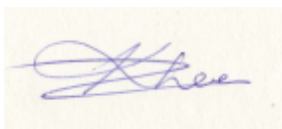


PREFERRED PROJECT REPORT

d'Albora Marinas – The Spit (MP08_0046)

PROJECT PARTICULARS

Project No.: 2006-038
Project Address: Spit Road, The Spit, NSW
Local Government Area: Mosman
Client: Ardent Leisure
Report Reference: 2006-038 Preferred Project Report (v2) - Final
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Final Approval:



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ATTACHMENTS

Attachment 01: Appendix C of the TIA

1 INTRODUCTION

This Preferred Project Report (the Report) has been prepared by Hamptons Property Services Pty Ltd (Hamptons) on behalf of Ardent Leisure (the Client) in relation to the application for alterations and additions to the existing marina facility operated by d'Albora Marina, located at The Spit, Mosman, being Major Project MP08_0046. The Report is submitted in accordance with the requirements of Section 75H(6) of the Environmental Planning & Assessment Act 1979 (the Act), which states as follows:

(6) The Director-General may require the proponent to submit to the Director-General:

- (a) a response to the issues raised in those submissions, and*
- (b) a preferred project report that outlines any proposed changes to the project to minimise its environmental impact, and*
- (c) any revised statement of commitments.*

The purpose of the Report is therefore to detail amendments to the proposal, which are being made in response to both public and agency submissions, in conjunction with providing a response to the matters that have been raised in these. A revised Draft Statement of Commitments is also provided to align with the proposed design changes.

As such, the Report is set out as follows:

- **Chapter 2** provides a synopsis of the revised development proposal;
- **Chapter 3** reproduces the submissions received and provides a response to each of these;
- **Chapter 4** details an updated Draft Statement of Commitments; and
- **Chapter 5** concludes the Report.

Overall, the conclusions of the Report are that the revised proposal has mitigated a number of the issues raised and, where this is not the case, this Report has appropriately addressed each matter. As such, it is recommended that the project be approved subject to appropriate conditions of consent.

2 THE CHANGES TO THE PROPOSED DEVELOPMENT

As documented in the Environmental Assessment and the accompanying architectural drawings prepared by Corben Architects, the proposed redevelopment involved alterations and additions to an existing commercial marina facility, operated by d'Albora, located at The Spit, Mosman.

The proposal, as originally applied for, seeks consent for the expansion and upgrade of the existing d'Albora Marina facility at the site. This will include accommodating an additional 35 vessels, a new marina building for marine-related tenancies, a public deck with a small kiosk and public seating facilities, as well as a new hardstand area with a new travel lift.

The purpose of the proposed works is to facilitate an increase in the supply of berthing facilities at the site in the 12 metre to 30 metre range, for which there is significant demand, and remove the existing slipway to provide more environmentally sensitive access to the marina *via* the introduction of a new boat lift.

In response to the issues raised during both agency consultation and the public exhibition of the proposal, a number of design modifications are proposed. Firstly, the proposed first floor expansion of the building has been deleted from the development scheme. As a result, the restaurant, currently positioned at the ground floor of the building will be retained in this location.

Other changes at the ground floor level will include the retention of the existing arcade from the eastern side of the building, through the building; no new arcade from the southern side is proposed.

The existing toilets will be retained in their current location and no lift within the building will be proposed.

A workshop and storage area will still be provided on the northern side of the building, totalling approximately 190m², as will a new kayak storage area.

The existing public deck will be retained; however, a kiosk will no longer be proposed, due to the retention of the restaurant at the ground floor level.

The existing display areas, on the eastern side of the building, will also be retained in their current form.

The existing commercial offices, currently tenanted by d'Albora, will be retained on the first floor level.

The existing car parking arrangement on the site will be retained on the new hard stand area, with the current number of spaces (9) being retained; however, bicycle parking will also be incorporated into this area.

The vehicular indent bay, in the south-eastern corner of the site, adjacent to the Spit Road, continues to be proposed.



The proposed berthing arrangements, and changes to the marina arms and fingers, are as *per* the original application.

Further details may be found on the Architectural Drawings prepared by Corben Architects, accompanying this submission.

3 THE RESPONSE TO SUBMISSIONS

Section 75H(5) of the Act states as follows:

- (5) *The Director-General is to provide copies of submissions received by the Director-General or a report of the issues raised in those submissions to:*
- (a) *the proponent, and*
 - (b) *if the project will require an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997—the Department of Environment, Climate Change and Water, and*
 - (c) *any other public authority the Director-General considers appropriate.*

In accordance with **Clause 5(a)**, the submissions have been provided to the proponent.

This Chapter provides a consolidated response to those submissions, from both the public and government agencies.

ISSUE RAISED	RESPONSE
3.1. Public Submissions	
<i>Noise aspects of the proposed development are not considered to have been adequately addressed and if not controlled, may impact upon the amenity of Seaforth residents. In particular, noise impacts have been associated with the restaurant and boat repair areas of the proposal.</i>	
<p>Matters of noise impact and attenuation have been dealt with in the Noise Impact Assessment prepared by Wilkinson Murray.</p> <p>Noise impacts associated with the first floor use of the restaurant are mitigated as the status quo will be retained, with the restaurant remaining in its current position. The current trading hours and operating procedures will also be in accordance with the status quo.</p> <p>With respect to the boat repair area, the potential noise sources identified include both angle grinding and pressure cleaning of vessels. Such noise emissions are associated with daytime use of the facility only and have been assessed accordingly.</p> <p>The assessment concludes that the predicted noise levels will comply with the relevant criterion, even in the event of adverse wind conditions, to the nearest residential receivers.</p> <p>As such, no noise mitigation measures are required in this regard.</p> <p>Reference: Appendix 17</p>	

Traffic and parking impacts to the surrounding locality as a result of the additional demand generated by the marina expansion was raised. Specially, submissions raised the question of where additional users were going to park and that access to the marina is dangerous.

The removal of the first floor addition to the proposal reduces the overall car parking demand associated with the site.

The increase number of berths, by 35, generates a demand for additional parking, by 11 spaces. However, this nett increase is offset by the reduction in swing moorings required by NSW Maritime, being six. Therefore, the overall increase is only 29 berths, which would then require only nine additional car parking spaces.

In addition, the minor increase in floor space, by approximately 190m² for the purpose of workshop and storage space associated with the hardstand area is considered small and with little, if any, generation impacts.

The demand generated during peak periods on a Saturday would be in the order of 20 parking spaces and 31 spaces on a Sunday, taking account of the gross increase of 35 berths.

The shortfall in spaces, based on the demand assessment, and taking account of the proposed parking on the site, will result in a shortfall of 11 spaces on a Saturday and 31 spaces on a Sunday.

The recommendations as provided in the Traffic Impact Assessment are considered to represent an appropriate response to the site.

It is also noteworthy that Mosman Council's recent consideration of the application for alterations and additions to Middle Harbour Yacht Club has supported an application for expansion of that facility, by a net increase of 12 berths. The Council has accepted, as part of that application that there is a finite supply of parking in the locality; that there is a shortage at peak times; and that there is risk of patron inconvenience. While it is acknowledged that there are a lesser number of berths proposed and therefore a lesser demand for spaces, it is apparent that there are existing parking issues within the locality and that expansion of marine related tenancies may still occur despite the current situation.

It is considered that, despite the peak shortfall, the general outcome is that there is sufficient car parking to service the proposed increase in berthing facilities associated with the use of the site.

Reference: Appendix 19

Visual impact from the marina expansion, particularly when viewed from public areas, including the northern aspect of The Spit Reserve (closest to the site). Submissions discuss design changes to the proposed marina to reduce this impact.

The visual impact of the proposal is divided between two aspects, the first being the land component and the second being the water component.

The visual impact of the land component is now reduced and the status quo generally retained. Therefore, there will be no change in this regard.

The proposed changes to the water component are considered in terms of the proposed changes to Arm C, in conjunction with the additional vessels at the T-head of Arms A and B.

The conclusions of the visual assessment articulate as follows:

- *The proposed reconfiguration and slight extension of Arm A in the southern direction and Arm B in the northern direction would not be highly perceived;*
- *The proposed redevelopment is a very small percentage of the total existing extent of the marina. The increased extent would not have any significant visual effect and impact on most of the medium range and distant viewing locations.*
- *There would be localised higher effect and impact of the proposed extensions, alteration and additions on the close range waterway locations, a small section of Spit West Reserve, Spit Road and The Spit Bridge. Views of the proposed redeveloped marina would be mostly screened due to the vegetation in Spit West Reserve when seen from private domain locations constituted by commercial developments on the eastern side of Spit Road.*
- *There are a number of reserves and walking tracks located within the visual catchment of the development site. However, it was assessed that the proposed redevelopment would have low to medium effects and impacts on those locations such as medium range locations on Spit West Reserve, the Pearl Bay foreshore, Quakers Hat Park, walking track below Beauty Point Road, walking track below Delecta Avenue, Parraiwi Park, Laura Street Reserve and Spit East Reserve.*
- *The proposed redevelopment would be highly perceivable from medium range locations in Seaforth locality due to direct views of the marina from those locations without any intervening topographic or vegetation features. However, due to the highly elevated and expansive and panoramic nature of the views, the view composition offers very high maritime and urban compatibility. Hence, other than higher visibility as in the existing case, the proposed redevelopment would have overall low visual effects and impacts on these locations.*
- *The proposed redevelopment would also be perceivable from public and private domain locations in Beauty Point, however the vessels on Arm C would provide some screening effect to other components of the redevelopment as in the existing case.*
- *The visibility of the proposed redevelopment from Balgowlah Heights, Clontarf, Northbridge and most of the medium and distant waterways location would be similar to the visibility of the existing marina. Hence, there would not be any increased visual effects and impacts on these locations due*

to the proposal.

- *In summary, the visual effects and impacts of the proposed redevelopment are considered to be acceptable ...*

It is therefore considered that the proposed outcome, in visual terms is appropriate and will have limited impact in terms of both public and private views within the vicinity of the site.

Reference: Appendix 24.

Potential Boat Congestion from the change in direction of Arm C was raised as a concern.

Despite the proposed changes, the potential impact on congestion has been considered. Vessels which navigate the north-western side of C-arm coming out of the main channel maintain the same passage as they currently do to access the marina at the southern end, albeit slightly further west, into the waterway. The passing through this, along with D and N-Arms sees clear passage of some 40 metres, which is ten metres greater than the safe minimum passing requirement.

Reference: Appendix 08.

The site is considered to already be overdeveloped.

While not specific to whether this issue relates to the land, the water, or both aspects of the development, it is considered that the deletion of the extension to floor space on the site goes some way to the matter of overdevelopment.

The change reduces the impact of the proposal having regard to matters of perceived bulk and form of the building, along with a reduced level of usage as a result of the reduced floor space proposed.

The increase in vessel capacity is not considered to be significant over the existing situation and maintenance operations are generally aligned with the extent of current practices at the site.

It is therefore considered that the proposal does not result in an overdevelopment of the site.

Access for emergency services in the case of a fire starting in the moorings.

Access and procedures for emergency services, particularly in the incidence of a fire in moorings, will be undertaken in accordance with existing management practices.

The Operational Management Manual for the site accompanied the EA at Appendix 28.

The Design is considered to be inconsistent with Appendix D of the Sydney Harbour Foreshores and Waterways Area DCP as follows:

- ***The largest vessels are directly exposed to view from the adjacent shoreline; and***
- ***The largest vessels are scattered throughout the marina.***

Appendix D of the *Sydney Harbour Foreshores and Waterways Area DCP* contains guidelines for evaluating potential visual impacts of marina development. These guidelines have been evaluated in the Visual Impact Assessment prepared by Richard Lamb & Associates (**Appendix 24**).

The visual impact of the proposal has been addressed previously in the Report. The conclusions establish limited impact in this regard.

Inconsistent with Sea Level Rise policy.

Alterations to the existing building have been substantially reduced, with alterations limited to the western side of the building. Therefore, changes to take account of Sea Level Rise Policy, in terms of the building, will not be implemented at this time as the status quo is being retained.

Questions whether the RTA has considered the proposed development.

The proposed development has been considered by the RTA.

Reference: Section 3.4

Questions whether Pittwater & Warringah Councils have been notified with regard to traffic matters.

The extent of notification is determined by the Department of Planning and not a matter for the proponent.

Questions whether Manly Council have considered the proposal and lodged a submission.

Manly Council has considered the proposal and lodged a submission.

Reference: Section 3.2

Raises concern about whether or not refuelling of vessels have been considered and whether this will be allowed to occur at night and unsupervised.

The status quo will be retained with respect to refuelling, which allows for 24-hour refuelling of vessels. The noise impacts have been dealt with in the Noise Impact Report.

Reference: Appendix 17

Questions have been raised to whether NSW Maritime has considered the application and/or approval given.

Firstly, NSW Maritime, as land-owner, have provided 'Permission to Lodge' approval, enabling lodgement of this application with the Department.

Secondly, NSW Maritime, as a referral authority, have provided a submission to the application.

Reference: Environmental Assessment Form (owners consent)

Reference: Section 3.3

Concerns have been raised regarding NSW Maritime consent to use Ellery Park and queries the details surrounding this.
The proposed development does not include any works to Ellery Park.
Concerns have been raised that the development has not catered for a loading dock and vehicle delivery area for the commercial activities and their suppliers. Concerns then raised with the use of the southern adjoining land for the purposes of loading facilities.
Delivery arrangements to the site are dealt with at Section 3.4
The southern land within the Reserve is not being used for loading purposes.
Concerns have been raised regarding the possibility of a future application being made for use of the Spit Reserve. Errors noted in the application form.
This issue is considered to have been raised as a result of a minor error in the application form, which includes the Lot and Deposited Plan reference for the southern adjoining property, which, at the time of lodging the Preliminary Environmental Assessment were relevant to the application.
That land has subsequently been deleted from the application.
Concerns raised with the completeness of the application and concern that there is three other developments being applied for as follows:
<ul style="list-style-type: none"> • The proposed one for parking stated to be essential for the new proposed marina. • The NSW Maritime approval for further usage of its waters. • The NSW Maritime consent for the area Ellery Park in 2009.
No other development is being applied for other than that contained within the Environmental Assessment.
Orso Restaurant raised concern with the adequacy of the PVC sewer pipe installation.
This matter has been taken up with both Sydney Water and Mosman Council by Orso Restaurant and is not considered to have any relevance to this application.
3.2 Manly Council
The proposed development appears to be designated development in accordance with Schedule 3 of the Environmental Planning and Assessment Regulations 2000 and no Environmental Impact Statement in accordance with the regulations has been provided with the application. Given the significant increase in capacity of the Marina the proposal is not consistent with the Part 2 of Schedule 3 of the Environmental Planning and Assessment Regulations 2000. The use of Part 3A to avoid these requirements is strongly objected to.
Part 4, Section 77A of the <i>Environmental Planning and Assessment Act 1979</i> (the Act), states that 'Designated Development' is declared to be Designated Development by an environmental planning instrument or the <i>Environmental Planning and Assessment Regulations 2000</i> (the Regulations). In this instance, Manly Council is referring to Schedule 3 of the Regulations. However, in accordance with Section 75R of the Act, Part 4 of the Act does not apply to Part 3A projects and as such, the proposal cannot be designated development as declared by the Regulations.

Traffic issues associated with the proposal on The Spit have not been adequately addressed by the applicant. Traffic impacts on The Spit affect the vast majority of residents on the northern beaches and the proposal should not proceed unless the traffic impacts are properly addressed and no increase in disruption to traffic to the northern beaches achieved.

The traffic impacts associated with the proposal have been identified as follows:

- Peak movements involve 87 persons into and 19 out of the facility between 11am and noon on a Saturday;
- Peak movements involve 89 persons into and 19 out of the facility between 1:00pm and 2:00pm on a Sunday.
- This results in 48 vehicles in and 10 out in the same corresponding periods.
- The impact of this is considered to be moderate, at peak periods.
- In addition, traffic volumes during weekday commuter peak periods are expected to be very moderate.

Reference: Appendix 19

It is noted that the proposal to increase the size of the marina mainly includes the addition of large craft that will increase the waiting times for all residents on the northern beaches when The Spit bridge is raised and create pressure for increased opening times in the future. Until the State Government provides a bridge that does not open and block all traffic to the northern beaches to allow boats to pass, there should be no increase in the number of berths in this location. On this basis it is considered that the proposal is not in the public interest.

The vessels utilising the facility are not anticipated to impact upon the Spit Bridge opening times, over and above the existing situation. GBA Coastal Pty Ltd has advised as follows:

“Spit Marina has always operated under the constraint of the Spit Bridge and its opening times and this is set to continue for the foreseeable future. There is no suggestion that the upgraded marina facility would prompt any immediate or future change in the bridge opening arrangements.”¹

Reference: Appendix 08

The visual impacts of the proposal on public and private land within the Manly LGA should be considered in the assessment of this application. The Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005 nominates The Spit as a landmark and the Spit Bridge is listed as a heritage item under the Mosman LEP.

Visual impact – Section 3.1

The matter of heritage impact has also been considered, with the following conclusions being drawn by Weir & Phillips:

The proposed works at the d’Albora Marina at The Spit:

¹ Coastal & Maritime Assessment, dated May 2010 and prepared by GBA Coastal. Page 34.

- will not have any long-term impact on the heritage significance of the Spit Bridge;
- will not have any additional long-term impact on the heritage significance of the Explosives Wharf;
- will not have any additional long-term impact on the heritage significance of the Site of the former Explosives Wharf; and
- will not have any long-term impact on the heritage significance of the Remains of the Former Bridge and Seawall.

Further, the revised proposal now substantially retains the existing marina building; as such, the relationship with the building and these items will largely remain unchanged.

Reference: Appendix 10, Appendix 24

The proposal includes a significant increase in the size of the restaurant, from 100m² to 200m². As the Department is aware, restaurants over the harbour are classed as water-based restaurants and are prohibited within all water zones under the Sydney Harbour Catchment Sydney Regional Environment Plan 2005 (now deemed SEPP). The proposed increase in existing use rights has not been addressed within the proposal.

The relocation of the restaurant has been withdrawn from this allocation. This will be retained in its current location and no change in this regard is proposed.

The impacts of doubling of the size of the restaurant, its relocation to the first floor and reorientation to face the residential properties located at Seaforth is also of concern to the council in terms of the noise impacts. It is noted that the attached acoustic report leaves questions unanswered and does not appear to adequately address the potential impacts on Manly residents associated with the restaurant. In particular, the acoustic report fails to address the impact of the noise issuing from the internal areas of the restaurant (given that the glazing appears to be by-fold doors), in conjunction with the two external decked areas.

It is also noted that the number of patrons is given as 30 within the report and 56 seats on the plans. Clarification of the total number of patrons should be provided at the earliest opportunity.

It is not proposed to relocate the restaurant and the status quo will be retained.

There is insufficient car parking available for the scale of development presently on the site. The proposal does not propose sufficient additional car parking in light of the significant increase in the size of the marina, the large increase in office space within the marina and the doubling in the size of the restaurant. Car parking located on public areas and adjacent open space should not be relied upon for commercial uses.

Refer to Section 3.1 regarding demand for additional car parking.

The increased commercial space and relocation of the restaurant have been removed from this application, with the status quo being retained in this regard.

<p><i>The Spit is a significant landmark in Middle Harbour. The increase in the size and scale of the buildings comprising the marina, the provision of office space and the expanded restaurant, extension of second storey will have a negative impact on views to and from the foreshore. Manly Council considers that the proposed development is an unacceptable over-development of the site given the prominent location on the north-western extremity of The Spit which is a significant natural feature projecting into the waters of Middle Harbour. Every effort should be made to minimise the impact of any urban development on The Spit and to retain the remaining natural features.</i></p>
<p>There are no proposed changes to the first floor of the building that will impact on views to and from the foreshore; those initially proposed have been withdrawn from the application.</p> <p>Minor changes on the northern side of the building will be negligible.</p>
<p><i>Any future development proposed for the Spit should also take into consideration the NSW Sea Level Rise Policy Statement (2009) and the likely impacts of the predicted sea level rise on existing and future development in environmentally sensitive areas such as The Spit.</i></p>
<p>Refer to Section 3.1.</p>
<p>3.3 NSW Maritime</p>
<p><i>1. Sediment controls, to ensure that no sediment, fines and like material can enter the waterway or drainage system, should be in place for the duration of the works. The applicant should carry out works generally in accordance with the Sedimentation and Erosion Control Plan (SECP) in respect to environmental management and safeguards. These controls should be maintained at design level throughout the duration of works and should be inspected for this purpose at frequent and regular intervals. Any deficiencies should be immediately made good. Methods should be in accordance with the relevant specifications and standards.</i></p>
<p>The aforementioned sediment controls may be detailed in conditions of consent and any construction management plan.</p>
<p><i>2. The discharge of stormwater should be managed in accordance with the Water Cycle Management Study prepared by Martens Consulting Engineers.</i></p>
<p>It is anticipated that the Water Cycle Management Study would be referenced in any consent.</p>
<p><i>3. In order for the proposed development to have a satisfactory navigation impact, the proponent will need to relinquish six commercial moorings in Pearl Bay. Any consent for the proposal should include a condition reflecting this requirement.</i></p>
<p>The Proponent accepts a condition to this effect.</p>
<p><i>4. There appears to be insufficient depth of water in berths 193 and 194 according to AS 3962 Guidelines for design of marinas. Also, Drawing DA01 rev Q shows a 12m power boat in berth 193, but GBA based their assessment on an 8m power boat in berth 193. While the depths do not fully comply with the code, the amount of dredging required is relatively insignificant.</i></p>
<p>A condition of consent may adequately reflect the permitted use of the said berth.</p>

5. There appears to be insufficient depth of water across the full width of the fairway inshore of Arm A for 8m power boats in accordance with AS 3962.

As detailed at **Table 6.6** of the Coastal & Maritime Assessment prepared by GBA Coastal, AS 3962 is achieved for all berth and fairways, with the exception of the fairway between A-Arm and the seawall. GBA's assessment noted that 75% of this fairway has adequate depth in accordance with AS 3962. Further, GBA note:

*"...the location of A-Arm is not to be changed between the existing and proposed marina arrangements. Furthermore, Spit Marina has operated 8 m vessels to the A-Arm Inner berths for decades without incidents of vessel machinery damage or visible bed sediment plumes that have prompted complaints."*²

Regardless of this minor non-compliance, GBA Coastal concluded that the outcome is suitable.

Reference: Appendix 08.

6. There does not appear to be wide enough fairway for 30m boats to enter Arm N inner and Arm D (between the walkway at the northern end of Arm D and vessel 179). The fairway appears to be approximately 38m wide compared with 45m required by AS 3962.

The distance between berth 179 and the fuel and sewerage services area (northern end of Arm D) is approximately 38 metres. The distance required under AS 3962 is not required as Arm D and Arm N are not opposite each other and do not constitute a fairway.

The proposed distance is sufficient for access by the proposed vessels and is not therefore a navigation issue.

7. There appears to be insufficient fairway width at the entrance to Arm C inner and Arm B outer. The east-west arm at the southern end of Arm B seems to extend a little too far on drawing DA01 Rev Q. A fairway width of 16.5m is required by AS 3962 but it appears there is only 15m on DA01 Rev Q.

The entrance to Arm C inner and Arm B is 22.75 metres and complies with AS 3962.

8. Berths 1 to 35 and berth 193 should be conditioned for 8m power boats only in any approval.

Noted. A condition of consent is acceptable in this regard.

9. The demolition of any structure should ensure that all structural elements are completely removed from NSW Maritime land. All piles and piers involved are to be completely withdrawn from the bed of the bay and not cut off.

The removal of structural elements is not required as the existing building is not being replaced.

10. Drawing No. DA01 Rev Q shows a proposed lease line and the consent authority may want to clarify whether the proponent is seeking development consent for the lease (subdivision) or whether the proponent is proposing to separately seek development consent for that lease.

As detailed at **Section 4.6** of the EA, the proposed development will require an alteration to the existing lease area. This will be negotiated separately with NSW Maritime, subject to approval of the proposal.

² Coastal & Maritime Assessment, dated May 2010 and prepared by GBA Coastal. Page 41.

11. Assumptions regarding the timing of various stages, in so far as they relate to the environmental assessment, need to recognise that the timing of construction stages is a matter negotiated between the proponent and NSW Maritime. As such, the timing and sequence of construction stages may vary from the details articulated in the EA. Also, it does not appear that the staging plan by Corben Architects is attached to the EA as stated on page 23 of the EA. Please note that it is at NSW Maritime's discretion as landowner as to the timing of the final stages.

Noted, further refinement of the construction staging plan and arrangements will be negotiated with NSW Maritime.

3.4 Roads and Traffic Authority

The RTA would like to declare its interests in purchasing a sliver of land fronting the Marina (identified in the attachment, the area coloured black within the orange highlighted circle) which has preliminary been calculated at 36m². The RTA would like to purchase this land to formalise the Regional Cycling Route which passes through the area and under Spit Bridge. The land identified would continue to function as Road to access the Marina car park and Council car park. The RTA's interest in the identified land will not inhibit the proposed development.

Noted.

1. The RTA supports any changes to the existing access that would improve the safety and efficiency of the Marina's access point.

Noted.

To adequately assess the proposed road improvements the RTA requires further detailed information of the proposed indented bay dimensions and how it fits in with the existing road reserve including the existing pedestrian pathway and cycle way.

The details of the access arrangements, including the connections with the pedestrian and cycle pathway have been adequately shown on the revised accompanying plans.

The design shall take into consideration maintaining pedestrian pathways and allowing a safe point for pedestrians to cross adjacent to the Spit Road to walk continue along the Spit Bridge. The design shall also take into consideration maintaining a safe interface for cyclists continuing past the Marina Building and under the Spit Bridge.

Noted, the accompanying plans indicate the public pathway and its position in relation to the existing marina building. This will ensure that there is a safe path of travel past the site.

2. The RTA also requires an assessment of the sight distance for vehicles entering and exiting the site, if a 12.5 metre vehicle is parked in the indented bay.

The proponent met with both the RTA and the Department of Planning in relation to this issue. As clarified in that meeting, the indent bay is not for the purpose of parking. The indent bay is designed simply to provide a reversing area for vehicles to move into, prior to exiting onto the Spit Road, so as to enable egress from the site in a forward direction.

3. The RTA requires further information on how waste disposal will operate, i.e. how will waste from the Garbage Storage Area be transported to the proposed indented bay for removal.

Garbage waste will be retained in the garbage storage area at the north-eastern corner of the site. When being removed, the garbage truck will drive down and park adjacent to the garbage storage area, while removal takes place. As there is insufficient turning distance, the truck will be required to reverse back to the indented bay to enable it to leave the site in a forward direction.

While this is occurring, personnel will be attending the site to control both pedestrian and vehicular flow to ensure that there is no interruption, nor adverse safety consequences.

4. The RTA requires information on expected number of service vehicles per week and vehicle type.

Fuel deliveries to the site generally occur once per week, with two deliveries occurring during peak period. In addition, garbage removal generally occurs two times per week.

The restaurant receives delivery of goods by small van daily; no truck delivery occurs.

It is not anticipated that there will be any additional generation in this regard as a result of the proposed development.

5. The RTA requires confirmation on whether boat trailers will be used to transport boats to the Marina.

Boat trailers are not generally transported to the Marina.

This occurs only for special delivery of new vessels, in the event that these are not transported by water. This would occur, on an average basis of once per month.

6. It is unclear whether the proposed indented bay will be constructed by the proponent or Council. The RTA requires this information to be able to respond accordingly to the Department of Planning.

The proposed indented bay will be constructed by the proponent.

3.5 Office of Environment and Heritage (Formally DECCW)

1. Construction and Operation of the proposed slipway.

The Office of Environment and Heritage (OEH) notes that the proponent intends to demolish the existing slipway facility and install a new facility. The proposed facility will be an improvement on the existing one however, the proponent has failed to demonstrate that the facility will fully comply with Sections 120 and 124 to 129 of the Protection of the Environment Operations Act 1997 (POEO Act) for the following reasons:

(a) Proposed First Flush System to Serve the Slipway.

As part of the upgrade of the slipway the proponent intends to install a flush first system to capture and store the first 15mm of rainwater falling on the slipway. The captured water will be treated and reused for the cleaning and washing down of the slipway. A first flush system incorporates a stormwater bypass mechanism that allows stormwater to be discharged to the stormwater system when first flush storage capacity is reached.

Noted.

The main issue of concern is that if the slipway is used during wet weather potentially contaminated waste material generated whilst boats are being worked on would enter the stormwater system/Middle Harbour (thus polluting waters) when the system reaches its design capacity and is bypassing to stormwater system/bay. It should be noted that a first flush system is only appropriate when first flush is not used during wet weather.

To address the above the proponent needs to provide the design specification and layout drawings of the first flush system and stormwater bypass mechanism. In addition, the proponent must also provide detailed explanation on how they are going to prevent contaminated rainwater entering the stormwater system/Middle Harbour if they intend to use the slipway during wet weather.

The proposed development does not involve a new slipway; the existing slipway is being removed and replaced with a new hardstand area. A first flush system is an existing requirement on the site, as part of the EPA Licence conditions. This will be adhered to as part of any development consent issued for the site.

(b) Water Cycle Management

It was noted that when there is an excess in the treated stormwater the proponent intends to discharge the water to Middle Harbour. The proponent has not addressed the possibility of chemicals, heavy metals etc. or any other pollutants being entrapped in the water to be discharged to Middle Harbour. The proponent must demonstrate that the treated water will comply with Section 120 of the POEO Act at all times. If the water cannot comply with Section 120 it cannot be discharged to waters and should be tankered offsite to an appropriate waste facility for disposal. Until this issue has been addressed to the satisfaction of OEH and it is shown that the water to be discharged can comply with Section 120 of the POEO Act, it cannot be discharged to Middle Harbour.

In addition to the above the proponent has not outlined any procedures as to how it plans to manage or dispose of the water when it becomes overloaded / contaminated. This issue also needs to be addressed.

The requirements pertaining to this are governed by current licencing conditions and would continue to be required as part of any development consent.

(c) Relocation of the Refuelling Facility

The Environmental Assessment states that the refuelling berth will be relocated. However the assessment did not detail the environmental protection controls (bundling, roofing of the fuel bowzers area etc) that will be installed on or around the refuelling berth. Further it is unclear if the refuelling will be undertaken outside of hours when the marina's staff are not attendance. The issue also needs to be clarified.

The existing lease terms, along with current conditions on EPA licences will continue to be adhered to, In terms of use of the refuelling facility, this will continue in accordance with current arrangements, which allow for 24 hour access to, and use of, this.

(d) Dust and Odour Assessment

The Air Impact Assessment did not take into account the potential for dust, odour or spray painting drift to be emitted to the atmosphere from the repair maintenance of sea craft on the slip way. The proponent must undertake a further air impact assessment to address this issue to demonstrate compliance with Section 124 to 129 of the POEO Act. The assessment must also include measures to control/eliminate dust, odour and spray drift being emitted from the activities conducted on the slipway.

Under the relevant sections of the POEO Act, these conditions are currently adhered to. It is anticipated, as part of any future consent, that these would continue to be adhered to and conditioned accordingly. In terms of the impacts, the status quo is being retained; no spray painting of vessels will occur.

2. Geotechnical, Acid Sulphate Soil and Stage 2 Contamination Assessment Report

- **Soils**

The investigation by Martens Consulting Engineers was limited and there are a number of issues with the Geotechnical, Acid Sulphate Soil and Stage 2 Contamination Assessment report (ref P0701675JR02_v2 May 2010). However, provided that the site will be completely covered with hardstand and buildings as part of the proposed development, further investigations are not required as the potential exposures to site users from contamination that may be present will be limited.

Noted. No further action is therefore required in this regard.

- **Ground Water**

The groundwater monitoring which was undertaken as part of the investigation indicated elevated concentrations of toluene, total xylenes, arsenic, copper, lead and zinc.

The source of the metals detected is unknown but could be due to regional factors. The toluene and total xylenes detected are possibly associated with a minor leak from the Underground Storage Tanks (USTs) or a small fuel spillage. The USTs will be removed and replaced as part of the proposed development at the site and, if the USTs are the source of the toluene and total xylenes detected in the groundwater, these works will result in the removal of the contamination source.

Noted. The requirements in this regard may be dealt with by way of condition of consent.

- **Sediments**

The information provided regarding the sediments at the site is very limited, therefore it is not possible to assess the sediment contamination status. If the sediments are contaminated, a risk to the environment and/or human health is only likely to occur if they are disturbed, either as part of the construction works for the new development, or due to the movement of boats with significant enough draft to disturb the bed of the harbour.

The Environmental Assessment written by Hamptons Property Services states that 'All construction works within the Middle Harbour shall be done within a containment boom and silt net surrounding the works area' (section 8.2 page 94) to reduce sedimentation disturbance.

However, it is noted that the proposed marina will accommodate vessels ranging in size from 12 to 30 metres in length. Information regarding the potential for sedimentation disturbance from the draft of these vessels should be supplied. If sedimentation disturbance is likely to occur as part of the proposed marina operations, further investigations of the sediments may be required.

The GBA Coastal Assessment concludes that the proposal will have no influence on sediment distribution or sediment movement. In addition, the Assessment details vessel drafts having regard for AS3962.

Reference: Appendix 08.

• Removal of Underground Storage Tanks

The Underground Storage Tanks (USTs) will be removed and replaced as part of the proposed development at the site. The UST removal must be undertaken in accordance with Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008 which requires that the site is investigated and a validation report is produced.

This matter may be dealt with via condition of consent.

It should be noted that if further contamination issues come to light during the removal of structures or construction at the site, further investigations may be required and the remediation requirements reviewed accordingly.

This matter may be dealt with via condition of consent.

The consultation process and the issues raised must be described in the Environmental Assessment (EA).

The Aboriginal archaeological assessment includes a detailed environmental and historical overview as well as a thorough archaeological review of the greater Sydney Region and of the Pearl Bay/The Spit Middle Harbour Region. There were 19 Aboriginal sites identified and registered on the Aboriginal Heritage Information Management System (AHIMS) within 1km of the study area. The predominant site types recorded are rock shelters, middens and open camp sites respectively. Aboriginal sites in this locality are restricted to particular land form units - elevated alluvial flats and lower slopes, rock platforms, and sandstone outcrops/overhangs. No Aboriginal sites or objects have been recorded on low lying, sandy beaches. There are no recorded Aboriginal archaeological sites, items or places situated within the current study area,

OEH supports the assertion that no previously identified Aboriginal sites or items occur within the study area and that the impact of past reclamation and previous development of the subject lands is likely to have disturbed, removed or buried any archaeological evidence. Therefore, OEH supports the view that the proposed development is unlikely to impact Aboriginal archaeological site, items or deposits is highly unlikely. OEH further supports the view that no aboriginal sites, items or places - submerged or on land - are known or predicted to occur within the boundaries and scope of the current development footprint.

One of the management recommendations which form the Statement of Commitments relating to the proposed development in relation to potential Aboriginal cultural heritage requires OEH comment.

It is considered that the Department will contact the Office of Environment & Heritage in the event that further comment is required.

Recommendation 2 - Archaeological monitoring and documentation during certain components of the proposed development.

While OEH generally supports the management recommendations in the Statement of Commitments, it is recommended that there are clearly stated actions in the event that Aboriginal objects are located during monitoring.

OEH recommends that any Aboriginal objects located during monitoring are lodged with the Australian Museum. OEH recommends that this issue be formally resolved and specified as a condition of consent. This option does not preclude the local Aboriginal community applying for a Care and Control permit from OEH at a later date should Aboriginal objects be recovered.

This may be attended to by condition of consent.

4. Noise impact Assessment

Notwithstanding Point 1 above the Office of Environment and Heritage (OEH) could support the proposal with additional construction time limits to be placed on the existing Environment Protection Licence No. 11211 for construction activity and no change to the existing operational activity. The licence condition for operational noise is based on offensive noise and this together with appropriate approved hours of operation should suffice.

Regarding construction noise OEH could add to the EPL time limits on construction activities between 7:00am to 6:00pm Monday to Friday with construction permitted on Saturdays from 8:00am to 1:00pm; and no construction activities on Sundays and Public Holidays. Activities that may take place outside these hours are:

- Delivery of oversize loads etc as required by Police, or other such authorities;***
- To prevent harm to persons, property or the environment, and;***
- As otherwise agreed prior with OEH***

Should these matters be deemed necessary, conditions of consent may be imposed accordingly.

Should the Department of Planning and Infrastructure (DPI) issue approval for the expansion of the marina the above conditions should be included in Project Approval Conditions (PAC). PAC should also include specific noise conditions where impact piling operations generate significant noise impact levels greater than 75dBA at any noise sensitive receiver (including any appropriate modification factors). During pile driving activities the licensee shall implement respite periods to provide respite to the surrounding community.

OEH also recommend DPI condition approved hours of operation, as per those in Section 2.1 of the Noise Impact Assessment (although they might want to check the stated start time for workshop activities - this seems very late for these types of activities, which usually start around 7am).

This matter may be attended to by way of condition of consent.

3.6 Mosman Council

The Proposal

The details of the proposal are provided in the documentation and included descriptions of both the land based and water based components.

The Environmental Assessment states:

“The purpose of the proposed works are to facilitate an increase in the supply of berthing facilities at the site in the 12 metre to 30 metre range, for which there is significant demand, and remove the existing slipway to provide more environmentally sensitive access to the marina via the introduction of a new boat lift.”

While it is clear that the land based elements of the proposal include almost total replacement Council considers that there has been inadequate emphasis placed on the design and extent of the land-based elements which include a significantly larger retail/commercial building. A building which the Council considers has little reference to its site or surroundings and which is contrary to the Sydney Harbour and Waterways Area Development Control Plan which requires, inter alia, that development in this area:

“...is sited and designed to complement existing development and to retain the maritime character of the area;”

The revised proposal no longer involves works of any material significance to the building.

The retention of the existing building character will therefore be retained. The elements that are proposed will reinforce the maritime character of the area.

As a matter of principle, Council considers that expansion of berths and an overdue attention to environmental shortcomings of the existing operation should not be accompanied by unattractive expansion of retail and commercial space on the site to the extent proposed. For this reason Council considers that any approval should be on the basis of a significant reduction in the land based components of the use with an accompanying redesign of the building to achieve a better contextual fit.

The amended design retains the existing building.

The fact of the complete redevelopment of the land-based components is known to be necessary due to the state of the existing supporting marine structures and given the extent of the work proposed it is considered that any design of the building to achieve the above objectives should include revision of the access arrangements so that vehicular and pedestrian access is brought to a contemporary standard and the well-established conflicts between pedestrians, vehicles and cyclists at the front of the site can be resolved.

Matters of vehicular and pedestrian access, as well as the interface of the proposed building and The Spit Road reserve have been previously addressed in this document, in response to matters raised by the RTA.

In addition, as the revised proposal no longer proposes the substantial redevelopment of the marina building, this issue is resolved.

Visual Amenity

The proposed marina building comprises a large 32mx22m rectangular two-storey form with overhanging, relatively flat roof. It is a free standing, self-referential building that relies for its contextual fit on the large visual catchment afforded by the waterway and reserve lands.

The building has no regard for the architectural form and detail of traditional waterfront marine uses as typified by waterfront development on the eastern side of Spit Road (notably Ferguson's Boatshed). It appears to have been designed to maximise its volume on the site. The designation of substantial floor space, particularly on the first floor level to offices is atypical of usual water dependent commercial development activities in the area. (This is especially the case given the site's limited access and parking constraints.)

An alternative approach to the design of a building could include a more traditionally proportioned marina complex of relatively discrete buildings up to two storeys in height. Such an approach could achieve a development of equal functionality, greater permeability and lesser presence in this visually sensitive locality. Approval of the building in its present form therefore is opposed and a revision addressing the above issues should be required.

The proposal no longer involves any substantial change to the building. This issue is therefore resolved.

Traffic and Access

The site is currently constrained in relation to traffic, access and parking. The arterial road location, the narrow driveway between Spit Road and the site, poor sight lines and inability for large vehicles to turn and exit in a forward direction and the conflict of vehicles with pedestrians and cyclists make the existing situation problematic.

It is acknowledged that the existing traffic and access situation is undesirable. The proposed changes will see the following:

- Integration of the pedestrian and cycleway adjacent to the site, on the eastern side of the site, into the pathway arrangements;
- An indent bay, which enables large vehicles to reverse into this and leave the site in a forward direction.
- On-site management arrangements to assist pedestrian flow and reduce conflict, during loading periods.

These are considered to go some way to improvements in this regard.

The inability of the development to cater for the additional demand is a negative aspect of the proposal. The additional demand will place additional pressure on the public carpark in Spit West Reserve which will affect other users of this car park and other public parking areas in The Spit locality. Following the preparation of The Spit Landuse Management Plan in the late 1980s it has been recognised that the available parking at The Spit is finite and there is a shortage at peak times. This is particularly evident when sailing/boating demand coincides with high usage of other dining and recreational facilities. At that time Council took a view that businesses operating or expanding at The Spit did so in the knowledge that their patrons may be inconvenienced.

Given the nature and extent of the new development it is likely that despite the measures identified by the applicants the proposal will contribute to added demand for parking and patrons and other visitors to the area will be likely to be inconvenienced as a result. The applicant's consultant attributes a parking shortfall on weekends of between 11 spaces (Saturdays) and 31 spaces (Sundays) to the development based on 2008 surveys. Ticket parking arrangements in the area have changed since that time and the parking characteristics now reflect different circumstances. The parking analysis is considered flawed for this reason.

Refer to **Section 3.1**.

While ticket parking arrangements have changed over this period, these are not considered to have any material impact on the outcomes associated with demand and/or shortfall.

In addition, the nature of the vessels now sought to be moored is such that there is an expectation that greater parking would be required than projected and on a more regular basis. Council has separately received representations from the operator that clients with larger luxury vessels are disinclined to use existing moorings because of the absence of permanent parking spaces available for their use. It is difficult to reconcile the complaints on the one hand and the proposed make up of moorings on the other.

Refer to **Section 3.1**.

The car parking requirements for marinas to not differentiate between vessel sizes and associated demand for spaces; as such a separate rate cannot be applied.

Limited detail is provided both within the report and on the architectural plans in relation to the indented bay and what the impact on other road users will be when a truck is parked or manoeuvring in this location. For example, it is not clear how other vehicles will access the Ellery Park carpark and the proposed carparking area; how north and south-bound cyclists using the regional bike route over Spit Bridge and pedestrians will safely move through the area; and how traffic will be managed if trucks are required to queue.

There will be no impact on other road users as a result of the indent bay. This is not a truck parking space, but an area to reverse into to allow egress from the site in a forward direction.

Matters of pedestrian and cyclist safety are detailed above, as are on-site arrangements for trucks, to avoid conflict with the former.

The reduced amount of floor space associated with the proposal is also considered to reduce some demand that was potentially associated with the proposal.

At the time of consideration of the Spit Bridge widening Council took issue with the poor access to this site and sought an improvement as part of any widening. At the time the RTA claimed that as the status quo would apply; no upgrade was needed. In the present circumstances the site will undergo what amounts to a total redevelopment so a proper consideration of the overall access in both the immediate and longer term is necessary.

The revised proposal substantially reduces the extent of works to the land-based component of the development.

The proposed on-site car parking arrangements in the hardstand area, in conjunction with the proposed indent bay to facilitate forward access are anticipated to improve overall access arrangements.

The Environmental Assessment demonstrates that other, broader alternatives, were considered, particularly that of a vehicle circulation and drop off area on the southern side of the building, as part of the Reserve. This was rejected by the Council, despite representing a material improvement.

The proposed outcome establishes a suitable outcome that will improve traffic safety outcomes leaving the site.

The site is on a regional bicycle route and the access point at Spit Road with the proposed indented bay will coincide with the end of the cycling and pedestrian paths over Spit Bridge and into Spit West Reserve. Council is seeking to achieve an upgrade of cycling and pedestrian facilities in the area by use of the route under the Spit Bridge and along the eastern and western foreshores and this would be prejudiced if the access design at the d'Albora Marina is not satisfactorily handled. Council and the RTA this month commissioned consultants to prepare proposals for resolution of these issues and to undertake work at d'Albora Marina that might prejudice this is considered unwise.

From what can be seen from the application plans both pedestrians and cyclists would need to cross the enlarged entry apron to proceed to Spit West pathways or under the bridge to Spit East. As presented this would not be appropriate or adequate and should be resolved as a precondition of any new building work on the site. Council's study provides an opportunity in this respect.

The cycleway connections, as known to the Proponent, are documented on the amended Architectural Drawings.

The proposal is not considered to prejudice Council's plans in this regard.

It is also not clear whether the indented manoeuvring bay is intended to serve as a set down and pick up area for visitors to the site as the boardwalk on the southern side of the building discharges directly onto the roadway in the indented bay. If the area was used by boat crews to unload stores or equipment to transfer to moored vessels further issues of conflict would occur. This too suggests that a more thorough approach to the design of the land-based components of the site is required.

The indent bay is designed simply as a reversing area to enable vehicles to leave the site in a forward direction. It is not designed as a drop off-point for patrons of the marina, including the general public, nor is it an unloading area.

Adequate signposting will be provided to this effect and procedures identified in the Operational Management Plan to alleviate the occurrence of this.

Council has consistently put to the RTA and to the representatives of d'Albora that vehicular access needs to be comprehensively altered so access is improved and pedestrian and cycling conflicts are resolved as part of any redevelopment. This advice was provided in response to the Spit Bridge widening and is equally the case now especially in view of work being done on regional and local cycling infrastructure in the vicinity of this site.

Refer to Section 3.1 and comments above regarding consideration of development alternatives.

The assessment of the Director General's Requirements at section 8 of the Environmental Assessment does not address the potential loss of public access to the foreshore and waterways of Middle Harbour.

Council has previously raised issue with the development not providing for adequate public access to and along the foreshore and the development proposed is likely to reinforce the current inadequacies in the longer term.

Council has recently undertaken significant works in Spit West Reserve and Pearl Bay to improve the visitor experience and improve access. This should be built upon to a greater extent than has been the case with the current proposal which provides little more than level access to a kiosk on the western side of the proposed building.

SREP (Sydney Harbour Catchment) 2005 requires that development should maintain and improve public access to and along the foreshore and identifies the undesirability of boardwalks as a means of access across or along land below the mean high water mark. The proponents consider the inclusion of boardwalk access to their kiosk as an improvement. Council does not concur with this view and considers greater access to the foreshore is possible.

Matters of public access to the foreshore and waterways of Middle Harbour were appropriately addressed at **Section 7.3.1** of the EA, in response to the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (SREP 2005).

The amended proposal does not reduce public access arrangements to the foreshore, retaining the status quo.

The redevelopment of the marina is an opportunity to link The Spit Reserve with Ellery Park specifically given the unsafe and less appealing route via The Spit Road frontage. Such access could also tie in with Council's foreshore pathway project which involves a combined cycleway/pathway adjacent to the foreshore in The Spit Reserve which is being explored in conjunction with the RTA.

As addressed in the EA, current pedestrian access to Ellery Park is via the Council owned car park, adjoining the site to its north. As this car park area does not form part of the site, it is not subject to this proposal and any adjustments within that car parking area are at the Council's discretion.

The proposal does not inhibit the achievement of any future project that the Council is seeking to pursue.

Noise

The letter from Wilkinson Murray Pty Limited dated 26 August 2010 was provided by the applicant in response to concerns raised by Council that the Noise and Air Quality Assessment identifies the nearest residential receivers as 300m away, when the nearest residential receivers are located on the opposite side of Spit Road at Smiths and Fergusons boatsheds, both of which contain dwellings.

The letter finds that the operation noise levels predicted for the daytime and night periods are below the noise criteria established for surrounding residences and as such noise from the operation of the premises is unlikely to affect the acoustic amenity of residences on the opposite side of Spit Road at Smiths and Fergusons boatsheds.

The acoustic assessment provided by the applicant appears to be deficient in regard to:

- ***it fails to identify the hours of operation of the restaurant;***
- ***it fails to identify how many patrons are to be accommodated on the balcony in the assumed situation;***
- ***it fails to consider the potential noise impact from amplified music;***
- ***it fails to consider the potential noise impact associated with aspects such as waste management i.e. waste collection and disposal of bottles***

The Council has identified that the nearest residential receivers are closer, by virtue of residences on the eastern side of Spit Road. It is reasonable to suggest that the noise associated with vehicular traffic would out way noise associated with the premises.

In addition, the existing building is being retained and the restaurant will no longer be relocated, but retained in its current position; as such, the status quo is maintained in this regard. Therefore, patron capacity and hours of operation will be retained as per the current situation.

Aspects of waste management may be dealt with by conditions of consent, as considered appropriate by the Department and would be in accordance with the current situation.

It is considered that the Department of Planning and Infrastructure should undertake a thorough analysis of the acoustic impact of the development as part of its consideration of the application as it has potential to affect residential amenity in the vicinity of the site.

It is considered that a thorough assessment has been supplied with the Environmental Assessment.

Hazards and Risk

The Engineering Services Report identifies that sewage is proposed to be disposed of through the existing Sydney Water town sewer connection.

The Spit is not directly serviced by Sydney Water; rather users including the Mosman Rowing Club, the public amenities, d'Albora Marina and land users on Spit East use a shared pump out system which connects to the Sydney Water town sewer connection in Parriwi Road. This existing arrangement is not identified within the Environmental Assessment, nor is the impact of the proposed intensification of use on the existing system. The applicant should be required to investigate whether the existing system needs to be upgraded and the implications of same regarding the expanded retail, commercial and food business activity which is proposed.

Further, the Draft Spit Reserves Plan of Management identifies that the sewerage infrastructure in Spit West Reserve requires upgrading and identifies the d'Albora Marina being jointly responsible for these works. The service line for the d'Albora site runs through the Spit Reserves.

As the revised proposal no longer includes the substantial redevelopment of the marina building, the existing sewerage system and capacity will remain unchanged and therefore unaffected by the proposal.

The usage of this is predominantly by the public, as opposed to private patrons of the marina, as is the existing pump out facility. Therefore, despite the nett vessel increase, the flow on effect in this regard is considered to be limited.

Other Issues

The broad objectives of the proposal are outlined above as being an increase in berths for large vessels (21% over existing) and improvement to the environmental performance of the boat repair aspects of the business. This latter aspect and related improvements to refuelling arrangements and sewage pump outs are, of themselves, desirable based on environmental criteria.

Noted.

The various expert reports accompanying the proponent's submission suggest that the waterbased changes can be accommodated without significant environmental or operational impacts. What is perhaps of greater concern is that the 21% increase in berths is also to be accompanied by a total rebuilding of the land-based aspects of the marina. This will include an almost doubling of the floor space and volume of the building and a rationalisation and increase in areas available for maintenance and repair. Each of these point to increased levels of activity and intensity of use.

The revised proposal no longer involves expansion to the land-based component of the redevelopment. Therefore, the increased intensity associated with the development, is limited to the increase in berthing capacity and improvements to boat servicing arrangements.

As noted above the proposal does not adequately resolve issues with the existing access arrangements and with added activity there is a likelihood of this posing greater problems in the future.

Matters of access arrangements are discussed at **Section 3.1**.

The intensity of the development has been reduced under the amended development proposal; as such, the perceived problems of added activity are considered to be reduced.

The plans were prepared prior to construction by Council of the Spit West shared path and other foreshore embellishments. Apart from the matters identified in discussion above the design approach does not take advantage of the new pathways nor promote foreshore access to the full extent possible. Cycle and pedestrian access would be interrupted and the junction of the path and the indented vehicle manoeuvring area is not resolved in a satisfactory manner. Pedestrian and cyclist safety in this location is a significant issue in need of resolution.

Public access to waterways, as well as the relationship of the proposal with the surrounding pedestrian and cycle paths is addressed above.

The relationship of the moored boats, particularly in the extended Arm A may also be a matter of concern due to the limited manoeuvring space between the seawall and the marina. The plans still do not identify the new sea wall and viewing platform which is regularly used for fishing and even with the current configuration has led to conflicts, including claims of fishermen casting lures on to passing vessels, etc.

This matter with respect to appropriate distances between the sea wall and A-Arm has been addressed by GBA Coastal Pty Ltd.

Reference: Appendix 08

The documentation submitted as part of the Preliminary Environmental Assessment for the proposal in 2008 identified that the applicant would be open to a planning agreement to facilitate improvements in Spit Reserve. This was at a time when consideration was being given to excision of part of the Reserve for parking and manoeuvring purposes. The applicant has now advised that as the proposed development does not include any works within Spit Reserve it is not considered necessary that the applicant enter into a planning agreement. Nevertheless it is considered appropriate that a contribution be made by the applicant commensurate with the section 94A contribution for open space embellishment to represent 1% of the value of the works.

Given the additional demand likely to be placed on Spit West Reserve from the development, it would be appropriate to seek a contribution from the development to contribute to the upgrade of the Reserve. The Draft Spit Reserves Plan of Management identifies various works to which such funds could be directed in addition to those carried out over the past two years.

In the event that Mosman Council's Section 94A contributions plan allows for this, the Proponent would do so accordingly, in alignment with any Condition of Consent.

The development as proposed is not resolved in terms of minimising impacts of sea level rise. Following concerns previously raised by Council in relation to this matter the architect has provided a letter addressing sea level rise dated 13 December 2010. This letter identifies that in light of the sea level rise predictions, the ground floor of the proposed building and ground adjacent to the building would be underwater and the concrete hardstand area be designed to have subsequent concrete slabs poured over the original slab to achieve acceptable freeboard from rising sea level. The letter suggests that the marina building be constructed on concrete floating pontoons similar to the marina pontoons and attached to the seabed with concrete piles.

Given the above there would seem to be scope for relocation of the building to address issues of vehicular access and manoeuvring and the resolution of conflicts with other users, notably cyclists. Continuation of foreshore access could also be explored to encourage passage past the site on the foreshore side.

As discussed in further detail at **Section 6.2** of the EA, an early consideration as part of the design development of the project included the possible relocation of the building, towards the southern end of the Spit Reserve.

However, this was not concluded as a suitable outcome because of the perceived use of public space for a commercial purpose, despite any land-swaps. The retention of the building in its current location was deemed to be the only feasible option.

The revised proposal now retains the existing marina building, with a minor extension to the north as previously described. The hardstand improvements will be undertaken in the same manner as originally proposed.

The outcome is therefore considered appropriate given the improvements as they are proposed.

This construction method is not identified on the architectural plans and is not referred to by other consultants. The ramifications of this new construction methodology are unclear and it also not clear whether this has been accounted for in the stated estimation of the costs of the proposed works.

The specifics of the construction method will be outlined as part of the final Construction Management Plan and completed at the construction certificate stage. All works, as required under the Act, for the purpose of establishing the construction cost, have been identified.

As noted above there is likely to be additional demand for parking and access arising from the more intensive use of the site. While the plans allocate notional uses to various areas on the site there is potential given the location that uses such as for expansion of the proposed restaurant would be favoured for some of the space allocated in the plans for offices. In the circumstances such changes of use may be disadvantageous and for this reason Council seeks to ensure that the extent and nature of uses is primarily directed at maritime activities in favour of hospitality or non-marine commercial uses. Any approval should reflect these requirements for current and future uses.

Parking and access matters have been addressed at Section 3.1 above.

The proposal no longer incorporates changes (including reallocation of uses) within the building.

Any land use change within the building must accord with the relevant environmental planning instruments at the time.

3.7 Department of Trade & Investment, Regional Infrastructure and Services (DTIRIS)

This response includes comments from a fisheries perspective. There are no agriculture or minerals concerns with this proposal.

Noted.

The Department has reviewed the EA against the provisions of the Fisheries Management Act and the Policy and Guidelines Aquatic Habitat Management and Fish Conservation 1999. In considering these, the Department wishes to advise that it has no objections to the works as proposed provided that the 'Aquatic Ecology', 'Sediment and Erosion Control', 'Water Cycle', 'Slipway' and 'Waste Management' measures within the amended draft Statement of Commitments (Appendix 27 of the EA) are implemented in full and included in any approval for these works.

Noted. Such matters may be attended to by way of Conditions of Consent.

Further, DTIRIS recommends that the following measures are employed during construction to avoid the harm of adjacent seagrasses:

- *Silt curtains are set so that they exclude adjacent seagrasses from turbidity impacts.*
- *Any barge operations over seagrasses are conducted during times when there is sufficient depth of water over seagrass to avoid harm from barge operations, including propeller action. There is to be no anchoring with seagrass beds during construction.*

These matters have been included in the revised Statement of Commitments at **Chapter 4** of this Report.

3.8. NSW Department of Planning and Infrastructure

1. Restaurant and office uses

The Department seeks further assessment and clarification on the extent of the proposed restaurant and office use of the site, in particular the permissibility of the restaurant use on the site, and the demand for additional on-site car parking and noise impacts. Analysis of these issues should be provided including:

- *Further consideration of the permissibility of the restaurant having regard to Mosman Local Environmental 1998 and the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.*
- *Further assessment of car parking requirements for the restaurant, as outlined below.*
- *Further consideration of the impacts from the increase in floor space of the building.*
- *Clarification of each office use to ensure they are consistent with the objectives of the Mosman Local Environmental 1998 and the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.*

The relocation of the restaurant has been withdrawn from this application. It will be retained in its current position at the ground floor on the western side of the building. As such, matters of permissibility, car parking demand, increases to the floor space of the building and the consistency of office uses are no longer relevant to this application as the status quo, in this respect, is being retained.

2. Parking and vehicle access

Further analysis of measures to improve vehicle access to and from the site should be provided in accordance with the RTA's letter dated 8 April 2011.

The Department notes that there is limited scope to increase on-site parking. However, concern is raised that the proposed additional marina berths, office uses and restaurant will generate car parking demand above the proposed on-site provision of 9 spaces. The heavy reliance on nearby public car parks may reduce the availability of public parking in the area for non-marina users. Further analysis of car parking demand generated by the additional marina berths, office floor space and restaurant floor space (above the existing floor space) should be provided, including an updated review of the parking studies relied upon within the Traffic Impact Assessment.

Measures to reduce the parking demand should be explored, which may include consideration of reducing the scale and nature of the proposal.

Matters raised by the RTA have been addressed previously in this Report. The details of the access arrangements, including the connections with the pedestrian and cycle pathway, have been adequately shown on the revised plans, as has the proposed indent bay.

With respect to reducing the scale and nature of the proposal, generation associated with the net berthing increase has been addressed at **Section 3.1**. In addition, the minimal increase in floor space proposed, in comparison to the original proposal will see a further reduction in the scale and nature of the development.

3. Built Form

Further analysis of the impact of the proposed building in terms of complying with the requirements to ensure the development will enhance the visual qualities of Sydney Harbour and retention of the maritime character of the area.

The visual impact of the land component is now reduced and the status quo generally retained. Therefore, there will be limited change with regards to the built form's impact on the visual qualities of the area with alterations limited to the western side of the building, and limited to a minor extension to the existing envelope, the appearance of which will be negligible.

Further Information

In addition to any revised architectural plans and supporting documentation prepared in response to the matters raised in Schedule 1, the following information is also required:

- ***Clarification of the gross floor area of the existing building compared to the proposed gross floor area, with each use to be separately identified.***

<p>The proposed changes to the marina building will increase the gross floor area by 190m². Currently, the existing marina building has a gross floor area of approximately 980m² and as such, the proposal will result in a total gross floor area of approximately 1,170m². Each additional use has been indicated on the accompanying plans, with the existing uses remaining.</p>
<ul style="list-style-type: none"> <i>Further details regarding the proposed response to the issue of sea level rise.</i>
<p>Alterations to the existing building have been substantially reduced, with alterations limited to the western side of the building. Therefore, changes to take account of Sea Level Rise Policy, in terms of the building, will not be implemented at this time as the status quo is being retained.</p>
<ul style="list-style-type: none"> <i>Vessels are located on the hardstand area, clarification is to be provided if these additional vessels form part of the application or are identified only as 'indicative vessels' undertaking repairs/other use.</i>
<p>The vessels shown as being located on the hardstand area are provided as indicative vessels, to demonstrate that sufficient space is available in this area.</p>
<ul style="list-style-type: none"> <i>Details of the existing and proposed hours of operation of the restaurant and any restrictions to be placed on the use of the outside seating area. Confirmation of the approved and proposed number of patrons is also to be provided.</i>
<p>The restaurant is being retained in its current position on the site; as such, the status quo is maintained in terms of the use and any existing operational restrictions, including trading hours and patron capacity.</p>
<ul style="list-style-type: none"> <i>Clarification if any dredging is required to be undertaken as part of the proposal as the EA contains conflicting statements and comments received from NSW Maritime indicate that dredging is required.</i>
<p>The construction methods proposed, and the water depths available, are such that dredging is not required.</p>
<ul style="list-style-type: none"> <i>The submitted Traffic Impact Assessment (TIA) provides no consideration of bicycle facilities within the proposal and the does not provide bicycle parking spaces for visitors or employees at the marina or end of trip facilities (i.e. changing rooms/shower facilities) for workers and visitors to the marina that may travel by bicycle.</i>
<p>The amended plans show bicycle parking will be incorporated into the car parking area and is considered to be adequate to cater for the demand generated by visitors and employees alike. The building currently contains end of trip facilities which may be used by marina users and staff.</p>
<ul style="list-style-type: none"> <i>Submission of Appendix C of the TIA in support of the proposal.</i>
<p>The references made to Appendix C within the TIA relate to existing truck manoeuvrability, which is now shown on the amended plans. However, please find attached the Appendix C referenced within the TIA at Attachment 01.</p>
<ul style="list-style-type: none"> <i>Clarification as to whether the application seeks approval to modify the lease areas, including details of any discussions held with authorities to modify the lease area.</i>
<p>As detailed at Section 4.6 of the EA, the proposed development will require an alteration to the existing lease area. This will be negotiated separately with NSW Maritime, subject to approval of the proposal.</p>

- **Clarification as to the number of full time equivalent operational and construction jobs, to be split into separate uses.**

During construction approximately 10 personnel would be involved with the construction of the marina berths, with an additional twenty personnel required for the construction of the hardstand area,

Once operational, the existing staff would be retained. This consists of three full time marina staff and seven part time marina staff, One additional staff member would be employed upon completion of the project.

- **Justification of the inclusion of additional large vessels to the site and the requirement for the existing Spit Bridge to open for these large vessels.**

The purpose of introducing additional large vessels to the site is to cater for a demand for such berths as identified by the Proponent.

As previously detailed, the vessels utilising the facility are not anticipated to impact upon the Spit Bridge opening times, over and above the existing situation. GBA Coastal Pty Ltd provided the following in this regard:

*"Spit Marina has always operated under the constraint of the Spit Bridge and its opening times and this is set to continue for the foreseeable future. There is no suggestion that the upgraded marina facility would prompt any immediate or future change in the bridge opening arrangements."*³

Reference: Appendix 08

- **Further details regarding how the proposal will provide safe and convenient pedestrian and bicycle access through the site thus providing an important link between the Spit Bridge and Spit West Reserve, noting Mosman Council's comments in relation to this matter and the requirement to improve public access along the foreshore.**

The indicative location of the cycleway and footpaths are now shown on the amended plans prepared by Corben Architects. In addition, matters of public access to the foreshore and waterways of Middle Harbour were appropriately addressed at **Section 7.3.1** of the EA, in response to the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (SREP 2005). The amended proposal does not reduce public access arrangements to the foreshore.

- **Details addressing Council's Section 94 contributions plan.**

Matters of the Section 94A contributions plan have been previously addressed. In the event that Mosman Council's Section 94A contributions plan requires the payment of contributions, the Proponent would do so accordingly, in alignment with any Condition of Consent.

Architectural Plans

- **Plans approved by NSW Maritime for owners consent on 30 December 2009.**

The plans referred in the NSW Maritime's owners consent, dated 30 December 2009, accompanied the EA and have previously been supplied to the DoP.

³ Coastal & Maritime Assessment, dated May 2010 and prepared by GBA Coastal. Page 34.

- ***Plans indicating the level of the sea floor and water depth that indicate the mean low and high water marks. The plan should also highlight areas where boats will be restricted in length due to the depth of water (this is to be provided in support of the report prepared by gba Coastal Pty Ltd) and how boats manoeuvre in these areas.***

The amended plans provide details regarding the mean high water mark, whilst the hydrographical survey provided with the EA provide details of water depth and sea floor levels. The hydrographical survey accompanies this Report.

Matters pertaining to restriction on vessel length are dealt with by GBA Coastal.

Reference: Appendix 08.

- ***Plans indicating the location of the existing and proposed underground storage tanks.***

Specific details about the locations of the existing and proposed underground storage tanks may be provided at the construction certificate stage, in accordance with any Conditions of Consent.

- ***Plans demonstrating that car parking provided on the hardstand can manoeuvre throughout the site and are not impacted by the vessels located on the hardstand.***

Due to their location and orientation, the car parking provided will not, in any manner, be impacted upon by the use of the hardstand area.

- ***Amendment of Plan DA02 to clearly identify the location of the existing and proposed new building identification sign.***

The proposal will now retain the existing signage arrangements at the site, as per the status quo.

- ***Elevation view comparison of the existing and proposed building envelopes.***

As the proposal now substantially retains the existing building, it is considered that the amended plans, which include elevations, are sufficient.

- ***Plans identifying the commercial moorings to be relinquished as a result of the comments from NSW Maritime.***

As previously detailed, the Proponent accepts a condition to this effect to satisfy the requirement from NSW Maritime. The relinquishment of any moorings will be at the discretion of NSW Maritime.

- ***Updated plans illustrating the new sea wall and viewing platform at indicated by Mosman Council.***

This matter has been addressed previously at **Section 3.6** of this table, with revised drawings prepared by Corben Architects, accompanying this Report.

4 THE REVISED DRAFT STATEMENT OF COMMITMENTS

In accordance with **Part 3A** of the Act, the proponent is required to prepare a **Statement of Commitments** pertaining to the development proposal. **Section 75F(6)** states as follows:

The Director-General may require the proponent to include in an environmental assessment a statement of the commitments the proponent is prepared to make for environmental management and mitigation measures on the site.

The Director-General's requirements for the project state the following requirements in this regard:

A Statement of Commitments outlining environmental management, mitigation and monitoring measures.

The Statement of Commitments relates to the site known as d'Albora Marina, located at The Spit, Mosman which is legally described as Lot 102, Lot 103 and Lot 104 in Deposited Plan 1011363.

This Draft Statement of Commitments provides commitments by Ardent Leisure during construction and future operation of the project.

The finalisation of the Statement of Commitments will need to incorporate any relevant conditions of consent and therefore, will be subject to finalisation once these have been received.

4.1 Overall Construction Matters

Construction of the site will occur in accordance with a staging plan which will be subject to the approval of NSW Maritime. The overall construction period from commencement to completion is approximately three years.

Construction, regardless of the stage, will occur between the following hours:

- **Monday to Friday:** 7:00am – 6:00pm
- **Saturday:** 8:00am – 1:00pm
- **Sunday & Public Holiday:** No Work

All construction works will take place on the site; any reliance on adjacent lands would be subject to separate agreements with relevant authorities.

In addition, construction will be undertaken in accordance with all conditions of consent imposed.

4.2 Noise Management

In accordance with the requirements nominated by Wilkinson Murray Pty Ltd, the management noise goals are as follows:

Table 01: Construction Noise Criteria

Receiver Area	Management Noise Goals -dBA	
	Recommended	Maximum
Seaforth	60	75
Clontarf	59	75
Beauty Point	59	75

Source: Wilkinson Murray, 2010

On this basis, these will be maintained throughout the course of the project.

The following Commitments are provided with respect to Noise Management:

- Machines used on site will be maintained in good condition, particularly considering the exhaust system on diesel powered machines, to minimise noise emissions;
- Excessively loud machines will be repaired, modified or removed from the site;
- Sound pressure level measurements will be conducted on all plant prior to works commencing on-site;
- The appointed project manager will be available to respond to questions and complaints from the community in a professional, considerate and timely manner; and
- Reversing alarms will be controlled to the minimum sound level consistent with safety by replacing, shielding or relocating the alarm unit on noisy machines.

4.3 Sediment & Erosion Control Management

The Proponent will maintain the quality of surrounding roads, footpaths, waterways and natural environments, during the construction period. The following Commitments are provided with respect to on-site management in this regard:

- **Mooring facilities;** it is understood that the likely foundation solution will be suspended concrete on driven piles. Construction by driven piles into the seabed will prevent dredging and suspension of marine sediments and the oxidation of any Potential Acid Sulphate Soils present.
- **Containment booms;** All construction works within Middle Harbour shall be done with a containment boom and silt net surrounding the works area. This will reduce sedimentation impacts during berth construction and reduce the impacts of an accidental spill in the works area by containing any potential pollutants.

- **Sediment fences and straw bales;** Sediment fencing and straw bales will be installed above the high water mark in the areas where works to upgrade the existing marina are to take place.
- **Stormwater flows** are to be redirected around the construction site to prevent the transportation of sediments into the waterway. This shall also ensure construction materials and waste do not discharge into Middle Harbour during periods of rainfall.
- All sediment fencing and straw bales shall be maintained and monitored on a regular basis and after periods of extended rainfall. Any damaged fencing shall be replaced immediately to prevent sedimentation of surrounding waterways.
- Sediment fencing and straw bales locations and typical specifications are provided in the Engineering Services Report, prepared by Martens and Associates, which accompanies this application.

4.4 Traffic Management

A Construction Traffic Management Plan will be prepared as part of any Construction Certificate process.

However, the following traffic management commitments are detailed below.

4.4.1 Pedestrian Management Method

Pedestrian movement management during the construction period of the development will include the following aspects:

- Pedestrian movement and pathways during the construction period will not be adversely affected by the development, through the implementation of appropriate and safe mechanisms;
- Pedestrian movement mechanisms will include the use of accredited traffic controllers when construction vehicles enter and exit the site and, where required, the use of temporary pedestrian pathways;
- Protection for pedestrians will be provided in accordance with all the relevant statutory requirements and will involve the use of perimeter fencing; and
- The provision of night-lighting, protective barriers, and when required, traffic barriers, will be provided.

4.4.2 Vehicular Management Method

Vehicular traffic management during the construction period of the development will include the following:

- All construction vehicles will enter and exit the site *via* Spit Road. This will be coordinated to ensure that disruption to traffic flow along the Spit Road is minimised;
- All crane operation and delivery areas will be located directly opposite the existing building on the site, within the northerly adjoining area;
- Waste bin delivery access and removal to and from the site will be the same as the construction vehicles, being entry from the south and depart to the north;
- All traffic control devices and personnel shall be set-up and controlled in accordance with the relevant *Australian Standards* and Workcover authority practices;
- Workers will be encouraged to utilise public transport to and from the site.

The Construction Management Plan will also detail the following:

- Vehicular access routes to and from the site during construction;
- The number of vehicle movements to and from the site; and
- Wash down requirements prior to exiting the site.

4.5 Water Cycle Management

The Water Cycle Management Strategy has been prepared by Martens & Associates. The following Commitments are provided in this regard:

- The total treatment capacity will be a first flush system, as required by the Department of Environment & Climate Change;
- The hardstand area will be designed such that drainage falls to the centre, where a catch drain is located. This will enable waste water from the maintenance activities to be entered into the collection pit.
- Water will be pumped through a grease arrestor to a water recycle system that has no less than the following:

- A suitable oil-water separator to treat captured waste water by removing sediments, oils and grease;
 - A 10KL reuse water storage water tank to supply water for maintenance and wash down activities.
- Treated water will be suitable for reuse for slipway activities. Waste water from these activities is caught by the collection pit and passes back through the treatment system;
 - Any overflow of treated stormwater will discharge into Middle Harbour, but will not impact on water quality;
 - A swale system shall be designed around the car park area to direct clean stormwater flows directly into Middle Harbour; and
 - The stormwater system shall be inspected every three months by a qualified contractor, to ensure operation at full capacity.

In addition to the above:

- a 20KL tank will be installed for the capture of stormwater from the roof.

On this basis, the commitment is for the capture of 30KL of rainwater to be harvested from the site and available for reuse.

4.6 Slipway Management

The Proponent provides the following commitments with respect to management of the slipway:

- Appropriate signage shall be employed to encourage the use of the slipway and maintenance area;
- Boat owners will be assisted by marina staff on the correct methods for boat washing and maintenance to prevent pollution of the waterways;
- The slipway and work areas shall be kept clean at all times;
- Paint chips and gross pollutants shall be removed immediately by sweeping, and not hosed; and
- Adequate machinery and work practices are to be employed to control dust and pollution sources. To avoid accidental spill, including glues, resins and paints should be used with care.

4.7 Waste Management

The Proponent's commitment to waste management on the site is in accordance with the Waste Avoidance and Resource Recovery Act 2001. The Waste Hierarchy is as follows:

- Prevention and avoidance of waste.
- Recovery of resources.
- Disposal of resources.

The principle aim is to avoid the production of waste.

Where this is not possible, recycling and correct disposal methods are to be implemented.

The following waste sources are identified and to be disposed of as follows:

- **Sewage:** as the proposal involves a new sewage pump-out facility, all waste shall be removed through the town water connection.
- **Oily Bilge Disposal:** visitors and users of the site will be reminded to dispose of such correctly, through specialist contractors who dispose of materials off site.
- **Solid Waste:** separate bins will be made available on site for recyclable materials; organic waste and other waste materials. Boas users will be encouraged to dispose of waste accordingly and will be reminded through both verbal communication and signage.

Self -closing lids will be provided on such facilities.

Waste will be collected regularly and taken off site.

- **Chemical Waste:** This will be collected regularly and taken off site on a regular basis.

This will not be disposed of in the catch drain.

An adequate supply of spill kits shall be maintained on site at all times and easily accessible in the event of an accidental chemical spill.

4.8 Aquatic Ecology

An Environmental Management Plan (EMP) will be prepared in order to address aquatic ecology management matters during the construction period.

The EMP will be prepared in accordance with the requirements of the NSW Department of Environment and Climate Change, as well as the NSW Department of Planning. These requirements will be established through additional liaison and consultation and will include, at a minimum, the following aspects:

- Details on the bulk fuel storage, vessel refuelling, fuel/sewage pump out berths, and the protection measures to be adopted during the construction and operation of the facilities;
- Description of the piling techniques and the impact on the sea floor; and
- Details of the wharf demolition methods as well as the management of demolition waste.

An EMP will be provided at the Construction Certificate stage.

4.9 Coastal & Maritime Engineering

This section provides the commitments pertaining to selected hydrological issues, namely:

- Estuarine morphology and evolution;
- Water depths and sediments;
- Water levels; and
- Waves and wave loading.

Overall, the environmental assessment found that the proposed development to be sustainable in respect of coastal and maritime engineering. The environmental impacts associated with the proposal are generally small and acceptable.

4.9.1 Estuarine morphology and evolution

All new waterside structures would be designed to accommodate the water depths, water flows and bed materials, with no impacts to the estuarine morphology within the area.

4.9.2 Water depths and sediments

The reconfigured berths are to be restrained by piles. These would comprise the existing piles, and any new piles to be determined as part of the detailed design. The piling design would have regard to existing water depths and bed materials.

4.9.3 Water levels

In relation to extreme high water levels, the impact on the floating berths of tide, weather influence on water level and SLR would be fully accounted for on the condition that:

- Pile cut off levels are suitably elevated, and that the bending capacity of the piles can accommodate the increased bending moments due to larger lever arms. Pile lengths should cater for a 1% AEP SWL of RL 2.4, plus a nominal wave amplitude of say 400 mm; and
- Ramps are operable for a SWL range between RL -0.3 and RL 2.8.

4.9.4 Waves and wave loading

The upgraded facility will incorporate the same width walkway pontoons as the existing facility, 5 m wide at C-Arm and 2.5 m wide elsewhere. Fingers are 1.1 m wide throughout. Standard 400 mm pontoon drafts are adopted, provided by concrete encased polystyrene pontoon units.

5 CONCLUSIONS

The purpose of this Report has been to outline the changes to the proposed development, provide a response to the submissions received and a revised Draft Statement of Commitments.

As demonstrated by this Report, the revised proposal substantially resolves a number of key issues raised by both the public and government agencies. In addition, where issues have not be resolved by the revised proposal, these have been adequately addressed in this report, or are a matter to be resolved by way of conditions of consent.

Overall, it is considered that the issues raised by the submissions are unsubstantial which is reflective of the quality of the proposal and its minimal impacts. As such, it is considered that the proposal may be approved, subject to the appropriate conditions of consent.

ATTACHMENT 01: APPENDIX C OF THE TIA

1



10.4M RIGID TRUCK meters

Width	:	2.50
Track	:	2.50
Lock to Lock Time	:	6.00
Steering Angle	:	30.00

HEAVY TRAFFIC

~~WINDOWS GUTTER~~
~~RL 6 31 RL 4 26~~

[illegible]

THE UNIVERSITY OF CHICAGO

10.4m Truck Under Existing Arrangement
with reversing movement into Spit Road
1 in 200 at A3.