Roads and Maritime Services

Elizabeth Bay Maritime Facility Upgrade

Submissions report

June 2017

Prepared by NGH Environmental and Roads and Maritime Services

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## Approval and authorisation

<table>
<thead>
<tr>
<th>Title</th>
<th>Elizabeth Bay maritime facility upgrade submissions report</th>
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| Accepted on behalf of Roads and Maritime NSW by | Nhu Doan  
Senior Project Manager |
| Signed | [Signature] |
| Dated | 6 June 2017 |
Executive summary

Roads and Maritime Services (Roads and Maritime) is proposing to redevelop the Elizabeth Bay maritime facility, known as Elizabeth Bay Marina, located at Ithaca Road, Elizabeth Bay (Existing Facility). The marina is valued by the boating community as well as the local residents of Elizabeth Bay and Potts Point. These two suburbs sit within a one square kilometre area and are home to 11,955 residents (2011 Census).

The existing marina at Elizabeth Bay is deteriorating, despite numerous maintenance works carried out in previous years. Parts of the marina are now closed because they are unsafe. This urgency has put Roads and Maritime in a unique position to rebuild the structure to meet current building standards and guidelines.

Roads and Maritime is responsible for upgrading the Existing Facility to be effective and safe for the boating community. The proposed redevelopment is for the demolition and reconstruction of the Existing Facility. The fixed structure of the facility is required to be extended approximately 30 per cent to comply with The Building Code of Australia and the Disability Discrimination Act. The extension of the pontoon is necessary to meet Australian Standards AS3962 Guidelines for the Design of Marinas.

Roads and Maritime has considered the submissions from the community and other stakeholders, and has modified the design where possible and reduced the size and total number of the vessels. These changes are listed below and more information is included in Section 4 of this report.

The Existing Facility is being replaced for the following reasons:

- Timber structures of the Existing Facility such as the piles have deteriorated and need to be replaced
- Current walkway, on the eastern side of the Existing Facility office and near the kiosk, is closed to the public as it is not deemed safe nor does it comply with current regulations for disabled access
- Existing Facility is prone to flooding in high tides because it was not built high enough
- Existing Facility structures in their current condition do not comply with the load requirements of the current Australian Standards and some parts are structurally unsound
- Use of the smaller berths on the southern side of the Existing Facility is limited due to the shallow water depth at low tides
- Most recent adverse weather in June 2016 saw the Existing Facility lose several moorings and two sides of the workshop/office building.

The original proposal comprised:

- The removal of the existing fixed platform, small building, kiosk, jetty, ramp, and pontoons and mooring piles
- The permanent relocation of around ten swing moorings to other areas within Elizabeth Bay to allow access for construction barges and other vessels, and for the operation of the Proposed Facility. The number of existing swing moorings would remain at 51.
- The construction of a new wharf and boating facility (Proposed Facility) including:
  - A new fixed platform and small buildings to allow for:
    - Office accommodation – fully fitted out including small kitchenette
    - Chandlery / Boat Broker and storage fitted out with storage lockers
    - Toilets, showers and changing amenities for users of the Proposed Facility
    - Kayak and paddleboard storage structure and racking
    - Cafe including fit out. The cafe would be tailored to service the needs of the boating community using the Proposed Facility and would include full food preparation and grease trap
  - A floating structure for the permanent mooring of up to 13 vessels
  - A new destination berth
o A new berth for a sewage pump-out facility as part of the new floating structure
o Mooring piles between vessel berths
o Ramp access for the new fixed platform of the floating structure
o Services bollards with lights which cast light downwards, including water and power to the vessels
o Piles which provide lateral restraint to the floating structure
o An access ramp and pontoon for the launching and retrieval of kayaks and paddleboards stored on the fixed platform

• Connection of services of the Proposed Facility to the services on land
• Minor adjustments to the seawall to facilitate construction of the Proposed Facility
• A temporary facility for access to and from the existing swing moorings during construction of the Proposed Facility. The temporary facility would consist of a small platform, ramp, pontoon and mooring for a tender vessel
• A site compound on a temporary floating structure in Elizabeth Bay
• A construction zone for utilities augmentation including a site compound
• A temporary potential works zone and potential materials staging area immediately north of the Ithaca Road car park for the delivery and storage of materials for construction.

Roads and Maritime prepared a Review of Environmental Factors (REF) to assess the environmental impacts of the proposed works. The REF was publicly displayed for 31 days between 1 March 2017 and 31 March 2017 at three locations. The REF was placed on the Roads and Maritime project website and made available for download. The display locations and website link were advertised in the Wentworth Courier on 8 March 2017.

In addition to the REF public display, 7000 community updates were distributed to local residents inviting them to view the REF and provide their feedback via email, mail, online or in person at one of the community information sessions. An email, with a link to the REF, was also sent to the 159 stakeholders registered in the project database.

Two community information sessions were held during the consultation period, allowing stakeholders to ask questions and speak directly to members of the project team.

The potential reach of our communications (email, letterbox drop, meetings, project website and local press) to invite feedback on the REF for the preferred marina design was over 50,000 people.

A total of 180 submissions from 176 members of the public and government agencies were received in response to the display of the REF. This included submissions from nine government agencies and 167 community members.

A total of 10 submissions (or six per cent of the total submissions) supported the proposal. A total of 31 submissions (or 18 per cent of the total submissions) objected to the proposal as a whole. The majority of the submissions (129 or 63 per cent) objected to some aspects of the proposal, the majority relating to the increase in number and size of the boats, increase in size of the fixed structure and increase in the size of the berths extending into the bay. Five submissions from government agencies did not offer a position on the proposal.

City of Sydney raised concerns about the increase in size of the berths and inclusion of larger boats which would have a detrimental visual impact and impact views. They also raised concerns about public access.

The Department of Primary Industries (Fisheries) raised concerns about the potential impacts of the proposal on seagrass.

The main issues raised by the public included:
• The increase in number and size of boats and increase in size of the marina (fixed structure and berths). Issues related to the increase in size included, but were not limited to, the
impacts on visual amenity, the landscape character, public amenity, traffic and parking and noise.

- Construction impacts, in particular the impact of night works on sleep disturbance as well as parking.
- Public access to the marina, in particular the kayak facility, outside operational hours.
- Questions were also raised on the need and justification for the proposal and whether other options were adequately investigated.

Two additional studies were carried out after the display of the REF to response to stakeholders’ comments during the display, and one due to changes made during detailed design.

Following the feedback from DPI (Fisheries), the seagrass area around the marina was resurveyed and the impacts on seagrass reassessed taking into account the reconfiguration of the kayak pontoon to minimise seagrass impacts. The seagrass had regressed since the original assessment was completed in 2016. The proposed reconfiguration of the kayak pontoon would minimise impacts to seagrass compared to the original footprint assessed in the REF. A total of 15 square metres of *Zostera* sp. and 396 square metres of very sparse *Halophila* sp. would be impacted during construction and/or operation. These impacts would be offset as per the requirements of a permit to be issued by DPI (Fisheries).

Due to community concerns regarding the 2008 travel model splits data, Traffix carried out additional travel mode survey in May 2017 to provide more up-to-date information. The results indicated a decrease in the percentage of people travelling to site by car. This is a lesser impact than what was assessed as part of the REF.

Some changes to the proposal have been made since the REF was prepared in responses to community feedback and additional investigations during detailed design.

The changes as a result of REF submissions include:

- Reducing the capacity of the four outer fixed berths to accommodate 15 metre boats instead of 20 metre boats
- Removing four commercial swing moorings from Elizabeth Bay Marina reducing the number from 51 moorings to 47 moorings. This results in the proposal having no net increase in the number of permanent vessels (including wet berths and swing moorings)
- Reconfiguring the kayak layout to minimise impacts to seagrass
- Redesigning the gangway and kayak pontoon to include an open mesh to minimise impacts to seagrass
- Modifying work hours to remove proposed night works as a response to community feedback regarding potential sleep disturbance caused by night works.
- Providing 24 hour access for the boating community and general public to the kayak pontoon and water taxi pick up and drop off.
- Removing the temporary tendering facility in Elizabeth Bay in response to community concerns about potential public amenity impacts during construction. Marina customers who wish to be picked up from Elizabeth Bay between 9am and 5pm would be able to contact Tolkin Marine Services.
- Move the rainwater tank further into the kayak storage area and move the rain water pump inside the storage area to make it less visible from Beare Park.

The changes as a result of further design development include:

- Increasing the wave attenuator size by around seven metres to the west to ensure all vessels berths achieve moderate or better wave climate as required by AS3962 Guidelines for the Design of Marinas. The additional length would not be used to accommodate more vessels. The additional length would have a negligible impact on visual amenity with visual impacts remaining moderate as assessed in the REF.
- Installing heritage interpretation panels to provide information on the site’s past maritime history.
• Amending the piling operation environmental safeguards to improve constructability.
• Reducing the storage of paddle boards from 24 to 20 due to the relocation of the rain water tank as part of further design development.
## Contents

**Executive summary** ............................................................................................................................................................................ i

**Contents** ....................................................................................................................................................................................................... v

1 **Introduction and background** ......................................................................................................................................................................................... 1

1.1 The proposal ........................................................................................................................................................................................................... 1

1.2 REF display ........................................................................................................................................................................................................ 2

1.3 Purpose of the report .................................................................................................................................................................................................. 1

2 **Response to issues** ........................................................................................................................................................................................................ 2

2.1 Overview of issues raised ..................................................................................................................................................................................................... 2

2.2 Need and Options considered .................................................................................................................................................................................................. 3

2.3 Design .................................................................................................................................................................................................................................... 5

2.4 Legislative framework ................................................................................................................................................................................................... 11

2.5 Consultation ............................................................................................................................................................................................................. 13

2.6 Land and Maritime transport and parking .................................................................................................................................................................. 14

2.7 Heritage impacts ........................................................................................................................................................................................................... 18

2.8 Hydrology and coastal processes .......................................................................................................................................................................... 19

2.9 Landscape character and visual impacts .................................................................................................................................................................... 20

2.10 Noise and vibration .................................................................................................................................................................................................... 24

2.11 Other ............................................................................................................................................................................................................................. 25

2.12 Soils, water and contaminated land ......................................................................................................................................................................... 26

2.13 Waste and resource use ..................................................................................................................................................................................................... 26

2.14 Socio-economic impacts ................................................................................................................................................................................................... 27

2.15 Air quality ......................................................................................................................................................................................................................... 31

2.16 Biodiversity .................................................................................................................................................................................................................. 32

3 **Additional assessment** .................................................................................................................................................................................................... 34

3.1 Response to REF traffic concerns ................................................................................................................................................................................. 34

3.2 Seagrass impact assessment .................................................................................................................................................................................................. 34

3.3 Visual impact assessment .................................................................................................................................................................................................... 41

4 **Changes to the proposal** ........................................................................................................................................................................................................ 43

4.1 Removal of night works ...................................................................................................................................................................................................... 43

4.2 Providing 24 hour access to boating community and general public ............................................................................................................................................................................. 43

4.3 Removal of temporary tendering facility in Elizabeth Bay ......................................................................................................................................................................................... 43

4.4 Reduce the size of the outer four berths ................................................................................................................................................................................. 44

4.5 Remove four swing moorings .................................................................................................................................................................................................... 44

4.6 Installation of heritage interpretation panels ................................................................................................................................................................................. 44

4.7 Providing open mesh on gangway to kayak pontoon ........................................................................................................................................................................ 45

4.8 Reconfigure the kayak ramp ...................................................................................................................................................................................................... 45
4.9 Relocation of the rainwater tank and rainwater pump ..................................................... 45
4.10 Reduce storage of paddle boards ................................................................................... 45
4.11 Increase in the wave attenuator size ............................................................................. 45
4.12 Changes to piling safeguards........................................................................................ 45

5 Environmental management ............................................................................................ 47
  5.1 Environmental management plans (or system) ........................................................... 47
  5.2 Summary of safeguards and management measures .................................................. 47
  5.3 Licensing and approvals ............................................................................................. 72

6 References........................................................................................................................ 73

Appendices
Appendix A – List of Submissions
Appendix B – Response to REF Traffic Concerns (prepared by Traffix)
Appendix C – Seagrass impact assessment
Appendix D – Visual Impact Assessment
Appendix E – Temporary tendering and kayak storage facility operations fact sheet
Appendix F – Concept Plan
1 Introduction and background

1.1 The proposal

Roads and Maritime Services (Roads and Maritime) is proposing to redevelop the Elizabeth Bay maritime facility, known as Elizabeth Bay Marina, located at Ithaca Road, Elizabeth Bay (Existing Facility). The marina is valued by the boating community as well as the local residents of Elizabeth Bay and Potts Point. These two suburbs sit within a one square kilometre area and are home to 11,955 residents (2011 Census).

The existing marina at Elizabeth Bay is deteriorating, despite numerous maintenance works carried out in previous years. Parts of the marina are now closed because they are unsafe. This urgency has put Roads and Maritime in a unique position to rebuild the structure to meet current building standards and guidelines.

Roads and Maritime is responsible for upgrading the Existing Facility to be effective and safe for the boating community. The proposed redevelopment is for the demolition and reconstruction of the Existing Facility. The fixed structure of the facility is required to be extended approximately 30 per cent to comply with Australian Building Code (ABC) and the Disability Discrimination Act (DDA). The extension of the pontoon is necessary to meet Australian Standards AS3962 Guidelines for the Design of Marinas.

Roads and Maritime has considered the submissions from the community and other stakeholders, and has modified the design where possible and reduced the size and total number of the vessels. These changes are described in Section 4 of this report.

The Existing Facility is being replaced for the following reasons:

- Timber structures of the Existing Facility such as the piles have deteriorated and need to be replaced
- Current walkway, on the eastern side of the Existing Facility office and near the kiosk, is closed to the public as it is not deemed safe nor does it comply with current regulations for disabled access
- Existing Facility is prone to flooding in high tides because it was not built high enough
- Existing Facility structures in their current condition do not comply with the load requirements of the current Australian Standards and some parts are structurally unsound
- Use of the smaller berths on the southern side of the Existing Facility is limited due to the shallow water depth at low tides
- Most recent adverse weather in June 2016 saw the Existing Facility lose several moorings and two sides of the workshop/office building.

The proposal objectives are as follows:

- Provide a facility that meets all current laws and regulations, standards and guidelines (refer to development criteria below)
- Improve boat access to the berths by relocating these in deeper water
- Provide more reliable operations with prevention of damage to boats and structure due to flooding at high tide
- Provide a facility that minimises environmental impacts, including visual impacts and doesn’t impact the current traffic and parking in the area
- Improve customer experiences by improving the current facilities such as the kiosk, toilet amenities, office facilities, security and safer water access for kayaks, paddleboards and other small vessels
- Provide a facility that is acceptable to the community, and stakeholders
- Provide better access to services and amenities to general boating community.
The development criteria are as follows:

- Design life of 50 years for the fixed structure
- Design to take into account the wave climate at the site and predicted sea level rise at 2065 and to ensure the structure is flood free in 1-in-100 year events
- Provide an Ecologically Sustainable Development (ESD)
- Provide a Proposed Facility that has a National Australian Built Environment Rating System (NABERS) of 4+ (good or better performance). NABERS is a national rating system that measures the environmental performance of buildings
- Improve customer experiences by providing a Proposed Facility that complies with the Disability Discrimination Act 1992
- Enhance waterways infrastructure by providing 13 berths catering for greater mix of boat sizes.

The original Proposed Facility comprises:

- The removal of the existing fixed platform, small building, kiosk, jetty, ramp, and pontoons and mooring piles
- The permanent relocation of around ten swing moorings to other areas within Elizabeth Bay to allow access for construction barges and other vessels and for the operation of the Proposed Facility. The number of existing swing moorings would remain as existing at 51
- The construction of a new wharf and boating facility (Proposed Facility) including:
  - A new fixed platform and small buildings to allow for
    - Office accommodation – fully fitted out including small kitchenette
    - Chandlery / Boat Broker and storage fitted out with storage lockers
    - Toilets, showers and changing amenities for users of the Proposed Facility
    - Kayak and paddleboard storage structure and racking
    - Cafe including fit out. The cafe would be tailored to service the needs of the boating community using the Proposed Facility and would include full food preparation and grease trap
  - A floating structure for the permanent mooring of up to 13 vessels
  - A new destination berth
  - A new berth for a sewage pump-out facility as part of the new floating structure
  - Mooring piles between vessel berths
  - Ramp access for the new fixed platform of the floating structure
  - Services bollards with lights which cast light downwards, including water and power to the vessels
  - Piles which provide lateral restraint to the floating structure
  - An access ramp and pontoon for the launching and retrieval of kayaks and paddleboards stored on the fixed platform
- Connection of services of the Proposed Facility to the services on land
- Minor adjustments to the seawall to facilitate construction of the Proposed Facility
- A temporary facility for access to and from the existing swing moorings during construction of the Proposed Facility. The temporary facility would consist of a small platform, ramp, pontoon and mooring for a tender vessel
- A site compound on a temporary floating structure in Elizabeth Bay
- A construction zone for utilities augmentation including a site compound
- A temporary potential works zone and potential materials staging area immediately north of the Ithaca Road car park for the delivery and storage of materials for construction.

A more detailed description of the Elizabeth Bay Maritime Facility is found in the Elizabeth Bay Maritime Facility Upgrade Review of Environmental Factors Roads and Maritime Services 2017.

1.2 REF display

Roads and Maritime prepared a Review of Environmental Factors (REF) to assess the environmental impacts of the proposed works. The REF was publicly displayed for 31 days.
between 1 March 2017 and 31 March 2017 at three locations, as detailed in Table 1-1. The REF was placed on the Roads and Maritime project website and made available for download. The display locations and website link were advertised in the Wentworth Courier on 8 March 2017. The Wentworth Courier has a potential reach of 50,000 people per issue.

In addition to the REF public display, 7000 community updates were distributed to local residents inviting them to view the REF and provide their feedback via email, mail, online or in person at one of the community information session (see Figure 1-1 for the community update distribution area). An email, with a link to the REF, was also sent to the 159 stakeholders registered in the project database.

Two community information sessions were held during the consultation period, allowing stakeholders to ask questions and speak directly to members of the project team. Details for each community information session can be found in Table 1-2.

### Table 1-1 Display locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Sydney Council</td>
<td>Town Hall House</td>
</tr>
<tr>
<td></td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>456 Kent Street, Sydney</td>
</tr>
<tr>
<td>Kings Cross Neighbourhood Centre</td>
<td>50-52 Darlinghurst Road</td>
</tr>
<tr>
<td></td>
<td>Kings Cross</td>
</tr>
<tr>
<td>Roads and Maritime office</td>
<td>33 James Craig Road</td>
</tr>
<tr>
<td></td>
<td>Rozelle.</td>
</tr>
</tbody>
</table>

### Table 1-2 Community Information Sessions

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beare Park, Elizabeth Bay</td>
<td>Saturday 11 March, 10:00am – 1:00pm</td>
<td>100 people visited (85 signed in)</td>
</tr>
<tr>
<td>Reginald Murphy Centre, 19 Greenknowe Ave, Elizabeth Bay</td>
<td>Wednesday 15 March, 6:00pm – 9:00pm</td>
<td>22 people visited (18 signed in)</td>
</tr>
</tbody>
</table>
Figure 1-1 Community Update distribution area (Source: Roads and Maritime)
1.3 Purpose of the report

This submissions report relates to the REF prepared for the Elizabeth Bay Maritime Facility 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 Roads and Maritime. This submissions report summarises the issues raised and provides responses to each issue (Chapter 2). It details investigations carried out since finalisation of the REF (Chapter 3), describes changes to the proposal as a result of submissions and/or progression of the detailed design (Chapter 4) and identifies new or revised environmental management measures (Chapter 5).
Response to issues

Roads and Maritime Services received 180 submissions from 176 individuals and government agencies, accepted up until the 3 April 2017. This included submissions from nine government agencies and 167 community members. Appendix A lists the respondents and each respondent’s allocated submission number. The Appendix also indicates the issue category and sub issue for each submission.

2.1 Overview of issues raised

The potential reach of our communications (email, letterbox drop, meetings, project website and local press) to invite feedback on the REF for the preferred marina design was over 50,000 people.

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 Roads and Maritime response to these issues forms the basis of this chapter.

A total of 10 submissions (or six per cent of the total submissions) supported the proposal. A total of 31 submissions (or 18 per cent of the total submissions) objected to the proposal as a whole. The majority of the submissions (129 or 63 per cent) objected to some aspects of the proposal, most in relation to the increase in number and size of the boats, increase in size of the fixed structure and increase in the size of the berths extending into the bay. Five submissions from government agencies did not offer a position on the proposal.

City of Sydney raised concerns about the increase in size of the berths and inclusion of larger boats which would have a detrimental visual impact and impact views. They also raised concerns about public access.

The Department of Primary Industries (Fisheries) raised concerns about the potential impacts of the proposal on seagrass.

The other government agencies did not have particular issues but some provided feedback relating to specific requirements and/or guidelines that will need to be adhered to during construction and/or operation.

The number of times particular issues were raised by the public is provided in Figure 2-1. The main issues raised by the public included:

- The increase in number and size of boats and increase in size of the marina (fixed structure and berths). Issues related to the increase in size included, but were not limited to, the impacts on visual amenity, the landscape character, public amenity, traffic and parking and noise.
- Construction impacts, in particular the impact of night works on sleep disturbance as well as parking.
- Public access to the marina, in particular the kayak facility, outside operational hours.
- Questions were also raised on the need and justification for the proposal and whether other options were adequately investigated.
2.2 Need and Options considered

2.2.1 Strategic need

Submission number(s)
23; 37; 43; 62; 76; 81; 90; 120; 131; 141; 142; 155; 156; 160; 162; 168; 170

Issue description
- Given the proximity to facilities at Rushcutters Bay, is the maritime facility at Elizabeth Bay required?
- The proposal only benefits the affluent few who will have private boats moored on a private jetty. Rushcutters Bay has more space and should be used. The proposal will adversely affect the Elizabeth Bay community.
- The proposal is not required as there are available swing moorings.
- The proposal is for commercial purposes and is driven by revenue at the expense of the community.

Response
The existing marina at Elizabeth Bay is deteriorating, despite numerous maintenance works carried out in previous years. Parts of the marina are now closed because they are unsafe. This urgency has put Roads and Maritime in a unique position to rebuild the structure to meet current building standards and guidelines.
Roads and Maritime is responsible for upgrading the Existing Facility to be effective and safe for the boating community. The proposed redevelopment is for the demolition and reconstruction of the Existing Facility. The fixed structure of the facility is required to be extended approximately 30 per cent to comply with Australian Building Code (ABC) and the Disability Discrimination Act (DDA). The extension of the pontoon is necessary to meet Australian Standards AS3962 Guidelines for the Design of Marinas.

Transport for NSW Sydney Harbour Boat Storage Strategy published in 2013 identified a shortage of marina berths. D'Albora Marina at Rushcutters Bay is at capacity.

The proposal would be carried out on behalf of Roads and Maritime to reduce the need of commercial returns and instead focuses on the needs and use for the boating community. This would also ensure the public access to the proposed facility during and outside of operational hours. The proposal also responds to the Sydney Harbour Boating Destination Plan by providing improved amenities and services to the general boating public.

Roads and Maritime reduced the number of the swing moorings from 51 swing moorings to 47 swing moorings. This results in no net increase of the total number of vessels. Roads and Maritime also reduced the maximum vessel size of the four outer berths from 20 metres to 15 metres.

Sydney Harbour Boat Storage Strategy acknowledges that ‘commercial’ moorings will have to be lost to make way for additional wet berths. The Strategy also states that “the de-cluttering of bays can be achieved in a number of ways that may include converting moorings to berths at commercial marinas”. The removal of the swing moorings meets the Sydney Harbour Boat Storage Strategy by decreasing clutter and increasing navigation channels.

### 2.2.2 Options

#### Submission number(s)

9; 10; 12; 16; 17; 29; 42; 53; 62; 110; 117; 145; 154; 164; 167; 170

#### Issue description

- The marina should be repaired and restored and not extended to accommodate more boats.
- An option should have been provided in keeping with the character of the current structure.
- Replacement of the wooden piles should be considered.
- Additional moorings could be installed to increase revenue and capacity, without needing to create the significant additional structure and visual obstruction of the berths.

#### Response

A condition report of the Existing Facility was prepared by TLB Engineering in May 2015 documenting inspections of the structures above deck as well as the substructure below the deck level. The report is provided in Appendix B and summarised in Section 2.2.2 of the REF.

The report found that the existing facility and associated structures are in a very poor condition and are at high risk of failure within the next few years. The timber structures of the existing facility, including the piles, have deteriorated beyond repair with most requiring immediate replacement. The remaining elements of the structure including the timber deck and building are in unsatisfactory condition and require immediate replacement. Repair works would only extend the service life of the various components by up to 5 years.

The current facility is also not in accordance with current Australian Standards. Adverse weather in June 2016 saw the existing facility losing several moorings and two sides of the workshop/office building. The deck and the kiosk were also flooded as a result of the large tides. It subsequently
became apparent that there is also a need to raise the existing facility above the 1:100 year flood levels to avoid future flooding.

The replacement of the facility triggers the requirements to comply with current building codes and Australian Standards and City of Sydney regulations and guidelines. This does not allow Roads and Maritime to provide a facility of the same dimensions. The option of repairing the facility was considered in the REF in Section 2.4.

Roads and Maritime publicly displayed three design options for the marina in September and October 2016 to seek the community’s preferences on these options. Refer to Section 2.5 below for further information.

Swing mooring fields are defined around Sydney Harbour and require approval from NSW Maritime, local councils and, for areas near naval waters, the Department of Defence. In addition, swing moorings would require more space due to large swing circles, especially in low tides when the swing ropes have the most slack, and increase cluttering of the harbour. Any permanent increase in number of moorings at Elizabeth Bay would potentially impact on navigation and navigation channels.

The four outer berths would be restricted to vessels up to 15 metres as a response to the local residents’ concern around the size of boats potentially using the facility. Roads and Maritime would also remove four swing moorings, reducing the proposal to no net increase in the total number of vessels.

2.3 Design

2.3.1 Size of marina

Submission number(s)
2; 9; 19; 20; 32; 44; 52; 54; 56; 57; 62; 67; 71; 78; 79; 84.; 90; 93; 100; 102; 106; 107; 111; 114; 118; 120; 121; 123; 126; 136; 138; 145; 174

Issue description
- The proposed size and height of the marina, including buildings and berths, is too large and should be reduced
- The proposed footprint of the marina should be maintained and not increased.
- A lot of additional Bay is being used for only four additional berths.
- The berths should not extend into the harbour and the width of the marina should be reduced.
- The design of the building should be rationalised to minimise construction and operation costs and impacts, as well as to improve the feasibility of the proposal.

Response
In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) as part of the proposal. These changes, when compared to the REF proposal, would not worsen the visual impact and loss of access to the waterway in Elizabeth Bay.

The current configuration of the marina berths to the east and shallow waters is substandard and is restricting boat movements in low tides. The new marina arms are designed to current Australian Standards, in particular AS3962 Guidelines for the Design of Marinas. This requires the marina arms to be redesigned to reach deeper water and allow for adequate navigation fairway. In accordance with design guidelines for marinas, wave attenuation features are included in the design to reduce the likelihood of damage to boats and the building during storm and high tide
events. This has required the size of the berths, including the width of the pontoon, to be increased to comply with the relevant standards (refer to Section 4.11 for details).

The size and the height of the building was minimised as far as practicable in response to community feedback during the preliminary options display in October 2016 and taking into consideration the objectives of the proposal and requirements of current Australian Standards, Building Codes and guidelines.

The height of the building was kept as low as possible without making the building too blocky. The floor of the kayak storage area was lowered to keep the roof low while allowing for the storage of larger paddle boards, and the kayak storage area and central walkway were redesigned to be as open as possible to reduce the perceived bulk of the facility and open up views through to the bay.

The building also needs to comply with current design standards and regulations which required accessible ramps, amenities and services which include a pump room for fire hydrant services, a plant room, fire booster, disabled toilets and showers. The proposed building size is approximately 120 square metres larger than the existing building, of which an approximate 100 square metres is dedicated to the accessible ramps and services.

The accessible ramp allows equitable access to the facility as required under the Australian Building Codes, and its position at the entry to the marina facilitates this. The split levels allow equitable access both to the entry and the kayak storage area. The ramp is located off to the side of the main entry stairs, and behind the boundary timber fence, to better screen the extent of ramp. The main entrance to the facility was designed to be in between the two buildings to frame views towards the harbour.

### 2.3.2 Number and size of boats

**Submission number(s)**

15; 32; 36; 37; 38; 40; 52; 56; 61; 67; 72; 77; 80; 82; 83; 84; 89; 90; 95; 96; 99; ; 101; 103; 104; 105; 107; 112; 114; 118; 120; 124; 126; 128; 133; 142; 165

**Issue description**

- The marina should not increase the number of berths or size of boats.
- The marina should be limited to 15 metre boats.

**Response**

In response to community concerns the maximum boat size for the fixed berths has been reduced to 15 metres. Four swing moorings would also be removed, so the proposal would result in no net increase in the total number of vessels. Sydney Harbour Boat Storage Strategy acknowledges that ‘commercial’ moorings will have to be lost to make way for additional wet berths. The Strategy also states that “the de-cluttering of bays can be achieved in a number of ways that may include converting moorings to berths at commercial marinas. The removal of the swing moorings meets the Sydney Harbour Boat Storage Strategy by decreasing clutter and increasing navigation channels.

### 2.3.3 Cafe

**Submission number(s)**

8; 50; 56; 144

**Issue description**

- The café is not required and should be replaced by a permanent coffee/small food cart which would be more commercially viable.
• The café should front the park to activate and provide passive surveillance for the park
• Café should have a shaded area.
• The fit out and operation of the café will need to comply with the Food Safety Act, Food Standards Codes and the AS 4674-2004 Construction and Fit-Out of Food Premises.

Response
The proposal includes a Destination Berth to respond to the Sydney Harbour Boating Destinations Plan which is an initiative of the NSW Government designed to increase the number of services and amenities available to the general boating public on Sydney Harbour, with cafés as desirable amenities to be provided in a marina. A destination berth provides complimentary access for visiting vessels for casual short term mooring. The proposed café replaces the existing facility at the marina and is designed to have the same seating number available as the existing café.

The shaded area for the proposed café provides an undercover area with views across the bay. It is in the same location as the current seating area on the back deck. The northern location looks to balance available shade requirements in summer with the desire for direct sunlight in winter.

The proposed chandlery/boat brokerage space and the office would have large floor to ceiling windows with direct view to the park which would provide passive surveillance towards Beare Park.

The fit out and operation of the café would comply with the Food Safety Act, Food Standards Codes and the AS 4674-2004 Construction and Fit-Out of Food Premises. This has been included as a management measure in Section 5.

2.3.4 Deck Height

Submission number(s)
42

Issue description
• The deck should not be raised to cater for larger boats as it will impact amenity.

Response
The existing facility floods in large high tides which causes damage to the building as well as the boats that are berthed at the marina. The floor height has been raised to comply with City of Sydney minimum requirements for the floor to be above the 1 in 100 year flood level. It has not been raised to cater for the larger boats.

2.3.5 Entrance

Submission number(s)
35; 153

Issue description
• The entrance should have a cover for weather protection.
• A better entry with a more integrated accessible ramp could be proposed (for example a shared ramp entry, not a separate ramp and stair).

Response
The original concept for the proposal included a cover at the entrance. However, the battens in the design were subsequently removed to improve the openness as requested by the community during the consultation process in October/November 2016.
The accessible ramp allows equitable access to the facility as required under the Australian Building and Disability Discrimination Act, and its position at the main entry to the marina facilitates this. The split levels allow equitable access both to the entry and the kayak storage area. The ramp is located off to the side of the main entry stair, and behind the boundary timber fence, to better screen the extent of the ramp.

2.3.6 Fencing

Submission number(s)
47

Issue description
- The proposed full fence on the left side of the gate should not extend to the boundary of the facility and the full fence on the western side of the facility should only commence from half way.

Response
The fence that is proposed for the marina has been designed to provide a secure facility and to discourage anti-social behaviour on the facility outside of operational hours.

2.3.7 Finishes

Submission number(s)
153

Issue description
- External glazed balustrades contribute to the harsh, unsympathetic address to the park and waterfront in the current design.

Response
No external glazing balustrade has been proposed as part of the design. The external balustrade has been designed to Australian Standard AS1427 – Balustrade. The proposed design uses a hardwood timber frame with tensioned cable wire in a zigzag pattern. The materials were chosen to minimise impact of views from and to the Marina, and durable enough to withstand the coastal conditions at Elizabeth Bay.

2.3.8 Kayak facility

Submission number(s)
25; 31; 62; 99; 146; 128, 173

Issue description
- The concrete stairs on the western side of the marina are too steep and will not allow kayak users to access the beach safely. The current public access for to launch kayak should be retained.
- Access with a long rigid craft from the footpath will be difficult.
- Why is it necessary to build a special pontoon for a small number of kayak and paddleboard users?
- The berth sizes should be reduced and the area dedicated to kayaking/paddle boarding, and in particular the hiring of kayaks. Kayaking on the harbour shouldn't require ownership of a kayak, especially when there will be limited spaces to store them.
- Kayak facilities can be permanently relocated to D'Albora Marina in Rushcutters Bay.
• The berth sizes should be reduced and the area dedicated to kayaking/paddle boarding, and in particular the hiring of kayaks. Kayaking on the harbour shouldn’t require ownership of a kayak, especially when there will be limited spaces to store them.

Response
Following community consultation Roads and Maritime have amended the proposal to ensure that the proposed kayak pontoon remains accessible to kayak users at all times through the use of access keys. Any person wishing to access the kayak pontoon out of hours would be able to register for an access key. Depending on demand, an access card cost recovery fee may be incurred. Kayak users would have a choice to use the existing concrete stairs on the western side of the marina or via the main gate to the Proposed Facility.

This proposal would not alter the existing use of the marina. It is a public facility for all water users. The current facility is popular for passive crafts, including kayaks and paddle boards, especially during weekends. Paddle NSW also indicated a strong preference to have the facility at Elizabeth Bay upgraded to encourage more users to make the most of what the harbour has to offer.

The proposal includes a dedicated kayak access gangway and floating pontoon which would improve the launching of kayaks and paddle boards. The facility has been designed to Australian Standards AS3962 Guidelines for the Design of Marinas and AS4997 Guidelines for the Design of Maritime Structures, with significant inputs from Paddle NSW to ensure all users can access the water safely and with ease. The new access ramp from the front entrance would ensure the facility would also cater for people with disabilities. The design allows for easy access for personal crafts through the facility.

Following comments from the first round of consultation in September 2016, the design of the kayak ramp was revised to angle it away from the beach to provide better access to dog walkers and other beach users. The revised design also addressed concerns from kayakers that the fixed ramp would be too steep and unsafe.

The proposed facility includes storage of 24 kayaks and 20 paddle boards. However, the kayak pontoon is also expected to be used by many locals who store kayaks at their residence. A kayak hire place has not been considered as part of the proposal.

Following stakeholder consultation with DPI Fisheries the design of the kayak ramp has been modified to minimise impacts to seagrass (Refer to Section 4.8 for details), this also provides greater clearance between the pontoon and the beach area.

2.3.9 Office and chandlery

Submission number(s)
146

Issue description
• Are an office and chandlery and individual kitchenettes necessary?

Response
An office is a standard inclusion for a marina. It is required for the management and operation of the marina berths and the tendering services to the 47 swing moorings. The existing marina office assists with the management of the kayak storage facility, general marina security, and discouraging unsocial behaviour during operational hours.

The proposed boat brokerage/chandlery is replacing the existing marina workshop and is expected to be available for any wharf and boating business. Marine service is one of the recommended amenities in the Sydney Harbour Boating Destination Plan.
The Building Code of Australia requires each sole occupancy unit to have a kitchen sink and facility for the preparation of food.

### 2.3.10 Facility amenities

**Submission number(s)**
3; 146

**Issue description**
- Are the showers, toilet and lockers necessary?
- Lockers and showers should be available to the public

**Response**
The Building Code of Australia requires adequate toilet and washing facilities to be provided for the occupants of a building, relative to its use and size.

The proposed lockers utilise the available space to provide amenities for the community. Although the lockers would be likely to be predominantly used by marina users, especially kayakers, all members of the public would have access to lockers. The shower facility would be open to the public during operational hours.

### 2.3.11 Configuration

**Submission number(s)**
24; 27; 28; 35; 67; 127; 153

**Issue description**
- The berths should be located on the eastern side as per the current layout and not be relocated to the west of the existing marina arm.
- The berths should not extend into the harbour.
- The deck on the east side was preferred as it provided adequate shade.
- The design has little visual appeal or architectural merit.
- The building design should be iconic, inspirational and designed by an architect. A competition should be run and voted upon to find the most suited.

**Response**
The current configuration of the marina berths to the east is in shallow waters. This is substandard and restricts boat movements in low tides. Therefore, berths need to be relocated which requires the marina arms to be redesigned further into the bay to reach deeper water. This is to satisfy current Australian Standards, in particular AS3962 Guidelines for the Design of Marinas. Further details are provided in Section 2.3.1 above.

Following community consultation, the maximum size of boats in the outer four berths has been reduced from 20 metres to 15 metres.

The proposed café would include a shaded undercover area with views across the bay. The northern location of the undercover area looks to balance the available shade in summer with the desire for direct sunlight in winter.

The current proposed building design was based on the preferred option chosen by the Elizabeth Bay community during the public display period for the three preliminary design options, held in September and October 2016.
The project architect, Lahz Nimmo Architects, is a multiple architectural award winner, who considered all of the community and stakeholder feedback and proposed a design that is modern and sympathetic with the surrounding environment. The lead architect is the current president of the NSW Chapter Council of the Australian Institute of Architects.

2.3.12 Sewage pump out facility

Submission number(s)
28; 40; 42; 45; 62

Issue description
- A sewage pump out facility is not required as there is one at Rushcutters Bay.
- Sewage pump out facility should be made available to all existing swing moorings’ users.

Response
The repealed Marine Pollution Regulation 2006 Division 4 required all Sydney Harbour locality marinas to have waste collection facilities for sewage and solid waste. The current Marine Pollution Regulation 2014 is being reviewed and Roads and Maritime has requested the requirement for a pump out facility to be available at all commercial marina to be reinstated in the current Marine Pollution Regulation by 2018.

The Sydney Harbour Boating Destination Plan encourages all commercial marinas to have their own pump out facility. The introduction of a convenient new pump out facility would minimise the risk of boat operators illegally discharging waste in Sydney Harbour and would assist with improving the cleanliness of Sydney Harbour. This is evidenced by the submission requesting a pump out facility for all existing swing mooring users.

2.3.13 Destination berth

Submission number(s)
1; 30; 45

Issue description
- The proposal should include a pick up and drop off point for passengers and provisions that is suitable for large vessels.

Response
As detailed in the concept plan in Figure 1-3 of the REF, the proposal includes a destination berth where vessels would be able to pick up and drop off crew and provisions.

2.4 Legislative framework

2.4.1 Approval process

Submission number(s)
133; 142; 165; 173

Issue description
- The proposal should be assessed by an independent authority to avoid a conflict of interest.
- The proposal should be assessed and approved by an independent, open and transparent assessment of the proposal through a development application to council or the Department of Planning and Environment.
- How can the RMS lodge a development application with itself, and approve said application?
Response
As detailed in Chapter 4 of the REF, clause 68(4) of the ISEPP allows a public authority, in this case Roads and Maritime Services, to undertake development for the purpose of wharf or boating facilities without the need for development consent. The proposal is therefore subject to an assessment of environmental impacts under Part 5 of the EP&A Act.

The description of the proposed work and assessment of environmental impacts have been undertaken in accordance with clause 228 of the Environmental Planning and Assessment Regulation 2000, taking into account the factors in various environmental assessment guidelines. These include: Is an EIS Required? Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979 (Part 5 Guidelines) (DUAP, 1995/1996), Marinas and Related Facilities: EIS Guideline (DUAP 1996) (EIS Guideline), the Threatened Species Conservation Act 1995 (TSC Act), the Fisheries Management Act 1994 (FM Act), and the Australian Government’s Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

In doing so, the REF helps Roads and Maritime satisfy its duty under section 111 of the EP&A Act to examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the relevant activity.

Roads and Maritime have engaged a consultant to assess the impact of the proposal. The independent consultant has assessed the impacts in line with Part 5 of the EP&A Act.

2.4.2 Other

Submission number(s)
64; 152; 171

Issue description
- The Protection of the Environment Operations Act 1997 (POEO Act) should be considered in the regulatory framework for the proposal.
- The proposal does not fully meet the aims of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP). The proposal should be reassessed in the context of the government's policies and SREP.
- The proposal should ensure that the overall community is considered and not just the narrow sector of the marina clients. The provision for additional berths and increased vessel length need to be better justified.

Response
All legislation is considered when preparing a REF. However, only legislation that is directly applicable to the proposal is included in section 4 of the REF. Following a review of Schedule 1 of the Protection of the Environment Operations Act 1997, an Environmental Protection Licence would not be required for the proposal and therefore the REF did not include a summary of the Protection of the Environment Operations Act 1997. Construction of the proposal would however be guided by the relevant section of the POEO Act in regards to potential pollution events.

The Proposed Facility may be undertaken without development consent pursuant to the provisions of the ISEPP which prevail to the extent of any inconsistency with the provisions of the Sydney Harbour SREP (see clause 7(5) of the Sydney Harbour SREP).

Notwithstanding this, the proposal was assessed against the aims of the Sydney Harbour SREP, together with the specific matters required to be taken into account, as set out in Table 4-1 of the REF.

The main purpose of the proposal is to upgrade a "wharf and boating facility". Roads and Maritime has provided additional features to ensure public access to the facility and public use of the
amenities during and outside of operational hours. The Strategic Need for the upgrade is discussed in Section 2.2.1 above.

In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) or vessel length as part of the proposal.

2.5 Consultation

Submission number(s)
20; 26; 36; 37; 44; 55; 77; 84; 99; 105; 109; 114; 117; 118; 120; 126; 129; 130; 147; 158; 164; 167; 169

Issue description
- Roads and Maritime was doing excellent consultation.
- Agencies noting that they received notification of the REF display.
- The consultation process for the proposal was inadequate.
- Community consultation is crucial for an equitable result and should be an approval process’s requirements.
- The consultation process should be genuine and the proposal should be revised to take into account the community concerns.
- There was a lack of communication in regards to information sessions and time to respond.
- RMS should undertake a proper survey of the community that is representative of the defined Elizabeth Bay community. This survey should aim to question at least 300 rate payers and/or rent payers so that the confidence level of the survey has validity for all stakeholders. The next step is to include this information in any communication so the community gets a sense of where opinions lay.
- The ‘Have Your Say’ pamphlet was misleading and/or inaccurate. The indicative layout of the proposed marina did not include the extension of the berths.
- The consultation lacks information on mitigation measures for construction and operation of the proposed facility.
- The proposal should have support from the local community.

Response
Roads and Maritime have followed consultation protocols in line with the EP&A Act requirements, International Association and Public Participation (IAP2) principals, and with our own high standards to ensure the community was informed and had the opportunity to provide feedback.

Roads and Maritime used a mix of channels to reach the wider community and to understand preferences and issues of concern – including feedback from local residents and businesses, commercial and recreational boaters and operators, and the broader public.

Following initial investigations, Roads and Maritime publicly displayed three design options for the Proposed Facility in September and October 2016. The aim of this consultation process was to seek the community’s preference on these options. Roads and Maritime distributed 4000 community updates, advertised in Wentworth Courier and posted information on Roads and Maritime’s web page. During this display period we also held two community information sessions on 8 October and 10 October 2016 at the Rex Centre, Kings Cross.

We received 169 submissions during this period. The results from the first round of consultation is summarised in the Elizabeth Bay Community Consultation Report which is available on Roads and Maritime webpage at http://www.rms.nsw.gov.au/projects/sydney-inner/elizabeth-bay/.
During the public display period for the REF, some buildings could not be accessed to provide the community update due to building security. However, other channels such as local press were used to ensure the majority of the members of the community were notified where access was limited.

For the REF display, Roads and Maritime disseminated 7000 community updates to people in the vicinity of the proposal (refer to Figure 1-1 for distribution area). The following was also undertaken:

- Roads and Maritime emailed stakeholders, where email details were provided, on Thursday 2 March 2017.
- Information on the proposal was posted on the Roads and Maritime website page on Thursday 2 March 2017.
- An advertisement was published in the Wentworth Courier on 8 March 2017 to notify the community about the REF display with details of the community information sessions.
- Face to face meetings with individuals were held.
- Two community information sessions were held on 11 and 15 March 2017.
- Hard copies of the REF were available for viewing at City of Sydney office, King Cross Neighbourhood Centre and Roads and Maritime office at Rozelle.

Contact details were provided as part of all of these channels to ensure there was an opportunity to provide feedback at any time either by phone, email or online via the project web page. A reply paid envelope was also provided during the information sessions to allow visitors to take the feedback form home and send back to the project team at a later date.

The indicative layout of the marina provided on page four of the Community Update represented the layout of the proposed facilities within the building. Roads and Maritime acknowledges that the title of the image did not specify this adequately. The layout for the berths was provided in the artist’s impressions from various view points on the other pages of the Community Update.

The REF, which describes the proposal, potential impacts and proposed mitigation measures for construction and operation, was put on public display for a period of one month to allow the local community to provide feedback. Roads and Maritime received 180 submissions for this proposal from 176 individuals or groups representing various stakeholder groups. Roads and Maritime is satisfied that the community and other stakeholders were provided ample opportunity to send feedback to the project team.

This submissions report summarises the feedback received and provides responses to the issues raised by individuals.

In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) as part of the proposal.

### 2.6 Land and Maritime transport and parking

#### 2.6.1 Construction impacts – traffic and parking

**Submission number(s)**
20; 77; 84; 89; 99; 105; 107; 111; 114; 118; 120; 126; 129; 173

**Issue description**
- Construction of the proposal will impact parking, including from the set up of an ancillary facility.
• Development work should be limited to 9am to 3pm Monday to Friday in winter, outside key usage times
• Early notification for the closure of the car park is required as some residents don’t regularly check their vehicles.

Response
A traffic assessment has been completed for the proposal by Traffix and is summarised in section 6.4 of the REF, and detailed in Appendix M. The traffic assessment has assessed the potential impacts to parking. It is recognised that parking would be temporarily impacted during construction of the proposal and that this is unavoidable.

Work would be undertaken within standard construction hours between 7am to 6pm Monday to Friday and 8am to 1pm Saturday. Roads and Maritime planned to commence the works in cooler months to minimise impacts on peak use period.

Construction of the proposal would require two car parks for up to five months for the works zone. The works zone would be used to receive deliveries to the materials storage area.

The closure of the Ithaca Road car park would also be required for up to four weeks. The closures are required for the connection to utilities which are located within the car park. The closure of the Ithaca Road car park for the total of four weeks would see the temporary removal of:
• 24 on-street public parking spaces
• one car share space
• one accessible parking space.

Furthermore, between eight to ten car parks would also be unavailable for up to four days during concrete pours.

Roads and Maritime has provided mitigation measures to minimise impacts to traffic and parking during construction. Early notification for any car park closures would be made. Impact on parking for the services augmentation would be limited to day time. Where practicable, the construction contractor would be required to cover trenches to return parking to residents at night time. Roads and Maritime would continue to look at ways to minimise impacts on parking spaces during construction through the application process to seek approval from City of Sydney

2.6.2 Construction impacts – mooring access

Submission number(s)
46; 46; 74; 74

Issue description
• During construction residents of Elizabeth Bay with a mooring in Elizabeth Bay will be required to drive to Rushcutters Bay and park to use the tender service. Parking in Rushcutters Bay is difficult.
• During operation of the proposal a tender service should operate from the early morning (Before 9am). Rowing a small tender in Elizabeth Bay to access swing moorings is dangerous.
• During construction three dinghies should be stored near the eastern steps in Beare Park for use by the marina customers. Marina customers should also have access to the temporary construction pontoon for launching and recovering dinghies.

Response
Further details on the proposed temporary tendering facility are provided in Section 4.3 below. The D’Albora marina in Rushcutters Bay would be the temporary facility for tendering services during the construction period.
During construction, marina customers who wish to be picked up from Elizabeth Bay between 9am and 5pm would be able to contact Tolkin Marine Services. The pickup location would be from the steps to the east of the existing marina. It is recognised that pick-up at this location would be dependent on weather and tidal conditions. Where prevailing tidal and weather conditions would not allow safe pick up, customers that require a tendering service would need to use the service at Rushcutters Bay.

Customers who require use of the tendering service outside of these hours would be able to pre-book this service through Tolkin Marine Services. A fee may be applicable and payable directly to Tolkin Marine Services. There is a current low usage (up to five movements) of the tendering services outside these hours.

The construction barges are part of the construction site and cannot be used as a temporary facility due to Work Health and Safety regulation.

Rowing across the channel is not recommended. Customers who wish to keep dinghies at Beare Park are recommended to seek approval from the City of Sydney.

### 2.6.3 Maritime traffic

**Submission number(s)**
24; 28; 149; 150

**Issue description**
- The sewage pump out facility would increase maritime traffic in Elizabeth Bay.
- The proposal will result in an increase in maritime traffic that may be a safety concern for swimmers in Elizabeth Bay.

**Response**
It is recognised that the proposed sewage pump out facility is likely to increase boat movements in Elizabeth Bay as boats from the swing moorings and berths and elsewhere would be required to manoeuvre to the location. A review of the use of pump out facilities at Rushcutters Bay Marina indicates that an average of 10 vessels use pump out facilities per day during the weekend with five uses per day during weekdays. The use is predominately by the marina clients. There is a small usage from the broader boating community. As Rushcutters Bay Marina has a fuel service, the expected use of the pump out at Elizabeth Bay from boaters from outside of the marina is likely to be less. A navigation plan would be developed as part of the operation of the Marina to ensure any movements are undertaken safely. This has been included as a management measure in Section 5 below.

The proposal would increase the number of berths in Elizabeth Bay from nine to 13. The number of swing moorings in Elizabeth Bay would reduce to 47. Therefore there is no net increase in total number of vessels or maritime traffic. However, the proposal would relocate the berths to deeper water and therefore reducing the risk to swimmers near shore.

### 2.6.4 Parking impacts

**Submission number(s)**
15; 21; 28; 37; 44; 45; 48; 56; 62; 69; 73; 77; 81; 82; 83; 85; 87; 88; 94; 96; 101; 105; 106; 108; 110; 112; 121; 124; 126; 129; 130; 137; 145; 150; 151; 155; 156; 158; 159; 160; 162; 163; 166; 167; 168; 170; 174

**Issue description**
- There is concern that there would be an increase in visitor numbers from the proposal that would impact parking, including as a result of the increase in size and number of boats,
• The data used in the parking assessment is too old,
• The traffic study includes carpark data from the wrong marina.

Response
A traffic and parking assessment was completed for the proposal by Traffix and summarised in section 6.4 of the REF and included as Appendix M. An assessment of the parking impacts as a result of each component of the proposed facility was undertaken and summarised in Table 6-21 of the REF.

In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) as part of the proposal. These changes, when compared to the REF proposal, would reduce impacts to parking demand which was assessed as negligible in section 6.4.2 of the REF.

To assess the accuracy of the 2008 travel modes survey data, additional surveys were commissioned to establish the travel mode splits of visitors to the existing facility and the on-street parking occupancy in 2017 (refer to section 3.1 and Appendix B). The surveys were completed on Saturday 13 May 2017 between 9:00am and 12:00pm. These results demonstrate an increase of people who walked to the site from 25% in 2008 to 68% in 2017. There has also been a significant reduction in private vehicles accessing the site from 25% in 2008 to 18% in 2017.

These shifts indicate an improved scenario from the traffic assessment prepared for the REF. The results of the 2008 and 2017 travel mode splits are included in Appendix B of this report.

The traffic impact assessment used data from several other marinas to provide insight to traffic requirements and behaviour of existing marina developments in addition to Australian Standards Guidelines. The provision of this data was not an error, rather a methodology to establish parking rates. This methodology is common practice for traffic engineers.

The proposal is intended to minimise any increase in parking demand in the area with:
• the café to maintain the existing seating provision,
• the chandlery replacing similar traffic generation as the existing maritime workshop/ commercial space,
• there is no net increase in the total number of permanent vessels,

2.6.5 Traffic impacts

Submission number(s)
9; 24; 28; 40; 44; 56; 66; 67; 73; 79; 85; 88; 89; 92; 93; 94; 124; 130; 137; 154; 166; 167; 170; 174

Issue description
• An increase to the built form footprint, size of berths, number of visitors and operation of businesses will attract more people to Elizabeth Bay and impact traffic.
• An increase to traffic from a larger facility will present a safety concerns for pedestrians and park users.
• There is no information regarding how deliveries to the proposed maritime facility would be undertaken during operation.

Response
In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina, to result in no net change to the total number of permanent vessels which
includes fixed berths and swing moorings. This no net change in the number of vessels would reduce the traffic impact as noted in the REF. Furthermore, the REF traffic assessment concluded that the traffic generation due to the café and kayak/paddle board storage would result in no noticeable change in traffic conditions on the local road network as there would be negligible increase in the capacity of the proposed facilities (e.g. the café would maintain the existing 12 seats and the kayak/paddle boards remain similar to existing).

The boat chandlery/brokerage space replaces the existing maritime workshop and assessed to have the same traffic generation.

Additional assessments were also undertaken to confirm the results of the REF regarding the potential traffic and parking impacts from the operation of the café, chandlery and destination berth. These are described in detail in Section 3.1 and Appendix B. The additional assessment confirmed that the facility would have negligible impacts on traffic and parking.

Deliveries to the Proposed Facility would be expected to be of a similar nature to the requirements of the Existing Facility. As such, there would not be significant changes to the current conditions.

2.7 Heritage impacts

Submission number(s)
9; 19; 54; 93; 103; 145; 153; 167

Issue description
- The proposal will impact the heritage marina.
- The proposal will impact the heritage fabric of the area and Sydney Harbour.

Response
A heritage impact assessment has been prepared as part of the proposal. It is provided in Appendix Q and summarised in Section 6.8 of the REF. The actual physical fabric of the existing facility does not have specific heritage significance. However, the continued use of the site in providing water access to Elizabeth Bay is an aspect of heritage significance. The proposed facility would provide continued maritime use of the site consistent with its maritime history.

The project architect, Lahz Nimmo Architects, is a multiple architectural award winner who considered all of the stakeholder and community feedback and proposed a design that is modern and sympathetic with the surrounding environment, including the local heritage. The heritage assessment assessed the preferred option to determine whether it created any adverse heritage impacts. It concludes that the proposal would not create any adverse heritage visual impacts as it is appropriately scaled and subdued in design and form. The proposed design would be more sympathetic to the setting, and the facility as a whole is consistent with the established character of the area and the existing facility. There would be no more than minor to moderate visual impacts on or from nearby heritage items or areas, specifically the Boomerang property and the adjacent heritage conservation area setting.

The proposal includes heritage interpretation features on the main walkway of the Proposed Facility to provide visitors with an appreciation of the maritime history of the site.
2.8 Hydrology and coastal processes

2.8.1 Site suitability

Submission number(s)
37

Issue description
- Elizabeth Bay is not suitable for fixed berth storage due to harsher wave climate.

Response
The wind wave climate experienced at the site may include extreme wave heights up to one metre. The mooring of small vessels within the proposed facility would therefore need to be protected by a wave attenuator, as currently proposed for the outer section of the floating structure. The wave attenuator would be designed and constructed in accordance with the Australian Standard AS 3962-2001 Guidelines for Design of Marinas to achieve a moderate wave climate, or better. This would ensure suitable mooring conditions for vessels less than 20 metres in length, landward of the outer floating structure.

The wave attenuator has been revised to increase by about seven metres on the far northwest corner to ensure the wave climate for all berths in the marina, including the destination berth and the sewage pump out berth, achieving a wave climate of moderate or better (Refer to Section 4.11 for details). The additional length would not be used to accommodate more vessels.

The wave attenuator would result in a reduction of wave energy occurring at inner section of the floating structure, the fixed structure and the seawall immediately behind the Proposed Facility. This may decrease the rate at which the sandstone seawall degrades, immediately adjacent to the Proposed Facility. Reduced wave energy behind the wave attenuator may also reduce sediment movement along the shallow embayment area within and around the proposal site. This is expected to be a minor impact.

2.8.2 Foreshore erosion

Submission number(s)
155; 156; 160

Issue description
- The proposal would impact foreshore erosion from boat wash.

Response
As stated in section 6.3 and Appendix L of the REF the proposed facility may result in minor changes to local waves and currents, which may reduce the natural transport of sediments across the shallow seabed areas occurring in proximity to the site. Under present conditions, it is considered that only a minor amount of sediment is moved naturally near to the site. Therefore, any changes to sediment transport conditions from the proposal would be minor and adverse impacts are not expected.

The proposal would relocate the berthing of boats in deeper waters further away from the foreshore. This has the potential to minimise the effect of boat wash on foreshore erosion compared to current conditions. The wave attenuator would also result in a reduction of wave energy occurring at inner section of the floating structure, the fixed structure and the seawall immediately behind the proposed facility. This may decrease the rate at which the backing sandstone seawall degrades although this would be highly localised and would not apply to the whole seawall. Reduced wave energy behind the wave attenuator may also reduce sediment
movement along the shallow embayment area within and around the proposal site, however, this is expected to be a minor impact.

**2.9 Landscape character and visual impacts**

**2.9.1 Construction impacts**

**Submission number(s)**
107

**Issue description**
- The long construction period will create visual impacts.

**Response**
Construction would take around eight months to complete, weather permitting. It is recognised that during this time ancillary facilities, construction vessels, construction traffic, excavations during utility work and other construction activities would reduce the visual amenity provided by Beare Park and the bay. These impacts are unavoidable while the work is taking place. However, mitigation measures have been recommended in the REF to minimise impacts to visual amenity as far as practicable. Additional measures have also been recommended in chapter 5 of this report. These include:

- Appropriately screening ancillary facilities.
- Requirement to maintain the work site in a clean and tidy state and completing the work within the shortest possible time frame.

Furthermore, since the REF was displayed, the temporary tendering facility that was to be installed during construction would no longer be built (refer to chapter 4 for details). This would reduce visual impacts during the construction period.

**2.9.2 Landscape character impacts**

**Submission number(s)**
9; 12; 19; 21; 24; 35; 37; 52; 56; 72; 78; 97; 118; 126; 131; 149; 153; 158; 159; 168; 172

**Issue description**
- The design is not visually sensitive to the heritage or unique architecture of the area.
- The increased size of the marina and number and size of boats further out in the bay will impact the character of the locality.
- The proposed design does not address Beare Park.
- The entry is not defined, the building looks private and unwelcoming.

**Response**
The project architect, Lahz Nimmo Architects, is a multi architectural award winner, who considered additional comments from the community after the preliminary options display to provide a design that is sympathetic with the surrounding environment:

- The wall in front of kayak storage was fully removed to provide view and connection between Beare Park and the facility.
- A full width window was intended for the eastern side of the facility fronting Ithaca Road car park. However, glass panels could not be included in the front of the eastern building as this section must be fire-rated and sealed accordingly.
• A full width planter box was proposed to bring additional greenery to the facility. The large size of the planter box was designed to create immediate connection from the vegetation on Beare Park to the proposed facility.
• The entryway is approximately doubled the width of the existing facility.
• Facility signage would be aligned with the entryway.
• The design includes glass panels and windows where possible to enhance views through the building and to reflect the surroundings.

It should be noted that the heritage theme design did not receive as many favourable comments from the community as the contemporary design during the preliminary concepts display in September/October 2016.

A landscape character impact assessment was completed for the proposal by an independent consultant and is summarised in Section 6.5 and included in Appendix N of the REF. The identified landscape character impact is considered to be moderate due to the recognised high sensitivity of the setting, its scenic value and sensitive land use. The pontoon layout of the proposed facility is considered to contribute the most to the changes to the identity.

The revised marina configuration was required to reach deeper water to provide more reliable operation during low tides in accordance with relevant marina design guidelines. The marina arms also need to be of a certain size to be able to act as a wave attenuator to minimise impact to boats and building in storm events.

The kayak pontoon has been designed to provide a safe facility for the community that satisfies current engineering standards and DDA requirements.

The impact of the proposed facility on landscape character is considered acceptable because of its functional and scenic qualities, and the improved access and safety for users. Management measures included in the REF to ensure impacts to landscape character are minimised in the final design include:

• Screening storage and container areas and services appropriately
• Public domain hard landscape elements and plant selection would be complementary to the existing landscape character of the site

2.9.3 Visual impacts

Submission number(s)
9; 10; 12; 19; 24; 26; 28; 33; 37; 38; 40; 41; 42; 43; 48; 54; 57; 62; 66; 67; 72; 76; 80; 81; 84; 88; 89; 90; 92; 99; 101; 103; 107; 110; 112; 116; 118; 120; 121; 124; 125; 126; 128; 132; 133; 135; 136; 141; 142; 144; 145; 150; 153; 155; 156; 158; 160; 162; 164; 167; 168; 170; 173

Issue description
• The proposal, including but not limited to the height of the fixed structure, extension and increase of the marina arms into the bay and additional large boats will reduce views of the water.
• The bay is too small for the proposed extension of the marina arms.
• The extent of the marina should be marked by buoys.
• The increase in height will increase the overshadowing of Beare Park.
• The proposal will obstruct views to the harbour from the café due to the addition of larger boats and therefore does not meet key benefits in the have your say pamphlet which states ‘improved cafe facilities ... so users and visitors can enjoy views of the bay’
• The berth of the sewage pump out facility is visually intrusive.
• The marina is ugly.
• The front façade should be open to allow views of the wharf and bay
- Lighting of the marina will have a detrimental impact on visual amenity of the area.
- The ‘artist impression’ drawings provided are misleading because they do not accurately show the maximum size of vessels, making the proposed marina look more low key than it will be.
- The proposal will impact on the views from the residences overlooking the bay.
- Environmental system including rainwater tanks, solar panels should be more integrated with the design to minimise visual impacts.

**Response**

Visual Impact Assessment is subject to varied methodologies both in Australia and overseas. Within NSW, there are two recognised guidelines which have been used for assessment of the visual impacts of the proposal. These are the Guidelines for Landscape Character and Visual Impact Assessment published by Roads and Maritime and Appendix D of Sydney Harbour Foreshore and Waterways Area Development Control Plan published by Department of Planning. The assessment also follows the Land and Environmental Court principles for assessing private and public domain views. Further information on the visual assessment methodology is provided in section 1.3 of Appendix O of the REF.

The visual impact assessment is summarised in Section 6.5 and provided in Appendix O of the REF. The assessment recognised the high visual sensitivity of the majority of key viewpoints identified, including surrounding residences and users of Beare Park. It identified a moderate level of impact on views from these key viewpoints. The visual impacts are summarised in Table 6-26 of the REF. The assessment stated there would be slight but noticeable filling of the bay and less clear water visible, although boats would be at a greater distance from the viewer than the existing arrangement due to the reconfiguration of the marina arm further into the Bay.

The photomontages used in section 6.5 of the REF and the visual impact assessment have been prepared accurately and proportionally. The boats presented in the outer four berths are 20 metres in length. The buildings and pontoons in the photomontages were developed based on the design and are also accurate and proportionate.

The artist impressions indicate how the proposal might look within the landscape and have been created for various viewpoints in the specialist visual impact assessment. By using specialist software, the locations of the photo viewpoints were placed within the 3D model of the proposal and an image rendered to align with the photos. The photomontages incorporated vessels of the largest size able to be berthed at the facility. Whilst great effort has been taken to ensure an accurate representation, the impression alone cannot capture or reflect the complexity underlying the visual experience. They should therefore be considered an approximation of the three-dimensional visual experiences that an observer would receive in the field.

In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) as part of the proposal. Additional changes also included the extension of the wave attenuator pontoon by seven metres to the west and re-angling of the kayak pontoon further north. The visual impacts as a result of these changes were reassessed in Appendix D and summarised in Section 3.3. Overall there would be little to no discernible effect on the viewpoints as a result of the changes outlined above compared to the design assessed in the REF and would still result in a moderate impact. Beneficially, the visual impact of the maximum boat size for the outer berth would be reduced and views of the proposal from the water and land largely remain the same.

The concept design was developed to reduce visual contrast and took into consideration community feedback in late 2016 during the display of three proposed design options. As a result, adjustments to the following features have contributed to lowering the visual impact of the Proposed Facility building:
• Matching the flat roofed profile of the existing building and reducing the scale of the upgraded building as much as possible
• Using natural building materials such as timber batons as cladding
• Using glass panels to assist in breaking up the form of the building, reducing its perceived bulk and provide visual interest when viewed from the south
• Maintaining a view corridor to Sydney Harbour and back to Beare Park through the centre of the building when viewed from the north and south
• Removal of the wall in front of the kayak storage to increase views through the Proposed Facility.
• Providing a formal kayak storage area, reducing the visual clutter associated with the Existing Facility.

The current configuration of the marina berths to the east is in shallow waters. This is substandard and restricts boat movements in low tides. Therefore, berths need to be relocated which requires the marina arms to be redesigned further into the bay to reach deeper water. This is to satisfy current Australian Standards, in particular AS3962 Guidelines for the Design of Marinas.

The external lighting to the Marina Buildings has been designed primarily for safe nighttime circulation of the stairs and walkways. The lighting in this area would be on timers and sensors and would switch off when the buildings are not in use at night and therefore would minimise potential impacts. Management measures were also included in the REF to ensure lighting, particularly floodlighting, minimises reflection from the water’s surface.

The rainwater tank was relocated to the kayak storage area and the rainwater pump was relocated inside the storage area to make them more integrated with the building and less visible from Beare Park.

The sewage pump out facility would be designed in accordance with AS3500.2:2015 Plumbing and drainage to ensure that a secured and sealed connection between the vessels and pump out facility is provided. The system is expected to be compact size and should not be visually intrusive. Further information on the proposed sewage pump out can be found in Section 2.12.1.

The current café is located on Beare Park with seating at the back overlooking the bay. The proposed configuration would see the café relocated to the back of the marina with seating in the same general area as the current situation. While patrons would still have views of the bay from the café seating area, it is recognised that the berths and boats would impact views to the harbour and beyond.

The shadow of the Proposed Facility has been assessed and included in the photomontages provided as part of the visual impact assessment. These indicated the shadow would likely impact on the footpath immediately adjacent to the marina and its impact to Beare Park is limited.

The project area for the proposed marina upgrade is not marked out with buoys at this stage of the project and is not current practice. If the project is approved, construction zones would also need approval from City of Sydney. Residents would be notified before construction commences.

Additional safeguards included in the REF that would need to be implemented during detailed design and the operation of the marina including:

• Ensuring a sight line is maintained to the water when looking through the building north from Beare Park
• Specifying berth types, sizes and locations to ensure large bulkier vessels do not block key viewpoints
• Maintaining gaps in the proposed facility berthing, free from vessels that allows for views through the proposed facility to the opposite foreshore.
2.10 Noise and vibration

2.10.1 Construction impacts

Submission number(s)
11; 51; 77; 82; 83; 84; 99; 101; 105; 107; 108; 111; 114; 115; 118; 121; 126; 129; 137; 143; 148; 150; 152; 154; 158; 165; 171; 173

Issue description
• Out of hours construction of the proposal will impact the noise environment including sleep in Elizabeth Bay.
• Work should be restricted to 9am to 3pm weekdays only with no works on Saturdays.
• Construction of the proposal will impact the noise environment.

Response
As a result of community feedback during the REF public display period, the proposal has been revised to remove the need to work at night.

Construction of the proposal would only be undertaken during standard construction hours (7am to 6pm Monday to Friday and 8am to 1pm Saturday). Work is targeted to commence in cooler months to reduce impact during peak use.

Construction noise has been assessed in Section 6.1 of the REF and in the specialist report provided in Appendix J of the REF. Construction noise impacts are unavoidable for the proposed works to go ahead. However, safeguards have been identified in the REF to minimise impacts as far as practicable. This includes but is not limited to:
• Early notification of proposed works
• Verification processes to verify noise levels during construction and implement measures in the event of any exceedances of noise management levels.
• Management procedures to deal with noise complaints
• Use of quiet construction plant where possible. This would be a condition for any contractor working on site.

2.10.2 Operational noise

Submission number(s)
10; 12; 16; 21; 33; 37; 40; 41; 43; 44; 57; 62; 67; 76; 79; 84; 85; 86; 88; 89; 92; 99; 101; 103; 105; 114; 116; 124; 126; 128; 136; 137; 143; 150; 155; 156; 158; 159; 160; 162; 164; 166; 167; 168; 170; 173

Issue description
• The increased size and capacity of the proposal would impact the noise environment during operation.
• Additional noise from increased traffic as a result of the proposal.
• Operation of the proposal, including from engines, the destination berth, the sewage pump out facility and events taking place on boats, will impact the noise environment in Elizabeth Bay.

Response
A quantitative noise assessment was undertaken to assess operational noise impacts. The assessment is summarised in section 6.1 and provided in Appendix J of the REF. The assessment analysed noise sources from the operation of the proposed facility, including noise from boats, the café, the pump out facility and the negligible increase in traffic expected. The assessment concluded that the noise impact from the operation of the proposed facility would comply with the applicable noise criteria for intrusiveness and amenity during day time and night time for all receivers.
Roads and Maritime would manage the Proposed Facility initially and would comply with the REF mitigation measures to minimise noises during operation. When a protocol for public access and operation has been established, Roads and Maritime would incorporate the requirements in the leasing documents for the operation of the marina, café and other facilities. This would include requirements that no functions and/or events take place at the facility, including on any berthed boats. The café would also not be permitted to hold a liquor licence, open outside marina operating hours or be permitted to play amplified music. This has been added as a safeguard in Section 5 of this report.

The detailed design of the proposed facility would also include the procurement of ‘quiet’ plant, commercially available silencers or acoustic attenuators for air discharge, acoustically lined ductwork, acoustic screens and acoustic enclosures to minimise noise impacts from these sources. All mechanical plant would have their noise specifications and proposed location checked prior to installation, as required by the NSW Industrial Noise Policy.

### 2.11 Other

#### 2.11.1 Ferry terminal

**Submission number(s)**

8; 14; 15; 18; 22; 23; 26; 27; 37; 38; 39; 56; 66; 67; 69; 73; 75; 80; 86; 87; 89; 90; 94; 95; 99; 103; 111; 118; 119; 122; 126; 127; 128; 134; 136; 137; 141; 158; 173

**Issue description**

- The proposal should consider including a ferry terminal now or in the future.
- The proposed design will preclude a ferry terminal in the future.

**Response**

Transport for NSW has completed some preliminary assessments for a ferry wharf at Elizabeth Bay. The assessment has identified the eastern headland of Elizabeth Bay as an option for a ferry wharf. Elizabeth Bay ferry is part of the long term transport plan for the area and would be assessed as part of the ongoing planning.

A ferry wharf is not feasible at the location of the existing marina because it would not allow safe and easy movements to and from this location. The marina upgrade does not preclude a ferry wharf at the eastern headland of Elizabeth Bay.

#### 2.11.2 Enclosed swimming area

**Submission number(s)**

26.3

**Issue description**

- The proposal should include a netted swimming area.

**Response**

The Elizabeth Bay Marina proposal is focused on providing a safe upgrade to an existing marina facility. A netted swimming area is not part of scope for the proposal.
2.12 Soils, water and contaminated land

2.12.1 Water quality impacts

Submission number(s)
28; 40; 88; 92; 103; 105; 107; 114; 117; 118; 121; 133; 136; 137; 142; 143; 150; 154; 155; 156; 158; 160; 162; 166; 167; 168; 170

Issue description
- Construction of the proposal will cause water pollution.
- The increased size of the marina and sewage pump out facility will degrade water quality.
- The proposal would increase the risk of spills.
- The increased size in boats at the marina will cause water pollution.
- What will be done to ensure water quality is not impacted?

Response
Section 6.2 of the REF has assessed potential impacts to water quality from spills during construction and operation of the proposal.

The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) or any increase in the size of vessels as part of the proposal. It is therefore unlikely that there would be additional impact to water quality during the operation of the marina.

The sewage pump out facility would be designed in accordance with AS3500.2:2015 Plumbing and drainage to ensure that a secured and sealed connection between the vessels and pump out facility is provided. It would only be able to be operated when the marina is staffed to ensure the risk of spills is avoided.

The purpose of the sewage pump out facility is to minimise the risk of boat operators illegally emptying waste into Sydney Harbour by providing a convenient facility within the marina. By minimising the risk of this occurring, the provision of a sewage pump out facility would improve water quality.

Risks of impacts to water quality during construction and operation would be ameliorated or minimised with the safeguards and management measures as detailed in the REF. This includes but is not limited to:

- Establishment of erosion and sedimentation controls including using silt curtains
- The requirement for the preparation of a spill/emergency management plan and the use of spill kits during construction
- The requirement to store oils, fuels and chemicals in impervious double bunds.

2.13 Waste and resource use

2.13.1 Waste impacts

Submission number(s)
7; 51; 82; 84; 85; 99; 101; 114; 118; 120; 126; 129; 146; 173

Issue description
- The increased number of boats using the proposal would generate more waste and increase the pollution and litter in Elizabeth Bay.
- The design of the proposal, in particular the kayak pontoon, would trap more rubbish.
• Where is the sewerage pump-out facility going to be redirected?

Response
In response to community consultation, the proposal has been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the total number of permanent vessels (fixed berths plus swing moorings) as part of the proposal. Hence, there should be no increased waste, pollution and litter in Elizabeth Bay as a result of the proposal.

As a result of consultation the kayak ramp would be angled further away from shore to minimise the impact to sea grass. The reconfiguration would reduce the likelihood of rubbish being trapped by the kayak ramp. The maintenance of the existing stormwater drain would continue to be carried out by City of Sydney as the asset owner. Roads and Maritime would ensure the facility and the surrounding waterways are kept clean through leasing conditions.

The sewerage pump out facility would connect to the existing sewerage pipeline servicing the facility without a need for a holding tank. The existing sewage pipeline has been assessed to have adequate capacity for this connection.

2.14 Socio-economic impacts

2.14.1 Charter vessels

Submission number(s)
155; 156; 160; 160

Issue description
• The proposed development would ban all charter vessels, which currently operate a service for members of the public who do not have access to private boats.

Response
There is no intention to ban existing services during the operation of the proposed marina that are currently on offer to the public.

2.14.2 Construction impacts

Submission number(s)
20; 77; 84; 84; 101; 107; 114; 118; 120; 126; 129; 144; 173

Issue description
• The extent of the construction zone, compound and staging area is not clear.
• The installation of a Works Zone requires a Works Zone Application, endorsement from the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) and payment of associated fees.
• Construction should be undertaken Monday to Friday only to minimise community impact on weekends.
• The location of the temporary pontoon will negatively impact the public amenity of Beare Park.
• The temporary construction pontoon will impact on the area where people swim.
• Pedestrian access along the existing footpath adjacent to the sandstone seawall must be maintained at all times.

Response
The construction zones are as marked in Figure 1-2 of the REF and chapter 3 of the REF describes the construction activities that would take place during the construction period of around
8 months. Construction would not occupy Beare Park beyond the area between the built structure and the car park.

Roads and Maritime would submit a Works Zone Application for ancillary facilities to City of Sydney. Endorsement from the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) and payment of associated fees would also be sought. This has been included in the safeguards in Section 5 of this submissions report.

In response to submissions regarding disturbance as a result of night works, construction would now be undertaken during standard hours which includes Monday to Friday 7am to 6pm and Saturday 8am to 1pm to avoid night works and reduce community impact. As detailed in Section 4 of this report, the temporary pontoon would be removed so impacts to the public amenity of Beare Park would be reduced during construction. However, swimming in the area would be restricted during construction for safety reasons due to the presence of construction barges and construction activities taking place. It is recognised that swimming from the available steps along the seawall would not be allowed as this area would be a construction zone. This would be temporary and people would be able to continue swimming at these locations following construction. Roads and Maritime has targeted for construction to occur in cooler months when the weather is less favourable for swimming activities.

Public access along the footpath near the seawall would be maintained except where construction activities and the ancillary facility would be installed (i.e. section of footpath immediately fronting the marina). This would only occupy a small area and appropriate controls would be put in place to allow pedestrians to move around the work site safely.

2.14.3 Future developments

Submission number(s)
49; 155; 156; 160

Issue description
- Concern that approval of this proposal may lead to further development in the future including the café and a fuelling facility.
- The bays in Sydney Harbour are filling up with boats and there is concern that the rules governing expansion in Elizabeth Bay may be overturned by future politicians which will further increase the size of the marina.

Response
The proposal would be carried out on behalf of Roads and Maritime. This reduces the need for commercial returns and instead focuses on the needs and use for the boating community. Roads and Maritime does not have any plan for development beyond the current proposal.

Any future expansions would be subject to planning legislation. Potential future changes in planning legislation are beyond Roads and Maritime’s authority.

2.14.4 Marina operations

Submission number(s)
7; 9; 28; 38; 47; 58; 59; 69; 69; 127

Issue description
- Will regulations be in place to limit the operating hours of business in the proposal?
- Free public access at all times to the facility should be made a condition of future leases.
- There should be no extension of the trading hours, size and scope of the café.
- The café should be operated by a suitable qualified operator and provide high quality food and drinks.
- Support for Tolkin Marine Services as marina operators.
- Concern that current lease holders have interest in short term financial gain.
- Infrastructure required to run a commercial venture has not been considered such as grease trap removal

**Response**

Roads and Maritime would continue to manage the operation of the upgraded marina which would retain the current marina management arrangement in the short-term. Roads and Maritime would establish operational protocols and requirements to be implemented. These protocols would be incorporated into the leasing tender documentation to be released at the end of Roads and Maritime’s management of the facility and be advertised on the open market. Requirements would include:

- The Proposed Facility would open to the public during operational hours between 7:30am and 6pm, free of charge. This includes the kayak pontoon, the bathroom facilities, lockers, café, access, and all other facilities as part of the proposal.
- The Proposed Facility does not open outside of the operational hours and access would be restricted to ensure the security of the facility and to minimise anti-social activities. Members of the public wishing to use the kayak pontoon outside of marina operating hours would be required to register for an access card enabling access from the front entrance, which would allow access to the kayak pontoon. Depending on demand, an access card cost recovery fee may be incurred. Water taxi pick up and drop off would also be available 24/7 via the facility’s destination berth. Out of hours taxi trips can be arranged by calling a pre-registered taxi service (Refer to Section 4.2 for further details).
- The proposed café would accommodate the same number of seats as the existing kiosk. Through contractual arrangement Roads and Maritime would ensure that there would be no extension of the café trading hours.
- Functions and events would not be permitted at the café or on berthed vessels.
- The café would also not be permitted to hold a liquor licence, open outside marina operating hours or be permitted to play amplified music.

A grease trap has been designed to cater for the proposed services of the facility to comply with the Building Code of Australia. It was positioned to allow for adequate access for direct grease removal from Ithaca Road car park.

Tenders for the café and the boat chandlery are expected to be publicly advertised following the determination of the proposal. Roads and Maritime would assess the tenders using standard procedures to ensure most appropriate lease holders would be selected.

**2.14.5 Public access**

**Submission number(s)**

3; 25; 28; 31; 34; 35; 37; 38; 47; 52; 61; 63; 67; 73; 89; 90; 100; 105; 111; 114; 124; 129; 146; 153; 164; 166; 167; 170; 173,175

**Issue description**

- Public access to the facility should be free and available at all times and in the future as part of the lease conditions.
- Public access to the proposal should be unrestricted during operation.
- Access to the proposal should be restricted at night.
- The proposal will be for the exclusive use of marina customers and not the public. The proposal should include designated public zones.
• There should be an unrestricted pick up and drop off point for water taxis.
• The proposal will restrict public access to the water and harbour foreshore.
• The concrete stairs on the eastern and western sides of the marina are too steep and will not allow kayak users to access the beach safely.
• The current public access from the wooden stairs and the deck on the eastern side of the marina should be retained.
• There should be proper security to minimise late night fishing ventures.
• What is the ratio of the people using the marina for boating for kayak and boating purpose compared to the people that use the park?
• The proposal should remain dog friendly.

Response
The proposed facility would be open to marina customers and the general public during operational hours between 7:30am and 6pm, free of charge. This includes the main ramp, the kayak pontoon, the bathroom facilities, lockers, café and all other facilities as part of the proposal.

Out of hours access would be restricted to ensure the security of the facility and to minimise anti-social activities. However, members of the public wishing to use the kayak pontoon outside of marina operating hours would be required to register for an access card enabling direct access from the front entrance. Depending on demand, an access card cost recovery fee may be incurred. A gate would allow access to the kayak pontoon. The design has allowed for additional security cameras to ensure anti-social behaviour is captured on these cameras and addressed accordingly.

Water taxi pick up and drop off would also be available 24/7 from the marina’s destination berth. Out of hours taxi trips would be arranged by calling a pre-registered taxi service, who would be able to provide access for customers (Refer to Section 4.2 for further details).

Currently access to the water is available via stairs to the west of the marina and two sets of stairs to the east of the marina, including one at the marina itself. The proposal would not impact on the steps along the seawall to the east and west but would remove the wooden stairs as part of the marina. From the community information sessions, we understand that the current timber steps are used for launching kayaks and water taxi pick up and drop off after hours. Public access 24/7 for these two purposes are replaced as described above. For any other purposes, access to the water would still be available via the stone steps to the west and the east of the Proposed Facility.

It is recognised that the removal of the stairs would have some impacts to kayak users who are not registered to use the kayak pontoon outside marina operating hours. Roads and Maritime encourages users requiring access outside of hours to register to make the most of what the facility has to offer. Other public access to the water is still possible by the stairs along the seawall to access the beach area.

The operation of the Proposed Facility would remain pet friendly as a lease condition.

2.14.6 Public amenity

Submission number(s)
9; 40; 43; 44; 51; 56; 60; 66; 69; 75; 76; 79; 84; 87; 88; 92; 94; 95; 96; 98; 108; 111; 114; 116; 117; 118; 120; 121; 122; 124; 126; 127; 129; 130; 132; 135; 137; 143; 146; 150; 151; 155; 157; 158; 173

Issue description
• The proposal would increase the built form footprint, berth sizes and number of visitors which would impact public amenity and tranquillity of Elizabeth Bay and Beare Park.
• The proposal does not improve Beare Park.
• The proposal will open the way for larger commercial cruise boats to berth and allow commercial festivities such as weddings.
• Concerns that the facility will be an exclusive hang out place for only a few boat owners.
• The proposal would privatise and commercialise a public area
• The proposal would have a negative impact from an increase of tourist in the area.

Response

In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the total number of existing permanent vessels (fixed berths plus swing moorings) as part of the proposal. These changes, when compared to the REF proposal, would reduce the impact to public amenity in Elizabeth Bay.

A social economic assessment was prepared along with mitigation measures as Appendix P of the REF. The assessment concluded that the proposal is expected to have some impact on amenity (visual, noise) and traffic and parking during construction and recommended measures to mitigate these impacts. These impacts would lessen as a result of the changes following the REF display through removal of night work and the temporary tendering facility from the proposal.

The impacts on traffic, parking and noise during operation have been assessed to be minimal as mentioned above in Sections 2.6.4, 2.6.5, 2.10.1 and 2.10.2. In addition

• The proposed layout of the café would maintain 12 seats, as is currently provided at the existing kiosk. It is considered that the activities required to service the proposed café would remain similar to the existing kiosk/café.
• Functions and events would not be permitted at the café or on berthed vessels. This would be a leasing condition and has been included as a safeguard in Section 5 below.
• The increase of four kayak and paddle board storage spaces would require negligible activities to service.
• Although the design has to comply with current design guidelines and standards, all efforts have been taken to minimise visual impacts whilst taking into account community comments.
• The café would also not be permitted to hold a liquor licence, open outside marina operating hours or be permitted to play amplified music.
• The proposal does not change Beare Park usage.

Once operational the new facility is likely to have a negligible impact on the community with overall the social and economic benefit expected to outweigh any negative impacts.

The proposed facility would not be for exclusive use of boat owners, and would be open to marina customers and the general public during operational hours between 7:30am and 6pm, free of charge.

2.15 Air quality

Submission number(s)
24; 28; 155; 156; 160; 162

Issue description

• The proposed sewage pump out facility will impact air quality and cause odours.
• The proposed increase in berths will impact air quality by introducing additional large diesel engines.

Response

The proposed sewage pump out facility is an enclosed system requiring a tight connection between the boat and the facility before it can be operated. There would therefore not be any
odours emanating from the facility. Furthermore, the sewerage of the marina facility would connect to the existing sewerage pipeline servicing the facility without a need for a holding tank or transfer to trucks. The pump out facility would only be available during operation hours when the marina is staffed to ensure the pump out facility is operated properly. This further minimises any risk of impacting on air quality.

In response to community consultation the maximum boat size for the fixed berths has been reduced to 15 metres. The proposal has also been amended to remove four swing moorings from Elizabeth Bay Marina. This would result in no change to the existing total number of permanent vessels (fixed berths plus swing moorings) as part of the proposal. These changes, when compared to the REF proposal, would reduce any impact to air quality in Elizabeth Bay. The proposed facility would not significantly change air quality as there is no increase in total number of vessels. Larger diesel engines are unlikely to have more than negligible impact to air quality. The larger vessels would also be located at the outer berth further into the bay which would minimise potential air quality impacts affecting users of Beare Park and Elizabeth Bay residents.

2.16 Biodiversity

Submission number(s)
67; 77; 84; 89; 107; 114; 118; 120; 126; 155; 156; 158; 160; 161; 165; 168; 175

Issue description
- The proposal and associated pollution will impact on habitat for birds.
- The proposal will put more pressure on or damage the fragile marine eco system and the sea bed.
- The construction of the proposal will impact the marine life.
- The carpark should not be enlarged and further impact on the riparian land.
- The REF to be amended to accurately reflect the area of seagrass harm likely to result from this proposal and address the SHREP seagrass and wetland protection measures in light of the actual harm of seagrass that will result from this proposal. This will need to include an assessment of the specific area and density of seagrass that would be shaded from the construction and use of the proposed facility. Harm of seagrass is to be avoided as far as practical in the first instance.
- It is recommended that powered vessels be prohibited from the inshore northern edge of the marina and around the currently proposed kayaking pontoon to mitigate some potential harm of seagrass within this area. Avoidance of seagrass harm from the construction and use of this pontoon is preferred.

Response
A revised seagrass assessment is provided in Appendix C and Section 3.2 below. The following tasks were undertaken to respond to concerns on the original assessment in relation to potential seagrass impacts:

- The construction footprint was resurveyed to confirm the area and condition of seagrass present.
- The overall footprint of seagrass likely to be impacted by the upgraded marina was recalculated in light of the new surveys.
- The overall area of seagrass with the potential to be impacted during construction has been reassessed taking into account management measures that would be implemented to avoid impacts.
- A justification for the current proposed location of the kayak ramp and pontoon has been provided.
- The total area of seagrass that would need to be offset has been recalculated based on potential construction and operational impacts.
Management measures have been revised accordingly (Section 3.2.2).

Since the previous survey was undertaken in September 2016, there was a reduction in the area covered by seagrass within the construction footprint. Seagrass impacts would be greatly reduced compared to original assessment undertaken in 2016, due to the following:

- The relocation of the proposed kayak pontoon further north compared to the original design assessed in the REF.
- There was a reduction in the overall seagrass area within the construction zone since 2016.
- The original assessment assumed a worst case scenario of all seagrass within the construction being impacted. This assessment has assumed a more realistic assessment with the implementation of feasible safeguards to avoid impacts to seagrass.

The proposal removes four swing moorings and reduces maximum size of vessels which would reduce the impact on the sea bed.

There is no proposed expansion of the car park, therefore there would be no impact to the riparian land. The proposal has no direct impact to Beare Park or terrestrial habitat.

Mitigation measures have been provided in the REF and Section 3.2.2 to minimise impact to the marine ecosystem and marine life during construction of the proposal.
3 Additional assessment

3.1 Response to REF traffic concerns

3.1.1 Summary
A traffic assessment was completed by Traffix and included in full in Appendix M of the REF. Section 6.4 of the REF also summarised the traffic impacts as a result of the proposal. Following community consultation, it was identified that some additional traffic information and further clarification on the assessment were required. Subsequently, Traffix prepared a response to the traffic concerns raised by the community during the exhibition of the REF (Refer to Appendix B).

The additional information to address community concerns includes:
- Updating the 2008 travel mode survey data
- Clarification on the use of traffic data from other marinas for comparison purpose
- Changes to the proposed temporary tendering facility.
- Assessment of traffic and parking generation for the destination berth, café and chandlery.

The information provided in the response to REF traffic concerns has been used to address submissions in section 2 of this report. The assessment concluded that the Proposed Facility is expected to have a negligible impact on traffic and parking, both maritime and road.

3.2 Seagrass impact assessment

3.2.1 Summary
A seagrass impacts assessment was prepared to respond to DPI (Fisheries) submission and is provided in Appendix C. The following tasks were undertaken to respond to concerns on the original assessment in relation to potential seagrass impacts:

- The construction footprint was resurveyed to confirm the area and condition of seagrass present. Additional overall footprint of seagrass likely to be impacted by the upgraded marina was recalculated in light of the new surveys.
- The overall area of seagrass with the potential to be impacted during construction has been reassessed taking into account management measures that would be implemented to avoid impacts.
- A justification for the current proposed location of the kayak ramp and pontoon has been provided.
- The total area of seagrass that would need to be offset has been recalculated based on potential construction and operational impacts.
- Management measures have been revised accordingly.

Since the previous survey was undertaken in September 2016, there was a reduction in the area covered by seagrass within the construction footprint. The majority of the reduction was mostly attributed to a reduction in the distribution of *Halophila* sp. which is very sparsely distributed over 797 square metres of the construction footprint. The bed of *Zostera* sp. occupies an area of 265 square metres. The total area covered by seagrass is 797 square metres. (*Zostera* sp. is found with *Halophila* sp.)

Where *Halophila* sp. was found on its own, its percentage cover had considerably reduced and the species is very sparse with less than three per cent cover where present.

*Zostera* sp was moderately to highly dense to the east of the marina with an average cover of 57 per cent, average leaf length of 192 mm and moderately impacted by epiphytic growth. *Zostera* sp.
was low to moderately dense to the west of the marina with an average cover of 18 per cent, average leaf length of 231 mm and highly impacted by epiphytic growth. Seagrass impacts would be greatly reduced compared to original assessment undertaken in 2016, due to the following:

- The original assessment considered a worst case scenario assuming all seagrass within the construction would be impacted. This assessment has allowed for the implementation of feasible safeguards to avoid impacts to seagrass.
- There was a reduction in the overall seagrass area within the construction zone since 2016.
- The relocation of the proposed kayak pontoon further north, thus reducing impacts to seagrasses, compared to the original design assessed in the REF.
- The taxi pick up and drop off was to take place at the proposed kayak pontoon would be relocated at the destination berth in deeper waters away from the seagrass. The tender berth would also be relocated near the pump out facility in deeper waters.

Potential seagrass impacts would still be unavoidable as a result of the proposed works. Taking into account an overlap of the construction impact area and operational impact area, the total area of seagrass likely to be impacted is 396 square metres, including 15 square metres of *Zostera sp.* and 396 square metres of very sparsely distributed *Halophila sp.* However:

- The majority of seagrass to be impacted is *Halophila sp* which is very sparse (below three per cent cover) within the construction area. The species is also highly resilient and any impacts is likely to be reversible with seagrass likely to recolonise areas that have been temporarily impacted.
- As detailed in Section 5.2, an area of around 570 square metres of potential seagrass habitat would be created/ improved to the east of the marina as a result of relocating the berths to deeper waters. The higher deck level of the fixed marina facility would also provide increased light penetration below the marina, along the edges.

Safeguards have been revised in accordance with DPI (Fisheries) comments. Areas of seagrass that would be impacted would be offset in accordance with DPI (Fisheries) guidelines.

### 3.2.2 Management and mitigation measures

The following describes the proposed mitigation measures in relation to biodiversity impacts from the proposal, noting that this is a combination of mitigation measures from the original biodiversity assessment (NGH Environmental 2016) and this revised assessment on seagrass impacts. Additional safeguards compared to the original assessment are indicated in **bold text**.
<table>
<thead>
<tr>
<th>Impact</th>
<th>Environmental safeguard</th>
<th>Responsibility</th>
<th>Timing</th>
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<tbody>
<tr>
<td>Biodiversity</td>
<td>• The design of the marina must where feasible incorporate features to minimise shading of the seabed. The following must be considered:</td>
<td>Roads and Maritime</td>
<td>Pre-construction/Operation</td>
</tr>
<tr>
<td></td>
<td>• The amount of light reaching aquatic vegetation can be maximised by increasing the height of the structure above the water, reducing the width of the deck to the minimum required for safe access, excluding the use of a pontoon or minimising the size of it and orientating the structure to maximise sunlight penetration under the deck (e.g. north-south orientation is preferred over east-west orientation).</td>
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<td></td>
<td>• Structures over aquatic vegetation should be decked with mesh, grid or graters of agreed specifications to allow for light penetration.</td>
<td></td>
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</tr>
<tr>
<td>Biodiversity</td>
<td>• The sewer pump out facility must be designed and operated to ensure the risk of spills is avoided.</td>
<td>Roads and Maritime</td>
<td>Pre-construction/Operation</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Where feasible, the temporary facility consisting of a small platform, ramp and pontoon to be constructed on the eastern side of the existing marina and that would be operational during the demolition of the existing marina and construction of the proposed marina must be located in an area that would avoid shading any seagrass.</td>
<td>Roads and Maritime</td>
<td>Pre-construction/Operation</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• To mitigate shading impacts, the incorporation of meshed decking on the section of the pontoon situated over seagrass may be required as part of the Fisheries permit. Site investigations by DPI Fisheries to be undertaken at the permit application stage, will verify the need for meshed decking or otherwise.</td>
<td>Roads and Maritime</td>
<td>Pre-construction/Operation</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Relocated moorings are to be placed in an area that is situated approximately 15 m away from seagrass.</td>
<td>Roads and Maritime</td>
<td>Pre-construction/Operation</td>
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<tr>
<td>Impact</td>
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| Biodiversity         | • Appropriate signage will be installed at the facility to inform the marina users of the important ecological benefits of seagrass and ways to minimise impacts.  
                      | • Appropriate signage will be installed at appropriate location stating the kayak facility is not to be used by motorised vessels.  
<pre><code>                  | • A kayak tray is to be installed all around the kayak pontoon to deter motor vessels.                                                                                                                                  | Roads and Maritime     | Pre-construction/Operation              |
</code></pre>
<p>| Biodiversity         | • The compound site will not be located within the drip line of any trees within Beare Park.                                                                                                                                | Contractor              | Construction                           |
| Biodiversity         | • A silt curtain is to be installed around the work area to be disturbed within the waterway prior to commencement of works that disturb the seafloor. The silt curtains should be placed as close to the infrastructure to be removed/installed as possible to minimise impacts to seagrass. | Contractor              | Construction                           |
| Biodiversity         | • The silt curtain is to extend from a minimum of 100mm above the water line and be of sufficient depth extend to approximately 500mm above the seafloor during low tide.                                              | Contractor              | Construction                           |
| Biodiversity         | • The silt curtain must be monitored on a regular to ensure that the silt curtain does not damage the seagrass beds.                                                                                                        | Contractor              | Construction                           |
| Biodiversity         | • Visual observations of the effectiveness of the silt curtain are required to be made at least twice each day.                                                                                                            | Contractor              | Construction                           |
| Biodiversity         | • Results of observations of the integrity of the silt curtain are required to be recorded in a site notebook maintained specifically for the purpose. The notebook is required to be kept on the site and to be available for inspection by persons authorised by Roads and Maritime. | Contractor              | Construction                           |
| Biodiversity         | • Emergency spill kits will be kept on site at all times and maintained throughout the construction work. The spill kit must be appropriately sized for the volume of substances at the work site. A spill kit would be kept on each barge and at the temporary construction site. | Contractor              | Construction                           |</p>
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<tr>
<td>Biodiversity</td>
<td>• Spill kits for the construction barges will be specific for working within the marine environment.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• All staff will be made aware of the location of the spill kits and trained in their use.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• If a spill to water occurs, the Roads and Maritime Contract Manager and Roads and Maritime environment staff would be notified immediately, in accordance with RMS Environmental Incident Classification and Reporting Procedure February 2016.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• A spill/emergency management plan which incorporates these safeguards will be set out within the CEMP.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• The spill/emergency management plan will also include methods to be used to stop the spill, contain and control the flow, clean up the spill, and record the spill.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Equipment barges carrying plant or machinery would be fitted with impervious bunding around equipment which contain chemicals to prevent chemical spills or leakages from entering the water.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Sediment would be minimised from moving off-site and sediment laden water minimised from entering any watercourse, drainage line or drainage inlet.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• All, equipment, materials and wastes transported between an off-site facility, and the construction work site would be secured to avoid spills during transportation.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Vehicles, vessels and plant would be properly maintained and regularly inspected for fluid leaks.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• No vehicle or vessel wash-down or re-fuelling would occur on-site.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• All fuels, chemicals and hazardous liquids would be stored away from drainage lines, within an impervious bunded area in accordance with Australian standards and EPA Guidelines.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Impact</td>
<td>Environmental safeguard</td>
<td>Responsibility</td>
<td>Timing</td>
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<tr>
<td>Biodiversity</td>
<td>• Emergency contacts would be kept in an easily accessible location on the construction work site and on all construction vessels. All crew would be advised of these contact details and procedures.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• In the event of a spill during operation, the incident emergency plan would be implemented in accordance with Sydney Ports Corporation’s response to shipping incidents and emergencies outlined in the ‘NSW State Waters Marine Oil and Chemical Spill Contingency Plan’ (Transport for NSW 2012).</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• 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 erosion and sediment controls.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Seagrass bed exclusion zones will be delineated in the Construction Environmental Management Plan (CEMP) to prevent direct disturbance to marine habitats outside the limits of the required works area.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• There will be no stockpiling or demolition of construction materials on the seabed. All demolished material is to be deposited appropriately at an approved facility, on land above the highest astronomical tide mark.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Prior to use at the site and / or entry into the waterway, machinery is to be appropriately cleaned, degreased and serviced.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• To minimise wash and prevent bottom scouring of the marine sediments, vessels will not use excessive power when manoeuvring barges into place over the seagrass, course sand and rock rubble habitat.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Scouring damage will also be minimised by ‘working the wind and tides’ by only moving floating plant into place on high tides and under favourable or no-wind conditions, where practicable.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Impact</td>
<td>Environmental safeguard</td>
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<tr>
<td>Biodiversity</td>
<td>• All staff working on the site will be advised of the location of aquatic habitats, and exclusion zones.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• No vessel anchors will be placed in identified seagrass habitats.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Anchor cables must be suitably buoyed prior to laying, and kept buoyed once laid, to prevent cable drag and cable swing damage (scalping) to seagrass and rock rubble habitat areas. Where this is impractical, contractors will use floating rope.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• If unexpected threatened fauna or flora species are discovered, stop works immediately and follow the Roads and Maritime Services Unexpected Threatened Species Find Procedure in the Roads and Maritime Services Biodiversity Guidelines 2011 – Guide 1 (pre-clearing process).</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• Minimise disturbance of the seabed, marine vegetation habitats, and the mobilisation of any colonised pest algae (<em>Caulerpa taxifolia</em>).</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• All the wetted surface areas of demolition materials taken from the waters, and construction related equipment that comes in contact with the seabed (including mooring tackle, cables, ropes and anchors), must be inspected for possible attached <em>Caulerpa taxifolia</em> plants and these must be collected and disposed of into plastic bags then placed into garbage bins on shore as recommended in the NSW Control Plan for the Noxious Marine Alga <em>Caulerpa Taxifolia</em> (NSW Fisheries 2009).</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>• To prevent shading impacts, vessels must not be moored/anchored in the same location above marine vegetation (seagrass, macroalgae) for more than one complete 24 hour diurnal cycle (unless required for construction purposes, justification must be provided).</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
</tbody>
</table>
### Impact | Environmental safeguard | Responsibility | Timing
--- | --- | --- | ---
Biodiversity | A risk assessment workshop is to be completed prior to the commencement of works and attended by the Maritime construction project manager, contractor and RMS environment staff. The workshop would identify activities with highest risk of impacting seagrass and develop specific safeguards for each activity. These requirements would be captured in the contractors CEMP and communicated to all staff. | Contractor | Construction
Biodiversity | The seagrass within the study area must be surveyed and mapped prior to construction and within the first year following construction to determine the actual extent of impact in order to determine the amount of seagrass that may need to be offset. | Contractor | Construction
Biodiversity | A permit to harm marine vegetation under s.205 of the FM Act is to be obtained for these works, prior to the commencement of construction. The permit application is to provide detail on the specific area and density of seagrass that would be shaded from the construction of the pontoon and the extension to the marina building. The offsets will be negotiated with the proponent at the permit application stage. | Contractor | Construction
Biodiversity | Fisheries NSW (1800 043 536) and the Environment Protection Authority (131 555) must 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 Fisheries NSW and/or the Environment Protection authority for the works to proceed. | Contractor | Construction
Biodiversity | The temporary facility is to be removed following the completion of construction. | Contractor | Construction

### 3.3 Visual impact assessment

#### 3.3.1 Summary

A re-assessment of the visual impacts of the proposal has been conducted, and is provided in Appendix D, to account for the following changes:

- The extension of the wave attenuator pontoon finger by 7 metres to the west
• The reduction of the outer berth’s capacity for a maximum boat size of 15 metres instead of 20 metres
• The re-angling of the kayak pontoon further north

The assessment has identified and evaluated key viewpoints, distance zones and viewer sensitivity. In addition, the proposal has been evaluated against the relevant statutory zoning objectives for the W8 Scenic Water: Passive Use. Photomontages of existing conditions and following construction have been provided to help visualise the potential impacts from key viewpoints.

The assessment concluded that there would be little to no discernible effect on the viewpoints as a result of the changes outlined above compared to the original concept assessed in the REF. The visual impacts would remain as moderate. Beneficially, the visual impact of the maximum boat size for the outer berth has now been reduced.
4 Changes to the proposal

Some changes to the proposal have been made since the REF was prepared in response to stakeholder and community feedback and additional investigations during detailed design. These are described below.

4.1 Removal of night works

The REF included a requirement to undertake night works in order to shorten the duration to complete the proposed works. However, there was strong community feedback in regards to potential sleep disturbances during night works. Roads and Maritime determined that by removing five nights of works and limiting the works to standard construction hours (7am to 6pm Monday to Friday and 8am to 1pm Saturday), the construction period would be slightly extended but still be completed within the timeframe assessed in the REF (i.e. eight months):

By limiting the proposed construction activities to standard hours, the proposal would avoid any sleep disturbances. This has been included as a safeguard in Section 5.

4.2 Providing 24 hour access to boating community and general public

A number of comments were received from the community during the display of the REF requesting that the marina be open to the public 24 hours a day seven days a week. It should be noted that the current marina is closed to the public outside operating hours to ensure security of the marina. However, there is a small area of the existing marina, including some wooden stairs on the eastern side, that remain open at all times allowing use by water taxis as well as kayak users.

Roads and Maritime would ensure that the proposed kayak pontoon remains accessible to kayak users at all times through the use of access cards. Depending on demand, an access card cost recovery fee may be incurred. Any person wishing to access the kayak pontoon would be able to register for an access card. Water taxis would be able to pick up anyone from the facility’s destination berth. The doors to the facility would be able to be opened from the inside by the water taxi operator without an access key. The following additional measures would be implemented:

- Upgrade to current secure entry keypad
- Lighting to entry ramp to assist in after-hours access
- Review and coordination of security camera coverage

The requirement to allow 24 hour access to the marina facility for certain uses has been included as a safeguard in Section 5.

4.3 Removal of temporary tendering facility in Elizabeth Bay

In response to community concerns about potential public amenity impacts of the temporary tendering facility proposed to the east of the existing marina during construction the facility will no longer be installed and the following alternate arrangements will be provided to ensure an adequate service is still provided to the marina users.

During construction, the temporary tendering services will be from D’Albora Marina at Rushcutters Bay. Detail on the location of the temporary facility is included in Appendix E. Marina customers who wish to be picked up from Elizabeth Bay between 9am and 5pm would be able to contact Tolkin Marine Services. The pickup location would be from the steps to the east of the existing marina. There is a current low usage (up to five movements) of the tendering services outside these hours. Customers who require use of the tendering service outside of these hours would be
able to pre-book this service through Tolkin Marine Services. A fee may be applicable and payable directly to Tolkin Marine Services.

It is recognised that pick-up at this location would be dependent on weather and tidal conditions. Where prevailing tidal and weather conditions would not allow safe pick up, customers that require a tendering service would need to use the service at Rushcutters Bay.

Removing the temporary facility and providing the service as described above, would have the following benefits:

- Reduce potential noise and visual impacts from constructing the temporary facility
- Reduce public amenity and visual impact on Beare Park users.
- Reduce construction costs

However, some potential impacts would also result:

- The pickup service from Elizabeth Bay would only be available during adequate tides and during favourable weather conditions. At other times, people would need to use the tendering service at Rushcutters Bay. This would increase time for residents of Elizabeth Bay to get to Rushcutters Bay and put additional pressure on parking in Rushcutters Bay.
- There would be additional costs to users outside of operating hours 9am to 5pm.

The additional traffic assessment (prepared by Traffix and attached as Appendix B) anticipated that the proposed tendering facility will be utilised by an average of 1.5 boat user groups on a Saturday or Sunday when weather and tidal conditions are not appropriate for collection from Elizabeth Bay. The likelihood of this scenario is considered to be minimal. Furthermore, it is considered that the likelihood of the average use of berths being reached on poor weather condition days and unsuitable tidal condition would be rare as boat use generally aligns with better weather conditions. Therefore, it is expected that the impact to parking at Rushcutters Bay would be negligible.

4.4 Reduce the size of the outer four berths

A number of comments were received from the community during the display of the REF requesting that the size of the berths be reduced to minimise the visual impact. In line with the community feedback the proposal has been amended to reduce the four outer berths from a maximum vessel size of 20 metres in length to 15 metres in length.

The reduction in size of these berths will also address other concerns raised by the community including potential impacts on public amenity, parking and pollution from larger vessels.

4.5 Remove four swing moorings

During community consultation concerns were raised about an increase in the number of vessels as part of the proposal. Roads and Maritime propose to remove four swing moorings from the marina to have no net increase in the total number of vessels. The total number of permanent vessels will remain as 60 which include 13 fixed berths and 47 swing moorings.

Sydney Harbour Boat Storage Strategy acknowledges that ‘commercial’ moorings will have to be lost to make way for additional wet berths. The Strategy also states that “the de-cluttering of bays can be achieved in a number of ways that may include converting moorings to berths at commercial sites”. The removal of the swing moorings meets the Sydney Harbour Boat Storage Strategy by decreasing clutter and increasing navigation channels.

4.6 Installation of heritage interpretation panels

Interpretation panels are proposed on the main entrance to the Proposed Facility. They would provide information on the site’s past maritime history. This has been added as a safeguard in Section 5.
4.7 Providing open mesh on gangway to kayak pontoon

The safeguards in the original REF included a requirement to investigate ways to minimise impacts to seagrass by allowing light through features of the proposed marina that would increase shading impacts, where possible.

Open mesh has been designed for the gangway to the kayak pontoon and the pontoon itself to minimise shading impact on the seagrass.

4.8 Reconfigure the kayak ramp

Following consultation with DPI Fisheries the kayak ramp has been reconfigured to minimise potential impacts to seagrass by relocating it further north than the location assessed in the REF (Appendix F).

The tender berth would also be relocated near the pump out facility in deeper waters.

4.9 Relocation of the rainwater tank and rainwater pump

The rainwater tank was relocated towards the paddle boards storage area to reduce visual clutter and provide a wider access on the western walkway. The rainwater pump was also relocated to the bin storage area for the same reason.

4.10 Reduce storage of paddle boards

As a result of further detailed design, the storage for the paddle boards was reduced from 24 spaces to 20 spaces to allow for the relocation of a larger rain water tank. The rain water will be reused for wash basin and toilet flushing to ensure the 4+ NABERS ratings as part of the project objectives.

4.11 Increase in the wave attenuator size

The northern wave attenuator is required to be extended by seven metres to line up with the southern east west marina finger to ensure all vessels berths, including the temporary Destination berth and the sewage pump out berth, achieve moderate or better wave climate as required by AS3962 Guidelines for the Design of Marinas.

The concept design did not allow for moderate wave climate for the pump out and destination berths in 1 in 100 years events, due to their temporary nature. This was based on the assumption that these berths would not be occupied in storm events. However, further investigations have revealed that warranty for the whole pontoon would not be achieved if the wave climate of moderate or better is not attained in these berths.

The revised visual impact assessment concluded that this would not increase the visual impact of the proposed facility (refer to Section 3.3 and Appendix D). The additional length of the attenuator would not be used to accommodate more vessels.

4.12 Changes to piling safeguards

Section 6.2.4 of the REF included a safeguard to add pea gravel or alternative approved material to the seabed at the location of proposed piles prior to installing these to minimise sediment disturbance.
Following further investigation and consultation with Roads and Maritime environment specialist this safeguard is no longer required. The marine sediments at the proposal site comprise a larger distribution of coarse grained sediments. This safeguard is generally required when disturbing fine grained marine sediments.

Disturbance to sediments would be managed by the other safeguards in section 6.2.4 of the REF (e.g. use of silt curtains). The following additional safeguard would also be required and has been added in Section 5:

The methodology for piling will include:
- Lowering the pile tube onto the seabed and allow it to sink under its own weight.
- The pile will be spined to ensure a sealed connection between the piles and the seabed strata.
- Additional silt curtain will be used at each pile during installation.
5 Environmental management

The REF for the Elizabeth Bay Maritime Facility identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (section 7 of the review of environmental factors).

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

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

The PEMP and CEMP will be prepared prior to construction of the proposal and must be reviewed and certified by environment staff, Sydney Region, prior to the commencement of any on-site works. The CEMP will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements. The CEMP and PEMP would be developed in accordance with the specifications set out in the QA Specification G36 – Environmental Protection (Management System), QA Specification G38 – Soil and Water Management (Soil and Water Plan), and QA Specification G10 - Traffic Management.

5.2 Summary of safeguards and management measures

The review of environmental factors for the Elizabeth Bay Maritime Facility 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 section 7.2 of the REF) have been revised. Should the proposal proceed, the environmental management measures in Table 5-1 of this report would guide the subsequent phases of the Elizabeth Bay Maritime Facility development. Additional and/or modified environmental safeguards and management measures to those presented in the REF have been underlined and deleted measures, or parts of measures, have been struck out.
Table 5-1: Summary of environmental safeguards and management measures

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<td>Contractor / Roads and Maritime Project Manager</td>
<td>Pre-construction / detailed design</td>
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| GEN1| General - minimise environmental impacts during construction | A CEMP will be prepared and submitted for review and endorsement of the Roads and Maritime Environment Manager and City of Sydney prior to commencement of the activity.  
As a minimum, the CEMP will address the following:  
• any requirements associated with statutory approvals  
• details of how the project will implement the identified safeguards outlined in the REF  
• issue-specific environmental management plans  
• roles and responsibilities  
• communication requirements  
• induction and training requirements  
• procedures for monitoring and evaluating environmental performance, and for corrective action  
• reporting requirements and record-keeping  
• procedures for emergency and incident management  
• procedures for audit and review.  
The endorsed CEMP will be implemented during the undertaking of the activity. |                                            |                                               |
| GEN2| General - environmental awareness                 | 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.  
Site-specific training will be provided to personnel engaged in activities or areas of higher risk. These include:  
• areas of heritage significance  
• adjoining residential areas requiring particular noise management measures. |                                            |                                               |
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| NV1| Noise and vibration     | • A noise and vibration management plan must be prepared and incorporated into the CEMP. The management plan must be accordance with RMS Construction Noise and Vibration Guideline April 2016 and include but not be limited to;  
  • Reasonable and feasible noise control measures to reduce noise levels taking into account the control methods specified in the noise and vibration impact assessment for the project, this REF and the standard mitigation measures in Appendix B of the RMS Construction Noise and Vibration Guideline April 2016  
  • Identification of nearby sensitive receivers  
  • Details of the assessed hours of work and work to be undertaken  
  • Behavioral practices or other management measures to be implemented to minimise noise  
  • A complaints handling process. | Contractor     | Pre-construction |
| NV2| Noise and vibration     | • Local community must be notified at least seven days in advance of any work. The notification must include a description of the work activities, time periods, potential impacts and mitigation measures  
  • More specific notification processes including letter box drops, phone calls and individual/group information sessions as required must be undertaken to notify receivers of night work. | Contractor     | Construction   |
<p>| NV3| Noise and vibration     | • A verification process of noise and vibration levels must be implemented in accordance with Appendix F of the RMS Construction Noise and Vibration Guideline April 2016. Attended measurements are to be undertaken within a period of 14 days from the commencement of construction activities. | Contractor     | Construction   |
| NV4| Noise and vibration     | • A management procedure must be put in place to deal with noise and vibration complaints that may arise from | Contractor     | Construction   |</p>
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<td>the construction work. Each complaint must be investigated and appropriate noise and/or vibration amelioration measures be put in place to mitigate future occurrences, where the noise and/or vibration in question is in excess of allowable limits.</td>
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| NV5 | Noise  | • Where possible, night time construction work must be limited to two consecutive nights and these periods separated by at least one week with no more than 6 nights of work per month  
  • The local community should be engaged to seek ways to reduce the construction duration by allowing additional night work in a calendar month while minimising night disturbances as far as practicable.  
  • No night works must be allowed. All works must be completed during standard hours (7am to 6pm Monday to Friday and 8am to 1pm Saturday).  
  • In addition, The community would be informed of construction activities and a community information and complaints line would be provided throughout the works to take inquiries and follow up on complaints.  
  • Where feasible, high noise generating activities must be completed by 11pm. | Contractor | Construction |
| NV6 | Noise  | • While installing piles in the waterway during the night time period, pile drilling and pile hammering must be undertaken separately and not concurrently to avoid the cumulative noise impacts from both activities  
  • All other construction activities, such as cutting piles or pouring concrete, should be limited to the day period only. | Contractor | Construction |
<p>| NV7 | Vibration | • Recommended minimum buffer distances as detailed in the noise and vibration impact assessment (Renzo Tonin 2016) must be maintained for activities involving vibration intensive plant. If this is not possible, then alternate equipment or work methodology must be | Contractor | Construction |</p>
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<td>considered to reduce vibration impacts. If this is not possible, vibration monitoring must be undertaken during site activities to ensure vibration levels at the receiver comply with relevant vibration limits.</td>
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<td>NV8</td>
<td>Vibration</td>
<td>- If vibration is found to be excessive, management measures must be implemented to ensure vibration compliance is achieved. Vibration testing of actual equipment on site must be carried out. Management measures may include modification of construction methods such as using smaller equipment, establishment of safe buffer zones, and if necessary, time restrictions for the most excessive vibration activities. Time restrictions are to be negotiated with affected receivers.</td>
<td>Contractor</td>
<td>Construction</td>
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<tr>
<td>NV9</td>
<td>Vibration</td>
<td>- Due to the conservatively low vibration limits for the seawall structure, a more detailed vibration analysis must be conducted once the design and construction methodology for the project has been finalised by the contractor.</td>
<td>Contractor</td>
<td>Construction</td>
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<tr>
<td>NV10</td>
<td>Noise</td>
<td>The detailed design of the Proposed Facility needs to take into consideration:</td>
<td>Project Manager and Lead Designer</td>
<td>Detailed Design</td>
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<td>- Procurement of 'quiet' plant</td>
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<td>- Strategic positioning of plant away from sensitive neighbouring premises</td>
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<td>- Maximising the intervening shielding between the plant and sensitive neighbouring premises</td>
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<td>- Commercially available silencers or acoustic attenuators for air discharge and air intakes of plant</td>
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<td>- Acoustically lined and lagged ductwork</td>
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<td>- Acoustic screens and barriers between plant and sensitive neighbouring premises; and/or</td>
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<td>- Partially enclosed or fully enclosed acoustic enclosures over plant.</td>
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<tr>
<td>NV11</td>
<td>Noise</td>
<td>• Mechanical plant shall have their noise specifications and their proposed locations checked prior to their installation on site.</td>
<td>Contractor</td>
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<td>An operational noise management plan for the operation of the Proposed Facility is to be prepared and included in the terms of the future license of the Proposed Facility. The plan should include the below conditions:</td>
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<td>• Minimise on board entertainment, music and maintenance works while the vessel is docked in the marina berths</td>
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<td>• Encourage vessels to be reversed into berths to permit forward departures to avoid sounding the boat horn three times as would occur if the craft reversed from the berths</td>
<td>RMS project manager and operator</td>
<td>Pre- and during operation</td>
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<td>• Restrict motor boats from idling within the site and ensure that vessels promptly leave the marina once the engine is started up</td>
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<td>• Prohibit noise generating activities outside of standard hours while vessels are berthed</td>
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<td>• Discourage boat owners from leaving the marina berths outside of standard hours.</td>
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<td>• No liquor license for the café</td>
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<td>• No amplified music played at the café.</td>
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<td>SWQ1</td>
<td>Seawall</td>
<td>• If feasible, the temporary tendering facility must not add any additional loading to the seawall. If this is not possible, the ability of the seawall to withstand any additional loading should the temporary tendering facility need to be attached, must be investigated during detailed design.</td>
<td>Roads and Maritime</td>
<td>Pre-construction/ detailed design</td>
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<td>SWQ2</td>
<td>Water quality (spills)</td>
<td>• The sewage pump out facility must be designed in accordance with AS3500.2:2015 plumbing and drainage and operated to ensure the risk of spills is avoided</td>
<td>Roads and Maritime</td>
<td>Pre-construction/ detailed design</td>
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|    |        | a secured and sealed connection between the vessels and pump out facility is provided  
• The sewage pump out facility must only be operational during the operational hours of the marina. |              |        |
| SWQ3 | Erosion and sedimentation | • Erosion and sediment controls will be established prior to any disturbance of the land surface. Controls will be in accordance with edition 4 of 'Managing Urban Stormwater, Soils and Construction' (NSW Government, 2004) (‘The Blue Book’).  
• The maintenance of established stockpile sites during the work is to be in accordance with the Roads and Maritime Services Stockpile Site Management Guideline (EMS-TG-10).  
• Sediment must be minimised from moving off-site and sediment laden water minimised from entering any drainage inlet and Elizabeth Bay. | Contractor | Construction |
| SWQ4 | Sediments | • A silt curtain is to be installed around the work area to be disturbed within the waterway prior to commencement of work that disturb the seafloor  
• The silt curtain is to extend from a minimum of 100mm above the water line and be of sufficient depth extend to approximately 500mm above the seafloor during low tide  
• Visual observations of the effectiveness of the silt curtain are required to be made regularly during potential sediment disturbing work.  
• Results of observations of the integrity and effectiveness of the silt curtain are required to be recorded in a site notebook maintained specifically for the purpose. The notebook is required to be kept on the site and to be available for inspection by persons authorised by Roads and Maritime.  
• If turbidity of the water is observed outside the silt | Contractor | Construction |
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<td>curtain during removal of the first few piles, a second, moveable silt curtain will be installed around the piles being removed during each day of operation. • A Work Method Statement (WMS) for the removal and installation of the piles must be incorporated into the CEMP and include measures to minimise disturbance of sediments, including the safeguards in the REF. The WMS must be approved by the Roads and Maritime Environment Officer.</td>
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<td>Construction</td>
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<td>SWQ5</td>
<td>There will be no stockpiling or demolition of construction materials on the seabed. All demolished material is to be deposited appropriately at an approved facility, on land above the highest astronomical tide mark. • Prior to use at the site and/or entry into the waterway, machinery is to be appropriately cleaned, degreased and serviced. • To minimise wash and prevent bottom scouring of the marine sediments, vessels will not use excessive power when maneuvering barges into place over seagrass, the course sand and rock rubble habitat • Scouring damage will also be minimised by ‘working the wind and tides’ by only moving floating plant into place on high tides and under favourable or no-wind conditions, where practicable • Piles being removed must not be allowed to drag along the bottom of the seabed • The methodology for piling will include: • Lowering the pile tube onto the seabed and allow it to sink under its own weight. • The pile will be spined to ensure a sealed connection between the piles and the seabed strata. • Additional silt curtain will be used at each pile</td>
<td>Contractor</td>
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<td>• Pea gravel or alternative approved material must be added to the seabed at the location of proposed piles prior to installing these to minimise sediment disturbance.</td>
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<td>• Swing moorings being relocated must not be allowed to drag along the seabed and must be carefully placed to minimise sediment disturbance.</td>
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<td>SWQ6</td>
<td>Water quality (spills)</td>
<td>• Emergency spill kits must be kept on site at all times and maintained throughout the construction work. The spill kit must be appropriately sized for the volume of substances at the work site. A spill kit must be kept on each barge.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>• Spill kits for the construction barges must be specific for working within the marine environment.</td>
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<td>• All staff must be made aware of the location of the spill kits and trained in their use.</td>
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<td>• If a spill to water occurs, the Roads and Maritime Contract Manager and Roads and Maritime environment staff must be notified immediately, in accordance with RMS Environmental Incident Classification and Reporting Procedure February 2016</td>
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<td>• The spill/emergency management plan will also include methods to be used to stop the spill, contain and control the flow, clean up the spill, and record the spill.</td>
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<td>• Equipment barges carrying plant or machinery must be fitted with impervious bunding around equipment which contain chemicals to prevent chemical spills or leakages from entering the water.</td>
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<td>• A spill/emergency management plan which incorporates these safeguards will be set out within the CEMP.</td>
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| SWQ7| ASS     | • pH and peroxide tests, as relevant, must be carried out to detect the presence of any potential acid sulfate soils on soils in areas of excavation on the land and prior to start of work  
• Landside soils excavated for utility adjustments and sediments attached to piles being removed must be checked for potential acid sulfate soils  
• Any potential acid sulphate soils must be removed, contained, managed (treated) and disposed of in accordance with Waste Classification Guidelines: Part 1 Classifying Waste (DECCW 2009). | Contractor      | Construction|
| SWQ8| Waste   | • Waste disposed of off-site shall be classified in accordance with the *Waste Classification Guidelines: Part 1 Classifying Waste (DECCW 2009b)* prior to disposal and shall be disposed of at an appropriately licensed facility for that waste. Where necessary, this shall include sampling and analysis. | Contractor      | Construction|
| SWQ9| Water quality (spills) | • All, equipment, materials and wastes transported between an off-site facility, and the construction work site must be secured to avoid spills during transportation.  
• Vehicles, vessels and plant must be properly maintained and regularly inspected for fluid leaks.  
• Vehicle or vessel wash-down must not occur on-site.  
• Refuelling must be undertaken offsite if feasible or within a double bunded impervious area on the barge.  
• All fuels, chemicals and hazardous liquids must be stored offsite if feasible or within an impervious double bunded area in accordance with Australian standards and EPA Guidelines.  
• Emergency contacts must be kept in an easily accessible location on the construction work site and on all construction vessels. All crew must be advised of these contact details and procedures. | Contractor      | Construction|
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<td>• 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 erosion and sediment controls.</td>
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<td>SWQ10</td>
<td>Water quality (spills)</td>
<td>• Appropriately sized containers must be used during the disconnection/reconnection of the sewer and the emptying of any waste traps to ensure no sewage or other wastes end up in Elizabeth Bay.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>SWQ11</td>
<td>Water quality (spills)</td>
<td>• In the event of a spill during operation, the incident emergency plan must be implemented in accordance with Sydney Ports Corporation’s response to shipping incidents and emergencies outlined in the ‘NSW State Waters Marine Oil and Chemical Spill Contingency Plan’ (Maritime, 2012).</td>
<td>Contractor</td>
<td>Operation</td>
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<tr>
<td>SWQ12</td>
<td>Water quality (spills)</td>
<td>• A wet and dry spill kit must be stored at the Proposed Facility at all times and personnel trained in its use.</td>
<td>Contractor</td>
<td>Operation</td>
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<td>• An operating procedure for the sewage pump out facility must be prepared and displayed at the Proposed Facility to ensure the facility is appropriately used.</td>
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<tr>
<td>CPH1</td>
<td>Flooding</td>
<td>• Temporary construction facilities at the Ithaca Road / Beare Park carpark must not block or restrict stormwater drainage infrastructure (i.e. drains and stormwater pits)</td>
<td>Contractor</td>
<td>Construction</td>
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<td>• The footprint of any temporary site construction facilities within the carpark area that may be impacted by overland flows during flood events must be minimised as far as practicable</td>
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<td>• If temporary facilities are required at the Ithaca Road / Beare Park carpark, which is subject to overland flooding, then a site flood management plan must be developed as part of the Construction Environmental Management Plan.</td>
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| CPH2 | Temporary facility | • The temporary facility must be designed to accommodate design wave heights and water levels in accordance with the Australian Standards AS 4997-2005 *Guidelines for Design of Maritime Structures*. For temporary work, a 20 – 50 year ARI design wave height should be accounted for. It is suggested that a deck level of 2 m AHD is likely appropriate, however a freeboard allowance should also be considered. Numerical modelling of wave and water level conditions could be undertaken to refine the design height recommendations.  
• A Coastal Storm Emergency Response Plan must be prepared, that details safeguards to prepare, respond and recover from a possible storm event. The Plan will recommend the regular monitoring (visual and/or electronic) of BoM Sydney Closed Waters Forecast and Severe Weather Warnings, predicted tides (especially spring and solstice tides), ocean water level and winds/wave conditions; actions for the evacuation of staff and visitors from the water-based facilities to a safe location on land; and will provide recommendations to minimise risk of damage from coastal flood water and wave action to the temporary facilities. | Contractor, RMS | Construction |
| CPH3 | Design       | • Detailed design and construct fixed and floating Marina structures in accordance with Australia Standards AS 4497-2005 *Guidelines for Design of Maritime Structures* and AS 3962-2001 *Guidelines for Design of Marinas*, to ensure adequate strength and stability of the Marina with consideration to exposure to wind, current, wave and water level loads  
• Design and construct a wave attenuator in order to satisfy the Australia Standard AS 3962-2011 *Guideline* | RMS | Detailed design |
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|    |          | *for Design of Marinas* for an acceptable wave climate within small craft marinas. A ‘moderate’ wave climate is acceptable  

- Design the Proposed Facility to cater for an increase in ocean water levels due to sea level rise over the design life of the structure to satisfy the Australian Standard AS 2997-2005 *Guidelines for the Design of Maritime Structure*  

- With consideration of a 50 year design life for the Proposed Facility, and the former sea level benchmarks provided by the NSW Government, the Proposed Facility must be designed to cater for a 2065 sea level of 0.65m above 1990 levels  

- Design and construct fixed deck levels for habitable areas with an appropriate freeboard allowance above 100-year ARI extreme water level projected over the 50-year life cycle of the Proposed Facility. With consideration of future sea level rise, a 2065 100-year ARI storm surge level of 1.93 m AHD must be adopted for design purposes. |

| CPH4 | Construction | - Implement sediment erosion control measures in accordance with the Soils and Construction Handbook prior to the commencement of any excavation/trenching or earthworks.  

- Apply a silt curtain around the piles being removed during each day of operation prior to commencement of the work. Silt curtain to extend from a minimum of 100mm above the water line and be of sufficient depth to extend to around 500 mm above the seafloor during low tide to avoid damage to seagrass habitat.  

- Undertake visual observation of silt curtains twice per day to inspect their condition to ensure device is functioning as intended.  

- Undertake regular monitoring (visual and/or electronic)  

<p>| Contractor | Construction |</p>
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<td>of BoM Sydney Closed Waters Forecast and Severe Weather Warnings, predicted tides (especially spring and solstice tides), ocean water level and winds/wave conditions, and cease construction operations in the case of inclement weather conditions at Elizabeth Bay.</td>
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<td>• Anchor cables must be suitably buoyed to minimise cable drag from construction barges.</td>
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<td>• Anchors must be lifted prior to moving construction barges, to minimise disturbance of seabed.</td>
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<td>• In the event of an extreme coastal storm event, barges and machinery, to be relocated to land in the first instance (if time permits) or relocated to protected waters or securely tied to temporary facility pontoon/berthing platform as a secondary measure.</td>
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<tr>
<td>LTP1</td>
<td>Road traffic</td>
<td>• A Road Traffic Management Plan must be prepared as part of the CEMP and include the following:</td>
<td>Contractor</td>
<td>Pre-construction</td>
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<td>• A construction overview (including a construction schedule and proposed hours of work)</td>
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<td>• Truck routes for construction vehicles to access and egress the site from the arterial road network</td>
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<td>• Access to the site for the required construction vehicles, and frequency of construction vehicle arrivals and departures</td>
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<td>• Any required modifications to existing car parking arrangements to accommodate construction activities</td>
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<td>• Construction worker parking arrangements</td>
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<td></td>
<td>• Pedestrian access and control</td>
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<td>• Traffic control plans (if required) to facilitate construction vehicle access to and egress from the site, and any work zone requirements or road occupancy applications.</td>
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| LTP2 | No Impact                  | • A temporary works application and road closure application will be submitted to the City of Sydney for any ancillary facilities or road closures required for construction  
• Roads and Maritime must submit a Works Zone Application for ancillary facilities to City of Sydney.  
• Endorsement from the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) and payment of associated fees must also be sought. | Contractor      | Pre-construction |
| LTP3 | Maritime traffic           | • A Maritime Traffic Management Plan must be prepared as part of the CEMP and include the following:  
• A construction overview (including a construction schedule and proposed hours of work)  
• Routes for construction vessels to access and egress the site  
• Access to the site for the required construction vessels, and frequency of construction vessels arrivals and departures  
• The appropriate signage to be installed in consultation with NSW Roads and Maritime (Maritime division). | Contractor      | Pre-construction |
<p>| LTP4 | Road traffic               | • All Traffic Control Plans (TCP) will be implemented by a certified Traffic Controller who shall be onsite during work hours to ensure all signage is provided in accordance to the requirements of the approved CTMP. | Contractor      | Construction |
| LTP5 |                           | • Truck routes will be established prior to the commencement of any works, including the truck size, access location and provision of loading and unloading area to minimise the impact the existing road network and pedestrians | Contractor      | Construction |
| LTP6 |                           | • All trucks will enter and exit the site in forward direction. All drivers will be linked via radio and called to site when required to ensure no trucks queue or park on-street. | Contractor      | Construction |</p>
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<td>LTP7</td>
<td>Pedestrian access will be ensured and safely maintained at all time.</td>
<td>Contractor</td>
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<td>LTP8</td>
<td>Heavy earth equipment work will be restricted between the work hours of 7:00am and 5:00pm on Monday to Friday and 8:00am – 1:00pm Saturdays, only.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>LTP9</td>
<td>At no time will contractors be allowed to park private vehicles within the proposed loading areas, which are for the sole purpose of the loading / unloading of materials and equipment.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>LTP10</td>
<td>A site requirement will be imposed on all personnel to utilise public transport to and from the site.</td>
<td>Contractor</td>
<td>Construction</td>
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<tr>
<td>LTP11</td>
<td>Maritime traffic</td>
<td>The temporary facility must be built first prior to the demolition of the Existing Facility to ensure that the tendering service is not interrupted.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>LTP12</td>
<td>The impacted swing moorings will be relocated within Elizabeth Bay in consultation with NSW Maritime.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>LTP13</td>
<td>All construction barges will only use the maritime fairway.</td>
<td>Contractor</td>
<td>Construction</td>
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<tr>
<td>LCV1</td>
<td>Visual impacts</td>
<td>Screening storage and container areas and services appropriately.</td>
<td>Roads and Maritime</td>
<td>Detailed design</td>
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<td>Ensuring a sight line is maintained to the water when looking through the building north from Beare Park.</td>
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<td>Specifying berth types, sizes and locations to ensure large bulkier vessels do not block key viewpoints.</td>
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<td>Maintaining gaps in the Proposed Facility berthing, free from vessels that allows for views through the Proposed Facility to the opposite foreshore.</td>
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<td>LCV2</td>
<td>Visual impacts</td>
<td>Lighting, particularly floodlighting, will minimise reflection from the water’s surface.</td>
<td>Roads and Maritime</td>
<td>Detailed design</td>
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<td>Public domain hard landscape elements and plant selection will be complementary to the existing landscape character of the site.</td>
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<td>Signage locations will minimise impact by.</td>
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<td>consolidating within built form elements rather than freestanding where possible. Dimensions of signs should be kept to a minimum and be complimentary to the community and commercial identity of the site</td>
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<td>• Ensuring design refinements to the build form continue to represent the design form and quality of the proposal.</td>
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<td>LCV3</td>
<td>Visual impacts</td>
<td>• Urban design principles will be integrated throughout the detailed design and construction of the proposal.</td>
<td>Roads and Maritime</td>
<td>Detailed design</td>
</tr>
<tr>
<td>LCV4</td>
<td>Visual impacts</td>
<td>• Temporary visual impacts must be minimised by maintaining the work site in a clean and tidy state and completing the work within the shortest possible time frame.</td>
<td>Contractor</td>
<td>Construction</td>
</tr>
<tr>
<td>B1</td>
<td>Seagrass</td>
<td>• The design of the Proposed Facility must where feasible incorporate features to minimise shading of the seabed. The following must be considered:</td>
<td>Roads and Maritime</td>
<td>Pre-construction</td>
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<td>• The amount of light reaching aquatic vegetation can be maximised by increasing the height of the structure above the water, reducing the width of the deck to the minimum required for safe access, excluding the use of a pontoon or minimising the size of it and orientating the structure to maximise sunlight penetration under the deck (e.g. north-south orientation is preferred over east-west orientation)</td>
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<td>• Structures over aquatic vegetation should be decked with mesh, grid or grates of agreed specifications to allow for light penetration</td>
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<td>• To mitigate shading impacts, the incorporation of meshed decking on the section of the pontoon and gangway situated over seagrass will be used may be required as part of the Fisheries permit. Site investigations by DPI Fisheries to be undertaken at the permit application stage will verify the need for</td>
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<td>meshed decking or otherwise</td>
<td>• Where feasible, the temporary facility consisting of a small platform, ramp and pontoon to be constructed on the eastern side of the Existing Facility and that would be operational during the demolition of the Existing Facility and construction of the Proposed Facility must be located in an area that would avoid shading any seagrass.</td>
<td>Roads and Maritime, Contractor</td>
<td>Pre-construction</td>
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| B2 | Seagrass and aquatic habitats | • A risk assessment workshop is to be completed prior to the commencement of work and attended by the Maritime construction project manager, contractor and RMS environment staff. The workshop would identify activities with highest risk of impacting seagrass and develop specific safeguards for each activity. These requirements must be captured in the contractors CEMP and communicated to all staff and must include those identified in this REF.  
• The seagrass within the study area must be surveyed and mapped prior to construction and within the first year following construction to determine the actual extent of impact in order to determine the amount of seagrass that will need to be confirmed following the detailed design.  
• Potential offset  
• A permit to harm marine vegetation under s.205 of the *Fisheries Management Act* is to be obtained for these work, prior to the commencement of construction. The permit application is to provide detail on the specific area and density of seagrass that would be shaded from the construction of the pontoon and the extension to the Proposed Facility. The offsets will be negotiated with the proponent at the permit application stage  
• The temporary facility is to be removed following the completion of construction. | Roads and Maritime, Contractor          | Pre-construction |
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| B3 | Seagrass                     | • The silt curtains must be placed as close to the infrastructure to be removed/installed as possible to minimise impacts to seagrass.  
• The silt curtain must be monitored on a regular to ensure that the silt curtain does not damage the seagrass beds. | Contractor     | Construction |
| B4 | Seagrass and aquatic habitats | • Seagrass bed exclusion zones will be delineated in the CEMP to prevent direct disturbance to marine habitats outside the limits of the required work area  
• All staff working on the site will be advised of the location of aquatic habitats, and exclusion zones  
• No vessel anchors will be placed in identified seagrass habitats  
• Anchor cables must by suitably buoyed prior to laying, and kept buoyed once laid, to prevent cable drag and cable swing damage (scalping) to seagrass and rock rubble habitat areas. Where this is impractical, contractors will use floating rope  
• Minimise disturbance of the seabed, marine vegetation habitats, and the mobilisation of any colonised pest algae (*Caulerpa taxifolia*)  
• To prevent shading impacts, vessels must not be moored/anchored in the same location for more than one complete 24 hour diurnal cycle (unless required for construction purposes, justification must be provided)  
• Relocated moorings are to be placed in an area that is situated approximately 15 metres away from seagrass.  
• An environmental site induction is to be completed prior to the commencement of work and attended by the Maritime construction project manager, contractor and Roads and Maritime environment staff. The induction would identify activities with highest risk of impacting seagrass and develop specific safeguards | Contractor     | Construction |
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<td>for each activity. The induction will include the risk of increased nutrient levels.</td>
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<td>B5</td>
<td>Noxious weeds</td>
<td>• All the wetted surface areas of demolition materials taken from the waters, and construction related equipment that comes in contact with the seabed (including mooring tackle, cables, ropes and anchors), must be inspected for possible attached <em>Caulerpa taxifolia</em> plants and these must be collected and disposed of into plastic bags then placed into garbage bins on shore as recommended in the NSW Control Plan for the Noxious Marine Alga <em>Caulerpa Taxifolia</em> (NSW Fisheries 2009).</td>
<td>Contractor</td>
<td>Construction</td>
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<td>B6</td>
<td>Threatened species</td>
<td>• If unexpected threatened fauna or flora species are discovered, stop work immediately and follow the Roads and Maritime Services Unexpected Threatened Species Find Procedure in the Roads and Maritime Services Biodiversity Guidelines 2011 – Guide 1 (pre-clearing process).</td>
<td>Contractor</td>
<td>Construction</td>
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<td>B7</td>
<td>Fish kills</td>
<td>• Fisheries NSW (1800 043 536) and the Environment Protection Authority (131 555) must be notified immediately if any fish kills occur in the vicinity of the work. In such cases, all work other than emergency response procedures are to cease until the issue is rectified and approval is given by Fisheries NSW and/or the Environment Protection authority for the work to proceed.</td>
<td>Contractor</td>
<td>Construction</td>
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<td>B8</td>
<td>Seagrass</td>
<td>• Appropriate signage will be installed at the facility to inform the marina users of the important ecological benefits of seagrass and ways to minimise impacts. • Appropriate signage will be installed at appropriate location stating the kayak facility is not to be used by motorised vessels. • A kayak tray is to be installed all around the kayak</td>
<td>Roads and Maritime</td>
<td>Operation</td>
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| NAH1 | Non-aboriginal heritage | • An archival recording of the wharf and building in its current form will be undertaken to provide a record of the evolution of the site.  
• An interpretation proposal for the site should be prepared that illustrates its long and interesting history from the time of being part of the grounds of Elizabeth Bay house through its various periods of development.  
• Where possible the re-use of recovered materials from the Existing Facility is encouraged as part of the interpretation of the place.  
• A copy of the REF will be provided to the Heritage Council of NSW during the REF display period. | Roads and Maritime | Pre-construction |
| NAH2 | Non-aboriginal heritage | • If archaeological evidence is uncovered during work the protocols of the “Roads and Maritime Unexpected Archaeological Procedures Procedure” must be followed and an experienced archaeologist engaged to investigate that material prior to work proceeding. | Contractor | Construction |
| NAH3 | Non-aboriginal heritage | • Interpretation panels are to be installed on the main entrance to the Proposed Facility. They would provide information on the site’s past maritime history. | Roads and Maritime | Operation |
| CC1 | Climate Change | • The design of the building must meet a NABERS rating of 4 or above  
• Incorporate the use of solar panels in the design of the Proposed Facility. | Roads and Maritime | Design |
<p>| CC2 | Climate Change | • Consider the use of renewable energy to power the site compounds (e.g. solar panels) or the contribution to green energy programs. Any contribution must cover the full power usage during construction. | Contractor | Construction |
| CC3 | Climate Change | • Where feasible and reasonable, procure recycled content construction materials | Contractor | Construction |</p>
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<td>• Use lower embodied energy concrete for lower-strength applications where feasible and reasonable.</td>
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| CC4| Climate Change      | • Where feasible and reasonable select the most fuel efficient plant, equipment and vehicles available through consultation with subcontractors and suppliers  
• Regularly maintain all plant and vehicles, including any water vessels, to maintain fuel efficiency  
• Procure locally produced goods and services where feasible, reasonable and cost effective to reduce transport fuel emissions  
• Alternative fuel and power sources (such as biodiesels and ethanol blends) will be used wherever practicable. | Contractor           | Construction|
| AQ1| Air quality         | • Measures to address air quality impacts will be incorporated into the CEMP and implemented throughout the construction period. As a minimum, the following measures will be included:  
  • Covering of all loaded trucks and vessels  
  • Machinery to be turned off rather than left to idle while 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 regulations  
  • Maintenance of all plant and equipment to ensure good operating condition and exhaust emissions comply with the Protection of the Environment Operations Act 1997  
  • Maintaining the work site in a condition that minimises fugitive emissions such as minor dust. | Contractor           | Construction|
<p>| AH1| Aboriginal heritage | • If Aboriginal heritage items are uncovered during the work, all work in the vicinity of the find must cease and the Roads and Maritime’s Aboriginal cultural heritage advisor and the senior regional environmental officer | Contractor           | Construction|</p>
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<td>SE1</td>
<td>Marina operations</td>
<td>Roads and Maritime must establish operational protocols and requirements to be implemented for the marina. These protocols must be incorporated into the leasing tender documentation to be released at the end of Roads and Maritime’s management of the facility and be advertised on the open market. Requirements must include:</td>
<td>Roads and Maritime</td>
<td>Operation</td>
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<td>- The fit out and operation of the café must comply with the Food Safety Act, Food Standards Codes and the AS 4674-2004 Construction and Fit-Out of Food Premises.</td>
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<td>- The Proposed Facility must be open to the public during operational hours between 7:30am and 6pm, free of charge. This includes the kayak pontoon, the bathroom facilities, lockers, café, access, and all other facilities as part of the proposal.</td>
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<td>- The Proposed Facility does not open outside of the operational hours and access must be restricted to ensure the security of the facility and to minimise anti-social activities. However, 24 hour access to the kayak pontoon and water taxis must be maintained through appropriate secured means.</td>
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<td>- The proposed café must accommodate the same number of seats as the existing kiosk. Through contractual arrangement Roads and Maritime must ensure that there will be no extension of the café trading hours.</td>
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<td>- Functions and events must not be permitted at the café</td>
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<td></td>
<td>or on berthed vessels.</td>
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<td></td>
<td></td>
<td>• The café must not be permitted to hold a liquor licence, open outside marina operating hours or be permitted to play amplified music.</td>
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<td></td>
<td>• The facility must be pet friendly.</td>
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<td>• The facility and waters surrounding the facility must be kept clean.</td>
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<td></td>
<td>• The maximum size of vessels in the outer berths must be limited to 15 metres.</td>
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<td>• The last seven metres (western end) of the wave attenuator pontoon must not be used as a berth for vessels.</td>
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<td>WAR1</td>
<td>Waste and resource use</td>
<td>• A Waste Management Plan (WMP) must be prepared and implemented as part of the CEMP. The WMP will include but not be limited to:</td>
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<td>• Measures to avoid and minimise waste associated with the project</td>
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<td>• Classification of wastes and management options (re-use, recycle, stockpile, disposal)</td>
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<td></td>
<td>• Statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions</td>
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<td></td>
<td></td>
<td>• Procedures for storage, transport and disposal</td>
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<td>• Monitoring, record keeping and reporting.</td>
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<td>The WMP will be prepared taking into account the Environmental Procedure – Management of Wastes on Roads and Maritime Services Land (Roads and Maritime, 2014) and relevant Roads and Maritime Waste Fact Sheets.</td>
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<td>• Waste disposed of off-site shall be classified in</td>
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<td></td>
<td>accordance with the <em>Waste Classification Guidelines: Part 1 Classifying Waste (DECCW 2009b)</em> prior to disposal and shall be disposed of at an appropriately licensed facility for that waste. Where necessary, this shall include sampling and analysis</td>
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<td>• Timber and other components of the Existing Facility that is removed must be reused and/or recycled if feasible</td>
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<td>• Waste material must not be left on site once the work has been completed</td>
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<td>• Working areas must be maintained, kept free of rubbish and cleaned up at the end of each working day</td>
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<td>WAR2</td>
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<td>• A wet and dry spill kit must be stored at the Proposed Facility at all times and personnel trained in its use</td>
<td>Roads and Maritime</td>
<td>Operation</td>
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<td>• All wastewater from vessels is to be discharged at an approved vessel wastewater disposal facility. No vessel wastewater is to be discharged (i.e. pumped out) directly into the water or onto any land adjacent.</td>
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<td>• An operating procedure for the sewage pump out facility must be prepared and displayed at the Proposed Facility to ensure the facility is appropriately used.</td>
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### 5.3 Licensing and approvals

Table 5-2: Summary of licensing and approval required

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<th>Timing</th>
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<td><em>Fisheries Management Act 1994 (s199)</em></td>
<td>Notification to the Minister for Primary Industries prior to any dredging (work that involves the removal of any of material from water land that disturbs, moves or harms woody debris, snags, gravel beds, cobbles, rocks, boulders, rock bars or aquatic vegetation is considered dredging) or reclamation work.</td>
<td>A minimum of 28 days prior to the start of work.</td>
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<td><em>Fisheries Management Act 1994 (s205)</em></td>
<td>Permit to harm marine vegetation from the Minister for Primary Industries.</td>
<td>Prior to start of the activity.</td>
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<td><em>Marine Safety Act 1998 (s97(1))</em></td>
<td>Section 97(1) of the Marine Safety Regulation 2016 would require the work to be subject to an aquatic licence issued by Roads and Maritime.</td>
<td>Prior to start of the activity.</td>
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<td><em>Ports and Maritime Administration Regulation 2012 (s67ZN)</em></td>
<td>Section 67ZN of the Ports and Maritime Administration Regulation 2012 requires the written permission of the Port Authority of New South Wales’ Harbour Master prior to any disturbance of the bed of Sydney Harbour. As the proposal would disturb the bed of Sydney Harbour, Harbour Master approval would be required prior to the proposal commencing</td>
<td>Prior to start of the activity.</td>
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<td><em>Roads Act (1993)</em></td>
<td>Road Occupancy Licence (ROL) may be required. To be determined in consultation with City of Sydney.</td>
<td>Prior to start of the activity (if required).</td>
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<td><em>City of Sydney requirement</em></td>
<td>Roads and Maritime must submit a Works Zone Application for ancillary facilities to City of Sydney. Endorsement from the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) and payment of associated fees must also be sought.</td>
<td>Prior to start of the activity</td>
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6 References


Transport for NSW (2013) *Sydney Harbour Boat Storage Strategy*

TLB (2016). *Elizabeth Bay Marina condition report.*

Appendix A

List of Submissions
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