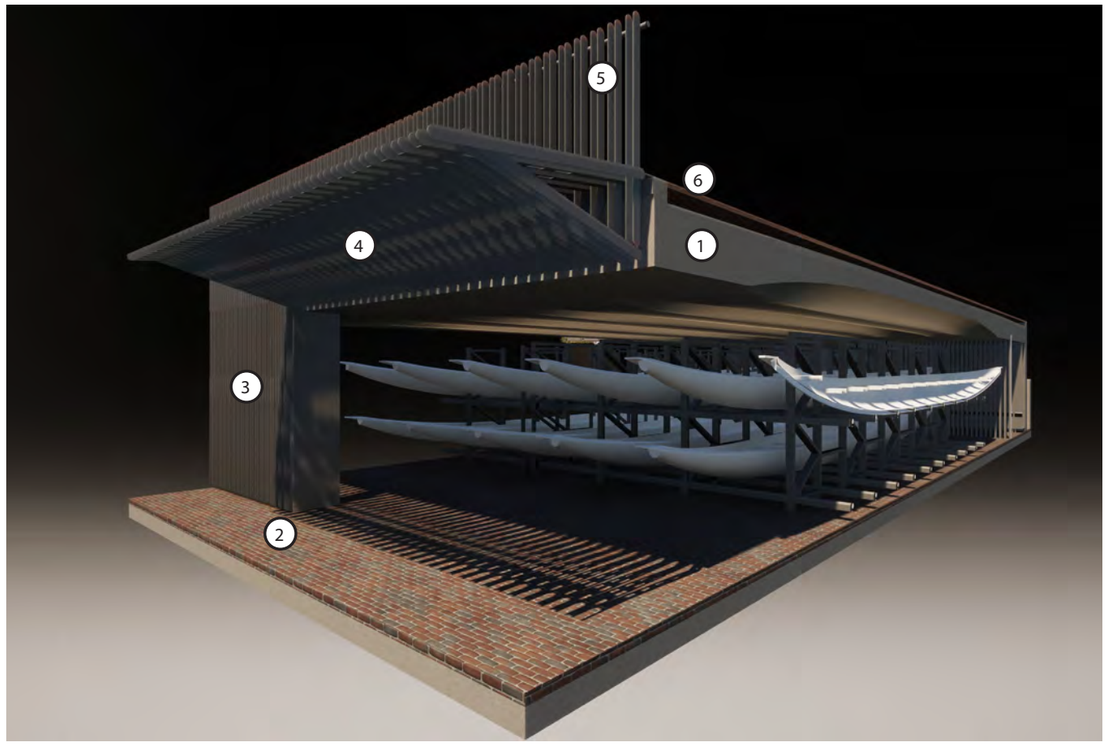
Key

1. Concrete Super-structure
2. Reclaimed Brick Paving
3. Metallic facade screen - fixed walling areas - zinc sprayed finish
4. Metallic facade screen - renlita type large format opening
5. Balustrade with integrated lighting within handrail
6. Viewing deck including memorial garden above,



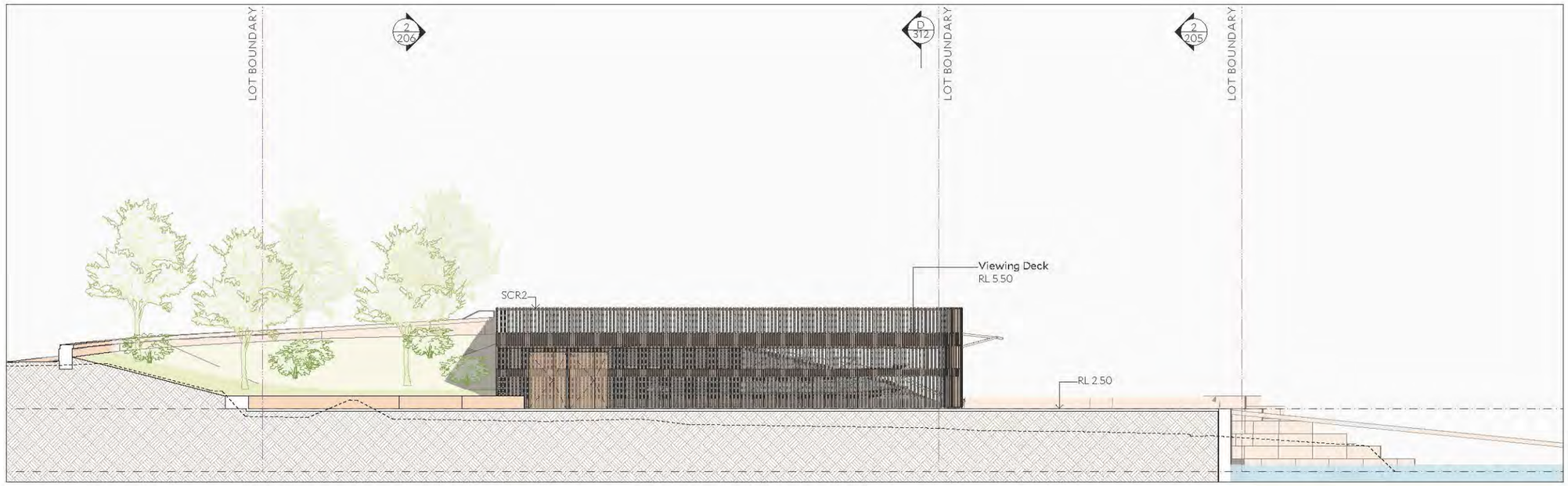


Dragon Boat Storage Shed - Elevation Detail



Dragon Boat Storage Shed - Sctional Perspective (Open)

Dragon Boat Storage Building
Elevations



Dragon Boat Storage Shed - West Facade

Dragon Boat Storage Shed - South Facade

2.18 Play and Recreation

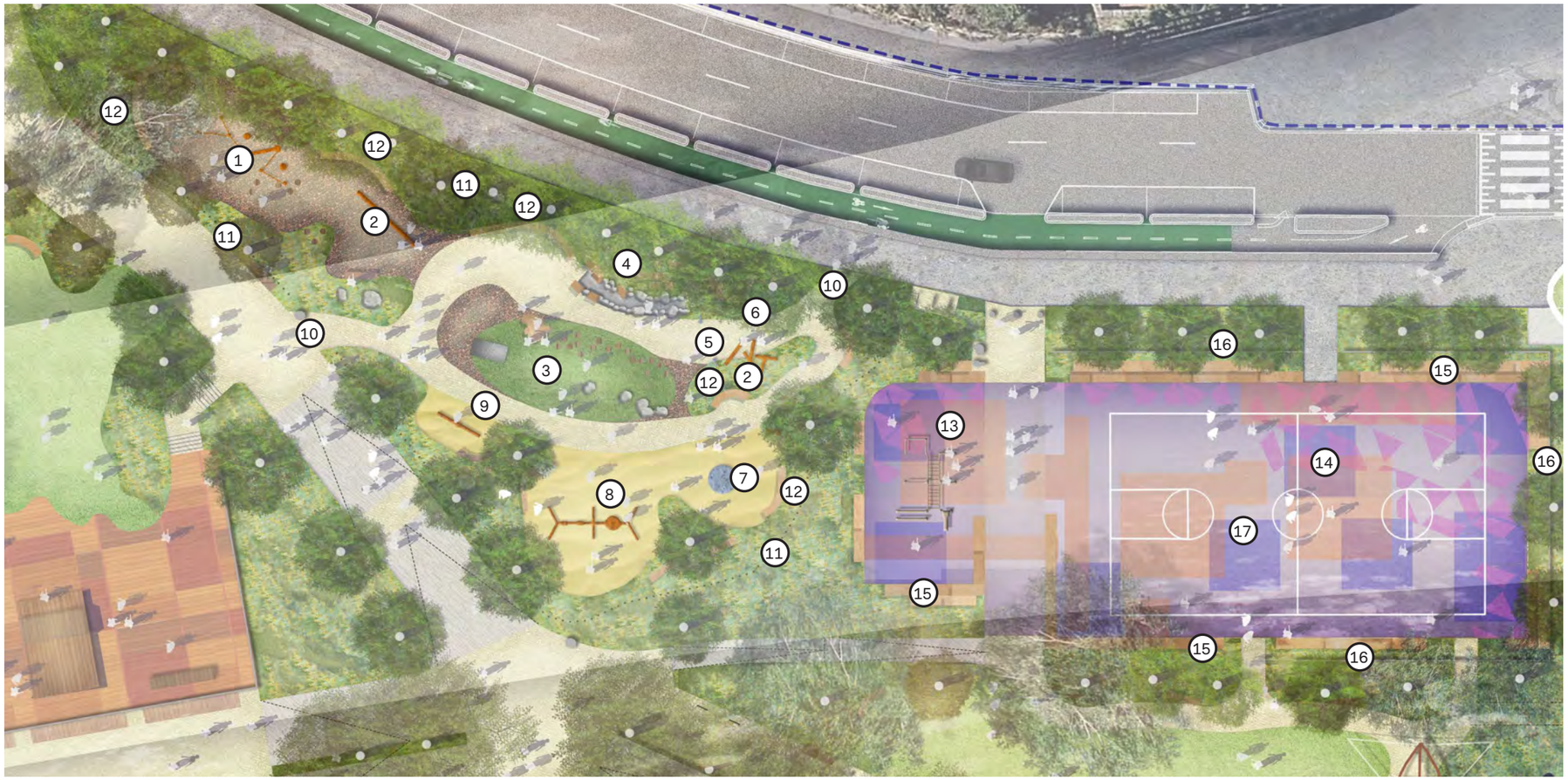
Bank Street Park will provide a wide range of play and recreational opportunities for all ages and abilities.

The playground caters to ages 2-12, with nature based play amongst planting. Fenced for protection from the water and street, the playground is set up in three key zones; an exploration and free play zone through the centre and north of the playground with slides, balancing and climbing equipment; a sensory / interactive zone closer to Bank Street with water play, rain wheels and talking tubes; and a dynamic zone with carousel, swings and see-saw. Arrangement and circulation has considered the separation of uses and ages to allow for free movement while minimising potential conflicts between activities.

The active recreational area of the park consists of a multi-purpose sports court adjacent static exercise equipment, geared towards older children, teens and adults. The sports court is fenced to the southern boundaries and Bank Street to contain balls, however multiple access points ensure the court can be used by multiple groups or activities without feeling dominated by a single group.

The design considers adolescent recreational opportunities across all genders. The multi-purpose court designed to be as inclusive as possible as a place to meet and play games. Across the park the provision of numerous gathering spaces including around the court, the park shelter areas, the deck over the dragon boats, and open lawn areas, allow for small groups to gather safely and comfortably, with views of activity areas without needing to be on show. These gathering opportunities are key to catering for adolescent girls in particular based on community consultation feedback.

Skating and scooters can be used on the court, footpaths and other hard spaces around the park, however additional ramps and skate equipment has not been provided based on the desire to maximise softscape over hardscape and reduce potential conflicts between skaters, marina and watercraft users if it were to be encouraged around the pylon.



Additional active recreational opportunities catered for at Bank Street Park include dragon boating, kayaking/ canoeing, fishing, cycling, walking and running.

Bank Street Park is not a suitable place for swimming due to water quality considerations and the nature of this area as working harbour. More appropriate locations for swimming exist in the harbour. The design of the park would enable access for swimming in the future, should this situation change over time.

Playground

1	Timber and rope climbing structure *Exploring / coordination*
2	Balancing logs and timber steppers *Exploring / coordination*
3	Planted mound with sandstone steppers and slide *Sliding / group play*
4	Hand pump and sandstone interactive water course to dry creek bed *Water play/Nature play/Sensory*
5	Talking tubes *Interactive/Sensory*
6	Rail wheel *Interactive/Sensory*
7	All abilities carousel *Spinning / group play*
8	Swing (standard + Disability Discrimination Act (DDA) basket) *Swinging / dynamic / motion*
9	See saw *Dynamic / cooperative play*
10	Entry gate
11	Playground fence in mass planting
12	Seating walls

Recreation

13	Fitness equipment
14	Multi-purpose court
15	Sandstone seating edge
16	Court fence
17	Ground surface artwork to court and fitness equipment areas

Play and Recreation
Indicative Playground Elements

1

2

3

Playground Elements (subject to further detailed design)

1	Timber and rope climbing structure *Exploring / coordination*
2	Balancing logs and timber steppers *Exploring / coordination*
3	Planted mound with sandstone steppers and slide *Sliding / group play*
4	Hand pump and sandstone interactive water course to dry creek bed *Water play/Nature play/Sensory*
5	Talking tubes *Interactive/Sensory*
6	Rain wheel *Interactive/Sensory*
7	All abilities carousel *Spinning / group play*
8	Swing (standard + DDA basket) *Swinging / dynamic / motion*
9	See saw *Dynamic / cooperative play*

4

5

6

7

8

9

Play and Recreation

View towards multi-purpose court from Bank Street

Looking towards the playground from above the dragon boat storage

Within the playground looking north

View of the playground from Bank Street

2.19 Materiality
Landscape Elements

A select number of materials have been chosen for the landscape design with an emphasis on robust, natural materials and tones, with lower embodied carbon and reflective of the site's industrial history and context.

Pavements and other materials such as crushed sandstone and decomposed granite gravel which are permeable (where appropriate), should be light coloured, reflective or “cool” in appearance.

Indicative materials proposed include:

1. Exposed aggregate insitu concrete paving
2. Cement-stabilised decomposed granite paving
3. Recycled brick paving
4. Painted sport surface
5. Timber decking and boardwalks
6. Sandstone blockwork
7. Rammed earth walls
8. Curved seating on rammed earth walls
9. Park and plaza seating
10. Timber seating platforms
11. Bike parking
12. City of Sydney bins and bubbler or similar

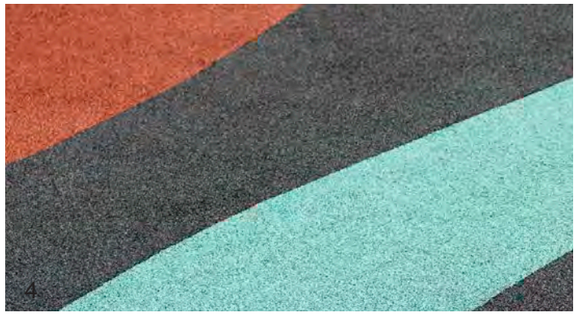
Over-water structures such as boardwalks will be designed with light penetration features to allow light to start food-chain ecology under hard structures.

Final materials and furniture selections will be undertaken in consultation with Placemaking NSW.


1


2


3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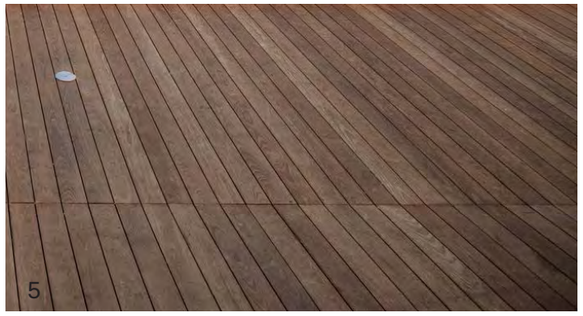
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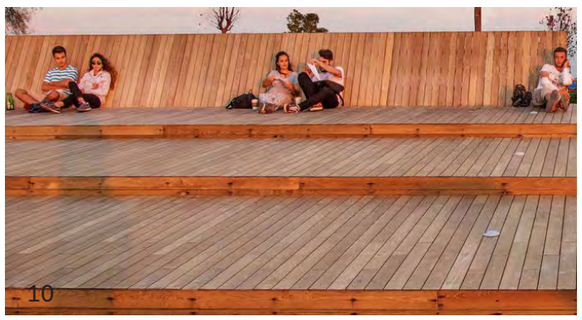

10


11


12

Materiality
Landscape Furniture

Legend

	Seat with backrest
	Bench seat
	Curved seat with backrest on rammed earth wall
	Shade structure with seating and table (SS01)
	Landscape seating wall
	Bike hoop
	Bin
	Bubbler

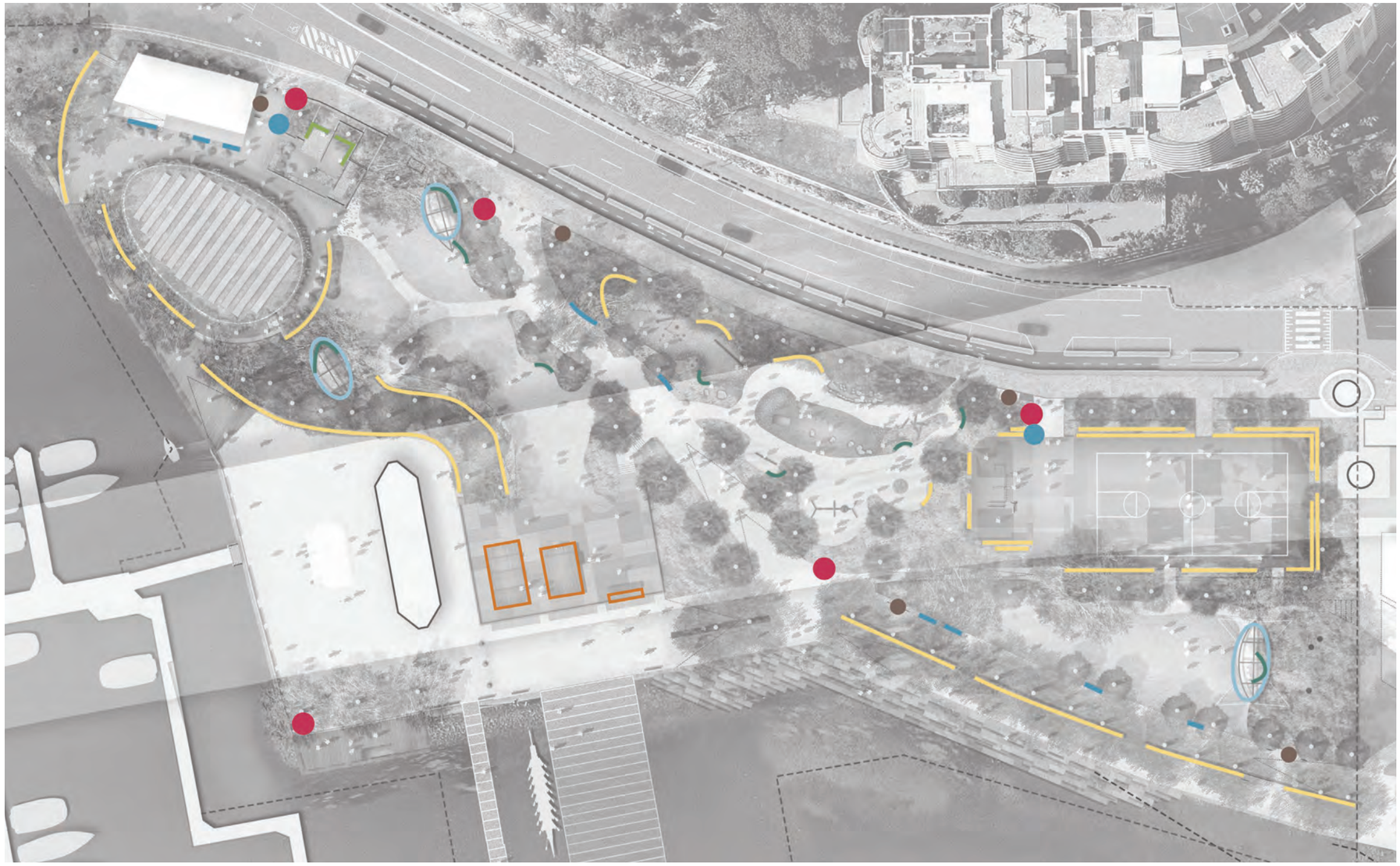


Figure 16. Landscape furniture

2.20 Pavillions
Cultural Gathering - Concept

The design of the Gathering Spaces has been developed based on the Historical and Cultural Mapping research undertaken as well as in response to key stakeholders' aspirations for Bank Street Park.

The structures of the Gathering Spaces reference the shields, wooden clubs and spears used by Aboriginal and Torres Strait Islander people in combat. Colonial reports indicate that shields manufactured in the region often bore painted clan or individual markings. As well as being used for combat, wooden clubs also had ceremonial use and could be used as percussion instruments. The shields are acknowledge and honour Blak Diggers' participation in the war and intend to symbolise an appreciation for Indigenous soldiers' actions.

The paving pattern references the snail shells found within the Sydney Harbour region and creates a contrasting surface that invites visitors to gather. The themes explored within the design of the gathering spaces intend to initiate and facilitate community gathering as well as recognition and acknowledgment for Aboriginal and Torres Strait Islander peoples' history and connection to Country.

The shelters and gathering spaces are subject to further design development in conjunction with additional stakeholder and First Nations engagement.

Refer to landscape plans for proposed locations of each shelter iteration.

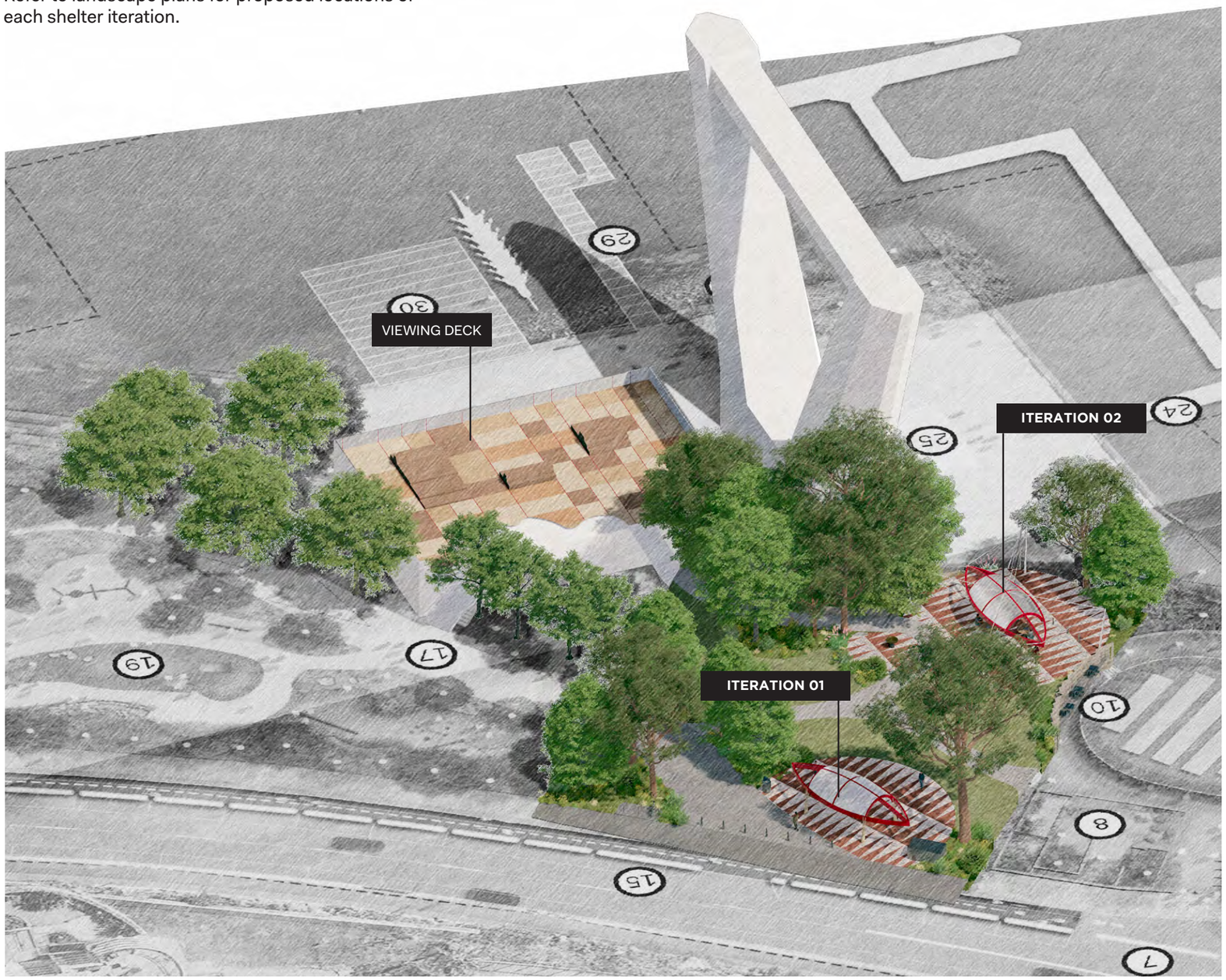


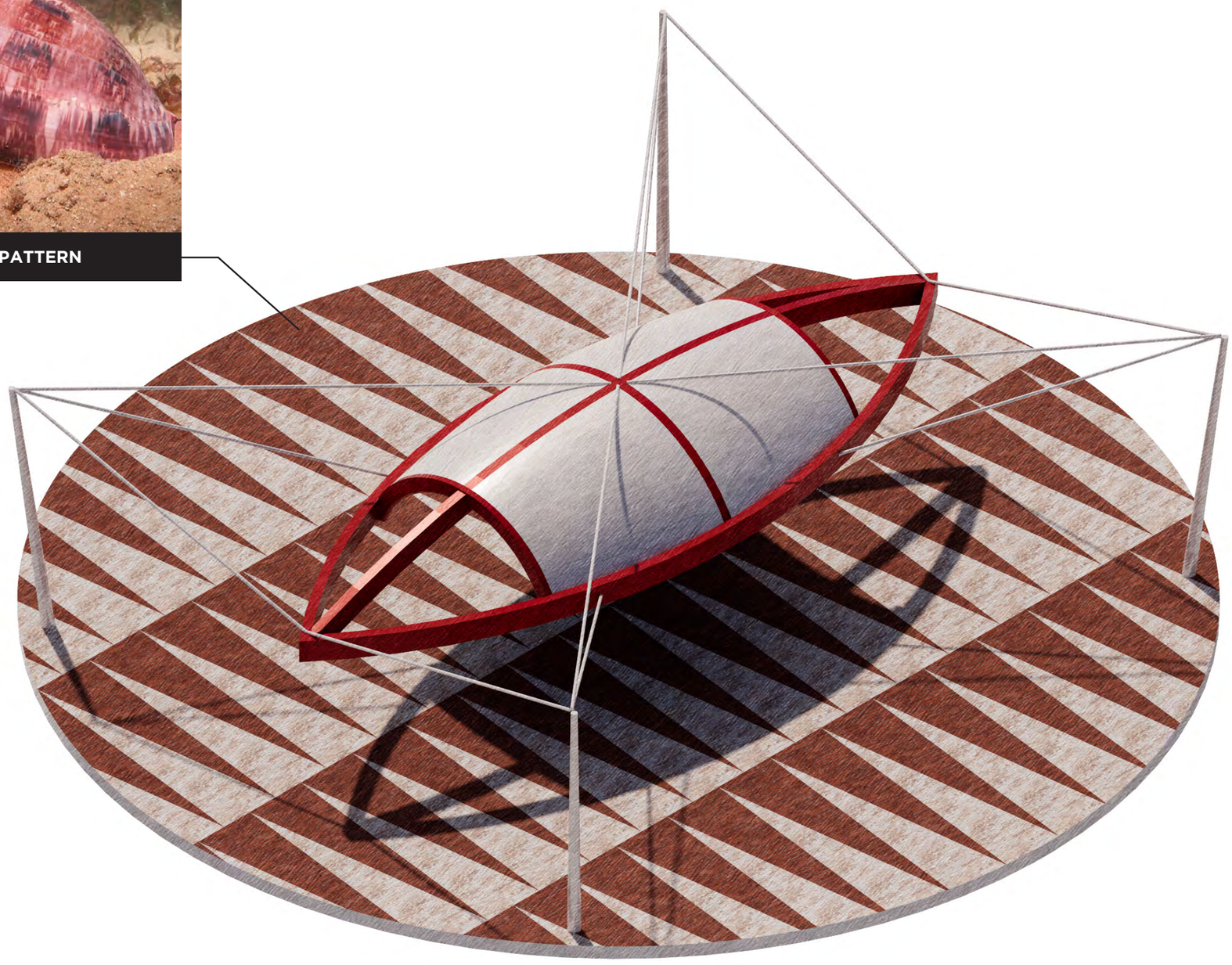
Figure 17. Gathering places conceptual approach

Pavillions
Type 01

PAVING PATTERN

Pavillions
Type 02

PAVING PATTERN



2.21 Lighting
Overview

Bank Street Park all though not owned or managed by the City of Sydney (CoS) should have a similar visual aesthetic as other parks and open space in terms of lighting.

The strategy for Bank Street Park is to have a suite of simple and robust lighting fixtures that establish appropriate lighting levels, standards and luminaire criteria to create an enjoyable night-scape and feeling of comfort to attract and encourage people to stay and enjoy the parkland at night.

+ Establish appropriate lighting levels, standards and luminaire criteria that promotes a safe public domain
+ Illuminate public and pedestrian areas to a level that will reduce the risk of crime to people and property
+ Minimise light spill and utilise LED fittings
+ Provide a level of illumination which is adequate for operation of CCTV camera surveillance
+ Allow lighting to facilitate orientation and wayfinding to assist in creating a legible night time environment
+ Create an enjoyable night-scape and feeling of comfort by improving the aesthetic quality of the environment at night time. Atmospheric feature lighting to include the top of the dragon boat deck and shelters
+ Be adjustable in terms of output level and spread / direction specification to suit wear requirements.
+ The playground and courts will not be directly lit as part of the lighting strategy to discourage nighttime use, however will receive some secondary light spill from pathway pole lighting.

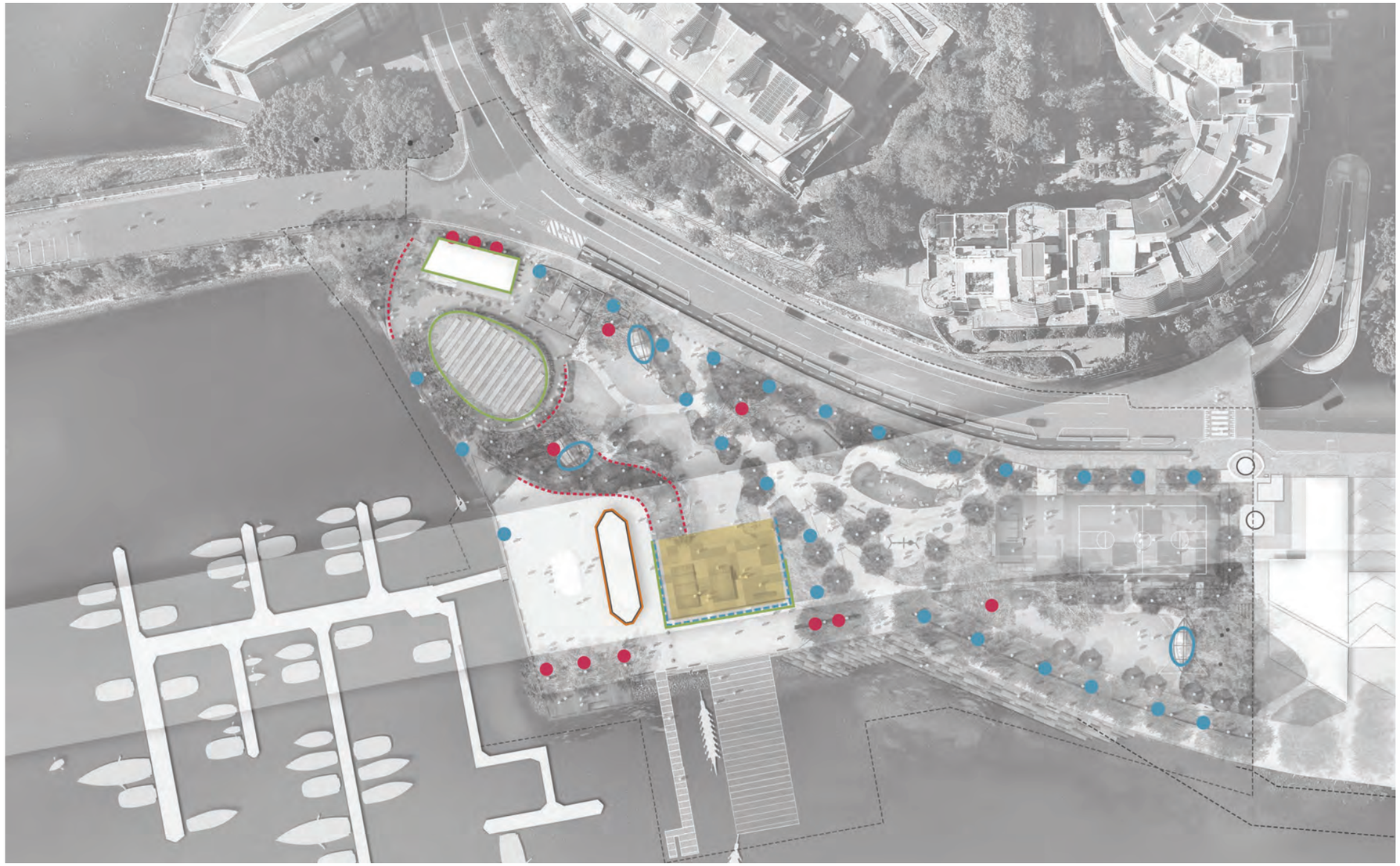
Pier 26 Hudson River Park, New York_Olin Studio

Lighting
Public Domain Lighting

Outdoor lighting should also minimise any adverse effect of the light installation during the detailed lighting design phase (as set out in AS4282-2019 Control of the Obtrusive Effect of Outdoor Lighting)

- Direct lights downwards as much as possible and avoid up-lighting and blue light pollution
- Use luminaries that are aimed to minimise light (e.g. full cut luminaries where no light is emitted above the horizontal plane)
- Avoid light pollution by over-lighting by utilising low-energy lighting
- Keep glare to a minimum by keeping the main beam angle less than 70 degrees
- Wherever possible use floodlights with asymmetric beams which permit the front glazing to be kept at or near parallel to the surface being lit
- Direct precinct lighting away from sensitive receivers
- Position precinct lighting as far away from precinct boundaries as practicable.
- Quantitative modelling to determine the extent of light spill should be undertaken as more detailed lighting design plans are generated, with mitigation measures to ensure compliance with AS 4282-2019.

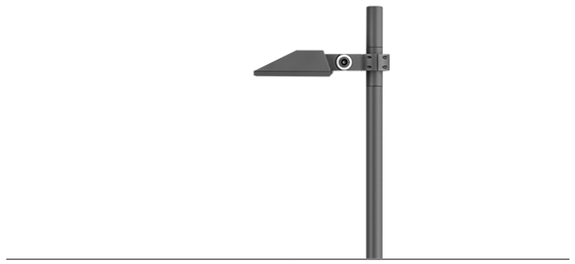
NOTE: Lighting and luminaire locations shown are indicative only and will be subject to further consultation and detail design with Placemaking NSW.

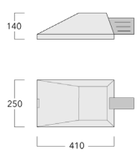


- Feature Tree Uprights
- 4.5m High Pole Mounted Public Domain Fitting at 15.0m Centres
- Feature lighting to deck
- Shelter Feature Uprights
- Balustrade Light Fittings
- Recessed Wall Mounted Light Fittings
- Lighting to pylon. To be coordinated with TfNSW.
- Architectural lighting

Lighting
Indicative Outdoor Lighting Fixtures

Outdoor lighting shown is indicative only and will be subject to further consultation with Placemaking NSW for final selection and location.



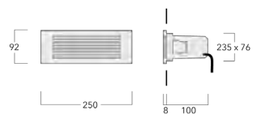


Description
IP66, Class I. IK08. Marine-grade die-cast aluminium alloy. 5CE superior corrosion protection + primer including PCS hardware. Silicone rubber gaskets. Safety glass lens, hinged. PMMA OLC® optics for superior illumination and glare control. Brackets to be ordered separately.

5.0m Pole mounted luminaire we-ef PFL230 LED (or similar)

Description
RGBW Colour Changer. IP67, Class I. IK10+. Stainless steel construction including PCS hardware. Safety glass lens; max. load 5 tonnes. Luminaire can be driven over at low speed. Silicone rubber gasket. Factory-sealed termination chamber complete with cable gland and 0.5 m of flexible PVC free cable. Integral EC electronic converter. Advanced thermal management protects LEDs while optimising lumens output. Removable LED boards for upgrading. CAD-optimised optics for superior illumination and glare control. OLC® One LED Concept. LED circuit board with WE-EF Colour Boost Technology. DMX Interface. For other control interface options to suit specific project requirements, contact WE-EF. Luminaire installation blockout and sealable junction box included in supply. IMPORTANT! Inground blockouts must be installed with effective drainage, watch **here.**

Inground luminaire we-ef ETC330-FS CC LED (or similar)



Description
IP55, Class I. IK10. Marine-grade, die-cast aluminium alloy. 5CE superior corrosion protection + primer including PCS hardware. Silicone rubber gasket. Polycarbonate main lens. Two cable entries. Factory installed LED circuit board. Integral EC electronic converter. Optional 2200 K version available. To be specified at time of ordering. A pre-installation blockout is available and recommended for mounting in concrete walls. To be ordered separately.

Wall luminaires recessed we-ef ST259 LED (or similar)

KLIK LED Pod

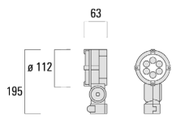
Optics			Lens/Reflector	
Beam Angle			Symmetrical	Asymmetrical
lm	W	mA	System Lumens †	
165	1.4	350	118	106
235	2.0	500	167	151

Colour	2200°K · 2700°K · 3000°K · 3500°K · 4000°K · 5000°K · Red · Green · Blue · Amber · PC Amber
CRI	80-85
Binning	2 McAdam Step
Driver	Input 24VDC (42VDC optional) / Output 350 - 500mA Constant Current
Control	DALI · 1-10V · DMX*
Distribution	Symmetrical · Asymmetrical
Tube Size	Ø38 - Ø45mm, Max. wall 3.5mm †
Cut out	Ø25mm
Weight	0.020kg

* DMX control is for overall dimming only and not for individually addressed LEDpods
† Others sizes available upon request
† Lumen output based on 4000K

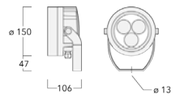
LPOD40 20191122

KLIK LED Pod 40 Handrail and Balustrade luminaire (or similar)



Description
IP66, Class I. IK07. Marine-grade die-cast aluminium alloy. 5CE superior corrosion protection + primer including PCS hardware. Silicone CCG® Controlled Compression Gasket. Safety glass lens. PMMA-LED lens array. Remote 240v gear to be ordered separately. 2700 K option available on request.

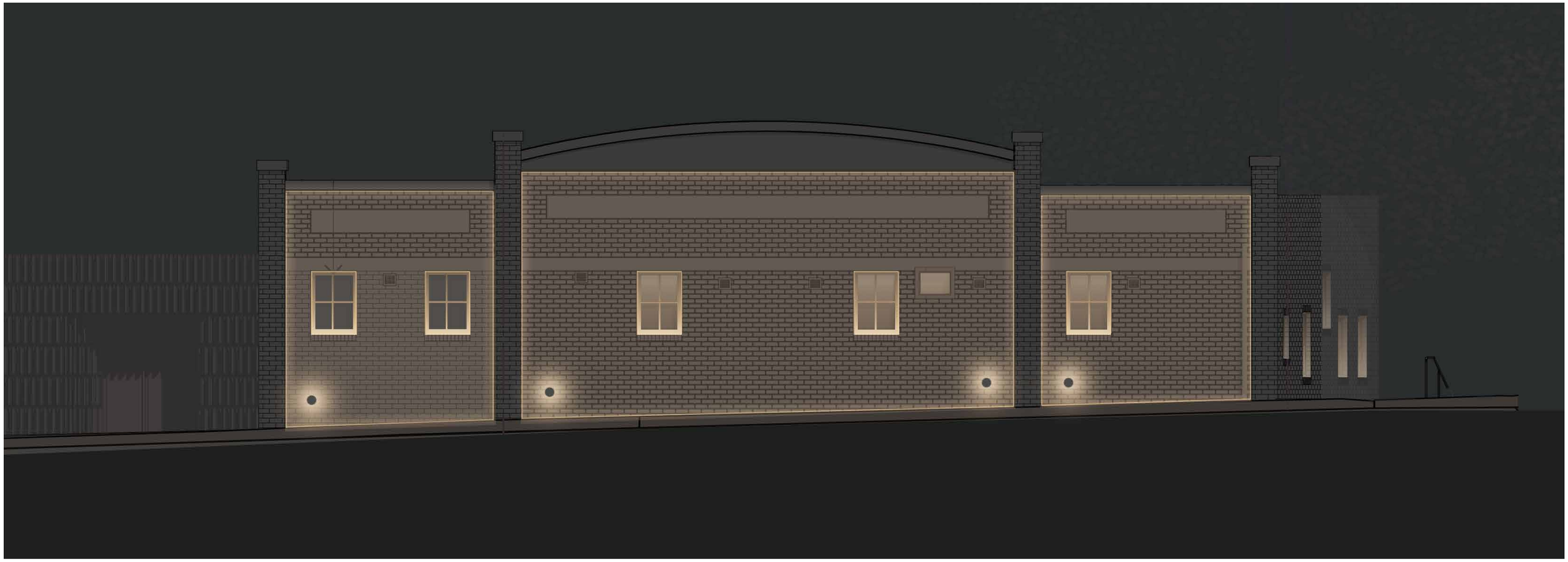
Feature projector luminaire we-ef FLC121 CC LED (or similar)

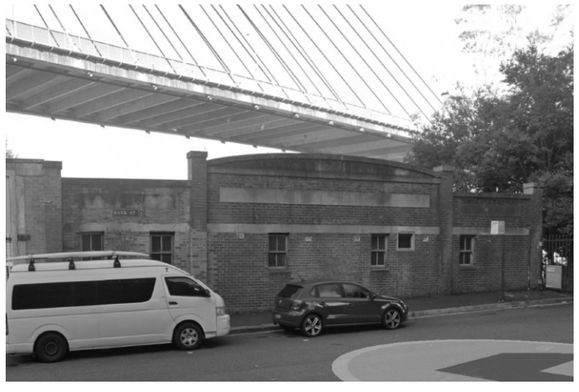


Description
RGBW/RGBA Colour Changer. IP66, Class III. IK07. Marine-grade, die-cast aluminium alloy. 5CE superior corrosion protection + primer including PCS hardware. Silicone CCG® Controlled Compression Gasket. Safety glass lens. One cable gland. Second gland for through-wiring on request. Electronic control gear in separate gear box (constant current), prewired. Gearbox to be ordered separately. CAD-optimised optics for superior illumination and glare control. OLC® One LED Concept. Factory-installed LED circuit board, Colour Boost Technology. DMX interface.

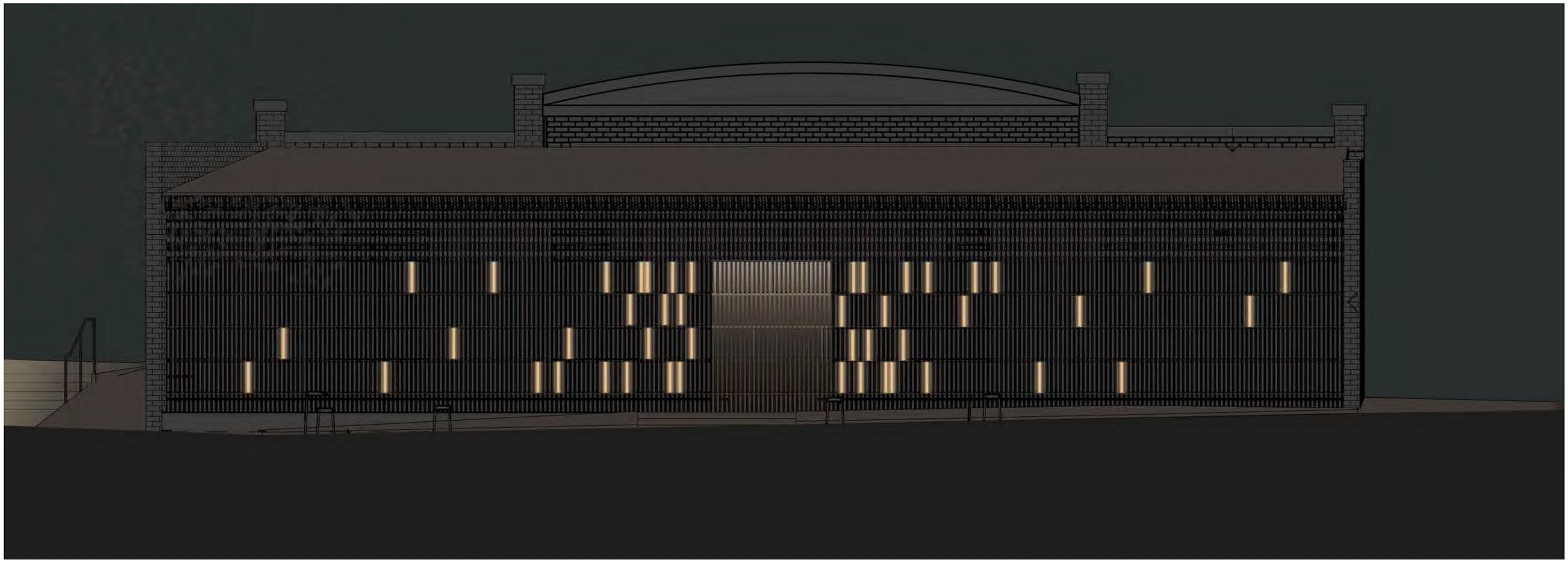
Feature projector luminaires we-ef FLC210 CC LED (or similar)

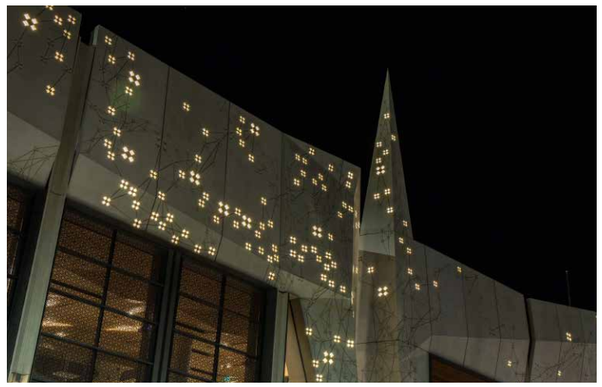
Lighting
Architectural - Bank Street Facade



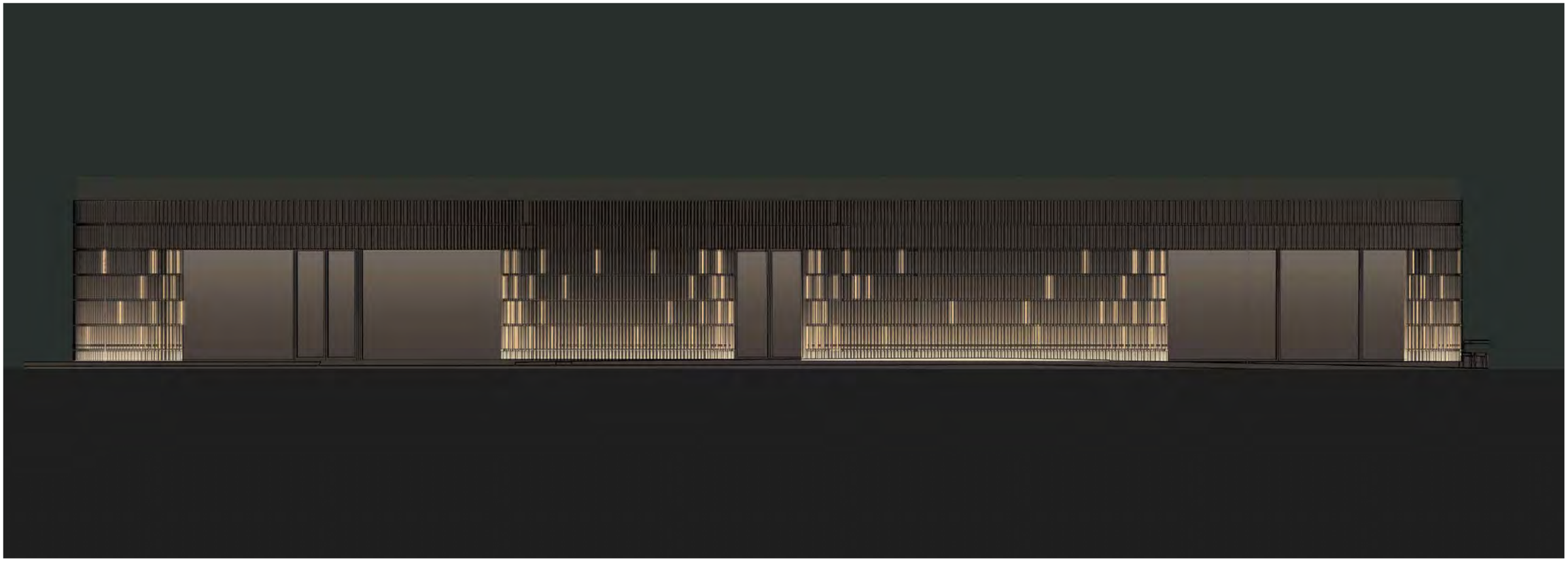


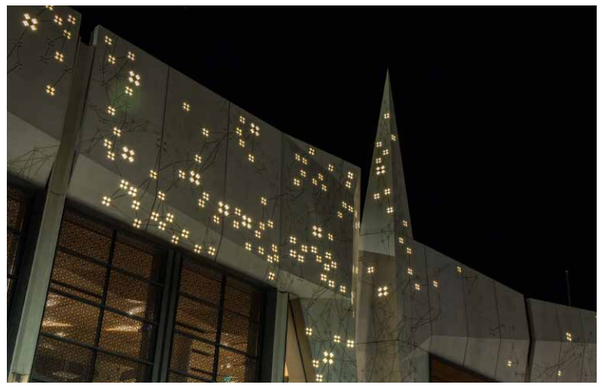
Lighting
Architectural - Building D



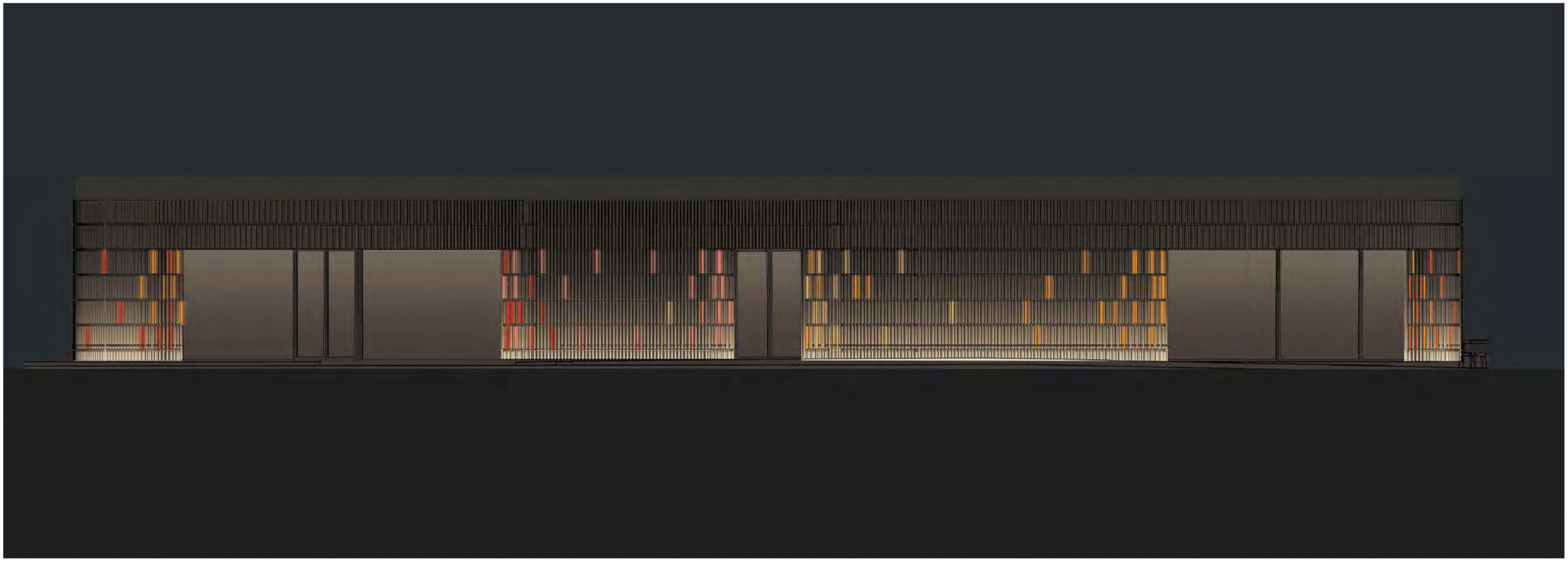


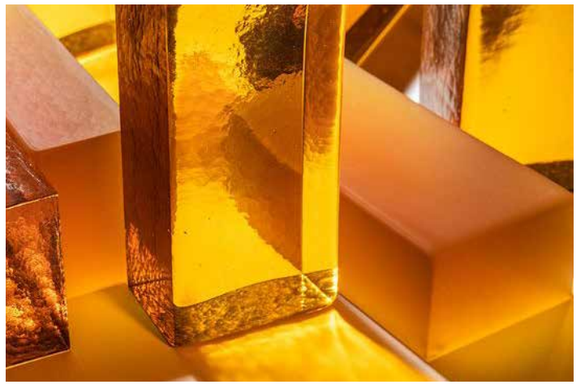
Lighting
Architectural - Community, Cafe and Marina Facilities Building



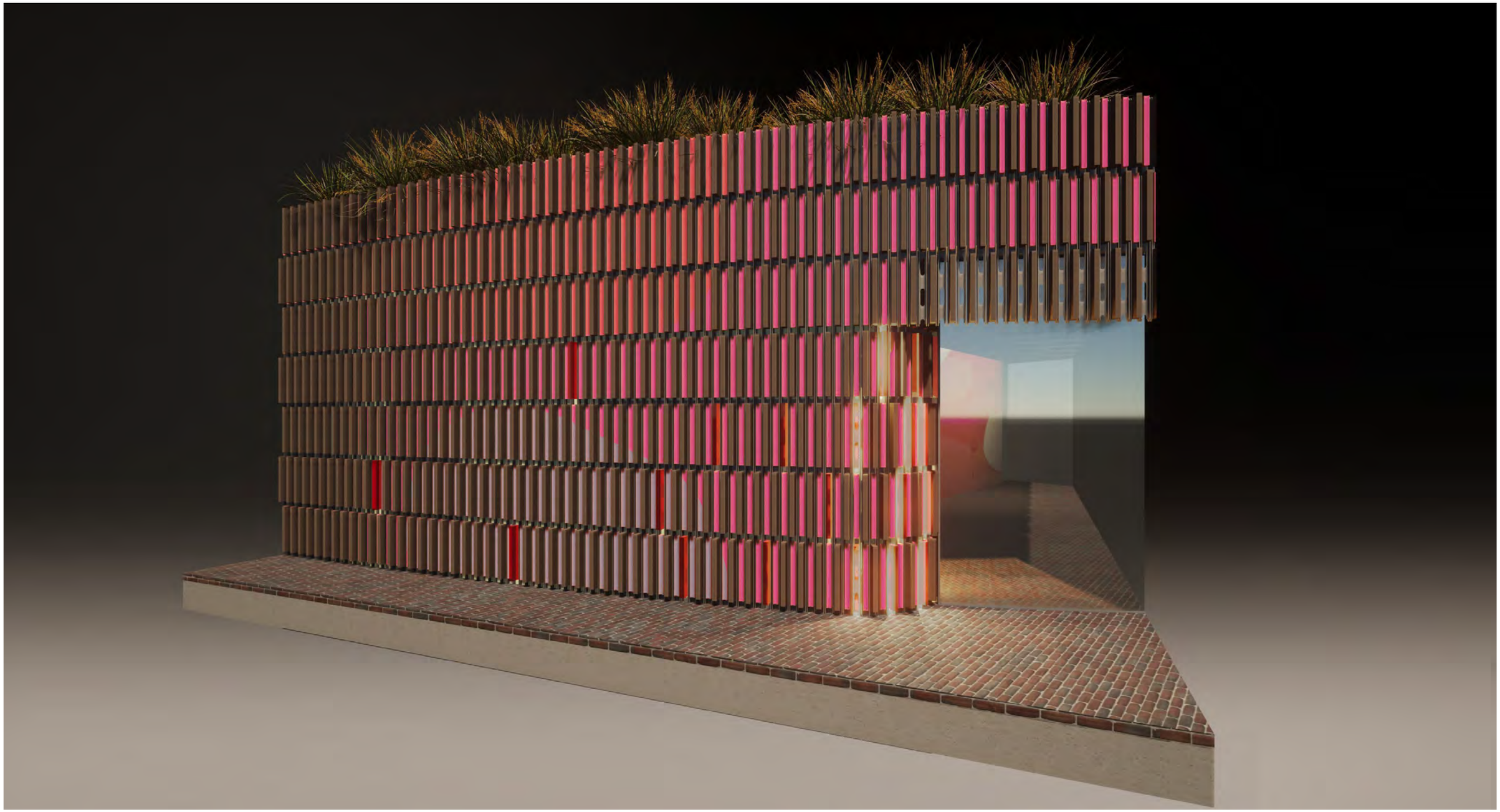


Lighting
Architectural - Colour Illuminated Facade Inserts

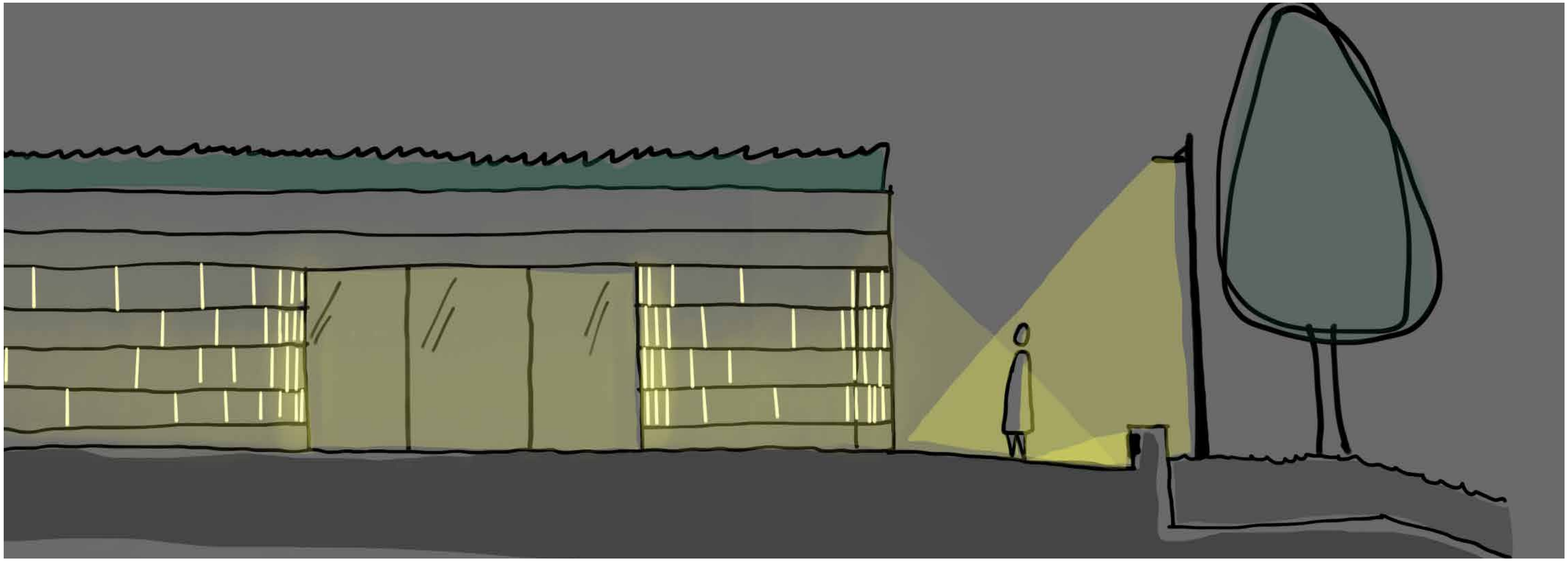


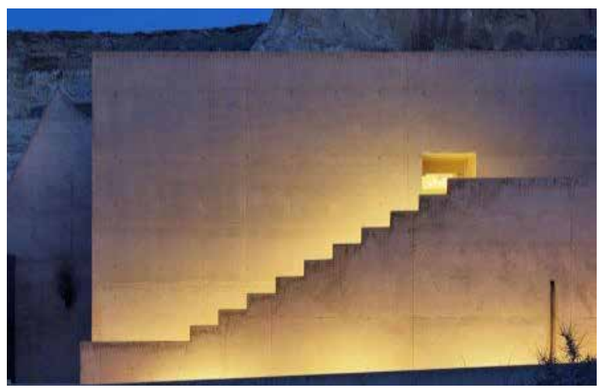


Lighting
Architectural - Colour Illuminated Facade Inserts

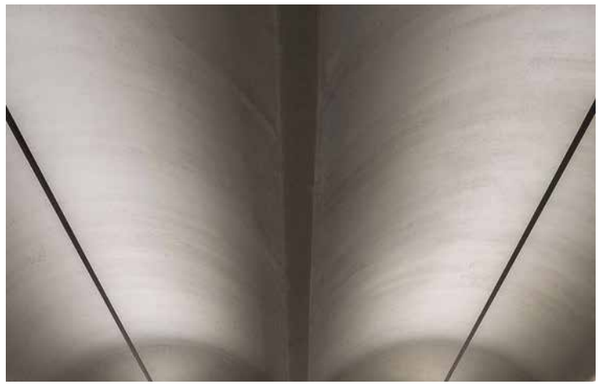


Lighting
Architectural - Pathways at Building Areas





Lighting
Architectural - Dragon Boat Storage Building



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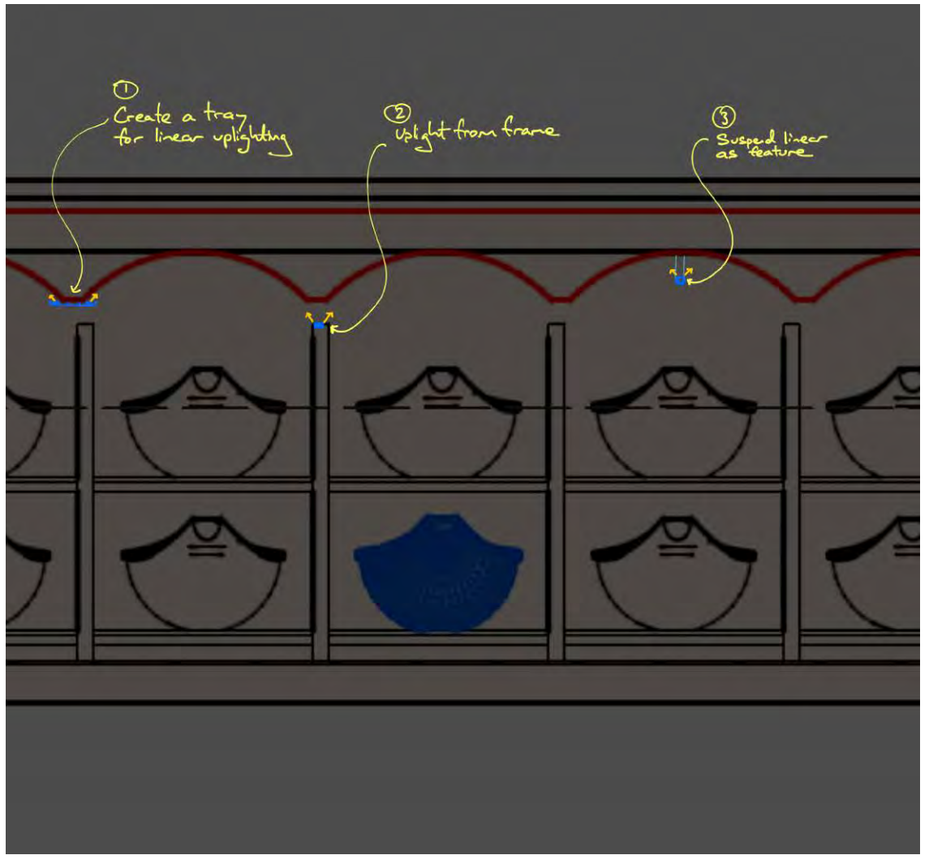
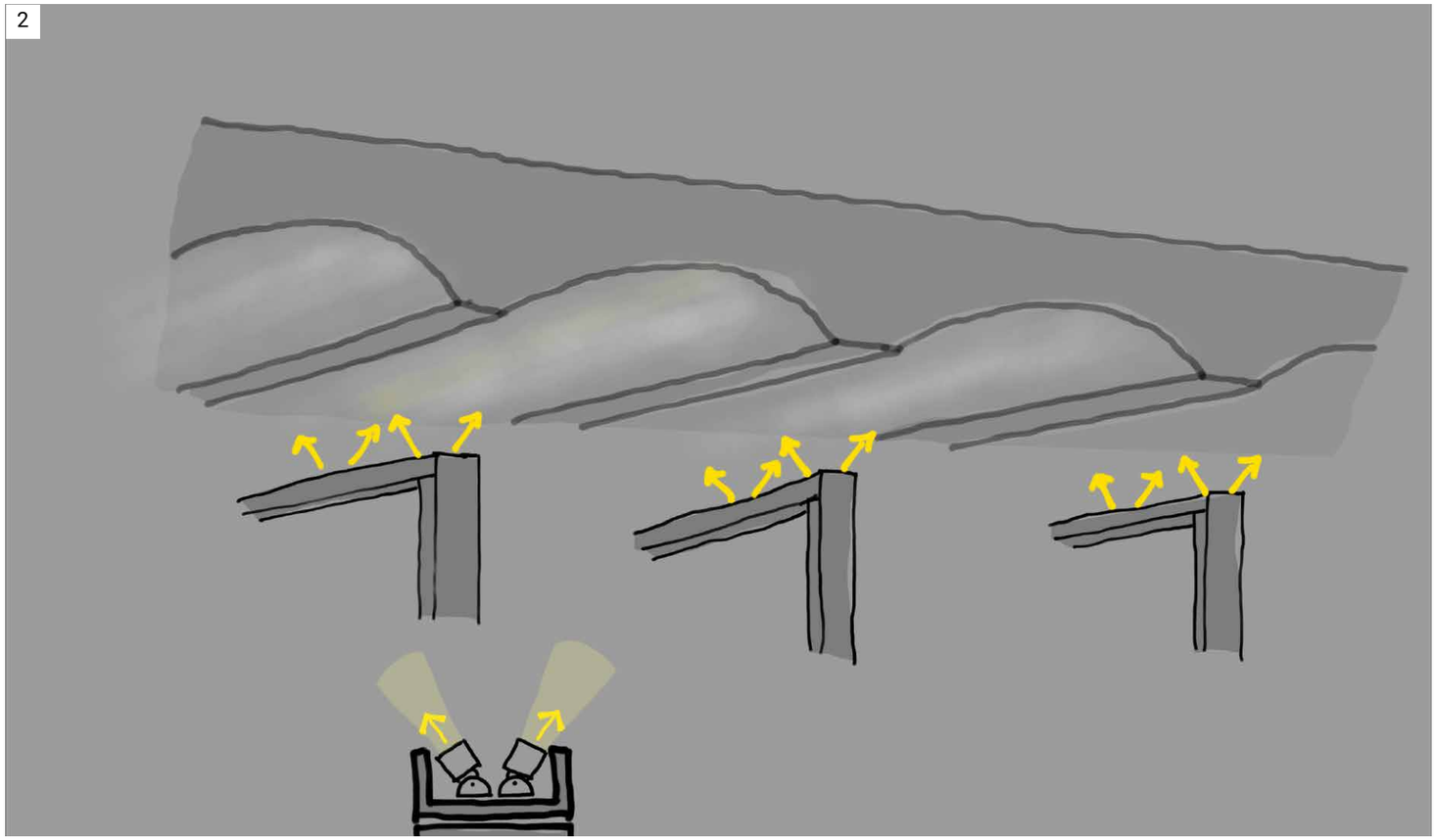
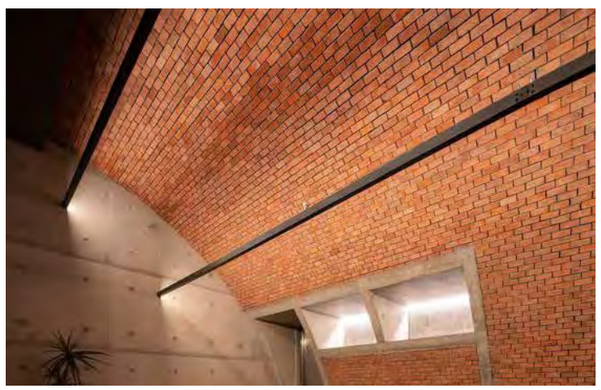
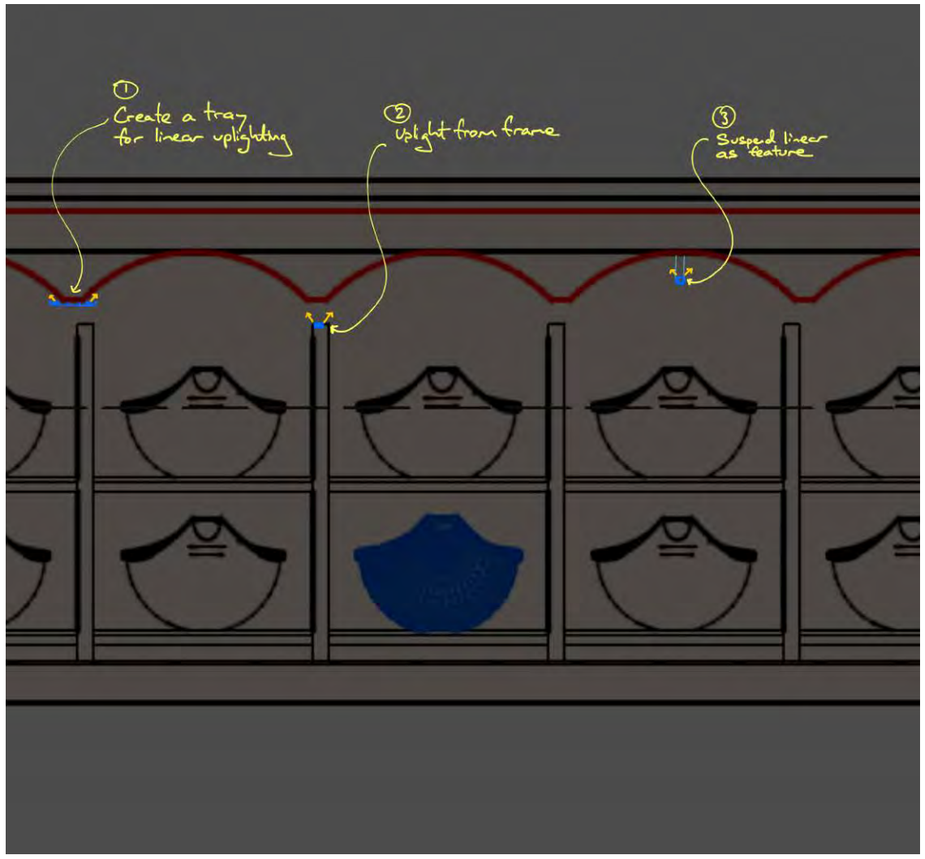
Architectural - Dragon Boat Storage Building

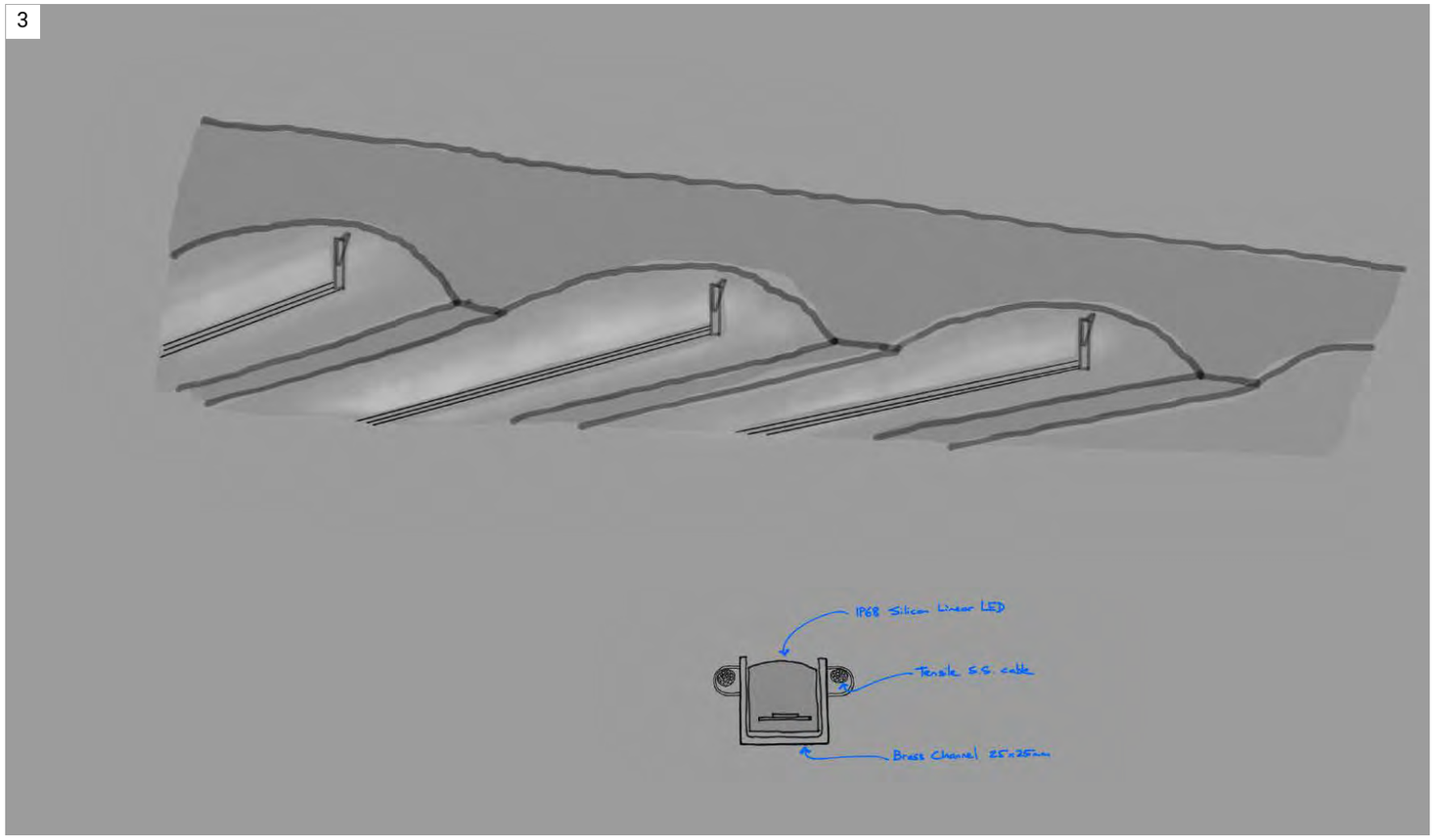


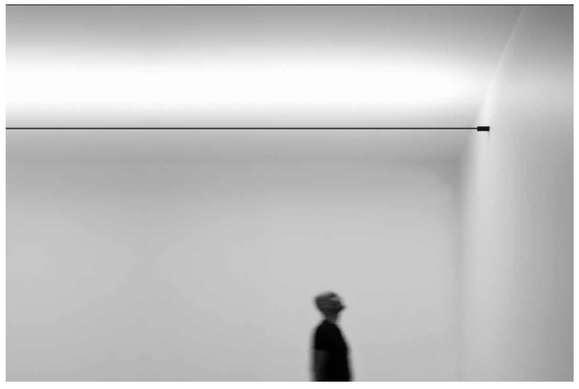


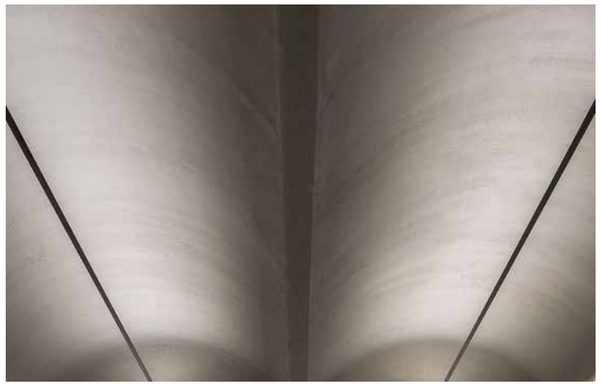


Lighting
Architectural - Dragon Boat Storage Building









3.0
Site Analysis

3.1 Context

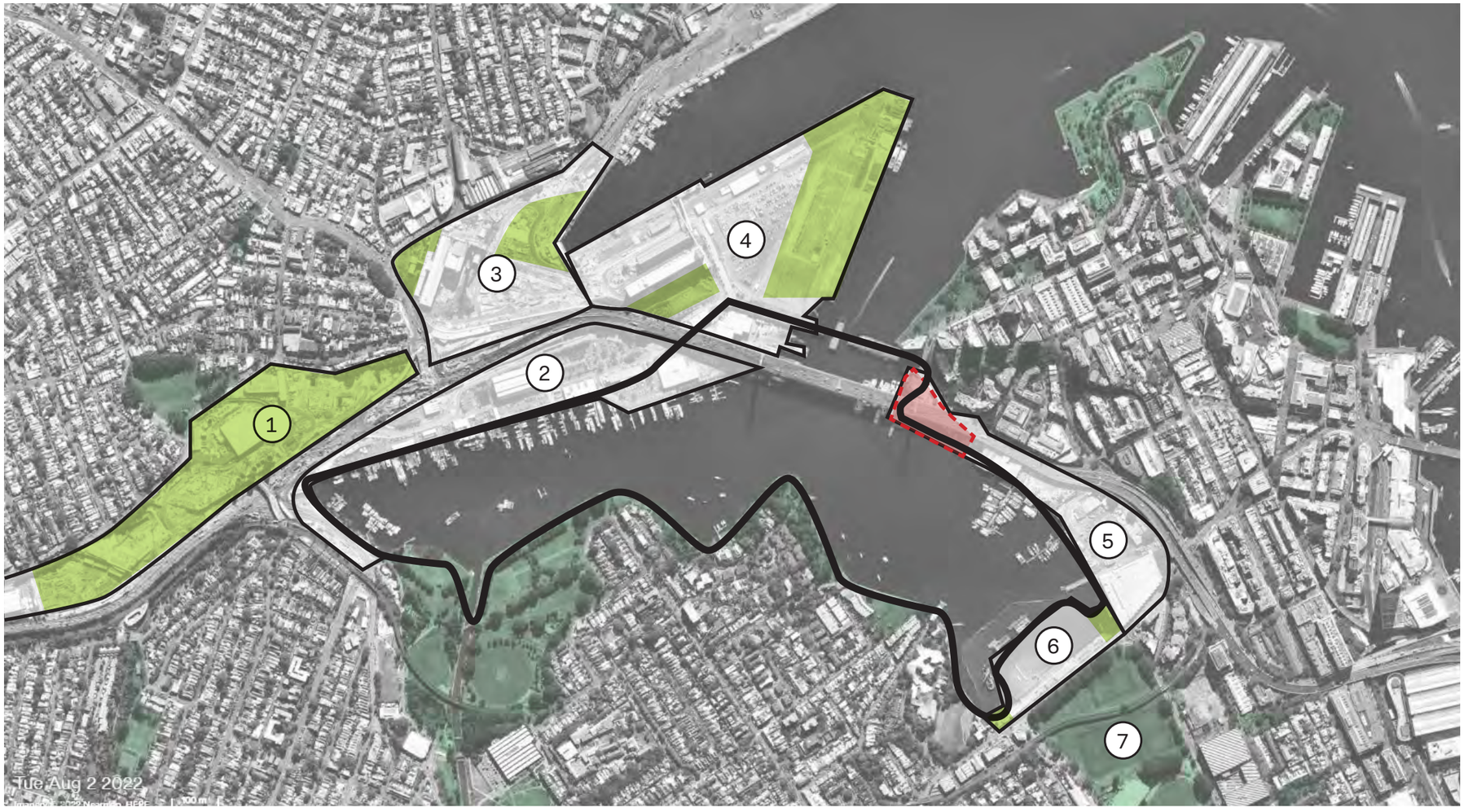
Bays Precinct

In 2016 the then Minister for Planning declared the urban renewal of The Bays Precinct a matter of state planning significance and determined that The Bays Precinct should be considered a potential State Significant Precinct (SSP).

Bank Street Park forms part of this wider Bays Precinct and will need to respond to this context of urban renewal, improved connectivity and open space, and increased density and intensification.

The Bays Precinct can be broadly separated into the following precincts, illustrated on the adjacent plan:

1. Rozelle Railyards
2. Rozelle Bay
3. White Bay Power Station
4. Glebe Island
5. Blackwattle Bay
6. Sydney Fish Markets
7. Wentworth Park



Bank Street Park

background aerial image: Nearmap

Open Space Context

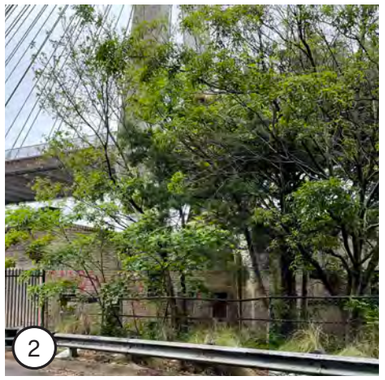
1. Waterfront Park
2. Pirrama Park
3. Ballaarat Park
4. Metcalfe Park
5. Pyrmont Bay Park
6. Tumbalong Park
7. Wentworth Park
8. Blackwattle Bay Park
9. Federal Park
10. Jubilee Park
11. Bicentennial Park
12. Easton Park
13. Cohen Park
14. Bays West Park
15. Rozelle Parklands
16. White Bay Park
17. White Bay Gardens
18. Local Park
19. Sydney Fish Markets Urban Park
20. Bays West Park

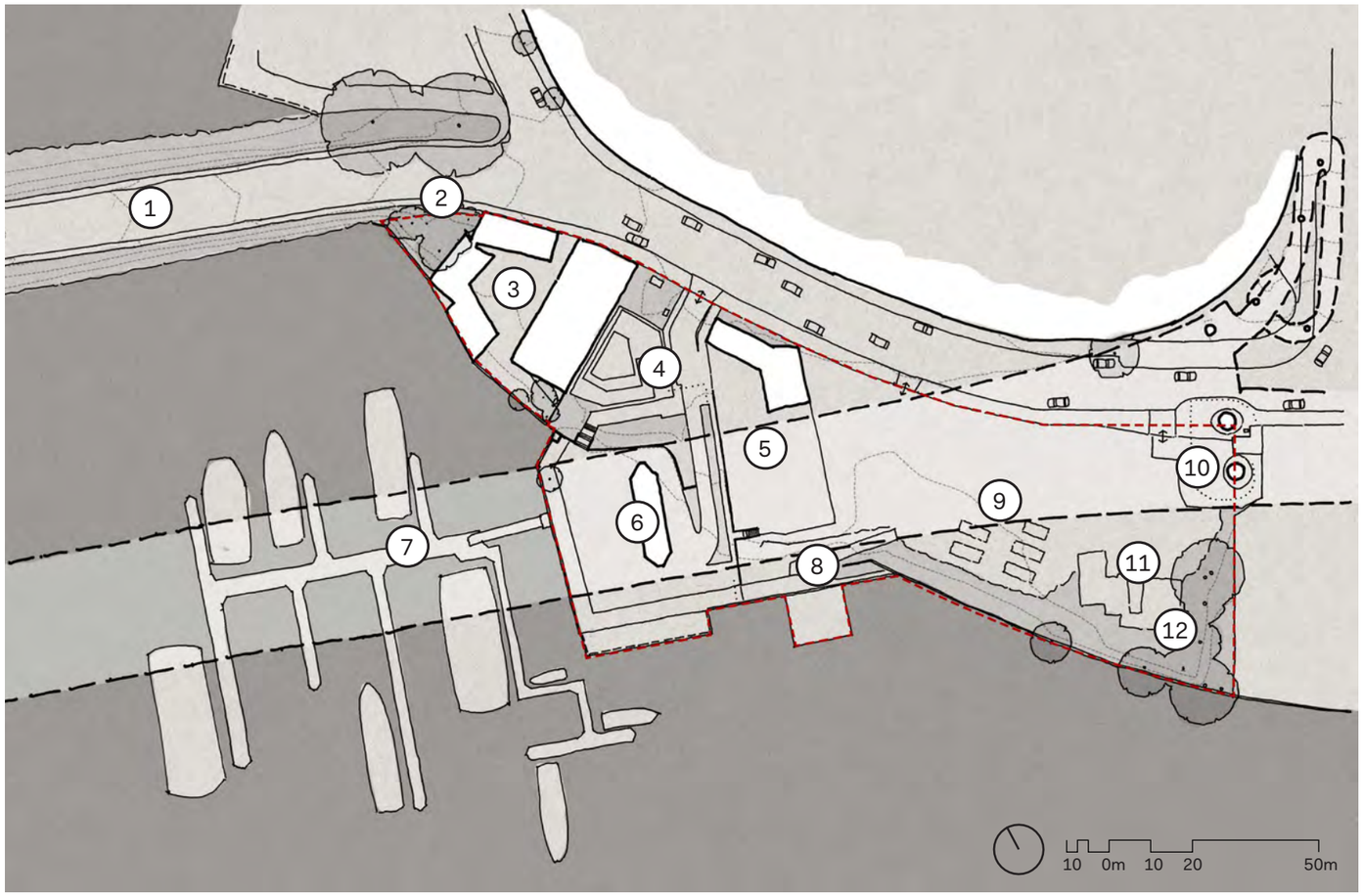
Playground Skate Park

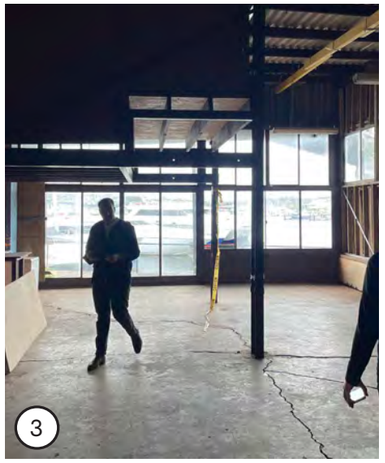
3.2 Site Appreciation

Site Features

1. Glebe Island bridge
2. Vegetated embankment
3. 1-3 Bank Street heritage buildings
4. Gabion walls and (restricted) pylon vehicle access
5. Marina office and facilities
6. Anzac Bridge pylon
7. Marina
8. Dragon boat launch ramp
9. Dragon boat storage and car parking
10. Pylons and substation
11. Pyrmont Heritage Boat Club
12. Vegetated embankment







3.3 Aboriginal culture and heritage

Traditional Owners[2]

The Gadigal (Gadi, Cadigal) are the Traditional Owners of the City of Sydney region, including the area in which the project site sits.

There is no certainty relating to the exact boundaries of Gadigal Country. However, the approximate territory of the Gadigal has been estimated to stretch from the southern section of Port Jackson from South Head to Petersham, with their southern boundary being the location of the Cooks River and Alexandra Canal.

Culture & Heritage

Aboriginal people have occupied Australia for tens of thousands of years. The oldest available indicative dating for Aboriginal occupation in the coastal regions of Sydney is 30,735 years ago at Parramatta (Attenbrow, 2010, p. 18). The archaeological material record provides evidence of this long occupation, but also provides evidence of a dynamic culture that has changed through time.

The Pyrmont area, known as Pirrama to its first inhabitants, was a location of rich resources. It was adjacent to the swamp and wetlands of Blackwattle Swamp, the marine resources of Blackwattle Bay, and contained rocky shores covered in outcrops which included rock shelters. The eastern shore of Blackwattle Bay also contained freshwater springs and wells, including the named Tinkers Well that remained until destroyed through quarrying. The location maintained a distinct Aboriginal presence up to1836 (Ross, 1988), with visits by Aboriginal people noted up to the 1870's (Matthews 1982, Smith 2004).

Aboriginal people observed in the study area at the time of colonisation were seen to traditionally live in small family or clan groups that were associated with particular territories or places.

With the establishment of European settlement at Sydney Cove, Aboriginal people rapidly became alienated from their land and resources. A major epidemic of an introduced disease, probably smallpox, which broke out in 1789, had a devastating effect on the Aboriginal population. Historical records indicate that in just over one year the Aboriginal population of Sydney had decreased by more than a half (Attenbrow 2010: 22). The activities of European colonists including violent attacks on Aboriginal people compounded the dislocation and destruction of the traditional life ways of Aboriginal people throughout the 1800s.

Aboriginal people have had a continuous connection to the Blackwattle Bay area through ongoing involvement in fishing activities, working at the wharves and at nearby light industries/factories, such as the abattoirs and tannery. A number of orphanages/ children's homes in nearby Glebe, operating from the 1890s till the 1980s, such as Bidura, Strathmore and Rylstone, had many Aboriginal children as inmates. More recently, Aboriginal run educational and cultural organisations in nearby Glebe, such as Tranby National Indigenous Adult Education and Training College since 1957 and the Aboriginal and Islander Dance Theatre since 1975, have provided support, training and a cultural focus for Aboriginal people locally and nationally. In the context of Aboriginal governance, the Blackwattle Bay area falls within the boundaries of the Metropolitan Local Aboriginal Land Council.

Today, the study area continues to have great cultural significance for Aboriginal people. This is encapsulated by the statement by one of the Registered Aboriginal Parties, Mr. Philip Khan (Artefact 2020) about the wider foreshore area:

"This whole area is highly significant to the Aboriginal People of the past and present, it has been lived on for over Thousands and Thousands of years by the First People, Aboriginal People and the Spirituality of the land is so overpowering it gives me Goosebumps just thinking about what those old people think of how we disrespect their ways of life and Spirituality given to them by the Great Creator, we have let them down. Also, it is part of the first contact area of Europeans and Aboriginal People."

Flora & Food Harvesting

Native plants were an important source of food, medicine and building material for the Gadigal people who have incredibly sophisticated knowledge of their Country, resources and how to exploit those resources. The edible and medicinal plants harvested and gathered by Gadigal people in the Sydney region include various fruits, berries, roots, tubers, leaves and nectars, and would have formed an important part of their diet, particularly during the winter months when fishing was more difficult.

Fauna & Food Harvesting

Prior to colonisation, present day Sydney harbour was incredibly abundant in food resources with estimates of approximately 600 fish species occurring with the natural rock formations around the harbour which also provided natural habitats for large communities of shellfish.

Fishing was a major occupation for both men and women. The Eora women were renowned for their skills in fishing, swimming, diving and canoeing. They were the main food providers for their families. Fishing from their bark canoes with lines and hooks they made their fishing lines by twisting together two strands of fibre from kurrajong trees, cabbage trees, flax plants or animal fur. The distinctively crescent-shaped fish hooks were honed from the broadest part of the sea snail shell.

Rivers and creeks also provided freshwater fish, shellfish and eels, as well as platypus and an abundance of birds which the waterways attracted.

Historical records also suggest that the hunting of land mammals including macropods, possums, gliders, fruit bats, dingos, koalas, wombats and kangaroo also occurred in the region and helped supplement marine food sources.

Refer to the Statement of Heritage Impact and Heritage Interpretation Framework for additional information.

A watercolour illustration of Aboriginal people fishing c.1790s. (Source: State Library of NSW)

3.4 European history and heritage

Blackwattle Bay

Blackwattle Bay was originally an unattractive shoreline with abrupt sandstone cliffs on its eastern shore and a low-lying swamp at its southern end extending towards Parramatta Road. Demand for additional wharfs and jetties inspired infilling of the shore along its eastern edge. Construction of a causeway across the bay and subsequent reclamation of the swamp south of that artery created a large public park (Wentworth Park).

Wharfs developed to serve bulk handling of coal and blue metal. In addition, Blackwattle Bay became a major centre for the timber industry, which obtained its raw materials from ocean-going vessels tying up at wharfs operated exclusively by timber companies.

In 1901, construction of a new Glebe Island Bridge commenced.

The parish map of parish Petersham provides the clearest image showing reclamations along the eastern side of the bay - Portions 8 to 13 (Source: Parish Petersham, Regional Charting map, LPI)

In 1909, Blackwattle Bay was described as 'the very core, life, and being of Sydney's Timber Industry, where timber is piled in stacks and supine forests along the water's edge for near a two mile stretch; in a locality and atmosphere, that talks, eats, drinks, and thinks timber for 14 hours out of the 24; where the workmen at the machines all carry shavings in their hair'.[1]

During WW2, wharfs near Bank Street previously used for fishing boats including the wharf at Number 1 Bank Street (then known as Cam's Wharf) were used to dock minesweeping vessels. What later became the Poulos wharf was used as a Navy depot.

In 1983, sites along the eastern side of the bay included Fork Lift Pty Ltd (No 1 Bank Street), Colonial Sugar Refining Co Ltd, Sydney County Council (later Poulos site), a Shell service station, E A Watts Pty Ltd (later Hymix North) and Hymix Concrete (Hymix South)

Both halves of the new Glebe Island Bridge were joined on 24 July 1995, establishing a new stronger transport link into the area. On 11 November 1998, the new Glebe Island Bridge was renamed Anzac Bridge.

Subject Site

1-3 Bank Street, Pyrmont has had a long association with Sydney as a working port. Originally associated with the Blackwattle Bay timber industry, the site was redeveloped in the 1930s for use as the base of the Cam and Sons fishing trawler fleet, where it continuously operated for over thirty years. Besides the recent removal of the finger wharf, the site is largely intact from its 1932 construction. It is a rare, extant example of the early-twentieth century maritime industry within Blackwattle Bay.

The site was occupied by a number of industries following the end of Cam and Sons' operation. In 1950, the City of Sydney building surveyor's department indicated an amenities room was constructed by Keene and Co., a company associated with the poultry industry on site. By 1975 the Bank Street wharf was occupied by the Forklift Hire Co.

A & E Ellis were proud of their fleet of ships like Our Elsie bringing timber to their wharf at Blackwattle Bay (Source: S A Mills, The firm that has reduced the Australian timber trade ... to a science, p 6).

Heritage

There are several heritage items in the surrounding area including the Wentworth Park viaduct, Glebe Island Bridge, Bellevue (house), and Lyndhurst (house). Glebe Island Bridge is listed on the State Heritage Register.

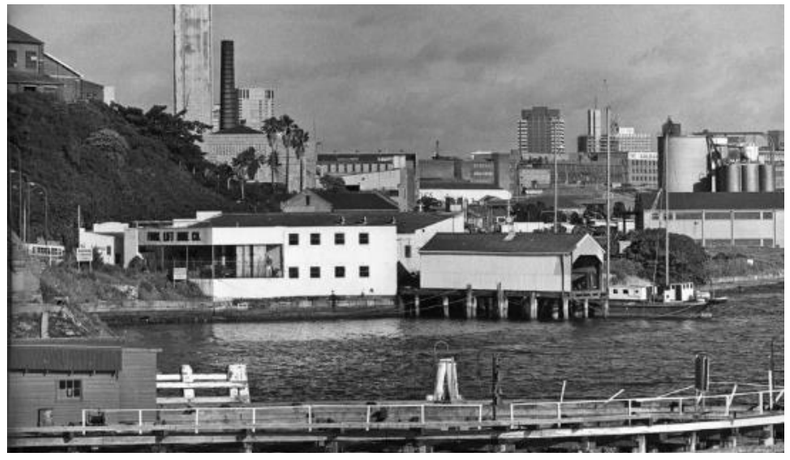
Anzac Bridge is listed as an item of State significance on the section 170 Heritage and Conservation Register of TfNSW. It is considered a world standard bridge in scale, aesthetics and design features. Its pylons are dominant features in the landscape which are distinctive to Blackwattle Bay.

Archaeology

The Fish Market site and Bank Street are identified as having 'potential for archaeology related to early industrial activities', including shipwrecks and early jetties.

Refer to the Statement of Heritage Impact and Heritage Interpretation Framework for additional information.

[1] S A Mills, The firm that has reduced the Australian timber trade ... to a science, A & E Ellis Ltd, Sydney, 1909, p 2



A view of the site taken from the Glebe Island Bridge in 1976. At this time the Forklift Hire Co. occupied the site (Source: City of Sydney Archives online, 067/067929).

3.5 Planning controls and adjacent land uses

Sydney Local Environmental Plan (LEP) 2012 - Land Use Zoning - Land development component

Bank Street Park is currently zoned RE1 Public Recreation, with MU1 Mixed Use to the east and R1 General Residential to the north.

- RE1 Public Recreation
- MU1 Mixed Use
- R1 General Residential

Zone RE1 Public Recreation:

Objectives of zone:

+ To enable land to be used for public open space or recreational purposes.
+ To provide a range of recreational settings and activities and compatible land uses.
+ To protect and enhance the natural environment for recreational purposes.
+ To provide links between open space areas.
+ To retain and promote access by members of the public to areas in the public domain including recreation facilities and waterways and other natural features.
+ To protect sun access to publicly accessible land.

Permitted without consent:

Environmental protection works

Permitted with consent:

Aquaculture; Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Centre-based child care facilities; Community facilities; Electricity generating works; Emergency services facilities; Environmental facilities; Food and drink premises; Horticulture; Information and education facilities; Jetties; Kiosks; Marinas; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Respite day care centres; Roads; Roadside stalls; Signage; Water recreation structures; Water recycling facilities; Water supply systems

Prohibited:

Any development not specified above

Adjacent Uses

The new Bank Street Marina was built in 2019. The landside component of the marina has development approval until 2025 and is currently leased to All Occasion Cruises.

The residential to the north consists of multi-storey apartment buildings sitting on top of the cliff edge directly north as well as wrapping around the waters edge to the north west of the site.

Poulos Brothers is an active seafood distribution facility directly to the east of the site that will remain functional until the site is developed as part of the future Blackwattle Bay mixed use urban regeneration that will provide greater connectivity and activation at this interface in the future.

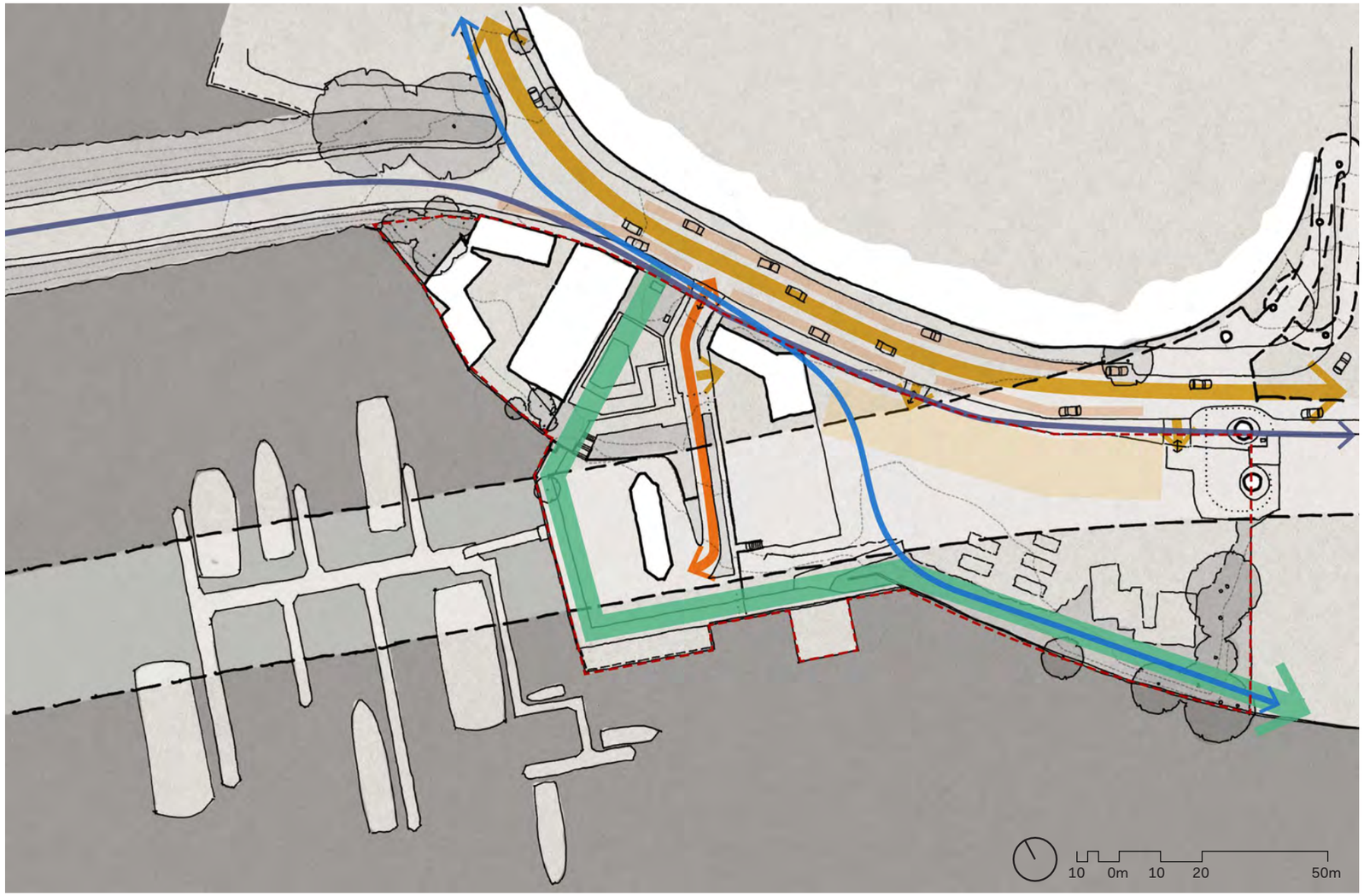
3.6 Circulation

Existing condition:

- Bank Street Local Street
- On-street parallel parking
- Site vehicle access (gated)
- TfNSW pylon access (restricted)
- Dragon boat informal parking area

Blackwattle Bay Design Code (proposed):

- Minimum 10m promenade
- Shared path, slow speed cycle route
- Separated cycleway (two-way)



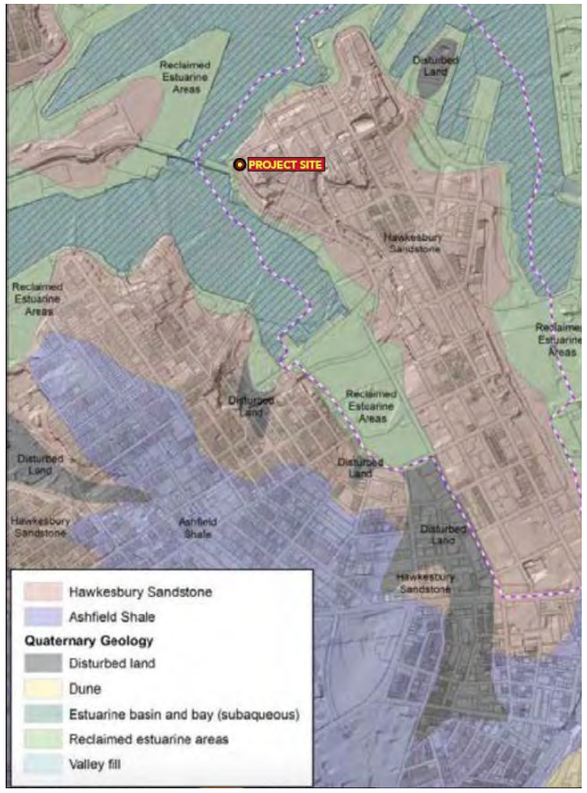
3.7 Land and marine ecology

Geomorphology[1]

The Geology of Sydney has been formed over hundreds of millions of years and is characterised in three distinct groups since the Triassic Period: The Narrabeen Group, the Wianamatta Group, and Hawkesbury Sandstone.

Early colonial observations of the foreshore at Blackwattle Bay describe it as consisting of rocky headlands and predominantly muddy foreshores.

Today's geology of the project site comprises of Hawkesbury Sandstone and reclaimed estuarine areas fronting on to an estuarine basin.



[1] Summarised from Greenshoot Consulting Bank Street Park: Context Mapping (Nov 2022). Refer to report for additional information.

Land ecology[2]

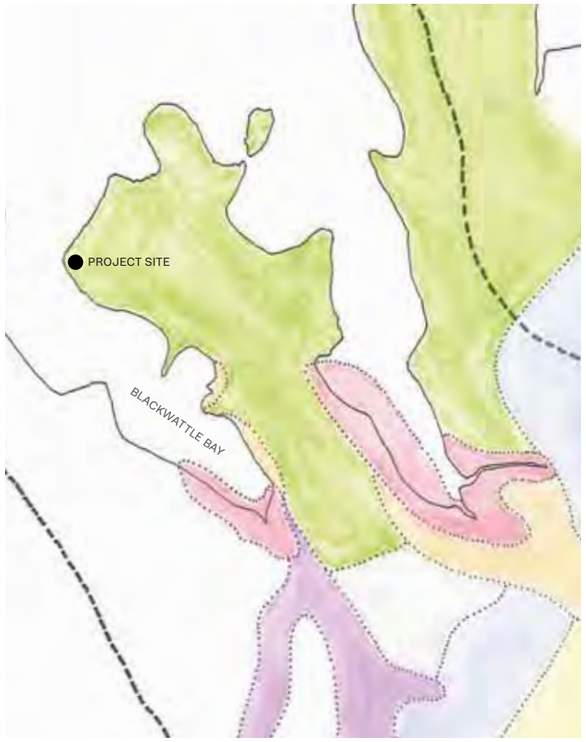
The original ecology of the project area has been identified to be Sandstone Ridgetop Woodland with heath elements. Species included Red Bloodwood *Corymbia gummifera,* Scribbly Gum *Eucalyptus haernastome,* Heath-leaved Banksia *Banksia erikafolia,* Scrub She-oak Casuarina *Casuarina distyla.*

To the south of the project area, around Blackwattle Bay there's a mix of Estuarine wetlands and Coastal swamp-forest. Estuarine wetlands include species such as Grey Mangroves *Avicennia marina,* saltmarsh species, rushes including the Common Reed *Phragmites australis,* and low open forest including Swamp Oak *Casuarina glauca.* Coastal swamp-forest is dominated by Swamp Mahogany *Eucalyptus robustus* with rainforest elements.

Transitions on Pyrmont peninsula since 1788 have profoundly altered its ecology. It is doubtful whether any of the original land surface of the peninsula remains. There is, however, a relict flora and fauna which is most precious and worthy of conservation. There is also the exciting possibility of re-introducing plants and animals which once existed on the peninsula, as rehabilitation occurs.

Native fauna of the peninsular included echidnas, quolls, koalas, squirrel gliders, possums, kangaroos, wallabies, flying foxes, emus, albatross, snakes as well as numerous birds. Today two native mammals frequent Pyrmont peninsula with certainty, the Grey-headed Flying Fox and the Common Brushtail Possum, as well as 45 species of native birds and 6 species of reptile.

With regard to the current site conditions, no mapped Plant Community Type has been mapped within the subject land. Presense of a vulnerable microbat species (Myotis macropus) requires further assessment. Three Matters of National Environmental Significance (MNES) listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) were identified, Bar-tailed Godwit, Curlew Sandpiper and Grey-headed Flying-fox, and it has been determind that the proposed works are unlikely to have a significant impact on these species.



Map of ecological communities in the Sydney Area. John Broadbent - Transformations: Ecology of Pyrmont peninsula (2008).

Marine ecology[2]

The project area is along the foreshore of Blackwattle Bay, an estuarine basin. Estuarine environments include intertidal and subtidal vegetated communities including seagrass, mangroves saltmarshes, kelp and other marine macroalgae which are important nursery grounds for juvenile fishes and invertebrates, as well as habitat for adult fishes, crustaceans and molluscs. Today, the estuarine environment of Blackwattle Bay is profoundly degraded as a result of anthropogenic activity, and is composed primarily of artificially created substrata. The region's sediments and estuarine waters have also been heavily polluted with a wide range of contaminants.

Mangrove swamps were also likely to have occurred in Blackwattle Bay. Between 1876 and 1908, however, such mangrove stands were destroyed due to foreshore works, extensive land reclamation and creek and swamp infilling to provide land for industry (Waterways Authority, 2002).

The Ecology Lab (2004) undertook a marine habitat survey for the Glebe foreshore (including Blackwattle Bay) and identified the presence of seagrass, saltmarsh, mangrove and macroalgae in the region, albeit in very restricted occurrences.

In considering practical approaches/strategies/actions that relevant authorities may adopt to improve the ecological quality of Pyrmont's estuarine environment the management of stormwater run-off must be thoroughly addressed.

Refer to the Biodiversity Development Assessment Report and Marine Ecology Assessment Report for additional information.

[2] Summarised from John Broadbent - Transformations: Ecology of Pyrmont peninsula (2008), Bank Street Park Biodiversity Development Assessment Report, and Marine Ecology Assessment Report.

3.8 Urban forestry

Retention value (SSP Urban Forestry Strategy and aligning with Arborist Assessment):

- Priority for retention
- Consider for retention
- Consider or priority for removal

Tree Species:

- Ficus microcarpa var. 'hilli' (Hills Weeping Fig)
- Eucalyptus saligna
- Casuarina glauca (Swamp She Oak)
- Ficus rubiginosa
- Pittosporum undulatum (Native Daphne)
- Metrosideros kermadecensis
- Phoenix canariensis

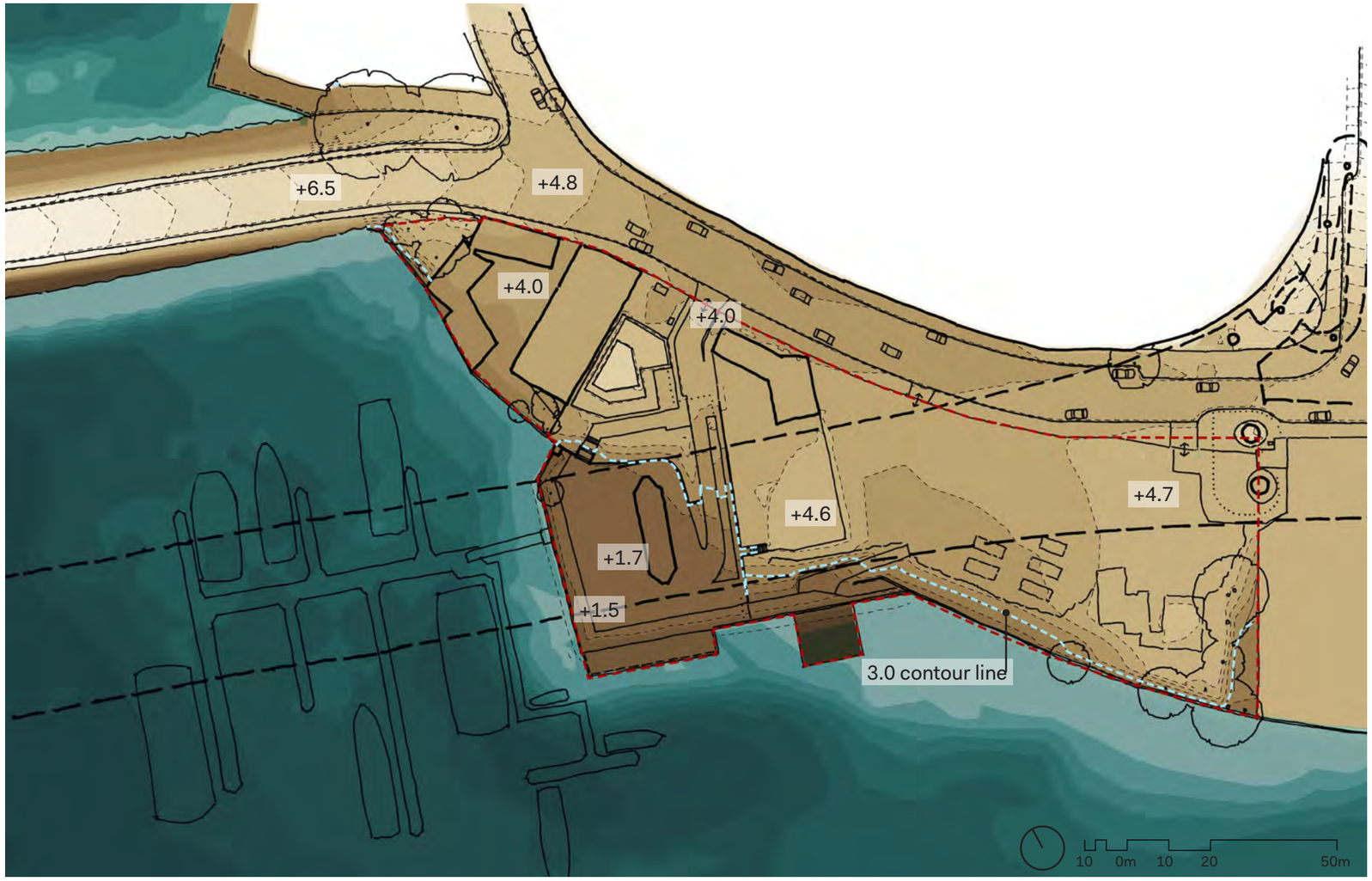
Canopy cover:

+ Existing tree canopy cover: 4%
+ Required canopy cover (Design Guidelines): 30%

3.9 Topography

Bank Street adjacent to the site sits at approximately RL4.0-4.5. From here, the majority of the site is within this RL range heading towards the water before dropping away to the seawall and pylon surrounds, which sits at RL1.5-1.7.

The adjacent plan highlights contour 3.0, which is the critical minimum RL for any future occupyable space based on sea level projections.



3.10 Water

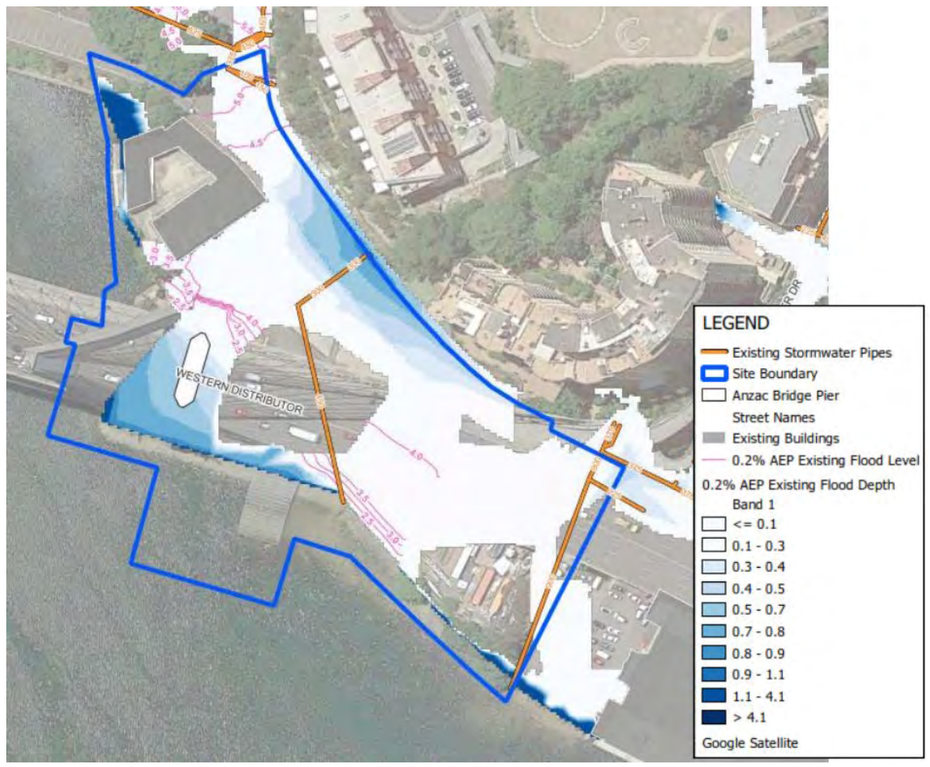
Flooding[1]

The flooding experienced in the vicinity of the Bank Street Park SSP precinct site is typically overland flow and a result of short intense storms. Some trapped ponding locations continue to accumulate water in longer storms, however the vast majority of the study area is subject to the worst case flooding from overland flow only.

From review of the existing topographical conditions, the contributing catchment for the Bank Street road reserve is relatively small and worst case flooding conditions are likely from short duration storms with very high rainfall intensity. The Site is subject to overland flows during large storm events which can be appropriately managed.

The flood velocity hazard classification is defined as H1 which is generally safe for vehicles, people and buildings. Refer to Flood Risk and Impact Assessment for more information.

Refer to Flood Risk and Impact Assessment for more information and proposed Flood management measures.



Existing 1% AEP Flood Depth with climate change. Source: Bank Street Park SSB Flood risk and Impact Assessment

Water Quality and Harvesting[2]

Additional water quality treatment is expected to be required to achieve water quality targets. This could be in the form of a combination of filtration devices, green roofs, rainwater tanks and stormwater harvesting.

The existing water quality infrastructure within the Site can form part of the overall treatment train.

Refer to Stormwater Management Report for additional information and proposed Water Quality and Harvesting measures.

[1] Summarised from Flood Risk and Impact Assessment
[12] Summarised from Stormwater Management Report

3.11 Easements

Water Supply

The existing potable water infrastructure in the Bank Street site has been identified based on Before You Dig Australia (BYDA) records and is owned by Sydney Water. These records indicate that there are numerous potable water mains within and adjacent to the site boundary.

The key existing potable water mains on site include:

+ DN 180 PE main along the southeast side of Bank Street;
+ DN 250 uPVC along the east side of Bowman Street; and
+ DN 250 DICL main across Bowman Street, at the intersection with Glebe Island Bridge.

The depths and positions of these mains are unknown. Further investigation is required to determine the exact existing layout.

Drainage

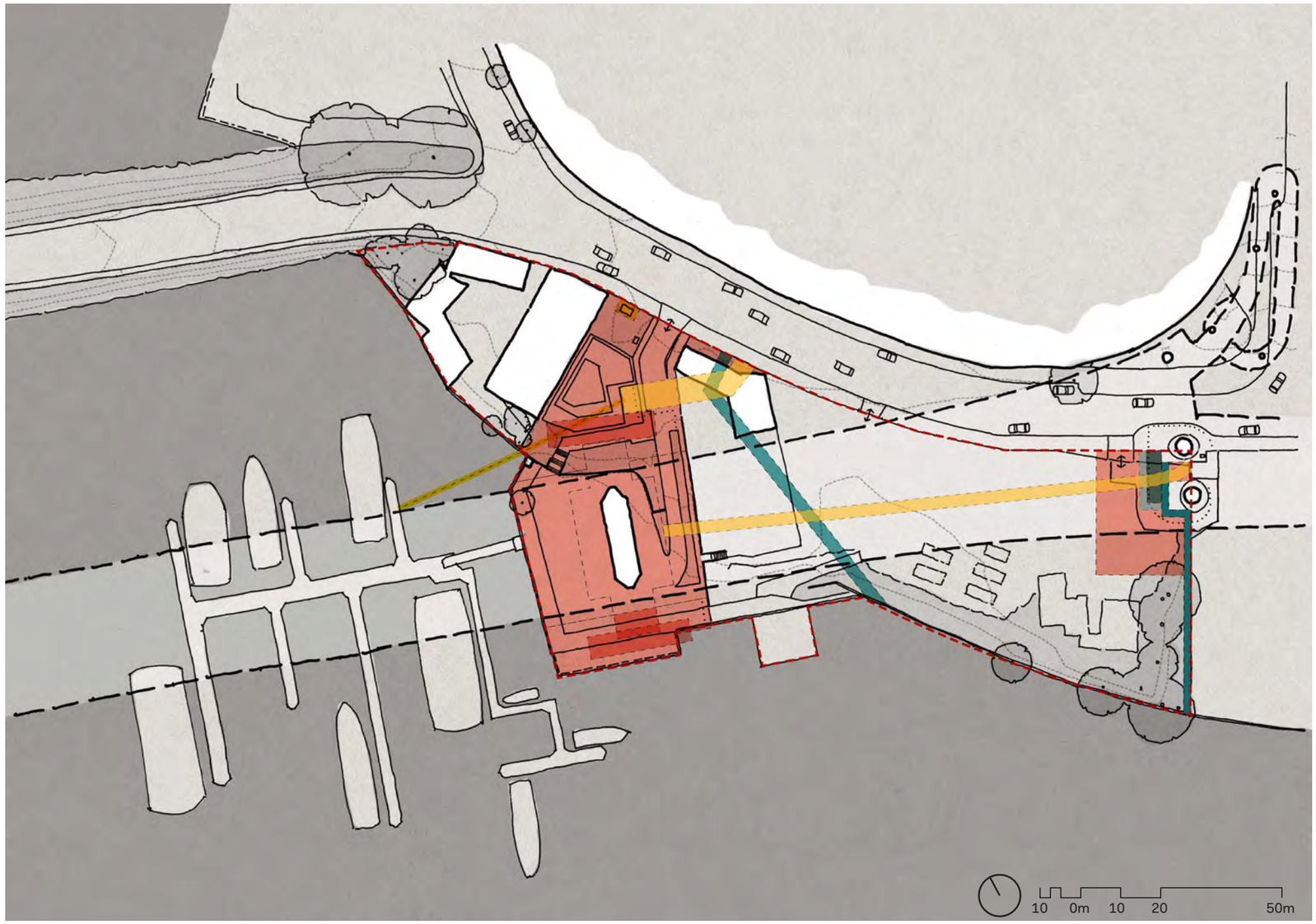
A Council-owned drainage pipe runs through the site which discharges road drainage and external catchment in Bank Street. A 3.0m wide easement is associated with the drainage pipe.

Maintenance

Area required by Transport for NSW to maintain pylons of ANZAC Bridge. Future pylon access requirements to be accommodated in consultation with TfNSW.

Electricity

There are two High Voltage (HV) transmission lines which run through the site. Northern HV duct has a 1.4m to 2.7m cover. Southern HV trench has a cover between 1.1m to 1.5m.



Easements

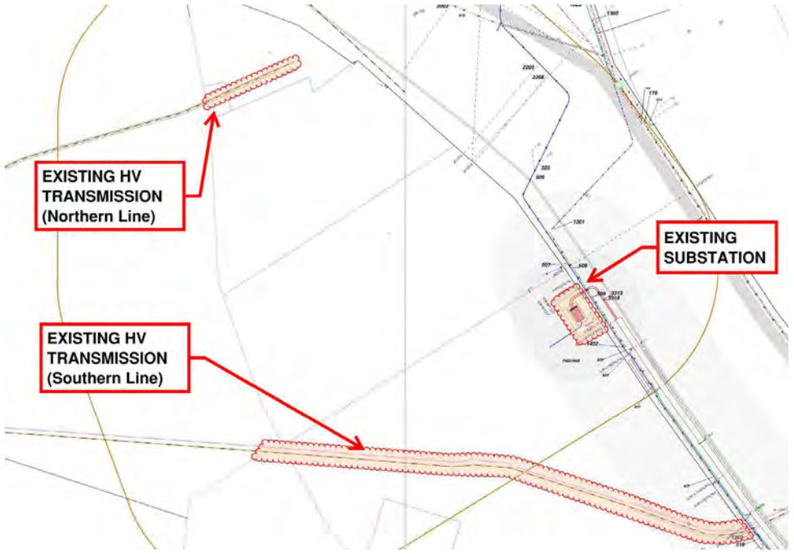
- Water supply
- Drainage
- Maintenance
- Electricity
- Public Access

3.12 Critical Infrastructure Services

Electrical

The existing Low Voltage reticulation network is considered non-critical which would not constrain development.

The existing substation and High Voltage transmission cables to the north and south are considered critical infrastructure and would need to be considered to avoid impact by proposed works.



Ausgrid BYDAResult (October 2022)

Telecommunications

The existing telecommunications infrastructure is non-critical and can be adjusted to support the re-development of the Site.

Potable water

There are only property connections to the main along Bank Street. These are considered non-critical. There is no known trunk water infrastructure within the Site.

Wastewater

There are only property connections to the main along Bank Street. These are considered non-critical. There is no known trunk sewer infrastructure within the park.

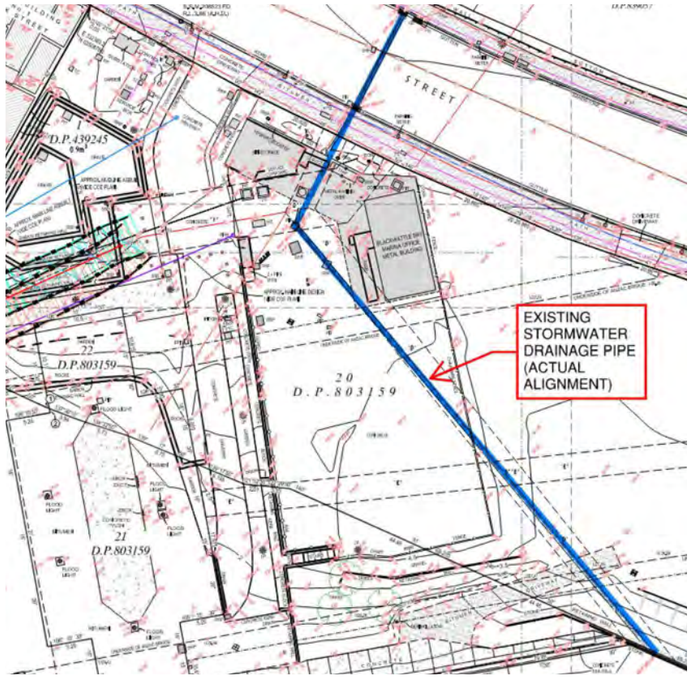
Gas

There is no known gas infrastructure within the Site.

Stormwater

Pit and pipe network present collecting local surface runoff and roof drainage. The local drainage network can be adjusted to support the re-development of the Site.

A Council-owned drainage pipe runs through 20/DP803159 with discharges road drainage and external catchment in Bank Street. A 3.0m wide easement is associated with the drainage pipe.



Detailed Survey (Craig & Rhodes) Extract

Refer to the Infrastructure Delivery, Management & Staging Report for additional information and proposed infrastructure strategy.

3.13 Adaptive Re-use Opportunities

Heritage Value

Since the construction of the subject site in 1932 the structures have been subject to several alterations and modifications. Some of these modifications were removed, such as awning between buildings B & C. Others are still in place, such as awning between buildings D & A originally constructed below roof level and later elevated but is not an original fabric.

Building C was altered the most. It appears that a major part of original structure was demolished, and new structure was erected to merge building B and Building C forming an L-shaped structure currently present on site. Large openings at the North elevation of building C were enclosed and glazing was installed. At the same time the internal partition to separate internal premises from the loggia/terrace space were demolished.

Based on the research undertaken during this preliminary heritage advice by CityPlan, it is concluded, that integrity of Building C was compromised, and its heritage value is low.

Heritage value of Buildings B, D and A is considered moderate due to major internal and minor external modifications undertaken in different periods of time.

During design development GML assessed the heritage significance of 1-3 Bank Street and analysed the suitability of the buildings for reuse. Refer to the Statement of Heritage Impact for more information.

GML's analysis concluded that Buildings B and C are not suitable for retention and reuse. Building A was considered suitable for retention. It is proposed for demolition to maximise solar access to the park and allow the integration of the 1-3 Bank Street site into the wider Bank Street Park. The southern elevation of Building A, a double-height brick wall, present a significant constraint on these objectives and would effectively sever 1-3 Bank Street from the rest of the park, if retained.

Building D is proposed to be adaptively reuse in the park for amenities and storage. It is proposed to demolish and rebuild the south elevation of the building to accommodate its new use. The roof is also proposed to be demolished and replaced. A structural condition assessment identified that the roof may need replacement due to the poor condition of the visible timber structural members in the building.

Detailed Survey plan showing original external structural walls and fabric (indicated in pink)

3.14 Community Engagement
Phase 1 Consultation

Phase 1 Consultation

Preliminary community consultation and engagement for the project site was undertaken by CRED Consulting in the form of workshops, pop-up events and surveys. The findings of Phase 1 consultation undertaken in August and September 2022 are summarised below.

Online Survey Findings

Top activities:

+ Enjoying the views (78%)
+ Enjoying nature (62%)
+ Walking, or running (55%)
+ Getting a coffee or snack at a kiosk (52%)
+ Cycling was the most popular activity suggested that was not included in the list provided to respondents (22 comments)

Most important features:

+ grassy open space (58%)
+ shade trees (55%)
+ Indigenous plantings (36%)
+ covered (weather protected) areas (30%)

Suggestions for 1-3 Bank Street:

+ Places to eat and drink, including a café or kiosk, restaurant or bar and pop-up coffee cart or kiosk.
+ Community spaces including a community hall/function space and community centre.
+ Art and cultural space, including an art gallery/creative centre (3 comments) or cultural display.
+ More open space

Pop-up Event Findings

+ Outdoor multipurpose court
+ Inclusive play space
+ Outdoor fitness station
+ Dragon boat amenities and landing site
+ A facility to accommodate existing dragon boat, kayak, and canoe paddlers
+ Change room facilities, showers, toilets
+ Marina operations space
+ A new harbour foreshore walkway that connects from Wentworth Park

First Nations Workshop

+ The Bank Street Park site and surrounding area holds great significance to First Nations peoples, particularly as a site of healing and medicine.
+ This site holds significance for First Nations women, who participated in fishing in and around the site.
+ Participants supported the idea that the design of the new park could give representation to First Nations women, and that this would be the first park of its kind to do so.
+ Participants also felt that a connection to the Black Diggers could be made within the new park, particularly given that the bridge overhead is symbolic for the ANZACs.
+ There is an opportunity to re-educate the community about the history of the site and First Nations peoples.
+ Making this site a welcoming place for children is very important.
+ It is important to incorporate culturally significant elements within the design of the new park, including weaving grasses, fishing symbols and native flora and fauna.

Online Workshop Findings

+ Quiet and calm space to provide respite
+ Incorporate green, grassy open space
+ Complement and not necessarily duplicate nearby park offerings
+ Be welcoming and accessible to all people
+ A desire for green, grassy open spaces with connection to the water and beautiful views emphasised.
+ Existing buildings repurposed as a waterfront bar, café or restaurant, artist studios, storage and change room facilities for the Dragon Boat community.
+ Be named Tjerruing Park, after the thick forests of Tjerruing (Callicoma serratifolia or blackwattle), that protects the freshwater as it flows into the garigalo (saltwater).
+ Representation of the First Nations history in the new park. Caring for Country, Indigenous plantings and incorporating the site's original flora and fauna
+ How sustainability principles can be incorporated in the design of a new park
+ Creating an inviting and comfortable space

Recommendations for the design brief

First Nations representation in the design

Be reflective of the history and culture of the local area (i.e. a women's place, Black Diggers' link to the ANZAC bridge and Tjerruing)

A place of respite

Green and grassy open spaces that provide respite from the busy city surrounds, particularly for people living in apartments

Mixed views of buildings

Opportunity to renovate or partially remove buildings to activate the space with a cafe/kiosk, restaurant / bar, storage facilities for dragon boaters or historical or cultural museum

Connection to water

Desire to touch and feel the water not just see it.

Don't replicate what already exists in the local area

Park features and activities should compliment what is already in the local area, to balance the needs of different user groups.

Elements for young people

Community Engagement
Phase 2 Consultation

Phase 2 Consultation

Phase 2 consultation was undertaken between 23 February and 22 March 2023 and tested three park design concepts with the community.

In addition to testing the design concepts with the community, the design team has engaged with First Nations representatives to address the community priority of Connection to Country and First Nations representation. Refer to Section 2.2 for more information on the First Nations consultation process.

Consultation

Feedback from Phase 2 Consultation included:

+ 3632 website views
+ 321 survey participants
+ 62 students from School workshops
+ more than 100 drop-in participants
+ 5 email submissions

Three Concept Designs

Three design concepts were developed for the park, which took into consideration community priorities highlighted in the Phase 1 consultation, site constraints, identified local infrastructure needs and the requirement for a space that can be enjoyed by all.

Each of the concepts comprises various elements, in different locations. The preferred park design may be a combination of different elements of all three concepts.

Concept 1

Concept 2

Concept 3

Phase 2 Summary of key considerations

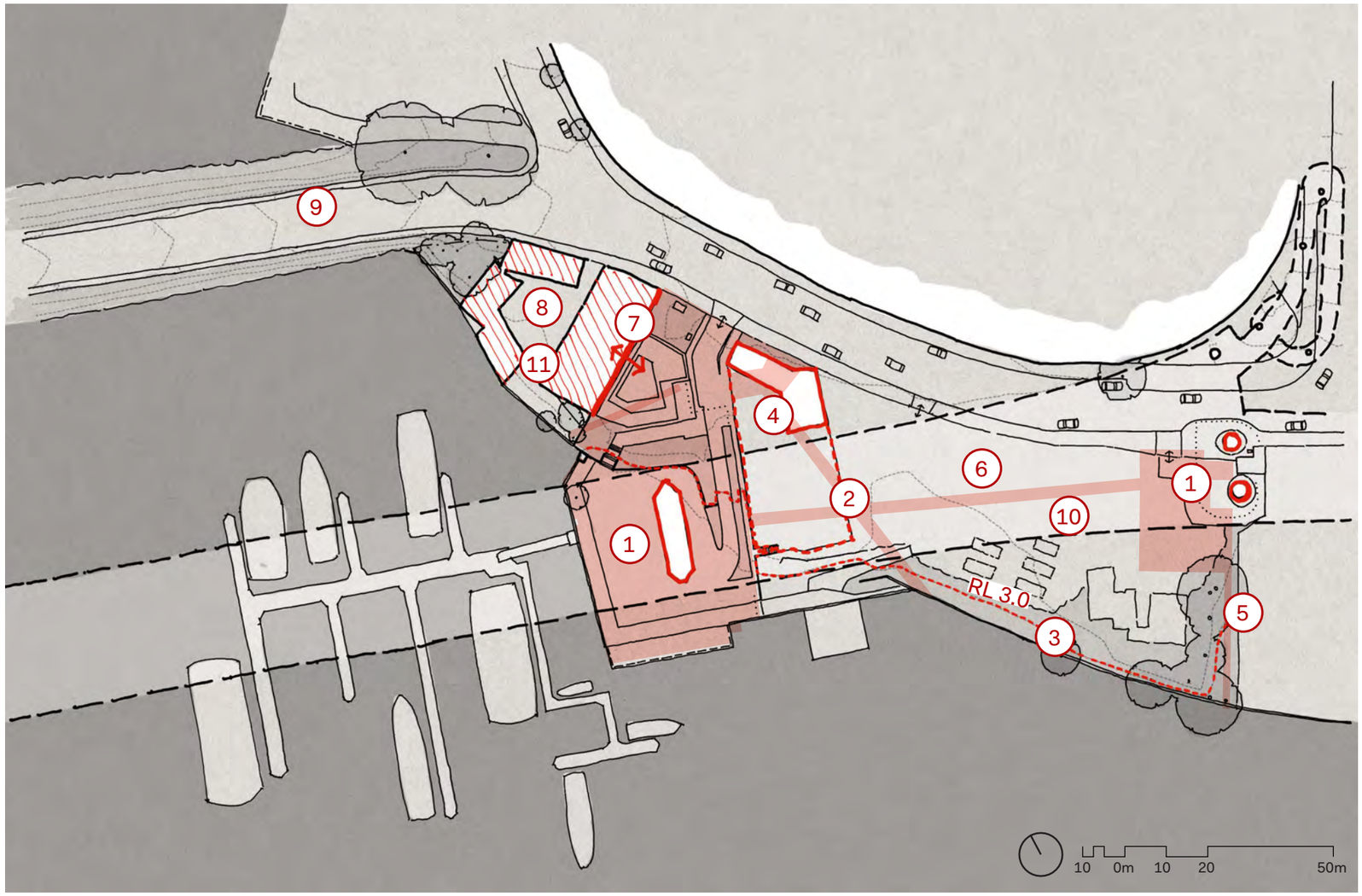
The feedback heard through consultation resulted in the following key considerations for the preferred design concept:

+ **Use Design Concept 3 as the framework / inspiration for the final design to best address community priorities.** Concept 3 was the preferred design approach from the survey results and feedback heard at the drop-in sessions.
+ **Include a new purpose-built community facility.** Almost two-thirds of survey participants preferred a new purpose-built facility as shown in Concept 3, and this was also heard at drop-in sessions. Some community members value the existing buildings and want to see them adaptively reused.
+ **Prioritise a natural play space theme, with climbing elements.** Nature play theme spaces were favoured by respondents, incorporating nature and climbing elements.
+ **Include places for young people to sit and talk in groups, and interesting lighting for night-time use.** Other ideas for young people heard include wireless phone chargers, in-ground trampolines, and curved seating.
+ **Storage for dragon boaters close to the ramp, designed to avoid conflicts between promenade users and boat users.** Of the survey respondents identified as a 'member of a recreation boat club', Concept 1 was the preferred concept, where the boat storage was closest to the ramp.
+ **Additional design considerations.** Suggestions including providing increased seating, BBQs, increased parking, additional tree canopy cover, information or interpretation about the history of Pyrmont.

Refer to Consultation Summary for more information on Phase 2 Consultation.

3.15 Constraints

1. Easement requirements from TfNSW particularly around the pylons
2. Existing services and easement requirements for drainage and electrical
3. Mitigation of future water level and sea level rises around the pylons (below RL 3.0)
4. Marina Operations have 5 year lease on current buildings and parking
5. Unknown eastern interface with adjacent uses (assumed will be at RL 3.0 as a minimum)
6. Overshadowing from the bridge above
7. Building A blank wall which hinders connection to the greater park area
8. Potential heritage constraints
9. Lack of equitable connection to Glebe Island Bridge
10. TFNSW potential impact due to other site works which may impact timing for delivery of the park
11. Potential soil contamination due to past land practices (abattoir, tanneries, ship building)



3.16 Opportunities

First Nations

+ Incorporate culturally significant elements, including weaving grasses, fishing symbols and Indigenous flora and fauna.
+ Welcoming place that educates the broader community about First Nations history and cultural practice in the area
+ Recognize First Nations people especially women and their deep connection to the land and water
+ Incorporate local language into programs, place and interpretation

Park Program

+ Include features and amenities catering to diverse users and a range of activities, including walking, cycling, relaxing, exercising, participating in informal sports and nature play, especially for teenagers
+ Provide shaded areas, places to sit where small groups could gather, kiosk for food and beverages, public toilets, areas protected from the weather
+ Accommodate needs of the recreational boating users and other water sport users including storage, changeroom and shower facilities, an office and club house
+ Create a unique open space that complements rather than replicates other open space in the area
+ Increase canopy cover by providing green, climate responsive, grassy spaces with Indigenous tree and shrub planting
+ Reflect the natural environment and have a strong connection to the water
+ Enhance the water and long distant views and scenery

Infrastructure

+ Remove the stone gabion structures to increase open space and provide more sympathetic options for hostile vehicle mitigation
+ Provide water sensitive urban design options including capture and treatment of surface runoff
+ Provide safe and secure lighting

4.0
SDRP Advice

28 April 2023

Mia Gouge
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PROJECT: Bank Street Park
RE: State Design Review Panel – 20 April – Review 1

Dear Mia,

Thank you for the opportunity to review the above project at an early stage. Please find below a summary of advice and recommendations arising from the design review session held on 20th April 2023.

It is acknowledged that the Bank St Park will play a pivotal role in the transformation of the Blackwattle Bay precinct, including better harbour foreshore connections and better amenity for the Pyrmont community. While the basis of the brief is clear and consistent with the Blackwattle Bay Design Guidelines, the extensive programmatic requirements of the brief appear excessive for this site.

The following elements of the design strategy are supported:

- The commitment to Connecting with Country and engagement with local Aboriginal Knowledge holders and the Metropolitan Local Aboriginal Land Council.
- Strategies for prioritising the park's connection with the water.
- The alignment of the through-site link (Concepts 1 and 3) creates a strong visual connection between the future waterfront promenade and Glebe Island Bridge.

The following commentary provides advice and recommendations for the project:

Connecting with Country

The understanding of Country and the approach taken so far in regard to consultation and truth telling is commended. The following further strategies are recommended:

1. Consider the park in terms of its relation to the broader Pyrmont and Blackwattle context and how it forms part of the wider Connecting to Country strategy of the precinct.
2. Ensure that the Cultural Heritage consultants and the design team have sufficient time and opportunity to collaborate on the interpretation of knowledge gained through the consultation process and meaningfully incorporate this into the design strategy;
3. Further exploration into the narrative around Gadigal women and fishing in the Blackwattle Bay area and how the park could best convey this, including (but not limited to) opportunities for recreational fishing at the water edge and the ongoing use of the site for launching small watercraft, e.g. kayaks and dragon boats.
4. Converting an industrial site to parkland provides opportunity to 'heal Country' and the ecology of the site should be considered in these terms - including the potential for living cultural practices and education to occur onsite.
5. While this was not discussed in the session the opportunity for interpreting the nearby Tinkers Well should be considered and discussed at the next meeting.

Site strategy

The proposed park is at a pivotal headland location within the Bays precinct and should respond to this broader context - considering the impact of the two bridges, the opportunities for continuous harbour foreshore access, connection into the active transport network and suitable programming for the interface with the water.

The following should be further investigated / clarified:

6. In terms of the optimal use of the site, consider whether some uses could be located elsewhere in the precinct or whether some use is already provided in the wider Pyrmont community.
7. Clarify the constraints in terms of TfNSW easement requirements.
8. Onsite parking is not supported. Opportunities for expanding street parking should be explored, provided this does not reduce the overall park area.
9. Show vehicle access requirements (e.g. waste, maintenance, marina operations) and where lines of bollards or other controls may affect use of the site.

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10. While also providing amenity for the community, the park operates as a crucial linkage node. Show how the project integrates with;
    a) the future foreshore promenade
    b) the future Glebe Island Bridge connection.
    c) the broader active transport network, including the existing ANZAC Bridge pedestrian and cyclist access ramp
11. There is an opportunity to integrate with future development at 17-19 Bank St. Relocation of the substation to facilitate an active edge here would be supported. Provide more clarity around the finished levels to promote direct on grade connections with the park.
12. Further to item 5 confirm the briefing requirements for community space, recreation facilities and open space for the proposed park, particularly in relation to community infrastructure already provided in other parts of the Pyrmont peninsula and Blackwattle Bay.
13. Consider opportunities for a future harbour pool /floating pool to provide further amenity for the community and reinforce the connection of the park to water.
14. Further investigations into utilising the underside of the ANZAC bridge (e.g. for art and lighting installations) are encouraged and could form a key component of the design and its Connection to Country.
15. The proposal for a substantial structure at 1-3 Bank St should be reviewed in light of the following;
    a) the heritage curtilage of the Glebe Island Bridge and whether the proposed scale and style of building is suitable for this location.
    b) whether this corner of the site is better utilised as soft landscaping, providing a gentler transition to Glebe Island Bridge, and whether built form can be better located elsewhere on the site.
    c) either a reduction in program requirements to allow for a smaller built form or distributing the program across the site to minimise the building impact and provide smaller scaled buildings in a park setting.
    d) whether there is a need for a café of this scale when future developments on adjacent sites are likely to provide ample food and beverage opportunities.

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Landscape

16. Further investigate the proposed park design in cross section so that the scale and volume relationship with adjacent topography, Blackwattle Bay and ANZAC bridge, can be properly understood. The scale and presence of ANZAC bridge is both a constraint and an opportunity to capitalise on this dramatic setting.
17. Further consider the microclimate and its impact on proposed uses, circulation and species selection. The ANZAC bridge overshadowing impact and wind exposure is both a constraint and an opportunity for the proposed park. In many respects the site at 1-3 Bank St provides the best microclimate for rich soft landscaping.
18. The multi-use court is a dominate element of the design. A fenced court is generally not supported, and its location or ways to reduce its visual and spatial impact should be investigated;
    a) An audit of nearby courts, and future planned courts, may preclude the need for a court at this location.
    b) Consider if the court can be a flexible space, open to other uses, and less of a dedicated sports court.
    c) If required, consider an alternative location away from the street or landscaped separation rather than fenced (e.g. partially sunken or a bermed edge) for the current proposal.
19. Restoration of the water's edge and intertidal biodiversity should guide the water edge condition. The connection to the water provided by the stepped sandstone of Concept 3 is encouraged, provided this doesn't preclude improvements to the marine habitat.

Architecture

20. Although the existing buildings at 1-3 Bank St are not overly significant from a heritage perspective, there are very few remnants of industrial heritage in Pyrmont. Consider retaining some of this building fabric e.g. street walls.
21. The proposed statement building at 1-3 Bank St is unconvincing. A reduction in program requirements, to allow for a smaller built form, or the redistribution of uses across other parts of the site, should be investigated.

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22. While the logic for 'shell' language for the community building is understood, its suitability for this site should be reconsidered.

Sustainability and Climate Change

23. Illustrate how the project will contribute to NSW's Net Zero emissions goal by 2050. Refer to 'NSW, DPIE, Net Zero Plan, Stage 1: 2020-2030' for further information.

24. Illustrate how the project will contribute to the precinct sustainability, canopy cover and biodiversity requirements.

It is recommended that the project return to the SDRP following further development. The issues outlined above are to be addressed at the next SDRP session.

Please contact GANSW Design Advisor, Chris Taylor (chris.taylor@planning.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

Darlene van der Breggen

Principal Design Advisor

GANSW

Chair, SDRP

Distribution:

NSW SDRP Panel members	Darlene van der Breggen (Chair) Oi Choong Craig Kerslake Chris Major Ken Maher (Council nominee)
GANSW Design Advisor	Chris Taylor
DPE	Cameron Sargent Anna Nowland
INSW	Mia Gouge
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07 July 2023

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PROJECT: Bank Street Park
RE: State Design Review Panel – 29 June – Review 2

Dear Mia,

Thank you for the opportunity to review the above project for a second time. Please find below a summary of advice and recommendations arising from the design review session held on 29th June 2023.

The project team is commended for a clear and comprehensive presentation and a considered response to the previous advice.

In addition to the items listed in the previous advice letter, the following elements of the design strategy are supported:

- The approach taken in designing with and for Country.
- The revised planting strategy that provides a better response to the scale and spatial character of the site.
- The general arrangement and consolidation of uses within the park to free up more open space.
- The general approach to the retention/adaptive re-use of historic building fabric at 1-3 Bank St.
- The proposed northern plaza at 1-3 Bank St which makes good use of the site orientation and available solar access.

The following commentary provides advice and recommendations for the project:

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Connecting with Country

The collaborative approach to research and whole-of-team commitment to designing with Country is commendable and has established a strong foundation for deeply embedding Country as the project develops. The following are recommended:

1. Engage in ongoing consultation with local knowledge holders and the RSL to tell the story of the Blak Diggers. Providing opportunities for events and remembrance is a compelling proposition for this site.
2. There may be further synergies between the WSUD and the site's connection to water. Explore opportunities to celebrate Water Country including water flows from the site to the sea.
3. Further explore the interpretive art strategy and the opportunity for projections to the underside of the bridge. Utilising this unique opportunity of the site to provide a distinct and changeable day/night character is encouraged. Linking this to Sky Country is a strong proposition.
4. Consider the materiality of the new community centre and how it relates to Country. The use of bricks reclaimed from the site is supported but investigate alternative techniques with brick coursing, textures and colours to weave together the stories of traditional owners and the post-colonial industrial use of the site.

Site strategy and Landscape

The general arrangement and location of uses has progressed well. The following are recommended:

5. While the location of the multi-purpose court in the southeast corner is generally accepted, further adjustment is recommended to ensure there is enough space to resolve the tight junction of the multi-purpose court, electrical substation and bridge pylons. There is even potential for a through site link at this location; from Bank St to the foreshore.
6. In relation to the above, review previous design studies for future development at 17-19 Bank St (development site PLO-01) undertaken by FJMT (now FJC). There are opportunities for site activation and connectivity along the shared boundary with the park.
7. Further demonstrate the proposed edge condition of the court and reduce the need for permanent fencing where appropriate. Opportunities for seating are encouraged. Demonstrate in cross sections, including the court's relationship to the likely future development at 17-19 Bank St.
8. Further develop the plaza at 1-3 Bank St and provide more detail on the proposed character and function of the space.

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9. Provide a more legible connection from the plaza, along the foreshore to the centre of the park.
10. Illustrate the spatial qualities of the site through site sections that show both the bridge and the full height of the sandstone escarpment opposite Bank St.
11. Further develop the planting strategy to reflect the changing scale and available microclimates. Test the need for seating shelters spatially when under the cover of the bridge.
12. Provide detailed design for the Bank St bike path and demonstrate how cyclists will be able to safely navigate vehicle traffic in both the interim and final stages.
13. Review the shared path through the centre of the site; particularly how bicycle speeds can be managed to ensure safe pedestrian conditions.

Architecture

The bulk, scale and intent of 1-3 Bank St has improved and is increasingly more appropriate for its park setting. Consider the following:

14. The retention of historic fabric at building D and the removal of buildings C and B is supported. The 'remnant footing' park is particularly successful and the removal of building mass at this corner is supported. Reconsider whether the community building is best served by retaining the existing southern wall.
15. As noted at item 4, the re-use of brick from the demolished buildings is encouraged. Further investigate opportunities to interpret Country and the site's history in contemporary ways; using brick coursing, textures, colours of Country or other techniques.
16. The 'wedge' shape of the community building is supported as a form that successfully opens sightlines and connections between Glebe Island Bridge and the rest of the park. Consideration could be given to adjusting the shape and curvature to better relate to the geometries of adjacent remnant structures.
17. The external openings to the community building generally require further consideration – eg. curved openings and the lack of windows to the southern façade.
18. Further test the community building's internal planning and whether these uses are suitably located in relation to one another and their external context. For example; the main stair has the best aspect and is probably least ineffective in terms of activating the plaza frontage. Similarly, the marina office is a private commercial use at the water frontage when a shared community use could be more suitable.

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Requests for the next SDRP

It is recommended that the project returns to the SDRP prior to lodgement. If another session can't be scheduled prior to lodgement, the above issues should be addressed in the EIS.

Please contact GANSW Design Advisor, Chris Taylor (chris.taylor@planning.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

Darlene van der Breggen

Principal Design Advisor

GANSW

Chair, SDRP

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21 August 2023

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PROJECT: Bank Street Park
RE: State Design Review Panel – 10 August – Review 3

Dear Mia,
Thank you for the opportunity to review the above project for a third time. Please find below a summary of advice and recommendations arising from the design review session held on 10th August 2023.

The design team is thanked for a clear presentation and a thoughtful response to previous advice.

In addition to the items listed in the previous advice letters, the following elements of the design strategy are supported:

- The reduced scale of the proposed community building
- The provision of sections and flythroughs showing the project's relationship with the ANZAC bridge, the water and the sandstone escarpment
- The openness of the multi-purpose court and it's integration with the park

The following commentary provides advice and recommendations for the project and should be read in conjunction with the previous advice letters:

Connecting with Country

The integrated design approach to Connecting with Country is commendable and the proposed design strategies are supported. The following additional advice is given:

1. Further investigation into the cultural practices that could occur in this location - to inform design principles and ensure suitable spaces are provided eg. women's healing walks, Blak Digger family gatherings, smoking ceremonies.
2. Specify plant species that support cultural practices.

The following recommendations from the previous session/s are reiterated:

3. Item 3 from SDRP session 2

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Site strategy and Landscape

The reduction in scale of the community building is supported and better aligns with the principle of buildings in harmony with a landscape setting. Further improvements are noted below:

4. Provide for future opportunities to swim in the bay, as the precinct develops, and water quality improves.
5. The intent to minimise fencing, provide seating and open the multi-purpose court to the park is supported. Going forward consider:
    a. how the design of the southern end of the court will influence future design of the adjacent development site and activate the southern boundary interface
    b. how the sandstone seating and ground plane interpretive artwork, including the design for hostile vehicle mitigation, could better integrate with the pylons
    c. that the multipurpose court will be viewed from multiple vantage points, eg. the switchback ramp alongside Quarry Master Drive, and the ground plane artwork should be considered as a fifth elevation
6. A future connection to the proposed colonnade of the southern site is encouraged. Consider how the constructed design of the park could actively promote this connection so that it can be realised in the future.
7. Look for opportunities to further balance the proposed cut and fill on the site. For instance, the finished levels to the south of the dragon boat storage could be adjusted to better integrate the side of the structure with the landscape and reduce the need for balustrading along the southern edge of the deck.
8. Review whether the proposed steps at the northern end of 1-3 Bank St could be replaced with sloped paths to provide universal access along all routes.
9. Further refine the interim Bank St bike path design to minimise redundant work when the path is extended. Clarify the end stage design and show the location of the pedestrian crossing.

The following recommendations from the previous session/s are reiterated:

10. Items 12 & 13 from SDRP session 2

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Architecture

11. A common design language between the amenity, community, dragon boat and kayak storage buildings is supported. Review how this language could be incorporated in the design of park shelters so there is design continuity across all built structures.
12. For the community building consider:
    a. larger openings to the enclosing screens to better integrate inside and outside spaces.
    b. minimising the extent of building frontage used for back of house functions and discretely locating their entrances (eg. the marina storage area facing building D should be internalised to a far greater degree).
    c. Adopt clear architectural language to signify entrances for different uses to improve wayfinding without relying on signage
13. Consider the relationship between the amenity building (building D), the community building and the landscaped courtyard and review:
    a. whether providing a covered outdoor space would improve the utility of the community space
    b. whether the provision of seating walls restricts the functionality of the landscaped area between the buildings and to the north of the community building.
    c. Review the design and configuration of the screen to Building D so that it is clearly separate to the historic fabric that it connects to.
14. Review the functionality of the Café and if necessary, seek specialist F+B advice, especially in relation to:
    a. extent of internal seating – there should be enough internal seating for the café to be viable during poor weather.
    b. how external seating areas will operate eg. shade and shelter, after hours seating storage etc.
    c. back of house functions such as storage and deliveries.

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Sustainability and Climate Change

15. While the removal of buildings A, B and C of 1-3 Bank St is supported as part of the design strategy, new buildings should be designed to minimise the embodied carbon cost of the development:
    a. Consider how to re-use the demolished materials onsite in landscaping or architecture eg. refabricated into the proposed screen battens
    b. New materials should be selected in consideration of their embodied carbon impact.
16. The use of green roofs and solar is supported. Consider combining the systems into a bio-solar design to improve the building's performance.
17. Confirm that the impact of rising sea levels has been factored into determining finished site levels.

The issues outlined above are to be addressed at as part of the EIS submission

Please contact GANSW Design Advisor, Chris Taylor (chris.taylor@planning.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

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Response to SDRP 3 Comments

	Comment	Response
Connecting with Country		
1.	Further investigation into the cultural practices that could occur in this location - to inform design principles and ensure suitable spaces are provided eg. women's healing walks, Blak Digger family gatherings, smoking ceremonies.	Further consultation with Blak Digger representative has been undertaken, and the design has evolved to further incorporate cultural practices through gathering spaces, ash receptacle and opportunity for honor roll on the Dragon Boat deck. Additional First Nations interpretive design has been incorporated through the design of shelter and Dragon Boat deck.
2.	Specify plant species that support cultural practices.	Plants have been selected based on suitability as well as potential uses. The planting list identifies numerous uses attributed to the various plants selected.
3.	Further explore the interpretive art strategy and the opportunity for projections to the underside of the bridge. Utilising this unique opportunity of the site to provide a distinct and changeable day/night character is encouraged. Linking this to Sky Country is a strong proposition.	The design doesn't exclude this from being integrated in the future, however this isn't included as part of the SSDA art strategy based on costing and coordination considerations. The lighting of the bridge may be tested on a temporary basis in the future (e.g. Vivid) before potentially becoming permanent in the future subject to a separate approvals process.
Site Strategy and Landscape		
4.	Provide for future opportunities to swim in the bay, as the precinct develops, and water quality improves.	Future opportunities to swim in the bay, as the precinct develops, and water quality improves, have been investigated and potential floating swimming enclosures could potentially be located in the precinct, however this would be subject to a separate proposal and not under this SSDA.
5.	The intent to minimise fencing, provide seating and open the multi-purpose court to the park is supported. Going forward consider: a) how the design of the southern end of the court will influence future design of the adjacent development site and activate the southern boundary interface b) how the sandstone seating and ground plane interpretive artwork, could better integrate with the pylons c) that the multipurpose court will be viewed from multiple vantage points, eg. the switchback ramp alongside Quarry Master Drive, and the ground plane artwork should be considered as a fifth elevation	The southern interface of the courts is designed to provide a planted buffer to the pylons and adjacent development. This interface will allow visual transparency to the courts from future development to the south, but acknowledges the need for fencing and separation to the courts along this edge. A setback to development along the southern boundary is provided in the Design Guidelines that will enable a footpath connection along this edge within the adjacent development site. The intention of the ground plane artwork covering both the courts and exercise equipment is to be visually striking from multiple vantage points.

	Comment	Response
6.	A future connection to the proposed colonnade of the southern site is encouraged. Consider how the constructed design of the park could actively promote this connection so that it can be realised in the future.	The design future proofs this connection with a pedestrian path along the western edge of the court in alignment with the future collonade. The intention is for this to connect via stairs in the future, hwoever isn't included in the SSDA submission to avoid creating stairs down to a boundary fence in the interim condition.
7.	Look for opportunities to further balance the proposed cut and fill on the site. For instance, the finished levels to the south of the dragon boat storage could be adjusted to better integrate the side of the structure with the landscape and reduce the need for balustrading along the southern edge of the deck.	The grading around the dragon boat storage was reviewed by the design team and altered to reduce balustrading along the southern edge to half of the deck. Further mounding to the storage building was ruled out based on suitable landscape gradients and maintaining views from the park to the water.
8.	Review whether the proposed steps at the northern end of 1-3 Bank St could be replaced with sloped paths to provide universal access along all routes.	This was reviewed by the design team in coordination with the access consultant, however design options exploring this resulted in extensive ramping eating into passive landscape areas and cafe spill areas. All areas are accessible by wheelchair with only minor / low use pathways including stairs.
9.	Further refine the interim Bank St bike path design to minimise redundant work when the path is extended. Clarify the end stage design and show the location of the pedestrian crossing.	An indicative cycleway continuation design is provided under 2.5 Access and Circulation.
10.	Review the shared path through the centre of the site; particularly how bicycle speeds can be managed to ensure safe pedestrian conditions.	Cycle speeds will be managed through signage, surface treatments and having bollards at the Bank Street end of the shared path. The promenade is split between concrete and gravel to encourage slower speeds along the water's edge.
Architecture		
11.	A common design language between the amenity, community, dragon boat and kayak storage buildings is supported. Review how this language could be incorporated in the design of park shelters so there is design continuity across all built structures.	The design of the park shelters have been developed as part of the First Nations interpretation with a strong connection to and support from the Blak Diggers.

Response to SDRP 3 Comments

Comment		Response
12.	For the community building consider: a. larger openings to the enclosing screens to better integrate inside and outside spaces. b. minimising the extent of building frontage used for back of house functions and discretely locating their entrances (eg. the marina storage area facing building D should be internalised to a far greater degree). c. Adopt clear architectural language to signify entrances for different uses to improve wayfinding without relying on signage	The community building has been redesigned to have a smaller presence in the landscape with larger openings to the enclosing screens to better integrate inside with outside spaces and minimising the extent of building frontage for back of house functions.
13.	Consider the relationship between the amenity building (building D), the community building and the landscaped courtyard and review: a. whether providing a covered outdoor space would improve the utility of the community space b. whether the provision of seating walls restricts the functionality of the landscaped area between the buildings and to the north of the community building. c. Review the design and configuration of the screen to Building D so that it is clearly separate to the historic fabric that it connects to.	Seating walls have been removed from the plaza space to free up the area and encourage spill out from the communit space when in use. Building D screen has been reviewed and adjusted to increase visual distinction with the historic fabric.
14.	Review the functionality of the Café and if necessary, seek specialist F+B advice, especially in relation to: a. extent of internal seating – there should be enough internal seating for the café to be viable during poor weather. b. how external seating areas will operate eg. shade and shelter, after hours seating storage etc. c. back of house functions such as storage and deliveries.	Cafe has been reviewed and reconfigured to better accommodate internal seating and back of house functions. It is anticipated external seating with umbrellas will be provided within the interpretation garden and paved area directly south of the cafe.

Comment		Response
Sustainability and Climate Change		
15.	While the removal of buildings A, B and C of 1-3 Bank St is supported as part of the design strategy, new buildings should be designed to minimise the embodied carbon cost of the development: a. Consider how to re-use the demolished materials onsite in landscaping or architecture eg. refabricated into the proposed screen battens b. New materials should be selected in consideration of their embodied carbon impact.	Demolished material will be reused throughout the park where possible in the landscape and new materials have been selected in consideration of their embodied carbon impact.
16.	The use of green roofs and solar is supported. Consider combining the systems into a bio-solar design to improve the building's performance.	Solar and green roof has been combined for the new building.
17.	Confirm that the impact of rising sea levels has been factored into determining finished site levels.	As part of the response to rising sea levels all habitable buildings have been designed to a minimum RL of 3.0 to reduce any potential for flooding issues.

5.0
Safety in Design Report

OCULUS

Bank Street Park
Design Safety Risk Assessment Report

Date of Issue
23 November 2023

Prepared for
Infrastructure NSW

We acknowledge the Traditional Custodians of the places we work.

We honour Elders past and present, whose profound knowledge systems can teach us much about how we care and design for Country.

Rev	Issue	Date	By	Checked
A	Draft	07.08.2023	Simon Bond	Roger Jasprizza
B	SSDA	23.11.2023	Simon Bond	Roger Jasprizza

Contents

Introduction & Approach to Safety in Design

Project Overview

The purpose of this report is to provide the design safety risk assessment, to support a State Significant Development Application (SSDA) for a new waterfront public park within Blackwattle Bay, to be known as Bank Street Park (SSD-53386706). Bank Street Park is located at 1A-19 Bank Street, Pyrmont on the shoreline of Tjerruing Blackwattle Bay and adjacent areas of Blackwattle Bay.

The safety objectives of the overall project are to ensure that the design complies with statutory and design requirements, such as relevant standards and codes, and that all safety requirements are incorporated into the design, reducing the risk to "So Far As Is Reasonably Practicable (SFAIRP)".

Through the design process a number of risks have been identified. In this report we aim to highlight potential risks and outline the steps taken to reduce or eliminate these.

The key items addressed include:

+ The risks associated with the design and construction of the park, foreshore promenade and new buildings on the site, including dragon boat stoarage facilities, marina offices and storage, and public amenities.
+ The steps taken to reduce the associated risks through the design process.
+ Requirements that the operators of the site will need to take into account in the future.
+ Safety for workers throughout the duration of the project's construction.

The Safety in Design matrix at the end of this document highlights the shared obligation of the designer, consultants, INSW, operator and the Contractor in managing risk associated with their work systems.

What is Safety in Design (SiD)

Safety in Design (SiD) is a process defined as the integration of hazard identification and risk assessment methods early in the design process to eliminate or minimise health and safety risks throughout the life of the project being designed.

Designers can achieve Safety in Design through a structured approach to identifying hazards & risks associated with the design. By employing recognised risk management strategies, risks to users and construction workers can be eliminated or significantly reduced through mitigation strategies and the implementation of design solutions based on risk assessments. A sound approach to SiD includes assessment of risks during key phases of the design development, development of risk control options and direction for safe construction, installation, commissioning, operation and maintenance of the completed works. The Code of Practice for Safe Design of Buildings and Structures developed by WorkCover NSW identifies five key principles for safe design.

Table 1: Principles of Safe Design demonstrates these principles.

Principle 1	People with control	Safe design is everyone's responsibility – ensuring safe design rests with all parties influencing the design of a building or structure.
Principle 2	The life cycle	Safe design employs life cycle concepts – applying to every phase in the life cycle of a building or structure, from conception through to redevelopment and demolition.
Principle 3	Risk management	Safe design implements risk management – through systematically identifying, assessing and controlling hazards.
Principle 4	Knowledge & capability	Safe design requires knowledge and capability – which should be either demonstrated or accessed by any person influencing design.
Principle 5	Information transfer	Safe design relies on information – requiring effective documentation and communication between everyone involved in the life cycle of a building or structure.

Table 1 - Principles of Safe Design

The implementation of safe building design requires a thorough understanding of the WHS issues associated with each stage of a project's life cycle. These life cycle stages are summarised as below:

+ Concept / schematic development
+ Detailed design
+ Demolition or demobilisation
+ Construction
+ Occupation and operation
+ Ongoing maintenance

Safety in Design Methodology

Safe Design Process

The following section of this report describes the methodology and implementation of the SiD process.

By considering SiD during the concept design phase, fundamental decision-making can occur during preliminary design development. This will avoid unnecessary reworks or abortive design.

The table below describes the eight steps associated with the delivery of safe design through the SiD process.

STEPS	DELIVERY OF SAFE DESIGN
1	Discuss the project
2	Identify key stakeholders
3	Determine the consultation process
4	Prepare a risk and solutions register
5	Prepare an initial report to the client
6	Amend and finalise the design
7	Provide a final report to the client
8	Review the design

STEP 1: Discuss the project

The design team and client representative involved in the development of the design must collaboratively plan and discuss the project to ensure the exchange of information. The designers and client must identify all operations to take place in and around the ptoject to ensure the design can be tailored to the operational requirements. These discussions will also help to identify the potential hazards and risk associated with the intended operations.

STEP 2: Identify key stakeholders

The project team is to identify additional project stakeholders for inclusion in the consultation process. The operational expertise of the facilities users should be drawn upon to help develop functional design.

STEP 3: Determine the consultation process

Once the design team has been established, the design manager should determine the approach to communication and collaboration.

STEP 4: Prepare a risk and solutions register

The design team should conduct a preliminary risk analysis in consultation with key project stakeholders. The intention of this step is to identify all conceivable risks and hazards that are relevant to the project and its intended operations. All risks and hazards will be recorded in the risk register.

A Safety in Design workshop was undertaken on the 10th of November 2023 and included representatives from the Bank Street Park design team, INSW, Placemaking NSW and Transport for NSW.

Once all risks and hazards were identified, the design team identified the likelihood and consequence associated with the risk. Commonly this is achieved through a quantitative assessment to establish a risk ranking. See section 3 of this report for the approach to risk assessment.

Once the risks are assessed the design team will develop solutions to each of the risks to either eliminate or mitigate the effect of the risk. Each solution will be documented in the risk register. See Section 5 of this report for instructions on the risk assessment process.

STEP 5: Prepare an initial report to the client

On completion of the risk assessment, a report to the client will be prepared to identify the intended design solutions for review and approval.

STEP 6: Amend and finalise the design

Based on the client's review and acceptance of the report, the design is to be updated in alignment with the documented strategies.

STEP 7: Provide a final report to the client and principle contractor

On completion of the design, a final SiD report is to be prepared and issued to the client and principle contractor for construction. It is recommended that the final SiD report be passed onto the facility occupant to contribute to their development of safe work practices and procedures. The report must identify any residual risk, so that further operational controls can be developed by the facility operator.

STEP 8: Review the design

As design development in certain projects continues into the construction phase through the development of workshop drawings and contractor proposed alternatives, it is important that any risk controls potentially affected by these elements are re-assessed. Furthermore, if additional information with regard to facility operations becomes available post completion of the design documentation, further assessment and development of controls may be necessary.

Risk Management

Designers, design managers & individuals involved in the production of building design should endeavour to eliminate any foreseeable hazards that may arise from the design of a project. As it is not always reasonably practical to eliminate all risks

associated with the built environment, designers and design managers must implement risk control measures through a structured approach to risk management.

Risk management must form an integral part of the design development process.

Ideally risk management should be discussed regularly at design meetings, and through planned workshops to ensure key decision making and design development is cognisant of the necessary risk controls required to deliver safe design.

The risk management process includes four key stages to developing and maintaining safe outcomes. These stages are described below and further represented in Figure 1: Risk Management Process.

+ Hazard identification – identification of potential hazardous situations that could result in injury or illness.
+ Risk assessment – assessment of how likely the risk is and the associated consequence if the hazard occurs.
+ Risk elimination / control – elimination or control of the risk through planned strategies and mitigation measures.
+ Evaluation and review – recurring review of risk controls and mitigation measures to ensure they remain current and appropriate.

Hierarchy of Controls

The two key definitions of risk controls are as follows:

Static controls

+ the physical components and electronic systems that form part of the built project that will be handed over to the end user. These controls are the responsibility of the project team, including the subcontractors, the architects, the engineering designers and other sub-consultants on the project.

Dynamic controls

+ the administrative procedures to be implemented by the 'tenant' during the operation of the facility.

Risk mitigation strategies that form the outcome of the SiD process can be characterised by the following hierarchy of controls shown in the Table 3: Hierarchy of Controls. The name 'hierarchy of controls' emphasises that elimination of a risk will always be preferred to mitigation or reduction strategies where achievable.

CLASS	CONTROL	DESCRIPTION
1	Elimination	Design the hazard out of the building or structure.
2	Substitution	Substitute less hazardous materials, fixtures, fittings, plant or construction methods.
3	Isolate	Use guards or barriers to limit access to the hazard.
4	Engineering	Minimise risk by engineering means, e.g. provide a permanent building maintenance unit to maintain the external façade of the building.
5	Administrative controls	Recommend the establishment of systems of work or signage, where Required, to control residual risks.
6	Personal protective equipment	Recommend suitable personal protective equipment and training, where required, to control residual risks.

Table 3 -Hierarchy of Controls

Risk Evaluation

Risks will be evaluated in alignment with the table below. High and extreme rated risks will require additional controls. The likelihood allocation combined with the consequence score identifies the risk ranking as displayed in the matrix below.

			Determine the Consequence (C)				
			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Catastrophic
Determine the Likelihood (L)	A	Almost Certain	High	High	Extreme	Extreme	Extreme
	B	Likely	Moderate	High	High	Extreme	Extreme
	C	Possible	Low	Moderate	High	Extreme	Extreme
	D	Unlikely	Low	Low	Moderate	High	Extreme
	E	Rare	Low	Low	Moderate	High	High

Table 4: Severity of Consequences identifies the ascending severity of consequences. The greater the consequence the higher numeric scores, for example, 1 represents an insignificant consequence, while 5 represents a catastrophic consequence.

SCORE	CONSEQUENCE
1	Occurrence would have an insignificant impact on the operation of the facility and the health & safety of the building occupants.
2	Occurrence would have a minor impact on the operation of the facility and the health & safety of the building occupants.
3	Occurrence would have a moderate impact on the operation of the facility and the health & safety
4	Occurrence would have a major impact on the operation of the facility and the health & safety of the building occupants.
5	Occurrence would have a significant impact on the operation of the facility and the health & safety of the building occupants.

Table 4 -Severity of Consequences

Risk Assessment Matrix

	Element / Activity	Hazard	Risk	Risk Rating			Risk Mitigation Strategy	Action by	Residual Risk Rating		
				Likelihood	Impact	Risk Rating			Likelihood	Impact	Residual Risk Rating
Design											
Park											
1	Falls from height		Injury from falls within the park, including from top of dragon boat storage deck	Possible	Catastrophic	18	All potential fall heights are to be reviewed and checked to ensure that the design complies with relevant Australian Standards and NCC	Design Team / Philip Chun	Rare	Catastrophic	12
2	DDA Compliance		Non compliance with Australian Standards	Possible	Moderate	10	All drawings and specifications are to be reviewed and approved by Access compliance consultant	Design Team / Philip Chun	Rare	Moderate	3
3	Slips		Poor slip resistance of external paved surfaces could result in multiple injuries from slipping	Likely	Moderate	12	Slip resistance requirements for all surfaces to be provided through detailed design and documentation. Slip resistance should be at least R11/P4 and suitable for wet areas, particularly P5 on ramps dependant on gradient.	Design Team	Rare	Moderate	3
4	Falls into water		Injury / drowning from accidental falls into harbour	Possible	Catastrophic	18	Safety equipment, safety signage and ladders to be incorporated along the water's edge as part of design development and documentation. Stepped sandstone terraces as per current concept to provide a safe edge to the water. Seating and low walls provided along water's edge to separate edge from paths of travel, consistent with the nearby harbour edge treatments around Pyrmont / Jackson's Landing. Acceptance of risk to be confirmed by INSW and Placemaking NSW.	Design Team / INSW / Placemaking NSW	Unlikely	Major	12
5	Crime		Injury Theft of property Vandalism	Possible	Moderate	10	Incorporate recommendations of the Crime Prevention Through Environmental Design (CPTED) assessment for Bank Street Park	Design Team / Core42	Rare	Moderate	3
6	Cyclists		Conflict between cyclists and pedestrians may cause injury.	Possible	Moderate	10	Provide pedestrian priority signage to shared zones and promenade. Provide signage and linemarking to dedicated cycleway. Clear sight lines. Provide speed reduction measures at conflict points, including bollards at the intersection of Bank St footpath and diagonal promenade connection	Design Team	Unlikely	Moderate	6

	Element / Activity	Hazard	Risk	Risk Rating			Risk Mitigation Strategy	Action by	Residual Risk Rating		
				Likelihood	Impact	Risk Rating			Likelihood	Impact	Residual Risk Rating
7	Maintenance vehicles		Conflict between maintenance vehicles and pedestrians or cyclists	Possible	Major	16	Restrict vehicle access to the park. No parking or loading areas within the park. Provide clear sight lines where maintenance access crosses with pedestrian access.	Design Team	Rare	Moderate	3
8	Stormwater runoff		Injury from unsafe water runoff / overland flow	Possible	Moderate	10	Overland flow paths located and designed to reduce risks to park users	Design Team	Unlikely	Moderate	6
9	Dragon boat facilities		Injury to dragon boat users or bystanders	Possible	Major	16	Design pathway network to allow other park users to avoid dragon boat area when in use. Provide sufficient room for the safe movement of dragon boats, in coordination with Dragon Boats NSW.	Design Team	Unlikely	Moderate	6
10	Marina facilities		Injury to marina users or bystanders	Possible	Major	16	Provide suitable access for loading and unloading between Bank Street and the marina storage to avoid conflict between users.	Design Team	Unlikely	Moderate	6
11	Playground		Injury from unsafe playground equipment	Possible	Major	16	Playground documentation to be certified by playground auditor against Australian Standards as part of the documentation process, including maintenance schedule	Design Team	Unlikely	Moderate	6
Buildings											
10	Building access		Unsafe access to buildings, including the public amenities	Possible	Moderate	10	Incorporate recommendations of the Crime Prevention Through Environmental Design (CPTED) assessment for Bank Street Park	Design Team / Core42	Rare	Moderate	3
11	Falls from height		Injury from falls from the building	Possible	Catastrophic	18	All potential fall heights are to be reviewed and checked to ensure that the design complies with relevant Australian Standards and NCC. Safe access and maintenance to building roof to be considered in design development, including rope clip-on points for working at height.	Design Team / Philip Chun	Rare	Catastrophic	12
Construction											
1	Works near live utilities		Electrocution	Possible	Major	16	Locate existing services and provide protection, isolate when necessary	Contractor	Rare	Major	10
2	Tree protection and removal		Installation of tree protection measures may result in injury	Possible	Catastrophic	18	Works are to be conducted by qualified arborist with SWMS provided prior to commencement	Contractor	Rare	Catastrophic	12
3	Collapse of structure		Permanent injury, death	Possible	Catastrophic	18	Contractor to provide SWMS for demolition	Contractor	Rare	Catastrophic	12

	Element / Activity	Hazard	Risk	Risk Rating			Risk Mitigation Strategy	Action by	Residual Risk Rating		
				Likelihood	Impact	Risk Rating			Likelihood	Impact	Residual Risk Rating
4	Hazardous Materials		Asbestos may be present in areas to be demolished in existing structures. Potential unearthing of hazardous substance.	Rare	Major	10	Documentation and construction to comply with the Remedial Action Plan recommendations PPE is provided in case of hazardous material found on site. Ensure adequate measures are set in place to dispose hazardous material from site.	Contractor	Rare	Moderate	3
5	Emergency Vehicle Access		Injury, death	Possible	Catastrophic	18	Contractor to maintain safe access at all times	Contractor	Rare	Catastrophic	12
6	Noise & Vibration		Demolition activity will create noise and vibration which will impact upon adjacent occupied spaces	Likely	Moderate	12	Construction Management Plan to facilitate construction activities in accordance with the recommendations of the Construction Noise & Vibration Assessment.	Contractor	Rare	Moderate	3
7	Airborne dust pollution		Potential air and water pollution. Inhalation of dust during excavation works may cause respiratory problems with workers and those using adjacent spaces	Unlikely	Major	12	Construction Management Plan to outline method statements for dealing with dust and debris. Ensure dust control has been established during construction. E.g. by employing water trucks and speed limits. Provide suitable PPE such as face masks for workers undertaking duties in the vicinity of earthworks.	Contractor	Rare	Moderate	3
8	Falls from height		Demolition works will require some work at height, falls can result in serious injury including falls from machinery	Possible	Catastrophic	18	Works to be conducted in accordance with Safe Work Method Statements using appropriate equipment and PPE	Contractor	Rare	Catastrophic	12
9	Traffic		Injury, death	Possible	Catastrophic	18	Demarcation and staging plans for issue pre-AFC Issue.	Contractor	Rare	Catastrophic	12
10	Retaining wall construction		Injury / drowning Potential falls from height Failure of wall during construction	Possible	Catastrophic	18	Provision of fencing where there are high level differences. Site should be kept tidy to avoid trip hazards. Ground conditions should be monitored to minimise failure of retaining wall during construction	Contractor	Unlikely	Major	12
11	Building construction		Injury	Unlikely	Major	12	Methodology statement required from contractor	Contractor	Rare	Moderate	3
12	Site Access		Trespassers causing damage or injury to self and others	Unlikely	Major	12	Site fencing to be detailed on plans. Contractor to adjust fencing strategy to suit construction activities.	Contractor	Rare	Major	10
13	Erosion and sediment management		Sediment impacting the external environment / public areas. Contamination of watercourses.	Unlikely	Moderate	6	Install sediment and erosion control measures in accordance with 'blue book' requirements	Contractor	Unlikely	Minor	4

	Element / Activity	Hazard	Risk	Risk Rating			Risk Mitigation Strategy	Action by	Residual Risk Rating		
				Likelihood	Impact	Risk Rating			Likelihood	Impact	Residual Risk Rating
13	Works near sediment basins		Falling into basin	Possible	Minor	6	Design of sediment basin has battered slopes conducive to safe access and egress. Warning markers placed around basin.	Contractor	Rare	Minor	2
14	Delivery and unloading of materials		Site personnel collision by vehicle. Collision of delivery vehicle with plant.	Unlikely	Moderate	6	Ensure traffic management plan considers delivery and plant movement to avoid clash. Site personnel wear reflective clothing to become more visible on site.	Contractor	Rare	Moderate	3
14	Plant operations on site		Plant - plant collision on site Collision of plant with site personnel	Possible	Moderate	10	Schedule works such that plant and labour are not working in the same area at the same time. Provide traffic management plan to capture traffic flows and plant movement.	Contractor	Rare	Moderate	3
15	Site Inspections		Falls, injury, collision with construction traffic	Possible	Major	16	Compulsory safety inductions prior to site visits. Protective clothing to be worn at all times on site. Visitors to be escorted throughout site by contractor personnel at all times. Site vehicles to be appropriately marked with flags/headlights and site lights as per contractor policy. Deep open excavations to be clearly marked or covered.	Contractor	Unlikely	Major	12
Operation											
Park											
1	Dragon boat operations		Injury / Drowning. Conflicts with boats arriving and leaving the site via Bank Street.	Unlikely	Major	12	Dragon Boat operations and management plan to be established and enacted to the satisfaction of Placemaking NSW	Dragon Boats NSW / Placemaking NSW	Rare	Moderate	3
2	Marina operations		Injury from loading / moving of goods.	Unlikely	Moderate	6	Marina operations and management plan to be established and enacted to the satisfaction of Placemaking NSW	TfNSW / Placemaking NSW	Rare	Minor	2
3	Playground		Injury	Possible	Major	16	Undertake regular maintenance of playground equipment in accordance with the maintenance schedule	Placemaking NSW	Rare	Moderate	3
4	Slips		Poor slip resistance of external paved surfaces could result in multiple injuries from slipping	Likely	Moderate	12	Keep pathways clear of grime and debris through regular maintenance. Monitor and repair any cracks or trip hazards within the landscape.	Placemaking NSW	Rare	Moderate	3
5	Crime		Injury Theft of property Vandalism	Possible	Moderate	10	Provide security management of the park. Maintain a tidy appearance and upkeep of the park, regularly removing any vandalism or rubbish.	Placemaking NSW	Unlikely	Moderate	6

	Element / Activity	Hazard	Risk	Risk Rating			Risk Mitigation Strategy	Action by	Residual Risk Rating		
				Likelihood	Impact	Risk Rating			Likelihood	Impact	Residual Risk Rating
6	Maintenance vehicles		Conflict between maintenance vehicles and pedestrians or cyclists	Possible	Major	16	Restrict vehicle access to the park and manage the save movement of vehicles through operations and management plans.	Placemaking NSW	Rare	Moderate	3
7	Stormwater runoff		Injury from unsafe water runoff / overland flow	Possible	Moderate	10	Maintain flooding and stormwater infrastructure to ensure the safety of the site in a storm / flood event	Placemaking NSW	Unlikely	Moderate	6
8	Tree limb drop		Injury / death from limb drop	Possible	Major	16	Undertake regular arborist assessment of mature trees	Placemaking NSW	Unlikely	Moderate	6
9	Building access		Safe access and clear surveillance of amenities and public facilities	Likely	Moderate	12	Maintain signage and safe working of door latches. Removal of obstructions to maintain clear visual access to entrances.	Placemaking NSW	Rare	Minor	2
10	Community building use		Safe access and clear surveillance of amenities and public facilities	Likely	Moderate	12	Community facilities operations and management plan to be established and enacted. Community facilities to be maintained to a clean and functional standard.	Placemaking NSW	Rare	Moderate	3

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