



Double Bay Wharf Upgrade

Submissions Report

Transport for NSW | April 2022

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Prepared by Cardno (NSW/ACT) Pty Ltd and Transport for NSW



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Approval and authorisation

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Executive summary

The proposal

Transport for NSW is proposing to upgrade Double Bay Wharf (the proposal) as part of the Transport Access Program (TAP). The proposal includes both landside and waterside work including the installation of a new jetty, gangway, covered pontoon, upgraded accessible parking and removal of the existing wharf structure.

The upgraded wharf would provide access for customers with mobility needs, meeting the standards of the *Disability Discrimination Act 1992* (DDA) and the *Disability Standards for Accessible Public Transport 2002* (DSAPT).

Details of the proposal are provided in Section 1.1 of this Submissions Report.

Display of the Review of Environmental Factors

Transport for NSW prepared a Review of Environmental Factors (REF) for the Double Bay Wharf upgrade (TfNSW, 2021). As part of the planning process the REF was publicly displayed between Friday 15 October and Tuesday 16 November 2021. The REF was published on the Transport for NSW project webpage and made available for download. Due to COVID-19 printed versions of the REF were available by request.

A number of activities were carried out during the public display period to provide the community with an opportunity to learn more about the proposal, ask questions and 'have their say'. Activities included installation of posters at the wharf, distribution of community updates and postcards and a targeted social media campaign.

Summary of issues and responses

A total of 20 submissions were received from the local community, businesses, industry and resident groups, and government.

A number of respondents supported or had no objections to the proposal, including that the design fits well with the surroundings.

The main issues raised were:

- Feedback, suggestions and concerns relating to the proposed design including the length of the wharf and providing access for smaller vessels.
- Wharf closure during construction and alternative transport options.
- Visual impacts of the new wharf including size of the wharf, covered pontoon and materials.
- Construction impacts including access, moorings and nearby businesses.
- Proposal justification.

A summary of the response to these is provided below:

- The Double Bay Wharf has been identified for an accessibility upgrade as it does not currently meet key requirements of the DSAPT or the *Disability (Access to Premises – Buildings) Standards 2010* made under the DDA. The DDA requires all public transport infrastructure, including wharves, to be fully compliant by December 2022.
- The wharf proposal is located further into the bay to meet accessible gradient requirements on the jetty and gangway and to accommodate the safe berthing of vessels on both sides. During detailed design Transport for NSW would investigate opportunities to reduce the length whilst meeting accessibility and operational requirements.

- Commercial and smaller vessels would continue to be permitted to berth at the new wharf. During detailed design Transport for NSW would investigate the installation of appropriately spaced fenders, ladders and cleats on the pontoon to support berthing by vessels of different sizes.
- The wharf would be closed for around six months during construction, however options to reduce this timeframe would be investigated when preparing the detailed work schedule. Existing public transport options could be utilised during wharf closure and Transport for NSW would consider alternative transport options during detailed design such as extending the operation of existing bus routes.
- The design of the wharf aims to unify and identify the harbour wharves and the ferry commuter transport system. The size of the wharf structure was determined by factors such as wave and wind conditions, and to meet accessibility gradient requirements.

A more detailed summary of feedback received and Transport for NSW responses is available in Section 2 of this report.

After consideration of the issues raised in the public submissions the safeguard and management measures described in the REF have been revised to mitigate potential impacts.

Next steps

Transport for NSW as the determining authority will consider the information in the REF and this Submissions Report and make a decision whether or not to proceed with the proposal. The decision will be shared with stakeholders and the community.

Where a decision is made to proceed, the project will move into detailed design and then construction. Transport for NSW would continue to inform the community and stakeholders prior to and during the construction phase.

Contents

Executive summary	i
Contents	iii
1. Introduction and background	1
1.1 The proposal	1
1.2 Review of Environmental Factors display	3
1.3 Purpose of the report	3
2. Response to issues	4
2.1 Overview of issues raised	5
2.2 Proposal design	6
2.3 Transport, traffic and access	7
2.4 Landscape character and visual impacts	9
2.5 Biodiversity	10
2.6 Noise and vibration	11
2.7 Consultation	12
2.8 Construction impacts	12
2.9 Proposal justification	13
2.10 Heritage	14
3. Environmental management	15
3.1 Environmental management plans (or system)	15
3.2 Summary of safeguards and management measures	15
3.3 Licensing and approvals	32
4. References	33

Tables

Table 2-1: Respondents	4
Table 3-1: Summary of environmental safeguards and management measures.....	16
Table 3-2: Summary of licensing and approval required	32

Appendices

Appendix A	Double Bay Wharf Upgrade, Review of Environmental Factors, October, 2021
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1. Introduction and background

1.1 The proposal

Transport for NSW proposes to upgrade the Double Bay Wharf (the proposal) as part of the Transport Access Program (TAP). The proposal includes both waterside and landside work as shown on Figure 1-1.

The waterside features of the proposal would include:

- Demolition of the existing wharf structure.
- Construction of a new *Disability Standards for Accessible Public Transport 2002* (DSAPT) compliant accessible jetty (about 70 metres long by 5.4 metres wide) connecting to the cul-de-sac end of Bay Street. The fixed jetty would be supported by up to 21 new piles.
- Construction of an uncovered aluminium gangway (about 18 metres long and three metres wide), connecting the new jetty to the new pontoon.
- Construction of a new double sided 9 x 22.5 metre steel pontoon held in place by four large piles. The pontoon would have a curved zinc roof supported by four steel columns, glass weather protection screens, stainless-steel balustrades, seating and information boards. To assist with ferry berthing two pivot piles are provided at either end of the pontoon (four in total), and a row of four protection piles are located at the southern end in case of ferry overrun.
- Installation of safety and security features including a help point, lighting, closed circuit television (CCTV) cameras, ladders to the water and a life buoy on the pontoon, and tactile ground surface indicators where required.

The landside features of the proposal would include:

- Re-surfacing and widening of the existing footpath between the wharf entrance and the designated accessible parking on Bay Street.
- Provision of a kiss-and-ride drop off zone with accessible pram ramp in the cul de sac end of Bay Street.
- Upgrade of the existing designated accessible car parking on Bay Street to provide a single compliant space.
- Retention of the five existing bicycle parking hoops.

Should the proposal be approved, work would be carried out over a period of up to six months starting in the first half of 2023. During construction the wharf would be closed. There may be a period of overlap between the closure of both the Double Bay Wharf and Darling Point Wharf. Transport for NSW would work to minimise any disruption during this period and keep the community informed.

A more detailed description of the proposal is found in the Double Bay Wharf Upgrade Review of Environmental Factors (REF) prepared by Transport for NSW in October 2021 (TfNSW, 2021).

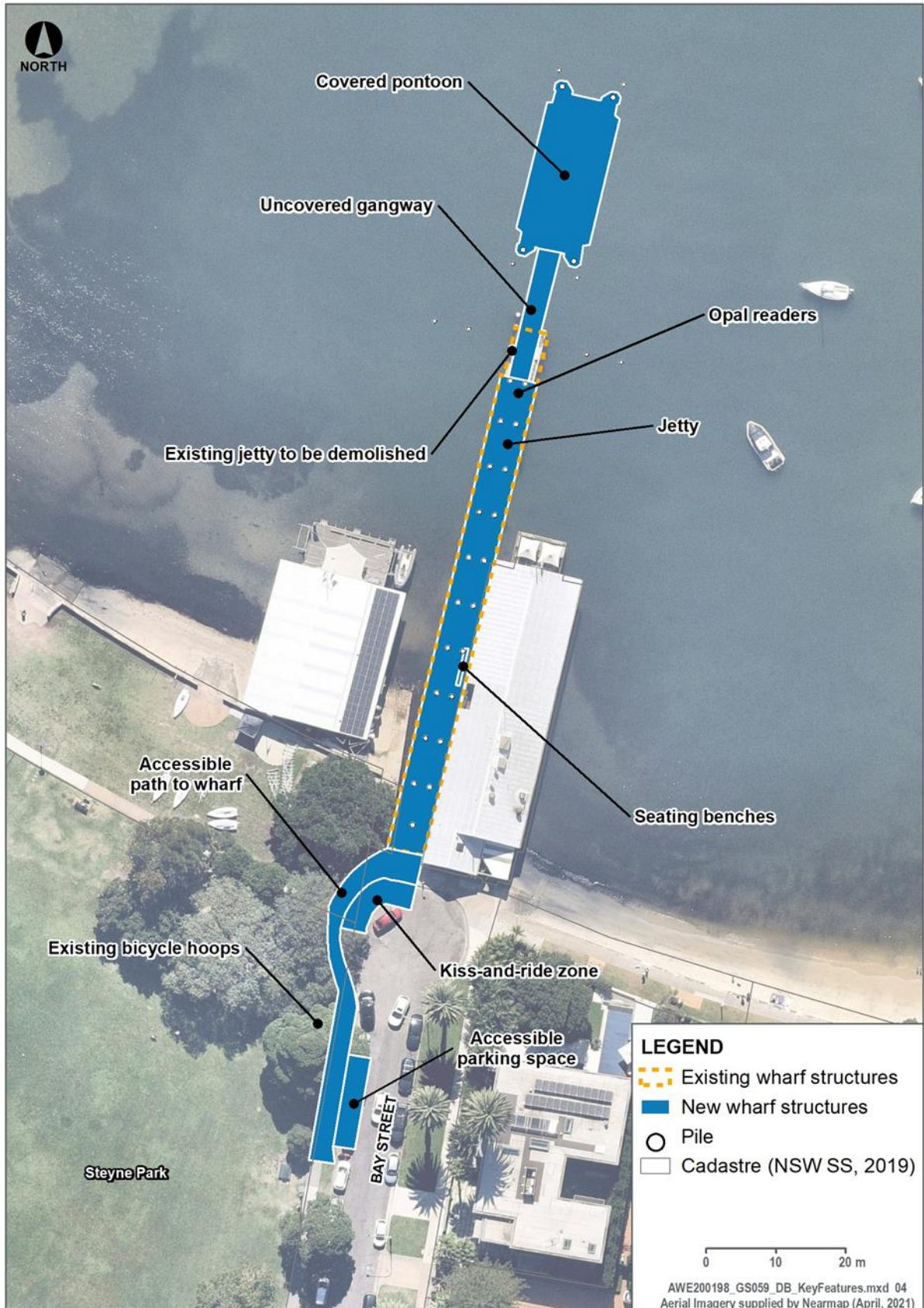


Figure 1-1: Plan of the proposal

1.2 Review of Environmental Factors display

Transport for NSW prepared an REF to assess the potential environmental impacts of the proposed work. The REF was publicly displayed for 33 days between Friday 15 October and Tuesday 16 November 2021.

The REF was published on the Transport for NSW project webpage and made available for download. Due to COVID-19 printed versions of the REF were available by request. A range of community consultation activities were carried out for the public display which included:

- installation of posters at the wharf with quick response (QR) codes taking passengers to an online survey
- distribution of 4,159 community updates letterbox dropped within the suburbs of Double Bay, Darling Point and Bellevue Hill at the start of the public display period
- distribution of 4,159 postcards halfway through the public display period as a reminder for the community to have their say
- targeted social media campaign during the public display period that reached 20,046 people
- email sent to 159 people on the project database.

1.3 Purpose of the report

This Submissions Report relates to the REF prepared for the Double Bay Wharf Upgrade and should be read in conjunction with that document.

The REF was placed on public display and submissions relating to the proposal and the REF were received by Transport for NSW. This Submissions Report summarises the issues raised and provides responses to each issue (Chapter 2) and identifies the revised environmental management measures for the proposal (Chapter 3).

No proposal changes are proposed that would require the preparation of a preferred infrastructure report.

2. Response to issues

Transport for NSW received 20 submissions, accepted up until the Tuesday 16 November 2021. Table 2-1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in this Submissions Report.

Table 2-1: Respondents

Respondent	Submission No.	Section number where issues are addressed
Individual	1	Section 2.2.1, Section 2.4, Section 2.6
Individual	2	Section 2.2.2, Section 2.3.1, Section 2.3.4
Individual	3	Section 2.3.2
Government agency	4	Section 2.5.1, Section 2.5.2
Individual	5	Section 2.3.2
Resident group	6	Section 2.2.3
Individual	7	Section 2.3.2, Section 2.3.4
Individual	8	Section 2.2.3
Individual	9	Section 2.9
Individual	10	Section 2.4
Business	11	Section 2.2.3, Section 2.8
Individual	12	Section 2.4
Individual	13	Section 2.3.2, Section 2.3.3
Individual	14	Section 2.3.5, Section 2.4
Individual	15	Section 2.2.3
Individual	16	Section 2.7
Individual	17	Section 2.4
Industry group	18	Section 2.2.3
Industry group	19	Section 2.2.3
Industry group	20	Section 2.2.3

2.1 Overview of issues raised

A total of 20 submissions were received in response to the REF display. This consisted of one government agency, one business, one resident group, three industry groups and 14 individual submissions from the community.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted and collated, and corresponding responses to the issues have been provided. Where similar issues have been raised in different submissions, only one response has been provided. The issues raised and the Transport for NSW response to these issues forms the basis of this chapter.

A number of respondents supported or had no objections to the proposal.

The issues raised in the submissions from the community and agencies can be categorised into eight main areas as follows:

- proposal design
- proposal justification
- transport, traffic and access
- landscape character and visual impacts
- biodiversity
- noise and vibration
- consultation
- construction impacts.

2.2 Proposal design

2.2.1 Length of wharf

Submission number(s)

1

Issue description

The respondent is concerned the wharf length is too long especially for aged individuals, parents and children.

Response

The length of the wharf (jetty and gangway) has been designed to meet accessible gradient requirements and to accommodate the safe berthing of vessels on both sides, while protecting the adjacent businesses. The length of the gangway is determined to provide a DSAPT compliant gradient of 1:14 for at least 80 percent of the tidal range.

During detailed design Transport for NSW would investigate opportunities to reduce the length of the wharf whilst meeting accessibility, operational and safety requirements.

2.2.2 Wharf furniture

Submission number(s)

2

Issue description

The respondent has requested additional seating be provided on the wharf for ferry passengers and locals to use. The respondent also requests that rubbish bins are installed along the gangway.

Response

The proposal includes the provision of seating on the pontoon. Providing additional seating at other locations on the wharf, including along the jetty, would be considered during detailed design.

The proposal includes the provision of rubbish bins on the pontoon. There is insufficient space for rubbish bins to be located on the gangway and no plan for rubbish bins on the new jetty.

2.2.3 Access for small vessels

Submission number(s)

6, 8, 11, 15, 18, 19, 20

Issue description

The respondents were concerned the design does not provide adequate access for smaller vessels including kayaks, water taxis, the sailing community, and for boats that need to access the nearby St Vincent Hospital in emergencies. Access should be provided through use of appropriate fenders, walers, cleats, access ladders, time-limit signage, or through a separate pontoon.

Some respondents suggested installing a dedicated floating pontoon off the main jetty for recreational boat users which would allow for safe and convenient access by people of all ages and abilities.

One respondent supported recreational usage from the proposed new floating pontoon.

Response

Commercial and smaller vessels would continue to be permitted to berth at the new floating pontoon. During detailed design Transport for NSW would investigate the installation of appropriately spaced fenders, ladders and cleats on the pontoon to support berthing by vessels of different sizes.

The key objective of the wharf upgrade is to provide compliant accessible access for customers using the ferry transport system. As commercial and smaller vessels would be permitted to use the new floating pontoon, no additional pontoons would be included in the scope.

2.3 Transport, traffic and access

2.3.1 Wharf closure

Submission number(s)

2

Issue description

The respondent was concerned about the ferry service being stopped for longer than the anticipated six month construction period.

Response

Construction is expected to take up to six months to complete, weather and maritime conditions permitting. However, a detailed work schedule would be prepared. Options to reduce this timeframe would be investigated when preparing the construction work schedule.

A Construction Environmental Management Plan (CEMP) would also be prepared before the start of work and would outline measures to minimise disruption to residents and the community during construction. Ferry users would be notified ahead of construction and updated during construction.

2.3.2 Alternate public transport services

Submission number(s)

3, 5, 7, 13

Issue description

The respondents have concerns about the alternate transport arrangements while the wharf is closed during construction.

One respondent has concerns about the operating hours of the 328 bus service and suggests additional weekday and weekend services be considered to assist the local residents. Another respondent suggested the 328 bus service should run to the City via Darling Point.

One respondent has concerns about public transport access to Circular Quay during the construction period while the wharf is closed and suggests an additional bus service or one of the current bus services (324 or 325) be changed to connect Double Bay with Circular Quay.

One respondent has concerns about access to Darling Point Wharf as an alternative. The wharf has limitations for the elderly, both getting to it by public transport and then using the stairs.

Response

The existing wharf would be closed and all ferry services suspended for up to six months (weather and maritime conditions permitting) to allow for the safe construction of the new wharf. During this time commuters would need to use alternative transport.

Existing bus services, including route 328, could be used to support access to Double Bay and surrounding areas as these transport options would remain unchanged during the construction closure period. Route 328 currently provides a service between Edgecliff Station and the suburbs of Double Bay and Darling Point.

Transport for NSW acknowledges that bus route 328 has reduced operating hours compared to the F7 ferry service so would consider extending the bus operating hours during the week and over the weekend.

A new express bus service, or modification to existing services, that connects Double Bay Wharf with the City and/or Circular Quay, is not feasible given the existing low patronage at the wharf.

Ferry users would be notified ahead of construction and during construction so that they can plan their trip via alternative transport modes.

Should the proposal be approved, work would be carried out over a period of up to six months starting in the first half of 2023. During construction the wharf would be closed. There may be a period of overlap between the closure of both the Double Bay Wharf and Darling Point Wharf. Transport for NSW would work to minimise any disruption during this period and keep the community informed.

2.3.3 Accessible parking

Submission number(s)

13

Issue description

The respondent is disappointed with the loss of an accessible parking space.

Response

The current accessible parking spaces on the western side of the Bay Street cul-de-sac are not *Disability Discrimination Act 1992* (DDA) compliant.

The proposal would replace the existing non-DDA compliant parking spaces with one DDA compliant accessible parking space.

2.3.4 Ferry services

Submission number(s)

2, 7

Issue description

The respondents have requested that Double Bay Wharf is added to the Watsons Bay ferry route.

Response

The key objective of the proposal is to ensure compliance with DSAPT and *Disability (Access to Premises – Buildings) Standards (2010)* made under the DDA. The Double Bay Wharf has been identified for an accessibility upgrade as it does not currently meet key requirements of the DDA which require all public transport infrastructure, including wharves, to be fully compliant by December 2022.

As the key objective of the proposal is to make the wharf accessible, suggestions regarding changes to the broader ferry network and timetabling are outside of the scope of this proposal. This feedback will be passed on to the Transport for NSW Planning and Programs team. Future feedback on ferry routes can be provided via transportnsw.info.

2.3.5 Moorings

Submission number(s)

14

Issue description

The respondent would like to clarify any impacts to moorings.

Response

It is expected that a small number of moorings would be temporarily affected during construction and some permanently as a result of berthing requirements for the new wharf. During detailed design Transport for NSW would be able to confirm how many moorings would be impacted. Those that are impacted would be notified early in the detailed design process.

2.4 Landscape character and visual impacts

Submission number(s)

1, 10, 12, 14, 17

Issue description

Some respondents raised concerns about the visual impacts of the proposed design including size of the wharf, the bulk of the covered pontoon, how far the wharf extends into the bay, visual impacts from the 18 Footers League Club, and that the wharf is not sympathetic to the local heritage style environment. One respondent suggests having a pontoon with no roof and having a sheltered waiting area on the jetty further back out of sight.

One respondent was also concerned about the materials being used and requested that non-reflective glass be utilised on the pontoon.

Response

The design of the wharf would be consistent with other wharves within Sydney Harbour. The design aims to unify and identify the harbour wharves and the ferry commuter transport system.

The pontoon size is determined by factors such as wind and wave conditions, maritime activities and to meet accessibility and future customer demand requirements. The curved roof is designed to be low profile and minimise the impact on the views to and from the water.

The length of the wharf (jetty and gangway) has been designed to meet accessible gradient requirements and to accommodate the safe berthing of vessels on both sides. The length of the gangway is determined to provide a DSAPT compliant gradient of 1:14 for at least 80 percent of the tidal range. During detailed design Transport for NSW would investigate opportunities to reduce the length whilst meeting accessibility and operational requirements.

A landscape character and visual impact assessment (LCVIA) was prepared to identify the overall impact of the proposed work on each of the Landscape Character Zones (LCZ) in the area and to identify the visual changes and impacts on the site and its surroundings when viewed from key vantage points. The assessment concluded that the overall proposal would have moderate to low impact on landscape and visual quality when viewed from Sydney Harbour and from its foreshore, including the 18 Footers League Club. The LCVIA is summarised in section 6.5 of the REF.

While the new wharf would be longer in length and larger in scale, the additional wharf structures would maintain the same alignment, are in close proximity to existing built form of similar scale, and are of a consistent maritime character within the bay. Therefore, reducing the impact on the visual landscape.

The pontoon would have a waiting area with a curved roof, seating, and glass weather protection panels to provide passengers with a comfortable place to wait for their ferry. Materials, including the use of non-reflective glass, would be considered during detailed design.

The covered waiting area is designed for customer comfort and efficient ferry disembarking and boarding.

2.5 Biodiversity

2.5.1 Permits, approvals and referrals

Submission number(s)

4

Issue description

A government agency noted the following in relation to the wharf upgrade:

- a section 205 permit under the *Fisheries Management Act 1994* (FM Act) would not be required as the proposed work would not impact on seagrass
- the REF referral constitutes a section 199 notification under the FM Act
- if there are any changes to the proposed operations an environmental assessment and consultation with DPI Fisheries should be undertaken.

Response

Transport for NSW acknowledges that a section 205 permit under the FM Act is not required and that its section 199 notification requirements under the FM Act have been fulfilled.

The frequency of services and type of ferries at Double Bay Wharf would not change as a result of the proposal. Transport for NSW understands that if the proposed operation of the wharf changes an environmental assessment and consultation with respective government agencies would be required.

2.5.2 Environmental safeguards and controls

Submission number(s)

4

Issue description

A government agency has reviewed the proposal and has no objections, provided that a number of environmental safeguards are implemented during construction to minimise impacts to the aquatic environment. The safeguards included erosion and sediment controls and measures to protect seagrass and threatened species.

Response

It is acknowledged that the government agency has no objections to the proposal, provided the identified environmental safeguards are implemented.

A construction environmental management plan (CEMP) would be prepared before commencement of the works to outline the environmental safeguards and control measures that would be implemented during the works to reduce impacts to the aquatic environment including marine vegetation and water quality.

All safeguards identified by the government agency are provided in section 3.2 and would be incorporated into the CEMP.

2.6 Noise and vibration

Submission number(s)

1

Issue description

The respondent is concerned about excessive noise from commercial boats that dock within the wharf area in the day and night, and would like noise restrictions implemented.

Response

The key objective of the proposal is to ensure compliance with the DDA . As such, noise restrictions relating to private commercial and recreational boats docking at the wharf is outside the scope of this proposal. This feedback will be passed on to the Transport for NSW Planning and Programs team. Future feedback and suggestions can be provided through the online feedback form: <https://roads-waterways.transport.nsw.gov.au/contact-us/feedback-form.html>

2.7 Consultation

Submission number(s)

16

Issue description

The respondent questioned why the public consultation was carried out and suggests the wharf upgrade is built efficiently.

Response

Community consultation is an important part of project development. Transport for NSW provide two formal opportunities for the community to share their feedback on the proposed upgrade: firstly through the concept design consultation and then through the REF consultation. Transport for NSW carefully consider all feedback received during these consultations, and ongoing throughout project development.

Following feedback and suggestions received, Transport for NSW would consider the following during detailed design:

- Installation of appropriately spaced fenders, ladders and cleats on the pontoon to support berthing by vessels of different sizes.
- Opportunities to reduce the length of the wharf whilst meeting accessibility and operational requirements.
- Consider alternative transport options such as extending the operation of some bus routes.
- Opportunities for providing additional seating.

The construction work would be carried out over a period of up to six months starting in the first half of 2023, and aim to take place outside of the peak summer period. The construction work would be carried out in an efficient and timely manner, in accordance with Transport for NSW guidelines, quality assurance specifications and environmental safeguards and management measures.

2.8 Construction impacts

Submission number(s)

11

Issue description

The respondent shared questions and concerns around the construction impacts of the proposal including amenity (noise, dust, visual), vibration, access and potential economic impacts.

Response

Transport for NSW acknowledges that construction of the proposal may result in temporary impacts to including noise and vibration, amenity, access and dust impacts. These construction impacts are discussed in sections 6.4, 6.5, 6.8, 6.9 and 6.10 of the REF and would be updated during detailed design where required.

All construction related impacts would be managed prior to and during construction in close consultation with the adjacent landowners and through implementation of a Construction Environmental Management Plan (CEMP). The CEMP would outline environmental safeguards and control measures to minimise impacts during construction.

Operation of the proposal provides justification over the temporary impacts, as it would benefit the community through improving passenger accessibility, amenity, safety and overall user experience. It is anticipated that the proposal would also have indirect wider community benefits, through ensuring continuation of the wharf for its expected lifespan (50 years). This extends to the cultural and amenity benefit of continuing to operate a wharf in this location.

2.9 Proposal justification

Submission number(s)

9

Issue description

The respondent has concerns about the justification for the project including the impact of the six month closure period on commuters, the cost, current low patronage levels and that they believe the existing wharf's condition is adequate.

Response

Double Bay Wharf has been identified for an accessibility upgrade as it does not currently meet key requirements of the DDA. DSAPT and *Disability (Access to Premises – Buildings) Standards (2010)* made under the DDA, require all public transport infrastructure, including wharves, to be fully compliant by 2022. At present, elements of the existing wharf including the tidal steps and accessible parking spot are non-compliant. The primary purpose of the upgrade is to ensure the wharf is accessible for all customers.

Whilst the proposal presented in the REF best meets the project objectives, Transport for NSW acknowledges the proposal would still result in some environmental impacts such as loss of visual amenity and temporary impact to traffic and access impacts. However, on balance the project is considered justified as the proposal would provide better commuter experience through improvements to passenger amenity, comfort, safety, access for customers with mobility needs and overall user experience.

During detailed design an assessment of the existing jetty would be carried out to better understand the remaining service life of the structure and if can be retained rather than be replaced. The new

wharf would have a design life of 50 years with maintenance and has been designed to meet projected sea conditions and to accessibility and future demand requirements.

Closure of the existing wharf and stopping ferry services would be limited to the time required to safely remove the existing wharf and construct the new wharf. This is expected to take up to six months to complete, weather and maritime conditions permitting. Transport for NSW would investigate options to reduce this timeframe when preparing the detailed work schedule.

There may be a period of overlap between the closure of both the Double Bay Wharf and Darling Point Wharf. Transport for NSW would work to minimise any disruption during this period. Existing public transport options could be used during wharf closure including local bus services and Edgecliff Station. During detailed design Transport for NSW would consider alternative transport options such as extending the operation of some bus routes.

2.10 Heritage

During preparation of the REF, Transport for NSW consulted with Woollahra Municipal Council (Council) about the proposal. At this time, Council noted that a Double Bay street name inlay ('Bay St') is located on the western side of Bay Street near the start of the arc of the cul-de-sac. The street name inlays in the Council LGA are heritage items on the *Woollahra Local Environmental Plan 2014* (no. 673) however the locations of the inlays are not detailed.

The 'Bay St' inlay would be impacted as part of the proposed footpath regarding work on the western side of Bay Street. The inlay would be managed and relocated in consultation with Council.

3. Environmental management

The REF for the Double Bay Wharf upgrade identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (section 7.2 of the REF).

After consideration of the issues raised in the public submissions, the safeguard and management measures have been revised to mitigate potential impacts.

Should the proposal proceed, environmental management will be guided by the framework and measures outlined below.

3.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed, these management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

A Construction Environmental Management Plan (CEMP) will be prepared to describe safeguards and management measures identified. The CEMP will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The CEMP would be prepared prior to construction of the proposal and must be reviewed and certified by the Transport for NSW Environment Officer prior to the commencement of any on-site work. The CEMP will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements.

3.2 Summary of safeguards and management measures

The REF for the Double Bay Wharf Upgrade identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

After consideration of the issues raised in the public submissions, the environmental management measures for the proposal (refer to Chapter 7 of the REF) have been revised. Should the proposal proceed, the environmental management measures in Table 3-1 will guide the subsequent phases of the proposal.

Additional and/or modified environmental safeguards and management measures to those presented in the REF have been underlined and italicised and deleted measures, or parts of measures, have been struck out.

Table 3-1: Summary of environmental safeguards and management measures

ID	Impact	Environmental safeguards	Responsibility	Timing
<u>GEN1</u>	<u>General - minimise environmental impacts during construction</u>	<p><u>A CEMP will be prepared and submitted for review and endorsement of the Transport for NSW Environment Manager prior to commencement of the activity.</u></p> <p><u>As a minimum, the CEMP will address the following:</u></p> <ul style="list-style-type: none"> • <u>any requirements associated with statutory approvals</u> • <u>details of how the project will implement the identified safeguards outlined in the REF</u> • <u>issue-specific environmental management plans</u> • <u>roles and responsibilities</u> • <u>communication requirements</u> • <u>induction and training requirements</u> • <u>procedures for monitoring and evaluating environmental performance, and for corrective action</u> • <u>reporting requirements and record-keeping</u> • <u>procedures for emergency and incident management</u> • <u>procedures for audit and review.</u> <p><u>The endorsed CEMP will be implemented during the undertaking of the activity.</u></p>	<u>Transport for NSW / Contractor</u>	<u>Pre-construction</u>
<u>GEN2</u>	<u>General - notification</u>	<u>All businesses, residential properties and other key stakeholders (e.g. schools, local councils) affected by the activity will be notified at least five days prior to commencement of the activity.</u>	<u>Transport for NSW / Contractor</u>	<u>Pre-construction</u>
<u>GEN3</u>	<u>General – environmental awareness</u>	<p><u>All personnel working on site will receive training to ensure awareness of environment protection requirements to be implemented during the project. This will include up-front site induction and regular "toolbox" style briefings.</u></p> <p><u>Site-specific training will be provided to personnel engaged in activities or areas of higher risk. These include:</u></p> <ul style="list-style-type: none"> • <u>Areas of non-Aboriginal heritage sensitivity</u> • <u>Seagrass meadows and threatened species habitat</u> • <u>Adjoining residential areas requiring particular noise management measures.</u> 	<u>Transport for NSW / Contractor</u>	<u>Pre-construction/detailed design</u>
LS1	Soil and water	A soil and water management plan (SWMP) will be prepared and implemented as part of the CEMP. The SWMP will identify all reasonably foreseeable risks relating to soil	Contractor	Pre-construction

ID	Impact	Environmental safeguards	Responsibility	Timing
		erosion and water pollution and describe how these risks will be addressed during construction.		
LS2	Soil and water	Any excavated sediments or soil that require disposal will be sampled, tested and classified in accordance with the <i>Waste Classification Guidelines: Part 1 Classifying Waste</i> (EPA, 2014) prior to being disposed of at a waste facility licensed to accept the relevant class of waste. Any materials classified as Hazardous Waste may require treatment or an immobilisation approach in accordance with Part 10 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> prior to off-site disposal.	Contractor	Construction
LS3	Soil and water	Clean and suitable topsoil will be stockpiled and reused on site where appropriate.	Contractor	Construction
LS4	Contaminated land	If unexpected contaminated areas are encountered during construction, appropriate control measures will be implemented to manage the immediate risks of contamination. All other works that may impact on the contaminated area will cease until the nature and extent of the contamination has been confirmed and any necessary site-specific controls or further actions identified in consultation with the Transport for NSW Environment Manager and/or EPA.	Contractor	Construction
LS5	Contaminated land	The piling activity shall mitigate the risk of sediment dispersal by applying industry best practice of minimising sediment disturbance during construction using piling methods or any other seabed interference.	Contractor	Construction
LS6	Erosion and scour	The number of barge anchor points will be minimised where possible. The anchoring locations should be selected to avoid seagrass meadows.	Contractor	Construction
LS7	Erosion and scour	Works associated with positioning barges, drilling and pile driving will occur during calm conditions to prevent excessive scouring and other impacts.	Contractor	Construction
LS8	Erosion and sedimentation	<p>Prior to commencement of construction activities, sediment control device (such as sediment boom and curtain) will be installed around the site to contain disturbed sediment from the water surface by allowing suspended sediments to settle back on the bottom of the seabed overtime. The silt boom and curtain should extend from a minimum of 100 millimetres above the water line to a minimum of 2.5 metres below the water line before starting work.</p> <p>Installation should be undertaken during high tide periods from a boat. The device should be designed to rise and fall with the tide to prevent disturbance. Inspection of the device should be undertaken on a daily basis after ebbing tides, with additional inspection carried out following storm events. Prior to removing the sediment control device, conditions within the curtain should be assessed visually and with a field</p>	Contractor	Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
		instrument to verify that sediment has settled resulting in similar water turbidity to that outside the curtain.		
LS9	Erosion and sedimentation	<p>Site specific erosion and sediment control plan/s will be prepared and implemented as part of the SWMP. Control measures are to be implemented and maintained (in accordance with the Landcom/Department of <i>Housing Managing Urban Stormwater, Soils and Construction Guidelines</i>, the Blue Book) to:</p> <ul style="list-style-type: none"> • Minimise sediment dispersal during piling • Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets • Reduce water velocity and capture sediment on site • Minimise the amount of material transported from site to surrounding pavement surfaces • Divert clean water around the site. 	Contractor	Pre-construction
LS10	Erosion and sedimentation	<p>Visual monitoring of local water quality (i.e. turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient silt curtains or erosion and sediment controls.</p> <p>Results of the observations are required to be recorded. Records are required to be kept on the site and to be made available for inspection by persons authorised by Transport for NSW.</p>	Contractor	Construction
LS11	Flooding	Appropriate procedures to manage the effects of potential flooding during construction and minimise adverse environmental impacts to the greatest extent possible, will be incorporated in the CEMP.	Contractor	Construction
LS12	Design changes	If there are major changes to the design or layout of piles then further delineation assessment of the known contamination will be undertaken to evaluate the vertical and lateral extent of sediment impact prior to work commencement.	Contractor	Detailed design
WQ1	Accidental spill	<ul style="list-style-type: none"> • A spill management plan will be developed as part of the CEMP and communicated to all staff working on site. • Appropriate land and aquatic spill kits are to be maintained on site and on barges. Aquatic spill kits must be specific for working within the marine environment. The spill kit must be appropriately sized for the volume of potentially polluting liquids stored on site. • All workers will be advised of the location of the spill kit and trained in its use. 	Contractor	Pre-construction / Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
WQ2	Accidental spill	If an incident (e.g. spill) occurs, the Transport for NSW <i>Environmental Incident Classification and Reporting Procedure</i> is to be followed and the Transport for NSW Contract Manager notified as soon as practicable.	Contractor	Construction
WQ3	Accidental spill	In the event of a maritime spill, the incident emergency plan will be implemented in accordance with Port Authority of NSW's response to shipping incidents and emergencies outlined in the <i>NSW State Waters Marine Oil and Chemical Spill Contingency Plan</i> (RMS, 2016c).	Contractor	Construction
WQ4	Accidental spill	Emergency contacts will be kept in an easily accessible location on vehicles, vessels, plant and site office. All workers will be advised of these contact details and procedures.	Contractor	Pre-construction / Construction
WQ5	Accidental spill	Vehicles, vessels and plant must be properly maintained and regularly inspected for fluid leaks.	Contractor	Construction
WQ6	Accidental spill	No vehicle or vessel wash-down or re-fuelling will occur on site.	Contractor	Construction
WQ7	Accidental spill	Any chemicals or fuels stored at the site or equipment barges will be stored in a bunded area.	Contractor	Construction
WQ8	Pollution	An environmental work method statement (EWMS) will be developed for the removal of the existing wharf elements (e.g. jetty, piles and tidal steps) to minimise the risk of pollutants and debris entering the waterway. The EWMS must be approved by Transport for NSW prior to the demolition works.	Contractor	Pre-construction
B1	All project impacts	<p>Integrate the management of flora and fauna into the CEMP. This is to include all terrestrial and marine flora and fauna and include but not be limited to such measures as:</p> <ul style="list-style-type: none"> • Documenting and establishing site clearing limits and include on the sensitive area plans • Establishing of no go zones (including no anchoring zones in seagrass) and go slow zones (e.g. vessel speed restricted areas) and include on sensitive area plans • Implementing tree protection measures • Pre-clearing surveys, vegetation removal, weed management and unexpected finds measures in line with the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011). 	Contractor	Pre-construction

ID	Impact	Environmental safeguards	Responsibility	Timing
B2	Removal of threatened species habitat and habitat features	Pre-clearing surveys will be undertaken in accordance with Guide 1: Pre-clearing process of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011). Any roosting Southern Myotis and other microbats in the wharf structures to be impacted/disturbed will be captured and relocated to similar or higher condition habitat. Release will only be done at dusk and roosting individuals should be kept in a secure, dark and warm location until then. Injured individuals or unfurred juveniles are to be transported to a veterinarian.	Contractor	Pre-construction
B3	Disturbance of threatened species habitat and habitat features	The unexpected species finds procedure is to be followed under the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011) if threatened ecological communities, not assessed in the biodiversity assessment, are identified on site.	Contractor	Construction
B4	Removal of marine vegetation and habitat	Considerations during detailed design to promote colonisation of habitat-forming species could include the installation of structures which provide habitat complexity (e.g. designs available as part of the Living Seawalls Project).	Transport for NSW and Contractor	Detailed design
B5	Removal of marine vegetation and habitat	Complete a targeted survey for Black Rockcod and White's Seahorse within 24 hours prior to the commencement of water-based construction activities. Black Rockcod individuals will be encouraged to move away from the study area prior to silt curtain installation and White's Seahorse will be captured and relocated to nearby similar habitat using methods approved by DPI (Fisheries). A White's Seahorse relocation plan will be developed in consultation with DPI (Fisheries) to dictate this activity. These activities are to be completed by a pre-qualified section 37 permit holder under the FM Act.	Contractor	Pre- construction
B6	Aquatic impacts	Aquatic habitat will be protected in accordance with Guide 10: Aquatic habitats and riparian zones of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011) and Section 3.3.2 Standard precautions and mitigation measures of the <i>Policy and guidelines for fish habitat conservation and management Update 2013</i> (DPI, 2013).	Contractor	Construction
B7	Aquatic impacts	Piling to stop if marine mammals, reptiles or Little Penguins are observed within approximately 100 metres of the project area and only to recommence once they have moved beyond 100 metres of the project area or are not seen for at least 20 minutes.	Contractor	Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
B8	Changes to coastal processes	The detailed design will aim to avoid/minimise any impact to coastal processes and hydrology.	Contractor	Detailed design
B9	Injury and mortality of fauna	Fauna will be managed in accordance with Guide 9: Fauna handling of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011).	Contractor	Construction
B10	Invasion and spread of weeds, pests and diseases	Weed species will be managed in accordance with Guide 6: Weed management of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011).	Contractor	Construction
B11	Invasion and spread of weeds, pests and diseases	Pathogens will be managed in accordance with Guide 2: Exclusion zones of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011).	Contractor	Construction
B12	Invasion and spread of weeds, pests and diseases	Water-based equipment and vessels to be sourced from local suppliers where possible. Equipment and vessels must be cleaned and inspected prior to entering the project area. If any marine pests are encountered during water-based construction activities, the area of infestation must be isolated/not disturbed and NSW DPI (Fisheries) notified promptly.	Contractor	Construction
B13	Invasion and spread of weeds, pests and diseases	Occurrence of any marine pests must be reported to DPI (Fisheries).	Contractor	Construction
B14	Fish kill	DPI Fisheries (1800 043 536) and the EPA (13 15 55) is to be notified immediately if any fish kills occur in the vicinity of the works. In such cases, all works other than emergency response procedures are to cease until the issue is rectified and approval is given by DPI Fisheries and/or the EPA for the works to proceed.	Contractor	Construction
B15	Tree protection	To ensure no impacts to trees on site, recommendations outlined in the <i>Arboricultural Impact Assessment Report</i> (Earthscape Horticultural Services, 2021) will be implemented.	Transport for NSW / Contractor	Detailed design / Construction
B16	Seagrass impacts	<ul style="list-style-type: none"> <u>No harm to seagrass is permitted.</u> <u>Silt curtains must not be installed within seagrass beds to avoid scouring seagrass.</u> 	Contractor	Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> <i>The deployment of ropes, anchors, blocks, chains or similar devices is strictly prohibited within seagrass. Ropes may be used if they are made buoyant with floats so that they don't drag through seagrass.</i> <i>No mooring of construction barges over seagrass.</i> 		
NV1	Noise and vibration	<p>Preparation of a construction noise and vibration management plan (CNVMP) based on recommendations provided within the ICNG and Australian Standard AS 2436-1981: <i>Guide to Noise Control on Construction, Maintenance and Demolition Sites</i>. This is to include, but not be limited to:</p> <ul style="list-style-type: none"> Plant controls: <ul style="list-style-type: none"> Use of noise attenuating controls at the source, such as mufflers, acoustic screens, etc. Maintain plant and equipment in good working order to prevent excess noise generation Locate static sources of noise such as the generators as remotely as possible from noise sensitive receivers Use of broadband reversing alarms, or 'quackers' (instead of standard tonal alarms), on mobile equipment in accordance with the relevant health and safety regulations Use of temporary noise barriers where practical. The height and location of these barriers will be determined during preparation of the CNVMP when more information regarding the proposed plant to be used for each construction scenario is available Investigate whether 'at plant' mitigation or muffled plant is available for plant with high source noise levels such as rock hammers and piling rigs, and plant emitting continuous noise such as generators. Management and behavioural controls: <ul style="list-style-type: none"> Ensure managers effectively communicate acceptable and unacceptable work practices for the site, through staff site inductions, notice boards, and prestart meetings Avoid dropping materials from height Workers to avoid shouting, minimise talking loudly, and avoid slamming vehicle doors. Conducting noise monitoring during landside, piling and out of hours construction scenarios considering the potential exceedances for the purposes of assisting in noise mitigation and to verify the findings of this noise assessment. 	Contractor	Pre-construction

ID	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> Implementing a procedure for dealing with complaints to ensure that all complaints are registered and dealt with appropriately. Conducting additional monitoring if complaints are received or proposed activities and number of plants exceed those assumed in this assessment. Modifying work activities where noise or vibration is found to cause unacceptable impact. Implementation of additional mitigation measures in accordance with the CNVG as reasonable and feasible. 		
NV2	Noise and vibration	<ul style="list-style-type: none"> Carrying out works within standard daytime hours as follows: <ul style="list-style-type: none"> 7:00 am to 6:00 pm Monday to Friday 8:00 am to 1:00 pm Saturdays, no work on Sundays or public holidays. Do not carry out operations during evening or night-time hours, unless required for safety reasons. Should operations be required outside standard hours, an Out of Hours procedure detailing works schedule, approval process, communications requirements and management measure will be prepared. All reasonable and feasible efforts will be undertaken to ensure noise levels will not exceed the ICNG noise management levels by carrying out night-works with reduced numbers of plant for example. 	Contractor	Construction
NV3	Noise and vibration	<ul style="list-style-type: none"> Notification of potentially affected receivers detailing work activities, dates and hours, impacts and mitigation measures, indication of work schedule over the night time period, any operational noise benefits from the work (where applicable) and contact telephone number. Notification will be a minimum of seven calendar days prior to the start of work. A contact telephone number and email address will be available for community feedback. 	Transport for NSW / Contractor	Pre-construction
NV4	Noise and vibration	Conduct short term background noise monitoring prior to construction to confirm the ambient noise levels presented in this report, which were carried out during COVID 19 and may not be representative of typical levels.	Contractor	Pre-construction
NV5	Vibration impact to heritage structures	<ul style="list-style-type: none"> Determine safe working limits based on proposed plant and where possible, smallest plant able to carry out required work should be utilized to minimize potential impacts. Where works are proposed within the safe working limits, for the heritage structures, specialist advice will be sought from an appropriately qualified structural engineer who is familiar with heritage structures to assess if vibrations 	Contractor	Pre-construction / Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
		<p>associated with the proposed works will potentially result in impacts to heritage structures.</p> <ul style="list-style-type: none"> A vibration monitoring plan will be prepared as part of the CNVMP (where works are proposed within safe working limits) and implemented to confirm vibration levels prior to construction commencement. Where exceedances are recorded, works will be modified in consultation with the identified specialist to reduce vibration levels. 		
NV6	Vibration impact to heritage structures	<p>Assessment and monitoring of vibration impacts to heritage items within the safe working limits will adhere to:</p> <ul style="list-style-type: none"> British Standard BS 7385: <i>Part 2: Evaluation and Measurement for Vibrations in Buildings –Part 2 Guide to Damage Levels from Ground-Borne Vibration</i> German Standard DIN 4150, <i>Part 3: Structural Vibration in Buildings: Effects on Structures.</i> 	Contractor	Construction
NV7	Vibration	Where buildings are located within the safe working limits, pre and post construction dilapidation surveys will be carried out.	Contractor	Pre-construction / Construction / Post construction
NV8	Vibration	Where buildings are located within the safe work limits (non heritage structures), vibration monitoring will be carried out to ensure compliance with the required criteria. If exceedances are recorded, works will be modified accordingly to reduce vibration levels.	Contractor	Pre-construction / Construction
LV1	Landscape and visual	<p>Urban design principles will be integrated throughout the detailed design and construction of the proposal and include:</p> <ul style="list-style-type: none"> Low-scale landside and waterside works to improve accessibility, wayfinding and services The approaches to and surrounds of the wharf designed to maximise amenity and in keeping with the existing urban and landscape environment The incorporation of lightweight materials and finishes to minimise reflectivity and maximise transparency of new structures to provide safety, weather protection and equitable access for ferry users. Detailed design should include contemporary design practices and lightweight materials and muted finishes A coordinated palette of materials and colours to respond to the existing maritime and foreshore character. 	Contractor	Detailed design
LV2	Landscape and visual	Hoarding will be erected around the compound area where possible, to reduce visibility.	Contractor	Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
LV3	Landscape and visual	Where out of hours work is required, lighting will be directionally controlled to limit potential impacts of light spill on surrounding receivers, including residential properties.	Contractor	Construction
LV4	Landscape and visual	All impacted areas and ground surfaces will be reinstated as near as possible to their original state following the completion of works.	Contractor	Post-construction
H1	Archaeological significance	If significant archaeological remains are encountered during excavation, works should cease and design options for avoiding impacts to the significant archaeological remains should be considered where practicable and opportunities should be investigated for the implementation of heritage interpretation.	Contractor	Detailed design / Construction
H2	Archaeological significance	If unexpected 'relics' are encountered during excavation, a section 146 relics notification will be forwarded to Heritage NSW, DPC. 'Relics' cannot be impacted without appropriate approvals under the <i>Heritage Act 1977</i> .	Contractor / Transport for NSW	Construction
H3	Archaeological significance	A Photographic Archival Recording of Double Bay Public Wharf Site (SHI no. 4920092) should be undertaken to document its current visual setting prior to any impacts and modifications. Recording should be prepared in accordance with the guideline for <i>Photographic Recording of Heritage Items Using Film or Digital Data Capture</i> (Heritage Council, 2006).	Contractor	Pre-construction
H4	Archaeological significance	A sensitive area plan (SAP), identifying all heritage items in close proximity to the works, is to be prepared under the CEMP. A heritage induction will be provided to workers prior to construction, informing them of the sensitive area plan and identifying the location and significance of known heritage items and the implementation of the <i>Unexpected Heritage Item Procedure</i> (RMS, 2015) if unanticipated heritage items or deposits are located during construction.	Contractor	Pre-construction
H5	Heritage Interpretation Strategy	Opportunities for the implementation of heritage interpretation will be investigated during detailed design.	Transport for NSW	Detailed design
H6	Unexpected finds	Terrestrial archaeological remains will be managed under the <i>Unexpected Heritage Items Procedure</i> (RMS, 2015) if unanticipated heritage items or depositions are located during construction	Contractor	Construction
H7	Vibration impact to heritage structures	If vibration monitors are attached to the heritage items, they must not be attached with permanent fixings. They will be removable without causing damage. Bees wax may be a suitable attachment method	Contractor	Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
H8	Double Bay Public Wharf Site (SHI no. 4920092)	Following the construction of the new wharf, the SHI description and heritage curtilage for Double Bay Public Wharf Site (SHI no. 4920092) must be updated to reflect its location and condition.	Transport for NSW	Post-construction
H9	Double Bay Public Wharf Site (SHI no. 4920092)	As the existing wharf structure within Double Bay Public Wharf Site (SHI no. 4920092) will be demolished, Heritage NSW, DPC must be notified in accordance with s170A (1c) of the <i>Heritage Act 1977</i> . A copy of the SoHI report should be submitted to Heritage NSW, DPC for their records.	Transport for NSW	Pre-construction
H10	Design change	Any project redesign resulting in new ground/seabed disturbance, vegetation removal, or new features must be assessed in an addendum to the SoHI and/or MASOHI as required.	Transport for NSW / Contractor	Detailed design / Pre-construction
H11	Maritime archaeology	An application for an exception under section 139(4) of the <i>Heritage Act 1977</i> should be submitted to the Heritage NSW, Department of Premier & Cabinet prior to the works commencing.	Contractor	Pre-construction
H12	Maritime archaeology	An induction should be provided to on-site contractors which should include a guide as to what may be found and an action plan to follow depending on the type of find. This will involve contacting the project maritime archaeologist and supplying required information for the archaeologist to assess whether the find is a 'relic', its archaeological significance and any additional actions or reporting required.	Contractor	Construction
H13	Maritime archaeology	Following demolition of the existing wharf avoid removal of any timber elements from the seabed and provide a maritime heritage induction to divers who will carry out the site-clean up following demolition.	Contractor	Pre-construction
H14	Unexpected finds	An Unexpected Finds Protocol will be prepared by a suitably qualified maritime archaeologist and implemented for all maritime works. This document will include: <ul style="list-style-type: none"> • Unexpected finds, stop work triggers and notification protocols • Heritage induction for contractors • Recording methods and procedures • Artefact collection and retention policies. 	Contractor	Pre-construction
<i>H15</i>	<i>Double Bay street name inlays (LEP no. 673).</i>	<i>Management and relocation of the 'Bay St' street name inlay (LEP no. 673) would be undertaken in consultation with Woollahra Municipal Council prior to the commencement of construction.</i>	Contractor	Pre-construction

ID	Impact	Environmental safeguards	Responsibility	Timing
AH1	Aboriginal heritage	Should the scope of the proposed work change, further consultation with Transport for NSW's Aboriginal Cultural Heritage Officer and regional environmental staff must be undertaken to reassess any potential impacts on Aboriginal cultural heritage.	Transport for NSW	Pre-construction
AH2	Unexpected heritage finds	The <i>Unexpected Heritage Items Procedure</i> (RMS, 2015) will be followed in the event that (an) unknown or potential Aboriginal object(s), including skeletal remains, is/are found during construction. This applies where Transport for NSW does not have approval to disturb the object(s) or where a specific safeguard for managing the disturbance (apart from the procedure) is not in place. Work will only restart once the requirements of that procedure have been satisfied.	Contractor	Construction
T1	Land transport and parking	A traffic management plan (TMP) will be prepared and will include the following: <ul style="list-style-type: none"> • Final access and parking arrangements • Alternate pedestrian and cyclist access around the construction area • Measures to ensure light vehicle parking is strictly in accordance with Woollahra Municipal Council requirements and prevents parking on footpaths and grassed areas adjacent to the site • Plans to maintain access to adjoining properties and businesses. 	Contractor	Pre-construction
T2	Land transport and parking	Where possible, the preferred means of transporting equipment and materials to the site will be via boat and barge over land transport so as to limit impacts to the local road network.	Contractor	Construction
T3	Land transport and parking	Public transport passengers will be notified of any impacts to transport services and the alternative transport options prior to the commencement of construction. This will include updates to the timetable (online and Opal app) indicating the construction works at the wharf.	Transport for NSW	Pre-construction / construction
T4	Water transport	<ul style="list-style-type: none"> • A maritime navigation exclusion zone will be established during construction to prevent unauthorised vessels entering the area. • This zone will be clearly defined to communicate access for other water users. 	Contractor	Pre-construction / construction
T5	Water transport	A Maritime TMP will be prepared and implemented during the water based construction work. The Maritime TMP will be prepared in consultation with Transport for NSW and approved by the Harbourmaster. In addition, the proposal will: <ul style="list-style-type: none"> • Fit all buoys with lights • Prepare Response Plans for emergencies and spills for all construction vessels 	Contractor	Pre-construction / construction

ID	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> Fit at least one vessel with an Automatic Identification System (AIS) Retrieve any material associated with the construction of the development that enters the water to prevent the obstruction of vessel movements Prepare a Communications Plan for implementation during the work which must include 24/7 contact details, protocols for enquiries, complaints and emergencies. <p>Any variation to the above will be agreed in advance with the Harbourmaster.</p>		
T6	Water transport	Commercial, recreational operators and private services that use the existing wharf will be advised of the wharf closure at least two weeks prior to closure.	Transport for NSW	Pre-construction / construction
SE1	Socio-economic	<p>A Communications and Stakeholder Engagement Plan will be developed prior to the commencement of construction and will be implemented during construction to provide timely and accurate information to stakeholders. It would include (as a minimum):</p> <ul style="list-style-type: none"> Mechanisms to provide details and timing of proposed activities to affected local community and local businesses, including changes to traffic, public transport services and access A contact name and telephone number for complaints. <p>The Plan will be prepared in accordance with the Community Involvement and Communications Resource Manual (RTA, 2008).</p>	Transport for NSW / Contractor	Pre-construction / construction
SE2	Socio-economic	<ul style="list-style-type: none"> A webpage and free-call number will be established for enquiries regarding the project, and will remain active for the duration of construction. Contact details will be clearly displayed at the entrance to the site. All enquiries and complaints will be tracked through a tracking system, and acknowledged within 24 hours of being received. 	Contractor	Pre-construction / construction
SE3	Sustainability	Investigate opportunities to encourage the Contractor to purchase goods and services locally.	Contractor	Pre-construction / construction
SE4	Sustainability	Investigate opportunities to incorporate community health and wellbeing initiatives in the design and construction of the project.	Transport for NSW / Contractor	Detailed design / construction
SE5	Land transport and parking	Explore opportunities to provide alternative transport during construction.	Transport for NSW	Pre-construction
SE6	Local businesses	Discussions will be held with the local businesses that will be directly impacted by the proposal, such as the 18 Footers League Club and Double Bay Sailing Club to seek opportunities to minimise the impact of the project during the construction phase.	Transport for NSW	Pre-construction

ID	Impact	Environmental safeguards	Responsibility	Timing
SE7	Local businesses	Access to 18 Footers Leagues Club and Double Bay Sailing Club facilities would be maintained throughout the construction phase.	Contractor	Construction
AQ1	Air quality	<p>Air quality during construction will be considered and addressed within the CEMP and will include methods to manage work during strong winds or other adverse weather conditions as required. As a minimum, the following measures will be included:</p> <ul style="list-style-type: none"> • Covering all loaded trucks and vessels • Machinery to be turned off rather than left to idle when not in use • Maintenance of all vehicles, including trucks and vessels entering and leaving the site in accordance with the manufacturers specifications to comply with all relevant legislation • Maintenance of all plant and equipment to ensure good operating conditions and exhaust emissions comply with the <i>Protection of the Environment Operations Act 1997</i> • Maintaining the work site in a condition that minimises fugitive emissions such as minor dust • Appropriate sediment and erosion controls for any exposed earth or stockpiled waste. 	Contractor	Pre-construction / construction
AQ2	Sustainability	During construction, the Contractor is to monitor performance of their non-road diesel plant and equipment against US EPA, EU or equivalent emissions standards using Transport for NSW <i>Air Emissions Workbook - DMS-FT-439</i> .	Contractor	Construction
WM1	Waste	<p>A waste management plan (WMP) will be prepared in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i>. A WMP is to be prepared as part of the CEMP and would include measures to minimise waste, outline methods of disposal, reuse and recycling and monitoring, as appropriate. This is to include the following:</p> <ul style="list-style-type: none"> • Appropriate measures to avoid and minimise waste associated with the project should be investigated and implemented where possible. • Waste management, littering and general tidiness will be monitored during routine site inspections. 	Contractor	Pre-construction / Construction
WM2	Resource use	Recycled, durable, and low embodied energy products will be considered to reduce primary resource demand in instances where the materials are cost and performance competitive and comparable in environmental performance (e.g. where quality control specifications allow).	Contractor	Detailed design

ID	Impact	Environmental safeguards	Responsibility	Timing
WM3	Sustainability	During construction, the Contractor is to monitor waste and recycling quantities using Transport for NSW <i>Waste Data Collection Workbook – DMS-FT-436</i> to support compulsory requirement 4 of the Transport for NSW <i>Sustainable Design Guidelines version 4.0</i> .	Contractor	Construction
HR1	Hazards and risks	Weather forecasts will be monitored during construction. In the unlikely event of a major flood event or strong marine winds/waves, equipment and materials will be temporarily removed from the site, where possible.	Contractor	Construction
HR2	Hazards and risks	Further investigations and assessment of impacts to local utilities will be undertaken.	Contractor	Detailed design
HR3	Hazards and risks	Onsite service location will be carried out prior to undertaking any excavation or piling works to identify any additional cables not identified during design.	Contractor	Pre-construction
CC1	Climate change	During detailed design undertake a compliant carbon footprinting exercise in accordance with the Transport for NSW <i>Carbon Estimate and Reporting Tool Manual</i> (TfNSW, 2019). The carbon footprint will be used to inform decision making in design and construction.	Contractor	Detailed design / Construction
CC2	Climate change	During detailed design undertake a compliant climate risk assessment in accordance with the Transport for NSW <i>Climate Risk Assessment Guidelines – DMS-SD-081</i> .	Contractor	Detailed design
CC3	Climate change	The detailed design process will consider adaptation measures for climate change, including the following: <ul style="list-style-type: none"> • Design of pontoons, waiting areas and gangways • Integrate coastal erosion control techniques around landside infrastructure • Drainage and storm water infrastructure • Specifications of materials in design • Weather protection features. 	Contractor	Detailed design
S1	Sustainability	The Contractor shall propose a suitably qualified and experienced sustainability officer at a minimum 14 days prior to site establishment to be endorsed by Transport for NSW. The sustainability officer will be responsible for implementing the sustainability objectives for the project. Details of the sustainability officer, including defined responsibilities, duration and resource allocation throughout the appointment are to be submitted to Transport for NSW prior to the preparation of the Sustainability Management Plan.	Contractor	Detailed design / Construction

ID	Impact	Environmental safeguards	Responsibility	Timing
S2	Sustainability	<p>Prior to commencement of construction, a Sustainability Management Plan shall be endorsed by Transport for NSW. The Plan will be provided prior to construction and include the following minimum components:</p> <ul style="list-style-type: none"> • A completed electronic checklist demonstrating compliance with Transport for NSW's <i>NSW Sustainable Design Guidelines Version 4.0</i> (7TP-ST-114) • The Contractors sustainability goals and targets, internal procedures, and implementation strategy. 	Contractor	Detailed design / Pre-construction
S3	Sustainability	The Contractor must comply with the Transport for NSW <i>Sustainable Design Guidelines version 4.0</i> .	Contractor	Detailed design / Construction
C1	Cumulative construction impacts	<p>Consultation will include notification prior to the start of the works</p> <p>Updates on any delays or changes to the construction period will also be communicated.</p>	Transport for NSW / Contractor	Pre-construction / construction
C2	Cumulative construction impacts	Alternative transport options to be investigated should the Darling Point and Double Bay Wharf construction programs overlap.	Transport for NSW	Pre-construction
<u>D1</u>	<u>Design</u>	<p><u>During detailed design Transport for NSW will investigate the following:</u></p> <ul style="list-style-type: none"> • <u>Opportunities to reduce the length of the wharf whilst meeting accessibility and operational requirements</u> • <u>Opportunities to provide additional seating at the wharf</u> • <u>Installation of appropriately spaced fenders, ladders and cleats on the pontoon to support berthing by vessels of different sizes.</u> 	<u>Transport for NSW</u>	<u>Detailed design</u>

3.3 Licensing and approvals

A summary of the licences and approvals required for the proposal is provided in Table 3-2.

Table 3-2: Summary of licensing and approval required

Instrument	Requirement	Timing
<i>Fisheries Management Act 1994</i>	A permit under section 37 of the FM Act is required to relocate seahorses if present. Relocation may be undertaken by a pre-qualified permit holder.	Prior to start of the activity.
<i>Roads Act 1993</i>	Consultation with Woollahra Municipal Council is required for works on Bay Street.	Prior to start of the activity.
<i>Heritage Act 1977</i>	An application for an exception under section 139(4) of the <i>Heritage Act 1977</i> should be submitted to the Heritage NSW, Department of Premier and Cabinet.	Prior to start of the activity.
Ports and Maritime Administration Regulations 2012	Written permission from the Harbour Master is required to disturb sediment in Sydney Harbour	Prior to start of the activity.

4. References

TfNSW (2021) *Double Bay Wharf Upgrade. Review of Environmental Factors*. Prepared by Cardno (NSW/ACT) Pty Ltd on behalf of Transport for NSW, October 2021.

Appendix A

Double Bay Wharf Upgrade, Review of Environmental Factors, October 2021

Available online:

<https://roads-waterways.transport.nsw.gov.au/projects/01documents/double-bay-wharf-upgrade/double-bay-wharf-review-of-environmental-factors-2021-10.pdf>