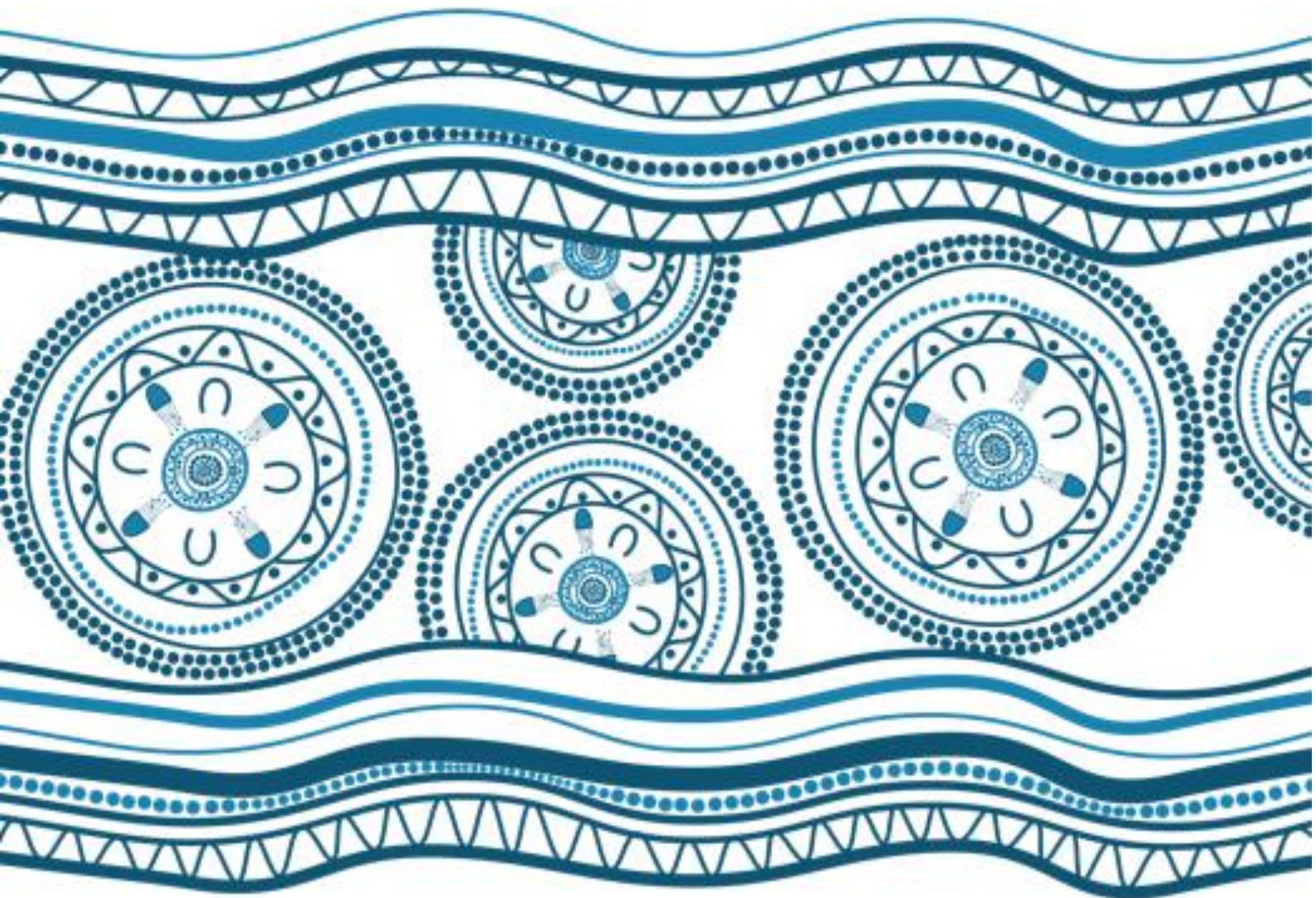


Appendix M

Landscape Character and Visual Impact Assessment Report



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Kamay Ferry Wharves

Landscape Character and Visual
Impact Assessment

June 2021

ARUP

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A coastal scene featuring a sandy beach, blue ocean, and a white building with a dark roof. The building has a sign that says 'BOATSHED' and another that says 'BOATSHED TO GO'. There are cars parked in front of the building. In the background, there is a grassy hill with some trees and a few houses.

01

Introduction

Purpose of this report

Transport for NSW (TfNSW) is seeking approval to reinstate the ferry wharves at La Perouse and Kurnell in Botany Bay (the project) under Division 5.2 of the Environmental Planning and Assessment Act 1979 (EP&A Act) as State Significant Infrastructure (SSI).

The purpose of this report is to support and inform the design process and the preparation of an Environmental Impact Statement (EIS). It presents a concept design for the project and an assessment of the Landscape Character and Visual Impacts (LCVIA) during both the construction and operation phases of the project.

The results of this assessment will be used to support the required environmental and planning approvals for the project as required under the Environmental Planning and Assessment Act 1979.

Background

The Project

The project would allow for an alternative connection between La Perouse and Kurnell rather than by road. The primary purpose of this infrastructure would be to operate a public ferry service for visitors and the local communities. It would also provide supplementary temporary mooring for tourism-related commercial vessels and recreational boating. Between 1890 and 1974 the historic ferry service operated in Botany Bay and the wharves were eventually decommissioned due to severe damage experienced as a result of a storm. Refer to Chapter 06: Project, page 66 and Figure 23 for the historical wharf alignments.

The project provides opportunities for significant cultural and economic benefits to the local Aboriginal community by providing improved access to culturally significant sites. It is also expected to deliver benefits and opportunities to wider communities on either side of Botany Bay such as investment opportunities in a ferry service and other new visitor/tourist experiences.

Project site

The project is located at La Perouse and Kurnell situated to the north and south of Botany Bay. Both sites are located in the Kamay Botany Bay National Park about 14km south of the Sydney CBD (refer to Figure 1, page 7).

Both areas are recognised as having scenic and environmental value due to the biodiversity and heritage significance. Key environmental features include: Nationally designated parklands that provide high quality recreational areas, the marine habitats that contains seagrass meadows and known and potential heritage items and values including Aboriginal heritage, non-Aboriginal heritage and underwater cultural heritage. The areas have Aboriginal cultural sites and significance dating back thousands of years, and Botany Bay represents the location of the first landing of Captain James Cook in 1770.

Botany Bay, though home to naturally attractive and significant areas around the Project, is predominantly industrial in character. It contains Port Botany, Sydney's main shipping port; Sydney Airport, with runways built on reclaimed land within the Bay; and the Caltex operated oil terminal at Kurnell.

Study objectives & report structure

Broadly summarised, the report is structured with reference to the following tasks:

- **Section 01 'Project Overview' (page 8):**
Establishes an understanding of the project relevant to the LCVIA; namely the location, form and scale of the project and the relative physical differences between the current conditions and those which are proposed both during construction and during operation.
- **Section 02 'Methodology' (page 14):**
Provides the methodology through which the potential impacts are identified and assessed, including the project assumptions and limitations.
- **Section 03 'Legislation and Policy' (page 26):**
Identifies both physical and statutory components of the landscape and visual baseline which influence character and associated sensitivities.
- **Section 04 'Context' (page 34) and Section 05 'Baseline' (page 44):**
Describes the existing landscape and visual character of the study area, via desktop studies and site work, as a means of establishing a baseline against which impacts associated with the project can be assessed.
- **Section 06 'Project' (page 66):**
Provides a description of the key elements relevant to the LCVIA within the project. Describes the urban design response, with reference to placemaking and embedded mitigation.
- **Section 07 'Impact Assessment' (page 80):**
Provides an assessment of the identified key landscape character areas and representative viewpoints.
- **Section 08 'Summary of Assessment' (page 112):**
Provides a summary of the landscape and visual impacts assessed throughout the report. This section includes broadly suggested mitigation measures considered to reduce and manage the impacts beyond the measures that have been incorporated into the project.



FIGURE 1 SITE CONTEXT



Project overview

Overview

The project (including the construction area) covers an area of about one square kilometre, stretched over both the Randwick City and Sutherland Shire Local Government Areas (LGAs). The wharf at La Perouse is proposed to extend about 100 metres from the shore and the wharf at Kurnell is proposed to extend about 200 metres from the shore. The EIS has been prepared based on the concept design (as summarised in Chapter 06: Project).

If approved, the project would continue to be developed in collaboration with the project stakeholders to ensure the collaborative and integrated design is achieved. It is anticipated that the project would generally progress in-line with the current intent and within the project area.

The main components of the project include:

- Two new wharves, one at La Perouse and one at Kurnell
- Landside paving, access ramps, seating and landscape design at the entrance to the wharves
- Reconfiguration of existing car parking areas at La Perouse to increase the number of spaces (including provision of accessible parking and kiss-and-ride bays)
- Reconfiguration of footpaths around the new car parking area at La Perouse
- Provision for bike racks at La Perouse
- Installation of utilities to service the wharves.

The following description provides an understanding of the key construction and operation activities associated with the project.

Construction

The proposed construction staging, timing and activities will continue to be developed. Pending approval, construction is expected to take up to 13 months, starting in April, 2022. The project would be built and managed by a contractor under a Construction Environmental Management Plan (CEMP) prepared and approved in response to a condition of consent, and in accordance with relevant safety management plans.

The construction of the two wharves will occur at the same time with landside and waterside works occurring simultaneously. The indicative construction method is illustrated in the opposite table.

Construction would take place between standard working hours Monday to Friday 7am to 6pm, and Saturday 8am to 1pm. There would be no work on Sundays or public holidays. However, being within a marine environment, the project would require several activities to be undertaken outside standard working hours for safety reasons.

Stage	Activities	
Stage 1: Site establishment	La Perouse - April 2022 – May 2022 (1 month)	Kurnell - April 2022 – July 2022 (3 months)
	<ul style="list-style-type: none"> • Install fencing • Set up compound and laydown areas • Set up site offices and access • Form temporary access roads • Form crane and rig platforms at La Perouse. 	<ul style="list-style-type: none"> • Install fencing • Set up compound and laydown areas • Set up site offices and access • Form temporary access roads • Demolish the existing Kurnell viewing platform • Establish the temporary causeway at Kurnell.
Stage 2: Main construction	May 2022 - December 2022 (7 months)	April 2022- March 2023 (11 months)
	<ul style="list-style-type: none"> • Piling • Wharf construction • Car parking reconfiguration and footpaths • Installation of utilities • Installation of wharf furniture • Landscaping. 	<ul style="list-style-type: none"> • Piling • Wharf construction • Installation of utilities • Installation of wharf furniture • Landscaping.
Stage 3: Site demobilisation	June 2022 – March 2023 (8 months)	September 2022 – April 2023 (7 months)
	<ul style="list-style-type: none"> • Removal of temporary work areas and site offices. 	<ul style="list-style-type: none"> • Removal of temporary work areas and site offices.

Operations

The wharves would provide berthing access for both ferry vessels and commercial and recreational vessels. Each wharf would create new public spaces that service a range of users for differing mobility needs and interests. Figures 2 and 3 illustrate the main design features for each project area and include:

- ① A multi-user and Disability Discrimination Act (DDA) accessible wharf head structure with separate and bespoke berths on each side for ferry operations and recreational boat users. A fixed wharf ramp structure comprises an Fibre Reinforced Plastic (FRP) open mesh flooring. Supporting the deck is a modular steel frame, concrete headstocks and steel tubular pile pairs.
 - ② At the top of the wharf head lies the protected waiting area featuring fixed bench seating, balustrading, lighting and a generous landing for wharf users. The waiting area comprises a timber deck finish protected by concrete precast deck planks, precast headstocks and steel tubular piles.
 - ③ Protecting the waiting area is a roof design that allows for dappled sunlight and reflection of the water movement creating a space sympathetic to its contextual environment. The roof comprises a translucent fibreglass sheet roof with perforated metal soffit and a structural steel T-frame with timber cladding.
 - ④ Connecting the waiting area to the landside is a 4m wide jetty approach structure that allows for bi-directional flow of wharf users with allowance for seating, balustrading and lighting. The deck is located ~4m above low tide and comprises a robust reinforced concrete deck structure, precast headstocks and steel tubular pile pairs.
 - ⑤ An expanded entrance/approach from the landside that integrates and grounds the wharf to the context and the park. The entrance zone incorporates seating to foster interactions with the public and allows for a moment of pause in the visitor journey to the ferry and within the park. Bicycle racks are provided at La Perouse.
 - ⑥ Opportunity areas for cultural artwork integration are located on the perforated roof soffit and fascia, timber decking, concrete deck, balustrades and arrival points.
- Further detail on the landscape and architectural design response associated with these features is included in Chapter 06: Project.



FIGURE 2 LA PEROUSE WHARF CONCEPT DESIGN KEY FEATURES

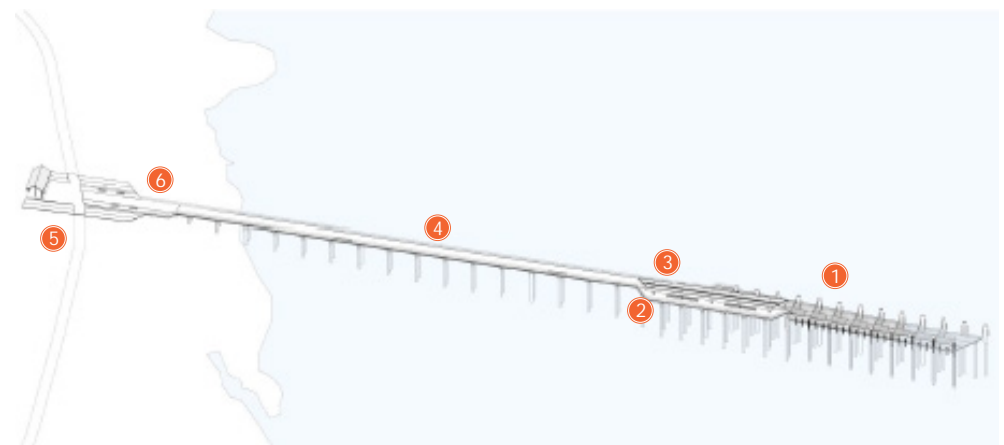


FIGURE 3 KURNELL WHARF CONCEPT DESIGN KEY FEATURES

Relevant SEARs and Agency Requirements

Environmental Impact Statement		
The project is described in sufficient detail to enable clear understanding that the project has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the project, on balance, has the least adverse environmental, social and economic impact, including its economic impacts.		
1.	<p>1.The EIS must include, but not necessarily be limited to, the following:</p> <p>(l) a statement of the outcomes the Proponent will achieve for each key issue;</p> <p>(m) measures to avoid, minimise or offset impacts must be linked to the impact(s) they treat, so it is clear which measures will be applied to each impact;</p> <p>(n) consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts;</p>	<p>Refer to 05 Baseline chapter for Landscape and Visual conditions.</p> <p>Refer to chapters 06 Project and 08 Summary of Assessment for the demonstration of how mitigation has been embedded into the concept design to minimise impacts how any residual impacts will be managed or offset.</p>
Assessment of Key Issues		
Key issue impacts are assessed objectively and thoroughly to provide confidence that the project will be constructed and operated within acceptable levels of impact.		
* Key issues are nominated by the Proponent in the SSI project application and by the Department in the SEARs. Key issues need to be reviewed throughout the preparation of the EIS to ensure any new key issues that emerge are captured. The key issues identified in this document are not exhaustive but are key issues common to most SSI projects.		
1	<p>The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the project location and the surrounding environment. The level of assessment must be commensurate to the degree of impact and sufficient to ensure that the Department and other government agencies are able to understand and assess impacts.</p>	<p>Refer to 05 Baseline for Landscape and Visual conditions and sensitivity assessment results.</p> <p>Refer to 07 Impact Assessment for Landscape and Visual magnitude of change and overall impact results.</p> <p>Refer to 08 Summary of Assessment for an overview of the Landscape and Visual Impacts and embedded mitigation.</p>
2.	<p>Assessment of Key Issues: For each key issue the Proponent must:</p> <p>(a) describe the biophysical, social and economic environment, as far as it is relevant to that issue, including baseline data that is reflective of current guidelines where relevant;</p> <p>(b) describe the legislative and policy context, as far as it is relevant to the issue;</p> <p>(c) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities within the project and cumulative impacts;</p> <p>(d) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies);</p> <p>(e) detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); and detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures.</p>	<p>Refer to 03 Legislation and Policy for legislative and policy context, as far as it is relevant to the LCVIA and the project.</p> <p>Refer to 04 Context for the biophysical, social and economic environment data collected about the project areas.</p> <p>Refer to 07 Impact Assessment for the identified, described and assessed impacts.</p> <p>Refer to chapters 06 Project and 08 Summary of Assessment for the demonstration of how mitigation has been embedded into the concept design to minimise impacts how any residual impacts will be managed or offset.</p>
3.	<p>Assessment of Key Issues: Where multiple reasonable and feasible options to avoid or minimise impacts are available, they must be identified and considered, and the proposed measure justified taking into account the public interest.</p>	<p>Refer to 07 Impact Assessment for the identified, described and assessed impacts, 06 Project for the concept design and 08 Summary of Assessment.</p>
Design, Place and Movement		
The project is well-designed and enhances the environment where it is located, including improved accessibility and connectivity for communities and public space.		
2.	<p>Place design principles that are reflective of the design objectives in Better Placed, including a focus on:</p> <p>(a) fit – contextually, local and of its place;</p> <p>(b) performance – sustainable, adaptable and durable;</p> <p>(c) community – inclusive, connected, accessible and diverse;</p> <p>(d) people – safe, comfortable and liveable (such as crime prevention through environmental design);</p> <p>(e) working- functional, efficient and fit for purpose;</p> <p>(f) value – creating and adding value; and</p> <p>(g) look and feel – engaging, inviting and attractive.</p>	<p>Refer to Chapter 06 Project.</p>

3.	Place designs, actions and outcomes for the project that protect and facilitate improvements to the built environment, including in relation to: (a) public space (including open space); (b) active and public transport; and (c) views and vistas.	Refer to 06 Project, (Figures 29-34) for placemaking concept design outcomes regarding public space, active movement connections and key views.
5.	The provision of visual representations of the project from key locations to illustrate the project.	Refer to 07 Impact Assessment for visualisations
6.	Demonstration of the project's consistency with the Kamay Botany Bay National Park Plan of Management (2020) and the Kamay Botany Bay National Park: Kurnell Precinct Master Plan (2019).	Refer to 06 Project, (page 76) for demonstration of consistency with the Kamay Botany Bay National Park Plan of Management (2020) and the Kamay Botany Bay National Park: Kurnell Precinct Master Plan (2019).
Non-Aboriginal Heritage		
The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of Non-Aboriginal heritage.		
1	Where impacts to National, State or locally significant heritage is identified, the assessment must: (c) consider impacts caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment, drainage infrastructure, contamination remediation and site compounds (as relevant); and	Refer to 04 Context, (pages 40-41) for the Cultural and Heritage description. Refer to 07 Impact Assessment for the identified, described and assessed impacts associated with non-aboriginal heritage components.
Agency Comments		
Additional ESS Recommendations		
	In addition to the requirements in the draft SEARs and EES' previous submission, EES also recommends the EIS include: 1. An assessment demonstrating consistency of the project with the National Parks and Wildlife Act 1974, the Kamay Botany Bay National Park Plan of Management (2019) and the Kamay Botany Bay National Park: Kurnell Precinct Master Plan (2019).	Refer to 06 Project, (page 76) for demonstration of consistency with the Kamay Botany Bay National Park Plan of Management (2020) and the Kamay Botany Bay National Park: Kurnell Precinct Master Plan (2019).
Randwick City Council		
	Council recently prepared and exhibited a new set of draft Local Character Area statements that will form part of Council's new comprehensive Planning Proposal currently being prepared. The La Perouse area is within the Bays Local Character Area (LCA), one of 11 LCAs across Randwick City. The Bays LCA contains a Special Character Areas with distinctive qualities including, in particular, the sensitive coastal environment of Frenchmans Bay, Yarra Bay, Bare Island and the La Perouse neighbourhood centre. Additionally, the waters surrounding Bare Island is a very popular snorkelling and scuba diving location within the Kamay Botany Bay National Park. It connects eastward through the Eastern Suburbs Memorial Park picking up the Chinese Market Gardens and connecting to the high value natural environment in the Bunnerong Creek LCA. The following draft character principles have been prepared to set the desired future character of the Bays Local Character Area which should be considered in the planning and design of the proposed ferry wharf: <ul style="list-style-type: none"> Built scale that responds to the coastal character of the LCA Protect and enhance Aboriginal heritage and significant sites Preserve and enhance the village feel in La Perouse Improved accessibility around the coastal area with improved signage and wayfinding Preserve existing natural environments and local flora and fauna for future generations Ensure future development respects the cultural significance of Indigenous landscapes and sites Build on existing green grid and biodiversity corridors through the LCA Improved economic vibrancy as a result of the reintroduced Kurnell to La Perouse ferry. Greater visitor facilities and experience, compatible with the unique character of Botany Bay Preserve the biodiversity and continue to protect and rehabilitate the landscapes and ecosystems 	Refer to 05 Baseline for reference to Randwick City Council's LCAs and for context regarding the identified and assessed LCAs throughout this report. Refer to 06 Project for reference to the; <ul style="list-style-type: none"> protection and enhancement of the identified non-aboriginal and aboriginal heritage and significant sites surrounding the project areas improved accessibility and movement connections improved facilities and experience and enhancement to the existing landscape character the conservation and enhancement of ecological values throughout the concept design.





02

Methodology

Assessment methodology

Guidelines and policy

The LCVIA assessment conforms with the direction offered by the following guidance documents:

- TfNSW Guideline for landscape character and visual impact assessment, 2020 - Environmental impact assessment practice note EIA-N04.
- TfNSW Beyond the Pavement 2020, Urban design approach and procedures for road and maritime infrastructure planning, design and construction.
- NSW Government Better Placed, An integrated design policy for the built environment of New South Wales.
- The Guidance for Landscape and Visual Impact Assessment, Third Edition, 2013, prepared by the Landscape Institute and Institute of Environmental Management & Assessment, UK.

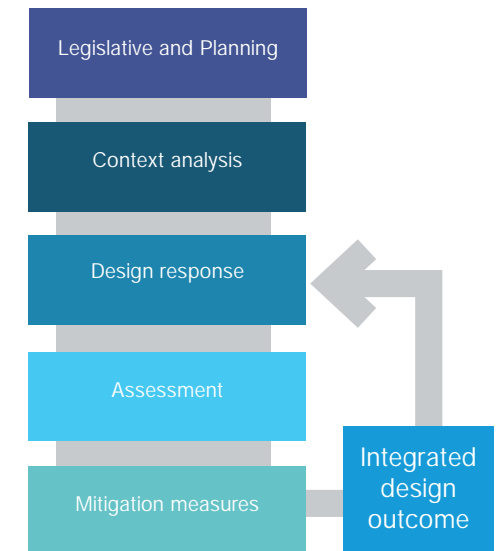
These guidance documents set out a clear and systematic approach in documenting the baseline landscape and visual conditions, potential impacts and mitigation.

Report approach

The LCVIA approach follows an iterative process where key issues, constraints and mitigation related to the landscape character and visual assessment are integrated into the project. Consistent with Chapter 01: Introduction, the approach consists of the following steps:

- Section 03 Legislation and Policy | A review of State, regional and local planning policy to gather information on the planning objectives and aims that are relevant to the LCVIA.
- Section 04 Context | An analysis of the local context with a focus on landscape and urban features, visual amenity through a selection of representative views, and landscape character. Determination of the sensitivity of the landscape and visual amenity. Sensitivity is defined further on page 15 and in Table 2 on page 18.
- Section 06 Project | Review of the project and the associated design integration and response. Potential impacts that may arise are fed back in to the design development process to embed mitigation measures within the project design and assist with shaping an appropriate landscape, urban design and architectural design response that relates to the SEARs Placemaking requirements.

- Section 07 Impact Assessment | Landscape character area and visual impact are assessed individually. The impact is assessed by combining the sensitivity of the existing area of a view point, with the magnitude of change (scale, contrast, quality, distance) of the project on that area or view. Magnitude of change is defined further on page 15 along with the landscape and visual assessment matrix table.
- Section 08 Summary of Assessment | Where potential impact cannot be resolved through the embedded design process, additional measures are to be explored and discussed further within the LCVIA and further detailed landscape design.



Sensitivity

According to the EIA-N04 Guideline for landscape character and visual impact assessment, sensitivity refers to “the sensitivity of a landscape character zone or view and its capacity to absorb change of the nature of the project and also relates to the type of viewer and number of viewers,” (TfNSW, 2020). It is informed by the analysis of the existing context, for example, the number of people experiencing a view, the analysis of landscape and visual features and their settings, together with the value placed on these locations by the community or by legislation or policy.

Sensitivity is described as either Negligible, Low, Moderate or High. Refer to pages 18 and 19 (Tables 2 and 4) for a description of components that inform the analysis of sensitivity and definitions for the levels of sensitivity.

Magnitude of change

The magnitude of change refers to the nature, scale and duration of the change that is expected to occur. It is described within the EIA-N04 Guideline for landscape character and visual impact assessment as “the measurement of the scale, form and character of a development Proposal when compared to the existing condition and also relates to how far the Proposal is from the viewer,” (TfNSW, 2020). It is informed by an analysis of the loss, change or addition of any feature to the existing landscape or visual amenity.

Magnitude of change is described as Negligible (barely perceptible change), Low (noticeable change), Moderate (considerable change) or High (dominant change). Refer to pages 18 and 19 (Tables 3 and 5) for a description of components that inform the analysis of the magnitude of change and definitions for the assessment categories.

Impact Assessment

The combination of sensitivity and magnitude provide the rating of the landscape character impact or visual impact for individual viewpoints as shown in Table 1.

Table 1: Landscape and visual impact assessment matrix

		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High Impact	High- Moderate Impact	Moderate Impact	Negligible
	Moderate	High-Moderate impact	Moderate Impact	Moderate - Low Impact	Negligible
	Low	Moderate Impact	Moderate - Low Impact	Low Impact	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Landscape character approach

Landscape character assessment

Landscape character can be defined as the “combined quality of built, natural and cultural aspects which make up an area and provide its unique sense of place”, (TfNSW, 2020). It includes all aspects of a tract of land – built, planted and natural topographical and ecological features.

To enable the assessment of impacts on landscape character, Landscape Character Areas (LCAs) have been defined for the study area. LCAs are defined as areas having a distinct, recognisable and consistent pattern of elements making one landscape character area different from another.

Randwick Council has recently identified a new set of Local Character Areas that will form part of Council's new comprehensive Planning Proposal currently being prepared. The La Perouse area is incorporated and sits within the Bays Local Character Area (LCA), one of 11 Local Character Areas across Randwick City. Reference has been made to the Randwick City Council Local Character Areas to assist with defining the LCAs in relation to the project. Please refer to 05: Baseline, page 44 for the identified LCAs and their relation to the Randwick City Councils Local

Character Areas.

Impact

The overall impact rating of the project on any given LCA is based on themes of magnitude and sensitivity. The severity of these impacts are calculated using the matrix illustrated in Table 1 (page 15). The landscape magnitude and sensitivity criteria that are used to inform the assessment are illustrated in Table 2 and 3 on page 22.

Impact ratings - Direct impacts

Direct landscape impacts relate to impacts on landscape character that may occur on LCAs as a direct result of the presence of the project within an area of a landscape character. It would result in the loss of the important physical or cultural elements that define the area's landscape character (for example vegetation, buildings, land form).

Impact ratings - Indirect impacts

Indirect landscape impacts relate to potential impacts that may occur on LCAs next to the project and construction footprints. Indirect impacts would affect the content, setting, and therefore perception of an area's landscape

character values. This is sometimes termed ‘borrowed character.’

Visual approach

Viewpoint selection

A Visual Envelope Map (VEM) is produced to illustrate the theoretical area from which the project would be visible from. Following a review of the VEM, a thorough desktop study and a site visit, representative viewpoints with the potential to be visually affected by some element of the project are identified and selected for further analysis.

Viewpoints were selected to illustrate:

- A range of receptor types including public and private domain views (residents, motorists and users of public open space)
- A range of view types including elevated, panoramic and filtered views
- A range of viewing distance from the project
- Key or protected views identified within the planning literature.

Impact

Consistent with the landscape approach, the overall impact rating of the project on any given viewpoint is based on themes of magnitude and sensitivity. The severity of these impacts are calculated using the matrix illustrated in Table 1 (page 15). The visual magnitude and sensitivity criteria that are used to inform the assessment

Study Area

Landscape character assessment

In order to complete the landscape character assessment, the identified assessed study area has been informed by a 5km buffer from the centre of Botany Bay, directly between the two project area locations. This ensures the analysis of the surrounding context of the project area in terms of landscape character.

Refer to Chapter 05: Baseline, Landscape character (page 44, Figure 17) for the illustrated LCA study area boundary.

Visual assessment

In order to complete the visual assessment, the identified assessed study area has been informed by a 5km buffer from the centre of Botany Bay and the VEM, which informs the specific locations of the selected viewpoints. This VEM study area buffer distance has been adopted on the basis of the scale, nature and magnitude of the proposed ferry wharves.

Refer to Chapter 05: Baseline, Visual context (page 48, Figure 19) for the illustrated visual study area boundary.

Photography

A number of photographs were taken to record key views to the project. These photographs were taken with a digital camera at a 50mm equivalent focal length. Where multiple shots were taken in the same location, each photograph was taken with a minimum 40 per cent to maximum 70 per cent overlap to allow for merging into panoramas.

Photomontages

Four photomontages were prepared for the project. These photomontages are intended to act as artist's impressions, illustrating the general location, scale, and relationship of key visual elements with the surrounding landscape. These simulations were created using site photographs, computer modeling and photo editing as follows:

1. A 3D computer model was developed based on a digital terrain model with one metre contour data. The location of these visual simulations was selected to illustrate the range of impacts likely for the project. The digital terrain model does not include buildings and vegetation.
2. The model was positioned over the existing photograph using the GPS coordinates of the location, and a minimum of three existing elements within the photograph as reference points.
3. The photographs have been edited using Photoshop to reflect the likely changes to the view. There is an element of judgment used in the changes shown in these photomontages.

Assumptions and technical limitations

The following assumptions and technical limitations have informed this study:

- The assessment is based on the EIS Project Description and project details would be further developed during future design stages. Through further engagement with stakeholders and through the design development stage, there is the potential for the final design to vary from that described within this report.
- The photo simulations are based on the concept project design. The end built form may differ from that portrayed in the images and, therefore, these images are purely indicative at this stage.
- The Digital Terrain Model (DTM) developed for topographic mapping was based on a 25m grid derived from LiDAR model.
- It is important to consider the conclusions of this assessment in the context of these limitations however; it is not considered that any of these limitations would have a significant effect on the assessment of impact.
- All discussions and assessments made on the magnitude of change are made relative to the existing landscape baseline condition and do not consider any future development within the study area.
- The designated visual study area is an approximate and based on desk-based study. Professional judgment has been used to predict the likely views of the project. The main elements likely to be visible in the selected views include the ferry wharves.
- Low tide conditions are to be used for assessing the 'worst case' scenario for visual impacts, due the increased exposure of wharf structures.

Landscape assessment approach

Landscape sensitivity

A record of the inherent and intrinsic sensitivity of the landscape and the degree to which it can accommodate change

- Value | The importance of the landscape to society
- Components | Contributing components, such as trees, woodlands, land use, heritage
- Characteristics | Patterns, scenic quality, tranquility etc
- Landscape Character Areas | Homogeneous areas with defining characteristics
- Replacement or substitution | The degree to which inherent components or characteristics can be reserved
- Trends of change | An account of the natural or human activities that may alter the landscape

Table 2: Landscape sensitivity level definitions

High sensitivity	<p>Landscapes which by nature of their character would be unable to accommodate change of the proposed type. Typically these would be:</p> <ul style="list-style-type: none"> • Of high value of high value with distinct elements and features making a positive contribution to character and sense of place. • Likely to be designated, but the aspects which underpin such value may also be present outside designated areas, especially at the local scale. • Areas of special recognised value, through use, perception or historic and cultural associations. • Likely to contain features and elements that are rare and could not be replaced.
Moderate sensitivity	<p>Landscapes which by nature of their character would be able to partly accommodate change of the type proposed. Typically these would be:</p> <ul style="list-style-type: none"> • Comprised of commonplace elements and features creating generally unremarkable character but with some sense of place. • Locally designated, or their value may be expressed through non-statutory local publications. • Containing some features of value through use, perception of historic and cultural associations. • Likely to contain some features and elements that could not be replaced.
Low sensitivity	<p>Landscapes which by nature of their characteristics would be able to accommodate change of the type proposed. Typically these would be:</p> <ul style="list-style-type: none"> • Comprised of some features and elements that are discordant, derelict or in decline, resulting in indistinct character with little or no sense of place. • Not designated. • Containing few, if any, features of value through use, perception or historic and cultural associations. • Likely to contain few, if any, features and elements that could not be replaced.
Negligible sensitivity	<p>Landscapes which by nature of their characteristics would be able to accommodate change of the type proposed. Typically these would be:</p> <ul style="list-style-type: none"> • Comprised of features and elements that are discordant, derelict or in decline, resulting in indistinct character with little or no sense of place. • Not designated. • Containing no features of value through use, perception or historic and cultural associations. • Likely to contain features and elements that could be readily replaced.

Magnitude of change

The scale, nature and duration of the change and the degree to which the effect can be mitigated

- The scale | Small, medium or large
- Nature | Negative (adverse) or positive (beneficial)
- Duration | Short, medium, long term permanent or temporary
- The mitigation | The degree to which mitigation would reduce the effect

Table 3: Landscape magnitude of change level definitions

High adverse	Total loss or large scale damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic conspicuous features or elements.
Moderate adverse	Partial loss or noticeable damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic noticeable features and elements.
Low adverse	Slight loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features or elements.
Negligible adverse	Barely noticeable loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.
No change	No noticeable loss, damage or alternation to character or features or elements.
Negligible beneficial	Barely noticeable improvement of character by the restoration of existing features, and/or the removal of uncharacteristic features, or by the addition of new characteristic features.
Low beneficial	Slight improvement of character by the restoration of existing features, and/or the removal of uncharacteristic features, or by the addition of new characteristic features.
Moderate beneficial	Partial or noticeable improvement of character by the restoration of existing features, and/or the removal of uncharacteristic features, or by the addition of new characteristic features.
High beneficial	Large scale improvement of character by the restoration of features, and/or the removal of uncharacteristic features, or by the addition of new distinctive features.

Visual assessment approach

Visual sensitivity

A record of the visual receptors within the study area and an analysis of the visual sensitivity

- Define visual study area | The areas within which the view is expected to be of concern of importance
- Identify the representative viewpoints | Record important public and provide view points
- The expectation and occupation or activity to inform level of sensitivity | The most sensitive receptors may include residential and public outdoor facilities. Industrial areas may have a low level of visual sensitivity
- The importance of the view | Views that may be designated to safeguard their value or locations that are valued by the communities

Table 4: Visual sensitivity level definitions

High sensitivity	<p>Examples may include:</p> <ul style="list-style-type: none"> • Residential properties • Users of public footpaths or other recreational trails (e.g National Trails) • Users of recreational facilities where the purpose of that recreation is the enjoyment of the landscape (e.g. National Parks and designated scenic lookouts) • Users of designated tourist routes • Large numbers of viewers.
Moderate sensitivity	<p>Examples may include:</p> <ul style="list-style-type: none"> • Outdoor works • Users of scenic roads, railway corridors or waterways • Schools and other institutional buildings, and their outdoor areas • Moderate number of viewers.
Low sensitivity	<p>Examples may include:</p> <ul style="list-style-type: none"> • Indoor workers • Users of main roads or arterial roads • Users of recreational facilities where the purpose of that recreation is not related to the views.
Negligible sensitivity	<p>Examples may include:</p> <ul style="list-style-type: none"> • Limited numbers of viewers or infrequently accessed view points • Passing interest in their surroundings • Users of minor roads and views from the air.

Magnitude of change

The scale, nature and duration of the change and the degree to which the effect can be mitigated

- Scale | With respect to the loss or addition of features in the view and changes in its composition
- Degree of contrast or integration | Form, scale and mass, line, height, colour, texture
- Nature of view in relation to the proposal | Angle, distance and extent
- Mitigation | The degree to which mitigation would reduce the effect

Table 5: Visual magnitude of change level definitions

High	The project, or part of it, would become the dominant feature or focal point of the view.
Moderate	The project, or part of it, would form a noticeable feature or element of the view which is readily apparent to the receptor.
Low adverse	The project, or part of it, would be perceptible but not alter the overall balance of features and elements that comprise the existing view.
Negligible adverse	Only a very small part of the project would be discernible, or it is at such a distance that it would form a barely noticeable feature or element of the view.
No change	No part of the project, or work or activity associated with it, is discernible.

Urban Design Approach

The project is outlined in Chapter 06: The Project and describes the architectural, landscape and urban design vision. To address the relevant SEARs regarding placemaking (refer to page 11, Design, Place and Movement), urban design objectives and principles to guide the design development of the project have been determined. A review of two urban design guidance and policy documents, including Beyond the Pavement and Better Placemaking prepared by TfNSW, was undertaken.

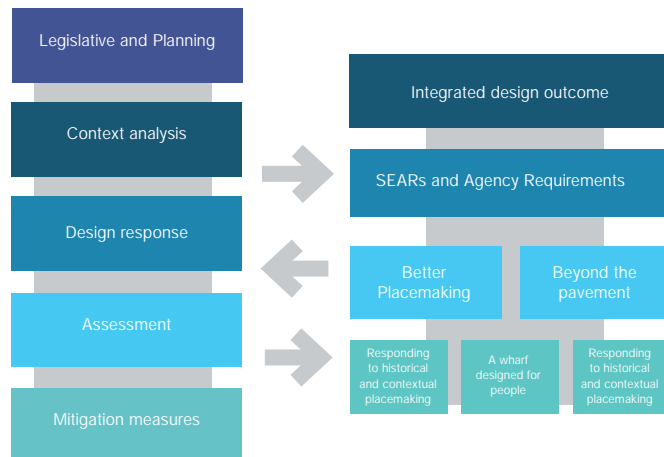
The following pages expand on:

- the background behind these two policies,
- the relationship between the principles and objectives outlined within the two policies (illustrated in table 8, page 20) and,
- the relevance to the project.

These documents, together with an understanding of the local context and project requirements, have informed the development of three urban design objectives for the project:

1. Responding to historical and contextual placemaking
2. A wharf for people
3. Celebration of past, present and future maritime use of the two sites.

Immediate site analysis, including concentrated opportunities and constraints mapping, was undertaken for both sites (refer to Chapter 04: Context). Through an iterative process, impacts highlighted from the LCVA (refer to 08 Summary of Assessment, page 112 for the summary table) have been fed back to the design team and captured through the proposed conceptual design.



NSW Planning Policy

Draft Connecting with Country

The Connecting with Country document is a draft framework for developing connections with Country to inform the planning, design, and delivery of built environment projects in NSW. It is intended to help project development teams – advocating ways they can respond to changes and new directions in planning policy relating to Aboriginal culture and heritage, as well as place-led design approaches. It also aims to help project teams gain a better understanding of, and to better support, a strong and vibrant Aboriginal culture in our built environment.

It is for community – to help communities advocate their own project initiatives and find common ground, as well as acknowledging diverse perspectives and stories and relationships to Country.

It is for local government – to help them respond to and advocate for community needs in local planning policies and projects.

It is for government agencies – to be better clients by building relationships with communities on Country.

It is for industry – to support better work practices, relationship building, and delivery of better built environment outcomes that are informed and guided by Aboriginal knowledge and leadership.

It is for developers (both Aboriginal and non-Aboriginal) – to understand the unique value of Country and the reciprocal nature.

This Connecting with Country Draft Framework is being tested through a collaborative process with NSW Government delivery agencies. The testing and piloting of this framework will also include deep engagement with Aboriginal people across NSW to inform long-term implementation and to demonstrate the commitment of the Department of Planning, Industry and Environment to nurturing strong relationships with Aboriginal communities.



NSW Planning Policy

Beyond the Pavement (2020)

Beyond the Pavement is a high level urban design policy that systematically incorporates urban design thinking into infrastructure projects, with a focus on delivering improved design outcomes and higher levels of community satisfaction.

It provides guidance on urban design outcomes and expectations, and how to integrate urban design into the infrastructure design process. It identifies urban design principles for TfNSW's projects and provides relevant case studies. These nine principles help define the project outcome, the criteria for success and what is expected in projects. These principles include:

1. Contributing to urban structure, urban quality and economy
2. Fitting with the built fabric
3. Connecting modes and communities and promoting active transport
4. Fitting with the land form
5. Contributing to green infrastructure and

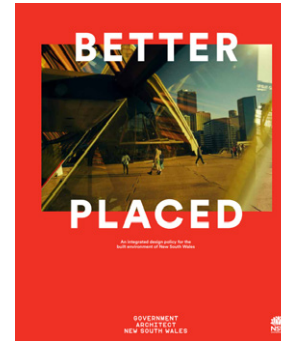
responding to natural systems

6. Connecting with Country and incorporating heritage and cultural contexts into projects
7. Designing an experience in movement
8. Designing self-explaining roads that safely respond to their role and context
9. Achieving integrated and minimal maintenance design.

Through Beyond the Pavement, TfNSW commits to providing excellent outcomes for the people of NSW, governed by the 9 over-arching urban design principles that include both physical outcomes and performance-based principles.

There are two principles in particular which relate to wharves:

- Principle two states that a project should avoid adverse visual impacts in the planning and design of roads and wharves.
- Principle three states that projects should incorporate inter modal connectivity in designing the upgrade of existing or building of new ferry wharves.



NSW Planning Policy

Better Placed (2017)

"New development has the potential to transform quality of life for people, stimulate the economy and enhance the environment. The design of the built environment shapes the places where we live, work and meet. The quality of design affects how spaces and places function, how they integrate, what they contribute to the broader environment, and the users, inhabitants and audiences they support or attract.

Better Placed is a policy for our collective aspirations, needs and expectations in designing NSW. It is about enhancing all aspects of our urban environments, to create better places, spaces and buildings, and thereby better cities, towns and suburbs. To achieve this, good design needs to be at the centre of all development processes from the project definition to concept design and through to construction and maintenance."

"Better Placed is focused on delivering the kinds of places we collectively aspire to and the best ways to understand and capture the benefits of good design," - Better Placed, 2017.

The seven distinct objectives created to define the key considerations in the design of the built environment are:

1. Better fit - contextual, local and of its place
2. Better performance - sustainable, adaptable and durable
3. Better for community - inclusive, connected and diverse
4. Better for people - safe, comfortable and liveable
5. Better working - functional, efficient and fit for purpose
6. Better value - creating and adding value
7. Better look and feel - engaging, inviting and attractive.

Table 8: Better Placed Objectives and Beyond the Pavement Objectives, Requirements and Principles matrix

Better Placed Objectives	Beyond the Pavement Objectives, Requirements and Principles		
	Better Placed Objectives	Beyond the Pavement - 4 Physical Design Objectives	Beyond the Pavement - 3 Performance Requirements
	Beyond the Pavement - 9 Design Principles		
	Better Fit (contextual, local and of its place)	Objective 1 (fit sensitively into the built, natural, and cultural environment in both urban and rural locations)	Principle 2 4 5 & 6 (Fitting with the built fabric / Fitting with the landform / Contributing to green infrastructure and responding to natural systems / Connecting to Country and Incorporating heritage and cultural contexts)
	Better Performance (Sustainable, Adaptable & durable)		Performance requirements 2&3 (cost effectiveness & sustainability)
	Better for Community (inclusive, connected and diverse)	Objective 1 & 2 (fit sensitively into the built, natural, and cultural environment in both urban and rural locations / contribute to the accessibility and connectivity of communities and a general permeability of movement through areas by all modes of movement)	Principle 3 (Connecting modes and communities and promoting active transport)
	Better for people (safe, comfortable and liveable) Designing self explaining roads that safely respond to movement and place)	Objective 3 (contribute to the overall design quality of the public domain for the community, including transport users)	Performance requirement 1 (safety and towards zero harm)
	Better working (functional, efficient and fit for purpose)	Objective 2 (contribute to the accessibility and connectivity of communities and a general permeability of movement through areas by all modes of movement)	Performance requirements 2&3 (cost effectiveness & sustainability)
	Better value (creating and adding value)	Objective 4 (revitalise areas and contribute to the local and broader economy) Performance requirements 2&3 (cost effectiveness & sustainability)	Principle 1 & 6 (Contributing to urban structure, urban quality and the economy / Connecting to Country and Incorporating heritage and cultural contexts)
	Better look and feel (engaging, inviting and attractive)	Objective 3 (contribute to the overall design quality of the public domain for the community, including transport users)	Principle 9 (Achieving integrated and minimal maintenance design)

Relevance to this project

Beyond the Pavement and Better Placed are relevant to the entirety of the project, as it is important to consider the broader impacts of the project and associated infrastructure upon existing built form, communities and the natural environments the project transects (including infrastructure associated with temporary construction such as laydown yards and construction lighting). The key purposes of these policies are to ensure that during construction and operation:

- Existing landscape and built environment qualities are understood and protected.
- Built projects contribute to the quality of the built environment in urban and rural contexts and create a legacy for the future.
- The quality of life of local communities is protected or improved in terms of connections, access to facilities, proximity to noise, views, safety and sense of place.

Relevant to the LCVIA, Beyond the Pavement states that:

- The architectural and landscape quality of transport infrastructure should be visually pleasing.
- Transport infrastructure should fit sensitively into its natural setting, protecting the scale and unique qualities of the places in which it is situated.
- Major built elements can add character and help transform areas for the better.
- Viewpoints should be protected and enhanced where possible.
- Heritage and Indigenous features should be protected and enhanced, incorporating them into the design can lead improved outcomes.
- The design quality of structures and elements contributes to how a place looks and feels and how robust and durable it is.
- Major structures (such as bridges, ferries and wharfs) should be planned and designed with special care as they can form 'gateways' and signature landmarks in the landscape.
- The location, scale and design of earthworks and structures should be kept in character with the existing landscapes.



03

Legislation and Policy



Legislation and Policy

The planning and legislative framework provides an indication of the land use policies and objectives that are applicable to the project area. This section explores legislation and policy at a National, State and local level and includes:

- Relevant State Environmental Planning Policies (SEPPs) for the study area that may be of specific relevance to the project
- A review of overlays and LEP zones defined at a local level by Randwick City Council and Sutherland Shire Council LGA
- A review of specific policy and strategic frameworks that are of relevance to the project
- A review of the 'Heritage' overlay - specifically, assets of heritage significance at the National, State and Local level located within the study area.

Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act (EP&A) 1979 establishes the framework under which planning and land use management take place in New South Wales, supported by the EPA Act Regulation. It identifies the environmental planning instruments or statutory plans that should be produced to guide development and land use at the local, regional and state level. These plans include SEPPs and LEPs.

National Parks and Wildlife Act 1974

The National Parks and Wildlife Act (NPWA Act) 1974 provides the legislative framework for the conservation of the State's natural and cultural heritage and landscape. It also reserves land, and dictates management principles for the management of that land, including National Parks. It is also intended to foster public appreciated, understanding and enjoyment of nature and cultural heritage.

The State Environmental Planning Policy (Coastal Management) 2018

Parts of the study area are identified as Coastal Environment Areas (refer to Figure 4).

Development consent cannot be granted on this land unless the relevant decision-making authority has considered whether the proposed development is likely to cause an adverse impact on the following LCVIA relevant factors:

- (a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,
- (b) coastal environmental values and natural coastal processes,
- (d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,
- (e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
- (f) Aboriginal cultural heritage, practices and places.

Parts of the study area are also identified as Coastal Use Area (refer to Figure 4).

Development consent cannot be granted on this land unless the relevant decision-making authority has considered whether the proposed development is likely to cause an adverse impact on the following LCVIA relevant factors:

- existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
- (ii) overshadowing, wind funneling and the loss of views from public places to foreshores,
- (iii) the visual amenity and scenic qualities of the coast, including coastal headlands,
- (iv) Aboriginal cultural heritage, practices and places,
- (v) cultural and built environment heritage.

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

Part of the project area, specifically around the Kurnell peninsula, is identified within the SEPP as subject to this policy (refer to Figure 4, SEPP No. 55 and SEPP No.19 boundaries).

The relevant LCVIA aims of this Policy are:

- (a) to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and,
- (b) to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

Legend

- * Proposed wharf locations
- National Parks
- SEPP (Coastal Management 2018)
- Coastal Use Area
- Coastal Environment area
- SEPP No 55 - Remediation of Land 1998
- SEPP No 19 - Bushland in Urban Areas 1986



FIGURE 4 DESIGNATIONS

LEP Land use zones

The land use zone sets out controls of land uses, and development activities. An LEP usually sets out land use controls within a zone sets in three sections including, permitted without consent, permitted with consent or prohibited.

The project area is covered by LEPs for Randwick City Council and Sutherland Shire Council. The proposed development is located within zones classified as a 'National Parks and Nature Reserve' and 'Public Recreation', with smaller areas of 'Natural Waterways', 'Neighbourhood Centre', 'Special Purpose', 'Environmental Conservation' and 'Residential' zoning also within the identified study areas. This is illustrated, in further detail, in Chapter 04: Context (refer to Figure 11 and 12 for land use zone boundaries) and described in Table 6.

Table 6: Relevant land use zones within the study area

Zone	Zone name	Relevant objective zone for LCVIA
Sutherland Shire LEP, 2015		
E1	National Parks and Nature Reserves	To enable the management and appropriate use of land reserved as National Parks, reserves and conservation areas.
E2	Environmental conservation	To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values, and prevent development that could destroy, damage or otherwise have an adverse effect on those values. To ensure that development complements and enhances the natural environment in environmentally sensitive areas.
B1	Neighbourhood centre	To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood.
W1	Natural waterways	To protect the ecological and scenic values of natural waterways. To protect and enhance remnant natural features, aquatic habitat, public access and the navigability of waterways. To ensure that the natural scenic qualities of waterways are not diminished through the cumulative impact of man-made structures.
E4	Environmental Living	To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values. To ensure the character of the locality is not diminished by the cumulative impacts of development. To share views between new and existing development and also from public space.

City of Randwick LEP, 2012

E1	National Parks and Nature Reserves	To enable the management and appropriate use of land reserved as National Parks.
RE1	Public Recreation	To enable land to be used for public open space or recreational purposes. To protect and enhance the natural environment for recreational purposes and protect, manage and restore areas with high biodiversity, ecological and aesthetic values.
B1	Neighbourhood centre	To minimise the impact of development and protect the amenity of residents in the zone and in the adjoining and nearby residential zones.
SP1	Special Activities	To provide for sites with special natural characteristics that are not provided for in other zones. To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land.
R2	General Residential	To recognise the desirable elements of the existing streetscape and built form or, in precincts undergoing transition, that contribute to the desired future character of the area.

Kamay Botany Bay National Park Kurnell Master Plan

The Kamay Botany Bay National Park Kurnell Master Plan (Neeson Murcutt Architects Pty Ltd, 2019) is a continuation of the previous Kamay Botany Bay National Park Master Plan (National Parks and Wildlife Service [NPWS], 2008). The 2019 master plan (refer to page 74, Figure 35) focuses on the 'Meeting Place' concept within the Kurnell Precinct of the National Park (defined as "a place where cultures met and continue to meet and where conflict and reconciliation, celebration and sorry business can be acknowledged in the one landscape" Neeson Murcutt Architects, 2019, page 2). The vision of the 2019 master plan is to make the Kamay Botany Bay National Park "a place of significance to all Australians that contributes to their sense of identity as Australians" (page 3).

This is to be carried out by improving visitor access and facilities as well as improving the visitor experience. There are three stages identified in this master plan. These include:

- Stage 1 – Foreshore loop and ferry
- Stage 2 – Arrival at Kurnell and new beach park
- Stage 3 – Broader park upgrade.

The reinstatement of the previous wharves and ferry services is identified as part of Stage 1 of this master plan. The ferry service would improve connection between La Perouse and Kurnell and provide a new type of visitor experience for those entering/traveling around the National Park.

Kamay Botany Bay National Park Plan of Management

The Kamay Botany Bay National Park Plan of Management (NPWS, 2020) covers an area of about 456 hectares. It covers the northern and southern headlands on the entrance to Botany Bay. This management plan outlines actions to achieve the desired outcomes for the National Park as well as regulation tables that set out what recreation and commercial activities are permitted in the park and any requirements to undertake these activities (eg. if consent from the National Parks and Wildlife Service is needed).

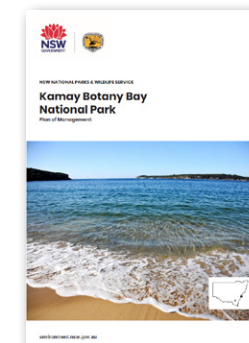
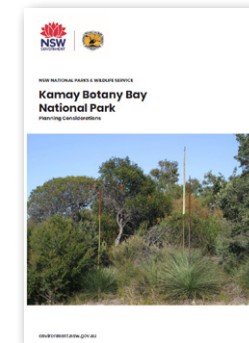
This project reflects Action 14e of the Plan of Management that supports "planning and establishing water-based links, such as a ferry, and associated infrastructure between the La Perouse and Kurnell sections of the park." This has been identified as a priority that should be delivered by 2023.

Please refer to Chapter 06: Project, page 78, for objectives within the Kamay Botany Bay National Park Plan of Management that are specifically addressed as a result of the project.

Kamay 2020 Project

The Kamay 2020 Project has been informed by both the Kamay Botany Bay National Park Kurnell Master Plan (Neeson Murcutt Architects Pty Ltd, 2019) and Plan of Management (NPWS, 2020). It is a project that commemorates 250 years since the encounter between Aboriginal Australians and the crew of the Endeavour and aims to deliver improved visitor amenity and access, provide new experiences and acknowledge the diversity of stories associated with the Kamay Botany Bay National Park.

The project is being delivered as part of Stage 1 of the Kamay 2020 Project, and it is compatible with the landside improvements including the installation of commemorative sculptures and other enhancements to the visitor experience at the National Park.



Non-Aboriginal Heritage Designations

Both the La Perouse and Kurnell project areas contain sites incorporating significant heritage. The Kamay Botany Bay National Park is designated as of national heritage importance. Refer to Chapter 04: Context (Land Use - page 36) for further information about the context of the National Park.

Other areas along the coastline, across both project areas, including Frenchmans Bay, Yarra Bay and Silver Beach are designated as of State heritage importance. Refer to Table 7 and Figure 8 for the specific heritage assets located within (and in close proximity to) the project areas.

It will be important for any future development to consider the potential impact on the visibility and landscape setting of these important assets and areas. At the local level also, both study areas contain assets of heritage significance, including monuments associated with Captain Cook and historic buildings, as seen in the opposite Figures 5-7.

Please refer to Aboriginal Heritage report and Non-Aboriginal Heritage for more information.



FIGURE 5 MACQUARIE WATCHTOWER, LA PEROUSE (IMAGE: NSW PARKS)



FIGURE 6 BARE ISLAND FORT (IMAGE: NSW PARKS)



FIGURE 7 CAPTAIN COOKS LANDING MONUMENT, KURNELL

Table 7: Relevant heritage significance within the study area

Register ID	Asset name	Description
National Heritage Significance		
105812	Kurnell Peninsula Headland (comprising Kamay Botany Bay National Park and the Sydney Water land at Potter Point)	Kurnell - The site of first recorded contact between Indigenous people and Britain in eastern Australia. Includes Captain Cook's Landing Place. Valued for its social, cultural and environmental history and significance, and for its rarity as a site.
State Heritage Significance		
5061543	Kamay Botany Bay National Park (North and South) and Towra Point Nature Reserve	Both project areas - Listed for its significance as a rare place demonstrating the continuous history of occupation of the east coast of Australia - demonstrating aspects of the way of life of the Aboriginal people before European settlement, and the first recorded site of contact with Europeans. Also listed for its geological and botanical features, and landmark qualities of the cliffs edging the sea side entrance to Kamay Botany Bay National Park in both the northern and southern sections.
5045621	Bare Island Fort	La Perouse - Significant as an almost completely intact example of late nineteenth century coastal defense technology. The site of the first War Veterans Home founded in Australia.
Local Heritage Significance		
A2506	Silver Beach and roadway	Kurnell - Silver Beach is a stretch of beach on the Kurnell peninsula fronting Botany Bay.
A2503, A2510 – A2522	Various locally significant heritage and archaeological assets associated within Kamay Botany Bay National Park	Kurnell - Includes Muru and Yena tracks, a series of monuments from Captain Cook – Captain Cook's well, monument, watering hole and landing site and landing place, the Banks Memorial and the Alpha Farm site.
I168	La Perouse Museum (former Cable Station)	La Perouse - A two-story Victorian building of historic interest for its original international communications function, and its more recent use by the Salvation Army.
I166	Macquarie Watchtower	La Perouse - The oldest remaining building in Randwick City and ranked among the earliest colonial structures in Australia.
I169	La Perouse Memorial	La Perouse - A symbol of the La Perouse Expedition that is associated with the ongoing relationship between France and Australia.
I167	Tomb of Pere le Receveur	La Perouse - A symbol of the association with the La Perouse expedition and the Roman Catholic Church in Australia. The tomb to a Franciscan monk and naturalist on the La Perouse expedition.
I172	Yarra Bay House	La Perouse - Grand individually styled Edwardian mansion. The only such building in this part of the Municipality. A local landmark in an open setting, on the foreshores of Phillip Bay.
I178	Coast hospital - entrance gates to former CEO's residence	La Perouse - The Coast Hospital Cemetery is of significant historical importance to the story of European colonisation of Australia, and the indigenous population. Coast Cemetery, an aging graveyard that remembers a time when the whole area existed solely to house smallpox victims.

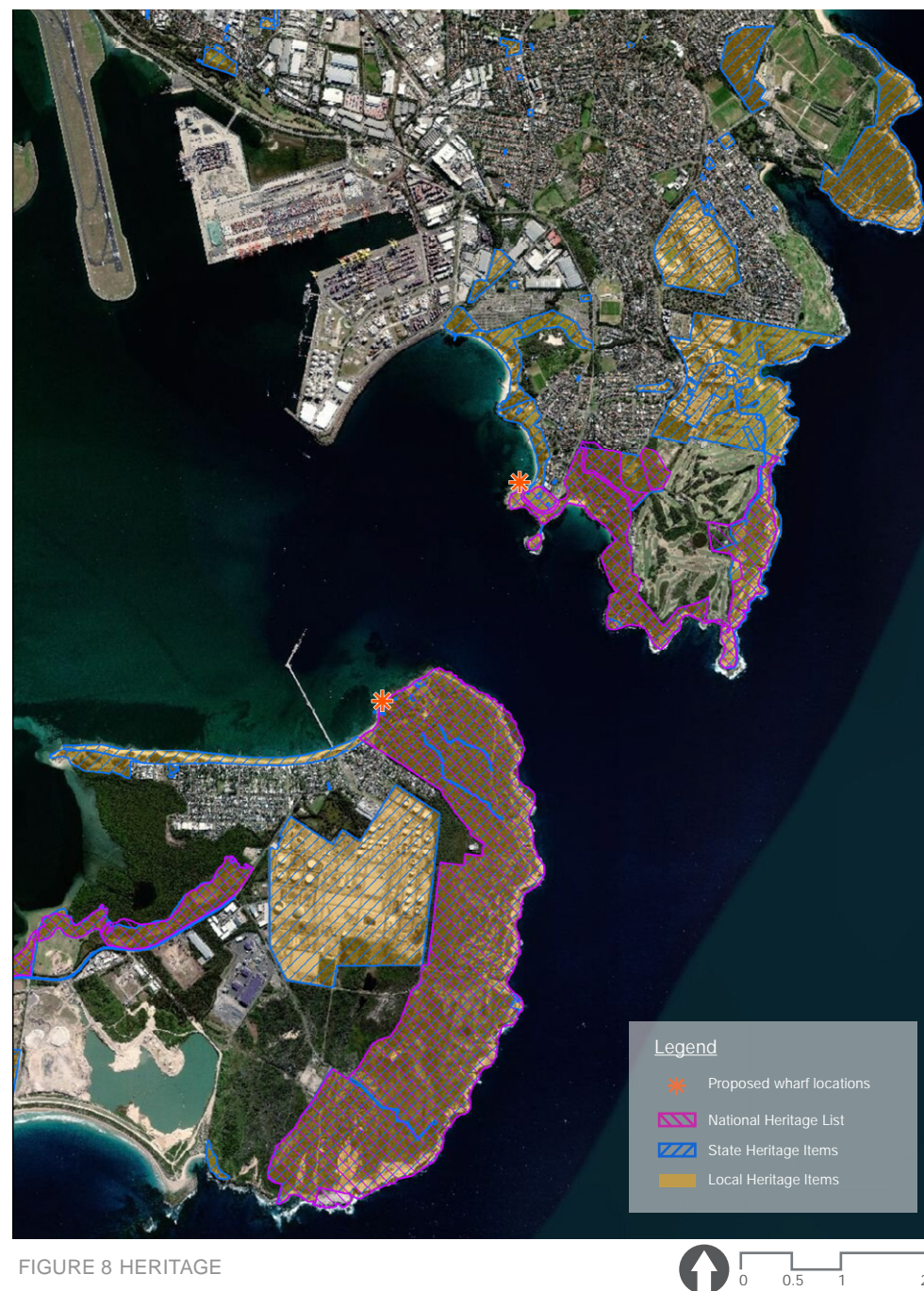


FIGURE 8 HERITAGE





04

Context

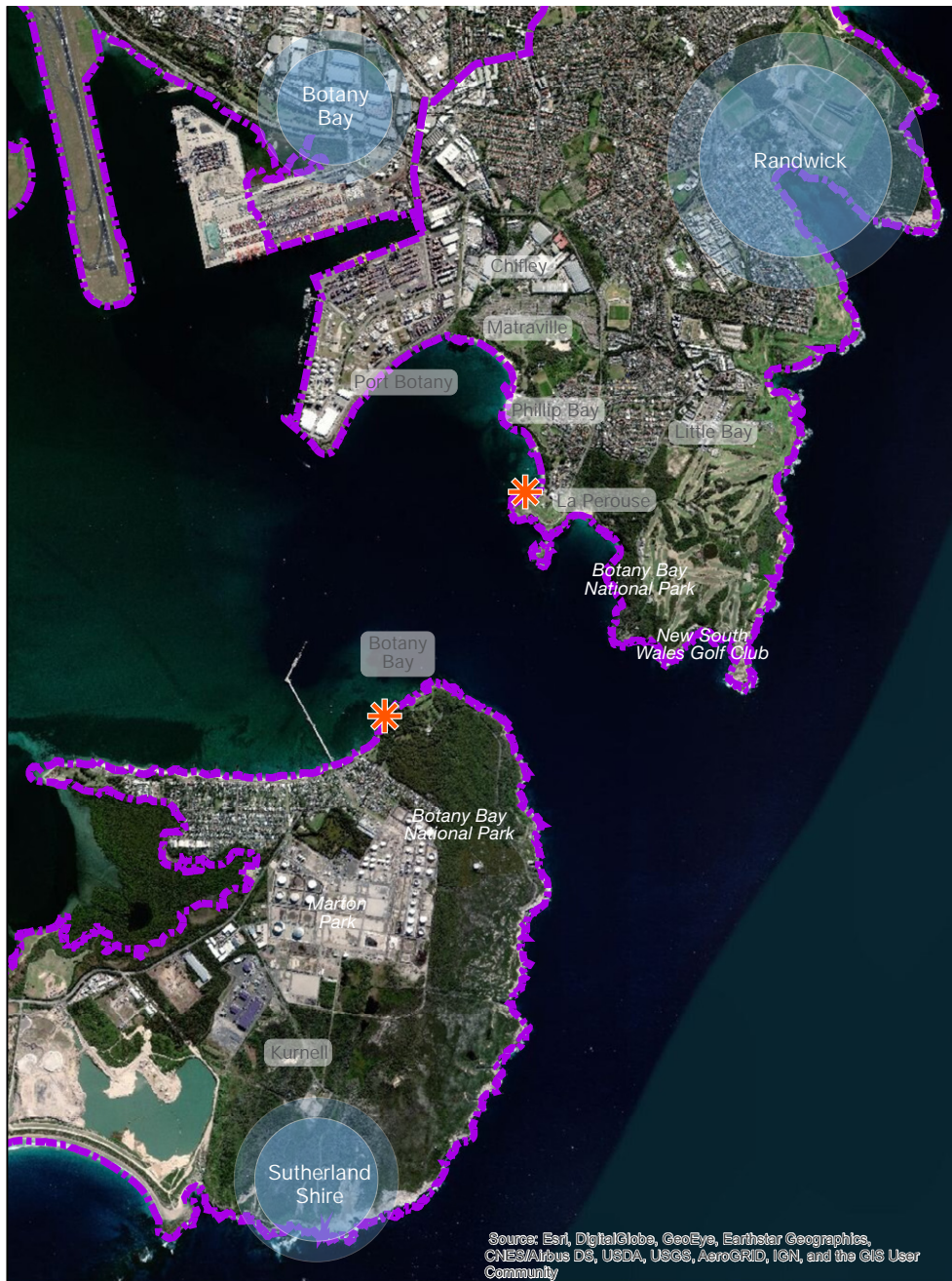


FIGURE 9 SETTLEMENTS

Context

Settlements

La Perouse

La Perouse is a suburb located approximately 14km south east from Sydney CBD and is a popular tourist destination that provides open spaces, beaches and rocky shores. It is located within the City of Randwick LGA and contains several historic sites including the Bare Island fortifications, Macquarie Watchtower, Cable Station and La Perouse Museum. La Perouse also holds significant cultural value and a number of its residents identify as Aboriginal Australians. The project area is located in the northern headland within Botany Bay and is situated within the Kamay Botany Bay National Park. La Perouse is surrounded by the adjoining 'coastal' residential communities including Philips Bay and Little Bay that rise from the north and largely consist of single and double storey dwellings. Port Botany is in close proximity to the project area and extends into the Botany Bay environs.

La Perouse is popular with visitors for sight-seeing, swimming, diving, angling and walking. There are also a number of restaurants located on Anzac Parade.

Kurnell

The project area at Kurnell, is in the Kamay Botany Bay National Park. It has heritage significance as the first meeting place between Aboriginal Australians and the expedition of Captain Cook in 1770.

Attractions at Kurnell include Cook's landing place, commemorative sculptures installed for the 250th anniversary of Cook's landing, and an environmental education centre. To the west of the National Park is a low-density residential area, several shops and an art gallery. The Caltex berthing facility is located about 0.5km to the west of the proposed wharf.

Legend

- LGA boundary
- ✱ Proposal area

Topography and Hydrology

Botany Bay is an open, oceanic embayment with its source at the confluence of the Georges River at Taren Point and the Cooks River at Kyeemagh. It flows 10km to the east before meeting its mouth at the Tasman Sea. The total catchment is about 55km².

La Perouse

La Perouse Peninsula is the northern headland of Botany Bay and the coast is characterised by rocky sandstone cliffs, that rise up towards the eastern coastline. The cliffs and surrounding terrain rise in elevation to the east towards Little Bay and the NSW Golf Club, with a few smaller sandy beaches at Congwong and Little Congwong Beach. Bare Island is a low sandstone island about 30 m from the shore at the southern end of La Perouse Headland, near the entrance to Botany Bay. To the north of La Perouse Point is Frenchmans Beach which is a popular swimming area. This sandy beach curves around to Yarra Point, and then on to Port Botany. There are no major waterways meeting the coast within this area.

Kurnell

Kurnell is extremely flat and low-lying, reaching an elevation height of approximately 0-4m AHD. The coastline along Botany Bay has a narrow sandy beach and sandstone rock with small rockpools. There are low retaining walls alongside the coastal track, protecting the path from tides. Rock groins are located at regular intervals (every few hundred metres), extending across Silver Beach. To the northeast of the project area, the Kurnell headland forms Kamay Botany Bay National Park, a protected environmental and heritage zone. The soil at Kurnell is described as deep podzols of dunes within swales and organic peats within swamp areas.

Legend

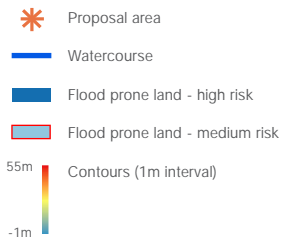


FIGURE 10 HYDROLOGY AND TOPOGRAPHY



FIGURE 11LA PEROUSE LAND USE

Land use zones

National Park

The Kamay Botany Bay National Park is historically significant and includes the site of first contact in 1770 between Aboriginal Australians and the crew of Lieutenant James Cook's ship Endeavour. This site is known as Captain Cook's Landing Place, and is marked by a monument along the northern shore walking track.

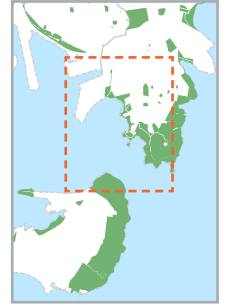
The park is valued for recreational use and is accessed by a number of walking tracks, traversing the coastline and the native bush. The Kurnell Visitor Centre is located on Cape Solander Drive. Nature trails meander through the Kamay Botany Bay National Park connecting Congwong Beach and Henry Head to the La Perouse headland.

La Perouse

The La Perouse project area, and the adjoining coastline, is dominated by land zones National Parks and Nature Reserve (E1) and Public Recreation (RE1) that wrap around the headland and include: Yarra Bay, Yarra Bay Bicentennial Park, Frenchmans Bay, Congwong Beach and the New South Wales Golf Club for private sports use. Low Density Residential (R2) and Medium Density Residential (R3) occupies the ridgeline/higher terrain north of the headland and on approach to the surrounding suburbs including: Phillip Bay, Little Bay and Chifley. The La Perouse Aboriginal Land Council - a key building to the local Aboriginal community, is located just east of Yarra Point.

There are many visitors attracted to the coastal location, particularly La Perouse Point, which incorporates various historic sites including Bare Island Fort, Macquarie Watchtower and the La Perouse Museum. Macquarie Watchtower is the oldest remaining building in Randwick City and is set within a grassed reserve which captures coastal views. Bare Island is a low sandstone island (30m from the shore of the southern end of La Perouse Headland) and includes a fortification complex built in 1880 to protect the coast.

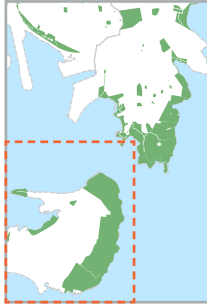
Frenchmans Beach and Congwong Beach are popular bathing and swimming beaches. The Guriwal Bush Tucker Trail also connects Frenchmans Bay to Yarra Point, the La Perouse Aboriginal Land Council and continues through to Yarra Bay to the Eastern Suburb Memorial Centre capturing coastal views along the entire length of the trail.



Kurnell

The Kurnell project area, and the entire eastern coastline of the Kurnell Peninsula, is dominated by land zone National Parks and Nature Reserve (E1) and designated as the Kamay Botany Bay National Park. Immediately opposite the National Park is a small area of Neighbourhood centre (B1), which consists of a small number of retail businesses. Environmental Living (E4) dominates the local area of Silver Beach that stretches across the northern coastline of Kurnell and is located west of the project site. Both General and Heavy Industrial zones (IN1 and IN2) consume a large portion of the Kurnell Peninsula.

Kurnell's main attraction is the beach front at Silver Beach looking out to Botany Bay. Due to the sheltered nature of the bay, the beach is a popular location for kite surfing and windsurfing.



The Caltex berthing facility, extending out from the Silver Beach coastline is for large vessels. The facility forms part of the infrastructure of the Kurnell Refinery located to the south of Kurnell, and is connected to the wharf through large pipes (alongside the wharf) and located underground within an easement, a few hundred metres through Kurnell.

Legend

-  Proposal area
-  B1 Neighbourhood Centre
-  B2 Local Centre
-  E1 National Parks and Nature Reserves
-  E2 Environmentally Conservation
-  E4 Environmental Living
-  IN1 General Industrial
-  IN2 Light Industrial
-  IN3 Heavy Industrial
-  R1 General Residential
-  R2 Low Density Residential
-  R3 Medium Density Residential
-  RE1 Public Recreation
-  RE2 Private Recreation
-  RU4 Primary Production Small Lots
-  SP1 Special Activities
-  SP2 Infrastructure
-  DM - Deferred Matter



FIGURE 12KURNELL LAND USE



FIGURE 13 LA PEROUSE VEGETATION

Vegetation

La Perouse

La Perouse Point, and the surrounding headland environs are largely cleared and consist mostly of mown lawn and modified heathland, that occurs as fragmented patches.

The project area is included within the designated Kamay Botany Bay National Park extents however, the vegetation present is restricted to small patches of planted/remnant native and exotic scrub. A small patch of surveyed native vegetation (coastal banksia scrub, refer to Figure 13) is contained to the eastern portion of the headland.

None of the vegetation present at La Perouse is considered to conform to any Threatened Ecological Communities (TEC) and survey results show that all portions of the project area have been impacted by weeds, primarily ferns, grasses and forbs.

Legend

-  Proposal area
-  Seagrass
-  Rock/Reef
-  Dry Sclerophyll Forest
-  Coastal Heaths
-  Maritime Grasslands
-  Coastal Banksia Scrub
-  Coastal Wattle Scrub
-  Planted
-  Regeneration



Kurnell

Historically, the majority of Kurnell has been disturbed and consists of predominately planted vegetation or re-growth. Sclerophyll forest dominates the project area with a small amount of Littoral Rainforest present in close proximity to the shorefront (refer to Figure 11).

Cleared grasslands occur within the project area and a large portion of non-endemic trees have been planted within the area including the largely iconic and established pine trees (*Araucaria* spp.) adjacent to the coastal edge and lining the Monument Track.

The following TECs were identified within the Kurnell study area and include:

- Kurnell Dune Forest (PCT 661) - Occurs along the foreshore and hind dune area.
- Littoral Rainforest (PCT 1832) - Disects the Kurnell Dune Forest in a north-south directions and buffers the drainage channel 'Cooks Stream'.
- Swamp Oak Floodplain Forest (PCT 1232) - A small patch occurs in the western extents, near the entrance to the National Park along Cape Solander Drive.

Legend

-  Proposal area
-  Seagrass
-  Rock/Reef
-  Dry Sclerophyll Forest
-  Coastal Floodplain Wetlands
-  Coastal Freshwater Lagoons
-  Coastal Heaths
-  Coastal Swamps
-  Maritime Grasslands
-  Wet Sclerophyll Forest
-  Coastal Wattle Scrub
-  Planted: Non-endemic
-
- TEC (Threatened Ecological Community)
-  Kurnell Dune Forest
-  Littoral Rainforest
-  Swamp Oak Floodplain Forest

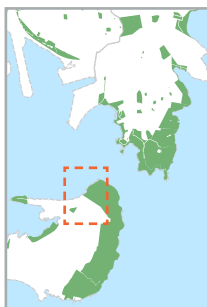


FIGURE 14 KURNELL VEGETATION





FIGURE 15 LA PEROUSE LAND USE

Culture and Heritage

La Perouse

The La Perouse headland holds a rich and layered history with significant heritage values that are important to all Australians. La Perouse, or Gooriwal, as it is known as to the Muruora-dial people of the area and has Aboriginal cultural sites dating back thousands of years. It is also a point of early contact between the European explorers. The peninsula was "described by European observers as an expanse of low heath full of bird life, which in turn abutted a tidal shore brimming with shellfish," (NSW Migration Heritage Centre, 2011). A large portion of the population at La Perouse identify as Aboriginal Australians attesting to the continuity of the community's relationship with the land.

The headland is named after the French navigator Jean-François de Galaup, comte de Lapérouse who landed on the northern beach

Legend

- Proposal area
- AHIMS
- Midden
- Rock Engraving
- Shelter with Art
- Revised Location of Aboriginal Sites (Artefact)
- Updated site location
- Conservation areas
- State significance
- Aboriginal significance
- State Heritage Items
- Local Heritage Items



of Botany Bay, west from Bare Island in 1788, just days after Captain Cook and the first fleet Endeavour. The La Perouse headland developed to serve for military purposes and the State heritage listed structures including; the Bare Foot Island fortifications (constructed in 1889) and the Macquarie Watchtower (constructed in 1821) were erected due to the area being determined vulnerable to foreign naval attack. Other structural heritage elements include the La Perouse Museum (located in the centre of the headland) and the La Perouse memorial monument.

Various aboriginal archaeological artefacts have been recorded within the study area particularly, midden, rock engravings and loose shells. Various locations of artefacts have been updated in terms of project locations (refer to Figure 15). The rock engravings are exposed on sandstone and may be weathered.

Refer to the Aboriginal Cultural Heritage Assessment Report and Statement of Heritage Impact Report for further information.

Kurnell

Aboriginal peoples have been living in the Sydney Basin and surrounding areas for at least 36,000 years. When Lieutenant James Cook landed in Botany Bay in April 1770, he contacted the Gweagal Aboriginal community of the Dhawaral nation. Due to the originally slow European settlement in Botany Bay, Aboriginal peoples continued to live around the foreshores during the 19th century. The 20th century saw largely industrial development occurring in the township of Kurnell including, sand mining enterprises, development of the oil refinery industrial site and chemical and petroleum plants. The eastern headland of Kurnell was established as a reserve and resulted in little alteration to the landscape and heritage artefacts.

Within the Kurnell study area there are also a number of both aboriginal and non-aboriginal heritage artefacts dispersed including recorded burial locations. Non-aboriginal protected archaeological sites identified surrounding the site include; Captain Cook's landing place, Banks Memorial, Alpha Farm site, Solander monument and Captain Cook's watering hole. The recently installed 250th commemorative sculptures are seen in Figure 16.

To mark the 250th anniversary of Cook's landing on 29 April 2020, three commemorative bronze sculptures were commissioned by National Parks and Wildlife Service (NPWS) in close collaboration with key stakeholders including the La Perouse Local Aboriginal Land Council.

The Eyes of the Land and the Sea is directly adjacent to the Kurnell project and was created by Aboriginal artist Alison Page and Nik Lachaczak with UAP Australia. Alison Page explained this sculpture, 'brings together different perspectives on our shared history – the bones of a whale and the ribs of a ship – and sits in the tidal zone between the ship and the shore where the identity of modern Australia lies,' (NSW Government, 2020).

Refer to the Aboriginal Cultural Heritage Assessment Report and Statement of Heritage Impact Report for further information.

Legend

-  Proposal area
-  Kurnell Commemorative Art Installations
-  Nuw/ Canoes
-  The Eyes of the Land and the Sea
-  The Whales
-  AHIMS
-  Burials/ Midden
-  Rock Engraving
-  Unknown
-  Revises Location of Aboriginal Sites (Artefact)
-  Foreshore Middens - Burials
-  AHIP Area
-  Foreshore Midden (AHIMS ID 52-3-0219)
-  Heritage Curtllages
-  Archaeological Item Sites
-  National Heritage Register
-  State Heritage Items
-  Local Heritage Items

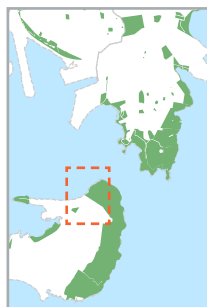



FIGURE 16 KURNELL HERITAGE





05

Baseline

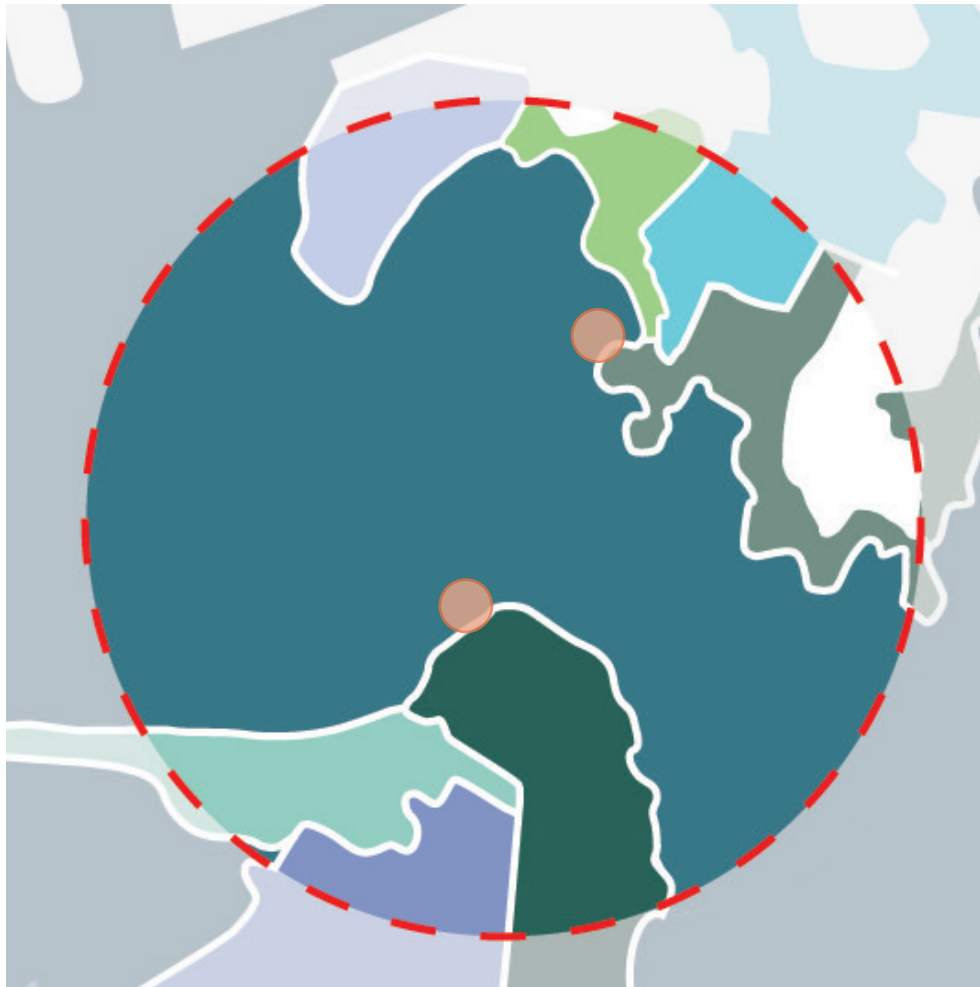
Landscape character

Landscape character assessment seeks to divide the landscape into distinct, broadly homogeneous units with defining characteristics. In this way each character area should be distinct from an adjoining area which will be defined by a different set of key parameters.

The Landscape Character Areas (LCAs) identified as part of this assessment have been derived from a review of planning policy, GIS baseline analysis and site investigations and have been informed by Randwick City Council local character study. The extent of character area analysis is informed by an understanding of potential perceived areas of change that may arise from the project.

In order to complete the landscape and visual baseline, as mentioned in Chapter 02: Methodology, the LCA baseline study area was informed by a 5km buffer from the centre of Botany Bay. This ensures the analysis of the surrounding context of the project area in terms of landscape character.

A total of eight distinct LCAs have been defined, as illustrated in Figure 17. Analysis of these LCAs is provided on the proceeding pages.



Legend

- Proposal area
- LCA1: Botany Bay
- LCA 2: La Perouse headland and Kamay Botany Bay National Park
- LCA 3: La Perouse residential coastal area
- LCA 4: Phillip Bay coastal area
- LCA 5: Port Botany
- LCA 6: Silver Beach and Kurnell residential area
- LCA 7: Kurnell Kamay Botany Bay National Park
- LCA 8: Kurnell industrial area

FIGURE 17 LANDSCAPE CHARACTER AREAS





LCA 1: Botany Bay

This LCA encompasses Botany Bay. La Perouse is on the northern headland of Botany Bay and Kurnell is located on the southern headland. Botany Bay, while including high quality natural areas surrounding the project area, is also industrial in character. It now serves as Sydney's main shipping port and includes Sydney airport, with runways built on reclaimed land within the bay and large planes frequenting the runways. Large marine vessels in conjunction with frequent shipping movement and activity is experienced within the bay environs. The landscape is predominately a large, flat water body with views stretching across the bay to the north, south and west.

The sensitivity of this LCA is judged to be **Moderate** due to the LCA containing some features of value through historic and cultural associations, and is additionally comprised of commonplace elements but with some sense of place.



LCA 2: La Perouse headland and Kamay Botany Bay National Park

This LCA is located on the northern headland surrounding LCA 1 and includes the Kamay Botany Bay National Park and the entire extents of the La Perouse headland. The park incorporates various protected historical monuments including Bare Island Fort and Bridge, Macquarie Watchtower, La Perouse Museum and various aboriginal archaeological artefacts. The landscape provides high scenic quality and is heavily vegetated, with the coastal rocky interface, sandy beach front and exposed grassed headland as some of the only cleared components within the LCA. La Perouse headland and Kamay Botany Bay National Park is a highly valued area and is visited regularly, particularly at popular beach spots and various walking trails.

The sensitivity of this LCA is judged to be **High** due to the high quality, scenic components of the LCA (including the expansive vistas and vegetation), the inability for these components to be replaced and, the national significance and designation of the parkland.



LCA 3: La Perouse residential area

This LCA is located to the north-eastern boundary and is defined by homogeneous, parcels of both medium and low density residential properties. It includes moderately sized plots of residential land with a coherent pattern of features, scattered clusters of mature canopy cover and single or double storey residential buildings. Street corridors are narrow and occur at an even distribution across the LCA. It is bound by the Kamay Botany Bay National Park and the Phillip Bay coastal area LCA.

The topography rises gradually in elevation on retreat from the Bay, towards the north-west which allows for intermittent glimpses out towards the water from residential streets and properties.

The sensitivity of this LCA is judged to be **Moderate** due to the LCA comprising of local residential commonplace elements with a sense of place and containing a level of value throughout the community.



LCA 4: Phillip Bay coastal area

This LCA borders the Botany Bay LCA and wraps around the northern headland from north to east. It is nestled between the Port and La Perouse residential area. The LCA is relatively undeveloped and is comprised of predominately recreational and community land uses. Areas that are contained within the LCA include dense coastal heath, coastal forests, cleared, open space, sandy beach fronts, the Yarra Bicentennial Park, the Yarra Oval Sport fields and the La Perouse Local Aboriginal Land Council community centre. The terrain reaches a height of 20m on approach to Phillip Bay and La Perouse residential area, towards the north-east extent of the LCA. Areas of dense vegetation along the coastal edge obstruct direct views out from meandering trails particularly, the Guriwal Bush Tucker Trail that connects Frenchmans Beach to Yarra Point and Yarra Bay.

The sensitivity of this LCA is judged to be **High** due to the LCA containing areas of State designated heritage significance, high cultural significance to the local area and the contributing components that provide high scenic quality.



LCA 5: Port Botany

This LCA is situated directly adjacent to LCA 1 in the northern extents and is defined by heavy industrial uses such as; imports of containers and bulk liquids, processing plants and storage facilities. The landscape is predominately flat, impervious hard surfaces with large, industrial infrastructure or warehouse development. The industrial character extends further north from the project area, whilst experiencing clearly defined edges with the bay interface and the open, forested coastal edge.

The LCA is experienced predominately by industrial workers located, during operative hours, within the Port vicinity. The large crane infrastructure and building scale and form within the LCA reinforce the heavy waterfront industrial nature of the character area.

The sensitivity of this LCA is judged to be **Low** due to the LCA containing defining characteristics however, few features of value.



LCA 6: Silver beach and Kurnell residential area

This LCA is located on the southern headland of the Botany Bay extents and incorporates Silver Beach, the Prince Charles Parade esplanade and the residential extents within Kurnell. The LCA extends west along the Kurnell peninsula and includes specific features such as Bonna Point (towards Towra Point) and Marton Park.

The topography is extremely flat and low-lying and is located within a Medium Flood Prone Land Risk zone as referenced to by the Sutherland Shire Council. It contains homogeneous, parcels of land with predominately residential development designated as E4 Environmental Living consisting of a coherent pattern of features across the mosaic. Clusters of commercial use development is located along Captain Cook Drive and dispersed intermittently across the LCA.

The sensitivity of this LCA is judged to be **Moderate** due to the LCA comprising of local residential commonplace elements with a sense of place and containing a level of value throughout the community.



LCA 7: Kamay Botany Bay National Park, Kurnell

This LCA 7 is located on the southern headland fronting Botany Bay and consists entirely of the designated Kamay Botany Bay National Park. It incorporates the Kurnell Visitor Centre, Cape Solander Lookout, Cape Bailey Lighthouse and the Monument Track that directs visitors through the LCA passing nationally significant landmarks such as Captain Cook's Landing Place and the 250th Endeavour commemorative art installations. The landscape is densely vegetated and is directly linked to the coastal edge.

Kurnell Kamay Botany Bay National Park consists of areas recognised as containing 'special value' and is visited regularly as a destination in itself. The sensitivity of this LCA is judged to be **High** due to: the high quality components of the LCA (including the expansive vistas and vegetation), the inability for these components to be replaced, the National significance and designation of the parkland and, the nationally designated heritage monuments dispersed throughout the park.



LCA 8: Kurnell industrial area

This LCA is located directly west of LCA 7 and directly south of LCA 6 and constitutes both the IN1 General and IN3 Heavy Industrial zones within Kurnell particularly, the Caltex Kurnell Terminal and the Sydney Desalination Plant. The landscape is predominately flat with gradual increase in elevation towards the eastern edge of LCA 8.

The LCA is characterised by large scale warehouse style development, cleared areas of impervious hard surface and industrial infrastructure relating to oil refinery. The LCA is experienced predominately by industrial workers located, during operative hours, within the vicinity.

The sensitivity of this LCA is judged to be **Low** due to the LCA containing defining characteristics however, few features of value.

Randwick City Council has proposed that the La Perouse project area (and surrounding headland) is incorporated within The Bays Local Character Area (refer to Figure 18), which consists of the entire coastal zone from Bare Island to Bumborah Point. Randwick City Council describes The Bay Local Character Area as “gently undulating terrain with expansive views to Frenchmans Bay, Yarra Bay and Port Botany across Yarra Bay Bicentennial Park”, (Randwick City Council, The Bays Local Character Statement, page 13).

Whilst responding to the Randwick City Council Local Character Areas, the project LCA boundaries have been reviewed at a finer grain and with reference the planning zones, specifically E1 National Park, RE1 Public Recreational and the extent of R1 and R2 residential zones.

The identified Bays Local Character Area principles include:

- Built scale that responds to the coastal character of the LCA
- Protect and enhance Aboriginal heritage and significant sites
- Preserve and enhance the village feel in La Perouse
- Improved accessibility around the coastal area with improved signage and wayfinding
- Preserve existing natural environments and local flora and fauna for future generations
- Ensure future development respects the cultural significance of Indigenous landscapes and sites
- Build on existing green grid and biodiversity corridors through the LCA
- Improved economic vibrancy as a result of the reintroduced Kurnell to La Perouse ferry
- Greater visitor facilities and experience, compatible with the unique character of Botany Bay
- Preserve the biodiversity and continue to protect and rehabilitate the landscapes and ecosystems



FIGURE 18 RANDWICK CITY COUNCIL THE BAYS LOCAL CHARACTER AREA

Visual context

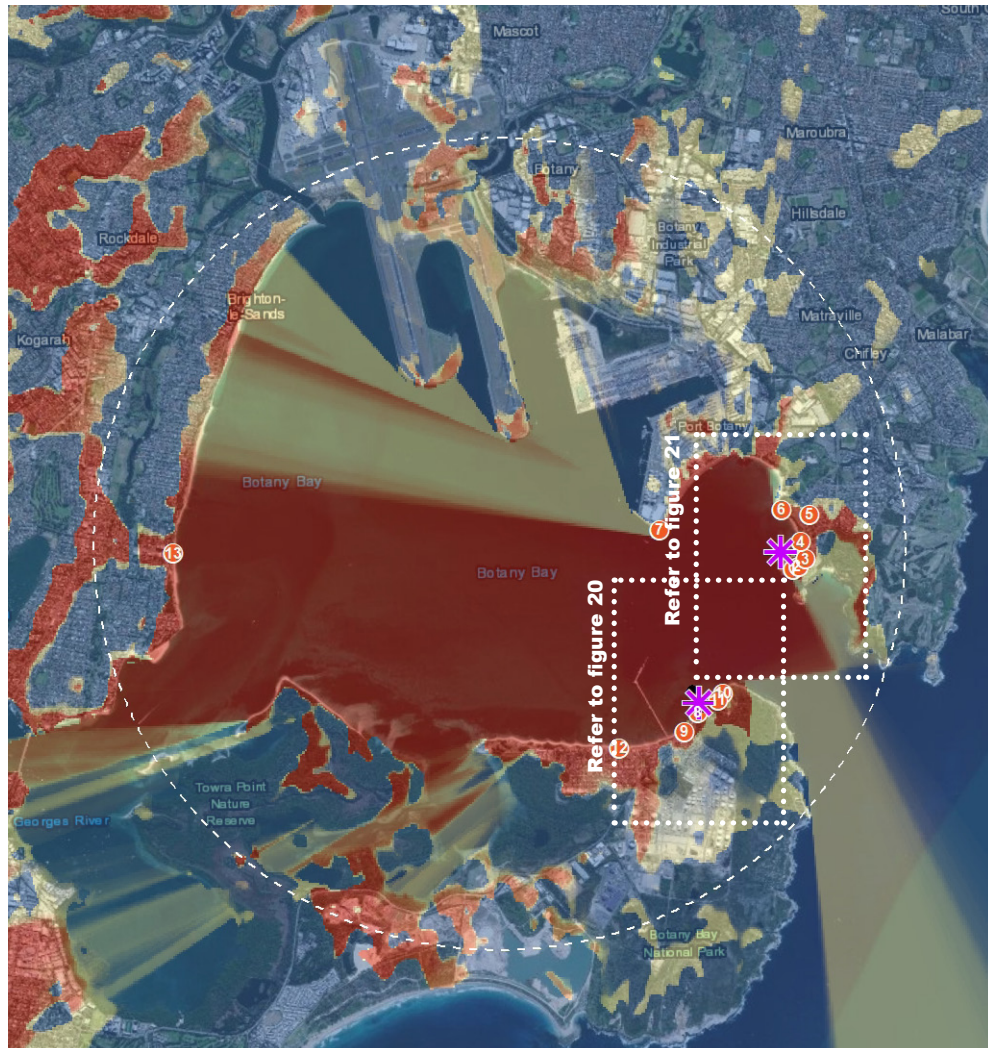


FIGURE 19 STUDY AREA AND VIEWPOINT LOCATION PLAN



- ① Viewpoint 1 - Anzac Parade, La Perouse
- ② Viewpoint 2 - La Perouse Museum, La Perouse
- ③ Viewpoint 3 - Corner of Anzac Parade and Endeavour Ave, La Perouse
- ④ Viewpoint 4 - Frenchman's Beach, La Perouse
- ⑤ Viewpoint 5 - Elaroo Ave, Phillip Bay
- ⑥ Viewpoint 6 - Guriwal Bush Tucker Trail, La Perouse
- ⑦ Viewpoint 7 - Molineaux Point Lookout, Prince Wales Dr, Port Botany
- ⑧ Viewpoint 8 - Captain Cook's Landing Place, Kurnell
- ⑨ Viewpoint 9 - Prince Charles Parade, Kurnell
- ⑩ Viewpoint 10 - Monument Track, Kurnell
- ⑪ Viewpoint 11 - Alpha House, Monument Track, Kurnell
- ⑫ Viewpoint 12 - Silver Beach, Kurnell
- ⑬ Viewpoint 13 - The Grand Parade, Ramsgate Beach

Visual Catchment

Figure 20 represents the study area, for the project from which 13 representative viewpoint locations have been selected. The study area is defined by a 5km buffer from the centre of Botany Bay. This VEM study area buffer distance has been adopted on the basis of the scale, nature and magnitude of the proposed ferry wharves.

The VEM, illustrated in Figure 20, displays the theoretical area from which the project (worst case scenario) could be visible. The VEM is determined by a 'bare earth' surface model which does not take into account vegetation and building footprints that may obstruct views towards the project locations.

A total of 13 representative viewpoints have been selected to comprehensively illustrate and document the visual amenity of the study area. The representative viewpoints were selected based upon a three-stage process:

1. Identification within the VEM,
2. Desktop studies identifying places of significance or within close vicinity of potential sensitive receptors and/or the project, and
3. Ground-truth of viewpoint locations through the site visit conducted on 6 August 2020.

In the proceeding pages, the representative viewpoints have been analysed to document the existing visual composition of the views and assess the viewpoints' level of sensitivity.

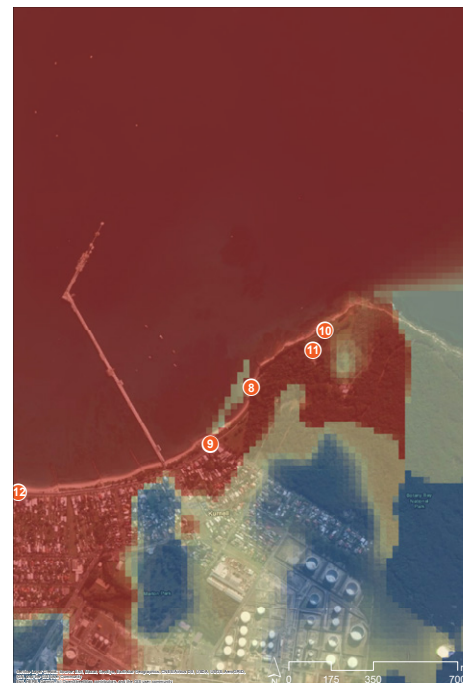


FIGURE 20 KURNELL VEM AND VIEWPOINTS

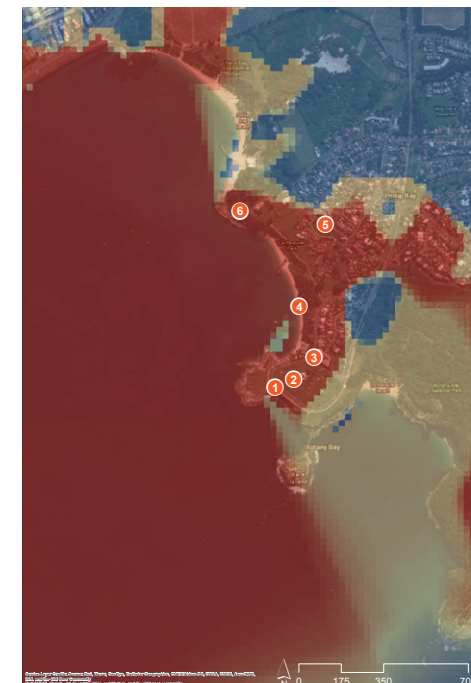
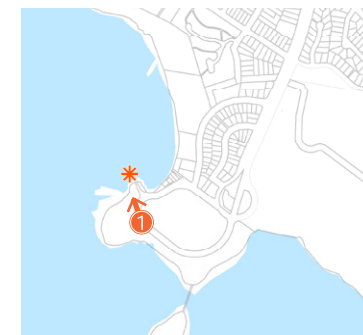


FIGURE 21 LA PEROUSE VEM AND VIEWPOINTS



Viewpoint 1 - Anzac Parade, La Perouse



Baseline description

A representative view from the pedestrian path crossing at La Perouse Point, Anzac Parade. The view is directed north towards Frenchmans Bay and Yarra Point.

The view foreground illustrates a one-way local road circuit, an open, grassed headland and a rock-lined drainage channel with the terrain sloping gradually towards the coastal edge.

The view extends out across Botany Bay to encompass Frenchmans Beach which is surrounded by low-lying plants along the sand

dunes that provide embankment stabilisation. Residential properties are visible in the background, set back from the beach front (right side of the view) on higher terrain.

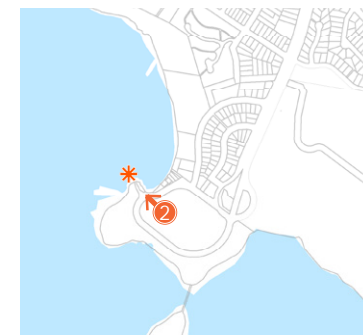
Yarra Point protrudes in front of Yarra Bay and is densely vegetated with a rocky coastal interface. The undulating coastal edge continues to wrap around Botany Bay and reveals the cemetery nestled behind the Point. High-rise buildings extend out from the vegetation directly in the central background of the view.

To the left of the view, Port Botany is visually dominate and includes views towards shipping containers, cranes and other associated infrastructure.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **High** due to the following:

- The high scenic quality of the La Perouse headland and Botany Bay surrounds
- Moderate level of receptors experiencing the view with focus on the surrounding natural environment
- Regular users of the recreational facilities and interest in local characteristics such as tourist walking routes and trails
- Views from the designated Kamay Botany Bay National Park, La Perouse.



Viewpoint 2 - La Perouse Museum, La Perouse



Baseline description

A representative view from the highest level of the La Perouse Point, directly adjacent to the La Perouse museum. The view is directed north-west across the headland, Anzac Parade, Botany Bay and extends towards Port Botany.

La Perouse monument is located in the direct foreground of the view and is a visually dominate, vertical structural element that contrasts against the open grassed headland and expansive view across the bay.

Low level tufting vegetation is scattered across the headland amongst street furniture and assisting public urban features such as fencing, signage and street lighting.

Port Botany, and the associated port infrastructure, acts as a backdrop to the view with large cranes and machinery equipment regularly dispersed across the horizon line.

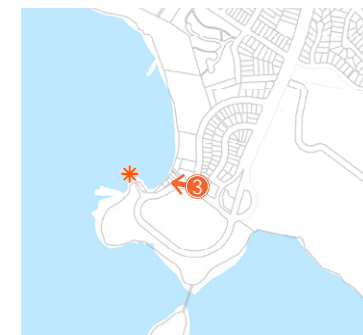
Looking north, (right of the view) Bumbora Point and mature patches of vegetation obstruct views out towards the industrial development in Matraville.

Yarra Point (seen in the middle ground, far right of the view), including its rocky interface and dense vegetation, obstructs direct views as the headland wraps around towards Yarra Bay.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **High** due to the following:

- The high scenic quality of the La Perouse headland and Botany Bay surrounds
- The current view includes views towards port and industrial infrastructure
- The historic and sensitive nature of the viewpoint location including the La Perouse monument and the museum
- Moderate level of receptors experiencing the view with focus on the surrounding natural environment.



Viewpoint 3 - Corner of Anzac Parade and Endeavour Ave, La Perouse



Baseline description

Viewpoint 3 is taken from the pedestrian path crossing at the intersection of Anzac Parade and Endeavor Avenue. The view is directed south-west towards La Perouse Point and is representative of commercial receptors including local cafes and restaurants.

The viewpoint location is considered to be the activated local centre of La Perouse and incorporates the main entrance to Frenchmans Beach and the Frenchmans Bay Reserve Playground.

To the west, Anzac Parade roundabout is visible (bottom right of the view) and the Boatshed La Perouse restaurant is a dominant focal point within the foreground. It is positioned directly on the beach front and is surrounded by outdoor dining and public street furniture.

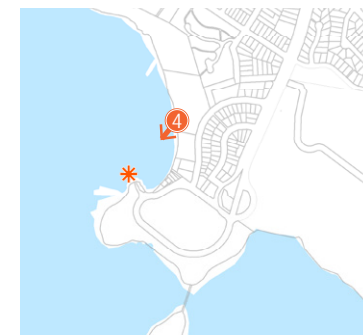
To the south, (bottom left of the view) planted areas adjacent to Anzac Parade roundabout include low level tufting grasses and ground covers. The planting areas continue to be dispersed across the rest of the sloping headland.

The topography slopes gradually from south to west (left to right in the view) and meets a rocky cliff edge that includes intermittent planting between the boulders. Direct views towards the cliff edge, and expansive views across Botany Bay, is obstructed by the Boatshed La Perouse restaurant. Views extend towards Kurnell and Towra Point providing a flat, vegetated backdrop to the view.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- The high scenic quality of the La Perouse headland and Botany Bay surrounds
- Moderate level of receptors experiencing the view as the main entrance point to the La Perouse Point and the main beach access point
- Representative view from the local centre of La Perouse and surrounding commercial receptors.



Viewpoint 4 - Frenchman's Beach, La Perouse



Baseline description

A representative view from Frenchmans beach front, accessible from the track off Endeavor Avenue. The view is directed south-west towards La Perouse Point, the adjoining headland, Anzac Parade and extends across Botany Bay towards Kurnell.

The rocky coastal interface and cliff edge is visible from the southern extent of the middle ground of the view (seen to the left) and extends towards the west (middle) of the viewpoint.

Frenchmans Bay waters' encompasses the entirety of the foreground view and incorporates water-based activities such as windsurfing and sailing (right of the view).

La Perouse Point is predominately an open, grassed headland that facilitates lookout points and local trails. The terrain drops as the crumbling rock and land surface meet the waters' edge.

Across the bay, Kurnell's esplanade is visible, where both commercial and residential development occurs between mature vegetation. Direct views towards this esplanade are obstructed by a large-scale wharf (includes restricted access to workers) that stretches off the Kurnell coast and emerges behind La Perouse Point.

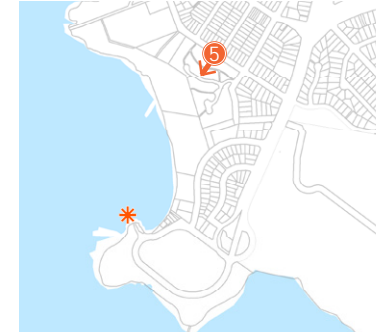
Kamay Botany Bay National Park and Towra Point provide a flattened, yet highly dense vegetated, backdrop to the view.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- The high scenic quality of Frenchmans Bay and La Perouse Point
- Expansive and panoramic nature of the view
- Moderate level of receptors experiencing the view with focus on the surrounding natural environment.

Viewpoint 5 - Elaroo Ave, Phillip Bay



Baseline description

This viewpoint is representative of residential receivers along the local street Elaroo Avenue, that is situated along the suburban boundary of La Perouse and Phillip Bay. The view is directed south-west towards La Perouse Point and was taken along the adjoining pedestrian pathway.

Double-storey private properties with moderately sized parcels of land are the dominate focal point of the view.

La Perouse Point and Anzac Parade can be seen in the central foreground, located on the lower reaches of the coastline - past the residential properties and the adjoining private canopy cover. Cars are parked along the one-way circuit and the open, grassed area is visible.

Both the buildings and the mature vegetation to the south (left side of the view) allow intermittent views through to Kamay Botany Bay National Park and Inscription Point across Botany Bay.

The densely vegetated landscape provides an expansive backdrop to this viewpoint with little variance in elevation.

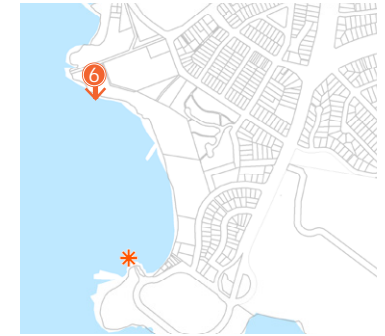
Past the existing properties in the foreground, urban density increases along Kurnell esplanade to the western extents (right side of the view).

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- Representative view of local residents with a permanent interest in the surrounding environment
- Expansive vista incorporating Kamay Botany Bay National Park and particular heritage monuments located within the national park
- The high scenic quality of the La Perouse headland and Botany Bay surrounds.

Viewpoint 6 - Guriwal Bush Tucker Trail, La Perouse



Baseline description

A representative view from the Guriwal Bush Tucker Trail at Yarra Point. The views are directed south towards La Perouse Point, the adjoining headland, Anzac Parade and extends across Botany Bay towards Kurnell.

Coastal shrubbery heath obstructs direct views towards the Kurnell and the Kamay Botany Bay National Park. The vegetation is somewhat spindly and permeable allowing predominately expansive views across the bay and coastal edge.

La Perouse Point and headland juts out from the east (left of the view) revealing the rocky coastal edge, open, grassed headland areas and the La Perouse monument. Bare Island Fort can be viewed beyond the headland with the heritage-listed structure shielded by the surrounding undulating land form.

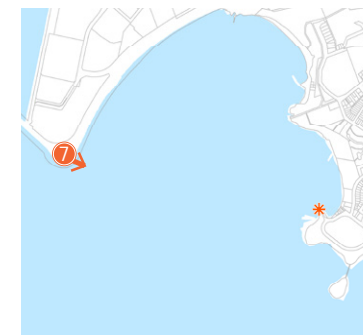
Across the bay, Kamay Botany Bay National Park is visible and provides a picturesque backdrop to the view. Particular landmarks along the Monument Track (within the Kamay Botany Bay National Park at Kurnell) are visible in the opening

between mature vegetation in the foreground. These landmarks include; Alpha Farm house, the flagpole and the large, mature pine trees planted along the coastline adjacent to the track. Kurnell local town centre is visible to the west (right side of the view).

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- The high scenic quality of the Guriwal Bush Tucker Trail and Yarra Point
- Expansive vista incorporating Kamay Botany Bay National Park and particular heritage monuments located within the national park
- Moderate level of recreational receptors experiencing the view with focus on the surrounding natural environment.



Viewpoint 7 - Molineaux Point Lookout, Prince Wales Dr, Port Botany



Baseline description

Viewpoint 7 is looking south-east and is situated within a reserved lookout location along the southern boundary of Port Botany. The lookout has restricted access and is located along Prince of Wales Drive at Molineux Point.

The view experienced from the lookout is expansive and stretches across Botany Bay, Yarra Bay, Yarra Point, Frenchmans Bay, La Perouse Point, Bare Island Bridge and Fort and Henry Head.

Pockets of urban density and residential receivers are scattered in clusters amongst the dense vegetation in the eastern extents (left of the view). La Perouse local centre and surrounding development are clustered in the middle foreground illustrating the topographical changes in the landscape.

La Perouse headland is predominately cleared with the red brick La Perouse museum illustrating a stark contrast to the rugged coastal aesthetics.

The Bare Island Bridge extends south (right of the view) out from the La Perouse headland connecting Bare Island Fort.

The densely vegetated, undulating coastal edge continues across the viewpoint with the New South Wales Golf Club situated on the ridge line in the middle of the view.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- Designated lookout location
- Expansive vista including the Kamay Botany Bay National Park and Bare Island Fort
- The high scenic quality of the La Perouse headland and Botany Bay surrounds.



Viewpoint 8 - Captain Cook's Landing Place, Kurnell



Baseline description

A representative view from the Monument Track, particularly Captain Cook's Landing Place monument, within the Kamay Botany Bay National Park. The view is directed north towards Port Botany, Phillip Bay and La Perouse.

In the foreground, the view is comprised of a rocky coastal edge and the Botany Bay interface (to the left of the view) with low-lying grasses and ground covers planted along the beach embankment (to the right of the view).

An existing wharf structure, referred to as Captain Cook's Landing Observing Deck, is situated in the middle ground of the view extending north-west from the landscape into the water body. The wharf includes seating furniture, simplistic fencing and interpretive panels.

Views, beyond the wharf, open up towards the western portions of the view (left of the view) allowing for an expansive vista across Botany Bay towards the Port.

Dominant industrial infrastructure and machinery is visible with high-rise buildings intermittently dispersed across the horizon line providing a backdrop to the view.

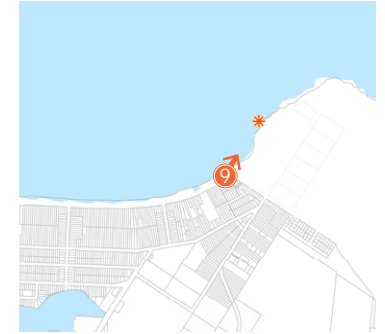
The view backdrop extends across the entire horizon line and illustrates various typologies throughout, revealing the cemetery, industrial warehouses within Matraville, Yarra Bay Beach and Point and La Perouse residential properties.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **High** due to the following:

- The high scenic quality of the Monument Track
- Expansive vista from Kamay Botany Bay National Park and particular heritage monuments located within the national park
- High heritage value associated with the view
- Moderate level of recreational receptors experiencing the view with focus on the surrounding natural environment.

Viewpoint 9 - Prince Charles Parade, Kurnell



Baseline description

This view is representative of both commercial and residential receivers within Kurnell and is located along Prince Charles Parade. The view is directed north-east towards the Captain Cook Landing Place monument and existing wharf and expands out across Botany Bay.

The Monument Track is level with the shoreline land form and follows the coastal edge meandering through the mature vegetation and around the National Park. The terrain begins to increase in elevation towards the south-east (right in the view).

Mature and established vegetation consumes the parkland edge and obstructs views through to La Perouse headland or the Kurnell Visitor Centre. The large pine trees enclose the track path and provide a formal avenue separating the beach front and the track.

To commemorate the 250th anniversary of the first encounter between the crew of the HMB Endeavour and the Gweagal people in 1770, the Australian and NSW Government have installed three sculptures at Kurnell. The Eyes of Land and the Sea (created by Alison Page, Nik Lachacizak

and UAP Australia) is visible in the middle ground of the view and is located on the rocky coastal edge. It provides an additional cultural landmark along the Monument Track.

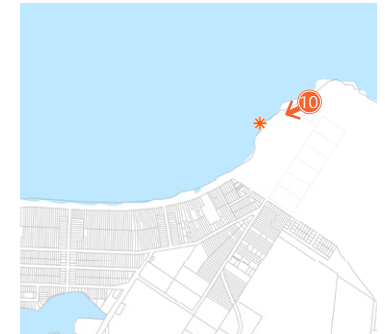
La Perouse headland is intermittently visible through the mature trees. Similarly to viewpoint 8, views towards Yarra Bay, Phillips Bay and the cemetery are experienced.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **High** due to the following:

- Expansive vista towards Kamay Botany Bay National Park and particular heritage monuments located within the national park
- Moderate level of receptors experiencing the view due to the viewpoint location along the activated Prince Charles Parade
- Representative view from local shops and commercial receptors of Kurnell and is located along the Kamay Botany Bay National Park western boundary.

Viewpoint 10 - Monument Track, Kurnell



Baseline description

Viewpoint 10 is taken from the Monument Track within the Kamay Botany Bay National Park looking south-west towards the Kurnell local centre.

The central foreground of the view illustrates a flagpole monument directly adjacent to the track. Similar landmarks are distributed along the track and are in close vicinity to the representative viewpoint location.

The Monument Track meanders through the open, turfed landscape before reaching an enclosed section surrounded by large, mature pine trees and a densely established patch of vegetation.

The topography gradually slopes towards the waters' edge and provides an area of sandy beach front before transitioning into a rocky interface. The coastal edge wraps around behind the established pine trees and becomes visibly obstructed.

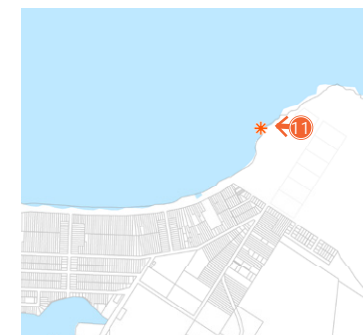
The local township of Kurnell is visible in the view background and extends west (right of the view) across the horizon line, along with the predominately flat, vegetated backdrop. Urban development is nestled amongst dense vegetation. Direct views are obstructed by a large working wharf off the Kurnell coast that has restricted access.

The open views towards Botany Bay within this viewpoint, exhibit the use of various vessels and water crafts within the surrounding bay environment.

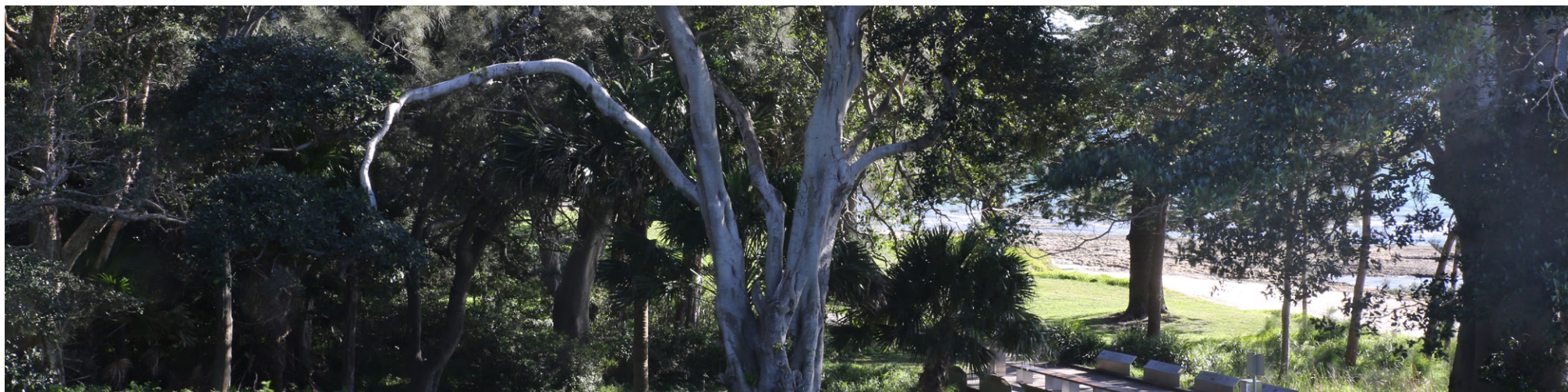
Sensitivity

The sensitivity of the representative viewpoint is judged to be **High** due to the following:

- The high scenic quality of the Monument Track
- Expansive vista from Kamay Botany Bay National Park and particular heritage monuments located within the national park
- Moderate level of recreational receptors experiencing the view with focus on the surrounding natural environment.



Viewpoint 11 - Alpha House, Monument Track, Kurnell



Baseline description

This representative view is located along Monument Track within the Kamay Botany Bay National Park directly in front of the heritage structure referred to as Alpha House looking south-west towards Botany Bay and the existing wharf structure.

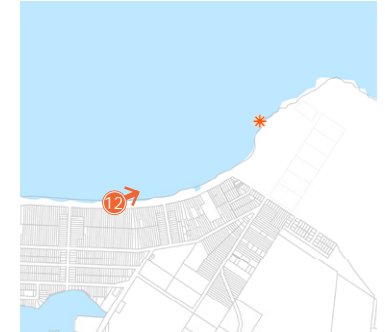
The view is heavily dominated with large, mature vegetation blocking open views towards the esplanade along Kurnell.

The foreground displays a designed timber deck, seating and associated interpretive panels across the waterway, referred to as Cook's Creek. Riparian sedges and grasses are planted along the waterway and between the established trees. Glimpses of the rocky coastal interface and bay are visible through the vegetation. The viewpoint location has been situated on noticeably higher terrain than the waters' edge. Views are consistently obstructed and closed throughout the entire view.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- The high scenic quality of the Monument Track
- Views from Kamay Botany Bay National Park and particular heritage monuments located within the national park
- Moderate level of recreational receptors experiencing the view with focus on the surrounding natural environment.



Viewpoint 12 - Silver Beach, Kurnell



Baseline description

Viewpoint 12 is taken from an extended decking platform on Silver Beach directly opposite Prince Charles Parade, looking east towards the Kamay Botany Bay National Park.

The view illustrates the sandy beach front in the southern extents (right in the view), meets the waters' edge and allows an expansive view across the bay. Various stretches of organised rock protection, to prevent erosion, are dispersed evenly across the beach front.

The Caltex berthing facility (with restricted access) stretches out into Botany Bay from the Kurnell coast and extends horizontally across the entire view. The infrastructure obstructs direct views towards the Monument Track, the coastal interface within the Kamay Botany Bay National Park and views experienced across the bay towards Henry Head.

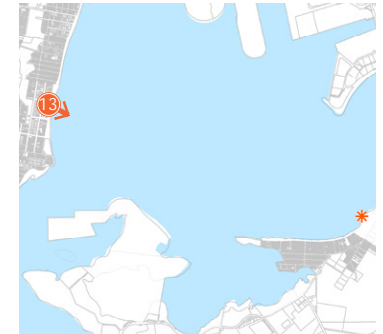
Dense vegetation from the Kamay Botany Bay National Park (viewed on both sides of the bay) provides an extensive backdrop for the view.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- Moderate level of receptors experiencing the view due to the viewpoint location along the activated Prince Charles Parade
- Expansive vista across Botany Bay
- Moderate level of recreational receptors visiting Silver Beach and experiencing the view with focus on the surrounding natural environment.

Viewpoint 13 - The Grand Parade, Ramsgate Beach



Baseline description

Viewpoint 13 is located along The Grand Parade, opposite Ramsgate Road, at Ramsgate Beach and includes representative views from surrounding commercial businesses such as local cafes and restaurants.

The view is directed east towards both La Perouse Point and Kurnell and is situated along the pedestrian path along the esplanade. Expansive views across Botany Bay dominates both the fore and middle ground of the view.

Background views eventually reach both headlands of La Perouse and Kurnell in addition to the adjoining headlands (Henry Head and Cape Banks). The land form is split allowing views to spill out of the Bay extents towards the South Pacific Ocean.

Clusters of development are visible sprawling across the landscape in concentrated patches. Kurnell experiences industrial development (right of the view) nestled within the dense vegetation backdrop and situated at a higher elevation than the coastal edge.

Views towards the Caltex berthing facility are visible and extend out from Kurnell coast towards the entrance of Botany Bay. Overall, the composition of the landscape is expansive and predominately level across the horizon line of the view.

Sensitivity

The sensitivity of the representative viewpoint is judged to be **Moderate** due to the following:

- Moderate level of recreational receptors visiting Ramsgate Beach and experiencing the view with focus on the surrounding natural environment
- Moderate level of receptors experiencing the view due to the viewpoint location along the activated Grand Parade
- Representative view from local shops and commercial receptors of Ramsgate Beach.

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The background of the slide is a photograph of a coastal scene. In the foreground, there is a lush green grassy field. Behind it is a paved area with a few cars parked. A metal railing separates the paved area from a body of water. In the water, a person is visible, possibly surfing or swimming. In the distance, there is a shoreline with trees and some industrial structures like chimneys under a clear sky.

06

Project



FIGURE 22 LA PEROUSE VISUALISATION OF THE CONCEPT PROPOSAL



FIGURE 23 KURNELL VISUALISATION OF THE CONCEPT PROPOSAL

Urban Design

This chapter outlines the landscape, urban design and architectural vision for the project and defines the design objectives and principles to guide the development of the project.

The project, as mentioned in Chapter 01: Project Overview (refer to pages 8 and 9), will see the reinstatement of two local wharves, located at La Perouse and Kurnell, which will provide a ferry connection between the two headlands of Botany Bay. The naturally picturesque sites hold deep indigenous value as well as European heritage, as discussed throughout 04: Context, and currently draws tourists and recreational visitors year-round. The wharves will not only celebrate these attributes, but will benefit the wider community through increased accessibility and connectivity.

Great design outcomes come from a deep understanding of place and program. It is fundamental that the landscape, architecture and urban design response for the project is appropriate, respectful and is sympathetic to their overall surroundings and context. The wharves will serve a functional purpose as well as acting as 'placemaking gateways' between land and water for visitors and locals, representing the urban communities and parklands they are joining.

Building on the direction provided within the Beyond the Pavement (TfNSW, 2020) and Better Placed (GANSW, 2017), three key urban design objectives were considered to achieve project aspirations:

1. Responding to historical and contextual placemaking
2. A Wharf for people
3. Celebration of past, present and future maritime use of the two sites.

These objectives have been applied to the concept design, and will contribute to influence as the project design develops in the future.

Urban Design Objectives and Principles

Objective 1: Responding to historical and contextual placemaking

This objective aims to ensure that the urban, landscape, architecture and engineering designs are well integrated, respond to historical context and capture and enhance key views and vistas.

The proposed wharf site locations possess an extensively rich maritime history, that has endured through various historic events that have unfolded on the sites - and continues today. The project will continue to celebrate and reinforce the connection between the land and the water. The design and the location of the project will also acknowledge the previous locations of the historic wharf infrastructure that was destroyed in 1974.

Sympathetic design will be essential to ensure the wharves are submissive to the natural landscape character and the existing historical monuments whilst maintaining and framing existing vistas. In order to protect heritage values, the design of the project will not encroach on any protected viewing corridors or disturb existing passenger flow directions. Framing key views will drive the design of the proposed roof structures. The design of the two wharves will also respond to the unique qualities and materiality of the two individual sites (La Perouse and Kurnell).

Objective 1 responds to:

- BetterPlaced design objective - 'Better Fit'
- Beyond the Pavement design objective - 'Fitting sensitively into the built, natural and cultural environment of its location'
- Beyond the Pavement design principles - 'Fitting with the built fabric', 'Fitting with the landform', 'Contributing to green infrastructure and responding to natural systems', 'Connecting to Country' and 'Incorporating heritage and cultural contexts'.

The assisting principles to achieve this objective include:

- Celebrate and reinforce this continued connection between the land and the water
- Acknowledge the old locations of the historic wharf infrastructure
- Utilise the existing passenger flow directions throughout the sites
- Maintain and frame existing views, particularly heritage views towards historical monuments
- Respond to the unique qualities and characters of the two individual sites.

"I understand and respect the importance of the monuments to non-aboriginal people. But as an aboriginal person my memories and values are in the natural environment which connects me to the country and the old people"

– La Perouse Aboriginal community member, Dean Kelly, 2007.

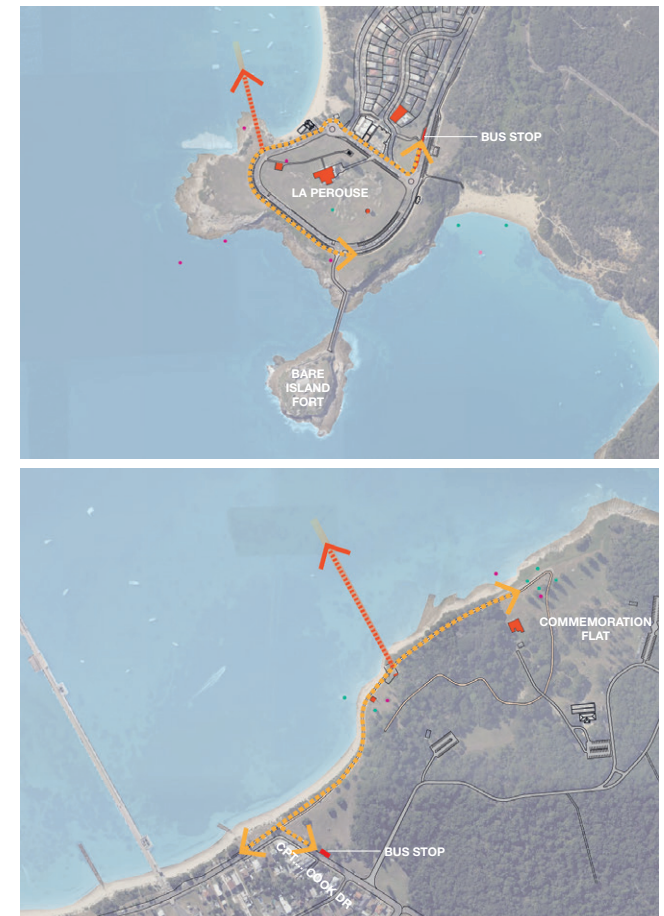


FIGURE 24 LA PEROUSE (TOP) AND KURNELL (BOTTOM)
HISTORIC WHARF ALIGNMENTS AND PEDESTRIAN
MOVEMENT PATHS

Objective 2: A wharf designed for people

This objective aims to bridge the gap between distinct communities by creating a publicly accessible waterway connection that unifies the Botany Bay area.

Acting as 'gateways', the wharves will celebrate this journey and offer new frontages and a sense of arrival to La Perouse and Kurnell National Park. While the wharves are designed to be fit for purpose, it is also designed to encourage flexibility of users and activities. The entrance to the wharves include landscape interventions using endemic species and integrated seating that create a sense of place. The waiting areas accommodate enough seating provisions for the ferry users and for those who want to enjoy the views. There is also sufficient space for fishing off the wharves.

Both La Perouse and Kurnell are highly significant to Australia as the 'meeting place' of the Aboriginal and European cultures and thus, the site allows for opportunities to recognise cultural impact and explore pathways towards reconciliation. The focus of the wharf design is to serve as an engaging educational tool.

The diverse stories that can be gained through indigenous history and engagement, community and local identity will also be strongly embedded throughout the details of the wharf design. The accessible layout and details of the wharf, including provision of adequate weather protection, creates an inclusive and equitable design whilst also maintaining standards for human comfort and safety. In addition to being a transport amenity, the wharf will also be a place to gather, a place to fish, a place to look-out and unwind, a place to swim, a place to play, a place to learn and a place that adds value to the evolving identity of the neighborhood.

Objective 2 responds to:

- BetterPlaced design objectives - 'Better for Community', 'Better for People', and 'Better Working'
- Beyond the Pavement design objectives - 'Contributing to the overall design quality of the public domain for the community' and 'Contributing to the accessibility and connectivity of communities by enhancing general permeability of movement through areas by all modes of movement'
- Beyond the Pavement design principle - 'Designing an experience in movement', 'Connecting modes and communities' and, 'Promoting active transport'.

The assisting principles to achieve this objective include:

- Encourage flexibility of users and activities
- Create an inclusive and equitable design
- Allow the design to serve as an educational tool
- Embed details of local identity and community within the design and add value to the evolving identity of the neighborhood
- Maintain standards for human comfort and safety
- Adhering to Beyond the Pavement's three performance requirements (safety and towards zero harm; cost effectiveness and sustainability).

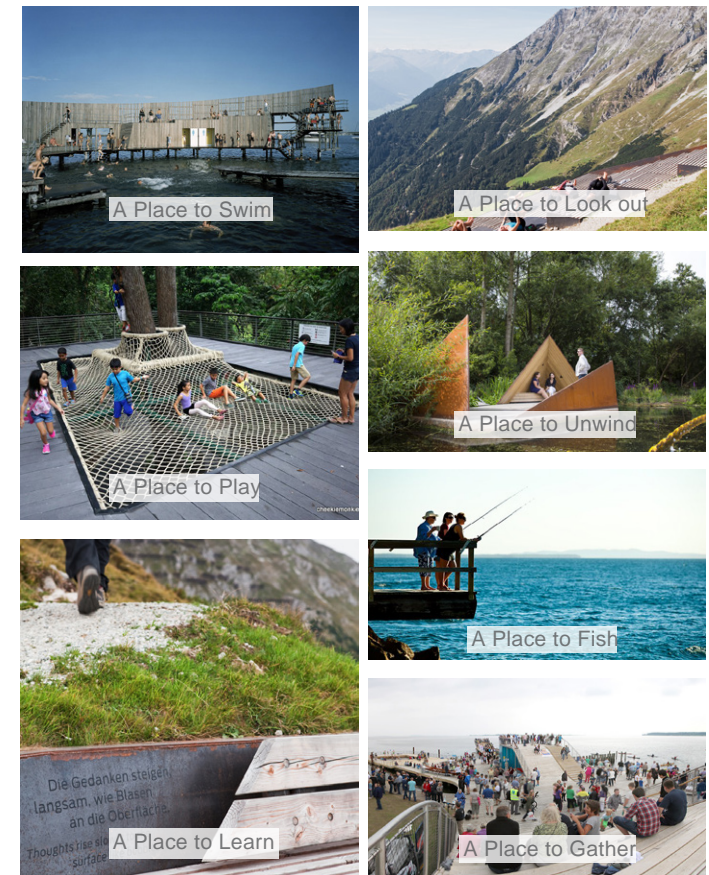


FIGURE 25 FERRY WHARF CONCEPT PRECEDENT IMAGERY

Objective 3: Responding to historical and contextual placemaking

This objective aims to foster a sense of local pride and identity by educating the public about the historical and present-day maritime activities and providing a high quality architectural response that is pragmatic, streamlined and cost effective.

While the project responds to the individual sites, they are unified using simple expressed materials and timber. This chosen material expression takes functional design and material cues from boat and ship design thus, tying the wharves to the sites' maritime and fishing history. The wharf design and materiality will educate the public on both the historical and present-day maritime activities and routes (including pre colonial, Captain Cook's and current local navigational fishing routes) whilst also fostering a sense of local pride and identity.

In alignment with the rich fishing history of the Botany Bay headland, the wharves will have adequate spaces to allow for recreational fishing. The finishes and the details of the wharves will be robust while also being welcoming and aesthetically pleasing. This will add social and financial value to its immediate context whilst also supporting tourism and further investments around the locality. The maritime inspired design approach for the project aims to create a high quality architectural response that is highly pragmatic, streamlined and cost effective. The material choices of concrete, timber, FRP, aluminum panels and metal chain work ensures high level of performance and lower maintenance in the marine environment.

Objective 3 responds to:

- BetterPlaced design objectives - 'Better Performance', 'Better Value', and 'Better Look and feel'
- Beyond the Pavement design objectives - 'Contributing to the overall design quality of the public domain for the community', and 'Revitalising areas and contributing to the local and broader economy'
- Beyond the Pavement design principles - 'Contributing to urban structure, urban quality and the economy', 'Connecting to Country and Incorporating heritage and cultural contexts', and 'Achieving integrated and minimal maintenance design'.

The assisting principles to achieve this objective include:

- Foster a sense of local pride and identity through the use of particular materials
- Allow for recreational fishing activities to occur
- Utilise robust and low maintenance, yet aesthetically pleasing materials
- Create a high quality design response.



FIGURE 26(LEFT) 1952 PHOTO OF THE OLD WHARF AT KURNELL.SOURCE: MAX DUPAIN, MAX DUPAIN'S AUSTRALIA.

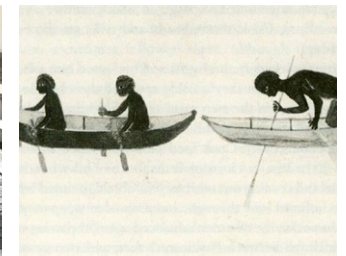


FIGURE 27(RIGHT) ABORIGINAL MEN FISHING, BY TUPAIA SOURCE: BRITISH LIBRARY, LONDON.



FIGURE 28(LEFT) AERIAL LOOKING OVER CAPTAIN COOK'S LANDING PLACE MONUMENT, KURNELL.



FIGURE 29(RIGHT) EXPRESSED STEEL AND TIMBER CLAD STRUCTURE SIMILAR TO THAT OF BOAT AND SHIP DESIGNS. SOURCE: CHROFI.

Design, Place and Movement

In order to specifically address the Design, Place and Movement SEAR requirements (refer to page 11) to ensure holistic integration of the design with the surrounding local context, the diagrams seen below and opposite have been developed. They demonstrate the design intent with particular reference to open space, capturing views and connectivity.

La Perouse



FIGURE 30 LA PEROUSE NATURAL CHARACTER

La Perouse has an enclosed cove that naturally protects Frenchman's Beach users. With the proposed wharf footprint extending off La Perouse point and towards Molineaux Point, the project contributes to, and emphasises the existing protected character of Frenchman's Beach.



FIGURE 31 LA PEROUSE CAPTURING KEY VIEWS

In order to protect heritage values, the design of the wharf will not intrude on any protected viewing corridors. Landside heritage views from and towards the La Perouse museum and the Boatshed restaurant are also protected through the design of the structural components. The framing of both the landside and the waterside views will drive the design of the proposed roof structures.

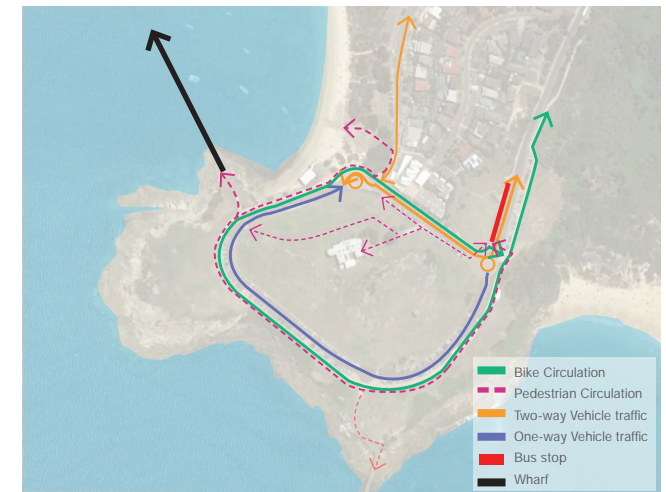


FIGURE 32 LA PEROUSE CONNECTIVITY

The proposal aims to enhance general permeability of movement through the Botany Bay area by interconnection of multiple modes of movement including the connection to waterway transport. Provision of active transport is achieved through integrated pedestrian and bicycle pathways within the project.

Kurnell

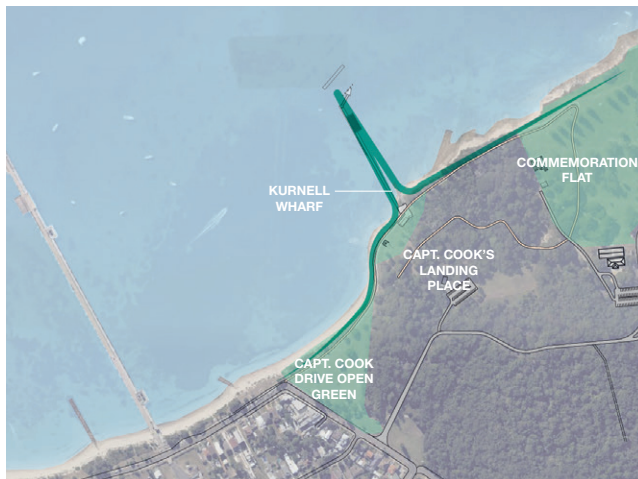


FIGURE 33 KURNELL NATURAL CHARACTER

Either side of the proposed Kurnell wharf, there are existing patches of extensively vegetated spaces that will be tied together by the wharf site location. The proposed structure will also celebrate the historic wharf alignment and the passenger flow directions.

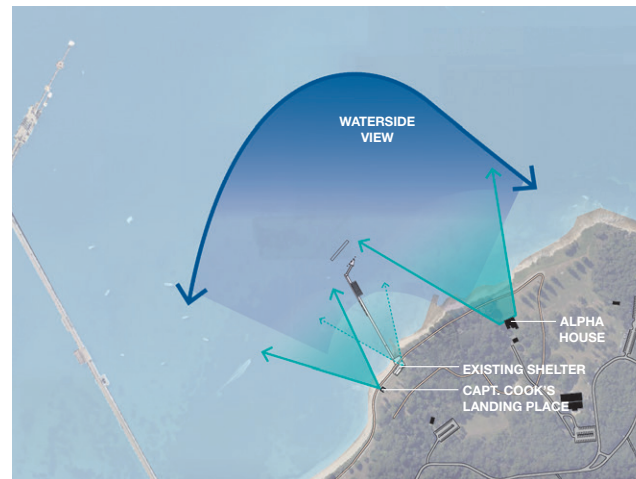


FIGURE 34 KURNELL CAPTURING KEY VIEWS

In order to protect heritage values, the design of the wharf will not intrude on any protected viewing corridors. In particular, the landside heritage views of the various heritage elements along the Monument Track including; Captain Cook's Landing Place monument and the Alpha house structure. The framing of the waterside views will drive the design of the proposed roof structures.

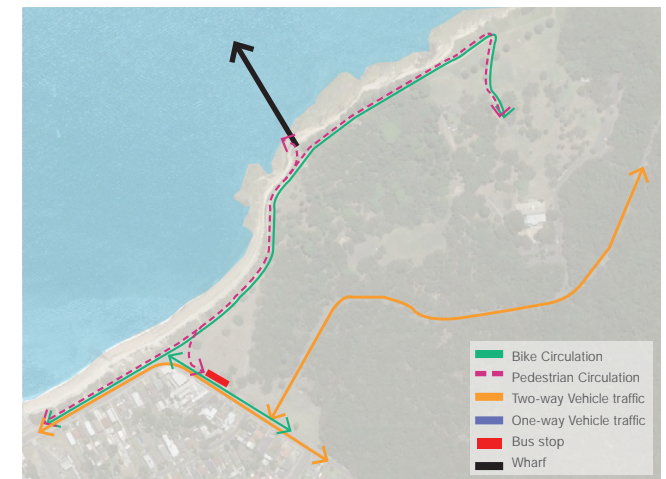


FIGURE 35 KURNELL CONNECTIVITY

The proposal aims to enhance general permeability of movement through the Botany Bay area by interconnection of multiple modes of movement including the connection to waterway transport. Provision of active transport is achieved through integrated pedestrian and bicycle pathways.

Design Response

La Perouse

The landscape design at La Perouse includes the provision of integrated seats and planters that are shaped as a response to and a reflection of the geometry of the wharf architecture whilst responding to the terrain and the expansive vista offered at this location.

During future design stages, there is the potential for the shape and form of the arrival point to respond to local stories and a historical narrative that could come from further detailed engagement with the local community.

Capturing views

Key views out from La Perouse point, Frenchmans Bay and the wharf itself have been captured by the direction and placement of the seating within the integrated planters. The landscape tie-in provides a lookout area for the entire La Perouse Point headland and invites all visitors of the headland to stop and experience the vista and the Botany Bay environs.

Refer to Figure 35 (opposite) to see the captured key view directions including:

- ① Views out towards Kurnell, Botany Bay and Kamay Botany Bay National Park.
- ② Views out towards ferry wharf docking location to facilitate passenger awareness.
- ③ Views out from ferry boardwalk towards Frenchman's Bay and Yarra Point.

Integrated bespoke seating and planters

The design promotes subtle level changes in the topography and includes three 'steps' or level changes. The planters act as a natural extension out from the terrain and inclusive access is provided through gentle gradients connecting the terraces. This creates pockets of clustered planting and formal seating furniture whilst also allows for informal seating opportunities within the 'stepped' seating edge.

Connectivity

The configuration of the integrated seating and level changes have been designed to connect to the existing movement network, particularly the main footpath adjacent to Anzac Parade that wraps around the entire headland and the footpath that traverses the open, grassed central median that currently, leads users to the La Perouse Monument and La Perouse Museum.



The wharf entry is located at the intersection of these two paths, providing a meeting point and rest point that frames the coastal views. The design also works with the existing designated pedestrian cross-over point and maintains this key connection to the surrounding heritage monuments.

Planting palette

Planting palettes will respond to the coastal local character of the headland and will contain low-lying, native species to ensure the views out towards the coastline and Botany Bay are preserved and connection to the local context and landscape is maintained.

Planting areas will frame the formal seating arrangements and soften the 'hardscaped' elements of the design (including paving and timber seats) whilst providing further private nooks for seating. The opportunity to incorporate interpretive panels of the rich historic nature of the location, and wider Kamay Botany Bay National Park, should be developed with indigenous consultants local to the La Perouse area.

The overall design for La Perouse, is illustrated opposite in Figure 37 and includes:

- ① An expanded entrance/approach from the landside that integrates and grounds the wharf to the context and the park.
- ② An entrance zone that provides seating to foster interactions with the public and allows for a moment of pause in the visitor journey to the ferry and within the park.
- ③ Information plaques that are incorporated into the balustrade design to offer educational opportunities.
- ④ A waiting area that is extended to allow for fishing off the wharf. This spacious zone permits for a deep and wide roof profile that provides ample weather protection.
- ⑤ A roof design that allows for dappled sunlight and reflection of the water movement thereby creating a space sympathetic to its contextual environment.
- ⑥ An overall form with components such as the entrance wharf, seating and berths, can provide a unified experience that is responsive to the local context.

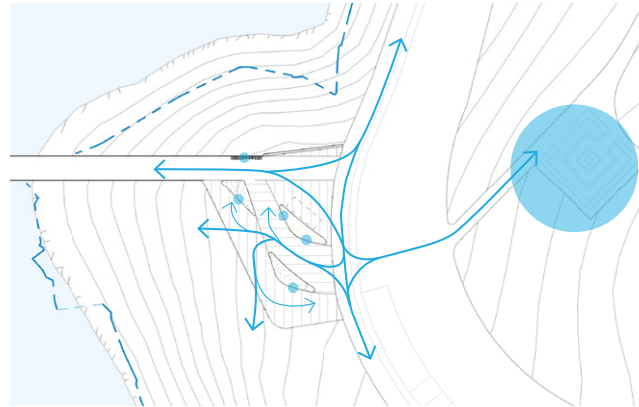


FIGURE 36LA PEROUSE CONNECTIVITY

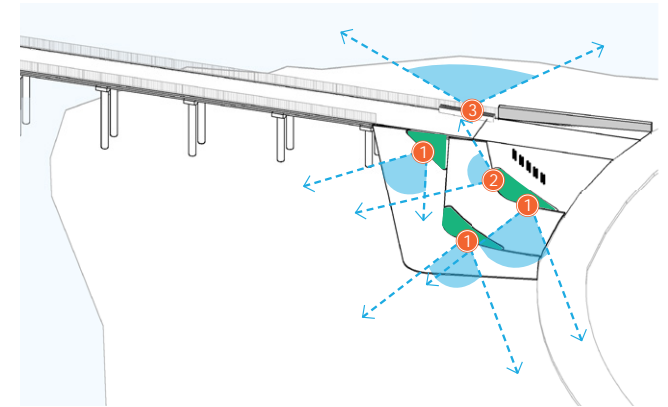


FIGURE 37LA PEROUSE VIEWS DIRECTIONS

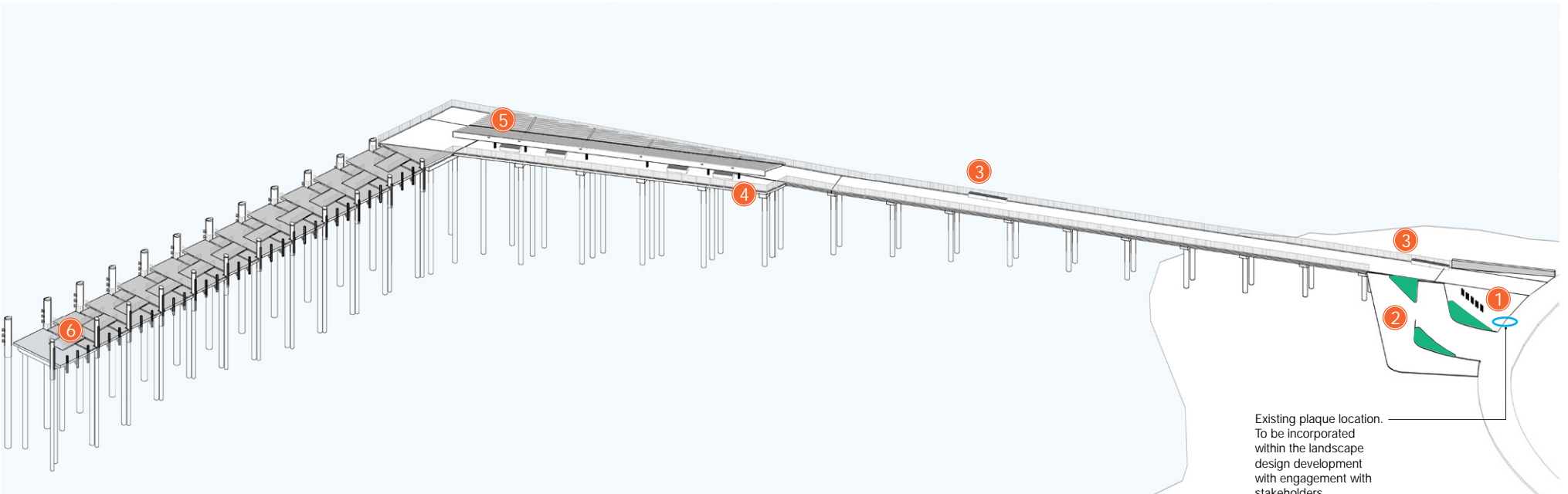


FIGURE 38LA PEROUSE CONCEPT DESIGN

Kurnell

The land side tie-in for Kurnell responds particularly to the sensitive cultural nature of the project area and provides a subtle planted backdrop to the surrounding heritage and cultural monuments including Captain Cooks Landing Place, the Eyes of the Land and Water sculpture and the existing heritage listed shelter located within the project site.

Capturing views

Direct views towards these landmarks are maintained and promoted through the low-level planting palette and the seating provisions.

Refer to Figure 38 (opposite) to see the captured key view directions including:

- 1 Direct views currently experienced from Captain Cook's monument out towards Botany Bay are protected and maintained.
- 2 Views out towards ferry wharf docking location to facilitate passenger awareness.
- 3 Direct views towards the Eyes of the Land and the Water sculpture.

Connecting to the existing

The landscape concept is humble in its approach and aims to integrate and blend the wharf's structural components within the sensitive setting of the Kamay Botany Bay National Park by providing a formal entrance gateway to the jetty from the popular Monument Track.

The landscape design is located directly adjacent to the four mature Norfolk Pine trees that continue as a planted avenue, lining the Monument Track that meanders further throughout the Kamay Botany Bay National Park. The landscape concept for Kurnell aims to respect the dominant visual and aesthetic character offered by the pine trees by allowing a chance to stop and celebrate the wide-spread views out across the Bay and providing a rest point that takes advantage of the large shaded grassed patch underneath the pine tree canopy.



Planting

Linear patches of planting adjoin the wharf architecture and paved entrance way, celebrating the architectural design and acting as an extension of both the existing heritage shelter and the densely planted coastal heath and Kurnell Dune Forest that currently abuts the Monument Track.

Similarly to La Perouse, the chosen planting palette will be locally sourced and reflect the native species from the project area. The opportunity to incorporate interpretive panels of the rich historic nature of the location, should be developed with indigenous consultants local to the Kurnell area and integrate with the interpretive panels located along the existing wharf structure (to be decommissioned) and further north at Captain Cook's Creek.

The overall design for Kurnell, is illustrated opposite in Figure 40 and includes;:

- 1 An expanded entrance/approach from the landside that integrates and grounds the wharf to the context and the park.
- 2 An entrance zone that also has seating to foster interactions with the public and allows for a moment of pause in the visitor journey to the ferry and within the park.
- 3 Information plaques that are incorporated into the balustrade design to offer educational opportunities.
- 4 The fishing deck which is adjacent to the waiting area to offer added amenity to the wharf.
- 5 A waiting area that extends past the roof to allow for people to gather and look out at the end of the wharf.
- 6 A roof design allows for dappled sunlight and reflection of the water movement thereby creating a space sympathetic to its contextual environment.
- 7 An overall form with components such as the entrance wharf, seating and berths, can provides a unified experience that is responsive to the local context.

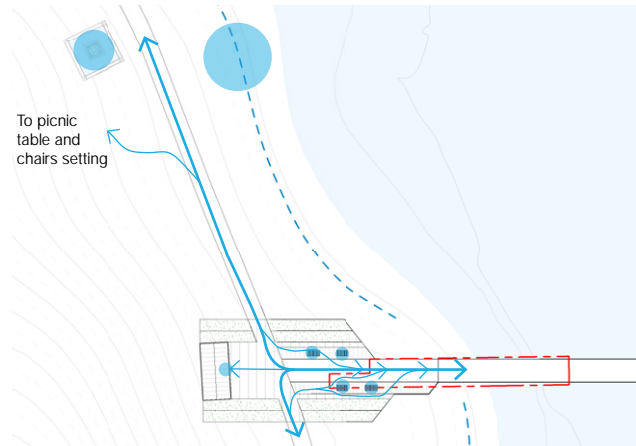


FIGURE 39 KURNELL CONNECTIVITY

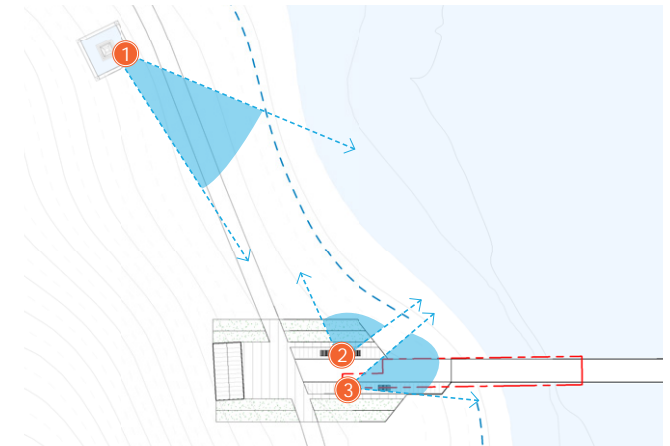


FIGURE 40 KURNELL VIEWS DIRECTIONS

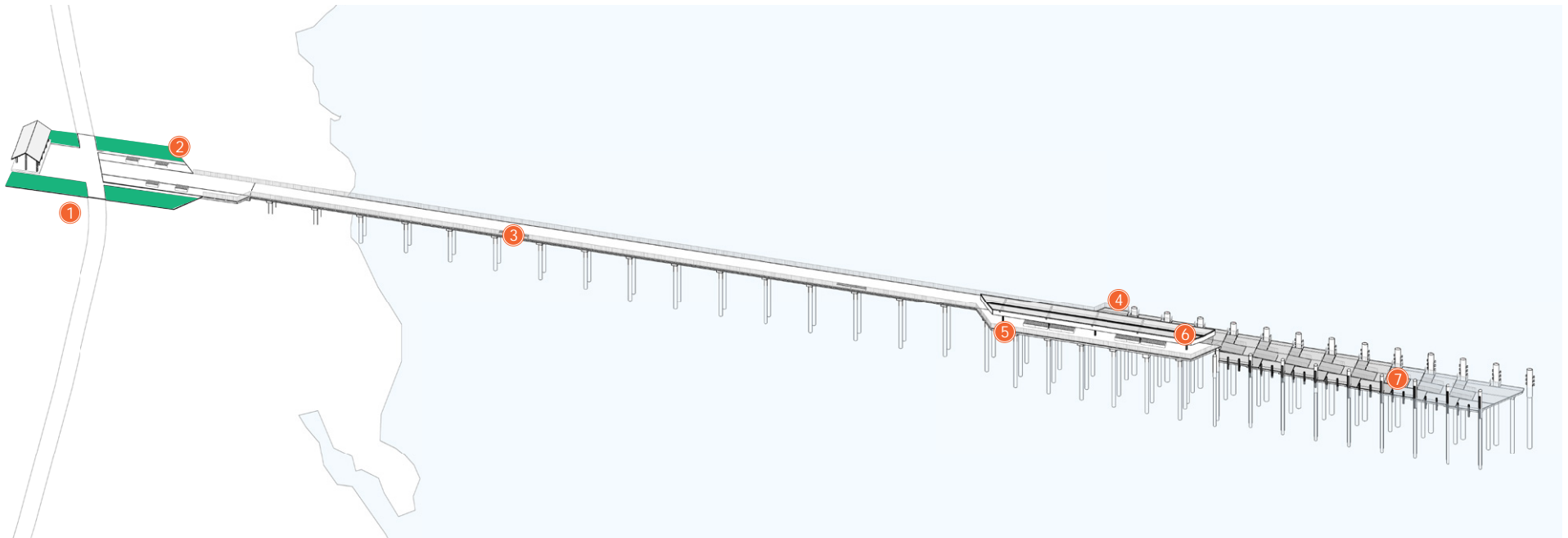


FIGURE 41 KURNELL CONCEPT DESIGN

Plan of Management (2020)

The project is consistent with the Kamay Botany Bay National Park Plan of Management (TfNSW, 2020) by addressing the following objectives:

- Promoting public appreciation and understanding of the park's cultural and natural values.
- Sympathetic design to the natural landscape and features thus celebrating views and vistas without encroaching on the heritage view corridors.
- Supporting aboriginal community engagement in the detail design of the wharf.
- Providing recreational opportunities that attract more visitors.
- Providing links and connections to a network of walking and shared-use tracks between La Perouse and Kurnell within the National Park that provide sustainable access to key features and destinations and link to regional walks.

Kurnell Precinct Masterplan

The project is consistent with the Kurnell Precinct Masterplan (Neeson M etc 2019) by addressing the following objectives:

- The wharf itself is an integral part of the masterplan and the overall design for the upgraded Kurnell precinct.
- New and upgraded interpretation signage and informative plaques on the wharf provides further education opportunities supported by the masterplan.
- Architectural details of the waiting area roof and balustrades will incorporate aboriginal narratives through engagement with the local indigenous communities and artists. This is in alignment with the masterplan's acknowledgment of the role of the Aboriginal community in telling its stories at Kamay Botany Bay National Park.
- The wharf itself provides a sense of arrival on to the Kurnell precinct and creates a threshold and a space for reflection proposed in the masterplan
- The design of the wharf embraces the masterplan principles of – Respecting cultures and creating an inclusive space with balanced indigenous and European presence and; Amplifying the unique natural characteristics and beauty of the site through design and using it to heal, recover and bridge cultures.



FIGURE 42 KAMAY BOTANY BAY NATIONAL PARK KURNELL MASTER PLAN

Indicative species palette

The chosen planting palette used across both La Perouse and Kurnell project sites will reflect the local character and indigenous species endemic to the area. Species selection will be developed during subsequent design stages to incorporate further feedback from stakeholders.

LA PEROUSE - COASTAL WATTLE SCRUB		KURNELL - DUNE FOREST + COASTAL HEATH	
Allocasuarina distyla Scrub sheaoak	Shrub	Banksia ericifolia Health Banksia	Large shrub
Acacia suaveolens Sweet-scented wattle	Shrub	Banksia serrata Old Man Banksia	Large shrub
Darwinia fascicularis	Shrub	Breynia oblongifolia Coffee Bush	Shrub
Lomandra longifolia Spiny headed mat rush	Grass	Cissus antarctica Kangaroo Vine	Climber
Melaleuca armillaris	Shrub	Leptospermum laevigatum Coast Tea-tree	Small tree
Westringia fruticosa Coastal rosemary	Shrub	Monotoca elliptica Tree Broom Heath	Shrub



A. distyla



A. suaveolens



D. fascicularis



A. distyla



L. laevigatum



M. elliptica



L. lomandra



M. armillaris



W. fruticosa



B. oblongifolia



M. armillaris



C. antarctica





07

Impact assessment

Landscape character assessment

This section documents the components that have the potential to change or influence the landscape (magnitude of change) and the potential impacts that may arise on the LCAs.

LCAs 1: Botany Bay, 2: La Perouse Kamay Botany Bay National Park and 7: Kurnell Kamay Botany Bay National Park are physically impacted by the project.

LCAs 3: La Perouse residential area, 4: Phillip Bay coastal area, 5: Port Botany, 6: Silver Beach residential area and 8: Kurnell industrial area, are not directly impacted by the project.

Legend

- * Proposal area
- LCA1: Botany Bay
- LCA 2: La Perouse Kamay Botany Bay National Park
- LCA 3: La Perouse residential coastal area
- LCA 4: Phillip Bay coastal area
- LCA 5: Port Botany
- LCA 6: Silver Beach and Kurnell residential area
- LCA 7: Kurnell Kamay Botany Bay National Park
- LCA 8: Kurnell industrial area

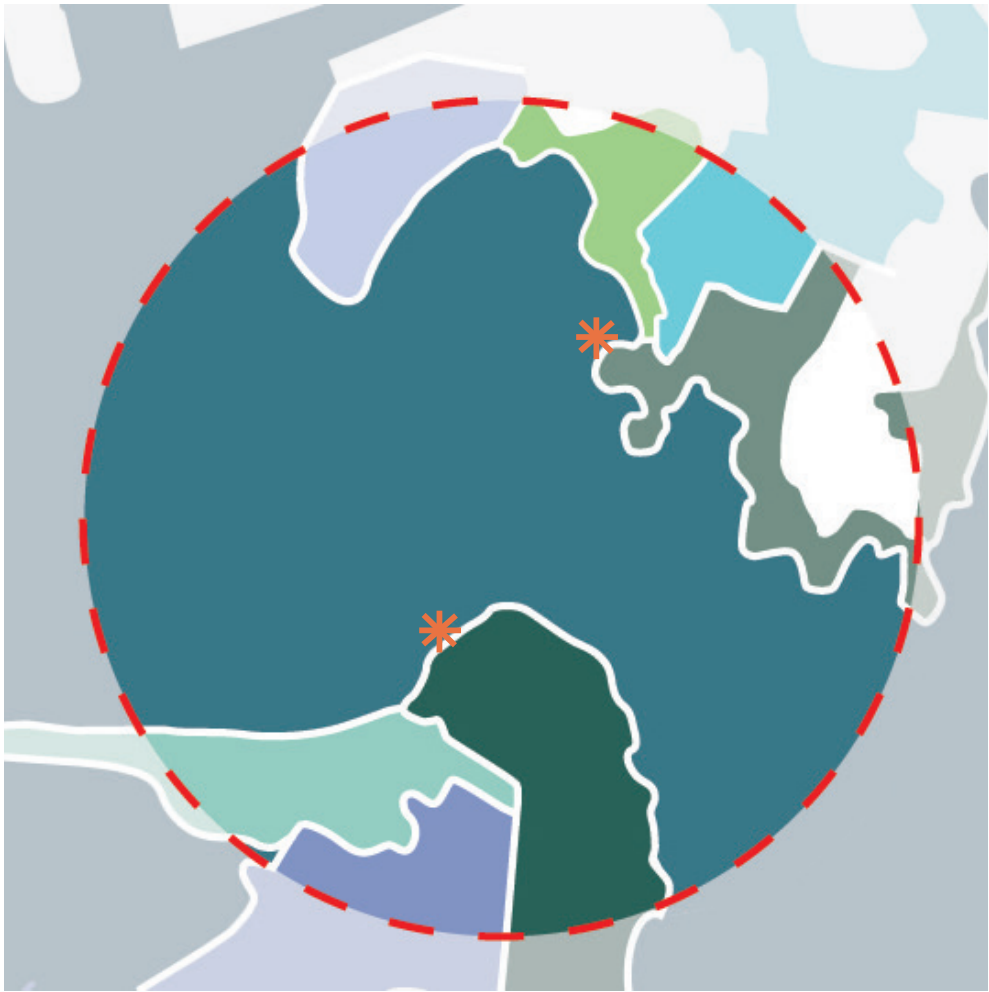


FIGURE 43 LANDSCAPE CHARACTER AREAS





FIGURE 44 LCA 1: BOTANY BAY

	Visual	Neg	Low	Mod	High
Sensitivity					
Magnitude of Change: Construction phase					
Magnitude of Change: Operational phase					
Construction Impact					
Operation Impact					

LCA 1: Botany Bay

This LCA is associated with the Botany Bay water body extents and includes the immediate site extents (for both La Perouse and Kurnell). The magnitude of change to the Botany Bay LCA are assessed for both the construction and operational phases.

Construction phase

The magnitude of change is considered to be **Low** due to the following:

- Demolition of the existing viewing platform structure (at Kurnell) contributing to a slight loss to the existing character.
- Introduction of a temporary causeway at Kurnell (85m length, 10-12m width), a large marine barge to assist with construction of the project. Construction of the causeway will include a gradual extension of the structure. This is considered an extension of the existing presence of infrastructure within this LCA, particularly the adjoining Caltex berthing facility extending off Silver Beach.
- The average daily vessel movements during construction are estimated to be an average of eight vessel movements per day, with a peak of 20 vessel movements per day. This significantly increases the number of motorised vessels in the bay, however this is not considered to be incongruous with the existing character.

The Moderate sensitivity and Low magnitude of change would result in a **Moderate-Low adverse** landscape impact.

Operational phase

The magnitude of change arising from the project is assessed to be **Low** due to the following:

- The project is anticipated to accommodate up to three vessels per hour (with a turnaround time of approximately 15 minutes) increasing the existing presence of motorised water vehicular traffic in the LCA.
- The wharf structure is considered to result in an increase in the scale of structural elements within the bay.

The Moderate sensitivity and Low magnitude of change would result in a **Moderate-Low adverse** landscape impact.



FIGURE 45 LCA 2: LA PEROUSE HEADLAND AND KAMAY BOTANY BAY NATIONAL PARK

LCA 2: La Perouse headland and Kamay Botany Bay National Park

This LCA is associated with the northern portion of the Kamay Botany Bay National Park and La Perouse headland. It includes the immediate site extents (for La Perouse). The magnitude of change to LCA 2 is assessed during both construction and operational phases.

Construction phase

The magnitude of change is considered to be **Moderate** due to the following:

- Introduction of ‘fenced off’ construction site establishment including the laydown area, site amenities and office and the adjoining crane platform (lasting overall 13 months). Large scale heavy machinery and construction equipment is considered an uncharacteristic additional feature.
- Temporary access will be installed to provide access from Anzac Parade (5m width and 45m length) to accommodate approximately 12 vehicles, on average a day. This is uncharacteristic to the existing nature of the picturesque headland.
- Moderate level of land disturbance (approximately 4 900m²) and earthworks associated with the proposed wharf tie-in and installation of utilities considered as noticeable damage to the existing rocky, coastal interface.

The High sensitivity and Moderate magnitude of change would result in a **High-Moderate adverse** landscape impact, however, this impact is considered to be of a temporary nature.

Operational phase

The magnitude of change arising from the project is assessed to be **Low** due to the following:

- The permanent wharf structure extends significantly off the naturally exposed headland. This is anticipated to result in a change to the existing aesthetic that contributes to the landscape character by adding further structural elements to the expansive vista which is considered uncharacteristic to the existing landscape character of the headland.
- The Project introduces an expanded entrance to the wharf structure that is designed with the natural topography of the headland, includes the provision of additional planting of local species and provides further seating for visitors.

The High sensitivity and Low magnitude of change would result in a **Moderate adverse** landscape impact.

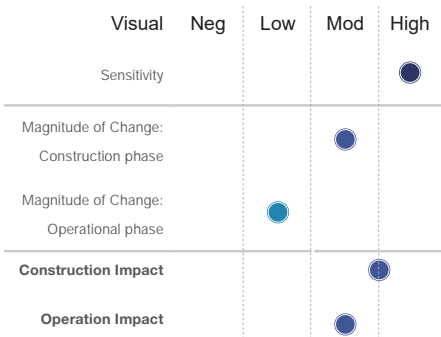




FIGURE 46 LCA 3: LA PEROUSE RESIDENTIAL AREA

LCA 3: La Perouse residential area

This LCA is associated with the La Perouse residential LCA and is indirectly affected by the project. The magnitude of change to the La Perouse residential LCA is assessed during both the construction and operational phases.

Construction phase

The magnitude of change is considered to be **Negligible** due to the following:

- The land based haulage route for construction traffic is anticipated to be directed past the eastern border of this LCA (along Anzac Parade) that are considered to be barely noticeable features.

The Moderate sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

Operational phase

The magnitude of change arising from the project is assessed to be **Negligible** due to the following:

- Changes are not anticipated to result in direct physical impacts to this LCA.

The Moderate sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase		●			
Magnitude of Change: Operational phase		●			
Construction Impact		●			
Operation Impact		●			



FIGURE 47 LCA 4: PHILLIP BAY COASTAL AREA

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase			●		
Magnitude of Change: Operational phase			●		
Construction Impact			●		
Operation Impact			●		

LCA 4: Phillip Bay coastal area

This LCA is associated with the Phillip Bay headland, beaches and adjoining parklands and is indirectly affected by the project. The magnitude of change to this LCA is assessed during both the construction and operational phase.

Construction phase

The magnitude of change is considered to be **Low** due to the following:

- The change is not anticipated to result in direct impacts to this LCA.
- The addition of new, but uncharacteristic features or elements in adjoining LCAs 1: Botany Bay and LCA 2: La Perouse headland and Kamay Botany Bay National Park, which contributes to the 'borrowed character' of this LCA.

The Moderate sensitivity and Low magnitude of change would result in a **Moderate-Low adverse** landscape impact.

Operational phase

The magnitude of change arising from the project is assessed to be **Low** due to the following:

- The change is not anticipated to result in direct impacts to this LCA however, due to the close proximity of the directly impacted LCA 1: Botany Bay and the recreational nature of LCA 4, impacts to the landscape character is anticipated.
- The increased motorised vessel activity and the permanent wharf structure itself, is anticipated to result in a change to the setting of this LCA by adding further structural elements to the expansive vista.

The Moderate sensitivity and Low magnitude of change would result in a **Moderate-Low adverse** landscape impact.



FIGURE 48 LCA 5: PORT BOTANY

LCA 5: Port Botany

This LCA is associated with Port Botany and is indirectly affected by the project. The magnitude of change to this LCA is assessed during the construction and operational phase.

Construction phase

The magnitude of change is considered to be **Negligible** due to the following:

- The change is not anticipated to result in direct impacts to this LCA.
- The change is not anticipated to result in indirect impacts to this LCA.

The Low sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

Operational phase

The magnitude of change arising from the project is assessed to be **Negligible** due to the following:

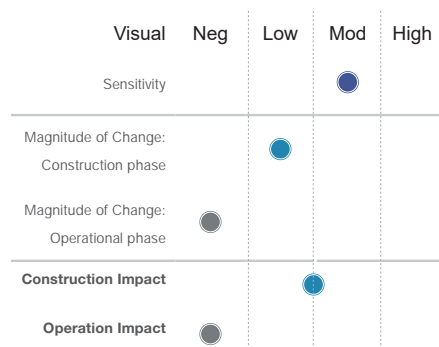
- The change is not anticipated to result in direct impacts to this LCA.
- The change is not anticipated to result in indirect impacts to this LCA.

The Low sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

	Visual	Neg	Low	Mod	High
Sensitivity			●		
Magnitude of Change: Construction phase		●			
Magnitude of Change: Operational phase		●			
Construction Impact		●			
Operation Impact		●			



FIGURE 49 LCA 6: SILVER BEACH AND KURNELL RESIDENTIAL AREA



LCA 6: Silver Beach and Kurnell residential area

This LCA is associated with Silver Beach and the Kurnell esplanade and residential area and is indirectly affected by the project. The magnitude of change to this LCA is assessed during the construction and operational phase.

Construction phase

The magnitude of change is considered to be **Low** due to the following:

- The land based haulage route for construction traffic is anticipated to be directed through the south-east extent of this LCA (along Captain Cook Drive).

The Moderate sensitivity and Low magnitude of change would result in a **Moderate-Low adverse** landscape impact.

Operational phase

The magnitude of change arising from the project is assessed to be **Negligible** due to the following:

- The change is not anticipated to result in direct impacts to this LCA.
- The change is not anticipated to result in indirect impacts to this LCA.

The Moderate sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

Refer to Appendix One (page 121 for Figures referring to construction site establishment areas and extent of ground disturbance).



FIGURE 50 LCA 7: KURNELL KAMAY BOTANY BAY NATIONAL PARK

	Visual	Neg	Low	Mod	High
Sensitivity					●
Magnitude of Change: Construction phase					●
Magnitude of Change: Operational phase			●		
Construction Impact					●
Operation Impact				●	

LCA 7: Kurnell Kamay Botany Bay National Park

This LCA is associated with the southern portion of the Kamay Botany Bay National Park and includes the immediate site extents (for Kurnell). The magnitude of change to this LCA is assessed during the construction and operational phases.

Construction phase

The magnitude of change is considered to be **High** due to the following:

- Introduction of 'fenced off' construction site establishment including the laydown area, site amenities and the site office (lasting overall 21 months). Large scale heavy machinery and construction equipment is considered an uncharacteristic, additional feature within the parkland extents.
- Introduction of a temporary road to provide access from Captain Cook Drive to follow Monument Track (5m width (extending to 8m), 25m length) to accommodate vehicles.
- An African olive tree adjacent to the footpath and 5 juvenile trees adjacent to the wharf would be removed to facilitate the construction works
- Utilities trench, considered as a noticeable disturbance within this LCA.

The High sensitivity and High magnitude of change would result in a **High adverse** landscape impact.

Operational phase

The magnitude of change arising from the project is assessed to be **Low** due to the following:

- The project has been considered to ensure the design effectively responds to the Nationally and State significant sites in the area.
- The introduction of a reinstated ferry wharf, and associated landscape and urban design, in the same location as the existing platform structure.

The High sensitivity and Low magnitude of change would result in a **Moderate adverse** landscape impact.

Refer to Appendix One (page 121 for Figures referring to construction site establishment areas and extent of ground disturbance).



FIGURE 51 LCA 8: KURNELL INDUSTRIAL AREA

	Visual	Neg	Low	Mod	High
Sensitivity			●		
Magnitude of Change: Construction phase		●			
Magnitude of Change: Operational phase		●			
Construction Impact		●			
Operation Impact		●			

LCA 8: Kurnell industrial area

This LCA is associated with heavy and general industrial zones within Kurnell and is indirectly affected by the project. The magnitude of change to this LCA is assessed during the construction and operational phase.

Construction phase

The magnitude of change is considered to be **Negligible** due to the following:

- The change is not anticipated to result in direct impacts to this LCA.
- The change is not anticipated to result in indirect impacts to this LCA.
- Extension to the presence of infrastructure within this LCA.

The Low sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

Operational phase

The magnitude of change arising from the proposal is assessed to be **Negligible** due to the following:

- The change is not anticipated to result in direct impacts to this LCA.
- The change is not anticipated to result in indirect impacts to this LCA.
- Extension to the presence of infrastructure within this LCA.

The Low sensitivity and Negligible magnitude of change would result in a **Negligible** landscape impact.

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Visual assessment

Following the VEM that was included in Visual Context (refer to page 48), the viewsheds have been separated for both sites to assist in analysing the visual impacts of the individual wharves. Refer to Figure 51 for the La Perouse VEM and Figure 52 for the Kurnell VEM.

The viewsheds have been generated from evenly dispersed 'points' placed on the top of the proposed structures within the 3D model. The viewshed is illustrated in a way that highlights the degree of visibility from the 3D model project components against the 'bare earth' surface model (refer to Chapter 04 Baseline, page 49). Consistent with the baseline analysis, 13 viewpoints have been assessed to represent the potential visual impacts that may arise as a result of the project.

Viewsheds, from each individual viewpoint, have been generated to inform the analysis for the key structural elements associated with the project (refer to Chapter 06 Project, page 66). The viewpoints are illustrated on the following pages and are accompanied by a description of the design components that have the potential to change the existing visual composition (magnitude of change) and the potential impacts that may arise.



FIGURE 52 LA PEROUSE VIEWSHED

LEGEND

- Proposal
- Viewpoint location
- Viewshed
- Highly visible
- Barely visible

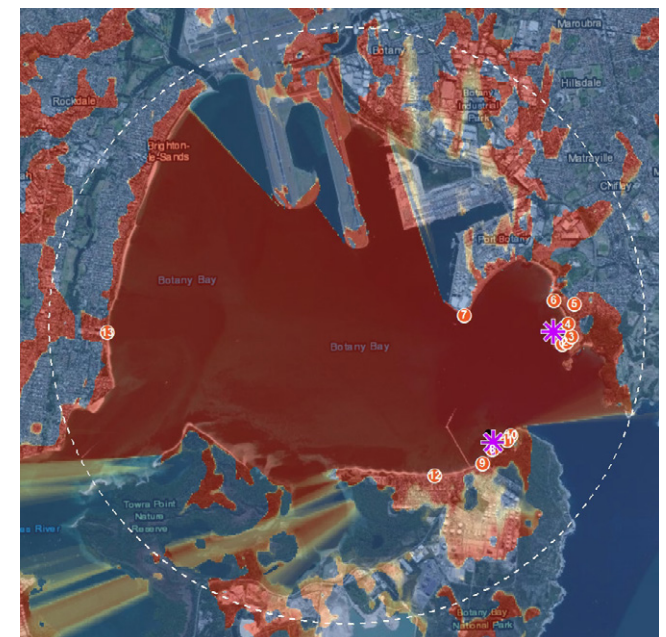


FIGURE 53 KURNELL VIEWSHED

LEGEND

- Proposal
- Viewpoint location
- Viewshed
- Highly visible
- Barely visible



FIGURE 54VIEWPOINT 1 VIEWSHED

Viewpoint 1 Anzac Parade, La Perouse

Magnitude of change

The representative view from the pedestrian path crossing at La Perouse Point, Anzac Parade is situated approximately 160m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Moderate** magnitude of change due to:

- Direct views towards the designated site office location, plant access and laydown area and site fencing during construction and would form a noticeable element in the view, readily apparent to the viewer.
- Direct views towards land that is expected to be disturbed by Piling (Bored Piles), and the areas for reconfigured car parking.
- Direct views (and in close proximity to) towards the identified haulage route for large machinery and trucks to access the site.

Operation

The operation phase impacts arising from this project is considered to be **Low** magnitude of change due to:

- Wharf structure, including berthing and departing locations, is not a particularly elevated feature and would be largely obstructed by the existing land form.
- The proposed wharf tie-in works including landscaping, gradual sloping of the surrounding wharf entrance and urban street furniture such as seating introducing

placemaking qualities integrated with the existing view composition.

- The existing visibility towards the Port Botany and the associated industrial marine character.

Visual Impact

Construction

The High sensitivity and Moderate magnitude of change is judged to result in a **High-Moderate adverse** impact during construction.

Operation

The High sensitivity and Low magnitude of change is judged to result in a **Moderate adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity					●
Magnitude of Change: Construction phase				●	
Magnitude of Change: Operational phase			●		
Construction Impact					●
Operation Impact				●	



FIGURE 55VIEWPOINT 2 VIEWSHED

Viewpoint 2 La Perouse Museum, La Perouse

Magnitude of change

A representative view from the highest point of the La Perouse headland, directly adjacent to the La Perouse museum and is situated approximately 175m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Moderate** magnitude of change due to:

- Moderate degree of contrast between construction equipment and the existing recreational view composition and features.
- Direct views are anticipated towards the designated site office location, plant access and laydown area and the site fencing during construction and would form a noticeable element in the view, readily apparent to the viewer.
- Direct views towards land that is expected to be disturbed, particularly the utilities trench and wharf tie-in area.

Operation

The operation phase impacts arising from this project is considered to be **Moderate** magnitude of change due to:

- Increased visibility of ferry vessel traffic activity within the Botany Bay extents and structural components directly visible.
- Integration of 'place-making' within the proposed design including additional lookout points and landscape design.
- The existing visibility towards the Port Botany and the associated industrial marine character.

Visual Impact

Construction

The High sensitivity and Moderate magnitude of change is judged to result in a **High-Moderate adverse** impact during construction.

Operation

The High sensitivity and Moderate magnitude of change is judged to result in a **High-Moderate adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity					●
Magnitude of Change: Construction phase				●	
Magnitude of Change: Operational phase				●	
Construction Impact				●	
Operation Impact				●	

Viewpoint 2 - Photomontage



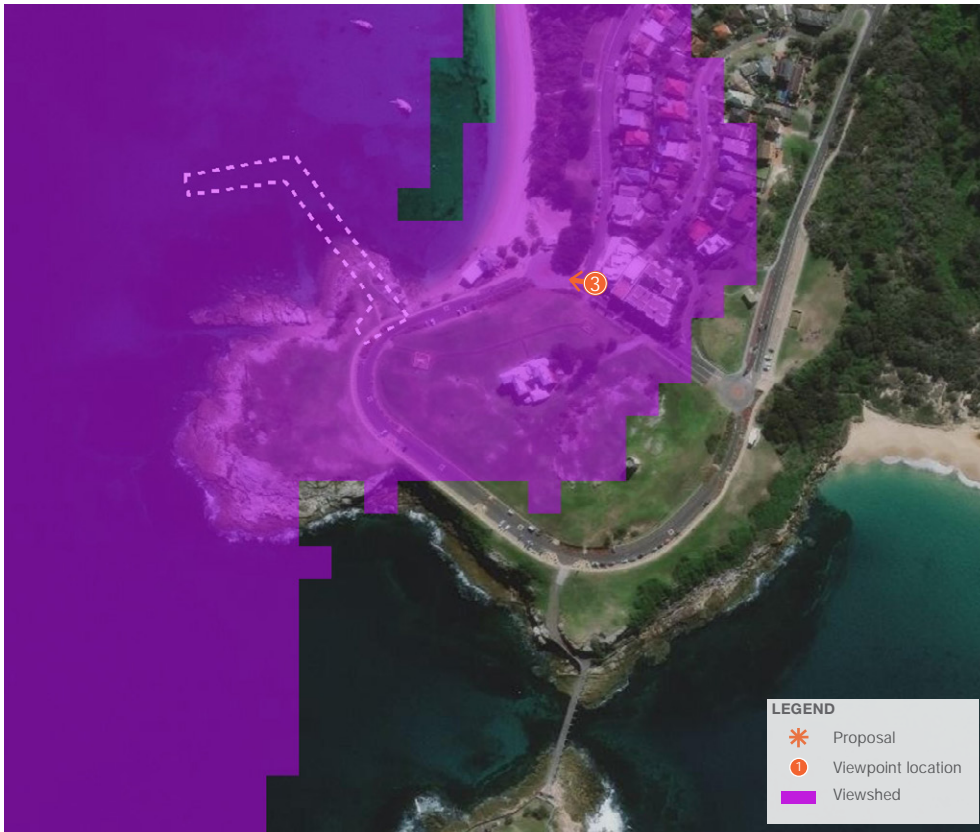


FIGURE 56VIEWPOINT 3 VIEWSHED

Viewpoint 3 Corner of Anzac Parade and Endeavour Ave, La Perouse

Magnitude of change

The representative view from the pedestrian path crossing at the intersection of Anzac Parade and Endeavor Avenue and is situated approximately 200m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Moderate** magnitude of change due to:

- Moderate degree of contrast between construction equipment and the existing recreational/commercial view composition and features.
- Direct views are anticipated towards the designated site office location, plant access and laydown area and the site fencing during construction and would form a noticeable element in the view, readily apparent to the viewer.

Operation

The operation phase impacts arising from this Proposal is considered to be **Low** magnitude of change due to:

- Obstructed visibility towards the dominate structural features of the Project.
- Integration of 'place-making' within the proposed design including additional lookout points and landscaping that would become noticeable to the receptor.

Visual Impact

Construction

The Moderate sensitivity and Moderate magnitude of change is judged to result in a **Moderate adverse** impact during construction.

Operation

The Moderate sensitivity and Low magnitude of change is judged to result in a **Moderate-Low adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase				●	
Magnitude of Change: Operational phase			●		
Construction Impact				●	
Operation Impact			●		

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FIGURE 57 VIEWPOINT 4 VIEWSHED



Viewpoint 4 Frenchman's Beach, La Perouse

Magnitude of change

The representative view from Frenchmans beach front accessible from the track off Endeavor Avenue and is situated approximately 185m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **High** magnitude of change due to:

- High degree of contrast between construction equipment and the existing recreational view composition and features.
- Direct views are anticipated towards the plant access road and crane platform during construction and would form a noticeable element in the view, readily apparent to the viewer.
- Construction site, particularly the crane and marine barge, would become the dominate focal point of the view.

Operation

The operation phase impacts arising from this project is considered to be **High** magnitude of change due to:

- Increased visibility of ferry vehicular activity within the Botany Bay extents.
- High degree of contrast between the wharf (structure) and the natural composition of the view including water body and geology (headland).
- The project would become the focal point of the view.

Visual Impact

Construction

The Moderate sensitivity and High magnitude of change is judged to result in a **High-Moderate adverse** impact during construction.

Operation

The Moderate sensitivity and High magnitude of change is judged to result in a **High-Moderate adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase					●
Magnitude of Change: Operational phase					●
Construction Impact				●	
Operation Impact				●	

Viewpoint 4 - Photomontage





FIGURE 58VIEWPOINT 5 VIEWSHED



Viewpoint 5 Elaroo Ave, Phillip Bay

Magnitude of change

The representative view of the surrounding residential receivers from the pedestrian path along Elaroo Avenue, Phillip Bay is situated approximately 365m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Low** magnitude of change due to:

- Views towards construction machinery may be perceptible through gaps in the houses and/or vegetation however, the distance of the viewpoint from the proposed construction area would not alter the overall balance of the view.

Operation

The operation phase impacts arising from this project is considered to be **Negligible** magnitude of change due to:

- The ferry vessels being a characteristic feature within the view.
- The project would be perceptible however, will not alter the overall balance of the elements within the existing view.

Visual Impact

Construction

The Moderate sensitivity and Low magnitude of change is judged to result in a **Moderate-Low adverse** impact during construction.

Operation

The Moderate sensitivity and Negligible magnitude of change is judged to result in a **Negligible** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase			●		
Magnitude of Change: Operational phase		●			
Construction Impact			●		
Operation Impact		●			

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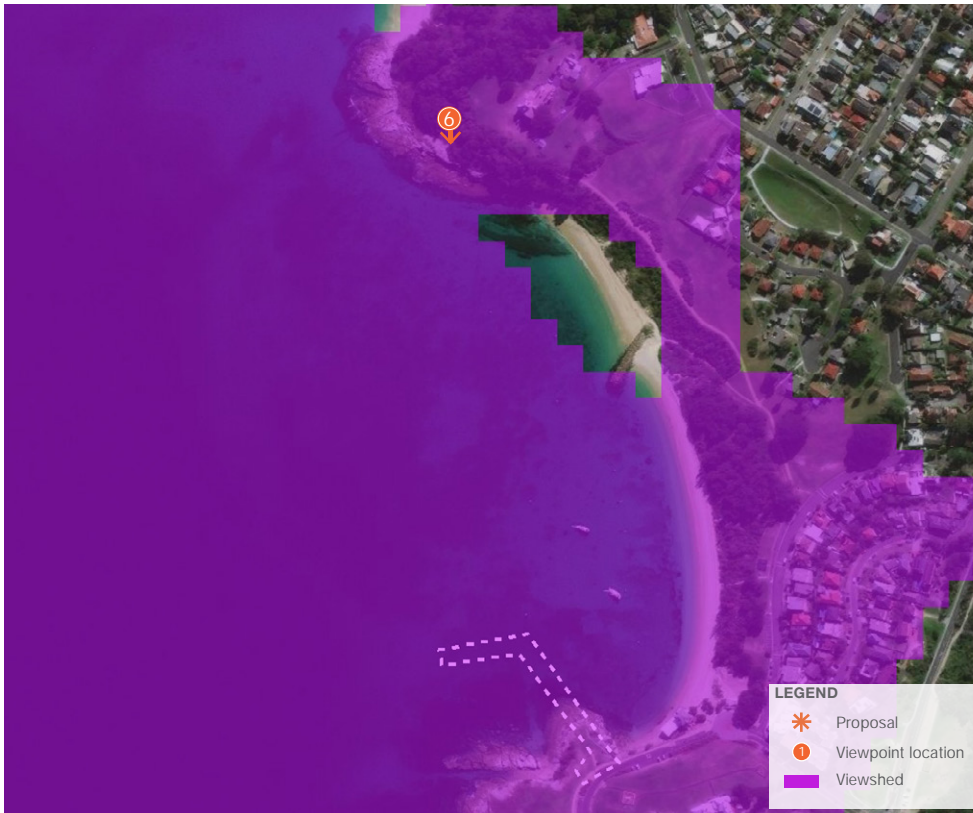


FIGURE 59VIEWPOINT 6 VIEWSHED



Viewpoint 6 Guriwal Bush Tucker Trail, La Perouse

Magnitude of change

The representative view from the Guriwal Bush Tucker Trail, Yarra Point and is situated approximately 585m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Moderate** magnitude of change due to:

- High degree of contrast between construction equipment and the existing recreational view composition and features.
- Views towards the crane and marine barge would form a perceptible feature and would be readily apparent to the receiver.

Operation

The operation phase impacts arising from this project is considered to be **Low** magnitude of change due to:

- The ferry vessels are considered a characteristic feature within the view. Vessel traffic will increase however, will temporarily pass through the view at various times throughout the day.
- The structure does not obstruct views towards the open headland or national park.
- The project would be perceptible however, will not alter the overall balance and is considered to be congruous with the features of the view.

Visual Impact

Construction

The Moderate sensitivity and Moderate magnitude of change is judged to result in a **Moderate adverse** impact during construction.

Operation

The Moderate sensitivity and Low magnitude of change is judged to result in a **Moderate-Low adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase				●	
Magnitude of Change: Operational phase			●		
Construction Impact				●	
Operation Impact			●		

Viewpoint 6 - Photomontage



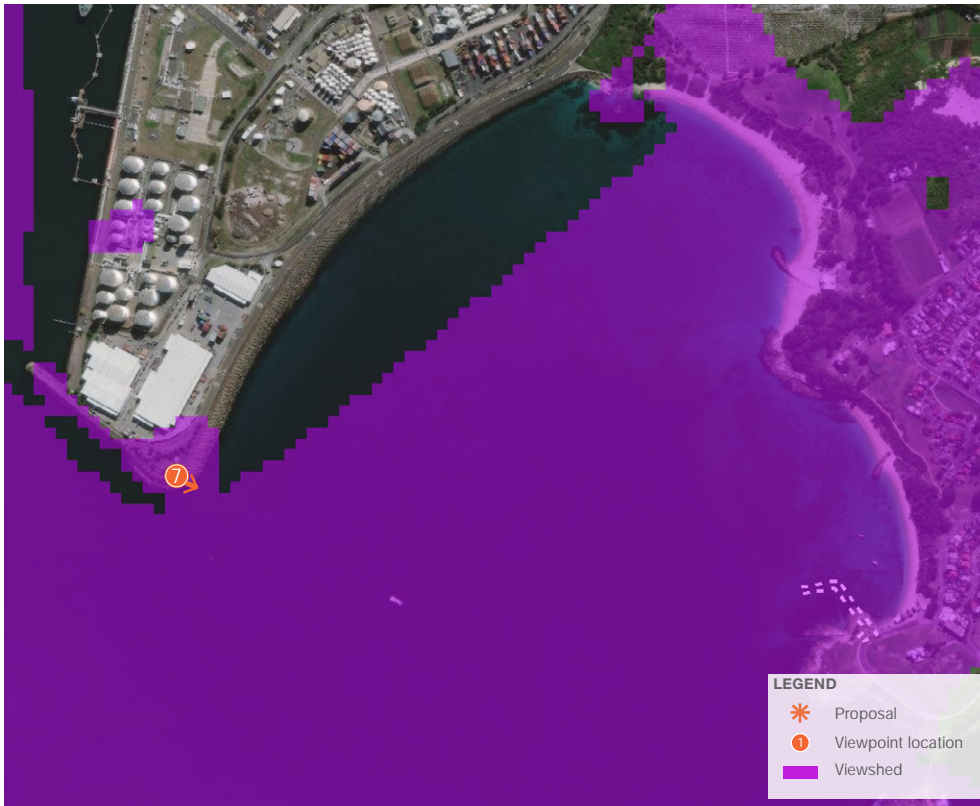


FIGURE 60VIEWPOINT 7 VIEWSHED

Viewpoint 7 Molineaux Point Lookout, Prince Wales Dr, Port Botany

Magnitude of change

The representative view from the reserved lookout location along Prince of Wales Drive at Molineux Point and is situated approximately 1.6km from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Low** magnitude of change due to:

- Moderate degree of contrast between the construction equipment, particularly vertically dominate cranes, and the expansive nature of the view that stretches horizontally.
- The distance at which the project may be visible, would form a barely noticeable feature in the view.

Operation

The operation phase impacts arising from this project is considered to be **Negligible** magnitude of change due to:

- Increased visibility of ferry vehicular activity within the Botany Bay extents.
- Slight degree of contrast between the proposed wharf structure and the natural composition of the view including water body and geology (headland).
- The distance at which the project may be visible, would form a barely noticeable feature in the view.

Visual Impact

Construction

The Moderate sensitivity and Low magnitude of change is judged to result in a **Moderate-Low adverse** impact during construction.

Operation

The Moderate sensitivity and Negligible magnitude of change is judged to result in a **Negligible** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase			●		
Magnitude of Change: Operational phase		●			
Construction Impact			●		
Operation Impact		●			

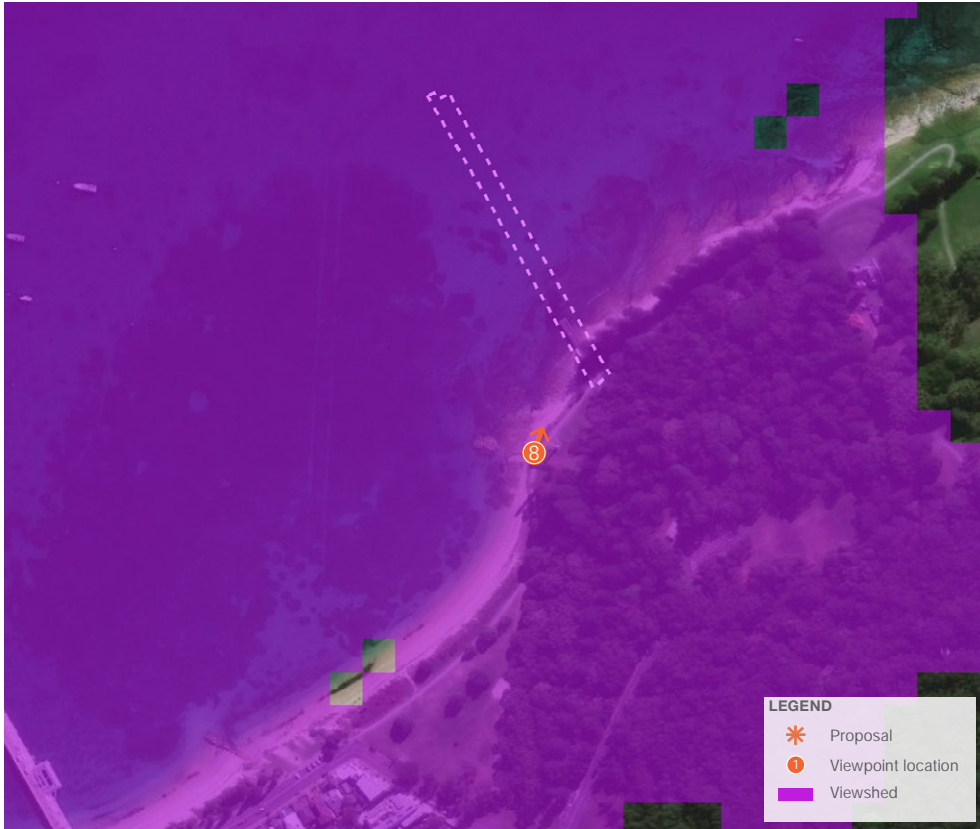


FIGURE 61 VIEWPOINT 8 VIEWSHED

Viewpoint 8 Captain Cook's Landing Place, Kurnell

Magnitude of change

The representative view is from the Monument Track, particularly Captain Cook's Landing Place monument, within the Kamay Botany Bay National Park and is situated approximately 100m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **High** magnitude of change due to:

- Direct views towards the wharf structure tie-in, temporary causeway (extending 85m from the land) and heavy machinery including the piling plant during construction and would form a dominant feature in the view, readily apparent to the viewer.
- High degree of contrast between construction equipment and the existing recreational view composition and features.
- Existing views towards large cranes and industrial equipment across the bay region.

Operation

The operation phase impacts arising from this project is considered to be **High** magnitude of change due to:

- An increase in motorised water vessel activity close to the viewpoint location, becoming a focal point during berthing and departing from the wharf.
- The project is congruous with the existing wharf structure, however is a substantially larger extension into the Bay.

Visual Impact

Construction

The High sensitivity and High magnitude of change is judged to result in a **High adverse** impact during construction.

Operation

The High sensitivity and High magnitude of change is judged to result in a **High adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity					●
Magnitude of Change: Construction phase					●
Magnitude of Change: Operational phase					●
Construction Impact					●
Operation Impact					●

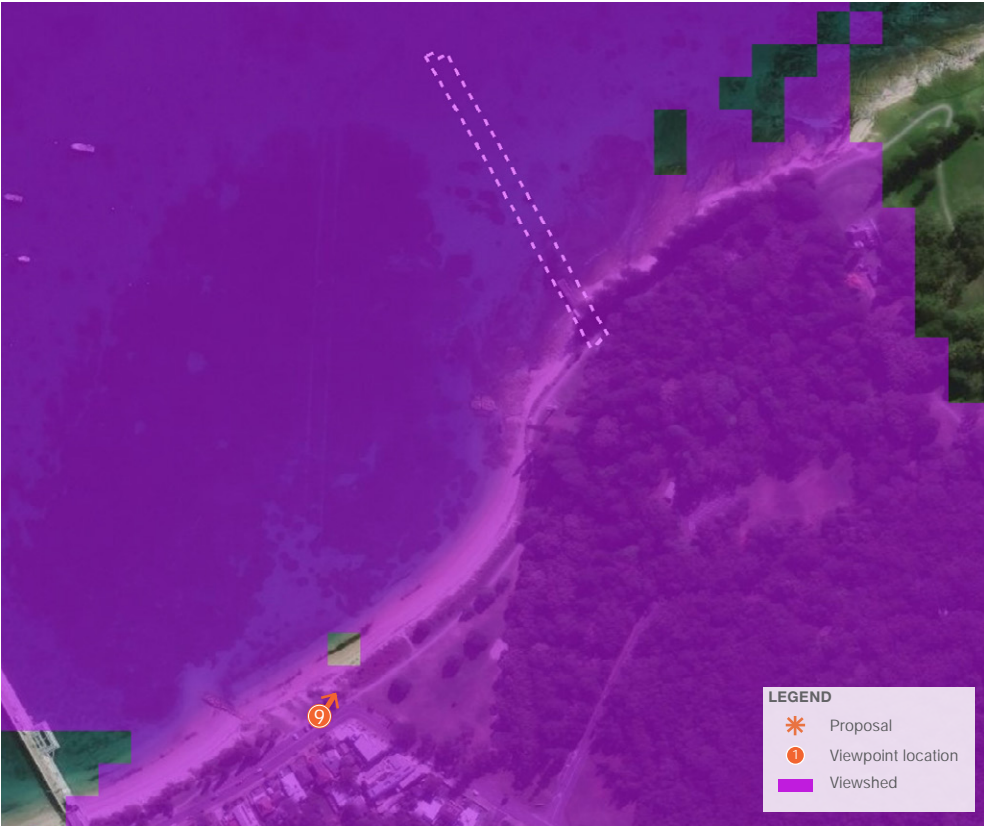


FIGURE 62VIEWPOINT 9 VIEWSHED



Viewpoint 9 Prince Charles Parade, Kurnell

Magnitude of change

The representative view along Prince Charles Parade opposite Silver Beach, Kurnell and is situated approximately 370m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **High** magnitude of change due to:

- Direct views towards the wharf structure tie-in, temporary causeway (extending 85m from the land) and heavy machinery, including the piling plant, during construction would form a dominant feature in the view, readily apparent to the viewer.
- High degree of contrast between the introduced cranes and machinery and the picturesque composition of the view, particularly the two heritage monuments visible in close proximity to the works (Captain Cook's Landing Place and The Eyes of Land and the Sea sculpture).

Operation

The operation phase impacts arising from this project is considered to be **High** magnitude of change due to:

- Increased motorised water vessel activity in the view during operative times and expected to increase at peak ferry times.
- The project is congruous with the existing wharf structure, however is a significantly large extension into the Bay environs.

Visual Impact

Construction

The High sensitivity and High magnitude of change is judged to result in a **High adverse** impact during construction.

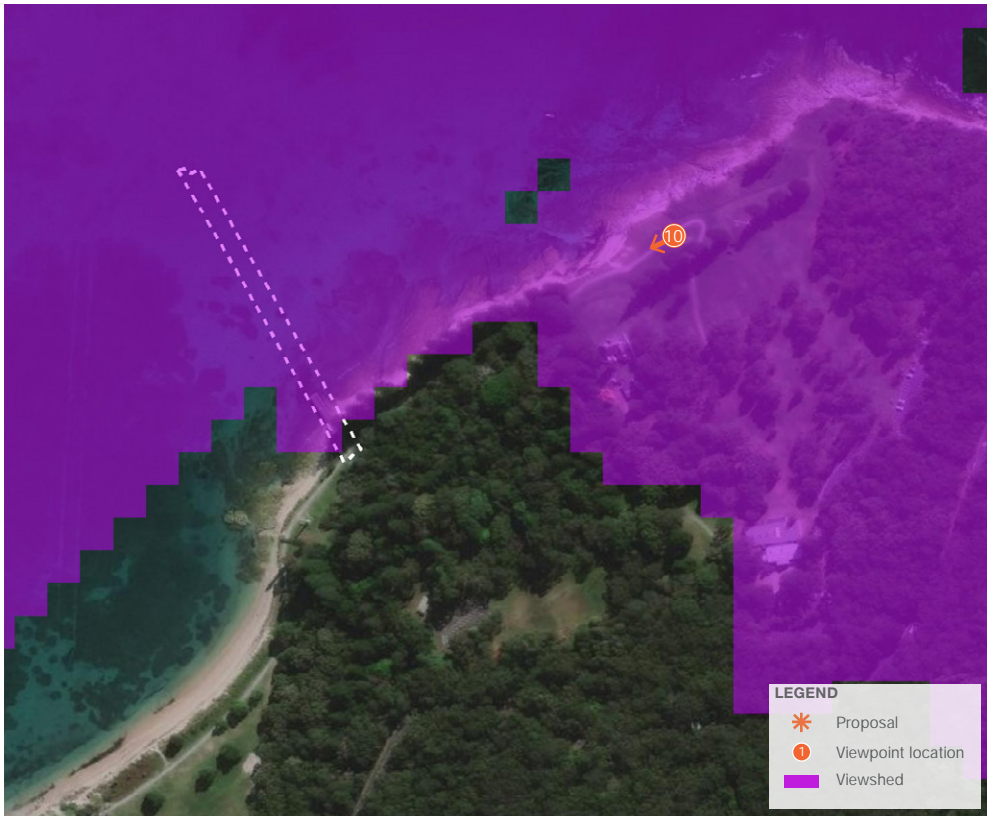
Operation

The High sensitivity and High magnitude of change is judged to result in a **High adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity					●
Magnitude of Change: Construction phase					●
Magnitude of Change: Operational phase					●
Construction Impact					●
Operation Impact					●

Viewpoint 9 - Photomontage





Viewpoint 10 Monument Track, Kurnell

Magnitude of change

The representative view from the pedestrian path along the Monument track within the Kamay Botany Bay National Park, Kurnell which is situated approximately 300m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Moderate** magnitude of change due to:

- Direct views towards the temporary causeway (extending 85m from the land) and heavy machinery including the piling plant during construction and would form a noticeable feature in the view, readily apparent to the viewer.
- The existing view composition is of a high scenic quality and would include a slight degree of contrast with the addition of heavy construction equipment. However, direct views exist towards the Caltex berthing facility and is considered characteristic to the Project.

Operation

The operation phase impacts arising from this project is considered to be **Moderate** magnitude of change due to:

- Direct views towards the wharf ramp and fixed platform which would add a noticeable structural feature in the foreground of the view.
- The ferry vehicles berthing and departing will be regular, increasing water vessel traffic in the surrounding area and directly visible from this viewpoint.

Visual Impact

Construction

The High sensitivity and Moderate magnitude of change is judged to result in a **High-Moderate adverse** impact during operation.

Operation

The High sensitivity and Moderate magnitude of change is judged to result in a **High-Moderate adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity					●
Magnitude of Change: Construction phase				●	
Magnitude of Change: Operational phase				●	
Construction Impact				●	
Operation Impact				●	

FIGURE 63VIEWPOINT 10 VIEWSHED



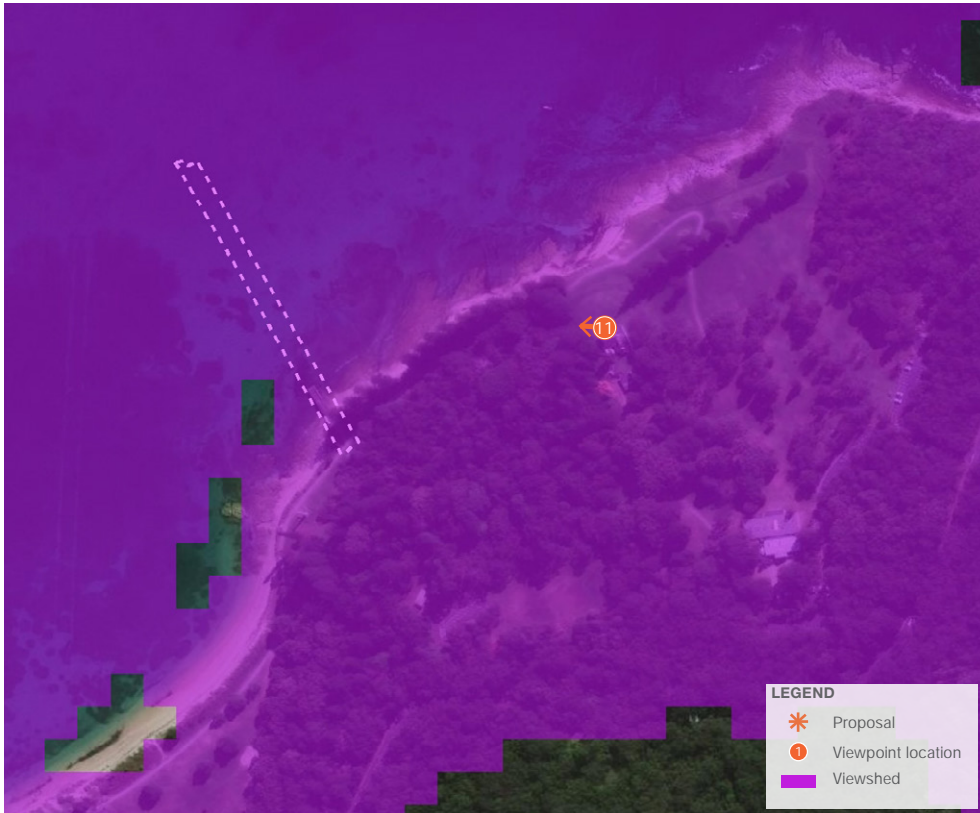


FIGURE 64VIEWPOINT 11 VIEWSHED



Viewpoint 11 Alpha House, Monument Track, Kurnell

Magnitude of change

The representative view along Monument Track, directly in front of the heritage structure referred to as Alpha House within the Kamay Botany Bay National Park and is situated approximately 230m from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to include **Negligible** due to:

- The majority of views towards the construction works for the Project are blocked by the existing established and dense vegetation.

Operation

The operation phase impacts arising from this project is considered to be **Negligible** magnitude of change due to:

- The majority of views towards the operational works for the Project are blocked by the existing established and dense vegetation.

Visual Impact

Construction

The Moderate sensitivity and Negligible magnitude of change is judged to result in a **Negligible** impact during operation.

Operation

The Moderate sensitivity and Negligible magnitude of change is judged to result in a **Negligible** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase	●				
Magnitude of Change: Operational phase	●				
Construction Impact	●				
Operation Impact	●				

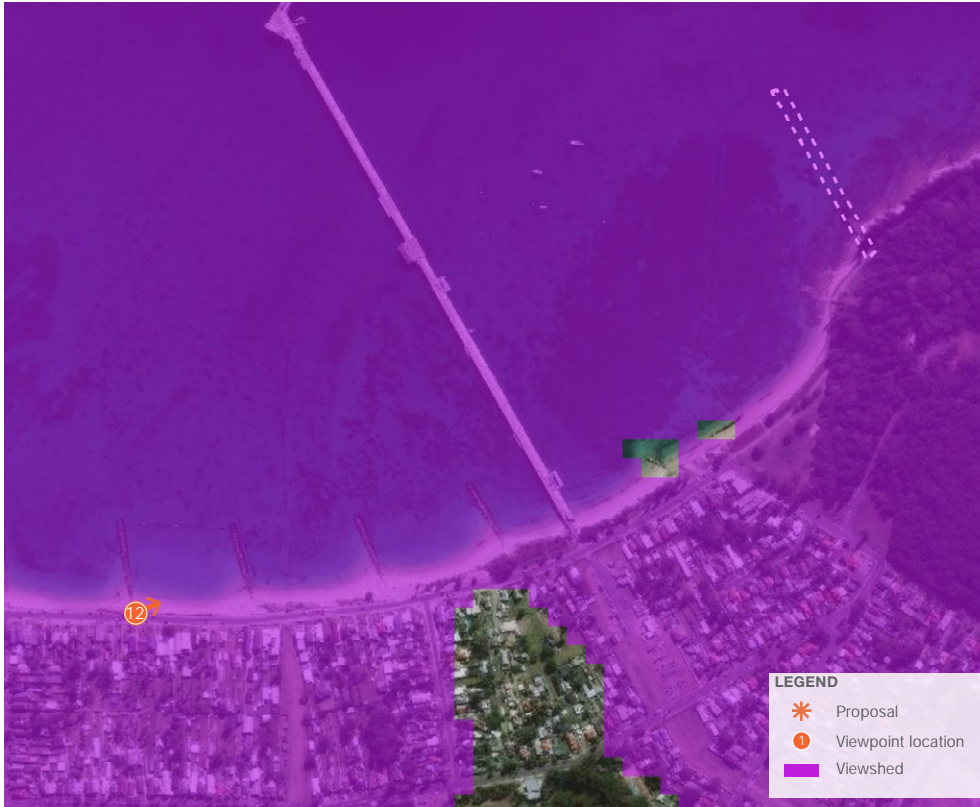


FIGURE 65VIEWPOINT 12 VIEWSHED



Viewpoint 12 Silver Beach, Kurnell

Magnitude of change

The representative view from Silver Beach along Prince Charles Parade, Kurnell and is situated approximately 1.2km from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Low** magnitude of change due to:

- Views are anticipated to be possible towards construction machinery, particularly cranes and the marine barge, during the construction of the project and would provide a vertical feature noticeable against the densely vegetated backdrop.

Operation

The operation phase impacts arising from this project is considered to be **Negligible** magnitude of change due to:

- Views towards the wharf roof canopy may be discernible however, direct views would be obstructed due to the existing Caltex berthing facility off Silver Beach and it would form a barely noticeable feature or element of the view.
- Ferry vessels would be discernible, introduced elements within the view however, is not incongruous with the existing composition of the view.

Visual Impact

Construction

The Moderate sensitivity and Low magnitude of change is judged to result in a **Moderate-Low adverse** impact during operation.

Operation

The Moderate sensitivity and Low magnitude of change is judged to result in a **Moderate-Low adverse** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase			●		
Magnitude of Change: Operational phase		●			
Construction Impact			●		
Operation Impact		●			



FIGURE 66VIEWPOINT 13 VIEWSHED



Viewpoint 13 The Grand Parade, Ramsgate Beach

Magnitude of change

The representative view is located along The Grand Parade, opposite Ramsgate Beach and is situated approximately 6.75km from the project boundary.

Construction

The construction phase impacts are assessed to be of a temporary nature and is considered to be a **Negligible** magnitude of change due to:

- Views towards construction works may be discernible however, the scale of the introduced components in comparison to the distance of the representative viewpoint would result in the project being barely noticeable.

Operation

The operation phase impacts arising from this proposal is considered to be **Negligible** magnitude of change due to:

- Views towards operative works would be barely noticeable from the distant viewpoint location and is considered not incongruous with the Botany Bay setting and the existing view composition.

Visual Impact

Construction

The Moderate sensitivity and Negligible magnitude of change is judged to result in a **Negligible** impact during operation.

Operation

The Moderate sensitivity and Negligible magnitude of change is judged to result in a **Negligible** impact during operation.

	Visual	Neg	Low	Mod	High
Sensitivity				●	
Magnitude of Change: Construction phase		●			
Magnitude of Change: Operational phase		●			
Construction Impact		●			
Operation Impact		●			





08

Summary of Assessment

Summary of assessment



	Sensitivity	MOC (Con.)	MOC (Op.)	Impact (Con.)	Impact (Op.)
LCA 1: Botany Bay	●	●	●	●	●
LCA 2: La Perouse headland and Kamay Botany Bay National Park	●	●	●	●	●
LCA 3: La Perouse residential area	●	●	●	●	●
LCA 4: Phillip Bay coastal area	●	●	●	●	●
LCA 5: Port Botany	●	●	●	●	●
LCA 6: Silver Beach and Kurnell residential area	●	●	●	●	●
LCA 7: Kurnell Kamay Botany Bay National Park	●	●	●	●	●
LCA 8: Kurnell industrial area	●	●	●	●	●

Visual impact



	Sensitivity	MOC (Con.)	MOC (Op.)	Impact (Con.)	Impact (Op.)
VP 1: Anzac Parade, La Perouse	●	●	●	●	●
VP 2: La Perouse Museum, La Perouse	●	●	●	●	●
VP 3: Corner of Anzac Parade and Endeavour Ave, La Perouse	●	●	●	●	●
VP 4: Frenchman's Beach, La Perouse	●	●	●	●	●
VP 5: Elaroo Ave, Phillip Bay	●	●	●	●	●
VP 6: Guriwal Bush Tucker Trail, La Perouse	●	●	●	●	●
VP 7: Molineaux Point Lookout, Prince Wales Dr, Port Botany	●	●	●	●	●
VP 8: Captain Cook's Landing Place, Kurnell	●	●	●	●	●
VP 9: Prince Charles Parade, Kurnell	●	●	●	●	●
VP 10: Monument Track, Kurnell	●	●	●	●	●
VP 11: Alpha House, Monument Track, Kurnell	●	●	●	●	●
VP 12: Silver Beach, Kurnell	●	●	●	●	●
VP 13: The Grand Parade, Ramsgate Beach	●	●	●	●	●

Landscape Character Impacts

During construction, LCA 7: Kurnell Kamay Botany Bay National Park has been assessed as a **High adverse** construction impact due to its significantly sensitive nature, National Park designation, 13 month construction time-frame, removal of vegetation and extent of the compound area extents. Refer to Chapter 05: Baseline for further explanation of the assessed baseline sensitivity result. This result also reflects the removal of the existing wharf viewing platform, the introduction of an 85m temporary causeway that will extend from the Kurnell shore-front and the temporary access track that will accommodate large machinery and trucks through the south-western extents of the LCA to the construction site.

The combination of being located within a high-quality recreational space, situation along the primary path 'Monument Track' results in a **High adverse** assessment result for both Construction and Operation. However, it is worth noting that the landscape character assessment for LCA 7 does not take into account the Project's alignment with the objectives outlined in the Kamay Botany Bay National Park Kurnell Master Plan, endorsed by National Parks and Wildlife Service. Refer to page 29 for more information regarding the publication.

LCA 2: La Perouse headland and Kamay

Botany Bay National Park is considered to be of a comparable level of sensitivity to LCA 7: Kurnell Kamay Botany Bay National Park being designated as the same National Park - split over the two headlands. During construction, LCA 2 has resulted in a **Moderate adverse** impact due to a less-intrusive construction methodology compared to Kurnell, however, is still considered to be incongruous with the picturesque headland used for predominately recreational and cultural activities. Refer to Chapter 05: Baseline for further explanation of the assessed baseline sensitivity result.

During operation, La Perouse's concept design incorporates a greater footprint for the wharf and landscape design tie-in. The design aims to support and enhance the highly visited headland's current uses and pedestrian movement paths, whilst allowing for an additional programmed space for 'looking out' across La Perouse Point and Botany Bay. The design responds to the natural contours of the headland and will replace one standard bench seat with various integrated, bespoke seating units and planters. The existing Timbery Reserve plaque will be replaced and reinstated within the landscape design through close stakeholder engagement.

Overall, the physical impact anticipated to

the LCAs is considered to be **Low adverse** and concentrated predominately within the construction footprint, across the two site locations, as a result of the Project. Due to the Project being a 'reinstatement' of the wharf structures (refer to Chapter 01: Introduction; Purpose of this report) and the majority of the Project's marine, structural components located within the Botany Bay environs, the project is not considered to be completely incongruous with the immediate surrounding landscape character. However, is expected to introduce a mostly structural component to the existing aesthetic that contributes significantly to the landscape character at both La Perouse and Kurnell.

Visual Impacts

Overall, **Moderate - High adverse** visual impacts during both construction and operational phases for the project, are concentrated to viewpoints within relatively close proximity to the works and are also emphasised due to the sensitive receptors and locations of both the Project site locations.

VP 1: Anzac Parade, VP 2: La Perouse Museum and VP 4: Frenchman's Beach has resulted in **High-Moderate adverse** impacts during construction as direct views towards all components of the construction footprint are anticipated, including; the laydown area, site offices and heavy construction machinery, such as cranes. For the La Perouse project site, these viewpoints will experience the highest impact during construction and will be difficult to mitigate against entirely.

Standard construction mitigation techniques, such as site fencing, are still considered to be incongruous with the existing view from the La Perouse headland and Kamay Botany Bay surroundings. It should be noted that construction impacts are considered to be of a temporary nature – lasting for approximately eight months.

VP 2: La Perouse Museum and VP 4: Frenchman's Beach are the viewpoints that are anticipated to result in the highest visual impact during operation for the La Perouse project site. This is primarily due to the direct views towards the ferry vessel berthing components of the Project. The wharf extends significantly into the Bay and, whilst not considered completely incongruous with the Bay environs and/or selected viewpoint locations – the structure is anticipated to become a dominant focal point of the existing views experienced. Additionally, increased motorised marine vehicular traffic and extended duration at which the vessels will spend within the viewpoints' frame of view will essentially change the overall balance of the existing views.

VP 8: Captain Cook's Landing Place and VP 9: Prince Charles Parade are anticipated to experience the highest visual impact for both construction and operation for the Kurnell project site. Similarly to La Perouse, this is due to direct views towards both the introduced wharf structural components and the high degree of contrast between the construction equipment and the existing visual composition. The construction footprint does not involve any removal or disturbance of vegetation, particularly the prominent avenue of large Norfolk Island Pine trees along the coastline, that will obstruct direct views from the selected viewpoints to the east of the project site.

Refer to the following pages to engage the embedded mitigation strategies employed within the concept design for both project site locations.

Summary of embedded mitigation

Following the summary of landscape and visual impacts on the previous pages, a series of mitigation techniques have been proposed and embedded within the conceptual design.

To visualise the embedded mitigation strategies highlighted within the following Table, refer to Chapter 06: Project.

Embedded design mitigation to reduce construction impacts

- Limit clearing and earthworks to the minimum required to establish the construction sites.
- Minimise disturbance experienced to mature vegetation.
- In consultation with land owners, restore all areas disturbed by construction in accordance with the landscape concept plans.
- Develop ancillary facilities, including the locations of visible structures and plant and perimeter fencing and treatments to minimise visual impacts for adjacent receivers where feasible and reasonable.
- It is assumed that ancillary areas will be rehabilitated to their previous condition.
- Site hoarding to be neutral colours and design to assist with responding to the natural surrounding landscape.
- Ensure temporary site hoarding as well as any permanent fencing design is appropriate to the landscape character area and fits sensitively into its surroundings.

Embedded design mitigation to reduce operational impacts

- Integrate bespoke seating provisions and feature planting into the to La Perouse wharf landside tie-in to define the arrival point and gateway to the project and ferry ramp entrance.
- Plant palette to respond to the open, cleared nature of La Perouse point with a similar form and structure as the existing clumps of low-lying, coastal shrubby planting.
- Revegetate using native species to strengthen and respond to the existing landscape character and strong community connection.
- Integrate level changes with the existing topography undulation where possible.
- Slender architectural design the wharf canopy to reduce the visual bulk and scale of the wharf. Increase visual permeability through structural components and connection to the surrounding coastal character.
- Material palette of wharf structures to assist in blending into surrounding environment.
- Maintain and frame existing views, particularly heritage views towards historical monuments.
- Lighting is to be developed in further detail in the following phases of design and is to be designed in accordance with AS4282-1997 Control of the obtrusive effects of outdoor lighting and AS/NZS 1158.3.1:2020 Lighting for roads and public spaces, Part 3.1: Pedestrian area (Category P) lighting - Performance and design requirements.

References

Government Architect, NSW Government. (2017). Better Placed. Crown Copyright .

Landscape Institute and Institute of Environmental Management and Assessment. (2013). Guidelines for Landscape and Visual Impact Assessment (Third ed.). London: Routledge.

NSW Government. (2018). Beyond the Pavement. Sydney: Transport, Roads and Maritime Services.

NSW Government. (2019). Kamay Botany Bay National Park, Kurnell Master Plan. Sydney: Neeson Murcutt Architects Pty Ltd.

NSW Government. (2020, October 7). Commemorative installations. Retrieved from Parks, Reserves and protected areas: <https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-management/community-engagement/kamay-botany-bay-national-park-public-consultation/commemorative-installations>

NSW Government. (2020). Kamay Botany Bay National Park Plan of Management. Sydney: Department of Planning, Industry and Environment.

NSW National Parks and Wildlife Service. (2020). Kamay Botany Bay National Park Planning Considerations. Sydney: Department of Planning, Industry and Environment.

Randwick City Council. (2019). The Bays Local Character Statement. Randwick: Randwick City Council.

Roads and Maritime Services. (2018). Guideline for landscape character and visual impact assessment. Centre for Urban Design. Rozelle: NSW Government.



09

Appendix One



Construction extents

La Perouse



FIGURE 67 EXTENT OF GROUND DISTURBANCE



Refer to Proposal Description - Figures 5-23 and 5-26.

FIGURE 68 SITE ESTABLISHMENT



FIGURE 69 EXTENT OF GROUND DISTURBANCE



FIGURE 70 SITE ESTABLISHMENT AREAS