



Transport for NSW

Kamay Ferry Wharves

Response to Submissions Report

October 2021



A vertical decorative border on the left side of the page, featuring a light blue background with intricate white and dark blue Aboriginal art patterns. These include concentric circles, wavy lines, and geometric shapes, typical of traditional Indigenous Australian designs.

Acknowledgement of Country

We acknowledge and pay our respects to the Bidjigal and Gweagal clans who traditionally occupied Kamay (Botany Bay). We also wish to acknowledge and pay respects to all Elders, past and present.

Approved by Chris Ingrej, CEO of the La Perouse Local Aboriginal Land Council, June 2021.

Cover artwork

Danielle Leedie-Gray is a self-taught contemporary graphic artist and a descendant of the Bidjara and Wakka Wakka people from south west and east Queensland, Australia. The Illustration tells the story of people coming together to work on a project significant to the local Aboriginal groups, Arup and Transport for NSW. The three main symbols used in the Illustration represent the water flow, people (shown by the U Shapes), and meeting places (shown by concentric circles) around the Kamay Ferry Wharves Project, gathering people together for discussion.

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Glossary of terms and abbreviations

Term	Meaning
AHIMS	Aboriginal Heritage Information Management Systems A register of NSW Aboriginal heritage information.
AtoN	Aids to navigation
Amendment Report	A report prepared by an applicant to amend or vary an SSI application at any time before it is determined.
ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AS/NZS	Australian Standard/New Zealand Standard
ASS	Acid sulfate soils Naturally acid clays, mud and other sediments usually found in swamps and estuaries. They may become extremely acidic when drained and exposed to oxygen and may produce acidic leachate run-off that can pollute waters and liberate toxins.
BC Act	<i>Biodiversity Conservation Act 2016</i> (NSW)
BDAR	Biodiversity Development Assessment Report
CBD	Central Business District
CEMP	Construction Environmental Management Plan A site specific plan developed for the construction phase of a project to ensure that all contractors and sub-contractors comply with the environmental conditions of approval for the project and that environmental risks are properly managed.
CMP	Conservation Management Plan
CNVMP	Construction Noise and Vibration Management Plan
Concept design	The design stage which is assessed in this EIS.
Covid-19	Coronavirus-2019
DAWE	Department of Agriculture, Water and the Environment
dBA	Decibels using the A-weighted scale measured according to the frequency of the human ear.
dB LAeq, 15min	The equivalent continuous sound level. This is the energy average of the varying noise over the sample period and is equivalent to the level of constant noise which contains the same energy as the varying noise environment. This measure is a common measure of environmental noise and road traffic noise.
dB LA90, 15min	The noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below LA90 level for 10% of the time. This is the measurement used to determine the rating background noise level.
DPI	NSW Department of Primary Industries
DPIE	NSW Department of Planning, Industry and the Environment

EES	NSW Environment, Energy and Science
EIS	Environmental Impact Statement An environmental impact assessment document prepared in accordance with the requirements of Division 4 of the Environmental Planning and Assessment Regulation 2000.
EPA	NSW Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
ESCP	Erosion and Sediment Control Plan
ESMP	Emergency Spill Management Plan
FM Act	<i>Fisheries Management Act 1994</i>
GPS	Global positioning system
HIS	Heritage Interpretation Strategy
HMP	Heritage Management Plan
ICOMOS	International Council on Monuments and Sites
ICNG	Construction Noise Guideline
LALC	Local Aboriginal Land Council
Landscape character	The aggregate of built, natural and cultural aspects that make up an area and provide a sense of place. Includes all aspects of a tract of land; built, planted and natural topographical and ecological features.
LED	Light emitting diode
LPLALC	La Pouse Local Aboriginal Land Council
mAHD	Metres above Australian Height Datum
MBOS	Marine Biodiversity Offset Strategy
MHWS	Mean high water springs is the long-term average of the heights of two successive high waters during those periods of 24 hours (approximately once a fortnight) when the range of tide is greatest, during full and new moon.
ML	Millilitres
MNES	Matters of national environmental significance
NPfl	Noise Policy for Industry
NPW Act	<i>National Parks and Wildlife Act 1974</i> (NSW)
NPWS	NSW National Parks and Wildlife Service
NSW	New South Wales
OEH	Former NSW Office of Environment and Heritage (now the NSW Department of Planning, Industry and Environment)

PAD	Potential Archaeological Deposit
PAN-OPS	Procedures for Air Navigation Services Aircraft Operations
PCT	Plant community types
PFAS	Per and Polyfluoroalkyl Substance
POEO Act	<i>Protection of the Environmental Operations Act 1997 (NSW)</i>
Preferred infrastructure Report	A report prepared by the applicant at the request of the Planning Secretary which outlines any proposed changes to the SSI to minimise its environmental impact or deal with any other issues raised during the assessment of the application.
PSI	Preliminary Site Investigation
SEARs	Secretary's Environmental Assessment Requirements
SSI	State Significant Infrastructure
SWMP	Soil and Water Management Plan
TEC	Threatened ecological communities
TI	Threshold Increment
TMP	Traffic Management Plan
Transport for NSW	Transport for New South Wales
TSI	Targeted Site Investigation
UDLP	Urban Design and Landscape Plan
UNSW	University of New South Wales
USEPA	US Environmental Protection Agency
UXO	Unexploded ordnance
VTs	Vessel traffic service
WAL	Water access licence
WEMP	Waste and Energy Management Plan

Executive summary

Transport for New South Wales (Transport for NSW) is seeking approval to construct and operate the Kamay Ferry Wharves in La Perouse and Kurnell (the project). The primary purpose of this infrastructure would be to enable the return of the public ferry service between La Perouse and Kurnell. The wharves would also provide supplementary temporary mooring for non-ferry commercial vessels (such as whale watching vessels) and recreational boating.

The key features of the project include:

- Demolition of the existing viewing platform at Kurnell
- Construction of temporary ancillary works including access roads, compound areas, stockpiles, fencing and temporary building platforms (including a temporary causeway at Kurnell and temporary crane platform at La Perouse)
- Relocation of swing moorings at La Perouse
- Construction of two wharves on piles, one at La Perouse and one at Kurnell that would include:
 - A berth for passenger ferries (to cater for ferries between 15 metres to 40 metres in length)
 - A multi-user berth for commercial and recreational vessels (to cater for vessels between two metres and 20 metres long)
 - Sheltered waiting areas and associated furniture located on the wharves
 - Signage and lighting
- Landside paving and landscaping at the entrance to the wharves
- New footpaths connecting the entrance of the wharves to the existing footpaths
- Reconfiguration of existing car parking areas at La Perouse to increase the number of spaces, and associated footpath changes to accommodate these additional car parking spaces
- Bicycle racks near the La Perouse wharf
- Installation of utilities to service the wharves including power and water.

The total construction period is anticipated to take up to 13 months. The construction of the two wharves will occur at the same time with landside and waterside works occurring simultaneously.

Transport for NSW formed the opinion that the project would have an impact on heritage and biodiversity that would likely significantly affect the environment and required an Environmental Impact Statement (EIS) to be developed under Part 5 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). The project does not require development consent under Part 4 of the EP&A Act. Accordingly, as per clause 14 and Schedule 3 of State Environmental Planning Policy (State and Regional Development) 2011 the project is State significant infrastructure under Part 5.1 of the EP&A Act and requires the approval of the Minister for Planning.

Transport for NSW also identified that the project may significantly impact on various matters (values) that are of national environment significance (MNES) and referred the project to the Commonwealth Department of Agriculture, Water and Environment (DAWE). The Department's Secretary determined that the project should be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) in January 2021. A single EIS was prepared in accordance with a bilateral agreement between the NSW and Australian Governments made in 2015 under section 45 of the EPBC Act.

As part of the approval process and following the development of the EIS, the project is required to be publicly displayed and open for submission comments.

The purpose of this report is to respond to the issues raised by the public, organisations and public authorities.

Exhibition and notification

The EIS was exhibited by the Department of Planning, Industry and Environment (DPIE) for 28 days from 14 July to 11 August 2021. The exhibition was advertised in local newspapers and on the DPIE and Transport for NSW websites. In addition, notifications were distributed to over 6,000 properties at La Perouse and Kurnell.

Transport for NSW held four community consultation sessions during the exhibition period over zoom, which included a 40 minute presentation and a further 80 minutes for attendees to ask questions to the project team.

By the end of the exhibition period for the EIS on the 11th of August 2021, 118 submissions had been made. This included 104 public submissions and 14 from public authorities. A further seven late submissions were received after the 11th of August. Of the public submissions received, 17 were in support of the project, 78 objected and nine did not offer a position of the proposal.

Key issues raised

The key issues raised by the submissions included:

- The viability of the project and the need for a ferry service
- The relationship between the La Perouse wharf and the cruise terminal proposal
- The size of the wharves, the ferry to be used and the reliability of the service, given weather conditions between La Perouse and Kurnell
- The impacts on Aboriginal and non-Aboriginal heritage at La Perouse and Kurnell
- The impacts on marine and terrestrial biodiversity and species commonly sighted in the area
- The impacts on traffic and parking
- The accessibility of the wharves and surrounding areas within Botany Bay
- The visual impact the wharves would have on the character of La Perouse and Kurnell
- The validity of the noise and vibration assessment and the impacts on local residents
- The potential soil, water and contamination impacts during the construction and operation of the wharves
- The validity of the decision making process and the consultation process.

Further analysis of the submissions received and responses to these submissions is provided in Chapter 2 (Public and organisation submissions) and Chapter 3 (Public authority submissions) of this report.

Project refinements

Since public display of the EIS, the design for the utilities and landscaping areas has been refined. The construction boundaries are adjusted to account for these refinements. The construction methodologies have been refined through engagement with potential contractors. There are no additional or increased environmental impacts as a result of these refinements.

Next steps

The NSW DPIE will review the EIS, submissions received, this Response to Submissions Report on behalf of the Minister for Planning and Public Spaces. Once the DPIE has completed their assessment, an environmental assessment report would be prepared, which may include recommended Conditions of Approval. The Minister for Planning and Public Spaces (or their delegate) would then decide whether or not to approve the project and identify any Conditions of Approval that would apply. The Commonwealth DAWE would then make their decision on the EPBC Act matters. The State and Commonwealth determination, including any conditions of approval and the Environmental Assessment Report, would then be published on the DPIE Major Projects website.

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Appendix C Urban Design and Landscape Plan

Appendix D Marine Biodiversity Offset Strategy

Appendix E Addendum to Marine Biodiversity Assessment Report

Appendix F Sampling and Analysis Quality Plan (SAQP)

Appendix G Updated Biodiversity Development Assessment Report

Appendix H Updated Noise and Vibration Impact Assessment

1 Introduction and background

1.1 The Project

Transport for New South Wales (Transport for NSW) is seeking approval to construct and operate the Kamay Ferry Wharves at La Perouse and Kurnell (the project). The project would reinstate the two ferry wharves in Botany Bay that historically existed. The main purpose for these wharves would be to allow a ferry service to start operating again for the first time in over 40 years. The ferry service would provide an alternative way for people to access Kamay Botany Bay National Park other than by road. Commercial vessels (such as whale watching vessels) and recreational boats would also be allowed to use the wharves.

Key features of the project include:

- Demolition of the existing viewing platform at Kurnell
- Construction of temporary ancillary works including access roads, compound areas, stockpiles, fencing and temporary building platforms (including a temporary causeway at Kurnell and temporary crane platform at La Perouse)
- Relocation of swing moorings at La Perouse
- Construction of two wharves on piles, one at La Perouse and one at Kurnell that would include:
 - A berth for passenger ferries (to cater for ferries between 15 metres to 40 metres in length)
 - A multi-user berth for commercial and recreational vessels (to cater for vessels between two metres and 20 metres long)
 - Sheltered waiting areas and associated furniture located on the wharves
 - Signage and lighting
- Landside paving and landscaping at the entrance to the wharves
- New footpaths connecting the entrance of the wharves to the existing footpaths
- Reconfiguration of existing car parking areas at La Perouse to increase the number of spaces, and associated footpath changes to accommodate these additional car parking spaces
- Bicycle racks near the La Perouse wharf
- Installation of utilities to service the wharves including power and water.

The total construction period is anticipated to take up to 13 months. The construction of the two wharves will occur at the same time with landside and waterside works occurring simultaneously.

A more detailed description of the project is found in Chapter 5, Project description of the Kamay Ferry Wharves Environment Impact Statement (EIS) prepared by Transport for NSW in July 2021.

Figure 1-1 shows the project's location.

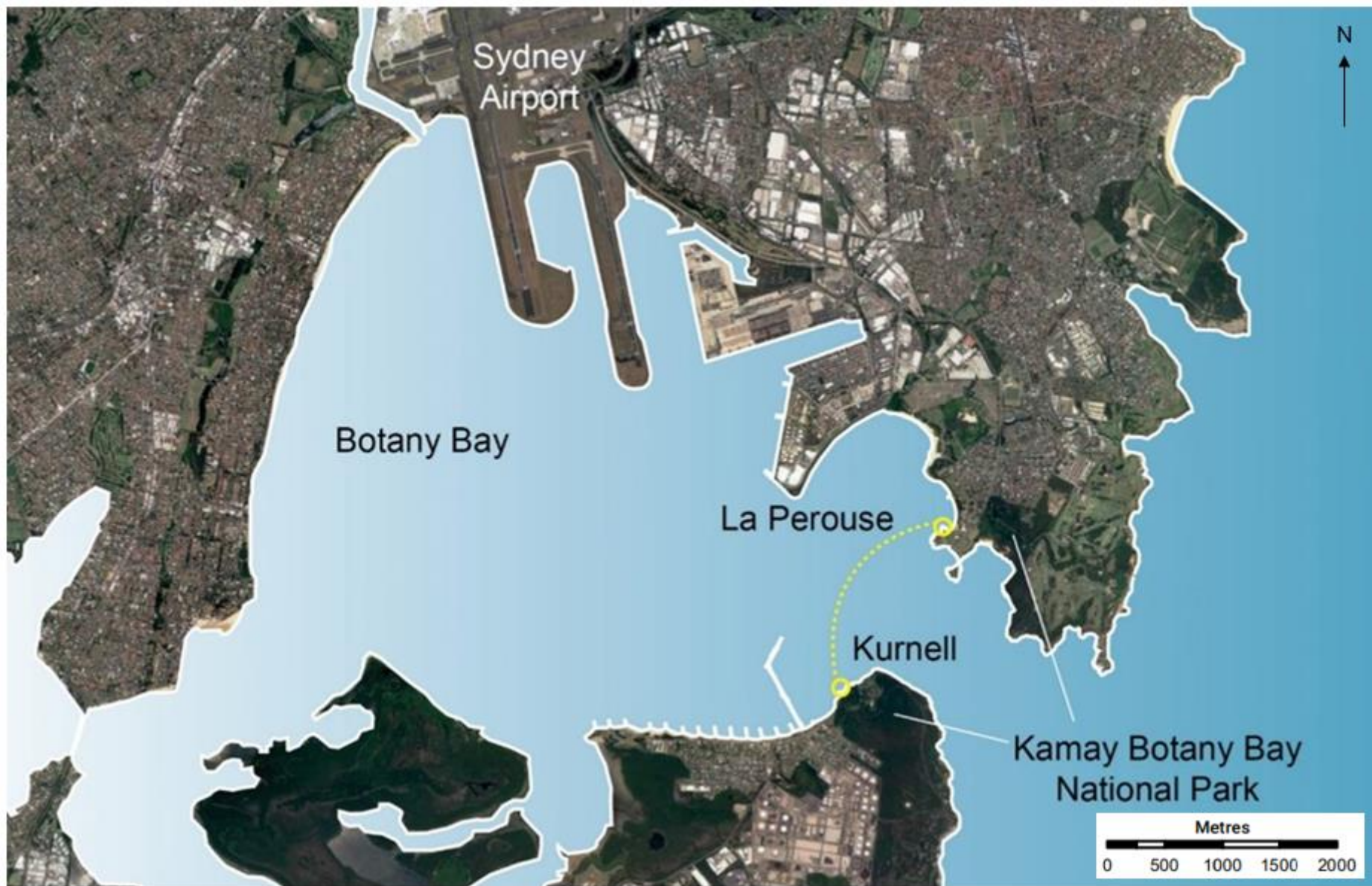


Figure 1-1: Project location – regional context

1.2 Statutory context

In early 2020, Transport for NSW formed the opinion that the project may significantly impact on key heritage and biodiversity values in Botany Bay projected under NSW legislation. Therefore, rather than self-determining whether to build the project, Transport for NSW sought approval from the Minister of Planning and Public Places in accordance with Division 5.2 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). This meant the project was classified State significant infrastructure in accordance with Clause 14 and Schedule 3 of State Environmental Planning Policy (State and Regional Development) 2011.

Transport for NSW also identified that the project may significantly impact on various matters (values) that are of national environment significance (MNES). It therefore referred the project to the Australian Government Department of Agriculture, Water, and the Environment (DAWE) in October 2020 to decide if it needed controlling under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Department's Secretary decided that the project should be controlled under the EPBC Act in January 2021. This is because of its potentially significant impact on nationally significant heritage places and various threatened species and communities in Botany Bay.

In accordance with the bilateral agreement between NSW Government and Commonwealth Government, a single EIS was prepared to assess the significance of the project's potential impacts.

1.3 Exhibition and notification

1.3.1 Exhibition

The EIS was exhibited by DPIE for 28 days from 14 July 2021 to 11 August 2021. The exhibition was advertised in the Daily Telegraph, Sydney Morning Herald and St George & Sutherland Shire Leader on 14 and 21 July 2021. It was also exhibited on the DPIE and Transport for NSW websites.

1.3.2 Community notification

There were two notifications sent to the community:

- A four-page community update sent to 6,262 properties on 12 and 13 July 2021. 1,454 updates were sent to properties on the Kurnell side and 4,808 to properties on the La Perouse side. The update summarised the project's key features, details of where to view the EIS, registration details and times for the information sessions (see section 1.3.3), and detailed instructions for how to make a submission to the EIS.
- A further letter notification was sent to the same 6,262 properties on 14 July 2021 to confirm that the information sessions would be online due to Covid-19 restrictions.

In addition, an eight-page EIS summary document and a postcard were produced and distributed. The intent was to have these at key outlets including the National Parks and Wildlife Service (NPWS) office at Kurnell and the La Perouse Museum. However, these locations were closed due to Covid-19 restrictions. Instead, they were sent to venues that remained open including coffee shops and chemists on both sides of the Bay.

1.3.3 Direct contact

Key stakeholders who had previously participated in project consultation activities but had not contacted the project team, received calls to remind them of the exhibition and how to make a submission. This included the representative of the South Sydney Amateur Fishing Association and the president of the Kurnell Progress and Precinct Committee.

Transport for NSW held four online community consultation sessions during the exhibition period. Each session involved a 40-minute presentation with up to a further 80 minutes for interactions

with the project team to answer questions. There were two Saturday sessions from 10 am to 12 pm (held on the 24th and 31st of July) and two weekday sessions from 5 pm to 7 pm (held on the 28th of July and 3rd of August). These sessions were capped at 30 participants to encourage active discussion. There were 107 people who signed up for the information sessions and 50 people who attended. Of those who signed up, 70 had not previously contacted the project team. These individuals were added to the database and sent information about the project and how to make a submission.

1.4 Purpose of the document

118 submissions were made on the exhibited EIS. The Secretary of the DPIE provided these to Transport for NSW on 12 August 2021.

In accordance with section 5.23 of the EP&A Act, the Secretary required Transport for NSW to respond to the issues identified in the submissions from members of the public, organisations and public authorities.

This Response to Submissions Report comprises four chapters and five appendices:

- Chapter 1 provides an overview of the project, EIS, exhibition and purpose of this report
- Chapter 2 includes a response to the public submissions and organisations
- Chapter 3 includes a response to public authority submissions
- Chapter 4 sets out four project refinements made since exhibition of the EIS
- Appendix A summarises the submissions and where they are responded to in the report
- Appendix B includes revised mitigation measures
- Appendix C provides the project's Urban Design and Landscape Plan which outlines the final design
- Appendix D provides the project's Marine Biodiversity Offset Strategy
- Appendix E provides an addendum to the Marnie Biodiversity Assessment Report.

No project changes are proposed that would require an Amendment Report or Preferred Infrastructure Report to be prepared.

2 Public and organisation submissions

The following chapter lists the responses to the issues raised in the public and organisation submissions.

2.1 Respondents

A total of 92 public submissions and 12¹ organisation submissions were received at the close of exhibition period on 11 August 2021. Another seven submissions were received after the 11 August 2021 and are considered late submissions. Late submissions are not counted in the overall tally and statistics reported below. They are also not displayed on the Major Projects website. However, they were reviewed and the issues responded to in this report.

The direct community notification to 6,262 properties generated 92 public submissions. Therefore, about 1.5 per cent of those contacted made a submission.

2.2 Overview of the issues raised

Each submission was individually reviewed. The issues raised in each submission were extracted and collated. Where similar issues were raised in different submissions, only one response is provided.

Of those that made a submission:

- 17 (16 per cent) support the proposal
- 78 (75 per cent) object to the proposal
- Nine (nine per cent) did not offer a position on the proposal.

The main issues raised by the public and organisations can be categorised into the following topics:

- Project viability
- Cruise terminal
- Design of the wharves
- Operation of the wharves
- Heritage
- Biodiversity
- Traffic and parking
- Cycling
- Access
- Character and amenity
- Noise and vibration
- Soil, water and contamination
- Decision making process.

The following sections respond to the issues raised. Appendix A outlines which issues respond to which submissions.

¹ Note that the Major Projects website includes Sutherland Shire Council and Port Authority of NSW submissions under the organisation tab, however they are public authority submissions.

2.3 Project viability

Submission numbers

25524770, 25891593, 25753921, 24534612, 24624972, 24638737, 24698075, 24863543, 24881103, 24960075, 25181214, 25210723, 25256004, 25383075, 25387208, 25389496, 25457983, 25529101, 25576449, 25577133, 25585227, 25587554, 25587773, 25588977, 25589008, 25589331, 25589756, 25625492, 25674509, 25695988, 25713376, 25754831, 25755710, 25769814, 25775347, 25780784, 25790809, 25792796, 25844755, 25871520, 25885898, 25896028, 25898884, 25991522, 26344710.

Issue description

1. An economic and environmental cost/benefit analysis is needed
2. The project was meant to commemorate the 250th anniversary of Captain Cook's arrival in Australia, which has passed
3. Concern that the experience of arriving by boat would only reinforce the perceived history of invasion of the land
4. The project favours commercial operators (including power craft) at the expense of other users (such as small water craft) and the environmental health of Botany Bay
5. Residents from Kurnell would not use the service to get to the city as it would be a two-hour trip
6. The old ferry service by all accounts was not financially viable. It seems unlikely it will be viable now. It stopped operating in May 1965, not when the wharves were destroyed in 1974
7. Not enough locals and tourists will use it to make it viable
8. Taxpayers will have to bear the cost of the project and the benefits for the Government to be subsidising an operator are unclear
9. The maintenance and operational costs are unknown as it is unclear whether the Government will subsidise the operator
10. Additional routes/stops are required to make the ferry service viable
11. Alternatives such as a low-cost bus routes have not been considered.

Response

A detailed business case assessment was carried out using the NSW Treasury investor assurance guidelines. This is needed for all public infrastructure projects. It involved a holistic assessment that considered the project's expected economic and societal benefits with the estimated whole of life costs (ie capital cost combined with long-term maintenance and operational costs). In addition, a fundamental project objective is to ensure that environmental impacts would be minimised, and where required, managed or offset appropriately.

In the business case assessment, various assumptions were made regarding whole-of-life costs, demand, and the specifics of ferry operations and the operator model. These assumptions were informed by various inputs and analyses including (but not limited to): site investigations, design development, demand modelling with Census and survey data, and consultation with industry stakeholders and the community.

The business case assessment demonstrated the project was a justified investment because the long-term direct and wider benefits to the Government and community are predicted to justify the costs, and therefore the project economically viable. The assessment outcome also aligned with the conclusions of the studies that examined the feasibility of reinstatement of the wharves, undertaken in 1999 and 2016.

The wharves would be mainly used to service a ferry for visitors to the area, while being used by the community, for cultural, tourism and recreational purposes. While the service's use by commuters cannot be fully discounted, this is certainly predicted to be a secondary use as evidenced from feedback from the community, with any commuters mainly travelling from Kurnell to the eastern suburbs and the City. The wharf infrastructure would also be available for short-term use by non-ferry commercial vessel operators, such as whale watching companies, while recreational boat users would be able to access the wharf (refer to Section 2.6 below).

Although an early desire from Government was for the project to coincide with the 250th anniversary of HMB Endeavour's arrival in Botany Bay, this was not the singular project objective (refer to Chapter 3 of the EIS).

The stated benefits from reinstating the wharves, as outlined in Chapter 3 of the EIS, are:

- Significant cultural and economic benefits to local Aboriginal people providing a meaningful step towards reconciliation at the location of the First Meeting Place
- Enabling realisation of the Kamay Botany Bay National Park Kurnell Master Plan objectives and benefits through an improved sense of arrival and increased visitation on both sides of the Kamay Botany Bay National Park
- The missing link for walking and cycling routes around Botany Bay and along the coastline
- Improved access and facilities for recreational vessels
- Investment opportunities leading to creation of jobs and wider economic benefits, in particular to the construction, tourism and hospitality sectors
- Creation of active transport alternatives facilitating mode shift away from private vehicle use and net reduction in carbon emissions
- Safer access for recreational fishers contributing to a potential reduction in rock fishing incidents in the region.

A key objective of the project from inception has been to understand, acknowledge and celebrate the cultural significance of the sites to the local Aboriginal community particularly through connection to culture, nature, land and water (Country), and the creation of opportunities for meaningful community participation in the project across all phases. The project has endorsement from the La Perouse Local Aboriginal Land Council (LPLALC), as evidenced by their submission. However, it is acknowledged that this may not necessarily represent the views of some people within the Aboriginal community. The local Aboriginal community consultation has not raised the concern that the project would reinforce themes of colonisation, but rather provides an opportunity to re-connect the headlands.

The project also supports key initiatives in the following Government strategies and plans as outlined in Chapter 3 of the EIS:

- NSW Future Transport Strategy 2056 (Transport for NSW, 2018)
- South East Sydney Transport Strategy (Transport for NSW, 2020)
- NSW Tourism and Transport Plan (Transport for NSW, 2018)
- Transport for NSW's Reconciliation Action Plan (Transport for NSW, 2019)
- Partnership Agreement on Closing the Gap (Coalition of Aboriginal and Torres Strait Islander Peak Organisations and Council of Australian Governments, 2018)
- NSW Maritime Infrastructure Plan 2019-2044 (NSW Government, 2018)
- Kamay Botany Bay National Park Kurnell Master Plan (NSW DPIE, 2019)
- Kamay Botany Bay National Park Draft Plan of Management (NSW DPIE, 2020).

An estimate of potential demand for a ferry service over the period of its operation was developed to inform the business case assessment. A bespoke model was developed to represent the existing transport and visitation choices within the Kamay Botany Bay National Park, and how the ferry service might attract users. The demand estimate was benchmarked against actual patronage data on similar smaller scale ferry services operating across Greater Sydney and NSW, including Cronulla to Bundeena, Palm Beach to Ettalong, and routes from Brooklyn on the Hawkesbury River.

While the operating model and specifics of the ferry service have not yet been confirmed, procurement options have been investigated. Through market sounding with potential ferry operators it was determined that the most likely viable model will be one where the Government part-subsidises the revenue intake from a private operator and regulates them over a fixed term. There are several examples of this operating model being successfully implemented in NSW (for example, the Cronulla to Bundeena service operates under a similar model).

Maintenance and operational costs have been estimated across the serviceable life of the wharves. The NSW Government will pay these costs. The Government does not subsidise the cost of maintaining the ferry vessel, this would be borne by the operator.

Transport for NSW is aware of the desire by some parties to expand ferry services to locations within Botany Bay beyond La Perouse and Kurnell. Submitters have expressed interest for new wharves at Sans Souci or Brighton Le Sands to complement this project. For the purposes of the current planning application, the project scope is limited to the reinstatement of wharves at La Perouse and Kurnell, as this is part of the Kamay Botany Bay National Park Kurnell Master Plan. The proposal for a La Perouse and Kurnell ferry service is viable without other services. However, the design of the wharves allows for their use within a potential future expanded ferry network if implemented in the future by others.

Chapter 4 of the EIS outlines how a bus service was considered early on in the project development stage. Whilst increasing the frequency of existing bus services, or providing a dedicated bus service, would be relatively inexpensive, it would not achieve the project objectives because it would not provide tourism-related commercial vessel and recreational vessel water borne access to La Perouse and Kurnell.

2.4 Cruise terminal

Submission numbers

25256004, 25389496, 25524770, 25576449, 25585227, 25589008, 25641516, 25674509, 25695988, 25713376, 25713376, 25754831, 25769814, 25790809, 25792796, 25806071, 25885572, 25885898, 25895184, 25896028, 25902282, 25589331, 25820785, 25871520, 25894952, 25898884, 26344710.

Issue description

1. The project is the first step to the cruise ship terminal project.
2. The Government will not tell the public that the project would not be extended and used for a cruise ship terminal
3. There is no viability for the project without it being linked to the cruise ship terminal project.

Response

The Kamay Ferry Wharves proposed is part of the Kamay Botany Bay National Park Kurnell Master Plan, which does not include any cruise terminal projects. The Kamay Ferry Wharves project is independent of, and separate to, any other infrastructure or development proposals for Botany Bay or the wider locality. This includes the cruise terminal proposal. The location and design of the wharves would not be able to accommodate cruise ships due for a variety of reasons including the limited water depth.

The project viability issues are addressed in section 2.3 of this report. A detailed summary of the benefits can be found in Chapter 3 of the EIS.

2.5 Design of the wharves

Submission numbers

24638737, 24863543, 24881103, 24960075, 25106037, 25210723, 25256004, 25387208, 25389496, 25457983, 25524770, 25529101, 25576449, 25589331, 25585227, 25587554, 25587773, 25589008, 25625492, 25641516, 25695988, 25713376, 25754831, 25769814, 25775347, 25780784, 25790809, 25791403, 25792796, 25806071, 25871520, 25882925, 25885572, 25885898, 25894952, 25896028, 25896310, 25896509, 25896517, 25898884, 25902282, 25903037, 25991522.

Issue description

1. The wharves should have timetable displays
2. The wharves should have toilets
3. There should be interpretive signs on the wharves providing interesting historical information
4. The wharves are much larger than the previous wharves and their length is unclear
5. It is unclear why the ferries need to be up to 40 metres long
6. The wharf design is an overdevelopment, extending out into Botany Bay and does not fit with the character of La Perouse
7. The waiting area roof structure is bulky and would cause the wharf structure to be much higher than the previous wharf
8. The wharves need to withstand extreme storm events.

Response

A description of the completed project can be found in Chapter 5 of the EIS. Timetable displays and signage are proposed and would be placed at appropriate locations for clear wayfinding for passengers. The details of signage and timetables would be confirmed in consultation with the future operator, NPWS and the local councils.

Toilets are not proposed at the wharves as there would be facilities available on the ferries and there are existing public toilets at La Perouse and Kurnell.

The wharves would include plaques or other integrated elements to share stories and historical information. The details of this signage would be developed in consultation with the local community. Table 5.4 of the EIS describes the contributing design principles, including the engagement of an Aboriginal artist/designer to incorporate cultural narratives into the wharf design and the inclusion of information plaques inlaid in the balustrades. The Urban Design and Landscape Plan (UDLP) attached as Appendix C to this report, shows the locations of proposal plaques and how Aboriginal narratives would be incorporated into the wharves.

The wharves at La Perouse and Kurnell would respectively extend 180 metres and 230 metres from the shorelines. As the La Perouse berth is at an angle to the jetty, the total wharf would extend about 100 metres perpendicular to the shoreline. Some submissions raised the concern that this is an overdevelopment, however this length is required to ensure sufficient and safe depth can be achieved to cater for the ferry vessels.

The wharves are designed to cater for a ferries up to 40 metres in length, with a two metre maximum draft. This size was determined based on a vessel fleet study and market soundings with potential ferry operators.

Chapter 4 of the EIS outlines the design development process that occurred to identify a preferred design option. The process considered the Ecologically Sustainable Development principles and it opted to adopt a simple and cost-effective design, while providing for the current and future generational use of the wharves, all the while minimising environment impacts. Elements were excluded from the design which would have increased bulk such as toilet facilities, more berths and larger waiting areas.

Chapter 13 and Appendix M of the EIS assessed the project's landscape character and visual amenity impacts. The design objectives and principles to minimise the project's visual impact are outlined in the Urban Design and Landscape Plan (UDLP) (Appendix C of this report). Section 2.8 addresses submissions about character and amenity.

The wharves are designed to provide a safe and practical shelter area for wharf users. The roof structure is designed to be slimline to avoid unnecessary bulk. The roof incorporates translucent fibreglass to allow light through and break up the structure. The size of the waiting area and width of the wharves is required to provide for disability access.

The wharves have been engineered to withstand storm events. Coastal modelling and site-specific studies were carried out to determine the location and orientation of the new wharves to account for storm events in excess of those that occurred in 1974. It is also worth noting that the previous wharves were built of timber, whereas the new wharves would be constructed from more durable and storm-resistant materials including steel and reinforced concrete. To protect the wharves against storm events and sea level rise, the jetty component of the wharves would be built four metres above the low tide level. They would also include a reinforced concrete and steel deck.

2.6 Operation of the wharves

Submission numbers

24997291, 24638737, 24960075, 25210723, 25256004, 25387208, 25389496, 25457983, 25524770, 25529101, 25576449, 25577133, 25585227, 25587554, 25587773, 25588977, 25589008, 25589331, 25625492, 25641516, 25674509, 25695988, 25713376, 25754831, 25790809, 25792796, 25806071, 25820785, 25844755, 25871520, 25885898, 25894952, 25896310, 25754831.

Issue description

1. Lack of information on the size, type and frequency of the ferry service that would be used
2. The ideal ferry would be the ex-Manly ferry
3. Unclear where the ferry would be moored overnight
4. Will a spare vessel be available when the original is out of service?
5. Lack of information on the swept ferry path
6. The swept ferry path does not consider the consultation held with recreational fishing and diving groups (divers may have to surface within the swept ferry path)
7. An accurate map of isolated reefs has been developed using a GPS logger. This resource should be used by the ferry operators when navigating between the two wharves
8. Concerns about the safety of other maritime users such as small boats, kayaks, windsurfers, beach users and divers
9. Strong winds and frequent storms would prevent the service operating full time, and it would strand people on the opposite side of the Bay
10. Lack of information on the number of, or type of commercial activities that would be permitted or how these will be regulated
11. Transport for NSW should limit the number and type of commercial vessels that can access the wharves
12. The project should consider future growth and operation of the Port and the potential for future Port developments.

Response

The exact size and type of vessel and frequency of the ferry service would be determined once an operator is selected. The EIS assessment has applied a precautionary principle by assessing a range of vessel sizes. As outlined in Chapter 5 of the EIS, the wharves could cater for a vessel up to 40-metres long, with a two-metre draft. The berth for recreational vessels would cater for vessels up to a maximum of 20 metres long with a 1.8 metre draft. The use of the ex-Manly ferry would depend on the operator selected, and whether this is part of their fleet.

Ferries would only use the wharves for boarding and alighting passengers during daytime hours. The overnight layover, refuelling, cleaning and maintenance of vessels would be undertaken at an existing facility within Botany Bay. This would depend on the selected operator.

If the ferry vessel was out of service, an alternative would be used during this period. This is consistent with the Sydney Harbour ferries. The replacement vessel would be no larger than the usual ferry vessel.

The exact route between the wharves would be determined once an operator is selected to run the service. The swept ferry path shown in Figure 1-2, 5-1 and 5-13 of the EIS is an indicative area

where a ferry may travel between the two wharves. This pathway would not be a “no-go area” for other users, but rather the likely route of the ferry service. Consultation with recreational fishing groups has been carried out and would be further explored to determine the exact pathway of the ferry vessels, so that important recreational areas can be avoided as much as possible. The global positioning system (GPS) logger of existing reefs along with existing navigational charts would help to determine the path.

Botany Bay users such as sports craft, small boats, kayaks, windsurfers beach users and divers would have to give way to the ferry vessel when it is approaching/ departing the wharves. There is no restriction on certain classes of vessels moving across Botany Bay. Therefore, the risk of divers surfacing within the swept ferry path is not unique to this project. Maritime safety rules would apply for vessels in and around the wharves. Signage would be installed at the wharves to communicate this.

The wharves are designed to accommodate a ferry service in all-weather except extreme storm events; namely those that would only statistically occur once a year or less. During these storms, the ferry service would stop. This would ensure that only safe public access is provided. The ferry operator would notify the public if the ferry service would not be running due to weather events.

The wharves are designed to be multi-user wharves. This means that they could be used by commercial and recreational vessels. These could be fishing charters or small whale watching vessels. The exact number of commercial and recreational users cannot be precisely known as it would be influenced by the needs and wishes of consumers. For assessment purposes an average of three vessels per day was assumed. On a sunny weekend, this would be more, but on a poor weather week day this is likely to be less. The number of vessels would be regulated by Transport for NSW in close consultation with the Port Authority of NSW, in accordance with the marine legislation including the *Ports and Maritime Administration Act 1995*, the *Marine Safety Act 1998* and the *Marine Pollution Act 2012*. Depending on the demand, this could be through a scheduled process or open access.

The ferry vessels would need to give way to any vessels heading into or out of Port Botany and the Caltex Kurnell Terminal. The ferry service would also have to give way to any future Port operations.

2.7 Heritage

Submission numbers

24613879, 24834297, 24960075, 25181214, 25210723, 25529101, 25585227, 25587773, 25625492, 25641516, 25722405, 25734521, 25775347, 25790809, 25791403, 25806071, 25844755, 25871520, 25885898, 25894852, 25903037, 25991522.

Issue description

1. Concerns about the loss and damage to Aboriginal and non-Aboriginal archaeological sites and heritage values
2. Impacts to values of Bare Island’s heritage listing have not been considered
3. The historic ferry shelter at Kurnell should remain
4. Request to remove all existing exotic plantings at Kurnell as they do not contribute to the heritage of Kurnell.

Response

Chapter 7 to Chapter 9 and Appendix E to Appendix F of the EIS respectively reported on the predicted Aboriginal, non-Aboriginal and underwater heritage impacts. The project has been designed to avoid existing heritage features as much as possible. Some direct impacts are unavoidable, and indirect impacts can be managed and mitigated. There is always the potential for unidentified heritage items to be within the La Perouse and Kurnell construction boundaries. Construction may result in these sites being directly and/or indirectly impacted (eg partially and/or

directly destroyed by constructions works or through vibration). These impacts would be managed through unexpected heritage items procedures, which requires that works stop, the appropriate people are consulted, an assessment is carried out and appropriate management measures are put in place. A Heritage Management Plan (refer to Appendix A of the EIS) would be prepared and implemented to avoid and mitigate heritage impacts during construction. The Plan would include sensitive area maps, consultation requirements, further archaeological investigations, a salvage excavation program, heritage inductions, unexpected finds procedure.

Section 8.2.2 of the EIS outlines the heritage structures on Bare Island. These are outside the area where construction activities would take place. This means none of the heritage structures would be directly impacted by the project. As the nearest structure is about 150 metres from the construction boundary, there would also be no indirect impacts (such as vibration impacts) to these features.

The historic ferry shelter at Kurnell would remain in place. As excavation for landscaping would be carried out within two metres of the existing ferry shelter there is potential for indirect vibration impacts. Management measures such as using hand held tools and not vibration intensive equipment would be outlined in a Heritage Management Plan to avoid these impacts (refer to section 8.4 of the EIS).

There are numerous existing exotic vegetation species that contribute to the heritage listing of the Botanical Collections Sites at Kurnell. One African Olive tree would be removed to install the utilities trench for power and water services (refer to section 8.3.1 of the EIS). Any new planting would be endemic to the local area and locally sourced.

2.8 Biodiversity

2.8.1 Marine biodiversity

Submission numbers

25895036, 25524770, 25892000, 25858430, 25891593, 25753921, 24626109, 24638737, 24960075, 24979424, 25106037, 25181214, 25200045, 25210723, 25256004, 25383075, 25387208, 25389496, 25457983, 25529101, 25576449, 25577133, 25585227, 25587773, 25589008, 25589331, 25638645, 25641516, 25695988, 25713376, 25754831, 25755710, 25761510, 25769814, 25775347, 25790809, 25792796, 25817456, 25820785, 25865559, 25875233, 25885572, 25885898, 25891478, 25894852, 25895184, 25896028, 25896310, 25896455, 25896509, 25896591, 25896672, 25898796, 25898884, 25899744, 25902282, 25903037.

Issue description

1. The EIS does not assess all marine species
2. The project will negatively impact seagrass, White's seahorse and other species, resulting in harm to or decline of the species which will not recover after construction.
3. The EIS does not assess impacts to Bare Island dive sites
4. The ferry swept path may impact squid breeding
5. The continuous movement of vessels will impact on local sub-water structure and habitat
6. Offsets are not provided and may not be sufficient to protect endangered species.

Response

Chapter 10 and Appendix H of the EIS assessed the potential impacts to marine biodiversity, demonstrating that in order to build the project there would be some unavoidable impacts. These impacts would be managed by a Biodiversity Management Plan as part of the Construction Environmental Management Plan.

Species assessments

A number of submissions raised the concern that the EIS assessment does not assess all marine species, particularly those that may be commonly sighted in Botany Bay. The EIS, including the Marine Biodiversity Assessment Report (Appendix H) and the Biodiversity Development Assessment Report (BDAR) (Appendix I) have been carried out in accordance with the *Biodiversity Conservation Act 2016* (BC Act), the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or the *Fisheries Management Act 1994* (FM Act). These Acts are supported by regulations and a series of technical guidelines that provide agreed methods for assessing biodiversity impacts. These guidelines set out a process of identifying ecological value/potential by firstly carrying out desktop studies. A field investigation is then carried out to understand whether the ecological value and potential of the study area is consistent with the findings from the desktop study. Where there is a reasonable potential for a threatened species that is protected under State or Commonwealth law to be present in that project area, then targeted ecological species surveys are carried out. This process was followed for the terrestrial and marine biodiversity assessment carried out for the EIS and defines the set of species that were subject to targeted ecological survey.

The ecological legislation outlined above also covers non-threatened species in terms of protecting broader conservation values. While proposed mitigation measures set out in 10.4.2 and 11.4.3 of the EIS focus on threatened species, they also serve to minimise wider ecological impacts for all species, including those identified in the above submissions.

Table 2-1 responses to specific species that were raised in the submissions and outlines how existing management measures would minimise impact to these species if present.

Table 2-1: Species or habitat raised in submissions

Species	Response
Seagrasses	<p>Seagrass have been identified during the biodiversity survey described in Chapter 10.3.2 of the EIS. The potential impact on <i>Posidonia australis</i> was further and specifically assessed in section 10.2.3 of Appendix H of the EIS, due to its threatened status under the EPBC act and FM Act.</p> <p>It is acknowledged that shading from the wharf would prohibit some of the seagrass community from recovering post-development and cause fragmentation in the wider habitat. Potential offsets that have been explored include rehabilitation of habitat via transplanting, increasing alternate seagrass habitat quality by addressing catchment water quality and pollution and allocating grants and collaboration to support further research into transplanting seagrasses. Further details can be found in Chapter 10, section 10.4.3 of the EIS.</p>
Fish	<p>Black Rockcod, White's Seahorse, Pot-bellied Seahorse and Weedy seadragon were assessed under the combined subheading fish in Table 10-3 of the EIS. Targeted surveys were undertaken for White's seahorse and Black Rockcod in accordance with the EPBC Act, neither were identified during the survey period. The species are known to the area and it was assumed that they are present. Suitable good quality habitat is located outside of the construction area for both species.</p> <p>The Red Indianfish, Red Wide-bodied Pipefish and Bare Island Anglerfish/Red-fingered Anglerfish were not assessed as they are not listed under the EPBC Act or BC Act. The environmental management measures proposed in section 10.4.2 of the EIS would manage potential impacts on all fish species.</p>
Marine reptiles	<p>Turtles, including the Loggerhead Turtle and Green Sea Turtle, were assessed under section 10.3.4 of the EIS. The Hawksbill Turtle, listed as vulnerable under the EPBC Act, is raised as a species of concern in a submission. This species is transient and there is no known breeding habitat in the project area, therefore it is</p>

Species	Response
	considered unlikely the species will inhabit the area. Should turtles be present during construction, it is likely that they would be deterred from the site by indirect impacts (noise and vibration). The soft start measures proposed would encourage marine species (including turtles) to move away from the area.
Marine mammals	The Australian fur-seal, Australian sealion and New Zealand fur-seal were assessed within the marine mammals subheading of Table 10.3 of the EIS. No threatened species of dolphins have been identified as likely to occur within the area. Similar to turtles, these species would be deterred from the construction areas with the use of the soft start measures and observation for marine species.
Cauliflower Soft Coral	Cauliflower soft coral is a matter of national environmental significance and was assessed in section 10.3.4 of the EIS. The coral was not identified within the survey area. Furthermore, the rocky reef and seagrass that is present is not suitable for soft coral to grow on. There is habitat suitable to support soft coral in the high-current and exposed areas of Bare Island and northeast of the Kurnell wharf location. These potential communities are outside the construction boundaries and would not be impacted by this project.
Other	Nudibranch are a group of soft bodied molluscs, also referred to as sea slugs, which contain numerous species of nudibranch. Nudibranch are a species within the mollusc family and are addressed in section 3.3 of Appendix H as part of the benthic infauna survey. They may occur in Botany Bay and due to the low mobility of these species, if they are present within the construction boundaries they could be directly impacted during construction. As nudibranchs are common and not endemic to Botany Bay, any impacts to these species would not impact their overall distribution or abundance.

Effects on Bare Island dive sites

Bare Island is located outside of the construction boundary at La Perouse. Therefore, there would be no direct impacts to Bare Island or surrounding dive sites. Indirect impacts during construction such as underwater noise impacts could change the behaviours of marine species at these dive sites.

Piling installation may generate noise and vibration at levels that are predicted to result in a temporary behaviour response (ie. they swim away from the area) in certain noise-sensitive marine species, as identified in section 10.3 and 16.4 of the EIS. This could result in less marine species around Bare Island during the piling activities. Piling is predicted to occur over four months at each site. During this time, diving in and around the wharves would be restricted to ensure public safety (ie to avoid underwater noise impacts on human receivers as well). Once the marine construction is complete, marine species are predicted to return to the area.

Concerns have been also raised about the impact of sedimentation and turbidity on dive sites. While the construction works would generate turbid waters, the extent and scale of the disturbance would be limited, as outlined in section 18.3.1 of the EIS, the sediment dispersion is not expected to extend to Bare Island as it is located at least 500 metres from the proposed wharf. Environmental management measures proposed in section 18.4 of the EIS would mitigate any sediment disturbance or turbidity impacts.

Bare Island is located away from the indicative ferry swept path, and therefore would not be impacted once the service is operational.

Ferry swept path

As outlined in section 2.6, the exact vessel pathways would be determined once an operator is selected to run the ferry service. The exact pathway of the ferry vessels would be determined in

consultation with special interest groups to avoid important marine conservation areas, recreational or fishing areas such as the squid breeding habitat as raised by a submission.

Impacts on sub-structure and habitat

Once operational, there would be localised impacts on the marine environment in and around the wharves. The shading caused by the wharves would restrict seagrasses from growing (refer to section 10.3.2 of the EIS). The wharves would shade an area of habitat that would have already been impacted during construction (a distance of about nine metres from the wharf structures). Other habitat shaded by the wharves, such as the rocky reef habitat, are not as sensitive to shading impacts as seagrass.

The propeller wash from vessels would have a localised impact on sediment of the seafloor in and around the wharves (refer to Table 10-5 of the EIS). This would prevent habitat from re-growing in these areas.

Offsets

Appendix D includes the project's Marine Biodiversity Offset Strategy (MBOS). The MBOS has been prepared in consultation with DAWE, DPI Fisheries, the Gamay Rangers, and the University of NSW (UNSW) who have experience at seagrass rehabilitation in Sydney. The MBOS establishes the process for identifying and securing offsets before starting work. The EIS identified the need to offset impacts to:

- *Posidonia australis* TEC (EPBC Act and FM Act),
- Type 1 and Type 2 habitats (FM Act), and
- White's Seahorse habitats (EPBC Act and FM Act).

The MBOS proposes two ways to offset the project's marine biodiversity impacts:

- Rehabilitating and improving seagrass in Botany Bay. This would also offset the loss of White's seahorse habitat in the area, while providing an improved habitat and environment for the existing *Posidonia australis* meadow.
- Creating independent artificial structures that will form reef habitat for species like seahorses.

2.8.2 Terrestrial biodiversity

Submission numbers

25181214, 25200045, 25536315, 25896509, 25902282.

Issue description

1. Concerns that terrestrial biodiversity will be lost and that mitigation measures have not been developed
2. Not all bird species known to exist at Kurnell and La Perouse are considered in the assessment
3. Concerns about potential impacts to Towra Point Nature Reserve
4. Birding NSW should be consulted prior to construction.

Response

Chapter 11 of the EIS assessed the impact of clearing 0.06 hectares of native vegetation and removing six trees. This amount of vegetation clearing and tree removal has been reduced as far as practicable, whilst still allowing the project to be constructed. Further mitigation measures such as tree protection and exclusion zones would be established around areas of vegetation to be protected during construction. Where native vegetation is cleared, biodiversity offset credits would be applied (refer to section 11.4.2 of the EIS). Biodiversity offsets are a legislative measure that ensures that where impacts are unavoidable, areas of native vegetation elsewhere are committed to preservation through the purchasing of the biodiversity offsets.

A Biodiversity Management Plan (refer to section 11.4.3 of the EIS) would be prepared and implemented to avoid and mitigate impacts to terrestrial biodiversity during construction. This would include mapping sensitive areas, site inductions, pre-construction fauna and flora clearing, vegetation and protection measures and unexpected finds protocol.

As discussed in section 2.8.1 above, species assessments are determined by the presence of a species within a study area based on an approved assessment method. A number of submissions raised the concern that not all relevant species were assessed in the EIS. The following considers these species.

- Birds that are likely to occur within the project area that are listed under the EPBC Act or the BC Act were assessed in section 10.2.2 of the EIS.
- Species that are not listed under the BC Act or EPBC Act were not assessed for the reasons described above. This included: Australian raven, Australian white ibis, masked lapwing, pied currawong, silver gull, sulphur crested cockatoo, superb fairy wren, great cormorant, little black cormorant, little pied cormorant, gannet, nankeen kestrel, and kelp gull.

Potential impacts to Towra Point Nature Reserve are assessed in 11.2.4 of the EIS. While the Towra Point Nature Reserve is a Ramsar wetland site, and considered a matter of national environment significance (MNES), it is at least two kilometres from the proposed wharf at Kurnell and therefore the project is not likely to have any impact on this reserve.

The Biodiversity Management Plan described above, would include measures to ensure impacts to birds are avoided and mitigated, such as a slow start procedure, fauna clearing procedure, fauna handling procedure and biodiversity site inductions and training. Birding NSW had the opportunity to participate in consultation through the exhibition period, and the Environment Energy and Science Group of DPIE have been consulted through the EIS process. As impacts to birds would be avoided and managed through the above measures, specific consultation with Birding NSW is not needed.

2.9 Parking, traffic and transport

Submission numbers

25165115, 25524770, 25858430, 25753921, 24488994, 24613879, 24626109, 24638737, 24834297, 24960075, 25046982, 25106037, 25181214, 25192460, 25200045, 25207501, 25210723, 25215486, 25271161, 25271161, 25272545, 25316212, 25347507, 25383075, 25387208, 25389496, 25457983, 25529101, 25576449, 25577133, 25580846, 25585227, 25587554, 25587773, 25588977, 25589008, 25589331, 25625492, 25649842, 25674509, 25695988, 25713376, 25754831, 25755710, 25769814, 25775347, 25780784, 25790809, 25791403, 25792796, 25796263, 25806071, 25817456, 25820785, 25844755, 25865559, 25882925, 25885572, 25885898, 25896509, 25898884, 25903037, 25947959, 25991522, 26344710.

Issue description

1. The project would generate additional traffic and result in parking issues at La Perouse and Kurnell on weekends and in summer
2. The proposed 13 additional parking spaces at La Perouse is not enough to cater for the project
3. New commercial operators should not be able to use the wharves as it will increase parking demand
4. Designated parking for divers should be provided to accommodate their heavy equipment
5. Access for emergency services would be impacted once operational
6. The project does not consider the proposed changes to local bus services and how this would change people's transport to the wharves
7. The light rail should be extended to La Perouse
8. The project needs appropriate traffic, parking and mass transit solutions.

Response

Chapter 12 and Appendix K of the EIS assessed the project's parking and traffic impacts.

Traffic and parking surveys and onsite observations were carried out to inform the extent of parking issues and the project's potential impact. Parking surveys were carried out on Sunday 2 February 2020 to inform the EIS assessment. These days represent a busy summer weekend.

An analysis was carried out to determine the parking demand generated from the wharves. This assessment considered the demand from users of the ferry service and potential commercial and recreational wharf users. Forecasts from census, and patronage data of similar ferry services (including Cronulla to Bundeena, Palm Beach to Ettalong, and routes from Brooklyn on the Hawkesbury River), suggest there would be around 149,600 passengers that would use the ferry service every year. Of these, 10 per cent of passengers are expected to be new ('induced') visitors. This is a relatively small number, around 50 people per day. This is not predicted to greatly increase traffic congestion as local road and intersection capacity assessments show there is sufficient capacity to accommodate additional private vehicle trips.

Based on the analysis described in section 12.3.3 of the EIS, the proposed 13 car parking spaces at La Perouse and 34 spaces at Kurnell are sufficient to meet the demand generated by the project in 2036. However, this would not alleviate the existing parking issues.

The project's purpose and objective is to cater for people that use the wharves. Parking for specific groups (such as divers) is not proposed, this would unfairly prioritise certain users over others. Kiss and ride parking spaces are proposed which can be used for dropping-off people close to the wharves.

During design development of the wharves, the project team has consulted with emergency service providers. Safe emergency access for police, fire and ambulance would be available to get to the wharves if needed. Maritime emergency services could also berth at the wharves.

Once a ferry operator is selected, Transport for NSW would work with them to schedule ferry times to consider other public transport services including the bus network.

While the project would deliver the wharf infrastructure Transport for NSW has also been considering options for improvement to transport connection to complement the wharves such as more frequent public bus services. This, and a potential increase of the light rail service, is not part of this project.

2.10 Cycling

Submission numbers

25165115, 25192460, 25207501, 25271161, 25272545, 25316212, 25347507, 25580846, 25649842, 24613879, 24488994, 24638737, 24698075, 24834297, 24960075, 24979424, 24997291, 25210723, 25256004, 25383075, 25387208, 25389496, 25529101, 25576449, 25577133, 25585227, 25587554, 25587773, 25589008, 25589331, 25674509, 25769814, 25775347, 25790809, 25792796, 25796263, 25885898, 25891478, 25898884.

Issue description

1. The wharves and ferry service should be friendly to all types of bicycles
2. The project should include more bicycle parking near the wharves that is well-spaced, secure and highly visible
3. The Anzac Parade Loop should be made cycling friendly
4. The Anzac Cycleway from Maroubra/Kingsford to La Perouse should be expedited.

Response

Transport for NSW would only select an operator that would be able to accept bicycles on the ferry given that cycle access is a key benefit of the project (refer to Chapter 3 of the EIS).

At La Perouse, there 10 bicycle rails are proposed, providing 20 bicycle spaces at the landside entrance to the wharf. The location of these bicycle rails is shown in Appendix C of this report.

There are no bicycle rails proposed at Kurnell as this will be delivered as part of the Kamay Botany Bay National Park Kurnell Master Plan, by NPWS.

This project does not involve the extension of any existing or proposed cycleways. The Anzac Bikeway between Kingsford and La Perouse that is identified in the Randwick City Council Bicycle Route Construction Priority Map would be developed separately by Randwick City Council.

2.11 Access

Submission numbers

24997291, 25524770, 24638737, 24960075, 25210723, 25256004, 25387208, 25389496, 25457983, 25529101, 25576449, 25577133, 25585227, 25587554, 25587773, 25589008, 25589331, 25625492, 25695988, 25695988, 25713376, 25754831.

Issue description

1. Construction fencing will impact access for locals and residents
2. Once operational, the wharves, ferry service and additional vessels would restrict access for other Botany Bay uses such as divers and sports craft users
3. By removing access to diving sites for divers, there would be an impact on dive businesses
4. Botany Bay is a Recreational Fishing Haven. How will recreational fishermen be compensated if access to fishing is lost.

Response

Areas would be fenced off during construction for safety reasons (refer to the construction boundaries in Chapter 4 of this report). The entire construction boundary may not be needed for the full 13-month construction period. When areas are not needed for construction they would be open for public access. Safe pedestrian detours would be made around construction areas and would be developed as part of a Traffic Management Plan.

Private property access would be unaffected as described in section 5.2.7 of the EIS.

Once constructed, the construction fencing would be removed and people would be able to access the shoreline around the wharves (refer to section 5.29 of the EIS). Ladders would be installed along the wharves to provide water access for recreational users (such as divers). Once an operator is selected, Transport for NSW would work with all potential users groups to define how the wharves would operate harmoniously. This would ensure conflicts are avoided and safety is maintained (refer to section 2.6 above).

The wharves would not restrict access to Botany Bay for divers and sports craft users. These user groups could use the wharves as outlined in section 2.6. As access to dive sites such as Bare Island, would be maintained, there would not be any impacts on dive businesses.

The project would not remove access to recreational fishing in Botany Bay. The impacts from the project are not expected to reduce fish stocks or fish habitat in Botany Bay. The access to fishing areas would be maintained as outlined in section 2.6 above. Furthermore, the wharves would provide recreational fishers with a safe landside location to fish from. Therefore, no recreational fishing compensation is needed.

2.12 Character and amenity

Submission numbers

24834297, 25695988, 25754831, 25769814, 25775347, 25780784, 25790809, 25792796, 25806071, 25817456, 25844755, 25875233, 25871520, 25885898, 25882925, 25896509, 25896672, 25898796, 25898884, 25790809, 25792796.

Issue description

1. The project would change the character of La Perouse by introducing a large wharf, which would attract commercial activity, making it a busy and noisy tourist hub
2. The proposed wharf would impact views of the La Perouse headland and across Botany Bay
3. The amenity for beach and water uses would be impacted by the operation of the wharves by noise, vessel wake, pollution, rubbish, and reduced water clarity.

Response

The operation of the wharves would increase the number of visitors to La Perouse and Kurnell. It is estimated that 10 per cent of the wharf users would be new visitors. The remainder would be those people who already visit the area.

The operation of the wharves is predicted to increase activity around the wharves by allowing vessels to berth and becoming a gathering place for people to sit, swim and fish. Potential noise impacts from the wharves are assessed in Chapter 15 of the EIS. In comparison to the existing ambient noise levels, the increase in noise generated by the wharves would not be discernible by the average listener and therefore would not affect the comfort of receivers. Further responses to submissions about noise are addressed below in section 2.9.

Impacts to landscape character and visual amenity are assessed in Chapter 13 and Appendix M of the EIS. Some existing viewpoints would have direct views of ferry vessels and wharf infrastructure, while other viewpoints would not be affected. Visual impacts are largely concentrated to viewpoints nearest the wharves. From Frenchmans Beach, the view of La Perouse headland and across Botany Bay would change as a result of the wharf. The wharf would be in the foreground when looking out towards Kurnell headland. The wharf design and in the context of the existing infrastructure in the area, such as Port Botany, Sydney (Kingsford Smith) Airport, and the Kurnell Terminal Wharf, means that wharves are not out of character with the existing landscape character and views.

Rubbish pollution from the wharf users is assessed in Chapter 23 of the EIS. The project would provide two recycling and general waste bins at each wharf to the public to use. The risk of pollution due to vessel spills is assessed in Chapter 24 of the EIS. With the spill mitigation measures proposed (section 24.6), the risk of pollution and bioaccumulation in the marine environment would be minimised and managed.

Chapter 18 of the EIS assessed the potential operational vessel impacts on turbidity and sedimentation. The propeller wash from vessels would create a scour hole. As this occurs, there would be sediment dispersion causing small sediment plumes around the berths. This sediment would disperse and settle quickly to the seabed. The sediment plume would reduce over time as the scour hole is created. The dispersion and deposition of the sediment would not cause a measurable impact on the water column beyond what already exists from the natural coastal processes in Botany Bay. Therefore, reduced water clarity impacts expected around the berths, but not beyond.

Vessel wake on Frenchmans Beach is assessed in Chapter 18 of the EIS. There is about 100 metres distance between the ferry berth Frenchmans Beach. This is intended to provide sufficient space, depth and energy to disperse the wake and ensure there would not impact the shoreline.

The project would create an improved sense of arrival by boat and place making improvements to both sides of the Kamay Botany Bay National Park as outlined in Chapter 27 of the EIS.

2.13 Noise and vibration

Submissions numbers

24834297, 25181214, 25256004, 25387208, 25389496, 25524770, 25576449, 25577133, 25587554, 25589008, 25589331, 25641516, 25695988, 25754831, 25769814, 25780784,

25790809, 25792796, 25844755, 25875233, 25885572, 25885898, 25896509, 25896591, 25896672, 25898796, 25898884.

Issue description

1. The noise from a 13-month construction period would affect people if they are working from home due to lockdowns
2. There would be noise from the ferries and commercial vessels including revving engines, loudspeakers, and vessel horns
3. There would be increased noise from additional cars at La Perouse
4. It is not clear how noise from commercial and recreational vessels could be controlled
5. There are technical inconsistencies in the Appendix O Surface Noise and Vibration Impact Assessment (refer to Table 2-2)
6. The underwater noise mitigation of three zones is vague on the defined boundaries
7. There would be underwater noise impacts to divers and marine species.

Response

Surface noise and vibration

Chapter 15 and Appendix O of the EIS predicted and assessed the project's noise and vibration impacts.

During construction, there would be periods of temporary noisy activities. These activities would not occur constantly throughout the 13-month construction period. Where noisy activities are predicted to impact sensitive noise receivers, these people would be notified at least five days before the activity taking place. This would include those people who may be working from home either through choice or the unlikely outcome that lockdowns would still be in place in 2022. The Interim Construction Noise Guideline (ICNG) (Department of Environment and Climate Change NSW, 2009), which the noise assessment is in accordance with, does consider the amenity of people being home during the day.

Other mitigation measures to be implemented during construction to reduce noise would be outlined in a Noise and Vibration Management Plan (refer to section 15.5 of the EIS).

A number of submissions raised the concern that the operation of the wharves would reduce the amenity of the area by introducing engine noise, loudspeakers and vessel horns, therefore generally making the areas around the wharves noisy. The EIS assessed the potential noise and vibration impacts from the operation of the ferry service. This included vessels approaching, mooring and departing. The assessment considered the noise levels for similar operating ferry services and the effects of commercial/recreational vessels using the wharves. The public announcement (PA) system, ferry horns, and passenger noise at the ferry wharves was also included in the operation modelling predictions. Further information on the noise predictions during operation are outlined in Appendix O, section 5 of the EIS.

The noise from road vehicles associated with the wharves was also assessed. Based on the predicted modelling in Appendix K of the EIS, the increased traffic associated with the wharves is not predicted to result in noise levels increasing by more than 2dB. People can perceive the change when it is more than 2dB.

Commercial and recreational wharf users would need to comply with any rules and regulations when using the wharves. This includes regulations for commercial and privately-owned vessels and the noise they emit. The *Protection of the Environment Operations Act 1997* (POEO Act) and the *Protection of the Environment Operations (Noise Control) Regulation 2008* are two key legislative measures put in place to control noise levels on NSW waterways. These laws primarily exist to address and eliminate offensive noise. Transport for NSW would manage compliance and any complaints.

Table 2-2 provides responses to specific noise-related technical issues raised in the submissions. The responses to these queries raised does not change the validity of the assessment carried out. The noise modelling carried out for the assessment adopted a conservative approach in accordance with ICNG and Noise Policy for Industry (NPfI) guidelines.

Table 2-2: Noise assessment clarifications and responses

Submission comment	Response
In Table 41 of Appendix O the assumed sound power noise levels for recreational vessels (accelerating) are 14dB lower than assumed for the ferry. This approach is not considered conservative, given that a range of different commercial/ recreational vessels could be allowed to use the whares. A more conservative approach would be to assume that the noise levels associated non-ferry vessels are equivalent to ferries.	The wharves are designed to cater for commercial and recreational vessels between two and 20 metres. This is half the size catered for the ferry vessels (up to 40 metres in length). The engine capacity is therefore substantially less. Therefore, the assumed sound power noise levels used for recreational and commercial vessels is appropriate. Refer to the Updated Noise and Vibration Impact Assessment attached as Appendix H to this report.
Note 2 of Table 41 of Appendix O says that recreational vehicle loading noise levels are assumed to be 5dB lower than when accelerating. Either the stated sound power level of 98 dB is incorrect or Note 2 is incorrect as the idle noise level is 14 dB higher than the accelerating level.	The assessment has been revised to model a typical worst case scenario where one ferry vessel and one commercial vessel are berthing at the same time. Any smaller recreational vessels would exhibit lower sound levels than that assessed. Refer to the Updated Noise and Vibration Impact Assessment attached as Appendix H to this report.
The assumed operating time of recreational vessels (seven minutes) is not conservative as the multi-user berth can cater for many vessels between two and 20 metres in length. Other commercial vessels could include passenger noise, PA systems, horns, etc., but these are not included in the noise modelling assumptions.	<p>The wharves would be available for temporary berthing for recreational and commercial vessels to pick up or drop of passengers, therefore a seven minute operating time is a reasonable assumption to make.</p> <p>All noise associated with the wharves use has been included in the operation noise modelling with the sound power level provided in Table 42 of the assessment (refer to the Updated Noise and Vibration Impact Assessment attached as Appendix H to this report).</p>
The location of the eastern vessel berthing area in Figure 16 of Appendix O is not consistent with the location described in Chapter 5 of the EIS.	Figure 16 of Appendix O of the EIS shows the anticipated operational vessel movements at La Perouse. The figure is incorrect as it shows vessels berthing near Frenchmans Beach. Chapter 5 of the EIS is correct, and shows vessels berthing at the designated berthing platform. The Updated Noise and Vibration Assessment has revised this figure (refer to Appendix H of this report).

Submission comment	Response
<p>Some of the noise modelling inputs relating to the number of commercial/recreational vessels accessing the wharf are not conservative, including the assumed source noise levels and number of vessels in the worst-case situation.</p> <p>More conservative assumptions will result in higher noise predictions.</p> <p>For example, at La Perouse, one public ferry and two recreational vessels are assumed to be berthing and departing in a worst-case situation (full capacity) at 15-minute interval. As previously noted, the multi-user wharf can likely accommodate more than two recreational/commercial vessels in any given 15-minute interval.</p>	<p>It would take a ferry vessel at least 15 minutes to cross between the wharves and only one vessel is proposed to operate. For recreational and commercial vessels, the berth could accommodate two vessels at once depending on their size. More conservative assumptions would increase the noise levels. However, what has been modelled has considered capacity, number and idling time. The assumptions are at the upper limit of what each wharf could accommodate, and therefore it is reasonable and appropriately conservative.</p>
<p>In Table 44 of Appendix O, the noise prediction result for location PRC1 (Frenchmans Beach) is 52 dB under enhanced weather conditions compared with the project noise trigger level of 48 dB, exceeding by 4 dB. It is not clear why this receiver is not shaded orange and identified as an exceedance in the table or following discussion. Discussion should be provided in relation to the potential impacts of the 4 dB exceedance at receiver PRC1 - Frenchmans Beach, noting that noise levels would be higher still with more conservative noise modelling assumptions.</p>	<p>This should have been highlighted as an exceedance. Please refer to Appendix H of this report for the Updated Noise and Vibration Impact Assessment.</p> <p>As noted in section 5.2 of the assessment, the modelling included a 10 dB conservatism in accordance with the Noise Policy for Industry guidance (NSW EPA, 2017). Therefore, actual noise levels at these receiver locations are unlikely to exceed the noise management levels.</p>
<p>Confirmation of the noise modelling should be undertaken once a ferry operator has been appointed and details of the ferry sound power levels are made available.</p>	<p>The confirmation of noise modelling would be undertaken once a ferry operator is selected.</p>

Underwater noise

The potential underwater noise impacts are assessed in Chapter 16 and Appendix P of the EIS. The assessment used conservative modelling to predict impacts during the wharves' construction and operation. There would be unavoidable noise generated during construction, especially when piling. This has the potential to impact underwater users and marine species if not managed appropriately. To mitigate these impacts exclusion zones would be established, while the intensity of the piling would be gradually increased (a termed soft start) and marine mammal observers would be used.

The use of the management zones comes from the concepts in Chapter 5 of the Underwater Piling Noise Guidelines (Government of South Australia, 2012). This builds on work dating back to 1995. It has long been used as a practice to protect marine fauna from underwater noise. If a marine mammal is spotted within the management zones, the construction activity would slow down or stop depending on the zone which the mammal enters. For underwater human receptors, consultation and notices to water users would be carried out prior to noisy piling activities to warn underwater users of potential impacts. A Noise and Vibration Management Plan (refer to section 16.5 of the EIS) would be prepared and implemented to include these mitigation and management measures.

As described in Appendix H, Table 20, the recommended observational and exclusion zones are defined by the species assemblages present and the predicted extent of impacts for those species. These are upper zone limits and illustrate zones as a worst-case scenario (ie. the most sensitive species is present). For example, if there were seals within the observation zones a stop-work scenario may be as little as 10 metres. These zones are dependent on the species present and subject to ongoing marine mammal observation.

2.14 Soil, water and contamination

Submission numbers

24343012, 24613879, 24624972, 24638737, 24881103, 24960075, 25106037, 25210723, 25256004, 25387208, 25529101, 25576449, 25585227, 25587773, 25589008, 25589331, 25695988, 25734521, 25754831, 25769814, 25775347, 25780784, 25790809, 25792796, 25806071, 25885572, 25885898, 25894952, 25896310, 25898884, 25991522.

Issue description

1. The assessment does not consider the potential risk of fuel/oil leaks from commercial and recreational vessels and how this would be managed
2. There should be signage and an approval process that requires minimum environmental performance limits and regular maintenance to minimise the risk of pollution from vessels
3. The construction method should include best practice for piling installation to minimise disturbing sediment, using floating booms to contain silt
4. The vessel activity in and around the wharves would cause sediment plumes.

Response

Potential impacts from fuel/oil leaks are assessed in Chapter 24 of the EIS. The ferry operator would be responsible for maintaining and managing vessels to avoid spills, including the preparation and implementation of a spill management plan. The ferry vessel would be regularly maintained by the operator to ensure it meets minimum environmental performance regulations to operate.

Other wharf users, including commercial vessel operators and recreational users, would be responsible for maintaining their vessels to minimise the risk of water pollution. All marine vessel operators are required to comply with the NSW Transport for NSW Boating Handbook, which outlines measures for protecting the environment and avoiding pollution of waterways.

Transport for NSW has legislative and policy responsibilities in relation to marine pollution which are regulated under the *Ports and Maritime Administration Act 1995*, the *Marine Safety Act 1998* and the *Marine Pollution Act 2012*. Transport for NSW would determine if any signage or approval process is required under this legislation.

Chapter 18 of the EIS assesses the potential impacts from propeller wash and sediment plumes. During construction, the proposed works that would generate sediment at a scale that would be above background concentrations would be when installing and removing a temporary causeway (refer to section 18.3.2 of the EIS). This is because of the scale of the associated rock placement. There is therefore the proposal to monitor turbidity while these works are taking place (refer to section 18.4 of the EIS).

Floating silt curtains/booms would be used during construction where appropriate depending on the construction methodology. These measures would be outlined in a Soil and Water Management Plan (refer to section 17.4 of the EIS). Where silt curtains or booms are not practical, such as when sediment disturbance is at the seafloor level, monitoring would take place. This would ensure silt levels remain below the appropriate water quality values.

Once operational, the propeller wash from vessels in and around the wharves would cause scour holes as described in section 18.3.2 of the EIS. There would be sediment dispersion causing small sediment plumes around the berths. This sediment would disperse and settle quickly. The sediment plume would reduce over time as the scour hole is created. For these reasons, the dispersion and deposition of the sediment would not cause a measurable impact on the water column or seabed beyond what already exists from the natural coastal processes in Botany Bay.

2.15 Decision making process

Submission numbers

25524770, 24626109, 25256004, 25387208, 25389496, 25383541, 25576449, 25585227, 25806071, 25885898, 25695988, 25754831, 25769814, 25790809, 25792796, 25844755, 25853733, 25895184, 25898884, 25902282, 25991522.

Issue description

1. The EIS does not address all the SEARs requirements
2. The EIS does not sufficiently address all impacts, such as impacts from commercial users of the wharves and climate change
3. The consultation process was not meaningful or effective and the project team has not listened to the opinions of the local La Perouse community
4. The consultation process should have included noticeboards to reach beach users
5. Not all the Aboriginal community at La Perouse has been consulted.

Response

The EIS addressed the issues identified in the SEARs issued under Division 5.2 of the EP&A Act and the relevant provisions of Schedule 2 of the NSW Environmental Planning and Assessment Regulation 2000 (refer to Appendix C of the EIS). The Commonwealth requirements have also been addressed. A checklist showing where the SEARs and Commonwealth requirements are addressed is provided in Appendix B of the EIS. In addition, the EIS went through an adequacy review process where DPIE checked that all SEARs had been met.

By addressing the SEARs requirements, the EIS has addressed all impacts of the project. Impacts from commercial users are assessed for each impact type. Assumptions are made about the likely commercial and recreational user types and frequency of use and that is what has been used to assess impacts in the EIS. The actual uptake of use by these groups would be market led. Controls would be put in place to manage impacts from these user groups, such as rules around berthing and departure at the wharves.

An assessment of impacts from the project on climate change and impacts from climate change on the project are assessed in Chapter 19 of the EIS. Impacts on greenhouse gas are assessed in Chapter 21 of the EIS.

The consultation process has been ongoing since the project conception in 1999. A summary of the consultation up until the exhibition period is outlined in Chapter 6 of the EIS. The consultation to date has been inclusive of the La Perouse local community, with measures such as letter box drops to specifically target the local population. The concerns raised by the local La Perouse community have been recorded and responded to throughout the consultation process. Consultation with the community and stakeholder groups would continue throughout construction and prior to operation of the wharves as described in section 6.4 of the EIS. This would help determine operational needs and requirements for all interested user groups.

The communication channels to reach the community (including beach users) are listed in Table 6.2 of the EIS. This did not include erecting permanent notice boards, however during in-person consultation sessions, placard boards were displayed to share project information.

The La Perouse Local Aboriginal Land Council has been extensively consulted throughout the project development (refer to section 6.2.1 of the EIS). Open invitations were issued for anyone wishing to attend the community consultation sessions which welcomed feedback and issues to be raised from anyone in the community.

3 Public authority submissions

A total of 14 public authority submissions were received. These were from a range of State and local government agencies. Transport for NSW has consulted with each public authority to discuss the response to submission, including individual meetings as required. The following chapter summarises the submissions made and provides a response to each public authority submission.

3.1 Bayside Council

The Bayside Council submission requests the addition of other services and routes to areas such as Sans Souci and Brighton le Sands.

The scope of the Kamay Ferry Wharves project is limited to the reinstatement of wharves at La Perouse and Kurnell. However, the design of the wharves allows for their use within a potential future expanded ferry network.

Bayside Council also recommends the inclusion of a bus interchange, live public transport information and a principal bicycle network.

The project is to provide wharf infrastructure only, but Transport for NSW has also been considering options for improvement to transport connection to complement the wharves (eg more frequent public bus services), however this is not part of this project. Once a ferry operator is selected, Transport for NSW would work with them to schedule ferry times to consider other public transport services including the bus network.

The ferry service would complement Transport for NSW future transport plans such as the rapid bus routes and the metro line proposed in the Future Transport 2056 South East Sydney Transport Strategy (Transport for NSW, 2020).

Transport for NSW is aware of long-term strategies to enhance the existing cycle network, and the wharves would complement and benefit from these connections. Extending cycle paths is outside the scope of this project.

3.2 Crown Land

There are two parcels of Crown Land located within and near the construction boundary at La Perouse. Crown Land advised that this land would need to be acquired under the *Land Acquisition (Just Terms Compensation) Act 1991*. Transport for NSW is consulting with Crown Lands on the appropriate property arrangements to occupy parcels required for the project.

3.3 DPI Fisheries

DPI Fisheries submission points and a response are provided in the table below.

Table 3-1: DPI Fisheries submission and responses

Submission	Response
A lack of information about the type (hull shape, draft and propulsion mechanism) and frequency of ferry services and type of recreational vessel usage, consequently the final impact of this proposal is unable to be quantified.	<p>Information regarding the type (length, draft and displacement requirements), frequency of ferry services and type of recreational vessel usage is contained within Chapter 5 of the EIS.</p> <p>The EIS has applied a precautionary principle by assessing a range of vessel sizes. The wharves could cater for a vessel up to 40 metres long and</p>

Submission	Response
	<p>with a two metre draft. The berth for recreational vessels would cater for vessels up to a maximum of 20 metres long with a 1.8 metre draft. Each ferry berth would be capable of accommodating up to three vessels per hour and enable a turnaround time of around 15 minutes from berthing to departing. This would result in approximately 36 ferry vessel movements a day during daylight hours. On average it is expected that around two recreational vessels and four charter vessels would use each wharf per day, and the vessel movements would be highest on weekends and on public holidays.</p> <p>By assessing the worst case scenario, the potential impacts from the project can be quantified and the actual impact would likely be less.</p>
<p>The proponent has not yet demonstrated how offset requirements under the <i>Fisheries Management Act</i> (1994) or the Commonwealth <i>Environmental Biodiversity Conservation Act</i> (1999) will be met. The Marine Biodiversity Offset Strategy is incomplete.</p>	<p>The MBOS is included as Appendix D of this report. The MBOS has been developed in consultation with DAWE, DPI Fisheries, UNSW and the Gamay Rangers.</p>
<p>It is not stated if any supplementary moorings (recreational or commercial) or dredging is proposed as part of construction or operation. These activities have a profound and long-lasting effect on seagrass.</p>	<p>No supplementary moorings or dredging is proposed.</p>
<p>Navigation channels and exact vessel pathways are yet to be disclosed.</p>	<p>Deepening of the seabed is not required, consequently there is no navigational channel(s). The wharves have been designed to remove the requirements for dredging for use of ferries and recreational vessels.</p>
<p>At the consistency review DPI Fisheries found that a threatened aquatic species assessment (Part 7A Fisheries Management Act, 1994) to address whether there are likely to be any significant impact on listed threatened species, populations or ecological communities under the Fisheries Management Act, 1994 (Key Issue SEARs requirement: Section 2 Biodiversity, Point 7 (a)) had not been undertaken. While this Key Issue SEARs requirement has been undertaken the determinisation has not been included. Appendix H Section 5.4.2 is missing a sentence that identifies that there will be a significant impact to <i>Posidonia australis</i> as part of the 7 Part test of significance. This is the corner stone of the environmental assessment process.</p>	<p>The conclusion from the 7 Part test of significance is that there will be a significant impact to <i>Posidonia australis</i>. However this impact will be offset by measures outlined in the MBOS</p> <p>Appendix E of this report is an addendum to the Marine Biodiversity Assessment Report to confirm the conclusions of the 7 Part test of significance on <i>Posidonia australis</i>.</p>

Submission	Response
It is recommended that recreational fishing activity on the Kamay ferry wharves in Botany Bay be managed using similar management arrangements and initiatives used as part of the Clean, Safe Wharves Program.	<p>The Clean, Safe Wharves initiative has been developed in discussion with local residents, councils, fishing groups, NSW Police and Sydney Ferries, looking at anti-social behaviour and fishing debris on some wharves within Sydney Harbour. The initiative also includes the abilities to immediately attend wharf clean-ups anywhere in the Harbour.</p> <p>The wharves have been designed to incorporate recreational activities such as fishing and swimming. As such this should alleviate the same issues that occur in many Sydney Harbour commuter wharves.</p> <p>It is proposed that the standard Transport for NSW management systems and procedures are considered acceptable for the operation of the wharves.</p> <p>Should any further initiative be required for the management of the wharves including the expanding of the Clean, Safe Wharves initiative or a similar program, Transport for NSW will consult with local residents, councils, NPWS, NSW Police and DPI Fisheries</p>
Fishing would be permitted from the ferry vessel berth except when in use by a ferry. Signage has been developed by TNSW in collaboration with DPI Fisheries and Sydney Ferries for the Sydney ferry wharves on this subject and should be applied to Kamay ferry wharves.	<p>Fishing would be permitted on the wharves, except for the ferry vessel berths.</p> <p>Appropriate signage will be provided in accordance with Transport for NSW systems and procedures.</p>

3.4 DPIE Environment Energy and Science Group (EES) – Biodiversity and conservation

The EES – Biodiversity and Conservation submission requests a number of clarifications are made to the Biodiversity Development Assessment Report (BDAR) (Appendix I of the EIS). The responses are provided in the table below.

Table 3-2: EES submission and responses

Submission	Response
EES's review was limited by the fact that the BAM Calculator case was not submitted in BOAMS; consequently, it was not available for review by EES to check consistency of BAM Calculator data with BDAR or spatial data.	The BAM calculator has been finalised and will be submitted in BOAMs for EES review.

<p>Additionally, neither plot field data sheets nor Excel spreadsheet of data were supplied, contrary to minimum requirements detailed in BAM Appendix 10, nor a summary by vegetation zone of composition, structure and function attribute scores. While floristics data was provided in Appendix B this contained only species occurrence for the subject site as a whole – occurrence of species by plot, cover or abundance were not provided.</p>	<p>The plot data sheets showing minimum requirements as per the BAM are included in the revised BDAR.</p>
<p>The amount of vegetation stated to be cleared in the assessment for EPBC Act matters of national environmental significance (MNES) – 0.29ha, e.g. in section 5.2.3 and on page 3 of the executive summary – is inconsistent with the amount stated in the BAM assessment – 0.06ha, e.g. in Table 6-2 and page 3 of the executive summary. Similar contradictions pertain to the stated amounts of clearing of habitat of certain species credit species – Large-eared Pied Bat and Grey-headed Flying-fox. Values stated in Chapter 11 of the EIS are consistent with the BAM assessment.</p>	<p>This is correct. There was a minor inconsistency between the Executive Summary and section 5.2.3. This is corrected in the Updated BDAR attached as Appendix G.</p>
<p>In comparing Table 6-2 to the not finalised BAM Credit Summary Report in Appendix D the following inconsistencies are noted:</p> <ul style="list-style-type: none"> • for 661_VZ3_Low – current vegetation integrity scores do not match (16.1 vs. 15.3) • for 661_VZ10_Low – current vegetation integrity scores do not match (15.7 vs. 13.8). 	<p>This is corrected in the Updated BDAR attached as Appendix G.</p>
<p>Sooty Oystercatcher was recorded foraging at La Perouse and Pied Oystercatcher was recorded foraging at Kurnell during surveys for this assessment (section 4.4.2), though locations of these observations are not mapped in the BDAR. However, Table 4-5 discounts the need for species polygons for these species on the basis that there is “no suitable breeding habitat identified within or adjacent to the development footprint.” However, this is not consistent with the requirements for these species in the Threatened Species Data Collection (TSDC) which states, for both species, that “This species was allocated to a full species credit because it can not be predicted to occur on a site based on habitat/vegetation/landscape associations. Two survey seasons are required, the first to detect if the site provides breeding habitat and the second to detect winter roosting habitat.”</p> <p>Local bird observers note that Pied Oystercatcher certainly and Sooty Oystercatcher potentially would use the immediate Kurnell shoreline. Additionally, Grey-tailed Tattler <i>Tringa brevipes</i> have in the past used the rock groins to the west near Bonna Point for roosting and could forage, more likely at night, along that shore between Bonna Point and Kamay Botany Bay Nation Park. EES seeks the response of the accredited assessor regarding these points.</p>	<p>The presence of suitable winter roosting habitat is assumed for Pied Oystercatcher and Sooty Oystercatcher given the survey effort did not comply with BAM. The updated BDAR (Appendix G) includes maps showing Pied Oystercatcher and Sooty Oystercatcher locations as well as their polygon area. Associated offset requirement for these species is also included.</p> <p>Grey-tailed Tattler is not listed under the BC Act and as such is not a species credit species. No offset is required in accordance with the BAM.</p>

<p>Large-eared Pied Bat <i>Chalinolobus dwyeri</i> Table 4-5 states that a species polygon for this species includes potential foraging habitat afforded by PCTs with which this species is associated and that occur within the field survey extent situated within 2km of potential breeding habitat. It is noted that the development will result in the loss through clearing of 0.05ha of this potential foraging habitat, which is to be offset by 1 species credit.</p>	<p>The BAM-C calculates 6 credits, however EES is recommending 1 species credit. The updated BDAR (Appendix G) includes the assessment of this species.</p>
<p>Location maps and site maps provided in Fig. 2-1 and Fig. 2-2 and explanation of native vegetation cover should indicate source and date of aerial imagery used.</p>	<p>Section 2.2.1 of the updated BDAR (Appendix G) includes the source and date of imagery used.</p>
<p>Section 2.1.2 states that the study area occurs across three NSW landscape regions (Mitchell 2002) in the following proportions by area:</p> <ul style="list-style-type: none"> • Port Jackson Basin (Poj) - 197.25ha (12%), including all the La Perouse site • Sydney – Newcastle Barriers and Beaches (Snb) - 627.94ha (38%) • Woronora Plateau (Wpp) - 138.93ha (8%). <p>These are proportions of the 'study area' (which in this BDAR is equivalent to the BAM 'assessment area' formed by a 1500m buffer on the 'development site'), however about 40% of the 'study area' is marine to which no NSW landscape applies.</p> <p>However, there is no explanation as to which landscape was selected for the assessment and why. The BAM Operational Manual Stage 1 states that if the subject land is located within more than one NSW (Mitchell) landscape, the assessor should select the NSW (Mitchell) landscape in which the largest proportion of impact or improvement will occur. The mention in the executive summary of only the Sydney – Newcastle Barriers and Beaches (Snb) landscape, referred to as "dominating" implies this landscape was chosen. If this is the case, EES concurs with this choice. The BDAR should be amended to clarify this, and if necessary, the BAM Calculator, as this will influence the number of biodiversity credits required to offset unavoided impacts.</p>	<p>The remaining 42% is the marine environment, and the NSW Mitchell Landscapes do not apply. The Sydney-Newcastle Barriers and Beaches (Snb) applies to the BDAR. Section 2.1.2 of the updated BDAR (Appendix G) has been revised in accordance with EES recommendations.</p>
<p>BDAR Section 3.1 describes vegetation survey, typing and condition assessment within the 21.88ha 'field survey extent' which includes land both within and adjacent to the development site, within which 9.71ha of native vegetation was determined to comprise seven PCTs (661, 1778, 1832, 1204, 772, 1232, 1823), however, the Executive Summary states that six PCTs were identified.</p>	<p>The updated BDAR (Appendix G) has been revised to resolve this inconsistency between the Executive Summary and section 3.1.</p>

<p>To comply with section 6.15 of the Biodiversity Conservation Act 2016 the BAM calculations and BDAR must be current and certified as such, for instance by signing, at any stage when submitted (or resubmitted) to the decision-maker. When submitting a BDAR the assessor must finalise the BAM Calculator and submit the case in BOAMS and should include in the BDAR the relevant credit reports. To evidence currency the date of submission of the BDAR must be within 14 days of the date shown on the relevant finalised credit report. EES notes that these requirements appear to not to have been met in relation to this BDAR dated 24 June 2021.</p> <p>This requirement also applies to BDARs, such as this, where the applicant is relying on the transition period allowing continuing use of the BAM 2017. EES reminds the proponent and assessor that the last date for submission of a BDAR prepared in accordance with this version of the BAM for state significant infrastructure and development is 22 October 2021. Where amendments involve changes to assessment data used in the BAM Calculator (e.g. additional threatened species, changes to size or location of impact areas, changes to status of a threatened entity), the BAM calculations and BDAR should be current, and certified as such, when it is re-submitted to the decision-maker. Otherwise, the application and BDAR may need to be amended to align with the new Biodiversity Assessment Method 2020 ('BAM 2020') and remove references to BAM 2017.</p>	<p>The updated BDAR (Appendix G) has been revised. This will be submitted to BOAMS prior to 22 October 2021. This is within the transitional period which allows the assessment to follow the BAM 2017 guidelines.</p>
<p>The BDAR states that the Towra Point Nature Reserve Ramsar site is located approximately 1km to the southwest of the site (executive summary). Towra Point Nature Reserve and part of the adjoining Towra Point Aquatic Reserve are protected under the Ramsar Convention as a wetland of international and national significance called the Towra Point Nature Reserve Ramsar Site (TPNRRS, www.environment.gov.au/cgi-bin/wetlands/ramsardetails.pl?refcode=23). As such it is a MNES under the EPBC Act. The site and adjacent areas support significant areas of coastal saltmarsh, an endangered ecological community, smaller areas of other threatened ecological communities, as well as mangroves and seagrass, making it a highly important fish habitat. The TPNRRS contains around 60 percent of saltmarsh and 40 percent of mangrove communities in the entire Greater Sydney region.</p> <p>The nature reserve is recognised as one of the four most important migratory bird sites in NSW and is an important breeding area for the endangered little tern. It provides critical roosting and feeding habitat for migratory shorebird species protected under international agreements and supports threatened species.</p> <p>Most recent information about the TPNRRS can be found in Towra Point Nature Reserve Ramsar Site: Article 3.2 Response Strategy, June 2019 prepared by Umwelt (Australia) Pty Ltd on behalf of NSW National Parks and Wildlife Service.</p> <p>The BDAR has not acknowledged or assessed potential impacts on this MNES. EES considers potential impacts on the biodiversity values of the TPNRRS should be assessed.</p>	<p>The project would not result in any direct or indirect impacts to Towra Point Nature Reserve. The updated BDAR (Appendix G) includes this assessment.</p>

<p>It is requested that consideration be given to identification of alternative locations for the installation of the Kurnell services cabinet to reduce impacts to the heritage landscape. Its height of 1200mm in such a prominent location could be detrimental to the sight lines and broader heritage landscape. National Parks and Wildlife Service (NPWS) also seeks to ensure that appropriate impact protections and mitigation measures are in place, particularly regarding:</p> <ul style="list-style-type: none"> • Aboriginal heritage including midden area proximal to the construction zone at Kurnell • historic heritage, including impact to the heritage landscape and impacts to heritage features • protection of fauna and flora in the national park, including protection against introduction of species to a national park setting and • pedestrian safety given construction is in two high visitation sites. <p>It is noted that the EIS indicates that NPWS will be ascribed a consultation role for several sub-plans under the Construction Environmental Management Plan. This consultation role is agreed to as NPWS will need to ensure that details of operational matters are appropriate and acceptable.</p>	<p>As outlined in section 3.9 of this report, with regards to the cabinet, Transport for NSW will continue to consult with NPWS about the location and design of this services cabinet.</p>
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3.5 DPIE Water

The DPIE Water submission relates to groundwater. Responses to this submission are provided in the table below:

Table 3-3: DPIE Water submission and responses

Submission	Response
<p>1. Pre-approval Recommendations:</p> <p>The Proponent should be required to:</p> <ol style="list-style-type: none"> Identify the predicted groundwater inflow volume generated by the construction activities, and report on whether the groundwater take is less than the 3ML licensing exemption offered under the Water Management (General) Regulation 2018, or a licence is required otherwise. A list of possible exemption that may apply are found in Schedule 4 of the Water Management (General) Regulation 2018. Describe how groundwater take will be monitored, recorded, and reported. Provide a statement against the 'minimal impact considerations' as required by the NSW Aquifer Interference Policy (2012). <p>Groundwater de-watering may be required for the car park and utility excavations at the La Perouse site. Inflows are expected to be small and should be short term. Water take should be appropriately licenced unless a Water Access Licence (WAL) exemption applies (as de-watering inflows are expected to be low, the WAL exemption for taking 3ML or less of groundwater may apply, depending if water will be</p>	<p>The proposed ground disturbance is limited to the car parking installation at La Perouse, the utilities installation and landscaping at the wharf tie-in areas at both sites (about 4400m³ at La Perouse and 2700m³ at Kurnell). This ground disturbance would be no greater than 900m. Groundwater may be encountered during construction of these activities, however is unlikely to be greater than 3 ML.</p> <p>Transport for NSW is exempt from requiring a licence under Schedule 4, Clause 17A of the Water Management (General) Regulation 2018, as Transport for NSW is a Transport authority pursuant to Schedule 4, Part 1 (3). The groundwater take is for the purpose of excavation to construct infrastructure pursuant to Schedule 4, Part 1 (7)(2)(c).</p> <p>If groundwater is encountered it would be managed in accordance with a Soil and Water Management Plan, which would include measures for storage, testing and reuse or disposal as required.</p>

Submission	Response
<p>used). No de-watering is specifically mentioned in the Kurnell site but it is acknowledged that the groundwater levels are close to the surface.</p> <p>Within the shoreline ridge, groundwater level is expected to be shallow, and it is likely that groundwater will be encountered during construction. The proponent is required to estimate the annual volume of groundwater take from the relevant water source and provide the details of how they are going to monitor and keep record of their take during construction. In addition, a groundwater impact assessment is required regardless of volume or any licencing exemptions that may or may not apply for the required dewatering on the site.</p>	<p>Any groundwater encountered is not expected to result in any impacts to the water table, water pressure or water quality (as listed in the NSW Aquifer Interference Policy) of the aquifers due to the limited and short term disturbance compared to the large size of the aquifers.</p>
<p>2. Post-approval Recommendations:</p> <ul style="list-style-type: none"> a. As per recommendation 1b above, the Proponent must obtain a Water Access Licence (WAL) under the Water Management Act 2000 prior to any water take, unless exemptions apply. A list of possible exemption that may apply are found in Schedule 4 of the Water Management (General) Regulation 2018. b. The Proponent should be required to implement a soil and water quality monitoring and Acid Sulfate Soils (ASS) management plan. <p>The pile structures for both the La Perouse and Kurnell wharves will extend through sand deposits that have a high probability of occurrence for ASS. Any disturbance of these sediments results in a risk of oxidising and mobilising these ASS and causing contamination of the nearby watercourses and aquifers. In addition, there is potential for organic contamination around the La Perouse project area by drilling into the Botany Sands aquifer. DPIE agrees that the groundwater contamination risk to be minor since the connection will be temporary and local during pile construction. However, soil and water quality monitoring is required to identify and manage any contamination if it does occur.</p>	<p>As outlined above, Transport for NSW is exempt from requiring a WAL.</p> <p>While there is a high probability of ASS within Botany Bay, the estimated level of sediment that would be brought to the surface is very low as no dredging is needed. Measures (such as keeping the soil wet) to manage ASS would be incorporated into a Soil and Water Management Plan to appropriately manage and mitigate the potential risk of encountering ASS.</p> <p>The underlying aquifers are Sydney Basin Groundwater Source (Hawkesbury Sandstone) and the Botany Sands Groundwater Source. These operate at a regional scale (ie they are large aquifers). Particularly the Botany Sands aquifer is known to be contaminated with chlorinated hydrocarbons due to the permeability of the sands, shallowness of the aquifer and history of industrial activities within the aquifer catchment.</p> <p>While the proposed land and overwater works may encounter groundwater this would be in the context of a hydraulically connected system. There is the potential to temporarily increase the local connectivity between the soils/sediment and groundwater. This could cause some localised change in groundwater and soil/sediment chemistry when piling and carrying out the excavation works.</p> <p>For overwater works, any release of groundwater pollutants into the Bay would result in instant dilution from volumetric mixing (eg large volume of water, small volume of pollutants).</p> <p>On land, if groundwater is encountered, it would be stored, tested and removed accordingly.</p>

Submission	Response
	<p>Once the work is complete, the hydraulic system would normalise over time because it is connected and operates regionally. This means while there may be a short-term change, it would normalise over time to the existing baseline.</p> <p>Based on the above, soil and water quality monitoring is not proposed.</p>

3.6 Environment Protection Authority

The Environment Protection Authority (EPA) submission relates to noise and surface water quality. Table 3-4 presents the submission requests and provides a response to each point.

Table 3-4: EPA submission and response

Submission	Response
Noise	
<p>The EPA requires the following information to be able to adequately assess the proposal. Points 1 to 3 are the most critical assessment issues.</p> <p>1. Long term background noise monitoring was performed at both La Perouse and Kurnell. The results are presented in the NIA at Table 14. The background noise level (RBL) is used to derive both construction and operational noise objectives. The daytime RBL for both La Perouse and Kurnell is reported as 43 dB(A). The resulting operational NPfl 'project noise trigger levels' (PNTL) for the project during the daytime is LAeq,15min 48 dB(A) for both Kurnell and La Perouse (ie RBL plus 5 dB). However, the NIA at Table 27 identifies the daytime PNTL for Kurnell as LAeq,15min 53 dB and not 48 dB.</p> <p>Predicted operational noise levels from the project are presented in the NIA at Table 43. Table 43 cites the daytime PNTL for La Perouse as LAeq,15min 53 dB and not 48 dB. When the correct PNTL is applied, the conclusions in the NIA that no operational noise impacts are predicted for residential receivers is incorrect. The proponent will need to undertake detailed checking of the data that informs the assessment, the information presented in the assessment and the conclusions drawn in the NIA.</p>	<p>In Table 27 of Appendix O, the Intrusive Noise Trigger Level LAeq15min at Kurnell should be 48 dB. The correct 48dB LAeq15min was used in the assessment as per Table 43 and therefore the outcome of the assessment is not affected.</p> <p>At La Perouse, with the updated PNTL to be 48dBLAeq15min, the predicted noise level residential receivers at 51-53 Endeavour Ave, 27 Goorawahl Ave, and 31 Endeavour Ave will exceed the criteria by 1-3dB for Enhanced meteorological conditions. It should be noted that the assessment is conservative as it has included a 10dB correction to account for two or more modifying factors as per NPfl.</p> <p>The updated Noise and Vibration Impact Assessment (NVIA) is attached to this report as Appendix H and reflects the above.</p>
<p>2. In Appendix B of the NIA, examination of the logger graphs for the La Perouse monitoring location shows daily trends of continuous elevated noise levels typically between 11 am to 8 pm. The LA90 levels during this period are at a constant level of approximately LA90 61-62 dB. This is likely the result of air conditioning or refrigeration plant (located immediately next to the logger) or kitchen exhaust plant associated with the restaurant immediately below the logger location.</p>	<p>Noise logging was carried out in accordance with the Noise Policy for Industry (NSW EPA, 2017). While the daytime and evening periods are affected by the operation of the air conditioning immediately next to the logger, the resulting daytime L90 of 43dB measured during the unaffected period between 7am to 12pm is considered representative of the La Perouse ambient noise environment. This is</p>

Submission	Response
<p>Consequently, the location is inappropriate to determine background noise levels representative of residential receiver locations in the area.</p>	<p>confirmed by the attended measurements at the 16 Prince Charles Parade and 9 Silver Beach Road locations. Further justification of the noise monitoring is provided in the updated NVIA (Appendix H).</p>
<p>3. The project description in the NIA indicates that the wharves will be restricted to 'daylight hours'. The NIA indicates that the operating hours of the ferry wharves have not been confirmed but have been assumed to be 7 am to 7 pm. Based on the assumed hours in the NIA alone, an assessment of potential evening operations should have been undertaken, however no such assessment is presented in the NIA. Additionally, 'daylight hours' at various stages of the year would include hours well before 7 am and well after 7 pm. If this is the case, an assessment of night-time operations, i.e. before 7 am should also be undertaken unless firm commitments are made, or conditions imposed, restricting night-time operations of the wharves. Any assessment of night-time operation should include an assessment of maximum noise level events in accordance with the NPfI.</p>	<p>The final timetable for operation of the ferry service would be up to the operator once selected. Once an operator is selected, additional assessment of the known vessel type and the hours of operation would be carried out.</p>
<p><i>Notes to points 1 and 3: The EPA notes that a conservative operational assessment approach has been taken where a +10 dB correction has been applied to predicted operational levels to account for potential 'annoying noise characteristics' of ferries. However, this is not considered to be a mitigating factor in incorrectly undertaking the impact assessment against incorrect PNTLs. Note too that the NPfI defines day, evening, and night periods for assessment purposes.</i></p>	<p>As outlined above, the impact assessment has been carried out in accordance with the guidelines.</p>
<p>4. The operational noise modelling needs to consider the operation of a PA address system on the wharves.</p>	<p>A PA system would only be used in emergency scenarios and therefore the noise impacts are assessed for day to day use.</p>
<p>5. The NIA indicates that construction works will be during standard hours except for marine piling works. It is the EPA's understanding that the need for night-time marine piling is largely due to calmer surface conditions at night. However, the EPA notes the proposal to use jack-up barges to complete marine piling works which largely negates the need to consider surface conditions. The potential need for out of standard hours works will need to be further justified if it is to be contemplated in any planning approval. Standard hours of construction work are defined in the ICNG.</p>	<p>The construction works may require night time activities for marine piling including the use of jack-up barges for certain weather conditions to maintain the safety of the workers. Floating crane barges may be used to drive piles and there are affected by weather. Cranes on all types of barges are also affected by wind, which is typically stronger during the day. An out of hours works procedure will be included in the Noise and Vibration Management Plan to manage any works outside standard hours.</p>
<p>6. As part of the Response to Submissions, the NPfI PNTLs assigned to community premises, childcare centres and educational institutions should be fully explained.</p>	<p>In accordance with the NPfI, the PNTLs for non-residential receivers have been determined by subtracting 5dB from the RANLs. Where the RANL is specified as an internal level, an external noise criteria has been determined by assuming a 10 dB reduction through an open window as per Table 28.</p>

Submission	Response
<p>7. Regarding construction sound power levels, section 4.1.2 indicates that: “<i>The equipment below [i.e. Tables 32 and 33] has been assumed to operate concurrently and continuously over a 15 minute period (a typical worst case assumption).</i> However, Tables 32 and 33 appear to adjust sound power levels based on a ‘duty cycle’ i.e. how long the plant is predicted to operate over a 15 minute period. The difference between the statement in section 4.1.2 and Tables 32 and 33 needs to be explained and any resulting changes to the construction noise impact assessment identified.</p>	<p>The equipment presented in Tables 32 and 33 have been assumed to operate concurrently and continuously over the assumed operating duration in a 15-minute period (a typical worst-case assumption). Further clarification of this is provided in the updated NVIA (Appendix H).</p>
<p>8. While the operational assessment of the proposed ferries and other marine craft has conservatively considered a +10 dB factor to account for annoying noise characteristics such as tonality and low frequency noise, the NPfI first requires that these characteristics be designed or mitigated so as to be not present. Any approval granted for this proposal should require the proponent to develop best practice noise performance requirements for the procurement, construction and operation of the ferry vessels, including eliminating annoying noise characteristics as identified in the NPfI.</p>	<p>Once a ferry operator has been appointed and details of the ferry sound power levels are made available, further assessment and validation of the NVIA is proposed. Other users of the wharves, such as commercial and recreational users would have to comply with regulations in the <i>Protection of the Environment Operations Act 1997</i> and the <i>Protection of the Environment Operations (Noise Control) Regulation 2008</i>. Transport for NSW would manage compliance and any complaints.</p>
<p>9. There are errors regarding some of the sensitive residential receiver locations at La Perouse: the NIA does not appear to have considered the residential accommodation above 1609 Anzac Parade (above Danny’s Seafood Restaurant). La Perouse Res 2 is located at 27 Goorawahl Avenue and is identified as 5 storeys, however this is a single story house. 28 Goorawahl Avenue would be slightly closer to the project. This should be reviewed, and any corrections made.</p>	<p>This has been reviewed in the updated NVIA (Appendix H), and this does not impact the outcome of the noise assessment.</p>
<p>10. In section 5.3 of the NIA, the operational traffic noise assessment has considered impacts at Opening Year (2024) and Design Year (2036). However, the design year assessment does not appear to consider forecast traffic movements, but rather presents the traffic volumes, that if not exceeded would satisfy the policy guidelines. The operational traffic assessment should be based on forecast 2036 traffic volumes.</p>	<p>Assuming the same seasonality adjust and growth rate 1.32% is applied to the traffic generated by the wharf, it is estimated that the 2036 traffic volumes will be between 12-14 for La Perouse and 49-57 for Kurnell. The additional traffic volumes are negligible and will only increase the noise level b 0.2 and 0.8 respectively at La Perouse and Kurnell. This is reflected in the updated NVIA (Appendix H).</p>
Surface water quality	
<p>1. The results of additional sampling and analysis of soils, sediments and groundwater to inform onsite management and disposal of contaminated water.</p>	<p>The level of investigation, and proposed mitigation and management measures are proportionate to, and reasonable given, the risk and the scale of proposed construction activities.</p> <p><u>Nature and scale of construction activities – Soils</u></p> <p>The proposed soil disturbance is limited to the car parking installation at La Perouse, the utilities installation and landscaping at the</p>

Submission	Response
	<p>wharf tie-in areas at both sites. Overall the project would require about 4400m³ of soil disturbance at La Perouse and 2700m³ of soil disturbance at Kurnell. The maximum depth would be about 900mm. Any excavated material would be classified for waste or re-use purposes and disposed of appropriately in accordance with that classification.</p> <p><u>Nature and scale of construction activities – Sediments</u></p> <p>Marine sediment sampling was undertaken and the results available in Appendix Q Targeted Site Investigation. Nickel and Monobutyltin were detected in laboratory results, however, the levels are likely to be indicative of natural/background concentrations.</p> <p>Sediment disturbance would be from piling activities, no dredging is proposed. In the context of Botany Bay, this sediment disturbance would be small in scale (associated with each pile). If sediment is brought to the surface, it would be stored and disposed of appropriately, based on the waste classification guidelines. Any disturbed sediment that is not brought to the surface would quickly disperse.</p> <p><u>Nature and scale of construction activities – Groundwater interactions</u></p> <p>The proximity of the construction areas to Botany Bay would suggest that the groundwater levels are affected by tidal fluctuations as well as infiltration during rainfall events. During test excavations, groundwater was not encountered in any test pits to a depth of 900mm. The proposed excavation is limited to trenching required to install utilities, excavation for landscaping works and for reconfiguration of the car parking area at La Perouse. The depth of these excavations would not exceed 900mm. Interactions with groundwater are considered unlikely and potential impacts on groundwater are expected to be negligible.</p> <p><u>Contamination risks – Soil, Sediment & Groundwater</u></p> <p>If groundwater and contamination is encountered it would be tested, classified, managed, transported and disposed of, in accordance with the Waste Classification Guidelines (NSW EPA, 2014). This means that any potentially contaminated soil or groundwater would be disposed of appropriately to an offsite facility based on its waste classification.</p>

Submission	Response
	<p><u>Outcome Summary</u></p> <p>The assessment determines the risk of impacts from disturbance of soil and sediments to be low due to the limited disturbance. Additional sampling and analysis are not required as any potential impacts can be adequately managed and mitigated through a Soil and Water Management Plan.</p>
<p>2. Appropriate management and mitigation measures, including, but not limited to:</p> <p>(a) in-water management measures to limit the disturbance and dispersion of potentially contaminated sediment (e.g., silt curtains, sheet piling)</p> <p>(b) enhanced erosion control measures to minimise disturbance of contaminated soils</p> <p>(c) a Construction Surface and Groundwater Quality Monitoring Program which includes but is not limited to:</p> <ul style="list-style-type: none"> i. water quality monitoring locations (including marine waters and any groundwater trenches) ii. analyte list and sampling frequency for each monitoring location <ul style="list-style-type: none"> a. sampling method for each location b. the method of analysis (as per the Approved Methods for Sampling and Analysis of Water Pollutants in NSW) and the practical quantification limit iii. timing and frequency information for sampling. Sampling should be carried out with a frequency commensurate with the risk and stage of operation. 	<p>(a) Marine sediment sampling results showed Nickel and MBT were detected but not above screening criteria.</p> <p>Sheet piling is not appropriate for the nature and scale of proposed works. The sediment disturbance would be minimal. It would disperse and settle quickly to reach ambient concentrations.</p> <p>The installation of sheet piling would cause more environmental damage, than it would avoid impacts. Mitigation measures such as floating silt curtains would be used where appropriated. Piling activities would produce minor disturbance with the generation of sediment mainly close to the bottom of the Bay.</p> <p>(b) Erosion and sediment control measures would be incorporated in the proposed Soil and Water Management Plan in accordance with best practice management guidelines (including the Blue Book (Landcom, 2004). These measures are proven and effective at dealing with major erosion and sediment control. These are the industry standard to provide adequate protection.</p> <p>(c) The Project does not consider a Construction Surface and Groundwater Quality Monitoring Program to be appropriate for the risk of the project. The risk is considered low due to the limited size and scale of sediment and soil disturbance proposed. A Turbidity monitoring is proposed only during the construction of the temporary causeway at Kurnell (unique to Kurnell). This activity has the potential to disperse fine sediments into the water column. Turbidity monitoring will ensure that the appropriate mitigation measures that are installed minimise water quality impacts.</p> <p>The remainder of the construction is limited to pile installation which, depending on the methodology proposed, would not generate</p>

Submission	Response
	<p>turbidity levels that warrant water quality monitoring.</p> <p>Groundwater monitoring is not proposed due to the limited scale of disturbance proposed and low potential for impacts (as described above).</p>
<p>3. Clarification of whether contaminated groundwater is to be irrigated to land. If it is, the proponent should provide an assessment of the potential impact to soils and human health is conducted to inform appropriate mitigation and management measures. This must include comparison of any contaminant levels against the relevant environmental and human health guidelines e.g. Environmental Guidelines: Use of Effluent by Irrigation (DECC 2004).</p>	<p>The proposal does not include any groundwater irrigation to land.</p>
<p>4. A Trigger Action Response Plan (TARP) to identify and manage any unpredicted impacts and their consequences to ensure corrective actions are implemented, including contingency options for management of contaminated water (e.g. tankering offsite for disposal at a licensed facility).</p>	<p>The project has committed to the development of an Emergency Spill Management Plan and a Soil and Water Management Plan which will include measures to identify and manage unpredicted impacts, including unexpected contamination finds.</p>
Contamination	
<p>The EIS and the supporting TSI and PSI reports have not satisfactorily addressed the requirements of the SEARs as the nature and extent of contamination have not been fully assessed. Furthermore, the reports do not identify mitigation and management measures to safeguard the environment and people during construction and operation.</p> <p>The proponent's TSI report included sampling of soil and sediments, however, groundwater was not assessed. Contaminants of potential concern that were identified, such as total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, and chlorinated hydrocarbons in soil and sediment samples were either below the limits of reporting (LOR) or less than the adopted screening criteria. Per and Polyfluoroalkyl Substance (PFAS) in soil in the La Perouse site were identified above the LOR, albeit below the screening criteria. However, PFAS in groundwater and surface water will need to be assessed.</p>	<p>Assessment of the potential extent of the contamination has been undertaken in Appendix Q of the EIS to meet the requirements of the SEARs. To meet the SEARs requirements a Preliminary Site Investigation was undertaken to identify potential contaminates of concern within the project area. Following the PSI an intrusive Targeted Site Investigation was completed. The level of investigation, and proposed mitigation and management measures are proportionate to the risk and scale of proposed construction activities.</p> <p>The assessment determines the risk of impacts from disturbance of soil and sediments to be low. Additional sampling and analysis are not required as any potential impacts can be adequately managed and mitigated through a Soil and Water Management Plan.</p> <p>As stated above, the scale of soil disturbance is small and therefore the scale of groundwater that may be encountered would be small scale. While it could be potentially contaminated due to existing contaminants in the surrounding environment, the proposed management measures to store, test and appropriately dispose of the groundwater and soils would avoid potential impacts on the surrounding environment.</p>

Submission	Response
	<p>Refer to Chapter 17, Soil, water and contamination and Appendix R, Groundwater Assessment Report.</p> <p>Groundwater and surface were not sampled for PFAS. Rather, soil and sediments were sampled. PFAS was not detected in marine sediments and only detected in soil at La Perouse, but below screening criteria as stated. If groundwater is encountered, it would be stored, tested and disposed of appropriately (therefore no risk of spreading PFAS). If PFAS was present in marine water at such a concentration to be detected, then this would be an existing widespread issues for La Perouse and Kurnell water users. The project will not contribute to any existing concentrations of PFAS.</p>
<p>The Sampling and Analysis Quality Plan (SAQP) referenced in the TSI was not submitted as part of the EIS and it is therefore not possible to determine if sampling during the targeted site investigation was undertaken in accordance with the SAQP. The SAQP must be submitted as part of the RtS.</p>	<p>A SAQP was prepared and has been provided to EPA. It is attached as Appendix F to this report.</p>
<p>The TSI identified unexploded ordnance (UXO) as a potential hazard in areas to the east of the project site at La Perouse. The EPA flags that this was not assessed by a qualified UXO expert and would require further investigation as a safety hazard if there is a change to the project footprint</p>	<p>The UXO area is located at least 200 m away from the La Perouse construction boundary (Refer to Appendix Q1 Preliminary Site Investigation – La Perouse). UXO only causes a risk where directly impacted, as the proposed works are away from the UXO area, there is no risk of impact. No further assessment is required.</p>
<p>The EPA recommends that Detailed Site Investigations (DSI) be undertaken to investigate the nature and extent of contamination in the soil, groundwater, surface water and sediments and to adequately inform what management measures or remediation would be required to safeguard the environment and people during construction and operation of the proposed wharves at La Perouse and Kurnell. This may include the preparation of a Remedial Action Plan (RAP) to address contamination and ensure the site can be made suitable for the proposed use.</p> <p>The DSI and any subsequent report/s, must:</p> <ul style="list-style-type: none"> (a) be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme; and (b) be prepared in accordance with the relevant guidelines made or approved by the EPA under 	<p>The Preliminary Site Investigation was carried out for La Perouse and Kurnell. The findings of this PSI was that an intrusive investigation of soil, sediment, surface water and groundwater should be undertaken to more accurately assess the contamination status of the site.</p> <p>A SAQP was prepared and field investigations were carried out accordingly. This was documented and assessed in the Targeted Site Investigation.</p> <p>The Targeted Site Investigation serves the same purpose as a Detailed Site Investigation. The Targeted Site Investigation concluded that management measures for contamination management be included in a management plan and that further testing of materials when encountered would be required to determine their waste classification and appropriate disposal pathway. It did not conclude that a Remedial Action Plan is required. There is no change to the existing use of the site, it will continue to be used as a national park and</p>

Submission	Response
section 105 of the Contaminated Land Management Act 1997.	there is no increased risk of exposure to contaminants to future users once the project becomes operational.
The EPA notes the proponent's commitment to the preparation and implementation of a Soil and Water Management Plan and recommends this be included as a condition of approval. The plan should detail measures to manage potential PFAS, Acid Sulphate Soils, asbestos finds, and any other contamination identified. An unexpected finds protocol should also be prepared and implemented during construction.	This is correct. A Soil and Water Management Plan would be prepared and would include measures to manage potential contaminated finds if encountered.
The EPA recommends that an NSW EPA-accredited Site Auditor is engaged throughout the duration of works for this project to ensure that any work required in relation to contamination is appropriately managed, including any unexpected contamination finds, so that there is confidence that the site would be suitable for the proposed use.	The assessment concludes that due to the limited scale of soil and sediment disturbance, any unexpected contaminated material found, can be adequately managed through implementation of the Soil and Water Management Plan.

3.7 Heritage NSW – Aboriginal heritage

Heritage NSW supports the management and mitigation measures outlined in the Aboriginal Cultural Heritage Assessment Report (Appendix E of the EIS) and that an unexpected finds procedure is adopted.

The project has committed to use the Transport for NSW (formally Roads and Maritime Services) Unexpected Heritage Items Procedure (November 2015). This procedure has been developed to provide a consistent method for managing unexpected heritage items both Aboriginal and non-Aboriginal heritage that are discovered during Transport for NSW (formally Roads and Maritime Services) activities.

The project has committed to the environmental management measures outlined in Appendix A of the EIS. These measures incorporate the recommendations of the Aboriginal Cultural Heritage Assessment Report (Appendix E of the EIS), including a Heritage Management Plan and unexpected finds procedures.

3.8 Heritage NSW – Non-Aboriginal heritage

The submission from Heritage NSW – Non-Aboriginal heritage recommends a number of conditions of approval. A response to this submission is provided in the table below.

Table 3-5: Heritage NSW – Non-Aboriginal heritage submission and response

Submission	Response
Built heritage	
1. Approval conditions recommended	
a) Detailed design of new infrastructure associated with the proposed development should be as minimal in height, bulk and visual impact as possible e.g. fencing/bollards/signage/kerbing/ground-treatment.	The landscape character and visual amenity impacts of the project were assessed in Appendix M of the EIS. The design has minimised height, bulk and visual impacts through the streamline and "light touch" design. The bollards, signage and kerbing will be sympathetic to the

Submission	Response
	existing infrastructure and in line with what is proposed as part of the Kamay Botany Bay National Park Kurnell Master Plan. The ground-treatment includes soft and hard landscaping as shown in the UDLP (Appendix C of this report).
b) The detailed design of the new wharf structures should take into consideration recessive neutral external colour schemes and finishes and avoid reflective finishes to minimise visual impacts.	The finishes are shown in the UDLP (Appendix C of this report). The colour palette and finishes have been selected to integrate into the existing environment.
c) A belt of low shrubs or grasses (under 1m height) should be planted on the 'park' side of the proposed car parking areas at La Perouse as a soft visual barrier to mitigate impact on the setting of the place.	Planting is not proposed around the reconfigured car parking areas to remain consistent with the existing car parking areas around Anzac Parade. Furthermore, additional planting would cause further potential disturbance impacts. The proposed landscaping for the project is shown in the UDLP (Appendix C of this report).
<p>2. A condition of approval is recommended requiring the minimization of vibration impacts by use of smaller equipment or hand tools in the following locations and regular vibration monitoring during construction works. Both need specification in the Construction Environmental Management Plan (CEMP).</p> <p>a) The La Perouse Monument inside the Anzac Parade Loop is near the construction boundary and may be impacted if large vibration generating equipment is used;</p> <p>b) The Kurnell wharf piling is within 5-10m of the coursed stone sea wall. There are parts of this wall no longer mortared together and in disrepair. Remedial work to mortar, repair and support these sections is required, before and during piling;</p> <p>c) The Captain Cook monument is within the construction boundary and adjacent to Monument Track, where a utilities trench will be installed. The monument is on sandstone bedrock and any hammering into this could cause vibration impacts. The use of specialized tools is recommended to minimise impacts;</p> <p>d) Landscape works close to the Ferry shelter shed, where there is potential for indirect vibration impacts to the structure.</p>	Measures to avoid and manage vibration impacts on heritage items will be included in the Noise and Vibration Management Plan as outlined in section 15.5 of the EIS. This includes pre-construction building assessments, minimum safe working distances established and vibration monitoring for heritage items within 70 metres of the construction boundary.
Heritage Interpretation Strategy and incorporation	
<p>1. Approval conditions are recommended to:</p> <p>a) Require preparation of a Heritage Interpretation Strategy for the project to guide the incorporation of heritage interpretation, such as displays and panels, into the project design, including options to incorporate interpretation into the design of the wharf structures themselves. Heritage interpretation implemented as part of the project should be consistent with the interpretation policies and guidelines outlined in the Meeting Place Precinct CMP and La Perouse Headland CMP.</p>	A heritage interpretation strategy has already been prepared for Kamay Botany Bay National Park by NPWS – Kamay Botany Bay Cultural Interpretation and Storytelling Plan (WolfPeak Environment and Heritage, 2020). The project design will use this strategy to incorporate interpretation into the wharves. A separate heritage interpretation strategy is not required.

Submission	Response
b) Require that the interpretation strategy take into consideration existing interpretation to provide consistent interpretation in the area and acknowledge the varied history of the headlands and their significance to multiple groups.	
c) Avoid any impacts to existing interpretation, including interpretive text along Monument Track, and make good any damage done by construction to such interpretation following the completion of works.	<p>The follow environmental management measure is proposed which is considered to meet the intent of the recommended condition:</p> <p><i>Monument Track will be reinstated in the same location following construction. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in section 5.5: Landscape of the Meeting Place Precinct CMP. Specifically:</i></p> <ul style="list-style-type: none"> <i>a. The existing concrete slabs will be temporarily removed and reinstated rather than being replaced. If this is not possible, replaced sections will match the existing track</i> <i>b. Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.</i> <p>Furthermore, a heritage register to document the location, condition, significance, storage requirements of any memorials, monuments and interpretive panels which need temporarily relocating and storing during construction is proposed. An environmental management measures was proposed to that effort as outlined in section 8.4 of the EIS.</p>
d) Consider the results of archaeological investigations undertaken as part of the project. Where appropriate, opportunities should be considered for leaving archaeological remains exposed and incorporating them into the visual landscape.	<p>The following environmental management measure has been added to Appendix B of this report:</p> <p><i>Where any archaeological investigations identify remains, opportunities should be considered for leaving archaeological remains exposed and incorporating them into the visual landscape. Consultation with Heritage NSW and National Parks and Wildlife Service will be undertaken to determine the long-term repository for any retrieved objects.</i></p>
e) Conduct an oral history project undertaken in consultation with local archives, libraries, historical societies, and community groups to record memories and experiences of community members and Aboriginal groups and their interactions with Kamay Botany Bay National Park during the 20th century. This project should be incorporated into the heritage interpretation works.	<p>This oral history has already been completed as part of the Kamay Botany Bay National Park Kurnell Master Plan, the Cultural Interpretation and Storytelling Plan was produced by WolfPeak Environment and Heritage (2020). This includes stories, memories and experiences of community members and Aboriginal groups. Any heritage interpretation works for the project would be guided by this NPWS document.</p>
f) Progress an option for interpretation at La Pouse consisting of developing a site map displaying visible archaeological and heritage elements near the proposed wharf, such as former slip ways, cable tank footing, and remains of the Paragon Restaurant, to facilitate greater engagement by patrons of the ferry service.	<p>Locations for interpretation panels are shown on drawings in the UDLP (Appendix C of this report). These would be spaced out along the wharves. The contents of the interpretation panels are to be developed in consultation with NPWS and the local community.</p>
Consultation with the NPWS, Aboriginal and community groups	

Submission	Response
<p>1. Approval conditions are recommended to:</p> <p>a) Require consultation with NPWS where proposed works impact significant fabric within the National Park to allow NPWS to give feedback and ensure assets are appropriately managed through design, construction, and implementation stages.</p>	<p>The Heritage Management Plan was proposed as an environmental management measure in section 7.5 of the EIS. This would include any consultation requirements with NPWS.</p>
<p>b) Require collaboration with Aboriginal and community groups during the preparation of the heritage interpretation to tell a broad range of stories, which would contribute to the project. It is recommended that an Aboriginal cultural expert be engaged to appropriately interpret cultural narratives shared by the Aboriginal community.</p>	<p>As outlined above, the Cultural Interpretation and Storytelling Plan (WolfPeak Environment and Heritage, 2020) has achieved this purpose.</p> <p>The Gujaga Foundation were contracted to translate the themes from engagement and identified in the Interpretation and Storytelling Plan (WolfPeak, 2020) into the built fabric of the wharves.</p> <p>The work that has been carried out by Gujaga Foundation includes establishing a project team, targeted elder engagement, online surveys, conversations with interested members of the La Perouse community and a community feedback workshop. This approach has developed key themes to influence the interpretation and artwork approach for the project. The artwork and stories to be incorporated into the wharves is presented in the UDLP (Appendix C of this report).</p>
Landscape Heritage	
<p>1. Approval conditions are recommended to:</p> <p>a) Retain the African Olive Tree in the Kurnell Meeting Place Precinct and to avoid impacts to it, in accordance with CMP policy 5.5.7. If retention is not feasible, it is recommended the tree is not replaced or replanted in accordance with the same policy.</p>	<p>Retention of the African Olive tree is not possible as it is located where the utilities trench is required (this is due to site constraints of being near the foreshore and choosing a path of least disturbance). The tree will not be replaced, which is in accordance with the Kurnell Meeting Place Precinct Conservation Management Plan. The UDLP (Appendix C of this report) outlines the proposed planting scheme which has been prepared in consultation with NPWS and the local Aboriginal community.</p>
<p>b) Protect significant trees close to construction by establishing tree protection zones and using root sensitive construction techniques, developed in consultation with a qualified Arborist. If such measures are unable to prevent permanent damage to or the death of significant trees, options to replace them should be considered with the guidance of the flowcharts under Meeting Place CMP policy 5.6.54.</p>	<p>Tree protection measures, such as tree protection zones and using root sensitive techniques, as recommended in the Arboricultural Impact Assessment (Appendix J of the EIS) will be included in the Biodiversity Management Plan.</p>
<p>c) Require avoidance of impact to the area of remnant Coast Banksia communities at La Perouse and Kurnell. Where this cannot be avoided, offset planting of replacement native vegetation at La Perouse and Kurnell should be provided. This should be drawn on all relevant final planting plans and its appropriate after-care be included as part of the Construction Heritage Management Plan (CHMP).</p>	<p>The project cannot avoid the impacts on some coastal banksia scrub (0.46ha) due to site constraints (such as avoiding other vegetation and further archaeological impacts).</p> <p>Whilst not a direct offset of the coastal banksia scrub, there is new native planting proposed around the wharf tie-in areas as outlined in the UDLP (Appendix C of this report). This planting has been selected in consultation with NPWS and the local Aboriginal community.</p>

Submission	Response
d) In accordance with Meeting Place Precinct CMP policy 5.6.42, where communities such as remnant Coast Banksia communities would be replaced, the provenance of the replacement species must be local (in order of priority: from within the immediate native plant community, then within Botany Bay National Park (south), then from Kurnell Peninsula).	The proposed new planting will be outlined in the UDLP (Appendix C of this report). The plants nominated are all endemic to the area and have been approved by NPWS in consultation with the local Aboriginal community.
e) Prepare an Urban Design and Landscape Plan (UDLP), or equivalent landscape scheme, to be incorporated into the project CEMP. The UDLP should outline a vegetation replacement strategy detailing which species would be replaced and what species would be used. Details on tree and vegetation mitigation measures, as outlined above, would be incorporated into the CEMP.	A UDLP is attached to this report as Appendix C. This includes the planting proposed around the wharf tie-in areas. Details on tree protection measures as outlined in the Arboricultural Impact Assessment (Appendix J of the EIS) will be outlined in the Biodiversity Management Plan.
f) Expand the Arborist's Assessment recommendations in sections 7.9.1, 7.11) regarding the number and timing of supervising arborist inspections, to include 2 years of post-works-completion monitoring of new plantings, at 4-monthly intervals, including recommended remedial works (watering, mulching, staking, pruning) to ensure all plantings (and retained existing ones) survive construction and have a 2 year period of 'settling in', survive and thrive.	The number and timing of supervising arborist inspections will be outlined in the tree protection measures in the Biodiversity Management Plan. Long-term management of the planting would be incorporated into the NPWS landscape management program.
g) Reinstate Monument Track in the same location following completion of construction works to ensure the historical circulation pattern is maintained in accordance with Meeting Place CMP policy 5.5. If feasible, existing concrete slabs should be temporarily removed, stored, and reinstated rather than replaced. Particular care is required to remove sections with interpretive text and ensure they are returned to their original location. Any required replacement sections shall match the colour and consistency of the existing track.	The following environmental management measure was proposed in section 8.4 of the EIS: <i>Monument Track will be reinstated in the same location following construction. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in section 5.5: Landscape of the Meeting Place Precinct CMP. Specifically:</i> a. <i>The existing concrete slabs will be temporarily removed and reinstated rather than being replaced. If this is not possible, replaced sections will match the existing track</i> b. <i>Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.</i>
Historic Heritage	
1. It is recommended that: a) Further archaeological investigation and management will be required for the significant non-Aboriginal features relating to the coarse stone wall, trust wharf / landing place wharf (A2516), former stone wall, and the former wharf approach road at La Perouse.	As outlined in section 8.4 of the EIS, the Heritage Management Plan will include a photographic recording program, archaeological work method statements, an archaeological research design, including any archaeological investigations, salvage excavations and management to manage impacts to heritage.
b) Further archaeological management and investigation should be undertaken for the significant non-Aboriginal archaeological remains of the stone sea wall at Kurnell.	

Submission	Response
c) The detailed design for the project should take the findings of the test excavation program into consideration and redesign to avoid impacts to significant built heritage and archaeological remains where feasible.	The design has taken into account the results of the test excavation carried out in 2020. The design has avoided known heritage features and archaeological remains where possible.
d) An archaeological salvage excavation should be undertaken to investigate and record the significant archaeological remains where they would be impacted by the construction activities.	An archaeological salvage excavation will be outlined in the Archaeological Research Design as recommended by the environmental management measures in section 8.4 of the EIS, and outlined below.
e) The archaeological salvage investigations must be guided by an Archaeological Research Design (ARD) that would be prepared for the project (discussed below) and would be managed by an Excavation Director who meets the NSW Heritage Council's Excavation Director criteria.	The following environmental management measure is proposed as outlined in section 8.4 of the EIS <i>An Archaeological Research Design (ARD) will be prepared before work starts. The ARD will confirm the areas within the construction boundaries requiring archaeological investigation, management and any salvage requirements, following detailed design. It will outline the archaeological investigation method. Archaeological Work Method Statements (AWMS) will be prepared prior to construction to support the ARD.</i>
f) Undertake a comprehensive photographic archival recording of heritage items within and in the vicinity of the construction boundaries to document the fabric, setting and views of the surrounding landscapes prior to the commencement of the construction phase and at the completion of the project.	Photographic archival recording is proposed as outlined in section 8.4 of the ES. The measure is amended to include recording at the completion of the project as well (as outlined in Appendix B of this report: <i>A Photographic Archival Recording Program will be undertaken in accordance with the How to Prepare Archival Recording of Heritage Items (NSW Heritage Office 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office 2006). Photographic archival recording will be carried out prior to commencement of construction and at the completion of the project for heritage items that are directly impacted within the construction boundaries and record the setting and views of the heritage items within the study area that will be subject to minor or greater visual impacts based on Table 8-4 of the EIS. The impacted elements include but are not limited to:</i> <i>a. The former sea wall at Kurnell</i> <i>b. The former wharf approach road at La Perouse</i> <i>c. The archaeological potential areas at La Perouse</i> <i>d. Nearby heritage items subject to minor visual impacts including; Kurnell Peninsula Headland, Kamay Botany Bay National Park (North and South) and Towra Point Reserve, Kurnell Historic Site (in Kamay Botany Bay National Park), Kurnell monuments (in Kamay Botany Bay National Park) and Captain Cook monument.</i>
Maritime Heritage	
1. Approval conditions are recommended, as noted below: A site-specific Maritime Heritage Management Plan must be developed once the final alignment of the new wharfs is confirmed. The management plan must include objectives and methodologies to conserve maritime heritage and mitigate impacts. This	A combined Heritage Management Plan is proposed to include measures for Aboriginal, Non-Aboriginal and Underwater heritage. This plan includes measures to manage and protect underwater heritage will include unexpected finds protocol (as outlined in section 9.4 of the EIS). The underwater heritage sections of the Heritage Management Plan would address maritime

Submission	Response
document must be prepared by a suitably qualified and experienced maritime archaeologist. The Maritime Heritage Management Plan must specify: a) Unexpected finds protocols relevant to each type of activity such as trenching for services, piling and installation / removal of temporary causeway / construction pad, placing guide frames and temporary piles.	heritage and accordingly, it is not necessary to have a separate maritime heritage management plan.
b) Development of artefact management policy. This document must look at policies relating to potential retention, conservation, storage, and exhibition of artefacts.	The Heritage Management Plan as outlined in section 9.4 of the EIS) will include artefact management procedures and unexpected finds protocol to be carried out if artefacts are discovered.
c) If submerged reburial of artefacts is to be undertaken a specific policy must be developed outlining how and where artefacts are to be reburied.	The pre-construction dive inspection will ensure impacts on submerged heritage is avoided. An unexpected finds procedure will be followed. The Heritage Management Plan will include artefact management procedures, including identification of approved submerged reburial locations and consultation requirements if heritage items were discovered.
d) Relevant work method requirements and maritime heritage inductions tailored for each type of work activity such as anchoring or trenching.	As outlined in section 9.4 of the EIS, the Heritage Management Plan will include relevant work method statements and inductions.
e) Restricted zones, archival, baseline and periodic monitoring protocols for identified heritage items before and during construction, including a final site inspection within three months of completion of works. This measure would ensure the impact on known and potential maritime heritage remains, such as maritime infrastructure, shipwrecks and discarded objects, would be Negligible to Minor.	As outlined in section 9.4 of the EIS, restricted zones, archival, baseline and periodic monitoring protocols will be outlined in the Heritage Management Plan.
<p>The Kamay Ferry Wharves Environmental Impact Statement (AIS) June 2021, Table 9-6: <i>Environmental management measures for underwater heritage impacts</i> states that the Unexpected Heritage Items Procedure (NSW Roads and Maritime Services, 2015) must be updated. This procedure does not deal with unexpected maritime heritage finds. A site-specific unexpected maritime heritage finds policy must be prepared prior to work taking place.</p> <p>As the site contains a local heritage item, and other local items are in the vicinity, advice should be sought from the relevant local council.</p>	<p>The Unexpected Heritage Items Procedure (NSW Roads and Maritime Services, 2015) has been developed for both terrestrial and marine work.</p> <p>Randwick City Council and Sutherland Shire Council have provided submissions to the EIS, which are responded to in section 3.12 and 3.13 of this report. The Heritage Management Plan will outline any further consultation requirements with Randwick City Council and Sutherland Shire Council.</p>

3.9 National Parks and Wildlife Service

The submission from National Parks and Wildlife Service (NPWS) recommends a number conditions of approval and queries the location of a utility cabinet at Kurnell.

Table 3-6: NPWS submission and response

Submission	Response
<p>NPWS is generally comfortable with the proposed work, provided appropriate impact protections and mitigation measures are in place. Attached are some suggested conditions of approval, including:</p> <ul style="list-style-type: none"> Measures to mitigate areas of particular interest to NPWS, including: Aboriginal Heritage including midden area proximal to the construction zone at Kurnell. Historic Heritage, including impact to the heritage landscape and impacts to heritage features. Protection of fauna and flora in the national park, including protection against introduction of species to a national park setting; and Pedestrian safety given construction is in two high visitation sites. <p>We would also suggest that TfNSW consider if alternative locations are available for the installation of the Kurnell services cabinet to reduce impacts to the heritage landscape; I note that NPWS will have the opportunity to contribute to TfNSW's Construction Management Plans.</p>	<p>A response to each of the recommended conditions is provided below.</p> <p>With regards to the cabinet, Transport for NSW will continue to consult with NPWS about the location and design of this services cabinet.</p> <p>NPWS would be included in the consultation for the preparation of the Construction Environmental Management Plan.</p>
<p>1) Consent for the works in the form of appropriate tenure documents will be required by the landowner in accordance with the National Parks and Wildlife Act 1974. The consent may include conditions and requirements.</p>	<p>Noted.</p>
<p>2) An Environmental Management Plan (EMP) identifying the potential risks of the activity and how these will be managed must be prepared. The plan must detail the environmental management procedures to be applied during and after the completion of the activity including, but not limited to, the following components:</p> <ol style="list-style-type: none"> measures to protect areas of environmental sensitivity. location of active work and storage areas. vehicle and pedestrian access arrangements, including parking and alternative access where access routes are interrupted. environmental safeguards, including water pollution controls, waste management, protection against introduction of non-endemic species and management of hazardous substances. site rehabilitation. contact protocols outlining procedures and any notifications to be given before works commence, together with contact details for relevant contractor, TfNSW and NPWS officers. site induction and training arrangements. site monitoring and reporting; and protocols for incidents and emergencies. 	<p>A Construction Environmental Management Plan (CEMP) and sub plans will be prepared by the Contractor and approved by DPIE prior to construction commencing. The CEMP will include all of the listed components.</p> <p>NPWS will be included in the consultation for the preparation of the CEMP and sub plan.</p>
<p>3) Where vegetation is proposed to be damaged or cleared, a Vegetation Management Plan (VMP) must be prepared. The plan must identify the precise extent, location, and type of vegetation to be cleared, areas to be revegetated or regenerated at the conclusion of the</p>	<p>A Biodiversity Management Plan (BMP) will be prepared as a sub-plan to the CEMP. The BMP will outline trees and vegetation to be removed during construction and tree protection measures.</p>

Submission	Response
activity and appropriate monitoring and treatment for weed growth. Prior to commencing clearing, the applicant must clearly mark the areas approved for clearing via stakes or other suitable markers identified in the Vegetation Management Plan.	The UDLP is attached as Appendix C to this report. This plan outlines the proposed planting at the wharf tie-in areas. Monitoring/treatment for weed growth would be incorporated into the NPWS landscape management program for the Kamay Botany Bay National Park.
4) The applicant must take reasonable steps to restrict public access during the construction period and provide signage to advise appropriate project details and contact information.	A Traffic Management Plan (TMP) will be prepared as part of the CEMP. This will outline measures to limit the disruption to public access during the construction period and detail signage and detour route requirements. The site will also comply with all Works Health Safety legislation to ensure the site is safe for the public.
5) Machinery, equipment, or materials required for the activity must only be stored in existing cleared areas.	These requirements will be included in the CEMP and sub plans.
6) All laydown/parking/staging areas must be returned to a condition consistent with that prior to the commencement of the activity.	These requirements will be included in the CEMP and sub plans.
7) The applicant must ensure that fire-fighting equipment is provided on site during periods of declared high or greater fire danger.	These requirements will be included in the CEMP and sub plans.
8) Hot works and machinery which may result in sparking or ignition must not be used on a Total Fire Ban day without an exemption from the Rural Fire Service.	These requirements will be included in the CEMP and sub plans.
9) Hot works and machinery which may result in sparking or ignition may only be used during a Park Fire Ban with written permission from the NPWS Authorized Officer and subject to the following minimum fire suppression measures being available: a) 400 litre tank full of water with a motorised pump b) 50 metres of hose c) Handtools such as rake hoes and shovels d) Trained staff in appropriate attire (long sleeve and pants).	These requirements will be included in the CEMP and sub plans.
10) Fuel and other similar flammable materials, such as gas cylinders and paint, must be stored in appropriate fire-resistant storage containers.	These requirements will be included in the CEMP and sub plans.
11) All excavated material must be stockpiled in an appropriate area, and bunded at all times. Stockpiles must be covered if they are to remain on-site for longer than two weeks or during periods of expected high rainfall.	Stockpile management procedure is included in the Soil and Water Management Plan as a sub-plan of the CEMP.
12) Any topsoil removed during excavation must be stockpiled for later reuse in rehabilitation of the work site.	Noted. Provided that the topsoil is suitable for reuse.

Submission	Response
13) Vehicles and machinery must only use the track/s detailed in the EIS. New access tracks or reopening of old tracks must not occur without NPWS approval.	Access to the site will be as outlined in the EIS and further detailed in the Traffic and Access Management Sub Plan.
14) Works must not be undertaken in wet weather if the proposed track surfaces and sites are going to be damaged by vehicles, equipment or works.	Noted. Measures will be outlined in the CEMP to protect underlying ground conditions and to avoid impacts during wet weather events.
15) The activity must have appropriate erosion and sediment controls installed to adequately manage drainage.	Erosion and sediment controls will be outlined in the Soil and Water Management Plan as part of the CEMP. These will include measures to manage drainage.
16) Any areas including vehicular tracks which are damaged or disturbed in such a way that may lead to soil erosion must be stabilised immediately and rehabilitation undertaken within 14 days. Where excavation occurs and is to be remediated, appropriate fill and compaction will be delivered in accordance with the following principles: compact in layers of 120–150 mm depth (compaction of layers less than this thickness may result in separation from the underlying layer and scaling of the material off the surface; compaction of layers thicker than 150 mm may result in under-compaction and the development of soft spots)	These requirements will be included in the CEMP and sub plans.
17) Use appropriate imported material for fill, including a good range of fines through to larger particle sizes. Any imported material should be tested and recommended by a qualified road practitioner. A record should be kept of all fill material, including its performance over time – material that performs well should be favored and used for future works.	These requirements will be included in the CEMP and sub plans.
18) When material is compacted onto an existing road surface the surface should be scarified prior to compaction. Scarification breaks the shear plane and aids: i. bonding of the compacted material to the existing surface a) mixing of existing and new materials b) formation of sufficient compaction depth.	These requirements will be included in the CEMP and sub plans.
19) At least one person on-site at all times must be capable of identifying the threatened species described in the EIS. All identified specimens must be flagged, identified to staff/contractors involved in the activity and not disturbed.	The BMP will outline induction procedures for site workers prior to works commencing. The BMP will outline procedures if threatened species are identified on site.
20) Any deep excavations left open at night must be left with ramps or openings such that any fauna entering has a means of escape. Excavations must be checked each morning for any trapped animals.	The BMP will include measures to ensure no trapping of species such as that described.
21) Disturbance to low growing species must be minimised and ground cover retained.	The BMP will outline the vegetation clearing required and the areas to be protected.

Submission	Response
	Exclusion zones and tree protection measures will be outlined in the BMP.
22) Any restoration or rehabilitation works must only use locally sourced indigenous plant species, unless otherwise approved in writing by the NPWS Authorised Officer.	The UDLP is attached as Appendix C to this report and includes plant species type and source. All species will be endemic to the area and this has been previously agreed with NPWS.
23) Any felled timber or vegetation must be dispersed throughout the adjacent environment to aid stabilisation of bare soils, enhance fauna habitat and reduce fire risk.	Where appropriate this could be achieved, or otherwise would be treated as waste and disposed of offsite. With the exception of the African Olive tree which has been requested to be gifted to Taronga Zoo.
24) All imported material must be from a source agreed with NPWS and must not contain soil or vegetative matter.	Noted.
25) All vehicles, plant and equipment must be washed down to remove any soil or plant matter prior to entering the reserve and when travelling from an area of known weed infestation to a new work area within the reserve.	Weed management protocol will be outlined in the BMP. Soil management measures will be outlined in the Soil and Water Management Plan (SWMP).
26) Concrete mixing or washout must not occur at the work site.	Appropriate constructed concrete washouts are proposed to be installed within the project site. 27) notes that concrete washouts can occur on the site. Transport will ensure 27) will be incorporated in the CEMP and sub plans.
27) If concrete washout is to occur on-site the resultant effluent must be discharged to a fully lined impervious bunded container for later discharge offsite.	These requirements will be included in the CEMP and sub plans
28) At least one person on-site at all times must be capable of identifying the heritage features described in the EIS. All identified specimens must be flagged, identified to staff/contractors involved in the activity and not disturbed.	The Heritage Management Plan (HMP) will include heritage induction requirements so that construction workers are informed of what to do if heritage items are identified. The HMP will outline when archaeological supervision is required during construction.
29) Protection measures must be implemented for heritage items from construction impacts including vibration – e.g. Midden and Cook Obelisk are immediately adjacent to the construction boundary.	The HMP will include procedures to avoid and mitigate vibration impacts to nearby heritage items.
30) If during the course of the activity any human skeletal remains are located the applicant must: <ul style="list-style-type: none"> a) immediately cease the activity b) not further harm these remains c) secure the area so as to avoid further harm to the remains d) notify the local police and OEH's Environment Line on 131 555 as soon as practicable and at that time provide any available details about the nature and location of the remains e) notify the NPWS Authorised Officer; and 	The HMP will include the Transport for NSW Unexpected Heritage Finds Procedure. This procedure outlines all the requirements to be followed if human remains are encountered.

Submission	Response
f) recommence the activity only after receiving confirmation in writing from the local police or NPWS that it is appropriate to do so.	
<p>31) If, during the course of undertaking the activity, the applicant becomes aware of the presence of threatened species, populations or endangered ecological communities, or their habitats, that were not identified and assessed in the EIS and which are likely to be affected by the activity, the applicant must:</p> <ul style="list-style-type: none"> a) immediately cease all work likely to affect the threatened species, populations or endangered ecological communities, or their habitats; b) inform the relevant authority. Notification must be made as soon as practicable by phone, electronically or in writing; and c) not recommence work likely to affect the threatened species, populations or endangered ecological communities, or their habitats until receiving written advice from the relevant d) authority to do so. 	The BMP will include measures for unexpected species finds and handling procedures.

3.10 NSW Rural Fire Service

The submission from NSW Rural Fire Service advised that there are no concerns about bushfire risk for the project. No response is required.

3.11 Port Authority of NSW

The Port Authority of NSW recommended a number of conditions of approval for the project including the preparation of a Construction Maritime Risk Management Plan, an Operational Maritime Risk Management Plan, Harbour Master approval and lighting for aids to navigation.

The EIS proposed that a Marine Works Management Plan would be prepared as part of the suite of sub plans to the Construction Environment Management Plan (refer to section 12.4 of the EIS), this achieves the purpose of the Maritime Risk Management Plan as requested. The Marine Works Management Plan will be prepared in consultation with, and to the satisfaction of the Harbour Master.

Prior to commencing operation of the project, Transport for NSW will consult and provide all operational requirements from the Port Authority and Harbour Master. These operational requirements would be incorporated in the operational management of Botany Bay as required. Any management plan or documents required for the operation of the project would be prepared in consultation with, and to the satisfaction of the Harbour Master.

Harbour Master approval would be applied for prior to construction commencing.

Lighting is proposed along the entire periphery of the wharf, including the submerged elements of the berth structure. The lighting design:

- Considers the navigational safety of the Port (as outlined in the Navigational Safety Assessment (Appendix L of the EIS)
- Proposes LED lighting be used
- Ensures all lighting will be dimmable.

The lighting design for the wharves is designed in accordance with Australian standards AS4282 and AS1158, these standards take into account the effect of glare on transport system users (eg pilots, water craft operators, train drivers, motorists, cyclists, pedestrians) which is known as Threshold Increment (TI) and is measured as a percentage, a percentage less than a 20% TI value is deemed appropriate. The project's TI value is less than 5% which is well below the value defined within AS1158. The design includes luminaires which have well designed optics which can further aid with minimising glare. By adopting these standards, the design will avoid impacts on pilot's night vision.

Once installed, the lighting will undergo a testing and commissioning process to ensure it meets the standards. The light levels can be adjusted accordingly if there are any lighting glare issues. During detailed design, the lighting of the wharves went through a design review process where Transport for NSW Operations and Compliance team advised no additional in water Aids to Navigation (AtoNs) are recommended providing both structures are well lit.

3.12 Randwick City Council

The submission from Randwick City Council raised a number of queries regarding traffic and transport, heritage, land details, structure design, wharf infrastructure, energy efficiency, marine biodiversity, terrestrial biodiversity and wayfinding. The table below responds the submission.

Table 3-7: Randwick City Council submission and response

Submission	Response
Traffic and parking	
<p>Council request that, in its Response to Submissions, TfNSW is to demonstrate:</p> <p>How the project meets the demand for parking associated with people who drive to La Perouse, solely to take the ferry.</p>	<p>The demand analysis in Appendix K of the EIS outlines the anticipated future ferry passengers and what percentage of these are expected to drive to La Perouse and park to use the ferry service.</p> <p>The project has used a place and design driven approach aiming to maximise the potential of the existing infrastructure; without just taking an unconstrained approach to parking provision. Demand modelling indicated there would be no additional inbound or outbound trips at La Perouse. This is predominantly related to a large portion of trips that would have previously driven to La Perouse, now driving to Kurnell and using the ferry service to access La Perouse. Given no uplift in demand was predicted it was deemed that no additional parking at La Perouse would be required to serve demand relating to ferry passengers. The project will provide 13 additional parking bays and two accessible bays by optimising the existing parking arrangement, converting parallel parking to right angled parking.</p>
<p>How the project indicates that there will be no additional inbound or outbound trips occurring in either the weekday or weekend peak periods as per the assessment in Table 15 of Appendix K, and the associated statements.</p>	<p>The ferry passenger demand at La Perouse has been calculated as the 'induced demand' plus the net difference in 'diverted existing' trips. These two trip types are explained below:</p> <ul style="list-style-type: none"> Induced demand – these are new trips to La Perouse generated by the addition of the ferry service Diverted existing trips – these are trips that would have driven to their destination but instead will now drive to the other ferry stop and catch the ferry service to their destination (eg existing vehicle trips to Kurnell that are replaced by a vehicle trip to La Perouse followed by taking a ferry service to Kurnell).

Submission	Response
	<p>These demands indicate a larger number of diverted existing trips will be diverted away from La Perouse to Kurnell than those being diverted to La Perouse from Kurnell, leading to a net reduction in diverted existing trips at La Perouse of 11,800. As this net reduction is greater than the induced demand of 7,500 trips this indicates that overall there will be no increase in inbound or outbound trips at La Perouse.</p>
<p>How the suggested line marking delineation proposed along the Anzac Parade parking loop road helps to mitigate the existing congestion arising from the one-way loop arrangement as per the advice in Appendix K, Page 2. It is unclear as to what arrangements could be made to improve the current situation.</p>	<p>The additional line marking as outlined in Appendix K is a recommendation to help improve the traffic congestion around the La Perouse loop. Some of the congestion issues on the one-way loop arrangement are caused by vehicles waiting for a parking space to clear, blocking other traffic circulating the loop. The central marking delineation would suggest for waiting vehicles to pull over to the side of the carriageway allowing other vehicles to pass. This could be implemented where the carriageway is wide enough to facilitate this side by side movement safely and would not conflict with other provisions such as pedestrian crossing points. This is not part of the project scope, but rather is a recommendation for Randwick City Council as the road authority to implement this change.</p>
<p>Council requests that TfNSW provides a further transport and parking analysis report to giving greater clarity regarding the likely impacts which the proposal will have upon the local community and local area having regard to the issues raised under the Traffic and Parking section above.</p>	<p>The Traffic and Transport Assessment Report and Chapter 12 of the EIS, sufficiently assess the potential traffic and parking impacts. Therefore, a further transport and parking analysis is not required.</p>
Impact on heritage values	
<p>It is recommended that the mitigation measures identified in page v to xi of the Statement of Heritage Impact be included as conditions of any approval for the project.</p> <p>Additionally, it is recommended that a condition of approval be included requiring the preparation of a Heritage Interpretation Strategy (HIS) to guide any interpretive installations proposed in the wharf construction and associated landscape works as identified in existing Conservation Management Plans (CMPs) and heritage studies, and that the HIS also consider the results of all archaeological investigations carried out as part of the project.</p>	<p>The proposed environmental management measures outlined in Appendix A of the EIS achieve the intent of those recommended in the Statement of Heritage Impact.</p> <p>A Heritage Interpretation Strategy is not proposed as an environmental management measure as it is considered that existing documents and strategies exist to influence the interpretation panels or similar on the wharves. This includes the Kamay Botany Bay National Park Interpretation and Storytelling Plan by WolfPeak Heritage and Environment (2020), developed for the Kamay Botany Bay National Park.</p> <p>The Gujaga Foundation were contracted to translate the themes from engagement and identified in the Interpretation and Storytelling Plan (WolfPeak Environment and Heritage, 2020) into the built fabric of the wharves.</p> <p>The work that has been carried out by Gujaga Foundation includes establishing a project team, targeted elder engagement, online surveys, conversations with interested members of the La Perouse community and a community feedback workshop. This approach has developed key themes to influence the interpretation and artwork approach for the project. The artwork and stories to be incorporated into the</p>

Submission	Response
	wharves is presented in the UDLP, attached as Appendix C to this report.
Aboriginal and non-Aboriginal archaeology	
<p>Council requests that the measures for managing impacts of excavation and construction works in and close to areas containing Aboriginal and Non-Aboriginal Archaeology in La Perouse and Kurnell as identified in the Aboriginal and Non-Aboriginal Archaeological Test Excavation Report be included as conditions of any approval for the project.</p>	<p>The following environmental management measures are proposed to protection Aboriginal and non-Aboriginal archaeology and achieve the intent as those in the Archaeological Test Excavation Report:</p> <ul style="list-style-type: none"> • <i>A Salvage Excavation Program will be developed and be carried out prior to any subsurface impacts within the Low Potential PAD at La Perouse. This includes the jetty tie-in where utilities, wharf piles and landscaping works. Following completion of the archaeological excavation and the subsequent analysis and reporting, further consultation will be undertaken to determine the long-term repository for any retrieved Aboriginal objects.</i> • <i>A visual inspection of the potential rock engravings (Site 3, La Perouse [AHIMS ID 45-6-0650] and Site 4, La Perouse [AHIMS ID 45-6-0651]) will be undertaken before setting-up the ancillary facilities and starting construction.</i> • <i>Establish exclusion zones for all registered AHIMS rock engraving sites within the construction boundary or directly adjacent and cover with geotextile fabric (or similar) before setting-up the ancillary facilities and creating the construction compound.</i> • <i>Archaeological work method statements will be prepared prior to setting up ancillary facilities, construction compounds or construction works to prevent impact and preserve the integrity the rock engraving at La Perouse (AHIMS ID 45-6-0653). During excavation and subsurface works or any other identified high risk activities, archaeological supervision and vibration monitoring will be undertaken at the potential location of the rock engraving at La Perouse (AHIMS ID 45-6-0653). If the engraving is identified and/or the vibration levels would result in damage to the integrity of the sandstone structure, works must cease, the site protected and the construction methodology be reviewed in consultation with a heritage consultant to mitigate further impacts.</i> • <i>Archaeological supervision will be undertaken during excavations below 400mm at Kurnell within the Foreshore Midden – Captain Cook's Landing Place (AHIMS ID 52-3-0219). If archaeological material is identified, further archaeological investigations may be required following review and assessment of the archaeological resources identified.</i>
Aboriginal cultural heritage	

Submission	Response
<p>It is recommended that all general recommendations and specific recommendations contained in the Aboriginal Cultural Heritage Assessment Report for the La Perouse and Kurnell construction boundary which cover site induction, further reporting, consultation, updates, unexpected finds, protective and mitigative measures, be included as conditions of any approval for the project.</p> <p>It is further recommended that all registered Aboriginal parties in the La Perouse and Kurnell area be sent an update on the project at least every six months to ensure that consultation with these parties remain current. In addition, Council requests that a heritage management plan covering provisions for protecting Aboriginal heritage and culture be incorporated into the project Construction Environmental Management Plan. Alternatively, a standalone Construction Heritage Management Plan should be prepared to address all heritage matters including Aboriginal cultural heritage.</p> <p>Exposed Aboriginal midden sites along the southern coastal fringe of Frenchman's Bay, adjacent to the Ferry access works should be identified in the heritage management plan as these are very fragile and need to be protected as part of the proposed works.</p> <p>Council also requests that the La Perouse Local Aboriginal Land Council be engaged to provide cultural heritage induction to all workers on-site prior to the commencement of any construction works.</p>	<p>A Heritage Management Plan would be prepared and implemented to avoid and manage impacts to Aboriginal cultural heritage in line with the recommendations of the Aboriginal Cultural Heritage Assessment Report. The Heritage Management Plan would be a subplan to the overall Construction Environmental Management Plan.</p> <p>The proposed environmental management measures are outlined in Appendix A of the EIS.</p> <p>The Heritage Management Plan would include consultation requirements – including consultation with registered aboriginal parties.</p> <p>The Heritage Management Plan would include induction requirements.</p>
Heritage interpretation	
<p>It is recommended that provisions be made in any consent for ongoing consultation and involvement of local Aboriginal stakeholders to ensure that cultural motifs continue to be incorporated and maintained in the architectural details of the wharf and associated public art.</p> <p>It is also recommended that the Heritage Interpretation Strategy (HIS) for the project be prepared in consultation with Council and NPWS to guide the incorporation of Aboriginal and non-Indigenous heritage interpretation, such as displays and panels, into the project</p>	<p>As outlined above, the work carried out by the Gujaga Foundation has translated the Interpretation Strategy and Storytelling Plan (WolfPeak Environment and Heritage, 2020) into the built fabric of the wharves. Aboriginal community stakeholders would continue to be consulted about the implementation of this work.</p> <p>Ongoing consultation with NPWS and the local community would continue to be carried out to inform way finding signage and interpretation panels to be located around the wharves.</p>

Submission	Response
<p>design. Furthermore, Council requests that the HIS incorporates the recent heritage and history of the La Perouse area including that of the La Perouse Museum; the social history of La Perouse area, and themes and features around the previous Ferry's history.</p>	
Land details	
<p>It is requested that further engagement with Randwick Council be undertaken in relation to, among other things, the necessary requirements and processes for the construction compound area, and making this area good following completion of construction works.</p>	<p>Noted. The Construction Environmental Management Plan (CEMP) would outline the consultation requirements with Randwick City Council.</p>
Structure design	
<p>It is recommended that the waiting area of the proposed wharf be designed to provide adequate weather protection. Additionally, Council requests that provisions be made in any consent to minimise the use of ad hoc structures such as ticketing booths, kiosks, and the like on the proposed wharf.</p>	<p>The waiting areas have been specifically designed to provide weather protection for future wharf users. The seating areas have wind protection panels orientated to protect against the prevailing wind directions. The roof provides weather protection against sun and rain. Details are outlined in the UDLP (Appendix C of this report).</p> <p>The operation of the wharves will be the responsibility of Transport for NSW. Any future users will have to adhere to Transport for NSW operational management systems, which would include permission for any use of the wharves. Additional structures such as kiosks or booths would be subject to further planning approval and are not part of this proposal.</p>
Wharf infrastructure	
<p>Council requests confirmation in the Coastal Processes Memorandum that the air-gap of 0.3m recommended by Cardno in the fixed structure design of the proposed wharf is capable of withstanding east coast low storm/swell events as experienced in 1974 and 2016 which are known to occur in the bay surrounding the proposed wharf. Council also requests that alternative modes of transport be provided in the event that the Ferry service is cancelled during extreme storm events</p>	<p>Notwithstanding the findings of the Coastal Process Memorandum, the wharves have been designed to withstand wave loading for a 500 Average Recurrence Interval (ARI) event plus sea level rise; this is more onerous than the 1974 and 2016 storm events.</p> <p>In the event that the ferry service is cancelled, alternative transport arrangements will not be provided. Rather, public announcements of cancelled services would be through the operator's and Transport for NSW's website.</p>
Energy efficiency	
<p>Council requests that the project comprehensively adopts green energy</p>	<p>The wharves do not consume much energy, and it would be comparable to a house with lights, power supply,</p>

Submission	Response
<p>initiatives in the design and operation of the proposal by providing technical details for achieving future provisions for renewable energy integration. Additionally, it is recommended that strategies and actions to achieve compliance with the NSW Government Resource Efficiency Policy be systematically detailed and outlined as conditions of consent for the project.</p>	<p>communications and water. The wharves have been future proofed to accommodate electric ferries if this is required in the future which aligns with Transport for NSW's Future Energy Strategy. Noting that electric ferries would require additional funding, upgrade works and planning approvals.</p> <p>The maintenance needs of the wharves are limited through careful selection of materials with proven durability performance in the marine environment (aluminium, 316L stainless steel, high strength concrete).</p> <p>Solar panels are not proposed, as they require a constant supply of power and it would become safety risk if the power for lights and equipment could not be met. Transport for NSW are committed to the requirements of the NSW Government Resource Efficiency Policy. Specific requirements would be outlined in the Construction Waste and Resource Management Plan, as part of the Construction Environmental Management Plan.</p>
Marine biodiversity	
<p>It is recommended that conditions be included requiring the Biodiversity Offset Strategy to be prepared by a qualified marine biologist and that Council be provided the opportunity to review and comment on the draft Biodiversity Offset Strategy prior to it being finalized. Furthermore, Council requests that the Marine Offset Strategy for the project prioritise the relocation of seagrass within the Frenchman's/Yarra Bay area to the northern side of Botany Bay to maintain sea grass habitat within. In the instance that a suitable site cannot be found in these locations in the near shore areas of the Randwick LGA, an alternative site be identified in the Penrhyn Estuary area off Foreshore beach in Bayside LGA. Further to this, Council requests that the re-establishment of a colony of Crayweed (<i>Phyllospora comosa</i>) should be investigated and undertaken on the existing rocky reef to the south of the wharf structure as part of the Offset Strategy. Additionally, Council requests that the use of silt curtains throughout piling and sediment disturbing construction activities be applied to minimise impacts of sediment dispersal and seagrass smothering during construction. It is recommended that mitigation measures to minimise impacts on the marine environment surrounding the proposed wharf structure be included as</p>	<p>The Marine Biodiversity Offset Strategy (MBOS) is attached to this report as Appendix D.</p> <p>The MBOS has been prepared by a suitably qualified marine ecologist, along with input from DPI Fisheries, UNSW, DAWE and the Gamay Rangers.</p> <p>The MBOS includes a Seagrass Rehabilitation Plan developed by technical specialists, including marine ecologists and environmental engineers, in consultation with NSW DPI Fisheries, to identify suitable sites and detail the procedures to collect, hold, transplant, and rehabilitate seagrass.</p> <p>Crayweed was not identified on site and impacts to the macroalgae present are anticipated to be temporary. Therefore this would be additional offset work than what is currently required. Although this could be a valuable opportunity, the focus has been on protecting and offsetting the endangered seagrass habitat that will be impacted. Furthermore, DPIE Fisheries have not raised this as a concern or as a preferred option for offset. The offsets proposed are outlined in the MBOS attached as Appendix D to this report.</p> <p>Floating silt curtains or other management measures would be used during construction where appropriate and would be included in the Construction Environmental Management Plans and subplans.</p> <p>The project would include recycling and waste bins at each wharf for the public to use (including for fishing tackle waste).</p> <p>A Seabin is not currently part of the project infrastructure.</p> <p>The existing moorings would be relocated in accordance with Transport for NSW approval requirements as outlined in section 12.3.2 of the EIS.</p>

Submission	Response
<p>conditions of consent including the installation of tackle bins on the wharf structure to encourage fishers to appropriately dispose of unwanted tackle items to minimise impacts on marine life from discarded fishing paraphernalia such as fishing lines. Council requests that the installation of a Seabin and associated operating infrastructure be investigated to determine if such a facility would be suitable in the control of any potential wharf generated marine debris to help protect the local marine environment. Council also requests that the use of sea grass friendly moorings be used in Frenchmans Bay to replace existing moorings and to offset potential damage from increased day tripper boat visitations that the ferry wharf project may generate. As the wharf potentially will attract recreational fishing to the bays around the wharf, Council recommends that mitigation measures be investigated to minimise impacts from fishing.</p>	<p>Rock fishing activities are already practiced in the area. The wharves would provide a safe platform for fishers to use.</p> <p>The wharves may increase the number of small recreational boats in the area. The wharves would provide a safe temporary berthing area for these boats, rather than them anchoring on the sensitive sea grass areas.</p>
Terrestrial Biodiversity	
<p>Council requests that the new Commonwealth National Light Pollution Guidelines for Wildlife January 2020 be utilized to develop a sensitive permanent lighting design to minimise light spill and reduce the risk of predation on threatened species in the area.</p>	<p>At La Perouse, the wharves are proposed to be lit to meet safety and navigational requirements. The existing lighting design around Anzac Parade would be continue for the reconfigured car parking areas. Low level lighting is proposed at the landscaping areas at the entrance to the wharves including through bollards, integrated seat lighting and wall mounted lighting. Details of the lighting design are outlined in the UDLP (Appendix C of this report).</p> <p>The following environmental management measure is recommended in Appendix A of the EIS:</p> <p><i>The lighting will be designed in accordance with AS/NZS 1158:2005 Lighting for Roads and Public Spaces (Australian and New Zealand Standard, 2005), AS/NZS 4282:2019 Control of Obtrusive Effects of Outdoor Lighting (Australian and New Zealand Standard, 2019) and to be guided by the National Light Pollution Guidelines for Wildlife (Australian Government, Department of the Environment and Energy, 2020).</i></p> <p>The lighting would be in accordance with these requirements to reduce glare and minimise light spill. Two existing light poles are proposed to be removed, and overall the proposed lighting is not expected to be greater than the existing generally 'brightly' lit environment.</p>
Wayfinding	

Submission	Response
It is recommended that a condition of any approval be included for the provision of a signage/wayfinding plan prepared in consultation with relevant stakeholders and consistent with existing signage within the National Park to provide direction to services and facilities in the La Perouse Headland including existing toilets.	The wayfinding signage is to be determined in consultation with Randwick City Council and NPWS to align with existing themes for signage around the Kamay Botany Bay National Park.

3.13 Sutherland Shire Council

The submission from Sutherland Shire Council raised queries regarding the MBOS, scour assessment, traffic and parking, pedestrians and cycling and the design. Responses to this submission are provided in the table below.

Table 3-8: Sutherland Shire Council submission and responses

Submission	Response
MBOS	
Council requests that the proposed Marine Biodiversity Offset Strategy be prepared, reviewed and endorsed by NSW Department of Primary Industries Fisheries prior to any approval being granted and this document's implementation be included as a condition of consent. Council would also like to view this document prior to approval.	The Marine Biodiversity Offset Strategy (MBOS) has been prepared in consultation with relevant stakeholders DPI Fisheries, UNSW and Gamay Rangers. The MBOS is attached as Appendix D to this report.
Scour assessment	
Concerns are also raised regarding the incomplete modelling relating to potential scour from vessels utilizing the wharf. It is understood that modelling has been undertaken only for the proposed ferry. However, information on the size of the scour is not available as the approach speed and angle is yet to be defined. There is also limited information relating to any additional recreational vessels which may utilize the wharf and the potential additional scour impact this could create. Additional detail relating to what will be permitted, how any regulations will be enforced and the potential environmental impact of this, should be provided prior to approval.	<p>Appendix T, Coastal Processes Memorandum of the EIS looked at a case study of Manly East wharves to assess the likely scour impacts from the proposed operation of the Kamay wharves. This provides real evidence of how scour is likely to occur at the proposed wharves.</p> <p>The Manly East case study is conservative and the actual scour will depend on the size of the vessels used by the operator.</p> <p>Other vessels using the wharves would be smaller than the ferry vessel, and therefore any scour from these vessels would also be smaller.</p> <p>Due to the shallow water depths in Botany Bay scour is unavoidable. The wharves are designed at a length to ensure a balance between the necessary depth to provide a safe berth for ferry vessels and avoiding excessive length into Botany Bay. The scour impacts would be localised and limited to the berths. There would be no impacts across the ferry swept path between the wharves.</p>

Submission	Response
	<p>Transport for NSW would be responsible for ensuring that only vessels of the appropriate size can use the wharves. This would ensure scour impacts are no greater than what has been assessed.</p>
Traffic and parking	
<p>The traffic and parking surveys (February and August 2020) understate current demands. The surveys pre-date significantly increased peak demands observed over the 20/21 summer following the installation of the new commemorative sculptures within Kamay National Park. The surveys do not quantify the number of park visitors parking within existing public roads to avoid fees associated with parking within Kamay National Park. Additional surveys should be undertaken over the 21/22 summer period to further inform a land-based transport strategy for ferry and park usage. This should be established as a condition of any approval for the project.</p>	<p>The parking surveys carried out on Sunday 2 February 2020, to inform the EIS assessment, looked at the capacity along Captain Cook Drive (the free parking areas within existing public roads). Anecdotal evidence from the community and through submissions has outlined that there has been an increase in peak demand over the 2020/2021 summer.</p> <p>Regardless of the existing peak demand, the demand analysis accurately represents the expected additional demand created from the operation of the wharves as outlined in the Traffic and Transport Assessment (Appendix K of the EIS). The additional demand at Kurnell is modelled to be 30 parking spaces at peak times. This is readily accommodated by the proposed 34 number of car parking spaces to be provided within the national park.</p> <p>It is acknowledged that the project will not resolve existing car parking issues.</p>
<p>The future parking demand is underestimated, being based on only 1% of all trips from Kurnell being induced trips eg new visitors taking up the ferry service. If the ferry service proves more popular than estimated, more pressure will be placed on Council's on-street parking and other infrastructure. TfNSW and NPWS need to have an agreed scaled up response to popularity such as further parking, improved active transport links and public transport service to Kurnell and alternatives such as shuttle buses/ shuttle train etc. Ongoing monitoring of park visitation, ferry patronage and land based transport should be done to inform ongoing review of the land-based transport strategy for ferry and park usage. This should be established as a condition of any approval for the project.</p>	<p>Refer to the previous response. Once the wharves are operational, Transport for NSW will continue to consult with NPWS and Sutherland Shire Council about the effectiveness of the parking solution and market demand. Transport for NSW will work with the operator to coordinate vessel movements with public transport services. There are also parking upgrades proposed within the national park as part of the Kamay Botany Bay National Park Kurnell Master Plan (Master Plan), to meet additional visitation demand in the Kamay Botany Bay National Park generated separately from the wharves. This is in addition to the parking proposed to service the visitor demand from the ferry wharves.</p>

Submission	Response
<p>The required ferry parking at Kurnell is to be provided by NPWS with timing and delivery linked to the project program in the National Park's Master Plan for which separate approval will be required. The EIS (Figure 5.10) shows three optional locations, two of which are unsuitable given their poor proximity to the wharf. The ferry service should have an exclusive, dedicated parking area within the National Park which needs to be clearly identified as part of this EIS. The parking needs to be located in a prominent and convenient location to allow safe and accessible access to and from the wharf with appropriate wayfinding and identification as "ferry parking".</p>	<p>34 car parking spaces would be provided within the national park to cater for park visitors who wish to use the ferry.</p> <p>Safe and accessible access will be provided from the national park parking areas to the wharves via a pedestrian pathway (also to be upgraded as part of the Master Plan works).</p>
<p>A parking and ferry ticketing validation system should be implemented that offers appropriate fee incentives for using the exclusive parking area. Without such a system, it is highly likely that many ferry patrons will attempt to park on street.</p>	<p>Parking to meet the modelled visitor demand of the project would be provided within the national park as part of the Master Plan.</p>
<p>It is critical that all land based transport infrastructure including car parking, paths lighting and wayfinding is delivered by NPWS prior to the opening of the ferry service. This should be established as a condition of any approval for the ferry project</p>	<p>This is offered as an environmental management measure in Appendix A of the EIS.</p>
<p>Pedestrian and cycling</p>	
<p>Council's expectations are that the Kamay Botany Bay Kurnell Masterplan be updated and implemented to accommodate a pathway system that connects the ferry wharf to Captain Cook Drive, bus stop(s) and ferry related car parking facilities. The path(s) must be safe, direct, and convenient to use, providing good amenity (that includes shade trees) as well as capacity to minimise user conflict and meet forecast pedestrian and cycling demand. The pathway network and wharf should accommodate cyclists and pedestrians, with a separate or a wide shared path 3.5 to 4m to provide an attractive, safe travel experience. Appropriate lighting along the paths and in the hub areas should allow for winter use.</p>	<p>The footpaths and pathways within the national park are planned to be upgraded by NPWS as part of the Master Plan, including accessible links to the proposed wharf.</p> <p>The Kamay Ferry Wharves Project would reinstate Monument Track which runs from Captain Cook Drive to the proposed wharf as a like for like replacement once construction activities are complete. Bollard lighting would be installed along Monument Track as outlined in the UDLP (Appendix C of this report).</p>
<p>The Heritage Impact Statement provided which recommends the creation of Heritage Management Plans (HMP) for both wharves, to manage the construction phase around heritage and future operation of the ferries, is supported. The implementation of due diligence strategies, archaeological supervision and interpretation should be included in the HMP.</p> <p>Regarding the impacts to local items at Kurnell, the removal of five juvenile trees and an African Olive tree at Kurnell are found to alter the visual historical setting. However, these juvenile trees are not part</p>	<p>The Heritage Management Plan would include measures such as site inductions, protocol to follow, archaeological supervision and unexpected finds procedure.</p> <p>The African Olive tree at Kurnell is required to be removed. The tree would not be replaced, which is supported by the recommendations in the Statement of Heritage Impact (Appendix F of the EIS), the Meeting Place Precinct Conservation Management Plan and Heritage NSW advice. NPWS supports this position.</p>

Submission	Response
<p>of the remnant vegetation and may be replaced. The African Olive tree has historical value and should be conserved or as a last resort, it may be re-located and interpreted.</p>	
Design	
<p>The educational potential of the area for learning about Aboriginal culture, history and the natural environment should be enhanced with the inclusion of art works which invite reflection on the significant stories of the place, such as the meeting of cultures and the meeting of land to sea. Ideally, the project design should foster a feeling of reconnection to the natural environment of the bay.</p> <p>The project is schematic and accordingly it is difficult to comment on the detailed design. The concept design as illustrated in the artist's impression comprises entirely rectilinear forms and large concrete surfaces. A curved connection from the ferry berth to the foreshore would better relate to the natural features, as would the use of more natural materials such as weathered timber and stone. Other ideas are to consider sail shapes in devising weather protection of the waiting areas, and the provision of facilities for recreational fishing in the form of 'side pods' placed randomly along the long walkway so this is not just a ferry terminal but also a 'gathering' place.</p>	<p>A UDLP is attached as Appendix C to this report. The Plan outlines the artwork to be included in the design, the design elements and the material selection. The artwork has been developed by collaboration with the Aboriginal community through the Gujaga Foundation.</p>

3.14 Water NSW

Water NSW advised that there are no Water NSW assets located near the project, and therefore no potential impacts on Water NSW assets. No response is needed.

4 Project refinements

This Chapter describes the following four proposed refinements:

- Refinement 1 Utilities alignment
- Refinement 2 Landscaping
- Refinement 3 Construction boundary
- Refinement 4 Construction methodologies

4.1 Utilities alignment

4.1.1 Description

The proposal is to refine the utilities alignment at both La Perouse and Kurnell. The concept design included power, water, communications and fire water supply utilities (refer to section 5.2.5 of the EIS). The utility design has been refined with the need for power and water only at both sites. The utilities for communication was removed from scope and the fire supply is provided within the water supply.

La Perouse

Power

The concept design was for the power to be connected into the existing supply at the wharf tie-in area (refer to Figure 4-1). The proposed connection point has been refined to the location shown on Figure 4-1. To connect into the revised connection point, the power supply cable would extend along the wharf and then along Anzac Parade to the proposed connection point. As with the original proposed, there would be ground disturbance from open trenching near the wharf tie-in area. There would also be ground disturbance around existing power poles along Anzac Parade. The power supply cable would be threaded through existing ducts between the poles.

The existing power supply cable would need rerouting at the proposed car parking area on Anzac Parade. This would involve trenching around 10 metres to the south of the proposed car parking areas as shown on Figure 4-2. This is a new trenching area since the concept design.

Water

The original proposal was for a water supply pipeline to be installed under the existing footpath to the north of Anzac Parade. Under the proposed refinement, water supply pipeline would be installed on the opposite side of Anzac Parade as shown in Figure 4-1. This is required to avoid the proposed power supply cable alignment. This would involve open trenching across Anzac Parade, and to the south of the roadway along the grassed area behind the existing car park.



Figure 4-1: Revised utilities at La Perouse



Figure 4-2: Revised power alignment near the car parking area at La Perouse

Kurnell

Power

The proposed refinement is for the power supply cable to generally follow the same alignment as proposed at concept design. It would therefore follow Monument Track from the wharf-tie-in to Captain Cook Drive. However, two refinements are proposed.

- Unlike the original proposal where the cable would have run alongside Monument Track, it would now be installed along Monument Track to allow bollard lighting to be installed along the footpath.
- Previously, the concept design shows the power cable turning 90 degrees and running parallel to Captain Cook Drive. It would now extend straight from Monument Track to a supply across Captain Cook Drive. The installation would continue to be open trenched up until Captain Cook Drive, and then will cross on overhead lines across Captain Cook Drive. This would avoid the need to trench the power supply cable across Captain Cook Drive.

Water

The proposed refinement would see the water supply pipeline generally follow the same alignment along Monument Track from the wharf tie-in to Captain Cook Drive. The water supply pipeline would be put in the same trench as the power cable. The water supply pipeline would still need open trenching across Captain Cook Drive to connect to the existing supply, as per the concept design.



Figure 4-3: EIS and proposed changes to utilities alignment at Kurnell

4.1.2 Environmental consideration

A review of the refinements against potential impacts on vegetation, heritage and access is provided below.

Vegetation clearing impacts

The proposed refinement to the water supply pipeline alignment would involve the removal of a small area of vegetation adjacent to existing car parking on Anzac Parade. The area of vegetation removal would depend on the final alignment of the pipeline. This planting is shown in Figure 4-4 below. This existing vegetation is not listed as native vegetation in Appendix I of the EIS. The vegetation would be replanted once the water supply pipeline is installed.



Figure 4-4: Area of existing planting at La Perouse

At Kurnell, the alignment of the utilities along Monument Track has not changed and potential impacts to the trees described in section 11.3.1 of the EIS would remain unchanged.

Heritage impacts

The proposed refinement to the power supply cable would place it along the same alignment as the original water supply pipeline on the north side of Anzac Parade loop. However, rather than needing to open trench along the entire length as needed for the original water supply pipeline, the revision would only need to excavate and disturb the ground next to the light poles (shown on Figure 4-1). This reduction in ground disturbance would reduce the impact on the Potential Archaeological Deposit (PAD) shown in Figure 7-1 of the EIS. Where ground disturbance is needed, the same mitigation measures as proposed in the EIS would be followed. This would include archaeological supervision as outlined in section 7.5 of the EIS.

The proposed revised alignment of the water supply pipeline is outside of the previously assessed impact area, being on the inside loop of Anzac Parade. The installation of the water supply pipeline would need to be open trenched. It would therefore disturb the ground. There could be unknown archaeological deposits associated with the Low Potential Archaeological Deposit (PAD) area that covers the majority of the La Perouse headland (refer to Figure 54 of Appendix E of the EIS) and non-Aboriginal archaeology (refer to Figure 143 of Appendix F of the EIS). There is no change in the potential for impacting on unexpected finds. This means the same mitigation measures as proposed in the EIS would be effective in managing the unexpected finds risk/impact (refer to section 7.5 and 8.4 of the EIS). This includes archaeological investigation and supervision, as well as unexpected finds procedures.

Access impacts

At La Perouse, the proposed revision to the water supply pipeline alignment would see it being open trenched across Anzac Parade and run further along Anzac Parade near the existing roundabout. This would require a temporary change in the operation of Anzac Parade during the excavation activities. Part of Anzac Parade can remain open to traffic while the trenching works take place. This would be managed by a Traffic Control Plan (refer to section 12.4 of the EIS) ensuring the road remains safe and accessible for road users. Any disruption would be for a temporary duration while the water supply pipeline is being installed (one to two weeks). As there is no pedestrian path along the south side of Anzac Parade, no pedestrians would be impacted by the proposed refinement to install the water supply pipeline.

The proposed power supply cable would be installed along the original water supply pipeline alignment. As noted above, the ground disturbance would be limited to around the light poles along Anzac Parade. This would require temporary traffic controls to be installed to ensure safe pedestrian access around the works during this time. There was provision for these controls in the EIS (as assessed in 12.3.1 of the EIS). As the same controls would be installed in the same location for the same timeframe, the impacts would be no worse than assessed in section of the EIS relation to pedestrian access.

4.2 Landscaping refinements at the wharf tie-in areas

4.2.1 Description

The specifics of the hard and soft landscape design have been further refined in close consultation with the local Aboriginal community, particularly at La Perouse where Timbery Reserve is located. The UDLP (Appendix C of this report) details the proposed landscaping elements included in these refinements. Specifically, the area of the landscaping has been refined, as shown in Figure 4-5 and Figure 4-6.

At concept design, there was no rock armour shown on the proposal. Figure 4-6 shows the proposed refinement to use rock armour to provide scour protection at Kurnell. The rock armour would sit on top of the existing rock surface and it would be built up to the underside of the wharf decking. The rock armour would join the existing sandbags located at the existing viewing platform.



Figure 4-5: Revised landscaping area at La Perouse



Figure 4-6: Revised landscaping and scour protection at Kurnell

4.2.2 Environmental consideration

The revised landscaping at La Perouse and Kurnell has a slightly smaller impact area, and therefore less soil disturbance is required than assessed in the EIS. The proposed refinement includes the use of select native and endemic landscape planting and materials such as sandstone that are naturally characteristic of the area's setting. These materials would complement the other planted and natural features that already exist in the Kamay Botany Bay National Park.

The proposed scour protection at Kurnell would not impact coastal processes due to its limited scale and its location above the mean high water tide. It would not extend beyond the existing sandbag seawall. The rock armour would be placed on top of the existing beach surface. This is to avoid the need to remove any heritage features under the existing viewing platform.

4.3 Construction boundary

4.3.1 Description

The construction boundary was adjusted to account for the above refinements.

La Perouse

At La Perouse this involves extending the boundary by 1,287 square metres to install the water supply pipeline along Anzac Parade and to install the power supply cable to the south of the proposed car park as shown in Figure 4-7.

Kurnell

At Kurnell this involves reducing the boundary by 3,156 square metres as shown in Figure 4-8.



Figure 4-7: Revised construction boundary at La Perouse



Figure 4-8: Revised construction boundary at Kurnell

4.3.2 Environmental consideration

La Perouse

The revised construction boundary covers State-owned land by NPWS, which is managed by Randwick City Council. The boundary refinement would not require access over privately owned property, therefore there is no change to the EIS assessment of impacts on property ownership.

Not all areas of the revised construction boundary are needed throughout the entire 13-month construction period. The laydown area and wharf construction areas (refer to section 5.5.1 of the EIS) would be needed throughout the entire construction period. Whereas the areas of the revised construction boundary needed for utilities installation would only be needed for around one month while those elements are being constructed or installed.

Kurnell

The revised construction boundary would have no increased impacts to that assessed in the EIS because there is a reduction in area required to be occupied during the 13-month construction period.

4.4 Construction methodologies

4.4.1 Description

Since preparing and exhibiting the EIS, Transport for NSW has received input from various contractors on the detail of how the project could be built effectively and efficiently. This process was discussed in section 5.1 of the EIS. While the contractors have confirmed the project would be broadly constructed as per the method described in section 5.5 of the EIS, they are proposing the following refinements to improve site safety:

- Rather than locating the temporary causeway on the west side of the proposed wharf, the temporary causeway at Kurnell may be located on either side of the proposed wharf.
- The temporary crane platform at La Perouse and the temporary causeway at Kurnell may need to be extended further out into the Bay than what was shown in the EIS, this is to safely access the works areas.
- The construction methods for these temporary platforms may need to be on piles, rather than rock structures as shown in the EIS, or would be a combination of both.
- Temporary moorings were assessed in the EIS as concrete blocks on the seafloor. Instead of blocks, these may be in the form of temporary piles near the wharve structure to allow construction vessels to mooring close to the construction works.

4.4.2 Environmental consideration

In all cases, the proposed refinements would take place within the construction boundary identified in Figure 5-2 and 5-3 of the EIS. Importantly, the refinements would not affect the construction method or construction program described in section 5.5 of the EIS. Also, the same equipment and machinery as listed in Table 5-7 of the EIS would be used to carry out the work.

As described in section 27.1.5 of the EIS, there is inherent uncertainty when preparing the EIS. To account for this, precaution was adopted when carrying out the impact assessment and setting mitigation measures. Importantly, the EIS adopted a worst-case approach to the impact assessment to account for uncertainty around the construction methods. With regards to the above refinements:

- The EIS has accounted for the impact on the biodiversity values over a 15 metre buffer area surrounding the wharves (refer to section 10.3.1 of the EIS). This means, it would have no increased biodiversity impact beyond that described in the EIS.
- Underwater heritage was assessed in the EIS to be impacted by piling and temporary construction methods (including the temporary causeway at Kurnell and crane platform at La Perouse). The refinements above would not have any greater impacts on underwater heritage, and the same management measures as outlined in section 9.4 of the EIS would be effective in minimising impacts.

- No matter the configuration of how it would be constructed, it would not be of a scale to have any different impacts on coastal processes (refer to section 18.3.1 of the EIS). As assessed for the temporary causeway, any temporary structure may have localised influence on sediment transport, however, once the temporary structures are removed, the shorelines would return to their previous state.
- While the configuration and layout of the construction works would change locally, they would still have the same general appearance, mass, and scale when viewed from the shore and other viewpoints. The conclusions in the landscape character and visual impact assessment remain the same (refer to 13.3.1 of the EIS).
- The associated noise impacts have been considered as activities in the EIS (establishing the construction platforms/causeway and piling) (eg there are no new activities). Establishing the temporary causeway and piling activities (during Stage 2 of the construction period) have already been assessed exceed noise management levels as outlined in 15.4.1 of the EIS. If the location of these temporary construction methods (moving within the 15 metre buffer) would be closer to sensitive receivers, it could increase the exceedance heard by these receivers, but would not generate a new exceedance. The refinement does not change the effectiveness of the management measures, including the Construction Noise Management Plan, proposed in section 15.5 of the EIS.

5 Conclusion

Department of Planning, Industry and Environment (DPIE) will, on behalf of the NSW Minister for Planning and Public Spaces, review the EIS and this submissions report for the project. Once DPIE have completed its assessment, a draft Environmental Assessment Report will be prepared for the Planning Secretary of DPIE, which may include recommended Conditions of Approval. The Environmental Assessment Report will be provided to the NSW Minister for Planning and Public Spaces, who will then approve the project (with any conditions considered appropriate) or refuse to give approval to the project.

The bilateral agreement allows NSW to assess development applications on behalf of the Australian Government, removing the need for a separate assessment reducing duplicative processes. The Australian Government remains the decision-maker for whether a project is approved under the *Environment Protection and Biodiversity Conservation Act 1999*, using the assessment report prepared by the NSW DPIE. Once the NSW decision is made, the Commonwealth Department of Agriculture, Water and Environment will review the assessment and make a decision for the controlled action.

A copy of the final submissions report will be made publicly available. The NSW and Commonwealth determination, including any conditions of approval and the Planning Secretary's Environmental Assessment Report, will be published on the Major Projects website following determination.

6 References

- Australian Government, (1999). *Environment Protection and Biodiversity Conservation Act 1999*.
- Australian Government, (2020). *National Light Pollution Guidelines for Wildlife*.
- Australian and New Zealand Standard, (2005). *AS/NZS 1158.0:2005 Lighting for roads and public spaces*.
- Australian and New Zealand Standard, (2019). *AS/NZS 4282:2019 Control of Obtrusive Effects of Outdoor Light*.
- Coalition of Aboriginal and Torres Strait Islander Peak Organisations and Council of Australian Governments, (2018). *Partnership Agreement on Closing the Gap (2019-2029)*.
- Government of South Australia, Department of Planning, Transport and Infrastructure, (2012). *Underwater Piling Noise Guidelines*.
- NSW Department of Environment and Climate Change, (2009). *Interim Construction Noise Guideline*.
- NSW Department of Planning, Industry and Environment, (2019). *Kamay Botany Bay National Park Kurnell Master Plan*.
- NSW Department of Planning, Industry and Environment, (2020). *Kamay Botany Bay National Park Plan of Management*.
- NSW Environment Protection Authority, (2014). *Waste classification guidelines*.
- NSW Environment Protection Authority, (2017). *Noise Policy for Industry*.
- NSW Government, (1979). *Environmental Planning and Assessment Act 1979*.
- NSW Government, (1991). *Land Acquisition (Just Terms Compensation) Act 1991*.
- NSW Government, (1994). *Fisheries Management Act 1994*.
- NSW Government, (1997) *Protection of the Environment Operations Act 1997*.
- NSW Government, (2008) *Protection of the Environment Operations (Noise Control) Regulation*.
- NSW Government (2011), *State Environmental Planning Policy (State and Regional Development)*.
- NSW Government, (2016). *Biodiversity Conservation Act 2016*.
- NSW Government, (2018). *NSW Maritime Infrastructure Plan*.
- NSW Government, (2018). *Water Management (General) Regulation 2018*
- NSW Government, (2000). *Environmental Planning and Assessment Regulation*.
- NSW Office of Environment and Heritage, (2017). *Biodiversity Assessment Method (BAM)*.
- NSW Office of Environment and Heritage, (2019). *NSW Government Resource Efficiency Policy*.
- NSW Roads and Maritime Services, (2015). *NSW Unexpected Heritage Items Procedure*

Transport for NSW, (2018). *Future Transport Strategy 2056*.

Transport for NSW, (2018). *Tourism and Transport Plan: Supporting the Visitor Economy*.

Transport for NSW, (2019). *Transport for NSW Reconciliation Action Plan 2019-2021*.

Transport for NSW, (2020). *South East Sydney Transport Strategy*.

WolfPeak Environment and Heritage, (2020). *Kamay Botany Bay National Park: Interpretation and Storytelling Plan*.