



Environmental Assessment

Jones Bay Wharf Marina Expansion

October 2010

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Quality Assurance Statement

Approved for Issue

Revision No.	Author	Reviewer	Signature	Date
Draft for TOA	PM & SS	AD		13 September 2010
Rev 0				5 October 2010

Statement of Validity

Submission of Environmental Assessment

prepared under Part 3A of the
Environmental Planning and Assessment Act 1979

Environmental Assessment prepared by

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In respect of	Jones Bay Wharf Marina Expansion

Applicant & Land Details

Applicant name	Toga Development No 27 Pty Ltd
Applicant address	PO Box 1745 Strawberry Hills NSW 2012
Land to be developed	Wharves 19, 20 and 21 at 19-21 Pirrama Road, Pyrmont
lot no, DP/MPS, vol/fol etc	Part 3 in DP 1050360 Part 1, Portion Part 4, and Portion Part 6 in DP 1002200

Environmental Assessment	An environmental assessment is attached
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Declaration

I certify that I have prepared the contents of this Environmental Assessment in accordance with the Director General's Requirements dated 3 November 2009 and the Environmental Planning and Assessment Act 1979 and Regulation, and that to the best of my knowledge, the information contained in this report in neither false nor misleading.

Signature



Name

Alan Davidson

Date

5 October 2010

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- A Director General’s Requirements**
- B Drawings**
prepared by International Marina Consultants, RPS and Patterson Britton and Partners
- C Existing and Proposed Lease Boundaries**
prepared by International Marina Consultants
- D Survey Plans**
prepared by Frank Mason & Co and Hydrographic and Cadastral Surveys
- E Hydraulic Services Plan**
prepared by Harris Page & Associates
- F Traffic Impact Study**
prepared by Colston Budd Hunt & Kafes
- G Operational Management Plan**
prepared by Scope Marine
- H Aquatic Ecology Assessment**
prepared by Marine Pollution Consultants
- I ESD Strategies Report**
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- K Statement of Heritage Impact**
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- O Material and Construction Specifications**
prepared by Bellingham Marine
- P NSW Maritime Permission to Lodge**
- Q Development Consent for DA 358-10-2002**
- R Development Consent (Modification) for MOD 358-10-02(1)**
- S Electrical Infrastructure**
prepared by Simpson Kotzman

Executive Summary

Toga Development No.27 Pty Ltd is seeking to expand the existing commercial marina at Jones Bay Wharf, Pyrmont to accommodate up to 73 commercial vessels of various sizes.

The expansion is in response to recent demand for additional commercial berths on Sydney Harbour. The use of an existing facility to meet this demand, rather than the development of a new facility, will capitalise on the existing and historical use of the area for commercial maritime operations and its links to highly accessible public transport.

Key components of the layout of the expanded marina are to ensure that the proposal does not significantly impact on existing views to and from Sydney Harbour and that the heritage significance of Jones Bay Wharf is maintained.

Proposed Development

The proposed development consists of a series of new pontoons to be connected to the existing pontoons which align with the eastern and western sides of Jones Bay Wharf. The proposal will increase the number of berths within the marina by thirty three (33) so that the marina will have the capacity to accommodate up to a total of 73 commercial vessels of various sizes.

Larger commercial vessels up to 45m will be accommodated at the northern end and 8 public berths are proposed at the south-eastern end of the wharf.

The proposal does not include any works to Jones Bay Wharf itself.

Specifically the **proposed water-based development comprises:**

- additional floating mooring pontoons to be attached the existing pontoons that run parallel to the existing wharf
- additional pontoon restraint piles
- extension of services (potable water, telephone, power and lighting, safety equipment, fire hose reels)
- replacement of existing sewage pump-out with new system
- realignment of waterside allotment boundaries, and
- a section of foreshore public walkway between Jones Bay Wharf and the site to the east. This is subject to negotiations with adjoining landowners.

It is intended that the approval of this Project Application supersede the current consent (DA 358-10-2002).It will also address certain ambiguities in the existing consent for the existing marina.

Augmented infrastructure and services will be provided to the marina as required.

Environmental Assessment

In accordance with the provisions of Part 3A of the Environmental Planning and Assessment (EP&A) Act the Director-General issued requirements for the project that must be addressed in the Environmental Assessment (EA), These requirements refer to the following issues:

- key issues which included addressing the relevant planning policies and guidelines, design and construction, operational management, urban design and public access, transport and accessibility impacts, water cycle management, marina development and potential impacts, air, noise and

odour, climate change and sea level rise, heritage, waste management, infrastructure provision, staging, ecologically sustainable development (ESD), consultation and contributions.

- a description of the proposal
- a draft statement of commitments
- environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest

The proposal complies with all relevant environmental planning instruments, including the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 and the Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005.

The site is considered suitable for the development for the following reasons:

- The site is located within the W1 – Maritime Waters zone of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 which gives preference to and protects waters required for the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations generally.
- There is adequate water depth for a range of vessel sizes.
- The existing marina is protected from exposed wave environments by existing wave attenuating pontoons. These will be adjusted for the revised facility.
- The configuration of the additional berths will continue to facilitate the safe use of the waterways by other watercraft.
- There is a strong functional, visual and historical connection between the existing waterside structures and the existing marina which reinforces the compatibility of the use with the surrounding environment. These will be maintained with the extended facility.
- The existing adjacent road and parking capacities are sufficient to cater for the extended marine facility.
- The site is highly accessible to public transport including light rail, monorail and bus, and connects with expansive pedestrian and cycle networks.
- The waterway surrounding Jones Bay Wharf is currently underutilised.
- The current site services have the capacity to cater for the proposed expansion without any major upgrades.

Environmental impacts associated with the construction and operation of the proposed development will be minor and can be mitigated through adoption of the recommendations of the specialist consultant's reports. Jones Bay Wharf currently has operational mechanisms in place to manage the impacts of the existing marina. These mechanisms have been updated to ensure that the increase in the number of berths does not have a negative impact on the receiving environment.

Although there is expected to be a minor increase in the number of vehicle trips and parking demand associated with the operation of the wharf, no adverse traffic, pedestrian, parking or servicing impacts will occur from the extension of the wharf.

There are no major urban design issues associated with the proposal as it does not include any new buildings or alterations to existing buildings. The new pedestrian link between Jones Bay Wharf and Darling Island will improve pedestrian connectivity and public access.

Impacts on views from the surrounding area will be generally limited to the eastern side of the wharf and given the existing views, maritime environment, and built-up urban form of the area, the impact on views are considered to be minor.

Operational waste management and potential water cycle impacts will be managed in accordance with an operational management plan which has been developed based on the existing approved management plan.

There will be some minor impacts to aquatic ecology during construction and from the shading of previously unshaded areas. However, the proposal will have a net beneficial impact on aquatic ecology as more habitat area for the support of marine vegetation will be provided.

Noise impacts from the operation of the expanded marina on nearby noise sensitive receivers are expected to be minor and limited to the eastern side of the wharf. Adverse noise impacts generated during the construction stage will be appropriately managed in accordance with the recommendations within the supporting Noise Assessment.

An Air Quality Assessment has identified potential air quality and odour impacts and included recommendations to ensure that impacts can be appropriately managed and that the proposal meets all relevant policies and guidelines.

The nature of the proposal, a series of floating pontoon structures surrounding an existing wharf located well above mean high water and some distance from the coast, means that the risk associated with climate change and sea level rise is negligible.

The proposal represents a continuation of the maritime use of the wharf edge. The visual impacts from horizontal elements on the existing wharf edge and substructure are minimal. This means that there will be negligible impacts on the heritage significance of Jones Bay Wharf. In addition, the proposal supports the policies within the Jones Bay Wharf Conservation Management Plan.

An Ecological Sustainable Design (ESD) Strategies Report has been developed by Aecom Pty Ltd to include a range of ESD principles into the design, construction and operation of the marina.

Consultation has been undertaken during the preliminary stages of the development. Consultation will continue throughout the remainder of the project in accordance with a consultation strategy developed by Creating Communities Australia and the Department of Planning's Major Project Community Consultation Guidelines October 2007.

The social impacts of the proposal are positive as the proposal will increase the opportunities that residents and visitors have to access the harbour.

The additional economic activity and employment opportunities created by the proposal during the construction and operational stages will positively impact on Sydney Harbour's maritime industry and tourism.

The project is justified by the demand for berthing of commercial vessels on Sydney Harbour, the desirability from an environmental planning perspective to expand an existing facility rather than develop a new facility, and the economic contribution that the proposal will have on the maritime and tourism industries.

The project serves the public interest through its consistency with all of the relevant environmental planning instruments, and will result in beneficial environmental, social and economic impacts.

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I Site Description

1.1 Location

Jones Bay Wharf consists of Wharves 19, 20, and 21 at 19-21 Pirrama Road Pyrmont, located between Pyrmont Point Park and Darling Island. The wharf is situated at the northern end of Pyrmont approximately 1.5 kilometres west of Sydney's Central Business District (CBD), as shown on **Figure 1**.

Jones Bay Wharf Marina is located on the western and eastern sides of the existing wharf. The existing marina includes a private marina in the south-western corner of the wharf that is unaffected by this application.

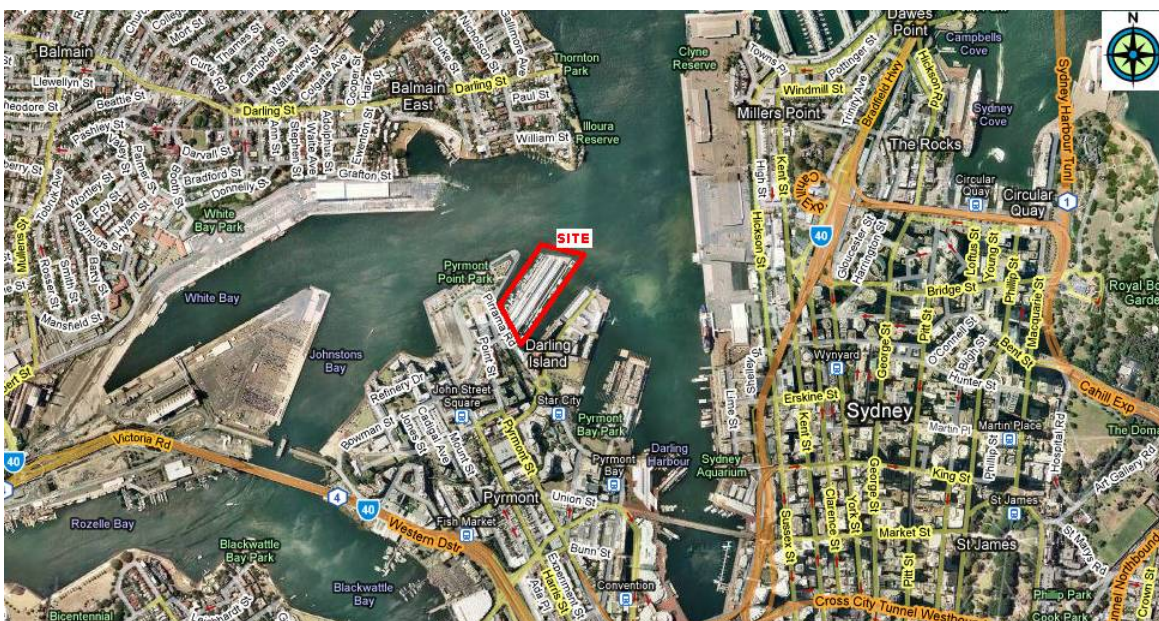


Figure 1 – Location Plan

1.2 Ownership and Title Information

The site comprises water lots that are owned by the NSW Maritime Authority (NSW Maritime) and subject of a 99 years lease to Jones Bay Wharf Pty Ltd which was granted in 2000. The proposal will require reconfiguration of the existing water lots.

Toga Pty Ltd is the parent company of Toga Development No 27 Pty Ltd, the sole shareholder of Jones Bay Wharf Pty Ltd.

NSW Maritime have provided land owners consent for this Project Application as set out in **Appendix P**.

The current Jones Bay Wharf Marina occupies a water lot that is identified as Part 3 in DP 1050360. The proposed marina expansion will extend Part 3 in DP 1050360 to include Part 1 and portions of Parts 4 and 6 in DP 1002200. Figure 2 summarises the existing and proposed lease boundaries (Refer also to the proposed lease boundary at **Appendix C** and the survey plans at **Appendix D**).

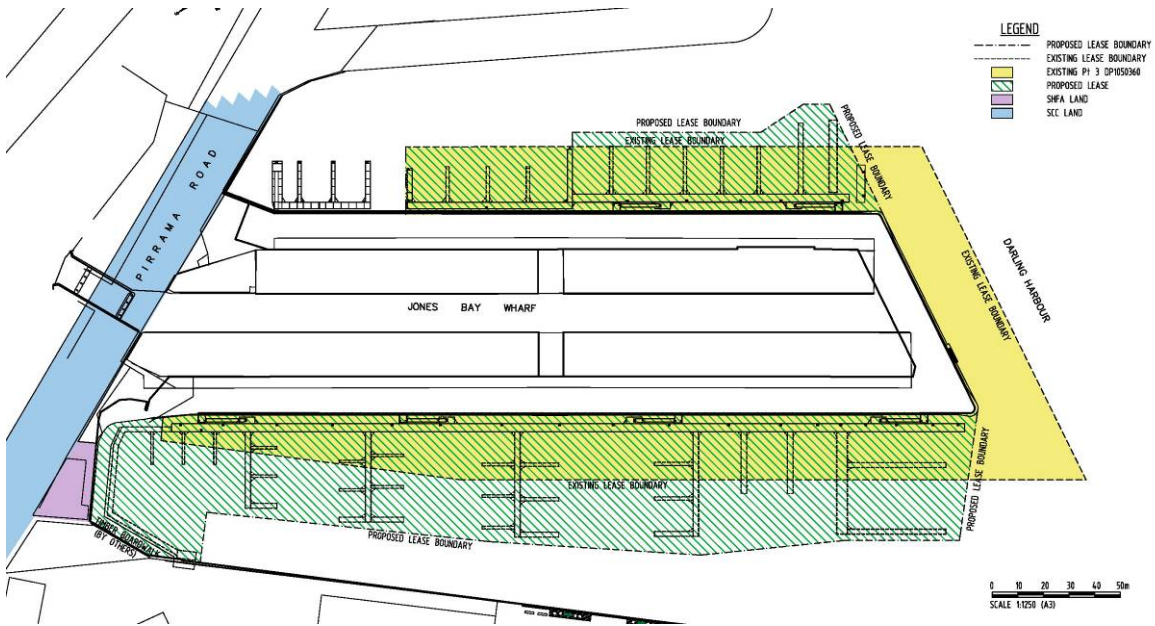


Figure 2 - Existing and proposed lease boundaries

The current water lot Part 3, is adjacent to the land component of Jones Bay Wharf, particularly Parts 1 and 2 in DP 1050360. These lots adjoin Pirrama Road, owned by the City of Sydney. Part 1 in DP 1002200, that will extend the water lease area, adjoins Lot 11 in DP 883135 known as the 'Arrow Dive' building, owned by the Sydney Harbour Foreshore Authority (see **Figure 3**). The private marina, which is unaffected by this application, occupies Part 4 in DP 1050360.

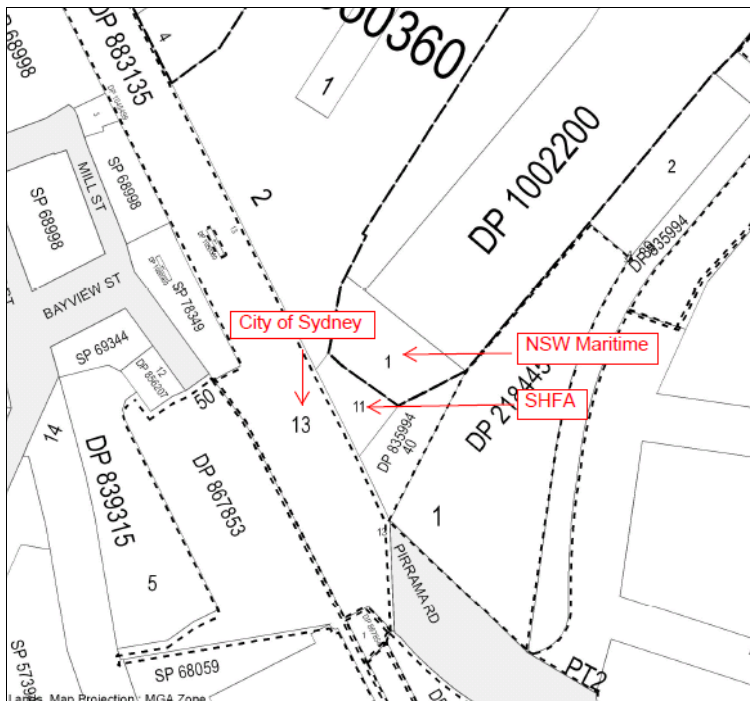


Figure 3 – Title Information details adjacent to Jones Bay Wharf Marina

1.3 Background

1.3.1 History

There is a long history of maritime uses in Jones Bay. The Sydney Harbour Trust, established in 1901, began a massive program of excavation and land reclamation which changed the shape of the Pyrmont shoreline. Plans for the construction of the new wharves were finalised in 1911. These plans included extensive rail links to Darling Harbour and the NSW rail network, designed to handle large wool and wheat exports. The composite reinforced concrete, steel and timber wharves and shore sheds were completed between 1917 and 1919. Upon their completion the wharf was able to berth five large steamers simultaneously. The wharf also contained sophisticated cargo-handling equipment and was able to store up to 120,000 bales of wool. Other cargo handled included: bagged wheat, bulk sulphur, timber and frozen cargoes.

During the Second World War, the wharves were an important centre for the transport of troops and materials. The change in trade policy and containerisation led to the decline of Sydney Harbour as a port and the use of Jones Bay as a trading wharf. In the 1950s the wharf became used as the disembarkation point for new emigrants, but with the construction of the Overseas Passenger Terminal at Circular Quay, this use also declined.

1.3.2 Previous Development Consents

By 1991 the wharf had become surplus to the requirements of the then owner, the Maritime Services Board and was made available for redevelopment upon cessation of existing leases. In 1995, a heritage Conservation Management Plan was commissioned and in 1997 a development application (DA 37/98) for a mixed commercial residential development was submitted.

In March 1999, the then Minister for Urban Affairs and Planning granted consent to the then City West Development Corporation to DA 37/98 for the carrying out of:

Adaptive reuse of Jones Bay Wharf (Piers 19-21 Pyrmont) including construction of new shore buildings, for maritime business uses, including berthing facilities, business uses including serviced apartments and public domain

subject to conditions and compliance with the Conservation Management Plan.

The consent includes Condition 51, which requires details of new marine structures. The approved drawing Site Plan A-01 as amended, permits *COMMERCIAL BERTHING* along the eastern and western sides of the wharf, *PRIVATE BERTHING* at the south-western corner and *CASUAL BERTHING* along the northern end. However, the subsequent consent (refer below) removed berthing along the northern end.

Early in 2000, Jones Bay Wharf Pty Ltd a joint venture between Multiplex Constructions Pty Ltd and Toga Pty Ltd successfully tendered for the site, securing a 99 year lease for the wharf and its associated structures, subject to completing the adaptive redevelopment of the Jones Bay Wharf.

In 2002, Jones Bay Wharf Pty Ltd submitted a separate DA (358-10-2002) to the then Planning NSW for the marine structures. The 2002 DA sought approval for the location and extent of new marine structures to enable the wharf to operate as part of the working waterfront identified in the Department of Urban Affairs and Planning's document *Sharing Sydney Harbour*.

On 16 September 2003, the Minister for Infrastructure and Planning approved DA 358-10-2002 for the construction of Marine Structures (Boat Berthing Facilities – Pontoons and Moorings) subject to conditions. A copy of the development consent is at **Appendix Q**. This consent authorised the construction of the pontoons and moorings that comprise the existing facility.

Condition 1 of the consent requires the development to be in accordance with the following.

- Statement of Environmental Effects for Proposed Marine Structures Jones Bay Wharves 19-21 Pirrama Road, Pyrmont, prepared by S A Smits & Associates Ltd dated October 2002
- Conservation Management Plan prepared by Design 5 Architects and Supplementary Heritage Impact Statement prepared by Otto Cserhalmi & Partners
- Traffic and Pedestrian Management Plan prepared by Colston Budd hunt & Kafes Pty Ltd dated April 2001
- Jones Bay Wharf – Marine Structures Strategy Report prepared by Patterson Britton & Partners Pty Ltd dated July 2002
- Jones Bay Wharf Berthing Facility – Safety Management Plan, prepared by Stephen Grubits & Associates Pty Ltd, dated May 2003, and
- The following drawings:
 - 4590-01 Issue A – Locality Plan
 - 4590-02 Issue A – Moorings Layout Plan
 - 4590-03 Issue A – Pontoon & Gangway Elevation
 - 4590-04 Issue A – Pontoon & Gangway Details

Condition 12 of the consent required that:

prior to the preparation of documentation for an application for a Construction Certificate, the applicant shall submit for the approval of the Sydney Harbour Foreshore Authority (SHFA) a Marine Structures Strategy document. The document is to contain inter alia; a report prepared by a practising structural engineer, acceptable to SHFA and experienced in marine structures, detailing the scope and methodology for any works to be undertaken in connection with the existing substructure and the design and construction details for any proposed new Marine Structures. The document shall include a life cycle assessment and maintenance regime for all Marine Structures and components once the works are completed.

In accordance with this condition, a Marine Structures Strategy (MSS) was prepared and approved in two parts. Part A, prepared by Robert Bird and Partners relates to the substructure and superstructure of the wharf itself. Part B describes the location and extent of the new marine structures in the form of a proposed mooring layout to accommodate vessels facilitating the approved use.

There are also a number of conditions of consent (Conditions 29-42 inclusive) that relate to how the wharf is to be used. Specifically, Condition 36 requires an Operational Management Plan including a Emergency Plan be prepared in accordance with the conditions of the approval be approved by the Director-General. A Safety Management Strategy, Environmental Protection Strategy and Schedule of Services for the operations of the marina have since been submitted and approved.

A modification to the current approval (MOD 358-10-02(1)) refer **Appendix R**, was approved 13 August 2004 to allow access to the western pontoon to be provided in accordance with the provisions of AS1428.1-1993 – Design for Access and Mobility. Access in accordance with the modification has since been provided.

The existing commercial marina operates under these various approvals:

- DA 37/98 - Adaptive reuse of Jones Bay Wharf (Piers 19-21 Pyrmont) including construction of new shore buildings, for maritime business uses, including berthing facilities, business uses including serviced apartments and public domain.
- DA 358-10-2002 - Construction of Marine Structures (Boat Berthing Facilities – Pontoons and Moorings).

- Marine Structures Strategy - Part A dated 14 March 2001, Part B dated 15 March 2001
- Safety Management Strategy and Environmental Protection Strategy dated October 2003.
- Schedule of Services.
- (MOD 358-10-02(1)) – to allow access to the western pontoon to be provided in accordance with the provisions of AS1428.1-1993 – Design for Access and Mobility.

1.4 Existing Improvements

1.4.1 Wharf Structure

Jones Bay Wharf is currently improved by two large two storey wharf buildings, upper and lower level roadways, upper and lower level perimeter decks with travelling gantries (that are now permanently fixed in position), shore buildings and a marina. The buildings, roadways, decks, gantries, and one of the shore buildings were redeveloped in 2001 as part of the Jones Bay Wharf redevelopment project. Subsequent projects included alterations and additions to the remaining shore buildings and the marine structures noted above. The wharf buildings are currently used for a range of business purposes comprising mainly commercial offices with cafes and restaurants.

The existing wharf structure, which extends approximately 340 metres into the waters of Jones Bay, is primarily built upon reclaimed land. The buildings and lower roadway are built on rock fill for their entire length. The lower deck projects over the water, supported by concrete encased timber piles. As well as providing restricted vehicular access, the perimeter of the lower deck also forms part of an extensive public walkway that connects Glebe, Blackwattle Bay and Darling Harbour. The public walkway easement is 10 metres wide measured from the edge of the wharf.

Jones Bay Wharf is listed as a heritage item in Sydney Local Environmental Plan and included on the Register of the National Estate.

1.4.2 Existing Marina

The marina structures approved in DA 358-10-2002 consist of a private marina in the south-western corner and a commercial marina for the remainder of the eastern and western sides of the wharf. As noted above, this application does not affect the private marina.

The existing Jones Bay Wharf Marina currently operates as a commercial marina, meaning that it caters for vessels registered with NSW Maritime as commercial vessels, and not for private recreational vessels. It has a total usable wharf space of 492 lineal metres providing capacity for approximately 40 vessels. The number of vessels that can berth at any one time is dependant on the size of vessels (refer photographs in **Figures 3 and 4**).

The marina comprises concrete pontoons or floating walkways along the eastern and western sides of the wharf. All of the pontoons on the eastern side are parallel to the wharf, whereas some of the pontoons on the western side are both parallel and at right angles. The pontoons, which are structurally independent, are connected to the wharf by a series of ramps or gangways and landings. They are located some 3.5 metres below the deck level of Jones Bay Wharf at low tide.



Figure 4 – Jones Bay Wharf Marina existing pontoons eastern side



Figure 5 – Jones Bay Wharf Marina existing pontoons western side (private marina in foreground)

The pontoons are held in place by a series of PVC coated steel restraining piles, the tops of which are level with the deck. This limits the visibility of the marina structures for pedestrians using the public walkway at deck level.

At present Jones Bay Wharf Marina utilises some of the facilities of the wharf itself, namely toilets and the garbage storage area. There is no marina office on site. Marina administration matters are currently handled on an “as-needs” basis utilising electronic communications, allowing for maximum personnel flexibility. The Marina Manager has personnel located nearby at Sydney Wharf and is able to attend the site at short notice to attend to the management of the wharf. The current Marina Manager has a working relationship with the overall Jones Bay Wharf manager.

1.5 Existing Access

The 10m wide public walkway that surrounds the wharf and is connected to Pirrama Road also provides pedestrian and service access to the marina. This access operates independent of the central roadway between the wharf buildings, although the lower level is accessible from the breezeway, at the midpoint of the wharf. This connection also enables access to site facilities.

There are presently seven (7) access points to the marina pontoons from the perimeter walkway, four (4) on the eastern side and three (3) on the western side.

There is no existing marina car parking on site. There is a public parking station opposite the site on Pirrama Road, known as the Promontory Car Park.

There are some 10 service parking spaces allocated to the marina within the public walkway area. These are distributed near the access points to the marina pontoons. These spaces are managed by the building manager, building executive committee and security to ensure that they are not misused nor used for extended periods.

Disabled access to the pontoons is currently provided at one of the access points on the western side of the wharf. The existing height of the lower deck above the waterline, some 3.5m at low tide precludes the ability to provide disabled access from all gangways at low tide.

Jones Bay Wharf is well served by public transport being close to the light rail, bus and ferry systems that serve Ultimo-Pyrmont and Darling Harbour. The site is within walking distance of the Darling Harbour precinct, Star City Casino and Central Sydney. It is easily accessible by road (via the Cross City Tunnel, Anzac Bridge and the Sydney Harbour Bridge).

1.6 Existing Services

The subject site is serviced by all necessary utilities including power, gas, water, sewer, stormwater drainage and telecommunications.

Power and telecommunications distribution networks are shared with Jones Bay Wharf.

Water supply and sewage collection are piped separately to the marina.

Solid waste is accommodated in the existing garbage room located central to the wharf, adjacent to the breezeway.

An existing sewage pump-out for vessels up to 33 metres is located at the southern end of the eastern side of the wharf for the exclusive use of this marina.

1.7 Local Context

Jones Bay Wharf lies on the western shore of the northern end of Darling Harbour. It is located in a mixed use zone that reflects its waterside inner city location. Darling Harbour (the waterway) to the east and Johnston's Bay to the west form part of Sydney Port, used by a range of vessels from bulk carriers to cruise liners. The area is also frequented by charter vessels, fishing boats and a wide range of recreational boats.

Figures 5, 6, 7 and 8 show the site in context with the surrounding area.

Jones Bay Wharf is surrounded on three sides by the waters of Jones Bay and Sydney Harbour. The original wharf was constructed in the bay to enable the use of the waterways in this inner city location. The wharf's only connection to Pymont is along Pirrama Road, which forms the southern boundary, and to a lesser extent Bayview Street, via the existing overhead bridge.

Development surrounding Jones Bay Wharf is of mixed use. Beyond the waterway across the bay to the north-west is Pymont Point Park, a major open space in Pymont. Residential developments are situated to the west and south of the wharf. Further to the south is Star City Casino and the National Maritime Museum. The nearest development is on the opposite side of Pirrama Road and at the higher level along Mill Street. James Watkinson Reserve is located further to the south. Darling Island across the bay to the south-east and east comprises mixed use residential and business developments.



Figure 6 – Jones Bay Wharf looking north-east towards Sydney CBD



Figure 7 – Jones Bay Wharf Marina looking south-west towards Pymont Point



Figure 8 – Jones Bay Wharf Marina looking south towards Darling Island



Figure 9 – Jones Bay Wharf looking north towards North Sydney

2 Development Proposal

2.1 Objectives

Toga Development No.27 Pty Ltd is seeking to expand the existing commercial marina at Jones Bay Wharf, Pyrmont to accommodate up to 73 commercial vessels of various sizes.

The expansion is in response to recent demand for additional berths for commercial vessels. The use of an existing facility to meet this demand, rather than the development of a new facility, will capitalise on the existing and historical use of the area for commercial maritime operations and its links to highly accessible public transport. The expanded marina will have a positive impact on the maritime and tourism charter boat industries, both important sectors of the NSW economy.

Key components of the layout of the expanded marina are to ensure that the proposal does not significantly impact on existing views to and from Sydney Harbour and that the heritage significance of Jones Bay Wharf is maintained.

2.2 Proposed Development

The proposed development consists of a series of new pontoons to be connected to the existing pontoons which align with the eastern and western sides of Jones Bay Wharf. The proposal will increase the number of berths within the marina by thirty three (33) so that the marina will have the capacity to accommodate up to a total of 73 commercial vessels of various sizes as detailed in **Table 1** below.

Larger commercial vessels up to 45m will be accommodated at the northern end and will include berthage for both motor boats and sailing yachts either for vessel brokerage and commercial charter purposes. The proposed Marina Layout Plan is at **Appendix B**.

It is proposed to provide 8 public berths at the south-eastern end of the wharf. This will be managed by a paid booking system and will allow boats to stay on a short term basis.

Specifically the **proposed water-based development comprises**:

- additional floating mooring pontoons to be attached the existing pontoons that run parallel to the existing wharf
- additional pontoon restraint piles
- extension of services (potable water, telephone, power and lighting, safety equipment, fire hose reels)
- replacement of existing sewage pump-out with new system (see Section 2.5.6)
- realignment of waterside allotment boundaries (refer plan at **Appendix C**), and
- a section of foreshore public walkway between Jones Bay Wharf and the site to the east. This is subject to negotiations with adjoining landowners.

It is intended that the approval of this Project Application supersede the current consent (DA 358-10-2002).It will also address certain ambiguities in the existing consent for the existing marina. Accordingly the Statement of Commitment at Section 5 incorporates the relevant provisions of the existing consent.

The proposal does not include any works to Jones Bay Wharf.

Augmented infrastructure and services will be provided to the marina as required. Individual metering of services will be available to individual vessels via multi-functional pedestals on the pontoons that will provide water, power and telecommunications.

The existing consent prohibits major vessels repairs, refuelling of vessels and the handling of any material which could result in a toxic hazardous spill. There is no intention to alter these arrangements.

Table 1 - Berth Schedule

Berth Size	Number
12m	14
15m	17
18m	20
20m	1
22m	9
23m	1
28m	7
33m	1
44m	1
45m	2
Total	73

2.3 Design and Construction

Ten (10) new pontoons will extend at right angles from the existing pontoons on the western side of the wharf. The furthest of these pontoons to the north will provide wave attenuation replacing the existing wave attenuator at the north-west of the wharf.

Ten (10) new pontoons will extend at right angles from the existing pontoons on the eastern side of the wharf. Some of these new pontoons will have additional arms which lie parallel to the wharf to provide berths for vessels of varying lengths. A pontoon is also proposed from the southern end of the existing pontoon structure along the Pirrama Road shoreline of the bay. Public day berthing will be located at this southern end. The pontoon at the northern end which is to accommodate vessels up to 45m will also provide wave attenuation for the eastern side of the marina.

The pontoons will be constructed from concrete, steel reinforcement and polystyrene with timber walers (edges). The pontoons will be held in place by PVC coated mooring piles. Transport of the marine structures will be via the water from a suitable place of launching or the place of manufacture. Construction of the marine structures including piling will be from the water. Installation and augmentation of utility and services on the land will be required.

The proposed boardwalk linking Jones Bay Wharf with Darling Harbour will be constructed on piles with a timber deck. It will be located at the same level as the existing pedestrian foreshore promenade.

2.4 Access

2.4.1 Pedestrian Access

Existing pedestrian access to Jones Bay Wharf and the marina, which is via the pedestrian walkway which surrounds the finger wharf, will be maintained. This comprises a series of ramps or gangways and a lift connecting the timber wharf deck with the floating pontoon/walkways as follows:

- four ramps on the eastern side
- three ramps on the western side, and
- disabled access lift on the western side.

In addition, this project provides the opportunity to facilitate construction of a missing section of the continuous foreshore walkway from Darling Island Road to Jones Bay Wharf (see **Figure 9** below). The construction of this boardwalk is subject to negotiations with adjoining landowners.

2.4.2 Disabled Access

The apron of Jones Bay Wharf is accessible to the disabled. The existing marina provides access from the apron to the floating deck via the gangway when the tide is high enough to allow a suitable gradient. At other times a mechanical device, operated by marina staff, is used to assist people to the floating deck on the either side of the wharf. This is consistent with the current disabled access approved as a modification to the current approval (refer **Appendix R**), which accesses the floating walkways on the western side of the wharf.

The expanded marina is primarily for commercial vessels which the general public will not access from Jones Bay Wharf.

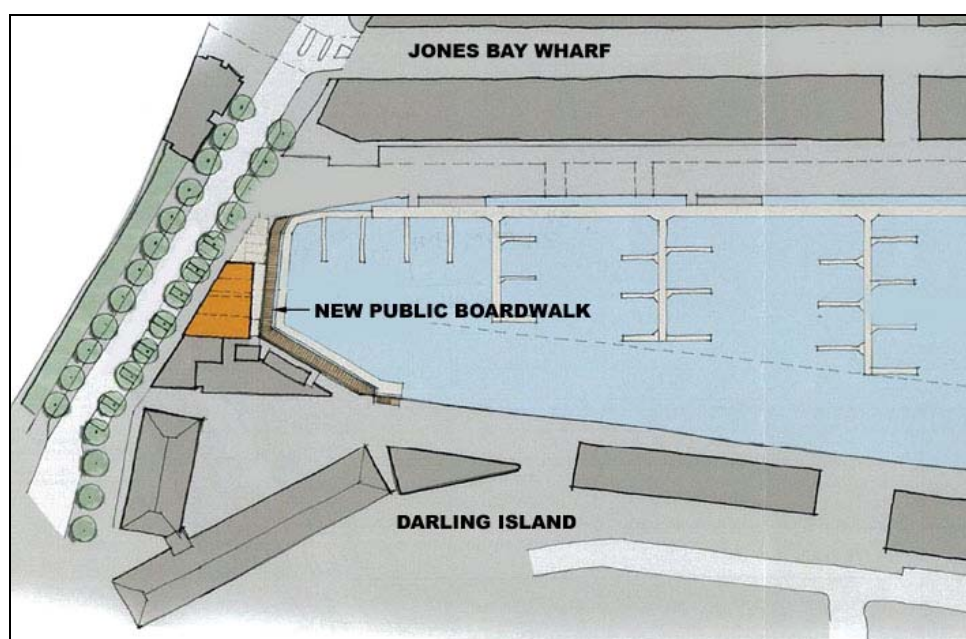


Figure 10 – Sketch showing location of proposed new public boardwalk

2.4.3 Vehicular Access

The proposed development maintains the existing vehicular access to the wharf from Pirrama Road. Any additional vehicles required to access the wharf for vessel and marina servicing will be required to do so in accordance with the Traffic Management Plan appended to the Traffic Impact Study prepared by Colston Budd Hunt & Kafes Pty Ltd (**Appendix F**) and the Operational Management Plan (**Appendix G**). Berthing facility lot owners and occupiers, vessel service contractors and other persons carrying out maintenance on marine structures will be able to access the wharf apron through the retractable bollards. General vehicles are not permitted onto the apron and signs and security controlled retractable and fixed bollards are erected on the connections to the apron to this effect.

2.4.4 Parking

No additional car parking is proposed. This proposal maintains the current parking provisions for vessel and marina servicing which allows short term vehicle parking on the wharf apron by berthing facility lot owners and occupiers, vessel service contractors and other persons carrying out maintenance on marine structures,

only when loading, unloading and servicing commercial vessels. Parking will be time restricted and controlled by the Traffic Management Plan (**Appendix F**) and the Operational Management Plan (**Appendix G**).

2.5 Operational Management

A detailed Operational Management Plan (OMP) for the expanded marina is at **Appendix G**. The following paragraphs summarise the key features of that plan.

2.5.1 Staffing and Operation

The marina manager will be responsible for the day-to-day operations at Jones Bay Wharf, including tenant and facility user obligations, access to service parking spaces, vessel management, maintenance regimes and routine safety checks.

Security arrangements will include security gates at each of the gangway access ramps and 24 hour CCTV surveillance. The Marina Manager will control access for contractors and trade persons. Arrangements will be in place to deal with emergencies on a 24-hour/7day per week basis.

Office hours will be as follows:

- Weekdays 8.30am to 5.00pm
- Weekends 8.30am to 12.00pm

Trade contractors will not be permitted to work on weekends without prior approval by marina management.

There will be no increase in the management workforce however there will be an increase in staff from boat crews and staff associated with minor servicing of vessels. The actual number that vessel staff numbers will increase is not quantifiable due to staff being there only on charter days or for minor vessel servicing.

Special events management plans will be put in place to deal with large vessel movements.

Embarkation and disembarkation of charter vessel passengers will not be permitted from the Marina.

2.5.2 Vessel Management and Navigation

Marina management will be responsible for the allocation of berths, protocols for entering and leaving the marina, including for special events and the enforcement of speed limits.

The expanded marina has been designed to address safe mooring particularly in relation to the local wind and wave environment. Navigational aids are proposed at the northern end of the eastern and western sides of the marina.

2.5.3 Noise

Existing noise controls incorporated in strata by-laws for Jones Bay Wharf will be enforced to limit revving of engines, loud music, parties and loose fittings. These controls will also ensure that any minor maintenance involving power tools etc is conducted during marina operating hours. Garbage removal from vessels will be restricted to between the hours of 7am and 6pm so as not to disturb local residents. Trade contractors will not be permitted to work on weekends without prior approval by marina management.

2.5.4 Signage

Signage as detailed in the OMP will be installed to address both marina rules and emergency procedures.

2.5.5 Lighting

As set out in the OMP, Jones Bay Wharf Marina will have low voltage bollard lighting. Lights on all pontoons will be activated by a sensor system, which will be monitored by marina management. Bollard lighting will be designed to minimise lighting disturbance to the local area.

2.5.6 Waste

Disposal of waste from the marina is currently controlled by *Jones Bay Wharf Safety Management Strategy and Environmental Protection Strategy* dated October 2003 and monitored by the Marina Manager. Garbage and solid refuse is stored in the facilities located central to the wharf. The Operational Management Plan (**Appendix G**) which updates and augments the previous *Jones Bay Wharf Safety Management Strategy and Environmental Protection Strategy* forms part of this proposal.

Facilities for the removal of sewage from vessels will be provided at 10 locations across the expanded marina. Sewerage pumpout points will be located on each of the 5 pontoons which lie at right angles to the eastern side of the wharf, close to the pontoon/wharf junction. Five (5) x sewerage pumpout points will also be located along the pontoons that lie horizontal to the western side of the wharf. Locations of sewerage pumpout points are demonstrated on the hydraulic plans at **Appendix E**.

Oil waste will be disposed of off site by a suitable service contractor arranged by the vessel operators, if required.

2.6 Ecological Sustainable Design

The proposed marina expansion has been designed to incorporate a range of Ecological Sustainable Design (ESD) principles into the design, construction and operation of the marina. The ESD Strategies Report prepared by AECOM Australia Pty Ltd (**Appendix I**) outlines the initiatives that will be incorporated into the proposed development. These include the following:

Design and Construction

- Use of recycled materials and consideration of materials which have a lower embodied energy where appropriate.
- The building contractor for the project, Bellingham Marine, offsets all greenhouse gas emissions produced from the manufacturing and construction operations by purchasing carbon offsets accredited under the Voluntary Carbon Standard. Bellingham Marine have been accredited by the Carbon Reduction Institute as detailed in the ESD Strategies Report.
- Use of Class S expanded polystyrene materials where possible.

Operation

- Individual water metering of each berth for monitoring water usage and management.
- Use of high-density polyethylene piping which avoids the use of PVC for sewer and water.
- Use of energy efficient sewerage pumping system.
- Use of biodegradable detergents for wash down.
- Training and utilisation of staff to ensure sustainable operating practices.
- Only trained marina staff will operate the sewer pump-out facility.

- All marina staff to under-go specific training in the use and deployment of floating booms and provided spill kits.
- Any spills, leaks or sighted waterway contamination will be reported to marina management.
- Use of motion sensor LED lighting with light diffusers.
- Construction of a continuous boardwalk linking Jones Bay Wharf and Darling Island.
- Maintaining disabled access to pontoons on western side of wharf.

2.7 Staging

The proposal does not involve staging. It will be constructed as one contract although the construction methodology will allow existing vessels to remain berthed at the wharf during construction.

3 Environmental Assessment

3.1 Application of Part 3A

The provisions of Part 3A of the Environmental Planning and Assessment (EP&A) Act apply to this development. Clause 75B of the EP&A Act specifies criteria for projects to which this part applies, and invokes the provisions of the State Environmental Planning Policy (SEPP) (Major Development) 2005.

Under the Major Development SEPP, the Minister formed the opinion that the proposed development is of a kind described in Schedule 1, namely Group 6, Clause 14 “Marina Facilities” as it is both:

- increasing the number of berths at an existing facility by more than 30 berths, and
- not only of local environmental planning significance.

Subsequently the Director General’s Requirements (DGRs) were issued on 14 January 2010, listing aspects to be addressed in this environmental assessment (EA), a copy of which is attached at **Appendix A**. The following is an assessment of the project in accordance with those requirements.

The table below provides a summary of the matters listed in the EA requirements and cross references them with the relevant sections in this report and the technical reports appended to this report.

Director General’s Requirement	Report Reference
Key Issues	
▪ Relevant Planning Policies and Guidelines	Section 3.2
▪ Design and Construction	Section 3.3, Appendix O
▪ Operational Management	Sections 2.5, 0, 3.6, and 3.12, Appendix G
▪ Urban Design and Public Access	Sections 2.3 and 3.3
▪ Transport and Accessibility Impacts	Section 3.5, Appendix F
▪ Water Cycle Management	Section 3.6, Appendix G
▪ Marina Development and Potential Impacts	Sections 3.7, Appendix H
▪ Air, Noise, Odour	Sections 3.8 and 3.9, Appendix J and L
▪ Climate Change and Sea Level Rise	Section 3.10
▪ Heritage	Section 3.11, Appendix K
▪ Waste Management	Section 3.12, Appendix G
▪ Infrastructure Provision	Section 3.13, Appendix E and S
▪ Staging	Section 2.7
▪ Ecologically Sustainable Development (ESD)	Sections 2.6 and 3.14, Appendix I
▪ Consultation	Section 3.15
▪ Contributions	Section 3.16
General	
▪ executive summary	Page iii
▪ description of proposed development and structures/works to be undertaken	Section 2
▪ site analysis including site plans, aerial photographs and description of existing and surrounding environment	Section 1
▪ assessment of key issues specified above and a table outlining how these key issues have been addressed	Section 3
▪ assessment of potential impacts of project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts	Sections 3 and 5

Director General's Requirement	Report Reference
<ul style="list-style-type: none"> ▪ plans and documents outlined below ▪ signed statement from author of Environmental Assessment certifying that information contained in report is neither false nor misleading ▪ Quantity Surveyor's Certificate of Cost to verify capital investment value of project (in accordance with definition contained in Major Projects SEPP, and ▪ conclusion justifying project, taking into consideration environmental impacts of proposal, suitability of site, and whether or not project is in public interest. 	<p>Appendices B, C & Section 1 Refer to inside of cover page.</p> <p>Lodged with application</p> <p>Section 4</p>
Plans and Documents	
<ul style="list-style-type: none"> ▪ existing site survey plan ▪ site analysis plan ▪ recent colour photographs ▪ locality/context plan ▪ architectural drawings <p>Other plans:</p> <ul style="list-style-type: none"> ▪ stormwater concept plan ▪ erosion and sediment control plan ▪ geotechnical report ▪ view analysis ▪ landscape plan ▪ shadow diagrams 	<p>Appendix C</p> <p>Appendix B</p> <p>Section 2</p> <p>Section 2</p> <p>Marina layout plan at Appendix B</p> <p>Not Relevant</p> <p>Not Relevant</p> <p>Not Relevant</p> <p>Appendix N</p> <p>Not Relevant</p> <p>Not Relevant</p>

3.2 Relevant Planning Policies and Guidelines

3.2.1 State Environmental Planning Policy (Major Development) 2005

As noted in Section 3.1, the Minister formed the opinion that the proposed development is of a kind described in the Schedule 1, namely Group 6, Clause 14 "Marina Facilities" as it is both increasing the number of berths at an existing facility by more than 30 berths, and is not only of local environmental planning significance. Subsequently the Director General's Requirements were issued on 14 January 2010.

3.2.2 State Environmental Planning Policy 55–Remediation of Land

This policy introduces state-wide planning controls for the remediation of contaminated land. It states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

The Aquatic Ecology Assessment at **Appendix H** advises that the sediments of Sydney Harbour are polluted with chemicals derived from earlier industrial and shipping activities in the harbour. However due to the dredging activity of Jones Bay in the past it is considered that sediments of Jones Bay are likely to be relatively lightly contaminated.

Construction activities of the proposed marina expansion are limited to marine structures and associated works. The Jones Bay Wharf site was remediated during the redevelopment of the site. Therefore the proposed intensified use of the wharf will not pose any increased risk to persons on the site. Driving of new piles into the harbour bed will be managed to minimise disturbance. Contamination risks are unlikely.

3.2.3 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Harbour REP) is the primary planning control for Sydney Harbour and its waterways, comprising the area below the mean high water mark (MHW). It aims to establish a balance between promoting a prosperous working harbour, maintaining a healthy and sustainable waterway environment and promoting recreational access to the foreshore and waterways. From 26 June 2009 all existing REPs were deemed to be State Environmental Planning Policies (SEPPs) under the new Division 2, Part 3 of the Environmental Planning and Assessment Act 1979 (EP&A Act). This assessment concludes that the proposal complies fully with the Harbour REP as set out below.

Zoning

Under the Harbour REP the waterway abutting Jones Bay Wharf to the north, east and west is zoned W1 – Maritime Waters. Commercial marinas are a permissible use within the zone.

The objectives of the W1 – Maritime Water zone are as follows:

- (a) *to give preference to and protect waters required for the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations generally,*
- (b) *to allow development only where it is demonstrated that it is compatible with, and will not adversely affect the effective and efficient movement of, commercial shipping, public water transport and maritime industry operations,*
- (c) *to promote equitable use of the waterway, including use by passive recreation craft.*

The expansion of the marina at Jones Bay Wharf to accommodate additional berths for commercial vessels is consistent with the objectives of the zone as it will facilitate the effective and efficient movement of public water transport and maritime industry operations as discussed in Section 0, not adversely impact on other vessels and promote equitable use of the waterway including use by passive recreational vessels.

Matters for Consideration

Part 3 Division 2 of the Harbour REP that outlines matters that are to be taken into consideration by consent authorities before granting consent to development under Part 4 of the EP&A Act. Although this is a Part 3A project, these matters are addressed below.

Harbour REP – Matters for Consideration	Response
<p>21 Biodiversity, ecology and environment protection</p> <p>(a) <i>development should have a neutral or beneficial effect on quality of water entering waterways,</i></p> <p>(b) <i>development should protect and enhance terrestrial and aquatic species, populations and ecological communities and, in particular, should avoid physical damage and shading of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),</i></p> <p>(c) <i>development should promote ecological connectivity between neighbouring areas of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),</i></p> <p>(d) <i>development should avoid indirect impacts on aquatic vegetation (such as changes to flow, current and wave action and changes to water quality) as a result of increased access,</i></p> <p>(e) <i>development should protect and reinstate natural intertidal foreshore areas, natural</i></p>	<p>Proposal will minimise any potential impact on water quality through the implementation of the OMP (Appendix G)</p> <p>Proposal will have a have a net beneficial impact on aquatic ecology as more habitat area for the support of marine vegetation will be provided refer Section 3.7 and Appendix H.</p> <p>Refer above.</p> <p>Proposal will have a have a net beneficial impact on aquatic ecology as more habitat area for the support of marine vegetation will be provided refer Section 3.7 and Appendix H.</p> <p>No natural areas to reinstate; original wharf built 100 years ago.</p>

Harbour REP – Matters for Consideration	Response
<p>landforms and native vegetation,</p> <p>(f) development should retain, rehabilitate and restore riparian land,</p> <p>(g) development on land adjoining wetlands should maintain and enhance ecological integrity of wetlands and, where possible, should provide a vegetative buffer to protect wetlands,</p> <p>(h) cumulative environmental impact of development,</p> <p>(i) whether sediments in waterway adjacent to development are contaminated, and what means will minimise their disturbance.</p>	<p>Not applicable.</p> <p>Not applicable.</p> <p>Proposal will have a have a net beneficial impact on aquatic ecology as more habitat area for the support of marine vegetation will be provided refer Section 3.7 and Appendix H.</p> <p>The Aquatic Ecology Assessment at Appendix H advises that the sediments of Sydney Harbour are polluted with chemicals derived from earlier industrial and shipping activities in the harbour. However due to the dredging activity of Jones Bay in the past it is considered that sediments of Jones Bay are likely to be relatively lightly contaminated.</p> <p>Construction activities of the proposed marina expansion are limited to marine structures and associated works. The Jones Bay Wharf site was remediated during the redevelopment of the site. Therefore the proposed intensified use of the wharf will not pose any increased risk to persons on the site. Driving of new piles into the harbour bed will be managed to minimise disturbance. Contamination risks are unlikely.</p>
<hr/> <p>22 Public access to, and use of, foreshores and waterways</p>	
<p>(a) development should maintain and improve public access to and along foreshore, without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,</p> <p>(b) development should maintain and improve public access to and from waterways for recreational purposes (such as swimming, fishing and boating), without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,</p> <p>(c) if foreshore land made available for public access is not in public ownership, development should provide appropriate tenure and management mechanisms to safeguard public access to, and public use of, that land,</p> <p>(d) undesirability of boardwalks as a means of access across or along land below mean high water mark if adequate alternative public access can otherwise be provided,</p> <p>(e) need to minimise disturbance of contaminated sediments.</p>	<p>Existing foreshore access on Jones Bay Wharf is unaffected by proposal. Proposal includes connection of public access for Jones Bay Wharf to Darling Island with new boardwalk.</p> <p>Waterway public access for commercial boating purposes without adverse impacts on environment. New public access boardwalk.</p> <p>Foreshore access in public ownership.</p> <p>Foreshore access comprises existing 100 year old wharf. New boardwalk is only means of connecting Jones Bay Wharf and Darling Island due to existing building. Refer above.</p>
<hr/> <p>23 Maintenance of a working harbour</p>	
<p>(a) foreshore sites should be retained so as to preserve character and functions of a working harbour, in relation to both current and future demand,</p> <p>(b) consideration should be given to integrating facilities for maritime activities in any development,</p>	<p>Proposal will further preserve and reinforce character and function of working harbour based on current and future demand.</p> <p>Development comprises maritime activities at existing 100 year old wharf.</p>

Harbour REP – Matters for Consideration	Response
<p>(c) <i>in case of development on land that adjoins land used for industrial and commercial maritime purposes, development should be compatible with use of adjoining land for those purposes,</i></p> <p>(d) <i>in case of development for industrial and commercial maritime purposes, development should provide and maintain public access to and along foreshore where such access does not interfere with use of land for those purposes.</i></p>	<p>Marina expansion compatible with adjoining commercial uses within former wharf buildings.</p> <p>Existing public access to foreshore to be maintained. Access to be extended.</p>
24 Interrelationship of waterway and foreshore uses	
<p>(a) <i>development should promote equitable use of waterway, including use by passive recreation craft,</i></p> <p>(b) <i>development on foreshore land should minimise any adverse impact on use of waterway, including use of waterway for commercial and recreational uses,</i></p> <p>(c) <i>development on foreshore land should minimise excessive congestion of traffic in waterways or along foreshore,</i></p> <p>(d) <i>water-dependent land uses should have priority over other uses,</i></p> <p>(e) <i>development should avoid conflict between various uses in waterways and along foreshores.</i></p>	<p>Access for passive recreation craft provided in public berthing area in south-east corner and adjacent private marina.</p> <p>No new development of foreshore land proposed. Impact on waterway minimised by continuing use of existing 100 year old wharf structure.</p> <p>No new development of foreshore land. Traffic in waterway limited to within Jones Bay; traffic along foreshore minimised by nature of marina that is for commercial vessels, ie no access for passengers.</p> <p>Water-dependent land use proposed.</p> <p>Development expands existing use in waterway adjacent to existing wharf structures. No conflict with foreshore uses.</p>
25 Foreshore and waterways scenic quality	
<p>(a) <i>scale, form, design and siting of any building should be based on an analysis of:</i></p> <p style="margin-left: 20px;">(i) <i>land on which it is to be erected, and</i></p> <p style="margin-left: 20px;">(ii) <i>adjoining land, and</i></p> <p style="margin-left: 20px;">(iii) <i>likely future character of locality,</i></p> <p>(b) <i>development should maintain, protect and enhance unique visual qualities of Sydney Harbour and its islands, foreshores and tributaries,</i></p> <p>(c) <i>cumulative impact of water-based development should not detract from character of waterways and adjoining foreshores.</i></p>	<p>No buildings proposed.</p> <p>Visual qualities of Sydney Harbour maintained and protected by locating expanded marina within existing sheltered bays.</p> <p>Cumulative impact minimised by locating expanded marina within existing sheltered bays shielded by surrounding development.</p>
26 Maintenance, protection and enhancement of views	
<p>(a) <i>development should maintain, protect and enhance views (including night views) to and from Sydney Harbour,</i></p> <p>(b) <i>development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,</i></p> <p>(c) <i>cumulative impact of development on views should be minimised.</i></p>	<p>Visual impacts of the proposed development are addressed in Section 3.4 and Appendix N. Views to and from Sydney Harbour maintained and protected by locating expanded marina within existing sheltered bays.</p> <p>Views to and from public places protected by locating expanded marina within existing sheltered bays.</p> <p>Cumulative impact minimised by locating expanded marina within existing sheltered bay shielded by surrounding development.</p>
27 Boat storage facilities	
<p>(a) <i>development should increase number of public boat storage facilities and encourage</i></p>	<p>Development will increase boat storage for commercial vessels promoting working harbour.</p>

Harbour REP – Matters for Consideration	Response
<p><i>use of such facilities,</i></p> <p>(b) <i>development should avoid proliferation of boat sheds and other related buildings and structures below mean high water mark,</i></p> <p>(c) <i>development should provide for shared use of private boat storage facilities,</i></p> <p>(d) <i>development should avoid proliferation of private boat storage facilities in and over waterways by ensuring that all such facilities satisfy a demonstrated demand,</i></p> <p>(e) <i>boat storage facilities should be as visually unobtrusive as possible,</i></p> <p>(f) <i>in case of permanent boat storage, safety and utility of development should not be adversely affected by wave environment, and development should avoid adverse impacts on safe navigation and single moorings.</i></p>	<p>No boats sheds or related buildings proposed. Proposal located at existing 100 year old wharf.</p> <p>Not applicable.</p> <p>Proposal will further preserve and reinforce character and function of working harbour based on current and future demand (refer Section 4).</p> <p>Floating pontoons minimise visual impact.</p> <p>Expanded marina designed to address wave environment and safe navigation.</p>

3.2.4 Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005

The Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005 (Harbour DCP) supports the Harbour REP for development within the ‘Foreshores and Waterways Area’ by defining ecological communities and outlining landscape characters for discrete sections of the Harbour, and providing design guidelines for the various types of development in and around the waterway.

The Harbour DCP does not identify the Pyrmont peninsula as having any particular ecological communities or any special landscape character. It is a developed urban waterway, part of Sydney Port.

Section 4 of the Harbour DCP contains guidelines for specific types of development that are water-based or located at the land/water interface. Apart from land based utility and service connections, the proposal comprises water-based development only. As such Section 4 applies as set out below. The following summary demonstrates that the proposal is consistent with all relevant objectives and controls of the DCP.

Sydney Harbour Foreshores & Waterways DCP 2005 – Relevant Clauses	Response
<p>4 DESIGN GUIDELINES FOR WATER BASED & LAND/WATER INTERFACE DEVELOPMENTS</p> <p>4.2 GENERAL REQUIREMENTS</p> <p><i>Following objectives and requirements must be considered for all water-based and land/water interface developments:</i></p> <ul style="list-style-type: none"> • <i>public access to waterways and public land is maintained and enhanced</i> • <i>congestion of waterway and foreshore is minimised</i> • <i>conflicts on waterway and foreshore are avoided</i> • <i>development warrants a foreshore location</i> • <i>development does not interfere with navigation, swimming or other recreational activities</i> • <i>demand for development has been established</i> • <i>structure does not obstruct or affect natural flow of tides and currents</i> • <i>development does not dominate its landscape setting</i> 	<p>Public access to waterway maintained and extended.</p> <p>Waterway congestion minimised by locating marina within Jones Bay. Berth numbers and sizes are appropriate for bays.</p> <p>Waterway and foreshore conflicts avoided by separation of uses.</p> <p>Commercial marina warrants foreshore location.</p> <p>Complies.</p> <p>Complies. Refer to Section 4.</p> <p>Complies.</p> <p>Marina expansion comprises floating pontoons at water level. Visual impacts of the proposed</p>

Sydney Harbour Foreshores & Waterways DCP 2005 – Relevant Clauses	Response
<ul style="list-style-type: none"> • extent of development is kept to absolute minimum necessary to provide access to waterway • shared usage of facilities encouraged to minimise number of structures and their cumulative impact on environment of Harbour and its tributaries, and • development is setback at least 2.5 metres from division of the waterway as established by NSW Maritime. 	<p>development further addressed in Section 3.4 and Appendix N Complies.</p> <p>Proposal comprises expansion of existing facility and of size that will not affect access to the waterway. Some public berths provided within commercial marina. Lease area within Jones Bay agreed with NSW Maritime. Refer to plan at Figure 2 and NSW Maritime consent to lodge at Appendix P</p>
<hr/>	
<p>4.3 FORESHORE ACCESS <i>Foreshore access is to be encouraged and promoted. Wherever possible, public access to and along foreshore including inter-tidal zone should be secured or improved. Foreshore links joining public open spaces or access points are most desirable.</i></p>	<p>Existing foreshore access unaffected by proposed development. access to be expanded with link between Jones Bay Wharf and Darling Island.</p>
<hr/>	
<p>4.7 MARINAS (COMMERCIAL & PRIVATE) <i>'Commercial marinas' permitted in a variety of locations in order to support working waterfront functions and recreational use of harbour. Where permissible following objectives and guiding principles must be considered.</i> <i>Location</i></p> <ul style="list-style-type: none"> • marinas (where permissible) to be located where they can be used by as many people as possible and are easily accessed from land and water • marinas to be located where there is adequate water depth or where minimal dredging of soft material will achieve an adequate water depth • marinas are to be located away from areas subjected to exposed wave environments • marinas are preferably to be located away from wetlands or the wetlands protection area (both as defined by SREP) or where they or vessels using them will physically damage or overshadow estuarine vegetation of high value • marinas are not to reduce number of publicly available single (swing) moorings, jeopardise safe navigation or adversely impact other water users including small craft, and • waterside structures are to minimise impacts on public water activities. 	<p>Noted. Commercial marina permissible use in zone.</p> <p>Marina accessible from public walkway that surrounds site.</p> <p>Water depth adequate as wharf previously accommodated ships.</p> <p>Complies.</p> <p>No wetlands in vicinity.</p> <p>No single swing moorings affected.</p> <p>Waterside structures limited to additional floating pontoons within sheltered bay.</p>
<hr/>	
<p><i>Design and Layout</i></p> <ul style="list-style-type: none"> • buildings and other facilities are to be designed and sited so that natural or other attractive features are not obscured (see also Section 4.5 of this DCP) • buildings are to be designed so that their dimensions are not excessive and can reasonably meet functional requirements 	<p>Complies. Additional facilities comprise floating pontoons below land of existing wharf apron.</p> <p>No buildings proposed.</p>

Sydney Harbour Foreshores & Waterways DCP 2005 – Relevant Clauses	Response
<p><i>of proposed uses</i></p> <ul style="list-style-type: none"> • <i>marinas are to enhance public access to and along shore and, where relevant, inter tidal zone</i> • <i>secure storage is to be provided in a controlled environment</i> • <i>extent of development over water including waterside structures, berths, fairways and access channels is to be minimised and result in minimal alienation of the waterway</i> • <i>marinas are to be in form of a series of interlinked pontoons which shall be restrained and held in position by a minimum number of piles or mooring lines to anchor points in the seabed</i> • <i>design of marina restraints shall take into account flexibility and performance of pontoon systems under environmental loads</i> • <i>colours, appearance and form of any associated buildings shall be compatible with surrounding environment</i> • <i>shiny or reflective materials are not to be used</i> • <i>depth and width of berths and fairways of commercial marinas shall accommodate either a yacht or motor vessel. Restricted berths to be nominated only where will lead to an optimal environmental outcome.</i> • <i>commercial marinas are to provide a point of access to boats for disabled people where possible</i> • <i>marinas are to be designed to minimise impact of vessels when in use on environment including on air and water quality, marine habitat and bank stability.</i> 	<p>Existing public access to foreshore unaffected and to be extended.</p> <p>Complies.</p> <p>Extent of development over water limited to floating pontoons within sheltered bays.</p> <p>Complies.</p> <p>Complies.</p> <p>No buildings proposed.</p> <p>Noted, not proposed.</p> <p>Complies. No restricted berths proposed.</p> <p>Complies, refer Section 2.4.2 and plans at Appendix R</p> <p>Complies, refer Sections 3.6 and 3.7 for details.</p>
<p><i>Facilities and Services</i></p> <ul style="list-style-type: none"> • <i>commercial marinas are to provide boating service facilities such as fuel, water, toilet facilities or sewage pumpout where practicable and where such facilities are not yet locally available</i> • <i>commercial marinas are to provide a mix and choice of boat storage facilities based on established demand as well as a range of marine services to boating public</i> • <i>commercial marinas are to provide benefits to both general and boating public, and</i> • <i>vessels at marina are not to be used as a permanent residence.</i> 	<p>Expanded marina to provide improved sewage pump-out facility; refuelling not permitted by existing consent, nor proposed.</p> <p>Boat storage facilities to provide for a range of vessels as set out in Table 1 in Section 2.2.</p> <p>Complies as set out Section 4.</p> <p>Noted, not proposed.</p>
<p><i>Visual Impact</i></p> <ul style="list-style-type: none"> • <i>visual contrast (derived from an analysis of form, line, colour and texture) between marina and existing or planned future character of its setting is to be minimised</i> • <i>visual impact of marina on people in visual catchment (derived from an analysis of the potential number of viewers, their location within landscape, distance from marina, and duration of view) is to be minimised</i> 	<p>Visual contrast minimised as proposal is for expanded marina facility adjacent to existing wharf within Jones Bay.</p> <p>Visual impact minimised, as proposed development located within existing sheltered bays shielded by surrounding development.</p>

Sydney Harbour Foreshores & Waterways DCP 2005 – Relevant Clauses	Response
<ul style="list-style-type: none"> any visual analysis shall consider impact of largest motor vessel(s) capable of being berthed at marina largest vessels (motorised or otherwise) to be berthed at marina are to be located as far from shore as possible waterside structures and berthed vessels associated with marinas are not to block views from foreshore public open space or views to foreshore public open space from waterway bulk and scale of buildings and other structures on land is to be minimised through appropriate mitigation measures including landscaping, articulated walls, detailing of surfaces and by using smaller elements visual impact of car parking from waterway is to be minimised, and all signage is to be located on dry land below the roofline (or parapet) of buildings. Advertising signs are not to detract from the visual quality or amenity of foreshores and waterways when viewed from waterways. 	<p>Noted.</p> <p>Largest vessels to be moored at northern end, furthestmost point from land. Complies.</p> <p>Long linear nature of existing wharf minimises impact on views, refer photomontages at Appendix N.</p> <p>No buildings proposed.</p> <p>No car parking proposed.</p> <p>Complies. No signage on building or advertising signs proposed.</p>
<i>Environmental Management</i>	
<i>Pollution and waste:</i>	
<ul style="list-style-type: none"> potential pollutant sources from site must be controlled and meet established performance standards appropriate controls are to be in place and managed to prevent any pollutants entering environment marinas for nine or more vessels are to provide adequate and readily accessible facilities for collection and disposal of wastes from vessels facilities for pumping out sewage holding tanks are to be provided onshore, and any waste that cannot be recycled is to be disposed of at an appropriate facility 	<p>Expanded marina will maintain environmental quality of site and surrounds. Refer OMP at Appendix G</p> <p>Complies, refer OMP at Appendix G.</p> <p>Complies, refer Section 2.5.6, Appendix G.</p> <p>Complies, refer Section 2.5.6 and plans at Appendix B.</p> <p>Complies.</p>
<i>Traffic and Parking:</i>	
<ul style="list-style-type: none"> land-based impacts including traffic volumes and parking demand meet established performance standards adequate car and trailer parking (based on number and type of berths, associated activities and number of employees) is to be available on-site, and adverse impacts of traffic and parking generated by boat storage facilities in terms of congestion, safety, air quality and noise are to be minimised. 	<p>Complies, refer traffic report at Appendix F</p> <p>No vessels requiring trailer parking proposed.</p> <p>Complies. Minimal impacts anticipated, refer transport report at Appendix F</p>
<i>Noise:</i>	
<ul style="list-style-type: none"> adverse impacts of noise (considering hours of operation, existing background noise, expected departure/arrival times for vessels, noise level of marina patrons, noise level from repair and testing of vessels and motors) are to be minimised through appropriate design and management measures, and 	<p>Complies, refer OMP at Appendix G and noise report at Appendix L.</p>

Sydney Harbour Foreshores & Waterways DCP 2005 – Relevant Clauses	Response
<ul style="list-style-type: none"> land-based impacts including noise emissions meet established performance standards. 	Not applicable.
<p><i>Lighting:</i></p> <ul style="list-style-type: none"> adverse impacts of lighting on night navigation and neighbours are to be minimised through appropriate design and management measures. 	Complies, refer OMP at Appendix G
<p><i>Health and safety</i></p> <ul style="list-style-type: none"> Marinas are to be a safe place to work and adequate environmental safety and emergency response plans are in place. 	Complies, refer OMP at Appendix G

3.2.5 Sydney Local Environmental Plan 2005

Sydney Local Environmental Plan 2005 (Sydney LEP) commenced on 9 December 2005. Sydney LEP is of limited relevance to this project, as it is a water-based development for which the Minister is the consent authority. However relevant provisions of the Sydney LEP are addressed below to demonstrate that the proposal is consistent with its adjoining land based zones.

Zoning

Under the Sydney Local Environment Plan 2005 (LEP) most of Jones Bay Wharf is identified as being within the Residential-Business (Non-Residential Development) zone, with the 10m surrounding public walkway zoned Public Recreation. Apart from alterations to some underground/under deck services, no works are proposed in either of these zones.

The objectives of the Residential-Business (Non-residential development) zone are as follows:

- (a) to promote a wide range of uses, particularly business development including tourist, leisure, commercial, retail and office development consistent with Ultimo-Pyrmont's proximity to the Sydney CBD, harbour locations and transport infrastructure, and
- (b) to accommodate residential development to a level compatible with adjoining business uses and consistent with the objective of creating a mixed-use area, and
- (c) to accommodate uses which generate employment opportunities and provide facilities and services that enable people to live and work in the same community, and
- (d) to ensure that the total amount of employment-generating development is compatible with the traffic capacity of Ultimo-Pyrmont and adjoining areas, and
- (e) to encourage sustainable transport modes for journeys to work and other trips, including walking, cycling and all forms of public transport, and
- (f) to limit advertising to a level compatible with the creation of a high-quality mixed-use area.

Although no physical works are proposed within the Public Recreation zone, access to the marina by pedestrians and service vehicles will continue to be via this zone. The objectives of the Public Recreation zone are:

- (a) to establish public recreation areas which serve the needs of residents and workers within Ultimo-Pyrmont and the adjoining suburbs, and
- (b) to provide public access to all parts of the public domain, especially waterfront areas and escarpments, and
- (c) to provide a variety of public areas and recreational opportunities, and
- (d) to provide for facilities that accommodate or are ancillary to recreational activities relating to the use of the public domain

Under Clause 87(1) of Sydney LEP, only uses that the consent authority is satisfied are consistent with one or more of the zone objectives are permissible in these zones. The proposed use is consistent with the

relevant objectives of both the Residential-Business Zone (Non-residential development) and Public Recreation zones as it will continue to promote commercial uses adjoining the harbour in a way that is compatible with surrounding development, while maintaining the existing public walkway.

The Operation Management Plan at **Appendix G** and the transport report at **Appendix F** set out the manner in which the marina is to be managed to ensure protection and enhancement of both the public domain and the amenity of surrounding development.

Heritage

Jones Bay Wharf is identified as a heritage item within the Sydney LEP (Item 99). Clause 101 of Sydney LEP states that *consent must not be granted to development ... of a heritage item... unless the consent authority is satisfied that the development will be compatible with the conservation of the heritage significance of the item.*

Although this development does not include works to the heritage item, a Statement of Heritage Impact has been undertaken as discussed in Section 3.11 and as set out in **Appendix K**. This assessment draws on the Conservation Management Plan (CMP) that was prepared for the site in August 2003.

The Statement of Heritage Impact concludes that the proposal will continue to support policies within the CMP and will further assist in fostering maritime related activities within the wharf building itself and impacts on the wharf and its setting are considered acceptable.

3.2.6 Sydney Metropolitan Strategy and Sydney City Subregional Strategy

Sydney Metropolitan Strategy

The Sydney Metropolitan Strategy is a broad framework released in December 2005 to strengthen Sydney's place in the global economy by outlining a vision for growth and development over the next 25 years. The strategy has five key aims:

1. enhance liveability
2. strength economic competitiveness
3. ensure fairness
4. protect the environment
5. improve governance

The eight key elements of the vision are: stronger cities within the metropolitan area, strong global economic corridor, more jobs in western Sydney, contain Sydney's urban footprint, major centres will emerge as jobs, service and residential locations, fair access to housing, jobs, services and open space, connected centres and better connected and stronger regions.

The proposed marina expansion will support the strategy's aims and vision by adding to the services available for commercial vessels in the major centre of Sydney. The expanded marina will assist in the better utilisation of Sydney Harbour.

Draft Sydney City Subregional Strategy

The Draft Sydney City Subregional Strategy was released in July 2008. The subregional strategy expands on the Metropolitan Strategy with key directions that comprise: reinforcing global competitiveness, ensuring adequate capacity for new office and hotel developments, planning for sustainable development of major urban renewal projects, planning for housing choice, developing an improved and increasingly integrated transport system that meets the Subregion's multiple transport needs, improving the quality of the built and natural environment while decreasing the Subregion's ecological footprint and enhancing the Subregion's prominence as a diverse global cultural centre.

The Subregional Strategy notes that the Pyrmont–Ultimo Precinct has emerged from its former industrial and warehouse uses as an information technology and media precinct, with residential development, visitor accommodation and a number of cultural, visitor and entertainment facilities as well as maritime activities.

Expansion of the existing commercial marina at the heritage listed Jones Bay Wharf maintains the tradition of maritime activity close to the City Centre enabling the asset that is Sydney Harbour to continue to be showcased and optimised.

3.2.7 Protection of the Environment Operations Act 1997

Chapter 3 of the Protection of the Environment Operations (POEO) Act relates to environment protection licences. These licences are required when works and activities listed in Schedule 1 of the Act are undertaken. Schedule 1 includes:

Marinas and boat repairs

(1) *This clause applies to the following activities:*

boat construction/maintenance (dry/floating docks), meaning the use of dry docks or floating docks for the construction, repair and maintenance of vessels.

boat construction/maintenance (general), meaning the use of facilities (whether water-based or land-based) for the construction, repair and maintenance of vessels (other than dry docks, floating docks and facilities not having frontage to a waterway).

boat mooring and storage, meaning the use of pontoons, jetties, piers or other structures (whether water-based or land-based) designed or utilised to provide moorings or dry storage (other than swing moorings and facilities not having frontage to a waterway).

(2) *Each activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if it meets the criteria set out in Column 2 of that Table.*

(3) *In this clause, waterway means any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea).*

This project does not include boat construction or maintenance (other than minor repairs as permitted by the existing consent) therefore only the *boat moorings and storage* activity applies. The criteria identified in Column 2 relates to the *capacity to handle more than 80 vessels (excluding rowing boats, dinghies and other small craft) at any time*. As this proposal will increase the capacity of the existing marina to a maximum of 73 vessels, as set out in Table 1 Section 2.2, a licence is not required. Therefore it is concluded that section 45 of the POEO Act *Matters to be taken into consideration in licensing functions* does not apply.

3.2.8 Fisheries Management Act 1994

Part 7 of the Fisheries Management Act 1994 (FMA) sets out the conditions under which permits are required for various construction activities, and the conditions under which a permit may be granted are specified in the NSW I&I (Fisheries) Policy and Guidelines NSW Fisheries 1999). With respect to estuarine activities permits are required for reclamation or dredging works and for the taking or harming of marine vegetation:

- The present proposal does not include activities that fall under the definition of dredging or reclamation.
- The proposal would result in a net increase in available wetted surfaces area to support macroalgae.

It is concluded that the proposal will not require a permit under the FMA.

3.2.9 Non-Compliances with Relevant EPIs

As the proposed development is consistent with all of the relevant environmental planning instruments as set out above, there are no non-compliances.

3.3 Urban Design and Public Access

Section 2.2 describes the proposal as comprising the installation of additional floating pontoons to expand the existing marina at Jones Bay Wharf. The design of the expanded marina will continue the design principles of the existing marina, by adding a series of perpendicular pontoons to the existing pontoons that lie parallel to the wharf structure. The marina is located at water level, which is some 3.5 metres below deck level and street level at low tide.

Section 1.5 identifies that the lower deck of the existing wharf includes a 10m wide public walkway measured from the edge of the wharf. Access to the existing and expanded marina will continue from this walkway, which generally remains in its original state. No works are proposed to this public domain. Consequently this existing component of the pedestrian pathway that extends for much of the perimeter of the Pyrmont peninsular will remain.

The proposal includes an additional linkage to the pedestrian network with a boardwalk in front of the Arrow Dive building on the water side, to connect the Jones Bay Wharf apron with the Wharf 18 deck opposite on Darling Island. This requires the agreement of the owner of the land to the east.

Management of the public walkway in terms of its use by marina users is addressed in the Operational Management Plan at **Appendix G**.

The existing disabled access to the marina on the western side of the wharf will be maintained.

The proposal does not include any new buildings or alterations to existing buildings therefore no major urban design issues are associated with the proposal. The important heritage aspects of Jones Bay Wharf are not affected (refer **Appendix K**).

Appendix O details the material and construction specifications for the proposed development.

3.4 Visual Impacts

A Visual Impact Assessment (VIA) (**Appendix N**) dated August 2010 has been prepared by RPS to determine the visual impacts of the proposed development on the surrounding waterway, public domain, and residential and commercial developments. The visual assessment was carried out from three significant view locations in the surrounding area as follows:

- View 01 - from cliff above Pirrama Road
- View 02 – from James Watkinson Reserve
- View 03 - from foreshore promenade on western side of Darling Island

THE VIA found that the proposed development will have a minor impact on Views 01 and 02. Impacts on views from these locations are mitigated by the dominance of the existing large commercial buildings located at Jones Bay Wharf and Darling Island, the siting of larger vessels at the northern end of the marina, the orientation of the most of the berths on the eastern side parallel to the existing wharf, and maintaining approximately 1/3 of the waterway on the eastern side to remain free from moored vessels.

There will be a moderate level of impact on views from location 03. A moderate level of impact in this location is considered acceptable due to the existing maritime character of the area, the subservience of the

marina to Jones Bay Wharf and its buildings, and the dynamic nature of views with the coming and going of vessels and occupancy of the marina.

The VIA provided the following conclusions:

The visual assessment indicates that the proposed marina expansion would have an overall low impact on the visual character of the surrounding area for the following reasons:

- *proposal results in only a minor alteration to the views on the western side of Jones Bay Wharf without blocking any views*
- *impacts on views on the eastern side of Jones Bay Wharf are minimised through the orientation of most of the vessels parallel with the wharf and the siting of larger vessels at the northern end of the marina.*
- *the change in views as a result of the proposal is consistent with the maritime character of the area and the existing use of the waterway.*
- *the scale of the marina is subservient to the existing urban built environment which includes large commercial buildings previously used for maritime purposes,*
- *the resultant views would be dynamic, changing throughout the day, week and year with the coming and going, and the travelling speed of vessels, and*
- *the location of pontoons 3.5m (at low tide) below the wharf deck and the physical setback of the wharf buildings from the edge of the wharf by 10m meaning that the marina is generally overlooked from the public domain, and commercial and residential developments.*

As such it is considered that view impacts as a result of the proposed development will be relatively minor and will be consistent with the existing visual character of the area.

3.5 Transport and Accessibility Impacts

These issues are addressed in the Traffic Impact Study (TIS) at **Appendix F**, prepared by Colston Budd Hunt & Kafes Pty Ltd in accordance with the RTA's Guide to Traffic Generating Developments.

The TIS has considered traffic generation, access, additional servicing requirements, loading docks/bays, promotion of public transport usage, pedestrian and bicycle linkages (in accordance with the NSW Department of Planning Guidelines for Walking & Cycling) and bicycle parking. It has also identified the current capacity of the Jones Bay Road and Pirrama Road intersection and the minimal impact on the intersection from the proposed development.

The existing marina has an employee workforce of some 30 full time and 50 casual employees/contractors. Based on surveys taken during the study the Jones Bay Wharf and the Promontory car park (public off-street car park) access driveways on Pirrama Road carry some 60 to 90 vehicles per hour two-way during the morning and afternoon peak periods. Surveys also found that the existing marina facility generated a parking demand of some 25 to 30 vehicles during the weekday period which were accommodated in both the Promontory car park and within the existing tenant parking on the wharf.

The study findings provide the following conclusions:

The proposed marina expansion could result in an increase in traffic generation of some 10 to 15 vehicles per hour two-way during the morning and afternoon peak periods. This is a low increase in traffic generation, equivalent to on average one additional vehicle every four to six

minutes during peak times. Such a low increase in traffic generation will not have a noticeable effect on the operation of the surrounding road network and its intersections.

Based on an increase in employee workforce of some 70%, the expanded marine facility could be expected to have a parking demand of some 40 to 50 vehicles during the peak weekday period. This results in a net increase of some 15 to 20 vehicles. These vehicles could utilise available vacant parking within the adjacent promontory car park.

Restricting parking will encourage the use of public transport and reduce the use of private vehicles.

In summary the main points from the Traffic Impact Study were as follows:

- the proposed development will increase employment densities close to residential areas and close to existing public transport services and is consistent with government policy objectives to reduce private car travel and encourage public transport use;
- a work place travel plan will be implemented for the development;
- parking provision is considered appropriate;
- access and servicing arrangements are considered appropriate and will be provided in accordance with the traffic and pedestrian management plan prepared for the site;
- the road network will be able to cater for the additional traffic generated by the proposed marina expansion
- Director General's requirements are discussed in paragraphs 3.29 to 3.35.

No adverse traffic, pedestrian, parking or servicing impacts will occur from the extension of the wharf.

3.6 Water Cycle Management

The OMP (**Appendix G**) prepared by Scope Marine includes specific operational procedures to minimise potential impacts on water quality from spills, leaks or other contamination. These are as follows:

Liquid Waste

- *Marina management will maintain the right to inspect vessels on arrival into the facility to check bilges for oil or potential environmental hazards.*
- *All on board toilets must comply with Australian standards and make use of on board holding tanks. No vessel is permitted to pumpout black or grey water into the local waterway.*
- *Marina tenants must comply with water regulations for usage and must only use biodegradable detergents in wash down procedures.*
- *A waste oil receptacle will be located within the facility garbage room for the safe disposal by a suitable service contractor arranged by the vessel owner.*

Sewage Pumpout

- *Jones Bay Wharf will have a section of marina space that will serve as a pumpout facility.*

- *The most North Eastern berths will have their own designated couplings while the berth directly astern of them which runs on an East – West axis will remain vacant so it can be used as a pump-out facility.*
- *Only trained marina staff will operate the pump-out facility.*
- *There will be a chemicals spill kit, floating booms and medical box on location.*
- *In the event of leak or spill during the pumpout process the pump will be stopped and the spill will be cleaned up aided by deployment of floating booms if need be.*
- *All Marina staff will under-go specific training in the use and deployment of floating booms and provided spill kits.*
- *Any spills, leaks or sighted waterway contamination will be reported to marina management.*

Cleaning

- *Jones Bay Wharf will be maintained by full-time on site staff. Duties carried out by the marina staff will include the on going cleaning of the facility to maintain a pleasant environment for tenants, contractors and local residents alike.*
- *There will be weekly, monthly, bi-monthly and yearly cleaning schedules which will range from washing of pile caps, gates, bollards, pontoons, signs and gangways to the removal of barnacles from piles and water blasting of pontoon surfaces.*
- *The marina specific garbage room and bins will all undertake weekly cleaning and upkeep.*
- *All cleaning will use only approved bio-degradable detergents*

Impacts on water quality will be also minimised by the enforcement of the following restrictions.

- *Pollution of navigable waters in the course of the occupation or use of the facility, or of the use or any operation or activity on any vessel berthed at the facility will not be permitted.*
- *Handling of any material which could result in a toxic or hazardous spill in the navigable waters will be prohibited.*
- *Application of fibreglass will be restricted to minor repairs.*
- *Vessel maintenance undertaken at the facility will be limited to minor repairs only. Major vessel repairs (including hull treatment, anti-foul or slipping, painting and engine repairs) will be prohibited*
- *Fuelling of vessels at the facility will be prohibited.*
- *Fuelling or servicing of any vessels berthed at the facility by other waterborne craft will be prohibited.*

These restrictions have been included in the Statement of Commitments at Section 5.

The proposal is for water-based development only. As such, the proposal will not impact on surface or groundwater hydrology and quality.

3.7 Marina Development and Potential Impacts

Marine Pollution Research Pty Ltd (MPR) have prepared an Aquatic Ecology Assessment (AEA) of the Jones Bay Wharf Marina site to consider the likely impacts on aquatic ecology from the construction and operation of the proposed expansion to the existing marina.

The site was not identified as containing any significant marine vegetation or aquatic ecology within NSW Fisheries, City of Sydney, or SREP (Sydney Harbour Catchment) 2005 mapping.

Diver based aquatic ecology survey's have been carried out to further investigate the marine vegetation and aquatic ecology of the site.

A thorough assessment of the impacts that the proposed development will have on marine vegetation and aquatic ecology conclude that:

- *Encrusting organisms including algae will be removed during pile removal and a small portion of seawall toe habitat supporting algae will be shaded. These losses will be offset by the provision of substantially more piles and an overall increase in floating pontoon wetted surface area that will all be colonised by new encrusting assemblages including macroalgae. In this respect there will be a net beneficial impact arising from the proposed marina expansion works.*
- *Disruption to associated fish assemblages will be negligible and there will be an overall beneficial impact for rocky reef fish assemblages with the increase in cavelike reef habitat created under the wharf and expanded floating pontoon network.*
- *By virtue of the depth of Jones Bay and its orientation plus proximity to the main harbour channel, it is concluded that the marina expansion would not have any significant impact on tidal exchange or water circulation of the bay and there would be sufficient water circulation to ensure that there would be no significant change in water quality arising from anti-fouling paint ablation arising from the increased vessel wetted surface areas in the bay.*
- *Possible impacts arising from the proposed construction works and from operation of the new facilities can be minimised to insignificance by appropriate construction, demolition and operational safeguards that would be implemented via a Construction Environmental Management Plan and an Operational Management Plan.*

Accordingly, the assessment has found that the project could meet the aquatic ecology conservation requirements of the SREP (Sydney Harbour Catchment) 2005 and could meet the aquatic ecology and fish habitat conservation requirements of the Fisheries Management Act 1994 (FMA) and the NSW I&I guidelines (NSW Fisheries 1999).

As such, it is considered that there will be some minor impacts to aquatic ecology caused during construction and from the shading of previously unshaded areas. However, the proposal will have a net beneficial impact on aquatic ecology as more habitat area for the support of marine vegetation will be provided.

In terms of the ability of the site to accommodate the expanded marina, the marina has been designed to allow sufficient capacity for the manoeuvring of boats entering and exiting the marina and to allow appropriate lines of sight when navigating into the main waterway. The location of the marina within a sheltered bay means that vessels speeds in the vicinity of the marina are generally low. The proposal does not increase the risk of collision between vessels, land or any other objects. As shown in the hydrographic surveys at **Appendix D**, there is adequate depth in the surrounding waterway to cater for the marina expansion.

Cumulative impacts from increased boating activities within the area will be minor due to the existing use of the site as a marina and the location of the site within a built up urban area. Potential noise impacts from the

increase boating activities have been considered in Section 3.8 below. Ecological and water quality impacts from the construction and operation of the marina and the increased movements of boats is discussed above and at **Appendix H**. The increased boating activity is consistent with the maritime character of the area and adds to the visual experience by onlookers.

3.8 Noise

A Noise Assessment (**Appendix L**) dated September 2010 has been prepared by Wilkinson Murray to investigate the noise impacts of the proposed development. This assessment has considered the noise impacts from the operation and construction of the expanded marina on the two nearest noise sensitive receivers. These are as follows:

- Residential properties located at 3 Darling Island Road, and
- Residential properties located at 25 Pirrama Road.

The west side of the wharf currently has 19 moorings which will be increased to 21 moorings. The proposed type and use of vessel is not expected to change. This minor increase is expected to provide negligible noise impacts on the residential receivers. Therefore only the operational activities on the eastern side of the wharf have been considered in the operational noise assessment.

Operational noise impacts considered in the assessment included the following:

- marine vessels maneuvering to and from the wharf;
- marine vessels engine idling for power generation;
- vehicle movements on the wharf apron;
- sewage pumping; and
- minor maintenance that includes cleaning using a gurney and the use of small hand tools.

The operational noise levels arising from the proposed development are expected to comply with the operational noise criteria during the day and evening but may not during the night time period when measured from 3 Darling Island Road. The predicted operational noise levels during the night time exceeded the criteria at this location however this is not expected to cause a significant noise impact, given the following:

- The dominating noise source during the night time is the movement of the large watercraft. This 15 minute night time scenario would occur typically two times over 15 minutes during the entire night time period (10.00pm-7.00am). During the rest of the assessment period no other wharf operations are expected. Therefore this scenario is not expected to cause a significant noise impact at the receiver.
- Predicted levels are considered unlikely to cause awakening reactions for residents.
- All maritime functions will cease between 12 midnight and 7.00am.

Construction activities on both the eastern and western sides of the wharf were considered in the construction noise assessment. Activities considered during this stage of the development were as follows:

- Stage 1: Piles are either delivered by truck and then stored on the quayside or delivered by barge and tethered to the quayside

- Stage 2: Bored Piling by floating rig to last 10 weeks.
- Stage 3: The pontoons that have been fabricated off site are delivered by barge and floated into place using a crane.
- Stage 4: Connections are made to existing services for electricity, water and sewer pumping.
- Stage 5: Final fit out of service bollards on floating pontoons.

The report provides the following findings from the assessment of construction impacts on noise sensitive receivers:

Construction noise from the west wharf will comply with the criteria at the residential receivers at 25, Pirrama Road. The construction on the west wharf will have no significant noise impact on the receivers at 3, Darling Island Road.

Where the predicted construction noise levels exceed relevant criteria, the guidelines suggest the following:

- *the proponent should apply all feasible and reasonable work practices to meet the noise affected level; and*
- *the proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.*

Where $L_{Aeq,15minute}$ construction noise levels are predicted to exceed 75dBA during Stages 2 and 3, the relevant authority (consent, determining or regulatory) may require respite periods to be observed. This may include restricting the hours that the very noisy activities can occur, taking into account:

- *times identified by the community when they are less sensitive to noise (such as before and*
- *after school for works near schools, or mid-morning or mid-afternoon for works near residences); and*
- *if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.*

Given that construction is expected to last only three months and will be limited to daytime, the impact on nearby residents is not expected to be substantial.

As such, noise impacts from the operation of the expanded marina on nearby noise sensitive receivers are expected to be minor and limited to the eastern side of the wharf. Adverse noise impacts generated during the construction stage can be appropriately managed in accordance with the recommendations within the Noise Assessment. Application of the Community Plan (**Appendix M**) will facilitate appropriate actions to minimise disturbance during construction in accordance with the Department of Environment, Climate Change and Water's Interim Construction Noise Guidelines.

3.9 Air Quality and Odour Impacts

AECOM have prepared a Qualitative Air Quality Assessment (QAQA) (**Appendix J**) which focused on the potential effects of the construction and operation of the proposed development on local air quality. These were assessed qualitatively through a desktop review of:

- The proposed study area, including surrounding land use and topography;

- Potential pollutants generated by the proposed development;
- Available ambient air quality monitoring data; and
- Local meteorological data.

The following conclusions are drawn from the data and assessment presented in this QAQA:

- *Emissions to atmosphere from the marina upgrade are expected to comply with Department of Environment, Climate Change and Water emission limits;*
- *Gaseous and particulate emissions from the marina will be controlled by the measures implemented in the Jones Bay Wharf Operational Management Plan and the installation of the waste removal systems for both general waste and sewage. Emissions will be dependent on the implementation of the policies and procedures outlined in the Operational Management Plan;*
- *Volatile organic compound emissions from the marina will be controlled by*
- *No revving of engines and when engines are running warm up procedures for motorised vessels will be limited to 10 minutes.*
- *No generator use or running of engines onboard vessels except in preparation for departure or checking of equipment functionality will be allowed.*
- *Limited landside vehicle operations inside the marina.*
- *Odour emissions at the marina will be management under the sites Waste Management Plan and as such are not expected to result in adverse impacts from the facility; and*
- *Particulate emissions from the marina will be controlled via a comprehensive weekly, monthly, bi-monthly and yearly cleaning schedule. Cleaning will range from washing of pile caps, gates, bollards, pontoons, signs and gangways to maintaining the sites garbage room and bins.*
- *Ambient air quality data from 2009 show no exceedances of relevant ambient air quality guidelines. It is the responsibility of the Proponent to minimise or prevent dust and other pollutants emissions from the site as much as possible and, therefore, minimise the effect of the development on the local air shed dust levels. The development includes substantial pollution reduction equipment that, if maintained and operated according, should substantially mitigate any pollutant emissions from the facility.*

Due to the mitigation measures outlined above, no adverse air quality or odour impacts will result from the proposed development.

3.10 Climate Change and Sea Level Rise

The *Draft NSW Coastal Planning Guideline: Adapting to Sea Level Rise* contains eight planning criteria that should be considered when selecting coastal development sites and designing development proposals. These criteria are addressed in the following table.

Planning Criteria for Proposed Development in Coastal Risk Areas	Response
1. <i>Development avoids or minimises exposure to immediate coastal risks (seaward of the immediate hazard line)</i>	Location of proposed development adjacent to existing wharf west of Sydney Harbour Bridge minimises exposure to immediate coastal risks.
2. <i>Development provides for the safety of residents, workers or other occupants on-site from risks associated with coastal processes</i>	Height of wharf, some 2.0m above mean high water ensures safety of occupants. Floating pontoons will adjust to sea level change.
3. <i>Development does not adversely affect the safety of the public off-site from a change in coastal risks as a result of the development</i>	Safety of public unaffected by proposed development.
4. <i>Development does not increase coastal risks to properties adjoining or within the locality of the site</i>	Location of proposed development adjacent to existing wharf will not increase risks to adjoining or nearby properties.
5. <i>Infrastructure, services and utilities on-site maintain their function and achieve their intended design performance</i>	Existing and proposed infrastructure will maintain function and intended design performance.
6. <i>Development accommodates natural coastal processes</i>	Not applicable.
7. <i>Coastal ecosystems are protected from development impacts</i>	Coastal ecosystems unaffected, refer aquatic ecology assessment at Appendix H .
8. <i>Existing public beach, foreshore or waterfront access and amenity is maintained</i>	Existing waterfront access and amenity maintained.

The nature of the proposal, a series of floating pontoon structures surrounding an existing wharf located well above mean high water some distance from the coast, confirm that the risk associated with climate change and sea level rise is negligible.

3.11 Heritage

As stated in Section 3.2.5, although this development does not include works to the heritage item, a Statement of Heritage Impact (SHI) has been undertaken by Otto Cserhalmi & Partners (refer **Appendix K**). This assessment draws on the Conservation Management Plan (CMP) that was prepared for the site in 2003. Although the DGRs request that the CMP be appended to this assessment, due to its size and lack of availability electronically, it is to be made available in hard copy as required.

Specific conservation policies in the Conservation Management Plan recognise the importance of the maritime nature of the site and the history of the wharf as a berthing facility. These are listed below and addressed within the SHI as follows:

- 1) Policy 8.6.2 - Those uses which retain maritime related activities are preferable to those that are unrelated to harbour activity, and
- 2) Policy 8.6.3 - The use of the existing berths for boat mooring as part of the primary function of Jones Bay Wharf should continue.

Response in SHI

As stated in the Introduction to this report as part of the development approval process in 2002, a Marine Structures Strategy was prepared which described the proposed multiple berthing facility. A statement of heritage impact assessing the Marine Structures Strategy found that the new berthing facilities works supported specific policies in the CMP by strengthening the

context and setting of the wharf, by using the perimeter of the wharf for multiple berthing, and reinforcing the historical usage of the wharf.

The modifications to the marina therefore, by reinforcing and extending the berthing facilities, also support these two policies.

The report also states that the proposed marina development would continue the maritime use of the wharf edge and main visual impacts from horizontal elements on the existing wharf edge and substructure would be minimal. Therefore the proposal further supports the CMP which, in regards to context and setting, requires that if the perimeter of the wharf were to be used for maritime related activities, related recreation or similar uses, the context and setting of the finger wharf would be strengthened by these activities.

The SHI acknowledges that there will be some disturbance of the harbour bed where the rough water piles are to be introduced, however the original Maritime Archaeologist's report for the marina development concluded that it was dredging and not pile driving that caused major harbour bed disturbance. As there is no dredging proposed it is believed therefore that any disturbance will be minimal.

The SHI provides the following conclusion:

The heritage values of the Jones Bay Wharf site are considerable. These values include its spatial and aesthetic qualities, its significant fabric as well as the structure's harbour setting, and historical usage. It has been established that using the redeveloped wharf as a berthing facility supports the conservation policies of retention of original use and boat mooring. The proposed modifications to the marina continue to support these policies and will further assist in fostering maritime related activities within the wharf building itself, and it is for this reason that the impact on the wharf and its setting is considered acceptable.

The visual assessment (**Appendix N**) demonstrates that the scale of the proposed marina extension, and the size of boats to be berthed are subservient to the scale and design features of the Jones Bay Wharf as a whole.

3.12 Waste Management

Disposal of waste from the marina is currently controlled by *Jones Bay Wharf Safety Management Strategy and Environmental Protection Strategy* dated October 2003 and monitored by the Marina Manager. Garbage and solid refuse is stored in the facilities located central to the wharf. The Operational Management Plan (at **Appendix G**) which updates and augments the previous *Jones Bay Wharf Safety Management Strategy and Environmental Protection Strategy* forms part of this proposal. The Operational Management Plan ensures that operational waste resulting from the expanded marina will not cause adverse impacts.

Facilities for the removal of sewage from vessels will be provided at the expanded marina as detailed in Section 2.5.6. Operation of the sewerage pumpout facilities will be by trained marina staff only.

Oil waste will be disposed of off site by licenced waste contractor if required.

The extension of the marina will not generate impacts in relation to waste.

3.13 Infrastructure Provision

Existing utilities and service to the site are electricity, water and sewerage. The demand for each of these will increase due to the proposed development.

An electrical infrastructure report prepared by Simpson Kotzman is at **Appendix S**. It provides the anticipated maximum electricity demand based on the proposed number and sizes of berths. Electrical infrastructure will be augmented as recommended in this report to cope with the increased demands.

The proposed water services, sewage pumpout system, and fire hydrant system is detailed in the Hydraulic Services Plan and report at **Appendix E**. Minimal augmentation of the existing water services is required for the marina expansion. New double headed fire hydrants will be installed at the top of each gangway, providing coverage to the new pontoons.

The new pumpout system described in Section 2.5.6 will require the installation of a 15,000L inground concrete sewer holding tank which will discharge into the main sewer at a maximum rate of 2L/s. The existing 150mm sanitary drainage services installed below the wharf is sufficient to accommodate the extra flow and discharge associated with the new works.

Servicing of the existing marina can be easily accommodated with the augmentation to existing services. No adverse impacts will occur.

3.14 Ecologically Sustainable Development

As described in Section 2.6 the proposed marina expansion has been designed to incorporate a range of Ecological Sustainable Design (ESD) principles into the design, construction and operation of the marina. The ESD Strategies Report prepared by AECOM Australia Pty Ltd (**Appendix I**) outlines the initiatives that will be incorporated into the proposed development. These include the following:

Design and Construction

- Use of recycled materials and consideration of materials which have a lower embodied energy where appropriate.
- The proposed building contractor for the project, Bellingham Marine, offsets all greenhouse gas emissions produced from the manufacturing and construction operations by purchasing carbon offsets accredited under the Voluntary Carbon Standard. Bellingham Marine have been accredited by the Carbon Reduction Institute as detailed in the ESD Strategies Report.
- Use of Class S expanded polystyrene materials where possible.

Operation

- Individual water metering of each berth for monitoring water usage and management.
- Use of high-density polyethylene piping which avoids the use of PVC for sewer and water.
- Use of energy efficient sewerage pumping system.
- Use of biodegradable detergents for wash down.
- Training and utilisation of staff to ensure sustainable operating practices.
- Only trained marina staff will operate the sewer pump-out facility.
- All marina staff to under-go specific training in the use and deployment of floating booms and provided spill kits.
- Any spills, leaks or sighted waterway contamination will be reported to marina management.
- Use of motion sensor LED lighting with light diffusers.
- Construction of a continuous boardwalk linking Jones Bay Wharf and Darling Island.
- Maintaining disabled access to pontoons on western side of wharf.

3.15 Consultation

The Director General's Requirements state that consultation is required at an appropriate and justified level in accordance with the Department's *Major Project Community Consultation Guidelines October 2007*.

Consultation was undertaken with the Department of Planning to discuss the project and seek guidance on the issues that needed to be addressed in the Part 3A application. During this process NSW Maritime was also consulted and provided land owner consent (refer **Appendix P**). The following agencies were consulted by the Department of Planning during the preparation of the Director General's Requirements:

- Department of Environment and Climate Change
- City of Sydney
- NSW Maritime
- Department of Planning – Heritage Branch
- Department of industry and Investment

Consultation has also been undertaken with all owners and occupants of the wharf and the strata committees have given approval to proceed with the proposed development.

A Consultation Plan (**Appendix M**) has been prepared by Creating Communities in accordance with the Departments guidelines to detail the engagement and consultation that will be undertaken during the statutory advertising period. The target audience during the consultation program includes:

- State and local government
- the local community
- commercial boating and marina associations
- elected members
- adjoining major landowners
- heritage organisations
- utility providers
- emergency services
- local media

Consultation will focus on gaining community and stakeholder feedback around the proposed expansion of existing marina facilities at Jones Bay Wharf. The table below outlines the proposed consultation schedule.

3.16 Contributions

There are no applicable developer contributions in relation to this development as the proposed development is not within the area that the City of Sydney's Local Environmental Plan applies and no relevant Contributions Plans apply to the marina. Furthermore, as there is no increase in floor space, any relevant multipliers would yield a nil result.

4 Conclusion

Taking into consideration the environmental impacts of the proposal, the suitability of the site, and public interest, this report concludes that the project is an appropriate development in its location and in regard to its purpose.

4.1 Suitability of the Site

The site which currently accommodates berthing facilities for approximately 40 vessels, a sewage pumpout facility, and disabled access lift and ramp. The facility is suitable for the proposed extension for a number of reasons.

- The site is located within the W1 – Maritime Waters zone of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 which gives preference to and protects waters required for the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations generally.
- There is adequate water depth for a range of vessel sizes.
- The existing marina is protected from exposed wave environments by existing wave attenuating pontoons. These will be adjusted for the revised facility.
- The configuration of the additional berths will continue to facilitate the safe use of the waterways by other watercraft.
- There is a strong functional, visual and historical connection between the existing waterside structures and the existing marina which reinforces the compatibility of the use with the surrounding environment. These will be maintained with the extended facility.
- The existing adjacent road and parking capacities are sufficient to cater for the extended marine facility.
- The site is highly accessible to public transport including light rail, monorail and bus, and connects with expansive pedestrian and cycle networks.
- The waterway surrounding Jones Bay Wharf is currently underutilised.
- The current site services have the capacity to cater for the proposed expansion without any major upgrades.

4.2 Likely Environmental Effects

Environmental impacts associated with the construction and operation of the proposed development will be minimal, as detailed throughout Section 3.

As detailed throughout the report the operation of the extended marina will be in accordance with the OMP and Traffic Management Plan to minimise any potential noise, traffic, security or water quality impacts.

The proposed marina expansion could result in an increase in traffic generation of some 10 to 15 vehicles per hour two-way during the morning and afternoon peak periods. However such a low increase in traffic generation will not have a noticeable effect on the operation of the surrounding road network and its intersections (refer Section Transport and Accessibility Impacts 3.5 and **Appendix F**).

The Aquatic Ecology Assessment has found that there will be some minor impacts on aquatic ecology caused during construction and from the shading of previously unshaded areas. However, the proposal will

have a net beneficial impact on aquatic ecology as more habitat area for the support of marine vegetation will be provided (refer Section 3.7 and **Appendix H**).

As discussed in Section 3.8 and demonstrated at **Appendix L**, operation noise during the night time hours is expected to exceed the operational noise criteria when measure from 3 Darling Island Drive however this is not expected to cause a significant noise impact, given the following:

- The dominating noise source during the night time is the movement of the large watercraft. This 15 minute night time scenario would occur typically two times over 15 minutes during the entire night time period (10.00pm-7.00am). During the rest of the assessment period no other wharf operations are expected. Therefore this scenario is not expected to cause a significant noise impact at the receiver.
- Predicted levels are considered unlikely to cause awakening reactions for residents.
- All maritime functions will cease between 12 midnight and 7.00am.

Noise impact during the construction stage will be minimised by adopting the recommendations of the Noise Assessment.

Potential air quality and odour impacts were discussed in Section 3.9.

It is anticipated that there will be a minor impact on the wharf and its setting in terms of heritage however this is considered acceptable given the proposed modifications continue to support the conservation management policies that are in place for the wharf (refer Section 3.11 and **Appendix K**).

4.3 Likely Social Effects

The proposal maintains full access to the 10m wide public walkway that surrounds the wharf. It also proposes the construction of a missing section of continuous foreshore public walkway between Jones Bay Wharf and Darling Island to the east.

The social impacts of the proposal are only beneficial as the proposal will increase the opportunities for residents and visitors to access the harbour. The change in lease boundaries deletes the northern end of Jones bay Wharf from the marinas lease, ensuring that commercial berthing will not occur.

4.4 Likely Economic Effects

The expanded marina will have a positive impact on Sydney Harbour's maritime industry. Its focus in commercial vessels supports this sector of the Harbour's boating activity. It will create additional economic activity, employment opportunities during the construction stages and operation.

4.5 Justification of Project and Public Interest

This proposal is for the expansion of an existing use to address an increased demand for berthing of commercial vessels on Sydney Harbour. The Jones Bay Wharf commercial berthage facility has operated at almost 100% capacity since opening approximately 3 years ago.

Whilst the commercial, charter and boat broker markets are sensitive to the prevailing economic conditions, additional marina berths for commercial operators in Sydney Harbour are in very limited supply. Whilst most marinas in Sydney today have some vacancy, they are generally priced to suit a privately owned market which is beyond the reach of commercial vessel operators.

Unlike many other marinas in Sydney, this proposal seeks to provide additional commercial vessel berthing which will be priced to suit the commercial market.

It is desirable from an environmental planning perspective to expand an existing facility, rather than develop a new facility.

It is important for the NSW economy and maritime industry to ensure that commercial vessels have adequate facilities on Sydney Harbour. Tourism and the marine industry are both important contributors to the economy. To the year ending December 2008, tourist visitors to Sydney spent over \$11 billion. The marine industry is estimated by the Boating Industry Association to be worth about \$2 billion annually to the NSW economy. Australia-wide the charter/tourism segment is estimated to be 6.4% of the marine industry and it is reasonable to expect that it is of a similar size (or greater) in NSW. The proposal will support the marine industry by ensuring that commercial vessels have adequate facilities on the Sydney Harbour.

The project serves the public interest through its consistency with the relevant environmental planning instruments, and only beneficial environmental, social and economic impacts.

Importantly, the proposal has been considered in regard to the Jones Bay Wharf Conservation Management Plan which found that the proposed modifications continue to support the policies of the CMP and therefore the heritage significance of Jones Bay Wharf will remain to be understood and appreciated today and future generations.

5 Statement of Commitments

The following is the Statement of Commitments by Toga Development No 27 Pty Ltd on how the project will be managed to minimise its impacts both during construction and once the approved development is operational.

General

1. **The development will be undertaken in accordance with this Environmental Assessment dated August 2010 prepared by RPS including accompanying appendices**, and the following:
 - i) Jones Bay Finger Wharf Conservation Management Plan by OCP Architects dated August 2003
 - ii) Traffic and Pedestrian Management Plan prepared by Colston Budd Hunt and Kafes dated November 2008
 - iii) Marine Structures Strategy prepared by Patterson Britton & Partners dated July 2002
 - iv) Safety Management Plan prepared by Stephen Grubits & Associates dated October 2003
2. The applicant will obtain all necessary approvals required by State and Commonwealth legislation, including the Protection of the Environment Operations Act, NSW Maritime, Sydney Water and Workcover NSW and at all times comply with their requirements.

In particular the applicant will obtain Approval for Construction (AFC) from NSW Maritime. This will include all documentation and structural certification in accordance with NSW Maritime requirements.

Public Domain

3. 24 hour access will be retained to the 10m wide public access easement that surrounds the perimeter of Jones Bay Wharf to which the Jones Bay Wharf Marina is connected and from which it gains pedestrian and service access.
4. Fire fighting and life saving equipment in accordance with relevant standards and policies will be installed on the public domain.
5. Vessels will not be permitted to berth along the northern frontage of Jones Bay Wharf.
6. Any public domain infrastructure damaged due to construction works will be repaired or replaced to the standard in which that infrastructure was found immediately prior to the commencement of the works. The repair or replacement will be done to the satisfaction of NSW Maritime and Sydney City Council prior to issue of the Occupation Certificate.

Transport and Parking

7. All deliveries and servicing to the site will be via the perimeter deck public access easement accessed directly from Pirrama Road. This access will be limited to emergency vehicles and wharf and vessel maintenance vehicles for loading, unloading and servicing and managed by the Marina Manager in accordance with the Operations Management Plan.
8. Access, servicing and layout arrangements will be provided in accordance with AS 2890.1:2004 and AS 2890.2:2002.
9. There will be no vehicle parking on the public access easement at all times, except for the purposes noted in Item 7 above.

ESD

10. The construction and operation of the expanded Jones Bay Wharf Marina will be undertaken in accordance with the Environmentally Sustainable Design (ESD) Strategies Report prepared by AECOM dated 12 August 2010 to achieve identified ESD initiatives.

Infrastructure and Services

11. All services that are disrupted as a result of construction of the marina expansion will be appropriately relocated. This relocation will be undertaken in consultation and after agreement with the relevant service provider. Relocation of all services off-site will be completed prior to commencement of construction works.
12. All existing utility services will be augmented as required.

Waste Management

13. A detailed waste management plan will be prepared to ensure that suitable waste management processes and waste storage areas that support the principles of waste avoidance, reuse and recycling are incorporated into the operation of the facility. The waste management plan will include both projected waste generation rates and identify facilities to support this waste generation, ie appropriately sized and accessible waste storage areas, integrated with waste collection systems.
14. Suitable sewage pump-out facilities in accordance with NSW Maritime and Sydney Water requirements will be installed at the facility to provide for vessels accommodated by the facility. The pump-out facilities will be connected to the sewerage system servicing the Pyrmont Bay area.
15. Waste oil removed from vessels will be placed in a suitable receptacle in the garbage room to be disposed of by a suitable service contractor for each vessel.

Heritage

16. The recommendations of the Statement of Heritage Impact prepared by Otto Cserhalmi & Partners July 2010 will be implemented, except as amended by the following.
17. The nominated heritage consultant will provide written confirmation to the Department of Planning that the detailed design is in conformity with the Conservation Management Plan and all statutory approvals prior to construction commencing.
20. The nominated heritage consultant will provide written confirmation to the Department of Planning that the completed works are in conformity with the Conservation Management Plan and all statutory approvals prior to occupation.
21. Any work involving heritage fabric will be supervised by the nominated heritage consultant.

Air Quality & Odour Impacts

22. The recommendations of the Air & Odour Report prepared by AECOM dated 17 August 2010 will be implemented.

Access for People with a Disability

23. Access to the western pontoon will comply with the requirements of Australian Standard AS 1428.1 General requirements for Access and will remain consistent with the current approved access arrangements.

Building Code of Australia

24. All works will comply with the provisions of the BCA, either in terms of the deemed-to-satisfy provisions or by way of an alternate solution.

Operation

25. The design and management of the marina will comply with the Operational Management Plan (OMP) prepared by Scope Marine as set out in **Appendix G** to this Environmental Assessment.

The Operational Management Plan will be prepared in accordance with this Statement of Commitments, any other relevant approvals, all relevant Acts and Regulations and accepted best practice management procedures. The OMP will be reviewed every five (5) years.

The OMP will include the following:

- details of vessel berthing arrangements for the safe berthing of vessels in all wind and wave conditions
- maintenance/cleaning requirements for the facility
- program for maintenance for the checking of the facility
- details of waterside structures
- a description of the management system to deal with complaints and environmental incidents
- details of signage that alerts vessels and cautions them regarding the fact that the pontoon facility is in 'Rough Water', and
- other matters deemed necessary for the safe continued use of the facility.

The OMP will also include an Emergency Plan to cover actions in the event of:

- fire hazards to persons or property
- personal accidents
- collisions of vessels and collisions or sinking of vessels within the facility, and
- oil, sewage and bilge water spillage.

26. A summary of the Operational Management Plan, particularly the Emergency Plan will be prominently displayed at various locations at the facility.
27. The marina will accommodate only vessels as indicated on the Marina Layout Plan.
28. Commercial and visitor berthage will only be occupied by commercial vessels in respect of which all permits and certificates are current and registrations and licences have been received by marina management. Commercial and visitor berthage will not be occupied for private purposes.
29. The public berthing area will be used for casual berthing of vessels only. Signage will indicate the availability of the area for public use for boat pick up and drop off. The signage will also advise that permanent berthing is not permitted in that location.
30. A Marina Manager will be appointed to accept responsibility for the management of the facility and will be contactable on a 24 hour basis. The Marina Manager's responsibilities will include administration of leases, the Operational Management Plan and the facilitation for the maintenance of the pontoons, services and waste disposal practices at the facility. Details of the Marina Manager will be provided to NSW Maritime prior to the issue of an Occupation Certificate for the enlarged facility.
31. The facility will be maintained in good order and repair to the satisfaction of NSW Maritime.
32. Prior to the occupation of the expanded marina, concurrence will be obtained from the NSW Fire Brigade in relation to fire protection and fire fighting equipment and procedures at the facility.

33. The Marina Manager will advise both NSW Maritime and the Department of Planning, at annual intervals from the date of practical completion of the works, details of all complaints received and actions taken by facility management in response to such complaints.
34. NSW Maritime and the Department of Planning will be notified as soon as practicable of any incident with actual or potential off-site impacts on people or the environment. A detailed report will be prepared and submitted following investigations of the causes and identification of necessary additional preventative measures.

Control of Activities

35. The following controls will apply to the facility.
 - i) No person will reside on any vessel berthed or moored at the facility except to allow occupancy by crew members where crew accommodation is provided on vessels.
 - ii) All maritime operations will cease between 12 midnight and 7:00 am.
 - iii) Embarkation and disembarkation of charter vessel passengers will be prohibited at the facility.
 - iv) Incineration or open burning will be prohibited.
 - v) Vessel maintenance undertaken at the facility will be limited to minor repairs only. Major vessel repairs (including hull treatment, anti-foul or slipping, painting and engine repairs) will be prohibited.
 - vi) Fuelling of vessels at the facility will be prohibited.
 - vii) Fuelling or servicing of any vessels berthed at the facility by other waterborne craft will be prohibited.
 - viii) Handling of any material which could result in a toxic or hazardous spill in the navigable waters will be prohibited.
 - ix) Application of fibreglass will be restricted to minor repairs.
 - x) Use of power tools such as grinders and sanders will only be permitted for minor repairs. The use of power tools will be limited to 8:30 am to 5:30 pm weekdays and 8:30 am to 12 noon on weekends.
 - xi) Security alarms on vessels berthed at the facility will be adjusted for a cut-off period of 10 minutes or less.
 - xii) Gangways, equipment or cargo will not obstruct the public domain once vessels have departed.
 - xiii) Litter bins will not be permitted on the pontoons, access gangways or the adjacent public domain.
 - xiv) Public address systems or tone enhanced telephone systems will not be permitted unless the prior approval of NSW Maritime has been obtained.
 - xv) Lighting of the facility will be shielded to prevent light spillage beyond the immediate vicinity of the facility.
 - xvi) Vessels moored at the facility will be required to have automatic bilgewater pumps with suitable isolating switches while vessels remain berthed at the facility.
 - xvii) Pollution of navigable waters in the course of the occupation or use of the facility, or of the use or any operation or activity on any vessel berthed at the facility will not be permitted.
 - xviii) Any discharge of sewage (including treated sewage and effluent of any kind) from any vessel berthed at the facility into navigable waters, or to any place on land from which such sewage may fall, flow or be carried will not be permitted.

- xix) Notices will be placed on the wharf near the moorings warning boat owners and users of passing commercial vessel traffic that wash can be generated from the vessels and their tugs.
- xx) Advertising signage will not be installed on the marina, consistent with the Harbour REP.

Noise

- 36. The recommendations of the Noise Report prepared by Wilkinson Murray dated August 2010 will be implemented.

Construction Activity

- 37. Site management during construction will be in accordance with a Construction Management Plan to be prepared by the contractor. The plan will include:
 - statutory compliance
 - hazardous substances management plan
 - waste management plan
 - noise and vibration management plan
 - sustainability initiatives, and
 - traffic management.
- 38. General constructions hours will be as follows:
 - Monday to Friday 7:00 am to 5:00 pm, and
 - Saturday 7:00 am to 2:00 pm.
- 39. Where construction work is undertaken which generates significant noise or vibration impacts, construction hours will be as follows:
 - Monday to Friday 9:00 am to 12:00 pm and 2:00 pm to 5:00 pm, and
 - Saturday 9:00 am to 12:00 pm.
- 40. A construction traffic management plan detailing the temporary barriers, line marking and signage that will be set up to control traffic during the construction stage will be prepared prior to commencement of works.
- 41. During the construction stage, due care will be taken in order to avoid damage occurring to nearby utilities.
- 42. All areas used for construction site activities will be reinstated prior to occupation of the premises.

Piling

- 43. Piling installation will generally be restricted to vibro-piling. Impact piling will be limited to:
 - driving of final section of each pile into bedrock before final setting (where vibration methods are inadequate)
 - driving of the final section of each steel pile into bedrock
 - weekdays, excluding public holidays, and
 - fixed time periods as set out in Item 26 above.
- 44. All work will be done in such a way that no construction or demolition debris etc falls, flows or is carried to the bed or waters of the Port. Any material entering the Port will be removed immediately.

45. Appropriate silt curtains and oil absorbent booms will be installed and maintained to contain silt and other water pollutants which are generated by any substructure works. The silt curtains and oil absorbent booms will be installed and maintained to completely surround the proposed works whilst construction occurs on the substructure of the pier. The pollution control measures will ensure that the proposed works do not cause any deterioration of water quality outside the curtailed-off area of Sydney Harbour.