

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
1. TRAFFIC			
1.1	The proposed car park does not adequately cater for the possible demand - not enough car parking is proposed. The marina will greatly affect the ability of residents or their visitors to access visitor parking especially during peak times of marina operations. The car park design fails to provide essential facilities i.e. storage areas/loading areas.	82	Council's parking requirements for marinas are 0.6 spaces per wet berth, 0.2 spaces per dry berth or swing mooring and 0.5 spaces per employee. This compares to AS 3962 - 2001 which requires 0.3 to 0.6 spaces per wet berth, 0.2 to 0.4 spaces per dry berth, 0.3 to 0.6 spaces per swing mooring and 0.5 spaces per employee, plus one space per 30m2 for ancillary activities not related to boat berthing. AS 3962 - 2001 notes that 0.6 spaces per wet berth should be considered for racing clubs, and 0.3 for commercial facilities such as the proposed development. Council's parking requirement is therefore not considered to be appropriate as the proposed development is not a racing club marina. The proposed 58 space car park satisfies the Australian Standard and is therefore considered to be appropriate. The development is expected to generate a small number of service vehicles. These would primarily be vans, utilities and courier style vehicles which will be able to use the on site parking area
1.2	Roads and infrastructure in the area are not sufficient to accommodate increased building works, commercial development and traffic volumes including heavy vehicles.	13	During peak times the marina would generate up to some 20 vehicles per hour two-way. This is a low traffic generation, equivalent to one vehicle every three minutes. Such a low generation would not have significant effects on the operation of the surrounding road network. The development is expected to generate a small number of service vehicles. These would primarily be vans, utilities and courier style vehicles which will be able to use the on site parking area. Most construction activity is proposed to be undertaken from the water. Piles, floating structure, beams and timber decking would be brought to the site by water. The number of employees during the construction period will vary, but is estimated to be up to some 15 during the various stages of construction. Peak daily traffic flows during construction are estimated to be up to some 50 vehicles two-way. On a typical working day of eight hours, this is equivalent to an average of less than 10 vehicles per hour two-way. The surrounding road network will be able to cater for this low volume of traffic.
1.3	Increase in the volume of traffic using the Breakfast Point community roads and disruption to the community caused by the movement of goods and people between the 'off-site' car park and the marina that is over private land.	75	The Traffic and Parking Assessment concluded that the increase in traffic using the roads in Breakfast Point as a result of the proposed marina and kiosk would be low. Roads within Breakfast Point have been designed and constructed to cater for the proposed flow.
1.4	Increase in commercial traffic will increase risks for children, pedestrians and residents.	19	The additional traffic from the proposed development would not cause capacity or unusual safety issues on roads within Breakfast Point. The proposed driveway to the car park will have good sight lines and is provided in accordance with the requirements of the Australian Standard for Parking Facilities (Part 1: Off-street car parking), AS 2890.1:2004.
1.5	Street signs should be erected to divert traffic away from Admiralty Drive	2	This matter does not appear to be related to the marina.
1.6	The seawall will be damaged by traffic driving along the foreshore walkway.	1	Vehicular access along the foreshore walkway is not proposed.
1.7	Pressure on local roads. Tennyson Road is already congested and will become worse as the Breakfast Point development undergoes proposed expansion with more population introduced into the area. Increased pressure put on traffic flow at Mortlake/Cabarita Rd intersection and Medora Lane	10	These matters have been addressed in previous approvals for the overall development of Breakfast Point. In the Breakfast Point Masterplan 1999, 2002 and Concept Plan 2005. The Traffic and Parking Assessment for the marina Project Application concluded that:- <i>"The marina would generate up to some 20 vehicles per hour at these times. This is a low generation, equivalent to an average of one vehicle every three minutes during peak hours.</i> <i>Such a low traffic generation would not have significant effects on the operation of surrounding roads within Breakfast Point or the external road network. Intersections would continue to operate at their existing good levels of service A/B, with average delays of less than 15 seconds per vehicle."</i> The additional traffic from the proposed marina would not have a significant impact on the local roads.
1.8	The extent of illegal 24/7 parking within the estate will be increased as a result of the development	1	The Traffic and Parking specialist Colston Budd Hunt & Kafes considers the parking provision appropriate as discussed at Item 1.1.
1.9	The car parking area proposed does not serve the public interest, nor promote the use of the facility. The proposed car parking will not provide a sufficient number of spaces for public use purposes. Visual pollution of concrete car park with boom gate.	5	The proposed car parking location is consistent with the location identified in the Breakfast Point Masterplan 2002. The parking provision is considered appropriate as discussed above.
1.10	Concerned that there will be vehicular traffic on the foreshore pedestrian paths considering the 50 seat kiosk and boats themselves will require considerable logistics support in the delivering of supplies and removal of waste	7	Vehicular access along the foreshore walkway is not proposed. The development is expected to generate a small number of service vehicles. These would primarily be vans, utilities and courier style vehicles which will be able to use the on site parking area. The delivery and removal of materials to and from the Kiosk will be subject to a management plan which would include times for transport of materials which account for pedestrian traffic along the foreshore and to and from the Kiosk.
1.11	An assessment of traffic movements must take into consideration current and future development	9	These matters have been addressed in previous approvals for the overall development of Breakfast Point. In the Breakfast Point Masterplan 1999, 2002 and Concept Plan 2005. The Traffic and Parking Assessment for the marina Project Application concludes:- <ul style="list-style-type: none">o <i>"the development would have low traffic generation during construction and operation, equivalent to an average of one vehicle every three minutes during peak hours;</i>o <i>such a low traffic generation would not have significant effects on the operation of surrounding roads within Breakfast Point or the external road network."</i>
1.12	Management of traffic during construction and impact on residents and visitor parking is not provided	1	Most construction activity is proposed to be undertaken from the water. Piles, floating structure, beams and timber decking would be brought to the site by water. The number of employees during the construction period will vary, but is estimated to be up to some 15 during the various stages of construction. Peak daily traffic flows during construction are estimated to be up to some 50 vehicles two-way. On a typical working day of eight hours, this is equivalent to an average of less than 10 vehicles per hour two-way. The surrounding road network will be able to cater for this low volume of traffic.

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			Construction staff parking associated with the marina will be managed in a similar manner as currently being done for the land based construction activities underway at Breakfast Point. Designated builders parking has been provided offstreet.
1.13	The traffic report failed to address many of the DGRs	1	The Director-General's requirements included: traffic volumes during construction and operation (addressed in paragraphs 3.13 and 3.16 of the traffic report), assessment of the impacts of this traffic on the safety and operation of the surrounding road network (addressed in paragraphs 3.14 and 3.17 of the traffic report), site access (addressed in paragraph 3.9 of the traffic report) and internal roadways and parking (addressed in paragraph 3.11 of the traffic report).
2. REMEDIATION			
2.1	All contaminated sediments in Kendall Bay should be remediated.	50	This is a matter for the Department of Environment, Climate Change and Water (DECCW).
2.2	The proposed geotextile blanket does not meet the requirements of the remediation order issued by the EPA.	59	The requirements of the Remediation Order are being addressed as part of the Environmental Assessment. The proposed remediation method (geotextile blanket) has been discussed with the Department of Environment, Climate Change and Water (DECCW). DECCW have provided their comments in letter dated 30 November 2010. The proponent has reviewed this letter and has prepared a response (refer to Response to Agencies' submissions table).
2.3	The environmental scientist reporting and advising on this proposal is paid by the proponent.	2	AECOM was engaged by the proponent in accordance with normal professional practice for the environmental assessment of developments of this nature. AECOM's professional advice is based on objective technical data, and is prepared with reference to relevant regulations and guidelines. The findings have been subject to internal peer review and external independent review by a NSW DECC accredited Contaminated Land Auditor.
2.4	The lifespan of the blanket is said to be 100 years. How do we know that this is correct? Where has the blanket been used previously? Who will replace the blanket when required?	8	<p>The supplier of the geotextile blanket has stated the lifespan of the blanket to be 100 years when submerged in saline water below rock cover (refer letter from Geofabrics Australia Pty Ltd Volume 8, Appendix 12). Further to this the durability of the geofabric will not be affected by the TPH's and PAH's present in the sediments in Kendall Bay, nor will it be affected by hydrolysis as the water temperatures are below 35 degrees Celsius. Previous investigations in general did not detect phenol concentrations above laboratory detection limits. The RO (parts b and c) also reflects this as the 'contaminants' of concern were identified to be TPHs and PAHs, and not phenols. Therefore, phenols if present are in low concentration and are not considered to be a factor in the durability of the geotextile at this particular site. Refer to Appendix 1 - Summary of Agencies' Submissions and Proponent's Responses - Attachment 4 for further detail.</p> <p>A condition of approval could include the requirement for preparation of a Maintenance Plan for the marina. The maintenance plan would include allowances for any unexpected damage to the geotextile and any unexpected replenishment required to the basalt rock.</p> <p>A Business Plan will be prepared for the marina and will include allowances for the maintenance. The levies charged in relation to the marina would include allowances for maintenance.</p>
2.5	The movement of piles following mooring will result in dispersal of pollutants above the geotextile blanket. Are piles to be driven before or after the geotextile material is laid? How much pollutant will be released in the process? No reference is made to the methodology of withdrawing at least 13 temporary piles following construction.	5	<p><u>During construction of the marina:</u></p> <p>Temporary piles (for the securing of the silt curtains and for mooring of barges) will be driven prior to the laying of the geotextile. The movement of the pile will be downward with a small degree of lateral movement. The quantity of sediment disturbed will be minimal and any sediment which is released into the water column will be contained by the silt curtains (refer to AECOM Construction Environmental Management Plan (CEMP))</p> <p>In relation to the construction of the permanent piles, the geofabric blanket and rock armour will first be placed on the seabed. Blockouts will locate the surveyed position of each of the piles within the rock armour. When the blockouts are removed divers will make slits in the geofabric. The piles will be driven through these slits in the geofabric. On driving the piles the quantity of sediment disturbed will be minimal and any sediment which is released into the water column will be contained by the silt curtains (refer to AECOM Construction Environmental Management Plan (CEMP)). Divers will then install a geotextile collar around the base of the pile on top of the geotextile blanket. The collar will be attached to the pile and will move with it. At the collar there will be two layers of geotextile covered by the rock armour (Refer to Drawing DA06- Bed Treatment prepared by TLB Engineers in Appendix 1, Volume 2 of the EA). These geotextile collars will prevent movement of sediments into the water column..</p> <p>The proposed installation procedure is set out in the Construction Management plan included in the EA as Appendix 12.</p> <p>Withdrawing of temporary piles: The approach will be same as that used during demolition of the former coal wharf. It is noted that during the pile removal works, no free phase contamination was identified. More than 100 piles were removed when the original wharf was removed. The construction procedures used were approved by the DECC and environmental controls used successfully to prevent the dispersion of contaminants.</p> <p><u>Operation of the Marina</u></p> <p>The movement of piles in service at the bed, as a result of wave action or contact with boats, will be small (in the order of 10-20mm) . Movement of the piles will be laterally, there will be no vertical movement of the piles. Movement of the piles will not result in the discharge of pollutants which exist at depth in the sediment profile.</p>
2.6	The geotextile blanket and rock ballast will pollute the environment and restrict and damage natural marine growth.	20	<p>The rock armour will comprise basalt, which is generally used as a non polluting geotechnical component of aquatic engineering world wide. Also, due to basalts durability and chemical stability it is an ideal material for use as a scour reduction measure. Basalt's (igneous rock) use as rip-rap is a standard practice worldwide. No studies have been identified that indicate an adverse impact to marine water quality from the numerous projects where it has been used. The geotextile material has good resistance to permanent deformation under long-term loading and excellent chemical resistance to water, salts, organic acids, organic solvents and petroleum based chemicals s inert, and therefore is considered to be suitable to be placed into the environment.</p> <p>Complete and natural communities of marine organisms colonise and live on basalt rock in NSW, such as intertidal rock platform community at Kiama. Marina animals will gradually colonise the basalt rock, following the development of microscopic algal film on the rocks surface. The resulting marina community is likely to be different to that now living in the soft sediment, but the community will be subject to better water quality conditions than at present, because it will be isolated from the current sources of contaminants, the sediment, by the geofabric.</p>

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2.7	No development should be approved before the Kendall Bay contamination clean-up is completed and before there is sufficient evidence to support the long-term use of a geotextile blanket under the marina.	16	<p>This is a matter for the Department of Planning (DoP) and Department of Environment, Climate Change and Water (DECCW). The EA has included adequate studies and specialist advice to support the proposed remediation method.</p> <p>An Interim Audit advice was issued by the independent site auditor Mr Andrew Kolhrusch (October 2009). The advice <i>"has considered whether the Report (as per NSW DEC 2006) Guidelines for the NSW Site Auditor Scheme) demonstrates that the blanket over bed approach is technically feasible, environmentally justifiable and consistent with relevant laws, policies and guidelines."</i></p> <p>The comments raised in Section 3 -Review Comments of the Advice have been reviewed by the project team and will be addressed in the preparation of a Remediation Action Plan (RAP) submitted as part of any Preferred Project Report.</p>
2.8	The proposed geotextile blanket has no proven track record. The unknowns of utilising the proposed matting under a commercial marina.	83	<p>Geotextiles of the type proposed are used widely in coastal engineering applications (refer to Port of Brisbane Case Study, Nerang River and San Diego Bay contained in Attachment 4 to the Response to Agencies' submissions (23/02/11)).</p> <p>The proposed geotextile Elcomax 1200R is the heaviest grade non-woven product which is available. Refer to Appendix 1 - Summary of Agencies' Submissions and Proponent's Responses - Attachment 4 for further detail. The geotextile will readily accommodate the puncture (drop cone) and tear loads (wide strip tensile strength) than could be associated with the construction and operation of the marina.</p> <p>The capacity of the geotextile materials to withstand the contaminants within the sediments of Kendall Bay has been assessed Dr John Scheirs (Refer to Appendix 1 - Summary of Agencies' Submissions and Proponent's Responses - Attachment 4 for further detail.) The geotextile was found to be resistant to the PAHs TPH present in the sediments, microbial and biological attack, will not be degraded by hydrolysis as water temperatures in Sydney Harbour are less than 35 degrees and that there are no levels of phenols present to significantly impact on the durability of the lifespan of the geofabric.</p> <p>Appendix 1 - Summary of Agencies' Submissions and Proponent's Responses - Attachment 4 demonstrates that the geotextile has been used in revetments and break waters where the wave energy is significantly higher than at Kendall Bay. In these situations the rocks placed on the geotextile are significantly larger than will be used in the ballast for the marina project for example the reclamation project at the mouth of the Brisbane River. There risk of accidental tearing of the geotextile has been greater in these projects than for the proposed marina. Testing of the geotextile has been undertaken specifically for the Brisbane River project. No tearing of the geotextile occurred.</p>
2.9	The remediation proposed by Jemena / AGL is inadequate	7	<p>The Sediment Protection System proposal is independent of the proposed Jemena remediation project (Areas A and B).</p> <p>The adequacy of the Jemena remediation project (Areas A and B) is a matter for the DECCW and DoP.</p>
2.10	The smell from a mix of toxins and gases will result from this blanket.	2	<p>Given the inert nature of the geotextile material no toxins or gases will result from the blanket itself.</p> <p>The SPS will contain the existing sediments in-situ and protect them from the existing disturbance that could occur from wave, and current action and propeller wash from ferries and other vessels.</p> <p>It is noted that "toxins" and odours were not detected during the demolition of the former coal loading wharf, which included the removal of significant number of piles. The proposal does not include sediment removal.</p> <p>The installation of the geotextile will remove the limited existing biota. The decomposition will not release toxins, gases or odours above existing natural baseline conditions.</p>
2.11	The breakdown of the remediation order with the current pollutant may cause the NSW peoples an inordinate amount of money to finalise the remediation of Kendall Bay at some future stage. Will Jemena P/L be absolved of its responsibility to remediate the bay as directed by the EPA and would then the NSW tax payers be responsible for the remediation?	5	<p>This is a matter for the Department of Planning (DoP) and Department of Environment, Climate Change and Water (DECCW).</p>
2.12	The proposed geotextile style blanket is not remediation of the bay	53	<p>An Interim Audit advice was issued by the independent site auditor Mr Andrew Kolhrusch (October 2009). The advice <i>"has considered whether the Report (as per NSW DEC 2006) Guidelines for the NSW Site Auditor Scheme) demonstrates that the blanket over bed approach is technically feasible, environmentally justifiable and consistent with relevant laws, policies and guidelines."</i></p>
2.13	The risk of failure of the SPS and the likely dispersment of contaminants into the waterway from the increased turbidity generated from vessel wash. Can the pollutants rise up through the blanket? No data has been collected to confirm that there is no debris or obstructions present on the sea floor that will cause damage to the geotextile during the laying of the geotextile and rock armour.	12	<p>The SPS is designed to accommodate the anticipated wash loads due to vessel waves and propeller action from existing craft and new craft to be berthed in the proposed marina. The OEMP provides monitoring details and a regime of checking for damage and repair if required. Accordingly risk of damage to the SPS is low and any damage which may be found will be repaired if and when required. The final OEMP will be reviewed by DECCW and the Site Auditor.</p> <p>Information regarding the release of contaminated sediments is provided in Sediment Management Report (AECOM, 16 October 2010). Refer to Section 5.0. Trials and studies indicate that the effect of the SPS will be such that any movement of contamination during operation will be negligible.</p> <p>In relation to movement of contaminants through the blanket, conservative calculations of PAH and TPH concentrations in pore water were undertaken using published partitioning data and organic carbon content data of bay sediments, where PAH and TPH were typically found to be elevated during the AECOM sediment investigation. It is noted that partitioning data used for PAH related to naphthalene, which is more water soluble than the bulk of the PAHs detected. For TPH, partitioning data relating to the C16-C21 fraction (assuming aromatics only) were conservatively used to represent C15-C28 fraction, the dominating TPH fraction in the sediments. The</p>

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			<p>concentrations of contaminants used were those found in sediments below the top 0.1 m (i.e those sediments that will be compressed as noted in the Douglas Partners report). Based on these calculations, changes in the concentrations of contaminants in the water column within 1 m of the top of the sediments (the profile least influenced by tidal flushing) would be less than 0.05 ug/L for PAH and 2 ug/L for TPH over the 5 month settlement period noted by Douglas Partners. Therefore, these changes would be below the limits of detection typically achieved by NATA accredited commercial laboratories, and would have a negligible impact on water quality.</p> <p>It is proposed that divers would be utilised to check and clear the seabed of any significant debris prior to the installation of the geotextile. Side-scan sonar could be used to map such debris if required.</p>
2.14	The proposed SPS does not comply with the Director General's requirements for remediation. No significantly reduced level of disturbance can be claimed.	6	<p>An Interim Audit advice was issued by the independent site auditor Mr Andrew Kolhrusch (October 2009). The advice "has considered whether the Report (as per NSW DEC 2006) Guidelines for the NSW Site Auditor Scheme) demonstrates that the blanket over bed approach is technically feasible, environmentally justifiable and consistent with relevant laws, policies and guidelines."</p> <p>The EA demonstrates significantly reduced levels to negligible levels of disturbance of sediments after the installation of the SPS. Presently ferry traffic results in the disturbance of approximately 15, 500 m3 of sediment over the footprint of the proposed blanket, or in the order of 18,600 tonnes of sediment per year of 2,200 kg of PAH contaminants (refer to Sediment Management Plan). Disturbance of sediments in the area between the blanket and seawall will continue to be dominated by ferry traffic. An estimated 450 tonnes of sediment disturbed per year, which equates to a reduction in resuspension from 2,200 kg of PAHs at present to 35 kg per year, once the blanket is in place. This is a significant improvement on current conditions in Kendall Bay, as ferry disturbance is reduced considerably, and any parallel disturbance by marina vessels is minor by comparison.</p>
2.15	The lack of knowledge of the independent auditor regarding the structure and application of such a mat	2	<p>Mr Andrew Kolhrusch is the appointed site auditor for the Project and is accredited by the EPA under the <i>Contaminated Land Management Act 1997</i>.</p> <p>Accredited site auditors can be engaged to independently review reports on assessment, remediation and validation actions to ensure that the consultant's methodology and interpretation of data are consistent with current regulations and guidelines endorsed by DECC.</p> <p>Although the site audit is a separate process from the investigation and remediation, the site auditor has been engaged during the environmental assessment phase of the project to review and advise on the proposed remediation method. Site auditors are able to provide increased certainty to planning authorities about the nature and extent of contamination and the suitability of a site for a specified use.</p>
2.16	The area under the proposed manager's office has been identified as a toxic 'hot spot' but would not be covered by the geotextile blanket. The proposal does not provide any plan or give any commitment to remediate this area prior to construction. How are the pollutants to be restrained in the 10m area between the shoreline and the blanket commencement including one untreated 'hot spot'?	2	<p>The 'hotspot' referred to is 'Area B' to be remediated by Jemena (refer to Figure 2 in the URS report titled Preliminary Environmental Assessment, Remediation of Sediments in Kendall Bay, Mortlake (dated 30 October 2008)).</p> <p>Should the Jemena remediation not have been undertaken before the marina is ready to be constructed then modifications can be made to the jetty design to span over the 'hot spot' area to be remediated by Jemena and enable access to the remediation area for Jemena. The modified design could involve the western end of the jetty (5m wideX20m long) being removed in two sections, each 2.5m wide, with no piles in the area to be remediated by Jemena and Jemena may still have access to undertake their remediation works.</p> <p>GBA Coastal (GBAC) has confirmed that the zone between the seawall and the SPS blanket ranges in width from 15m to 20m and is approximately 300m long. Once the SPS and marina is in place, minimal change in wave energy will occur (<1% at the western shoreline). The only potential for sediment mobilisation in this zone (which includes the 'hot spot') would be due to the passing of fast ferries, which is no change to the current conditions.</p>
2.17	The modification of the sea bed bathymetry by the proposed geotextile blanket and ballast. This encroachment on the sea bed is effectively reclamation of 5.6 ha of the waterway. The mat will be damaged by vessels using this location.	8	<p>The SPS will not be damaged by vessels using this location and has been designed to withstand all hydrodynamic loads, namely tides, tidal currents, wind induced circulations, flood flows, wind waves, boat waves, propeller wash, and stormwater outlet flows.</p> <p>There will be clear water between the keel and propellers of the vessels and the blanket at all stages of the tide. The ballast has been specified to withstand the propeller water jet effects and the wind and vessel wave effects at the site.</p>
2.18	The encapsulation of the sea bed and the adverse impact upon aquatic fauna. The application states that the SPS has the ability to improve the health of the aquatic environment but with no research provided. The proposed SPS will kill the existing diverse range of fauna found in the sea bed sediments.	4	<p>The Aquatic Ecology assessment prepared by Cardno advises that there are very few living biota in the sediment. Once the blanket is in place, this biota will no longer exist.</p> <p>Complete and natural communities of marine organisms colonise and live on basalt rock in NSW, such as intertidal rock platform community at Kiama. Marina animals will gradually colonise the basalt rock, following the development of microscopic algal film on the rocks surface. The resulting marina community is likely to be different to that now living in the soft sediment, but the community will be subject to better water quality conditions than at present, because it will be isolated from the current sources of contaminants, the sediment, by the geofabric.</p>
2.19	Jemena would like to complete the remediation of Areas A and B and have the declaration lifted prior to the marina commencing to avoid conflict for the following reasons: reduce risk of exposure to workers and residents; permit a definitive validation of the remediation; assist in the sub-sea excavation which overlaps with the area of the proposed geotextile blanket; location of marina would potentially restrict waterborne access to the works area and risk of collisions for recreational vessel traffic in the vicinity.	1	Timing of Jemena remediation and construction of the marina is a matter for the DoP in consultation with DECCW.

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2.20	The project will result in increased sediment disturbance to the eastern side of Kendall Bay as it will not be protected by the blanket. How or when the balance of the polluted areas in Kendall Bay will be treated?	5	The additional <3% energy transferred to the eastern shoreline is due to boat wash and vessels movement associated with the marina. In relation to the potential impacts of mobilised sediment, the marina will have minimal impact on sediment movement on the eastern side of the bay as sediment movement in this area is principally driven by higher energy ferry wash. The remediation of the remainder of the bay subject to the RO is a matter for DECCW.
2.21	The blanket will not prevent disturbance of sediments from increased boating activity through wave energy generated in shallow water, will smother the seabed making it unsuitable for marine life. The proposed monitoring for five years is not effective.	7	Presently ferry traffic results in the disturbance of approximately 15, 500 m3 of sediment over the footprint of the proposed blanket, or in the order of 18,600 tonnes of sediment per year of 2,200 kg of PAH contaminants (refer to Sediment Management Plan). Disturbance of sediments in the area between the blanket and seawall will continue to be dominated by ferry traffic. After the marina is in place an estimated 450 tonnes of sediment disturbed per year, this equates to a reduction in resuspension from 2,200 kg of PAHs at present to 35 kg per year, once the blanket is in place. This is a significant improvement on current conditions in Kendall Bay, as ferry disturbance is reduced considerably, and any parallel disturbance by marina vessels is minor by comparison. The floating marina will act as a breakwater against wind waves and boat generated waves, but not against the large proportion of wave energy associated with the movements of fast ferries. These waves simply pass under the floating marina. Based on marina usage advised by TLB (8/2/11) and wave energy calculations using Shore Protection Manual methods, GBAC assesses that craft from the marina will cause a minor increase in boat wave energy at the western shore, southern shore (mangrove zone) and eastern shore of <1%, <1% and <3% respectively. GBAC considers that the impact of these changes in boat wave energy at the shoreline of Kendall Bay to be small and not significant. The suitability, frequency and duration of the proposed monitoring will be re-assessed in consultation with DECCW after the initial 6 years.
2.22	The disturbance of the contaminants in the bay during construction	3	The Construction Management Plan addresses the bed disturbance during construction. Disturbance of surface sediment during construction is summarised in Section 5.0 of the Sediment Management Report (AECOM, 16 October 2010). Some localised disturbance of sediments is expected during construction, however this will be managed to accepted standards for dredging/construction activities in areas of contaminated sediments, this includes the use of dual silt curtains, monitoring of water quality and, slow and controlled construction method.
2.23	It is recommended that a thorough analysis of previous studies and suggested approaches to pollution taking into account increased boating activity (prop wash) to inform the need to undertake urgent remediation. Further reports should be undertaken on the geotextile blanket proposal. It is not possible to verify that the correct test procedures have been followed or whether a NATA accredited testing facility was used to undertake the testing.	4	The independent site auditor <i>"has considered whether the Report (as per NSW DEC 2006) Guidelines for the NSW Site Auditor Scheme) demonstrates that the blanket over bed approach is technically feasible, environmentally justifiable and consistent with relevant laws, policies and guidelines"</i> for remediation. The EA demonstrates significantly reduced levels to negligible levels of disturbance of sediments after the installation of the SPS beneath the marina footprint and in the corridor between the SPS and the seawall as a consequence of marina operations (wave and prop wash). A NATA accredited testing facility was not used. NATA testing has a limitation with the test when the soil particles are very fine (d85 <90um) uniformly graded, as the soil then controls the permeability and doesn't allow the flow of liquid. There is no NATA approved test for the determination of sediment migration through geotextiles. The test carried out by Geofabrics (2009) was the NFG 38-017 (1989). The test provides results assuming the worst case scenario where the rock cover is providing no support and the subgrade soil is subjected to constant dynamic pulses of water. The test is conservative and appropriate for testing conditions which exist at the site.
2.24	No remedial actions are proposed to reduce Cu in the environment. Copper concentration in Kendall Bay exceeded ANZECC 95% trigger values at all sites measured by Cardno. Most boats use copper-based anti fouling paints.	2	Copper concentrations in Kendall Bay are characteristic of background sediment contamination in Sydney harbour. The Remediation order does not specify requirements for management of existing copper impacts. The Management plans for marina will encourage the use of non-cu based anti-foulants.
2.25	Placement of a marina on top of the blanket has the potential to damage the method of treatment and any future decontamination treatments	2	At any future time should it be agreed that the sediments in the bed of Kendal bay are to be removed, it is a relatively simple procedure to dismantle the floating structure of the marina, remove it and lift the ballast and geotextile blanket. If the future treatment involves the injection of material into the sediment it is relatively simple procedure to cut the appropriate holes in the SPS to inject the materials leaving the SPS in place would minimise the disturbance of sub-surface material.
2.26	Any remediation will disturb known and potentially known contaminants on the river floor	2	A summary of the disturbance is provided in Sediment Management Report (AECOM, 16 October 2010). Refer to Section 5.0. The proposed SPS has inherently lower risk of sediment disturbance than remediation methods that are conventionally based on removal and/or treatment methods.
2.27	Pollution and contaminants outside the marina footprint will still exist	1	The intent of the geotextile blanket is to manage sediment conditions within the area of the proposed marina only. Management of sediment conditions within the rest of the Remediation Order zone is at the direction of the DECC.
2.28	The Final Remediation Report prepared by URS for Jemena advises the Cap Placement over Existing Settlement is not suitable for further consideration	2	URS concluded that capping was inappropriate for the Jemena project which is addressing exposure risks from shallow and intertidal sediments only. Sub-tidal sediments in Kendall Bay (similar to the area of the proposed marina) are not being remediated by Jemena.
2.29	The slope of the floor of Kendall Bay often exceeds the USA recommended maximum grad (risk of sliding). The SPS in all DA drawings is offset by 10-20 metres from MHWM. Failure of proposed silt curtain due to irregular SPS Basalt surface & sloping floor. The GBAC predicted currents greatly exceed the USA recommended threshold current of 0.5m/sec when silt curtains become ineffective. The 70m wide openable gate in the silt curtain will allow contaminated sediments to escape during out flowing tides. Withdrawal of temporary piles will lift/suck up contaminated sediments into the water above. There has been no engineering risk	1	The procedure for assessing down slope migration in PIANC (1987) is independent of slope. This makes no sense if the substrate is flat. GBAC can only presume that the procedure pertains to "revetments" in line with the title of the text which typically are sloped at 1:1.5 to 1:3 (v:h). The steepest bed slopes under the SPS are 1:5 (v:h). The typical bed slopes are flatter than 1:15. GBAC would not expect down slope migration of the SPS to be an issue although this should be checked by a geotechnical engineer. Currents at the silt curtain during marina construction would generally not be expected to exceed 0.3 m/s. Max ebb currents up to 0.7 m/s are encountered in the main channel, towards the northern margins of the Remediation Site but not in Kendall Bay where tidal velocities would not be expected to exceed 0.2- 0.3 m/s (URS, 2006). GBAC would not expect peak tidal velocities to exceed 0.5 m/s at the NE corner of the outer silt curtain which is the most exposed point. Based on turbidity monitoring of propeller wash in Kendall Bay (2007), GBAC has assessed that marina operations should not increase background turbidity in the bay by more than 1 NTU (GBAC report, Appendix C).

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evaluation for sediment disturbance from marina boat concentration versus 'do nothing' option.		
2.30 The design of the SPS does not satisfy concerns raised by DECC. The provision of the SPS is a remediation project not just a civil engineering project. The proponent has not followed international guidelines to design the SPS. A 50y ARI applies to marina structures, a 200 year ARI should be applied to remediation projects. The erosion threshold velocity for unconsolidated sediments is 0.15m/sec lower than the 0.3m/sec adopted. There is no justification for accepting that only the top 100mm of sediment will be disturbed during the SPS & marina construction. The SPS thickness should be increased by 50% (USEPA). The absence of measured sediment geotechnical properties means some guesswork has been used in the SPS design & performance. The SPS design is not consistent with acceptable practice as defined by USEPA. The bed slope is too steep for an SPS. The proponent severely underestimates the amount of sediment disturbance after the marina operational phase. Case studies presented by the proponent do not have a marina present. The SPS thickness of other projects mentioned vary between 0.8 and 1.52 metres, significantly less than the 0.3 metre thick blanket proposed. Contaminated fine sediments will still pass through holes in the blanket. Mobile organisms are likely to get caught in the net and die during daily curtain openings, or suffer from lack of food.	1	<p>GBAC has extrapolated directional wind wave climate based on 1, 10, 20 and 50 yr ARI events. It is clear from this assessment that the adopted design propeller wash velocities of 1.6 and 2.2 m/s are substantially greater than the maximum horizontal water particle velocities associated with even a 500 year ARI wind wave event. Indeed, GBAC finds that wave heights at the depth limit of breaking over the marina could not generate velocities at the surface of the SPS greater than 1.2 m/s.</p> <p>GBAC considered the processes which bear on the selection of erosion threshold velocity (p34). It adopted an erosion threshold velocity of 0.3m/s for bed sediments of Kendall Bay. It is possible that this value could be lower - a private submission has used Sunborg to suggest as low as 0.15 m/s. Without complex laboratory testing, the precise value cannot be established. The SPS is designed to accommodate a velocity which penetrates through the SPS to the underside of the geotextile of between 0.1 and 0.2 m/s (p46). Even if a threshold velocity as low as 0.15 m/s applies, the concept design for the SPS as developed is considered reasonable. Further assessment of the threshold erosion and prediction of maximum velocity at the underside of the geotextile could take place as part of the detailed design. If required, it would be possible to introduce a modified geotextile layer to further reduce the velocity penetration to the underside of the geotextile (eg multiple layers of geotextile).</p> <p>The proposed blanket thickness of 300 to 400mm addresses design requirements for rock aprons exposed to propeller wash and wave action (PIANC, 1987). A suitable construction tolerance for blanket thickness would be incorporated into the specification for the works, nominally suggested at 100 - 150mm, ie actual apron thickness would vary between 300 and 550 mm. TLB to note. AECOM to comment on contaminated pore water ingress into blanket and need or otherwise for sand layer.</p> <p>GBAC report develops its assessment based on results hydrodynamic calculations (Table 5.6 and 5.7, p46), GTS testing (Appendix B) and its interpretation (p36), and advice from Douglas Partners (Appendix F). This is summarised in a the conceptual model shown in Fig 8. The relatively low quantities of sediment disturbance attributed to marina operations based on this assessment is consistent with the results of propeller wash monitoring and upper-bound predicted impacts on turbidity regime in Kendall Bay of 1 NTU on a background level of 10 NTU (p19 of Appendix C). Aside from this result, the significant existing disturbance to the bed of Kendall Bay due to wave wash from passing past ferries cannot be ignored (Appendix E and subsequent calculation refinements).</p> <p>GBAC calculations show that fine sediments should not be mobilised from under the SPS and pass up through the geotextile due to currents associated with boat generated waves (including those from fast ferries) and propeller wash.</p>
2.31 The conclusions of the estuary hydrodynamics report are rejected because they do not appear to take into account (actual mean water depth over which most of the structure will lay; 2) that the results be obtained after the placement of the blanket and the rocks because the water depth will be reduced by close to half a metre. This notwithstanding the obtained results cannot be diluted by the assumptions relied on because (at least) those assumptions did not make use of data based on the expected lower water depth after the blanket and rocks are in place.	1	The assessment of currents for the design of the SPS allows for the reduction in depth due to the thickness of the SPS (refer last para p41 and top para p43). The reader should note that a benefit of the SPS is to remove boat wave induced velocities at the bed which currently are sufficient to mobilise the bed sediments. If a lower erosion threshold applies than was adopted by GBAC, then the benefit of the SPS for the bay would equally be greater than that reported by GBAC.
2.32 Matters raised by Laurie Ihnativ in the Breakfast Point Submission dated 30 November 2010 (pages 42-65)	2	
(1) Introductory comments regarding site use and functionality of cap. Comment made that no comparable examples can be found where contaminated sediment is capped and then construction has taken place that potentially impairs the functionality of the cap		Noted.
(2) Generic description of capping technique and function.		Noted.
(3) Insitu cap must be treated as a engineering project. Detailed guidelines have been developed by USEPA (2005)		Noted. GBAC is aware of the USEPA Contaminated Sediments Program and its guidance for in-situ subaqueous capping of contaminated sediments. This material was reviewed in developing the SPS concept.
(4) Assessment relies on dated bathymetry. Data is insufficiently detailed. No data is presented to confirm presence of debris or obstructions on the bed.		<p>GBAC has used bathymetric information from TLB understood to be based on Harvey Hydrographic Surveys 2001 and NSW Maritime 2006. These data are acceptable for SPS concept design.</p> <p>GBAC agrees that any sharp or substantial debris protruding in the seabed would need to be removed prior to installation of the SPS geotextile. GBAC agrees that side scan sonar is a prospective method for locating debris on the sea bed. This investigation should take place as part of the detailed design.</p>
(5) Wave climate. Wind waves calculated using 50 year ARI criteria as defined in AS 3962, but this standard provides no guidance on an insitu cap. It is considered more appropriate that wave climate of at least 100 year or even 200 year ARI be used. Given the likely extremely low strengths of the sediments, the effects of earthquakes causing liquefaction should be examined (USEPA, 2005)		<p>GBAC has extrapolated directional wind wave climate based on 1, 10, 20 and 50 yr ARI events. It is clear from this assessment that the adopted design propeller wash velocities of 1.6 and 2.2 m/s are substantially greater than the maximum horizontal water particle velocities associated with even a 500 year ARI wind wave event. Indeed, GBAC finds that wave heights at the depth limit of breaking over the marina could not generate velocities at the surface of the SPS greater than 1.2 m/s.</p> <p>There is a very, very low risk a of earthquakes causing liquefaction at this site. The sediments have some cohesion, which makes liquefaction less likely than in very loose sand, requiring a very powerful earthquake. There is also very low probability of quakes at Breakfast Point.</p>
(6) - Physical bed sediments characteristics. Various methods have been used to establish sediment grading.		All testing was undertaken by NATA accredited laboratories.

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Some of these more applicable than others. It is not possible to verify that the correct procedures have been followed.		
(7) No discussion is given on the geotechnical nature of the sediments, including whether the sediments are normally consolidated or overconsolidated, This relates to sediment strength.		There are relatively few benthic organisms in the sediment. The effect of the few live benthic organisms will have negligible effect on the physical properties of the sediment sand minimal effect on the SPS.
(8) Report applies Hjulstrom curve to select an erosion threshold velocity of 0.3m/s. This is erroneous because it was developed for consolidated sediments Sunborg (1956) modified Hjulstrom to include unconsolidated sediments. The Subborg curve shows that a threshold erosion velocity as low as 0.15m/s applies.		<p>GBAC considered the processes which bear on the selection of erosion threshold velocity (p34). It adopted an erosion threshold velocity of 0.3m/s for bed sediments of Kendall Bay. It is possible that this value could be lower; the reviewer uses Sunborg to suggest as low as 0.15 m/s. Without complex laboratory testing, the precise value cannot be established.</p> <p>The SPS is designed to accommodate a velocity which penetrates through the SPS to the underside of the geotextile of between 0.1 and 0.2 m/s (p46). Even if a threshold velocity as low as 0.15 m/s applies, the concept design for the SPS as developed is considered reasonable.</p> <p>Further assessment of the threshold erosion and prediction of maximum velocity at the underside of the geotextile could take place as part of the detailed design. If required, it would be possible to introduce a modified geotextile layer to further reduce the velocity penetration to the underside of the geotextile (eg multiple layers of geotextile).</p> <p>The reader should note that a benefit of the SPS is to remove boat wave induced velocities at the bed which currently are sufficient to mobilise the bed sediments. If a lower erosion threshold applies than was adopted by GBAC, then the benefit of the SPS for the bay would equally be greater than that reported by GBAC.</p>
(9) Proponent concedes the marina development potentially disturbs the contaminated sediments. It is stated that the upper 100 mm of very soft sediment would probably be disturbed when the geotextile and rock blanket are laid. The estimated 100mm is based on a report by Douglas Partners without justification for the estimate. Reviewer considers that disturbance depth will significantly exceed 100mm. A value of 400 to 500mm is considered more likely.		Test will be carried out to determine the depth and extent of disturbance and refine placement techniques, so that no more than 100mm is disturbed.
(10) No geotechnical insitu or other factual data has been collected. This is a serious omission. Reviewer considers that soft sediments will experience significant displacement through localised bearing capacity failure when the rocks are placed.. This will result in a wavy surface at the geotextile. USEPA(1998) recommends increasing blanket thickness by 50% to overcome these uncertainties. Therefore, to obtain an effective rock cover of 300mm, a minimum of 450mm would be required		<p>GBAC would not expect that the geotextile could become elevated above the existing bed during construction. Accordingly, a specification for the SPS which involves a rock crest RL rather than a rock thickness would avoid the possibility of placing a blanket of inadequate thickness.</p> <p>The extent that sediment surface is displaced will depend on the strength of the sediments and the shear forces in the sediments that result in placement of the rock. Placement would be closely managed. A trial placement will be undertaken onsite to refine placement techniques so that the specified rock armour thickness is achieved.</p>
(11) Proposed non-woven geotextile is not suitable for reinforcement of the low strength soils.		GBAC accepts that woven geotextiles are stronger than non-woven geotextiles. However, a product such as Elcomax 1200R is suitable to receive direct loading from rock boulders which individually weight many hundreds of kilograms if not tonnes. The product is recommended by Geofabrics for just such coastal applications. The product will readily accommodate the puncture and tear loads associated with the proposed SPS.
(12) Proponent concedes that "once the geotextile is laid and fixed in position by overlying rock, further migration of fine sediment through the geotextile could be expected." Reviewer disagrees that hydrostatic testing by GTS is more representative of the hydraulic loading environment that the hydrodynamic testing. Reviewer considers that the site will be dynamic due to the continuous variation of the water levels due to tidal effects.		<p>Based on GBAC's prediction of the hydrodynamic loads that could develop under the geotextile as a result of propeller wash and wave action, migration of fine sediments through the geotextile should not occur once the blanket is constructed. However, from the results of the GTS testing, it cannot be discounted that some leakage of sediment could occur up through the geotextile over time.</p> <p>The effect of tidal variation in Kendall Bay as felt at the bed would be tantamount to hydrostatic. Tidal velocities over the SPS would not be expected to exceed say 0.2 m/s, velocities substantially below those associated with propeller wash for which the SPS is designed. GBAC would not concur with the comment that the actual situation at the SPS will be dynamic due to the continuous variation of water level due to tidal effects.</p> <p>Having regard to the nature of the dynamic and static tests performed by GTS, we would consider that the hydrodynamic forcing whereby sediment could be expelled up through the geotextile might reasonably be simulated for the purposes of concept design by the average of the hydrodynamic and static tests.</p>
(13) Comments on GTS reports.		Refer to email from Geofabrics (2010). GTS is a NATA registered laboratory.
(14) It was not possible to correlate the sample ID's used in the GTS testing to their location in the field. From a discussion on relative grainsize across the site, reviewer concludes that between 31.9% and 39% of the sediment could pass through the geotextile under hydrodynamic conditions, although the test results could be worse. The proponent overlooks the cyclical loading from tides and boat passes.		<p>Tidal variations are associated with water level changes which would not exceed 0.0001m/s. The dynamic test involved a piston-like action which simulated vertical velocities orders of magnitude larger.</p> <p>Propeller wash controls the hydrodynamic loading at the SPS. The retentive capacity of the geotextile to propeller wash is considered on p36 and p46 of GBAC's report. It's GBAC's view that only prototype scale simulation of the materials and loading processes could provide further information on this aspect.</p>

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(15) The CAL results show that most of the samples tested have in excess of 80% of their particles finer than 75 microns. The effective opening size of the fiber is about 75 microns. Therefore to suggest 1mm of material will penetrate the fabric during construction cannot be substantiated. It could easily be argued that the very soft sediment is 1.5m thick and that 30% could pass through the geotextile.		<p>"1mm" in comment should read "up to 10mm" as per GBAC conceptual model stage 3 (Fig 8).</p> <p>Propeller wash controls the hydrodynamic loading at the SPS. The retentive capacity of the geotextile to propeller wash is considered on p36 and p46 of GBAC's report. It's GBAC's view that only prototype scale simulation of the materials and loading processes could provide further information on this aspect.</p>
(16) The geotextile should be considered as only part of a filter to reduce but not eliminate the ingress of contaminated sediment through the insitu cap.		<p>Propeller wash controls the hydrodynamic loading at the SPS. The retentive capacity of the geotextile to propeller wash is considered on p36 and p46 of GBAC's report. It's GBAC's view that only prototype scale simulation of the materials and loading processes could provide further information on this aspect..</p>
(17) Comparison between bed disturbance caused by fast ferry wash and construction. Comment on distribution of contaminated sediments and the continued disturbance to be caused by fast ferries in the future.		<p>GBAC agrees that ferry wash through and past Kendall Bay would continue to disturb parts of the bed of the bay that are not protected by the SPS.</p> <p>GBAC agrees that the contaminated sediment in the bay is not limited to the footprint of the SPS. The fast ferries will continue to disturb bed sediments in Kendall Bay, however the area of the disturbance will be reduced.</p> <p>The main mechanism for the existing disturbance of the bed of Kendall Bay is wave wash from fast ferries. While propeller wash from fast ferries may be a factor, this could only be limited to a narrow swath along the line of the ferry route where it crosses suitably shallow water depths.</p> <p>GBAC assumed for its report that fast ferries passed the site 25,000 times per year. NSW Transport (Sydney Ferries) advised on 15/12/10 that new time tables as of 10/10/10 with additional back up services and crew training, amounted to a total of 33,800 passages per year. It is GBAC's understanding that all ferry movements in this part of the Parramatta River pertain to either Rivercats or Harbourcats. The wash assessment made by GBAC assumes Rivercats. GBAC understands that the boat wash behaviour of Rivercats and Harbourcats are for all intents and purposes the same (PBP 2002).</p>
(18) Reviewer questions whether there are contractors experienced in this type of construction where very soft underconsolidated sediments are present. Placing rocks under water where tides etc will want to move the blanket around is a difficult exercise (USEPA, 1998).		<p>GBAC has discussed the project with Theiss Contractors. Theiss were involved in the Port of Brisbane project referred to elsewhere in the EA. Theiss have also recently undertaken works in Homebush Bay and are therefore familiar with bed sediment conditions in the Parramatta River.</p>
(19) Comments on use of the geotextile, selection of Elcomax 1200R, PIANC(1987) requirements and non-compliance with respect to retention. The geotextile must be used as oart of a filter which will need to incorporate at least a layer of sand. It is agreed that the geotextile meets the permeability requirements.		<p>It is not clear from PIANC (1987) that the method in the text of the main document should not apply for the proposal.</p> <p>GBAC does not believe that the geotextile under the SPS will be exposed to "aggressive operational conditions" as relates to Appendix B, PIANC (1987). Design velocities at the top of the geotextile are predicted not to exceed 0.44 m/s (20% of 2.2m/s (p46, Table 5.12). This relies on vessels operated at an extreme low tide, and applying 75% thrust from a low speed/stationary start. Clearly this would not be a regular operational condition.</p> <p>It is not clear that the geotextile would fail the retention test.</p>
(20) Reviewer uses the data to show that the site is susceptible to downslope migration		<p>The procedure for assessing down slope migration in PIANC (1987) is independent of slope. This makes no sense if the substrate is of very low slope. GBAC can only surmise that the procedure in PIANC pertains to "revetments" in line with the title of the text. Revetments are typically sloped at 1:1.5 to 1:3 (v:h).</p> <p>Issue of downslope migration is raised by this reviewer at Item 2.32 (23). GBAC believes that the comment here by the reviewer is not valid and that referenced material has been taken out of context.</p> <p>The steepest bed slopes under the SPS are 1:5 (v:h). The typical bed slopes are flatter than 1:15. GBAC would not expect down slope migration of the SPS to be an issue and this will be assessed and confirmed by a geotechnical engineer as part of the construction documentation.</p>
(21) Refer Item (20)		<p>Refer response 20.</p>
(22) Refer Item (20)		<p>Noted. Issue of downslope migration is raised by this reviewer at Item 2.32 (23). GBAC believes that the query is not valid and has been taken out of context.</p>
(23) Further reference to bottom slopes. Reviewer references Palermo et al (2000) to conclude tha the bottom slope at Kendall Bay is far too steep for the proposed insitu cap.		<p>GBAC has used bathymetric information from TLB understood to be based on Harvey Hydrographic Surveys 2001 and NSW Maritime 2006. These data are acceptable for SPS concept design.</p> <p>The comment is made that bottom slopes steeper than 1v:60h to 1v:100h are too steep for the SPS. The reviewer quotes from Palermo et al (2000) and adds his interpretation as follows:</p> <p>"...LBC projects....have been executed at sites with slopes up to 1 to 60....". Placement of material on steep bottom slopes (steeper than 1v on 100h) should generally be avoided for a capping project....because of the potential for slope adjustment....". Using these criteria it can be concluded that the bottom slope at Kendall Bay is far too steep for the proposed ISC.</p> <p>The following document appears to be the source reference:</p> <p>Multiuser Disposal Sites (MUDS) for Contaminated Sediments from Puget Sound - Subaqueous Capping and Confined Disposal Alternatives Michael R. Palermo, James E. Clausner, Michael G. Channell, and Daniel E. Averett, July 2000</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			<p>1. Extract from Palermo et al (2000) pdf p 84:</p> <p>"Level bottom capping (LBC) is defined as the placement of contaminated material in a mounded configuration and the subsequent covering of the mound with clean sediment" (pdf p84).</p> <p>2. Extract from Palermo et al (2000) pdf p90:</p> <p>"The bathymetry of the site has an influence on the degree of spread during placement of both contaminated and capping material. The flatter the bottom slope the more desirable it is for LBC projects, especially if material is to be placed by hopper dredge. If the bottom in a disposal area is not horizontal, a component of the gravity force influences the energy balance of the bottom surge (lateral movement of the disposed material as it impacts sea bottom) and density flows because of the slope following impact of the discharge with the bottom. It is difficult to estimate the effects of slope alone, since bottom roughness plays an equally important role in the mechanics of the spreading process. To date, LBC projects in which the material was mechanically dredged and released from a barge have been executed at sites with slopes up to 1:60 (Clausner et al. 1998); and in which material was placed by hopper dredge at sites with slopes up to 1:225 (i.e., New York Mud Dump site). Placement of material on steep bottom slopes (steeper than 1v on 100h) should generally be avoided for a capping project (Truitt 1987a) because of the potential for a slope adjustment in the contaminated sediment mound. Bathymetry forming a natural depression tends to confine the material, resulting in a CAD project. This is the most desirable type of site bathymetry for a capping project".</p> <p>The SPS proposal at Inner West marina differs fundamentally from an LBC project in that the contaminated material is not being dredged and disposed subaqueously. It resides within the bed of the bay, the morphology of which has developed in response to ambient processes. The existing bed is essentially stable. It is not appropriate to be applying the 1v:60h or 1v:100h LBC slope criteria to Kendall Bay. It is GBAC's submission that the quote by the reviewer is out of context and the conclusion invalid.</p> <p>The procedure for assessing down slope migration in PIANC (1987) is independent of slope. This makes no sense if the substrate is flat. GBAC can only presume that the procedure pertains to "revetments" in line with the title of the text which typically are sloped at 1:1.5 to 1:3 (v:h). The steepest bed slopes under the SPS are 1:5 (v:h). The typical bed slopes are flatter than 1:15. GBAC would not expect down slope migration of the SPS to be an issue.</p>
	(24) Discussions with contractors		GBAC did not discuss the geotechnical nature of the bed with Thiess, although the contractor would be familiar with the Parramatta River generally.
	(25) Grout filled mattress alternative to proposed SPS		Noted.
	(26) Comment and calculation regarding volumes of disturbed material		<p>GBAC understands from Douglas Partners (Appendix F) that the upper 100 mm of very soft sediments in the bay, under the footprint of the SPS, would probably be disturbed by the installation of the SPS. Of this, it is estimated that up to 10% would migrate through the geotextile during placement of the SPS. The remainder, although disturbed, remains trapped under the SPS.</p> <p>We therefore estimate that up to 560 m3 of sediment would move into the rock blanket, and this would be remobilised later under the action of propeller wash from marina craft. It is predicted that 40m3 of fine sediment is dispersed over the mangroves, following commencement of marina operations (p49).</p>
	(27) Extension of comment (26) in relation to pollutant impacts on the mangroves, the potential for ASS and recontamination associated with Jemena remediation works		The SPS will result in the reduction of sediment movement within the bay and will have no adverse impact on ASS and contaminated sediments at the mangrove shoreline.
	(28) No attempt has been made to estimate the effect of continued river traffic outside the blanket on dispersion of bed sediments.		Advected suspended sediments which enter the marina from outside the marina may settle on the SPS. These sediments would be remobilised over time due to fast ferry wave wash, and propeller wash from marina craft. Like all mobilised sediments in the river, the remobilised sediments would eventually rework outside the marina and settle out in deeper or other quiescent parts of estuary.
	(29) Extension of comment 28 and conclusion that impacts on the mangroves will be continuous.		Refer to response 28.
	(30) Recontamination of the blanket from disturbance of the area between the blanket and the Breakfast Point seawall		Based on surface sediment distribution, estimated maximum advection currents (0.2 m/s), fall velocities of the sediments (0.004 – 0.046 m/s), it is estimated that the finer fraction (d50=0.06mm) of these sediments could be transported some 70 m into the marina, beyond the main walkway. Typical sized sediments here (0.2 mm) and the coarser fraction (0.35 mm) would be unlikely to reach the marina, and would settle out in the perimeter apron. All remobilised sediment that settles in the SPS is likely to be remobilised again by prop wash from marina craft. An estimate is to be made of the quantities of sediment remobilised by this mechanism.
	<p>(31) Conceptual model of disturbance and protection</p> <p>(31-1) Existing conditions – number of ferry journeys does not reduce. Comment on sediment disturbance.</p> <p>(31-2) Commencement of construction – not straightforward.</p> <p>(31-3) Geotextile located onto bed – issues with bearing capacity and quantity of sediment disturbed.</p> <p>(31-4) Construction completed – complexity of construction and process issues.</p> <p>(31-5) Post construction (up to 12 months) – process issues.</p>		<p>Comment may not recognise the processes being considered. The disturbance from fast ferries is not limited to its propeller wash disturbance, but also the capacity of the waves from these vessels to stir bed sediments in relatively deep water due to their long period (Tp=7s compared to 2-2.5s for movements of marina craft). The SPS is designed to protect the bed under the marina from the effects of propeller and wave wash from marina vessels.</p> <p>Noted. Refer response 4.</p> <p>10% based on upper limit from average of results from GTS testing.</p> <p>Refer response 10.</p> <p>GBAC statement assumes that the 10 mm of fine sediments reside within the lower portions of the SPS. Effective cover of 300-400 will be provided by suitable specification and construction tolerances. Refer response 10.</p> <p>For reasons stated above, GBAC does not concur with the reviewer's response.</p>

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	<p>(31-6) Marina operation phase commences– more sediment passes through geotextile therefore more sediment remobilised. Thinner apron than design will lead to ambient currents being bale to mobilise the sediments under the geotextile</p> <p>(31-7) Marina operation phase – recontamination of the blanket from far field ignored. Total disturbance to sediment will remain unchanged to that which currently occurs</p>		<p>Noted. Refer response 28.</p> <p>During the marina operation phase the total disturbance to contaminated sediment within the Remediation Site will be reduced compared to that which occurs today, because that proportion of the 56,000m2 SPS which is currently exposed to wave induced currents from fast ferries is now protected from the erosive flows.</p>
3. VISUAL			
3.1	Destroying natural view of peaceful walkway for commercial gain. The marina will obliterate and deprive the public of the existing views along the foreshore walk	24	<p>The comment in the first sentence seems to talk about views to the walkway. The other sentence also is not very clear and can mean both i.e, views from along the foreshore walk and views of the foreshore walk.</p> <p>The foreshore along the western shoreline of Kendall Bay adjacent to the location of the proposed marina is totally constructed and there are no natural features or features of scenic importance along this foreshore. Hence, loss of views of parts of this foreshore is not considered to be unacceptable considering that the views of the southern and eastern shoreline and of the relatively natural shoreline and foreshores of Kendall Bay are not unreasonably affected. The fairways between the Arms of the proposed marina maintain views of this constructed foreshore when seen from waterway and in many views from locations to the east of the marina site. (This is represented by Montage 2 at Page 123 of the VIA Report). The backdrop of these views will be constituted by medium density residential developments on relatively flat land and does not exhibit any significant natural features. It is acknowledged that the proposed marina will cause view blocking effects to the views of the southern shoreline of Kendall Bay in some isolated viewing location and this part of the bay does exhibits some naturalness seen from some oblique viewing directions such as from the northeast and north.</p> <p>The proposed development will result in change in the foreground views of the waters of Kendall Bay and Parramatta River in some views, however views of the main navigation channel of Parramatta River, far shorelines, land water interface and far headlands will be retained. (This is represented by Montage 10 at Plate 130 of the VIA Report). The character of the views in the foreground of some viewing places will be significantly altered but the views of the scenic features will be retained.</p> <p>Notwithstanding the above, the concept of a marina and intensive waterfront activity area was an integral part of the vision for the Breakfast Point redevelopment and was referenced in 1999 and 2002 Masterplans and the 2005 Concept Plan. There have also been over 1,200 properties sold at Breakfast Point, with the marina disclosure clauses in the contracts for sale.</p>
3.2	The proposal does not meet the DGRs to safeguard visual amenity to owners, water users and vantage points in the public domain. Visual Amenity has not been sufficiently considered nor described and that impacts are understated or ignored.	2	<p>The existing visual amenity and the potential impacts of the proposal on it has been adequately assessed in the VIA report. The viewing locations assessed represent all of the kinds of views and types of viewing locations from which views are available within the whole visual catchment on the basis of their viewing distances and associated view sensitivities. The viewing locations considered are both in the public and private domain in close, medium and distant ranges and include roads, reserves, foreshores and beaches, residences and waterway. They include adjoining land owners and land owners along the foreshores, Parramatta River, areas of Putney, Tennyson Point, Gladesville and Cabarita. Significant vantage points in the public domain have also been considered such as ferry wharves, foreshore reserves and beaches. This is in accordance with the Director General's Requirements.</p> <p>The visual amenity and the potential impacts have been sufficiently described and assessed using a methodology that has been developed over several years and uses relevant aspects of methods accepted in landscape assessment, extended and modified to adapt to urban and maritime environments. The modifications introduced are derived from visual perception research carried out by others and ourselves in both natural and urban contexts. The methodology adopts an objective approach as far possible to assess visual impacts which is a field which can be subjective in many instances and at times can be overruled by emotional responses of the receptors. Nothing has been ignored.</p> <p>The visual impacts of the proposal are summarized at Points 12 to 20 of the Executive Summary and at Sections 6.4 and 9.0 of the VIA Report. In my opinion, the visual impacts are not understated. The methodology is explicit with regard to the weightings applied and does not underweight any category of view. In fact it is conservative because it has more close range viewing places than distant ones and it rates impacts on many close views as high.</p>
3.3	The marina will impact on private views of Kendall Bay. Many of the boats will be over 4 metres in height from waterline and yachts will be even higher. The layout needs to respond to view corridors.	45	<p>We have interpreted this comment as claiming that the proposal will impact on views of Kendall Bay from the private domain (residences) by blocking views of the bay. Photomontages 3 and 6 on Pages 124 and 127 of the VIA Report show that there will not be an unreasonable view loss impact on the Views caused by the height of vessels and that the wide gaps (fairways) between the various Arms of the proposed marina act as view corridors. There will be low yacht occupation of the marina although it is inevitable that masts will be visible in front of background elements in some residential views. There will be no significance view loss from this effect. The view loss effect will be higher for the ground floors of residences; however, the views will be maintained through the fairways (view corridors). Photographic Plate 33 on Page 86 and the corresponding assessment sheet on page 120 of the VIA report adequately assess the potential visual impact on views from typical ground floor units.</p> <p>Notwithstanding the above, the concept of a marina and intensive waterfront activity area was an integral part of the vision for the Breakfast Point redevelopment and was referenced in 1999 and 2002 Masterplans and the 2005 Concept Plan. There have also been over 1,200 properties sold at Breakfast Point, with the marina disclosure clauses in the contracts for sale.</p>
3.4	The marina will affect our view enormously as we would be looking directly at boats instead of water. People on boats will be able to look directly into our houses.	1	<p>The objector's address was not provided. Therefore we are unable to provide a specific response to this statement as the property and specific degree of impact cannot be addressed.</p> <p>Included in the EA is the Visual Impact Assessment undertaken by Richard Lamb and Associates (RLA). RLA undertook a visual impact assessments from a range of locations within Breakfast Point, including Unit 32/71 Peninsula Drive, one of the foreshore residential apartments within Hunters Wharf development, located in close proximity to the location of the proposed marina</p> <p>RLA's Visual Impact Assessment acknowledges that the view loss impacts for foreshore residences (refer above). However, the effect will more be of change in the</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			<p>foreground to middle ground of the view and change in the character of the view. Most of the views of the far shoreline, Parramatta River channel and land water interfaces will still be available over the marina and through the proposed fairways.</p> <p>As far as visual amenity with regard to visual privacy and overlooking is concerned, the proposal will not have any unreasonable impacts. The users of the marina, public jetty, kiosk etc will access the marina from the foreshore walkway and roadways. The residences are located at considerable distances from the foreshore walkway and beyond the distance where any privacy impacts could be of concern.</p> <p>The stay of the marina users (boat owners etc) is generally for short term. There can not be any overlooking and visual privacy between users of the kiosk, given the separation distances. RLA does not consider that there will be any unacceptable level of such amenity issues caused by the users of the marina manager's office.</p>
3.5	The lighting at night will shine directly into our bedrooms.	4	<p>Selection of the light fittings and their layout has been conducted within the requirements of AS1158.3.1 – Lighting for roads and public spaces – Pedestrian area (Category P) lighting. The Standard establishes limits for glare, upward waste light and light spill onto abutting properties in Section 2.5.3.</p> <p>Both the bollard and pole mounted lights are classified Type 6 for glare and upward waste light control. This is the highest (best performing, in terms of glare and upward light reduction) classification available.</p> <p>As a guide, a vertical illuminance of 1 lux falling on the window of an adjacent property may be considered 'obtrusive spill light'. Based on initial light modelling, a window would need to fall within a radius of approximately 25m of a pole mounted light for the spill light to be considered 'obtrusive'.</p> <p>In summary, while the new lighting scheme will be a visible change to the night-time landscape, it will not shine through windows at a level considered 'obtrusive' by Australian Standards</p> <p>The luminance of the proposed lighting will not be capable of causing prominent or visible nuisance levels in any of the views, be it from close range or medium range, private views or public views. The luminance sources will not be capable of illuminating the interior of any residences.</p> <p>The existing lighting sources present in the view compositions in which the proposal will be seen are relatively brighter and more closely spaced. The effect of the proposed marina lighting will be significantly subdued, widely spaced and intended only to illuminate horizontal surfaces to the extent necessary only for safety. The lighting on the marina will be in the context of closer and higher luminance existing lighting sources. The present major lighting sources within the immediate context of the site are:</p> <ol style="list-style-type: none"> 1. The bollard lighting all along the foreshore walkway adjacent to the western and southern shoreline of Kendall Bay which is significantly closer to the viewer. By comparison, this general lighting is substantially brighter than the proposed marina lighting, 2. The lighting within the background residential context of Breakfast Point and Kendall inlet, 3. The lighting at Cabarita Rivercat Ferry Wharf. <p>Plates 1, 2 and 3 at Appendix D at Page 137 represent the night time photographs from the foreshore walkway and from the Cabarita Rivercat Ferry Wharf.</p>
3.6	The marina will significantly alienate views across Kendall Bay to Cabarita Park and across Parramatta River to Putney/Gladesville for a 500m section. The natural state of the bay provides a visual break from all the surrounding marinas.	4	<p>The east end of Kendall Bay and Cabarita Park are nature features of the shoreline and river, however the Breakfast Point component of the bay is totally constructed and of only moderate scenic value. Views to Cabarita Park and the southern shoreline of Kendall Bay will be maintained over the proposed marina from elevated land-based locations. Views of these will be lost from parts of the Parramatta River from locations directly north of the proposed site but the shoreline affected is of lower scenic quality and in the same view shed is the more scenic eastern part of the Bay and Cabarita Park. Similarly, views to Putney/Gladesville across Parramatta River will be maintained over and through the proposed marina. The proposed marina will cause a change in the composition of foreground views of parts of Kendall Bay and the Parramatta River, however, views of the main navigation channel of Parramatta River, far shorelines, land water interface and the majority of the natural and scenic features will be retained.</p> <p>The proposal is permissible with consent within the W1 Maritime Waters zone and the Project Application will be assessed on its merits by the determining authority.</p>
3.7	The Visual Impact Assessment contains a number of weaknesses - The photos submitted in the Visual Impact Assessment bear no reflection of the visual impact of the development - Photos are taken from elevated positions over low profile boats on a low level tide. Photomontages are required from the foreshore of boats up to 6m in height on a mid tide. Photos and photomontages are taken through a lens with an unrealistically short focal length - Concern with the visual impact of the Marina regarded as HIGH in Section 11.2 of the Proposal. - No mention in the Proposal of the impact of the marina on the views from the Breakfast Point Country Club balcony. - visual impact of marina on walkway, residential development, waterway and overlooking suburbs has been underestimated	12	<p>The photos used for photomontages from the waterway were specifically taken at a mid-tide time. They are taken with a standardized focal length lens for every photograph. The photographs in the VIA report are appropriate representation of the kinds of views and types of viewing locations. They include foreshores, reserves, beaches, roads, residences and waterway. The photomontages represent the worst case scenario with boats shown to be of maximum size that can be accommodated in individual berths. The models used to construct the montages are or real boats or realistic heights.</p> <p>The objector/s are advised to refer to the DA drawings to check the vessel/berth size schedule. It is also given at Table 1.1 on Page 8 of the VIA Report. There are no sizes proposed for which the height of the vessels can be 6m.</p> <p>The photographs taken by RLA were with a digital 35mm format SLR camera set to simulate a focal length of 35mm, to approximate the correct proportions of the elements of views as experienced by the human eye and to encompass both the marina and a representative part of its scenic context where possible. This is the usual approach undertaken for photographs to be used to assess visual impacts.</p> <p>The photographs taken by the montage artist Architectural Images were also with the help of digital SLR camera and used the same principles as above. The accuracy of the photomontages have been verified by Architectural Images (refer Architectural Images letter dated 28 October 2010 at Attachment 1)</p> <p>Subsequent to construction of the approved medium density residential development, there will not be any views of the proposed marina from the Breakfast Point Country Club. In the absence of this yet to be constructed residential development, there will be highly oblique views of only the southern part of the proposed marina from the Club. The Club is located on elevated grounds relative to the marina and it will not cause any view blocking effects, not even from the ground floor.</p> <p>The existing visual amenity and the potential impacts of the proposal on it has been adequately assessed in the VIA report. The assessment rates the visual effects and visual impacts of the proposal on close range viewing locations as High. The close range locations include parts of the western and southern foreshore, some residential developments in Manors Precinct East and Wharf Precinct and parts of the waterway. In my opinion, the visual impacts are not understated.</p> <p>The visual effects and impacts of the proposal on surrounding suburbs of Tennyson Point, Putney, Gladesville and Cabarita are assessed to be overall medium or high</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			depending on the distance from the proposed site.
3.8	Kendall Bay should be proclaimed as part of Sydney Harbour National Park as it is the only bay that is free of boat moorings or jetties and allows for complete public access to the waterways	3	<p>The waters of Kendall Bay are zoned 'W1 Maritime Waters.' The following types of development are permissible with development consent:</p> <ul style="list-style-type: none"> • Aviation facilities • Boat launching ramps (public) • Boat lifts (other than boat lifts for storage of vessels above water) • Boat repair facilities • Charter and tourism facilities • Commercial marinas • Commercial port facilities • Community facilities • Dredging • Flora and fauna enclosures • Private landing steps • Public boardwalks • Public water recreational facilities • Public water transport facilities • Recreational or club facilities • Skids • Telecommunications facilities <p>The proposed development for a 'commercial marina' is permissible with consent.</p>
3.9	The marina operations and kiosk will require extensive advertising matter which will ruin the appearance of the precinct.	1	There is no advertisement proposed as part of the proposed development, with the exception of the business identification sign on the administration building and the kiosk. All other signage if installed within the locality at a later stage will be subject to planning approvals if required.
3.10	The author of the Visual Impact Assessment discloses that it has had involvement with the project and this gives rise to a reasonable apprehension of bias. It is rejected on the basis that one person's views on a subjected matter are not to be favoured over those of a person who will have to live with them for days on end.	1	A team of expert independent consultants were appointed to inform the design of the proposed development in their areas of expertise. This is the customary means that all Applicants must take in preparing the application. If there is a general principle as suggested by this objection that all experts are biased then the planning system would need to be changed so the State could pay for independent assessments projects.
3.11	The front cover of each volume of the EA has a photomontage that is misleading and deceptive. There does not appear to have any representation of a 25m boat in it.	1	<p>The photomontages have been prepared by professionals, Architectural Images. Section 3.3.1 at Page 25 of the VIA Report explains the approach used in the preparation of the photomontages. A 3-dimensional computer model of the proposed development was created from the architectural plans for the floating structure and the kiosks and marina manager's office. The model became the base layer which was inserted into the photographs, using the Adobe Photoshop program. A series of 3-D models of real vessels of various types, lengths and sizes in various orientations were gathered by the montage artist to be used for the preparation of the photomontages. The vessels shown in the montages in each berth are of the maximum length that can be accommodated in them.</p> <p>There are only two vessels proposed in the range of 20 to 25m. These are shown in the montages. Vessels have been inserted at an occupancy ratio of 100% with maximum size vessels in each permanent marina berth to reflect worst/realistic case scenario. The montages accurately represent the size, form and character of the proposed vessels and marina structure.</p>
4. CONSULTATION			
4.1	No consultation has been undertaken by the developer.	51	<p>The Applicant has undertaken a range of community consultation activities to assist in developing and defining its proposal. Ford Communications, an independent company which specializes in community consultation activities undertook and managed the community consultation process and activities.</p> <p>Consultation was undertaken during the preparation of the EA with the public and local communities; local schools; and users of the waterway.</p> <p>The applicant also consulted with the following Government Agencies:</p> <ol style="list-style-type: none"> 1. Roads and Traffic Authority; 2. Department of Environment, Climate Change and Water; 3. NSW Maritime Authority; 4. Sydney Ferries; 5. Canada Bay City Council 6. Department of Planning 7. NSW Rowing <p>A detailed Consultation report by Ford Communications is included at Appendix 16 of the EA.</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
4.2	No direct community consultation took place with local communities prior to lodging the EA. Limited and misleading electronic consultation does not meet the DGRs. 31 responses from a catchment of 339,000 people demonstrates just how ineffective and misleading the process was	3	<p>An online community consultation website was the key communication channel employed for the community consultation process.</p> <p>Consultation was undertaken with community groups and affected landowners in the areas of:</p> <p>Abbotsford, Annandale, Ashbury, Ashfield, Balmain, Birchgrove, Birkenhead Point, Breakfast Point, Burwood, Burwood Heights, Cabarita, Camperdown, Campsie, Canada Bay, Chiswick, Concord, Concord West, Croydon, Croydon Park, Dobroyd Point, Drummoyne, Dulwich Hill, Enfield, Enfield South, Enmore, Erskineville, Five Dock, Glebe, Haberfield, Homebush, Homebush West, Leichhardt, Lewisham, Lilyfield, Marrickville, Mortlake, Newtown, North Strathfield, Petersham, Putney, Rhodes, Rodd Point, Rozelle, Russell Lea, Stanmore, Strathfield, Strathfield South, Strathfield West, St Peters, Summer Hill, Sydenham, Tempe, Tennyson Point and Wareemba.</p> <p>The community consultation website was set up at www.innerwestmarinasydney.com.au opening on Wednesday 17 June and ending on Friday 10 July 2009. This website provided information on the proposal (including maps, a layout of the proposed marina and photo montages) and a forum through which the community and affected landowners could submit topics that they believe should be addressed in the Environmental Assessment and participate in the discussion with fellow community members and landowners, effectively giving those individuals and organisations likely to have an interest in the proposal ample opportunity to express their views surrounding the proposal.</p> <p>Notification of the consultation process to the community and affected landowners was given by unaddressed mail delivery, advertising in local press, and publicity. Notification was given by various methods to a total more than 339,250 residents (ABS 2006).</p> <p>An unaddressed mass DL flyer letterbox drop was commissioned through Australia Post to all private delivery points in areas surrounding Kendall Bay, including: Breakfast Point, Cabarita, Canada Bay, Concord, Five Dock, Mortlake, Putney and Tennyson Point, totalling 12,835 delivery points and a total reach of approximately 30,973 residents (ABS 2006). The double-sided flyer notified the community that an Environmental Assessment was being prepared for the Marina proposal and their input was valued. They were directed to the website and given the opening and closing dates of the forum.</p> <p>The website forum was also advertised in the Inner West Weekly (on the 18th of June and the 2nd of July 2009), Inner West Courier (on the 16th and 30th of June 2009) and Village Voice Drummoyne (on the 19th June 2009) newspapers, again directing interested members of the public to 'have their say' on the website.</p>
4.3	The limited time proposed to fully and completely review the documents and prepare an adequate response is totally inadequate	5	<p>The EA was publicly exhibited for 2 months from 1 October 2010- 30 November 2010.</p> <p>The public exhibition timeframe is a matter for the Department of Planning.</p>
4.4	There has been little communication from the developer.	26	Refer to response 4.8.
4.5	The proposal has not been the subject of open and transparent consultation	13	News and editorial coverage was proactively sought in local media, including radio and local press The Inner West Weekly, Inner West Courier and Village Voice Drummoyne. A spokesperson was made available around the clock to answer any questions posed by the media.
4.6	Have the local Wangal clan been consulted as the area has significant historical ties?	1	Aboriginal community consultation under DECCW's Aboriginal Cultural Heritage Requirements for Proponents 2010 was not undertaken as part of AECOM's assessment, the purpose of which was to determine whether additional Aboriginal heritage investigation and impact assessment, including Aboriginal community consultation, was warranted. On the basis of a desktop review and site inspection, AECOM determined that further investigation of the Aboriginal heritage of the proposed marina site was not warranted. No Aboriginal sites were identified within the footprint of the proposed Marina and the site was considered to have no Aboriginal archaeological potential due to past land use practices.
4.7	The advertised workshops did not contain a single reference to the marina being in Kendall Bay or the name of the proponent	1	<p>It is noted that the flyer for the workshops distributed through Australia Post (October 2010) identified the project as "Inner West Marina Sydney"</p> <p>However, the flyer distributed through Australia Post (June 2009) for the "Pre-Application Community Consultation" identified the project as "Inner West Marina Sydney" and detailed a proposal for "a new marina at Kendall Bay on the Parramatta River in Sydney"</p>
4.8	Not all affected landowners were consulted. Only using the website is not sufficient compliance with the DG requirements. The consultation process was tainted by the use of "push questions/leading questions".	1	<p>Ford Communications advise (Section 6 of the EA):-</p> <p>"Online consultation is an effective tool because it reaches many more people than most other methods of engagement and is accessible to the community at any time. It's easy, safe, respectful and well-liked by the community. The aim of this pre-application consultation process was to offer interested members of the community the chance to have their say in the issues that should be considered in this Environmental Assessment. "</p> <p>Further community consultation was undertaken during the public exhibition of the EA. As a part of the public exhibition process, Breakfast Point Pty Ltd appointed Coppice Communication as independent consultants to facilitate face-to-face meetings with people who registered to attend a series of workshops, conducted 20th to 30th October 2010.</p> <p>Workshops were booked on demand at two local venues easily accessed by community members: Concord Library and Five Dock Library. The series of workshops were offered over a range of times: morning (10 AM), afternoon (2 PM), and evening (5:30 PM) on weekdays and one Saturday. Notification of the community consultation workshops to the community and affected landowners was given by unaddressed mail delivery and advertising in local press. Notification was given by various methods to a total of more than 360,267 residents (ABS 2006).</p> <p>An unaddressed mass DL flyer letterbox drop was commissioned through Australia Post to all private delivery points in areas surrounding Kendall Bay, including: Abbotsford, Breakfast Point, Cabarita, Canada Bay, Chiswick, Concord, Concord West, Five Dock, Gladesville, Henley, Mortlake, North Strathfield, Putney, Tennyson Point and Wareemba, totalling 23,658 delivery points and a total reach of approximately 59,800 residents (ABS 2006). The double-sided flyer notified the community that the workshops were taking place for the marina proposal and their input was valued. They were directed to register via a dedicated 1800 number or the website www.innerwestmarinasydney.com.au and provided with information on the workshops.</p> <p>The workshops were also advertised in the Inner West Courier; The Northern District Times and The Weekly Times newspapers; again directing interested members of the</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			<p>public to register via the 1800 number or on the website.</p> <p>Four workshops were held as follows:-</p> <ul style="list-style-type: none"> • Wednesday 20th October (5:30pm to 7:15pm) at Five Dock Library. There were 15 participants: 7 female and 8 male. • Thursday 21st October (2:00pm to 3:45pm). There were 12 participants: 3 female and 9 male. • Thursday 21st October (5:30pm to 7:15pm) at Five Dock Library. There were 7 participants: 2 female and 5 male. • Saturday 30th October (10:00am to 11:45am) at Concord Library. There were 20 participants: 10 female and 10 male. <p>A Community Consultation report prepared by Coppice Communications (October 2010) summarising the findings of the four workshops was submitted to the Department of Planning in October 2010.</p>
5. COMMUNITY			
5.1	Increased costs to the Community Association in regards to repair and maintenance of community property including roads, seawall and liabilities etc.	50	<p>It is uncertain if the operation of the marina may result in increased costs to the Community Association. However, it is the inherent nature of a community scheme that lots in the community scheme may be used for various purposes, including residential, retail and commercial purposes. It is always anticipated that the different uses of the community lots will require different access to and use of the community property. All members in the community scheme are required to contribute to the costs of the community scheme, regardless of whether those members actually use the various community property facilities or infrastructure.</p> <p>The marina operator will be the owner of lots in the community scheme (being lot 53 (car park lot) and lot 55 (sea wall lot)) and as such the marina operator will contribute to the costs of the Community Association through its levies. Those levies are used to contribute to the cost of maintaining community property that will be used by the public accessing the marina. However, the marina operator is also contributing to the cost of maintaining the Country Club and other recreational facilities which the marina operator will not use.</p> <p>The amount of levies payable by the marina operator, particularly in respect of the car park lot, is proportionately high given the proposed land use. That is the levies for the car park lot have been calculated using unit entitlements assessed on a high value land use (being residential townhouses). However, the proposed land use is a lower value land use (being a car park).</p> <p>To date the levies have been paid by the owner of lot 53 and lot 55, being Breakfast Point Pty Limited, since 2003 with no actual use by Breakfast Point Pty Limited of those community property facilities and infrastructure. That is, these two lots have effectively paid full levies for infrastructure and services not used for 7 years.</p> <p>Separately, it is also arguable that a marina with 172 berths which are used intermittently by marina users will cause less wear and tear to community property than a residential strata scheme which would use community property multiple times each day.</p>
5.2	The marina will appropriate Breakfast Point Community Association owned property for commercial use without adequate compensation proposed	5	<p>The proposal does not "appropriate" community property for any commercial use or otherwise. The marina is not constructed on community property. The marina is constructed wholly within Kendall Bay (owned by Maritime Authority of NSW), lot 53 (car park) and lot 55 (sea wall lot). Lot 53 and lot 55 is private property which will be wholly owned by the marina operator.</p> <p>The Community Association remains in control of the community property in the same manner as all other development activities at Breakfast Point. No Community members are restricted, other than in accordance with the Community Management Statement, from using lot 1 DP270347 (Community Property) or lot 501 DP1052824 (Foreshore Lease Land) as a result of the proposal. Accordingly, no compensation is necessary.</p>
5.3	The levies payable to the Community Association for the marina are significantly less than what is payable by comparable stratas within the Community Association, despite significant wear and tear the marina will cause to Community Association owned infrastructure and assets.	5	<p>Please see the response to number 5.1 above regarding the levies payable by the marina operator and the financial impact of the marina on residents of the community scheme.</p> <p>Specifically, the marina car park lot (lot 53) was assessed for residential land use of 6 townhouses at an average UE of 7. In comparison, the Savannah Strata Scheme has a UE of 174 for 40 apartments (being an average UE of 4.35 per apartment). On this basis it could be argued that the UE for the car park lot (lot 53) is almost double that of a strata scheme on a lot by lot basis.</p>
5.4	A number of legal issues have not been addressed by the proponent including: appropriate access for emergency vehicles/equipment; financial impact to residents who pay for the ongoing maintenance of roads; use of Community infrastructure, parks, gardens etc and access to the Club and implications for duty of care and insurance	5	<p>Please see the response to number 5.1 above with respect to the financial impact of the marina on residents in the community scheme.</p> <p>Access to the proposed marina is treated in the same manner as access to any other stage of development at Breakfast Point. That is, the public and invitees not members of the Community Association have been able to travel by vehicle, foot or cycle on any of the Open Accessways without the need for consent of the Community Association. There is no legal basis for the development of the proposed marina to be treated differently.</p> <p>In respect to access, it is intended that marina users will access the marina via:</p> <ul style="list-style-type: none"> • open access ways on community property (lot 1 DP270347) that connect the land within the Community Scheme to public roads, including Tennyson Road, Emily Road and Medora Street. These open access ways are detailed in by-law 29 and Part 7 of the Community Management Statement and are community property; • the strip of land owned by City of Canada Bay Council (being lot 501 DP1052824) which is leased by Council to the Community Association and which requires the Community Association to allow members of the public unrestricted access to the foreshore land (Foreshore Lease). The Foreshore Lease is disclosed in by-law 91 of the Community Management Statement and the contract for sale special conditions; and • either directly onto lot 55 owned by the marina operator, or if required, over part of the community property that is the subject of the easement for public access registered on DP270347 and permits pedestrian access for City of Canada Bay Council and its "Authorised Users" including Council's invitees and other persons authorized by Council, including members of the public. • Access for emergency vehicles is the same as for the rest of the community. The legislative regime that applies to emergency vehicles, police etc applies to an open access way as if the open access ways were public roads.

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			<p>Under the terms of the Community Management Statement, the Community Association has the obligation to, amongst other things, manage and maintain in good condition and repair the open access ways. Under the terms of the lease, the Community Association must maintain the leased area and ensure public access over the leased area is safely exercised at all times. Both the lease and the Community Management Statement require the Community Association to maintain appropriate insurance for the community property and leased area respectively.</p> <p>The obligations with respect to maintenance and insurance exist regardless of whether the marina is constructed. Any increase in costs of maintenance and insurance are addressed above in number 5.1.</p> <p>With respect to access to the Country Club, only the marina operator will have access to the Country Club as the owner of two lots in the Community Scheme and therefore a member of the Community Association. Marina users are not entitled to use the Country Club without the consent of the marina operator. The marina operator must abide by the rules set by the Community Association as for any other owner within the scheme.</p>
5.5	Residents who purchased property in Breakfast Point were told by the developer the only marina proposed for the bay was a small private marina at the southern end of the bay exclusively for the residents of Breakfast Point. Not a public marina.	28	<p>In the early years of selling properties at Breakfast Point (2000 to 2004) it was proposed and communicated to purchasers in the community scheme that a marina was being considered for Kendall Bay. It was proposed that it would be a private berthing facility in Kendall Bay to be offered to Breakfast Point residents. Various locations in Kendall Bay were indicated including the southern portion of the bay in front of 5i3/5F and the central/northern part of the bay in front of Hunters Wharf and the Harbour Manors. In some instances the marina was shown attached to the original wharf.</p> <p>The Community Management Statement and the contracts for sale entered into between the developer and purchasers' contained disclosures regarding the wharf and the marina. The Community Management Statement has formed part of the contract for every property within the community scheme.</p> <p>In 2005, with the introduction of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005, the waterway area within Kendall Bay was zoned 'W1 Maritime Waters' and development for the purpose of a 'private marina' was prohibited in the 'W1 Maritime Waters' zone.</p> <p>'Private Marinas' remain a prohibited form of development within all zones of the SREP (Sydney Harbour Catchment) with the exception of zone 'W6 –Scenic Waters: Active Use.'</p> <p>The developer has maintained disclosures of a marina and continues to disclose in the contracts for sale, a proposed marina within Kendall Bay.</p>
5.6	People from outside the community to use the club and associated facilities should not be given open access to infrastructure which residents pay for in unit levies.	1	<p>Please see sections 5.1 (regarding finance) and 5.4 (regarding access to the Country Club and community infrastructure) above.</p> <p>Separately, people from "outside" the community scheme already have access to much of the infrastructure either via the public access easement created over the open access ways, or generally over the open access ways (if the person is permitted to use the open access ways under the Community Management Statement or otherwise regardless of the public access easement).</p> <p>Some people from "outside" the community have been awarded Permitted Persons status at a Special General Meeting for the express purpose of paying for membership/access to the Country Club. That vote was carried unanimously.</p> <p>Invitees of all other lot owners in the community scheme are entitled to access the Country Club and other community infrastructure under the provisions of the Community Management Statement.</p> <p>Accordingly marina users are not entitled to use the Country Club without the consent of the marina operator. The marina operator must abide by the rules set by the Community Association as for any other owner within the scheme.</p>
5.7	Local residents should be given first options for the purchase of a berth at the marina.	3	This is a question of ownership structure and not a matter for the project application.
5.8	Community meetings over past 5 years showed universal condemnation of the developers plans	1	<p>There have been many community meetings over the past 5 years. If this submission refers only to Community Association meetings then a search of the records of DP270347 will reveal only a few meetings have addressed the marina. No formal objection to the marina was recorded until late in 2010.</p> <p>The marina is also disclosed in the Community Management Statement which was included in all contracts for sale of properties at Breakfast Point. Therefore, as the marina was disclosed at the time of purchase, any resident of Breakfast Point could chose not to proceed with buying into the community due to a potential future marina.</p>
5.9	Consent of owner's corporation and leasehold obligations with Canada Bay Council for use of land. Land Owner's Consent is required but has not been obtained from City of Canada Bay. Further, the Community Association DP20347 as the relevant representative body of the members and as lessee of the foreshore lot; or from the members of the Community Association as the actual owners as tenants-in-common of the common property (s31-33 CLM Act).	4	<p>Consent of either the Community Association (as the owner of lot 1 in DP270347 (Community Property)) or City of Canada Bay Council (as the owner of lot 501 DP1052824 (Foreshore Lease Land) is not required.</p> <p>a) Landowners consent from the Community Association is not required as lot 1 in DP270347 (Community Property) is not being developed (please see section 5.2 above). Further, appropriate access rights over community property for the marina operator and marina users is provided by way of the open access ways and easement for public access (see section 5.4 above).</p> <p>Separately, in respect of the developer, consent from the Community Association for the development of the marina is not required given the rights granted to the developer under the Community Management Statement to carry out development activities in the community parcel. By-laws 8.16 and 8.17 in the Community Management Statement are titled "Developer's Rights". These by-laws enable the Developer (which at this time is the proponent, Breakfast Point Pty Limited) to carry out "Development Activities" which are defined in the Community Management Statement to include, amongst other things, any form of building work and development in the community parcel.</p> <p>In particular, the Community Management Statement permit the Developer to use certain parts of Community Property in connection with the Development Activities, known as "Special Restricted Community Property". Special Restricted Community Property is defined in by-law 28.2 and includes the "Development Area". The Development Area is designated as that part of Community Property identified as such in the Concept Plan attached to and forming part of the Community Management Statement. This area includes the roads and other Community Property surrounding and adjoining lot 53 (car park lot) and lot 55 (sea</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			<p>wall lot) to be developed as part of the marina. By-law 28.2 stipulates specific rights in favour of the Developer when conducting Development Activities on Special Restricted Community Property.</p> <p>Landowners consent from the City of Canada Bay Council over the Foreshore Lease Land adjacent to the marina is not required as the Foreshore Lease Land is not being developed. Further, appropriate access rights over the Foreshore Lease Land for the marina operator and marina users is provided for in clause 2.1(a) of the Foreshore Lease.</p> <p>Breakfast Point Pty Limited is a member of the Community Association and claims through the lease the specific rights expressed in clause 2.1(c)(ii) of the lease. This means that Breakfast Point Pty Limited can temporarily use the Foreshore Lease Land without the consent of City of Canada Bay Council for the purposes of installing services for connection to the marina.</p>
5.10	The use proposed by the marina lends itself to a use of the burdened lots (Lot 1 and Lot 501) in a manner not permitted as access is restricted to foot and bicycle only	1	<p>This is not correct. Access to the marina over lot 1 DP270347 (Community Property) and lot 501 DP1052824 (Foreshore Lease Land) is not restricted to foot and bicycle only.</p> <p>As noted in section 5.4 above, access to the marina is provided by way of the open access ways and the easement for public access on lot 1 DP270347 and the Foreshore Lease for lot 501 DP1052824.</p> <p>It is intended that marina users will require:</p> <ul style="list-style-type: none"> vehicular access over those parts of community property that are open access ways. Neither the provisions of the Community Management Statement (see by-law 29), nor Part 5, Division 1 of the Community Land Development Act regarding open access ways preclude the use of open access ways for vehicular traffic; pedestrian access over Council owned lot 501 which is the subject of the Foreshore Lease. Clause 2.1(a) of the Foreshore Lease permits such pedestrian access; and pedestrian access either directly onto lot 55 or onto that part of lot 1 DP270347 that is the subject of the easement for public access. No vehicle access is required over this slither of land. The easement for public access permits pedestrian access over the easement site. <p>Separately, as noted in section 5.9 above, the developer has access rights over the community property under the Community Management Statement and also the Foreshore Lease.</p>
6. NOISE			
6.1	The quiet nature of the Breakfast Point precinct will be affected by noise from the 24/7 operation of the marina, the kiosk with outdoor seating, party boats, sails of the boats, wave effect from boats and engines. Night time noise levels will exceed agreed standards. Operational noise from the marina and its traffic will have a detrimental impact on nearby residents particularly at night.	53	Heggies SLR undertook ambient surveys at Breakfast Point, Tennyson Point and Gladesville to determine existing ambient noise. These take into consideration the existing ('quiet nature') noise environment of the area. Operational design criteria were then set in accordance with the DECCW INP, based on the survey results. Operational scenarios were developed (which included boat engine noise and people talking etc) and assessed against the INP derived goals. Traffic noise (cars) was assessed against the DECCW's ECRTN. Compliance for operation was predicted for daytime, evening and night-time for the INP amenity and intrusive criteria. Traffic noise complies with the ECRTN. The sleep disturbance screening criteria indicated a potential for disturbance and this should be addressed by the Management Plan.
6.2	Noise and disruption during construction. Construction hours should be strictly adhered to and there should not be 24/7 public access. The mitigation strategies proposed for noise design goals during day time etc is not a guarantee for residents.	7	As with any construction project, the work would be undertaken within the hours specified in the Consent. It is not envisaged that any work would be necessary outside the standard local Council permitted working hours.
6.3	Noise disturbances currently from rowing instructions before dawn and collection of rubbish at Cabarita, how often from this development?	1	A Noise Impact Assessment was undertaken by Heggies SLR as part of the EA. The assessment considered the likely noise impacts of the proposed marina during construction and operation -see comment at item 6.1.
6.4	The adjoining residential dwellings have not been acoustically constructed to minimise noise and nuisance from the marina activities.	1	As the marina complies with the INP no acoustic treatment is required.
6.5	Proposed noise abatement strategies are voluntary in nature and as such are inadequate and will not be enforced as there is no provision in the proponent's application to pay for such enforcement measures.	1	The proponent can commit to a Noise Management Plan
6.6	Noise during construction will exceed permissible levels and no effective management processes are included to address this issue	2	The noise assessment includes Noise Mitigation Strategies. Management processes (eg monitoring/respice/consultation can be committed to by the proponent. It is also noted the Environmental Noise Control Manual guidelines used in the assessment has been replaced by the DECCW's Interim Construction Guideline. The guideline recognises high levels may occur during construction and at levels above 75dBA receivers are classified 'Highly Noise Affected'. The Heggies SLR report contains noise mitigation strategies consistent with the Interim Construction Guideline.
6.7	Volume 4 Construction and Operational Noise Assessment - Comments contained in the Breakfast Point Resident Group submission dated 30 November 2010 (pages 92-96)	1	The submission's general comments on noise are addressed in the 4 responses above. In addition the submission notes Heggies SLR report does not consider the general public, however for passive and active recreation the INP recommends higher levels compared to the residential project noise goals. Also in relation to traffic noise, the submission states 'as soon as large pleasure craft are permitted to pick up and set down...then buses of various types and sizes will become the norm... and would significantly exceed the 2dBA criteria.' Whilst it is outside our expertise to comment on the likely hood of buses, it is noted the addition a bus does not automatically result in more than a 2dBA increase. For example with an existing flow of 12 cars/hr at 40km/hr the addition of 1 bus will result in a 2dBA increase, with more than 12 cars the increase will be lower than 2dBA with an additional bus.

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
7. NAVIGATION AND BOATING SAFETY			
7.1	Impact of the safe operation of the Sydney Ferries service between Cabarita and Parramatta River due to the establishment of a large commercial marina. Ferry commuters do not want a restriction on operations as could be imposed by the construction of this marina. It is critical that an effective and efficient public transport system be maintained. The project will severely impact on the navigation channels of Sydney Ferries (Rivercats) (refer Sydney Ferries letter)	22	There is sufficient clear navigable water for the construction and operation of the marina and for Ferries to maintain there scheduled services and time tables. This is discussed in the EA at section 11.3.
7.2	The depth of the bay is between -2m and -4m. It is further proposed that this depth be reduced by about 0.5m (blanket + rock ballast). Clearance under propellers or keels will be minimal.	1	There will be clear water under the vessels at all times. The sizes of the vessels in the berths are based on the draft of the vessel such that these are clear water under the vessel at all times.
7.3	School and recreational rowing groups and kayakers use this area. People should be allowed to exercise safely in an environment free from power craft. No account of the navigation channels for members of nearby rowing or sailing clubs have been undertaken (refer NSW Rowing letter)	15	The Parramatta river is already used by many water craft which enter the water or are moored up stream of the marina. The vessel usage from the marina is discussed in the EA at section 11.3. All vessels using the Parramatta River must comply with the Marine Safety Act which specifies minimum distances between powered vessels structures, non powered vessels such as rowers and sailing vessels. The distances specified in the Marine Safety Act will apply to all vessels using the marina in the same way they apply to all vessels using the Parramatta River. The vessels from the proposed marina will add relatively few vessels to the daily river traffic which is dominated by Sydney Ferries vessels on scheduled services, and will have minimal effect on the usage of the river by rowing craft and sailing clubs along the river.
7.4	Increased boat traffic and crowding of the waterway. There are already 2 commercial marinas in the vicinity. Chances of accidents will be increased and safety will need to be managed between rowers, boats and ferries.	74	Refer to response to 7.3. Also there are rules for the safe navigation of vessels which include the navigation of vessels near non powered vessels including rowing hulls. These rules are enforced by.
7.5	Concern for the safety of school boys rowing and the increased probability of collision. The total number of all school-aged rowers on the river on a Saturday can be in excess of 1,000. The same investigation and diligence which is expected with a terrestrial development in regard to road traffic generation should be applied to the on-water increase in boating transiting this area.	8	Refer to responses 7.3 and 7.4.
7.6	Increased traffic of speeding cruisers, the wake they create and dangerous navigation causes safety concerns for other river users including young sailors, rowers etc.	14	Refer to responses 7.3 and 7.4.
7.7	Restriction of the navigation and ferry channel into Kendall Bay between the proposed marina and Cabarita ferry wharf	7	The effect on ferry services is discussed in section 11.3 of the EA and in the response to the issue raised by NSW Maritime. In summary there is ample safe clear navigable water to enable ferries to use the water way and keep to their time tables.
7.8	Filling the area with a marina is going to present safety issues for all boat users in relation to the shallow water along the Cabarita shore and the movements of rivercats which swing wide close to Breakfast Point.	3	The Cabarita shore is east of the existing ferry wharf. The path taken by ferries departing the ferry wharf heading east, or approaching the wharf from the east , will not change as a result of the construction of operation of the marina.
7.9	A safety hazard will be generated to users of the Cabarita Park launching ramp through the path of the west-bound ferries and the wave effect caused by the channelling effect of the marina structure. A seawall is suggested in this location.	1	The waves generated by west bound ferries will pass the Cabarita boat ramp before they reach the marina, as occurs at present. The waves generated by the rivercat ferries are long period waves which will be slightly attenuated by the marina, but in general these waves will continue to pass through the marina to the shoreline along the western side of Kendal Bay. The reflection of these waves of the foreshore on the western side of Kendal bay will be slightly attenuated by the marina. The marina will result in smaller reflected waves reaching the boat ramp when compare with the current conditions.
7.10	Night navigation hazards have been overlooked	2	Navigation lights will be installed on the marina as is usual, and vessels approaching or departing the marina at night will use there navigation lights as required by The Marine Safety Act and Regulations.
7.11	No consideration given to boats waiting to approach the marina during windy conditions. Kendall Bay is severely affected by high winds from almost all directions. Boat manoeuvring and navigation is extremely difficult and dangerous.	2	The sea conditions and wind conditions which arise in Kendal bay are similar to many other areas of Sydney Harbour and the Parramatta River where vessels are moored. There is limited distance over the water for waves to develop, particularly for winds from the south and west, which are the directions from which the strongest winds arise. Accordingly the wave conditions near the marina in these conditions will be better than in many other areas of Sydney harbour and the Parramatta river where vessels are moored.
8. SOCIAL			
8.1	A Social Impact Statement has not been prepared	15	The Director General's Requirements (DGRs) did not specify a requirement for a Social Impact Statement to be prepared. The proposal is consistent with the Council approved Breakfast Point Masterplan 2002. It is considered that the social impacts of a marina were considered by the Council in their approval of the Breakfast Point Masterplan.
8.2	An independent Social Impact Assessment should be undertaken taking into consideration noise, traffic, congestion, safety, inappropriate parking, intergenerational equity, and financial costs of increased use of roads and facilities maintained by the community. Include Kendall Inlet in the assessment.	9	This is a matter for the Department of Planning.

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
8.3	Impact of the marina on the foreshore walk.	22	The foreshore walk will not be adversely impacted by the proposed marina operations.
8.4	The proposed marina is not in the public interest. (The marina will alienate the public from using and enjoying the public walkway around the Bay; The marina will destroy the visual amenity; the proposed geotextile mat will combine to add significant environmental, safety and hazard issues to Kendall Bay)	11	The proposal is consistent with the Breakfast Point Masterplan 2002 and is a permissible with development consent. The public interest has been considered in the EA.
8.5	Kendall Bay should not be leased to a big developer - it is a recreational area that all the public should enjoy.	13	The bed of Sydney Harbour is owned by NSW Maritime. NSW Maritime has granted land owner's consent to the lodging of this Project Application.
8.6	The four public destination berths will be accessible 24 hours a day. These berths will allow unrestricted access for vessels referred to as "party boats". A number of the persons disembarking from such vessels will be intoxicated and anti-social behaviour can be expected.	20	Party boats will not be allowed at the marina (refer to the Marina Management Plan). As set out in the Marina Management Plan, the marina manager or his representatives will be contactable 24 hours per day to address any security or public amenity matter which arises. The contact detail will be displayed at the landward end of the jetty.
8.7	The social impact to residents of public access any time day or night to the marina	6	Refer to response 8.6
8.8	The important part of the river will be ruined for rowers, small sailing vessels and the many who canoe in this area	5	Refer to response 7.3.
8.9	Anti social/criminal behaviour as is currently experienced on Cabarita Wharf and Bayview Park will be brought onto the front yard of those living close to the proposed marina. Have the Police been consulted?	3	No.
8.10	Why is the public pontoon/ferry wharf proposed when Sydney Ferries will not require utilising it?	5	The new low level fixed jetty and pontoon has been designed to incorporate a future ferry stop (as required by the Canada Bay LEP 2008 -Schedule 6, Part 1 Clause 2(a)(v)). The 'use' of the ferry stop will be the subject of a separate application and assessment process.
8.11	Viable expansion of other marinas is not given consideration. There are many suitable and accessible places to add extra berths such as Cabarita Point, where they could be absorbed into the community without the need for a new single giant marina such as the one proposed.	25	This matter is considered in Section 10 of the EA.
8.12	We seek inclusion of a written clause into the Conditions of Approval and Marine Operation Plan that specifically do not allow party boats or commercial boat operators access to the Marina.	1	No function or party boats will be permitted to berth at the marina.
9. OPERATIONAL			
9.1	Proposed 24/7 hours of operation for the marina will impact on the amenity of Breakfast Point current and future residents in relation to traffic, parking, noise and safety.	76	As with all marinas, the marina will be accessible 24 hours per day only for boat owners, not the general public, nor others who would undertake permitted activities during normal operating hours as set out in the Marina Management Plan, such as cleaning vessels. The marina management plan does not permit noisy activities and sets out the enforcement of marina rules. The movement of boats at night would be occasional and the noise generated similar to vessels currently travelling along the Parramatta river at night.
9.2	The access to the public walkway along the foreshore by vehicles to service the marina which may cause or impact walkers, cyclist and joggers of all ages both the very young and the elderly.	27	The management plan for the movement of materials including waste, to and from the marina and kiosk would account for the pedestrian use of the foreshore; and would be at times when the public use is of the foreshore is low.
9.3	Fire and explosion risk from marina operations. Fire safety design and fire escape steps to protect residents in close proximity and access for emergency vehicles are not detailed.	38	The least distance between a vessel and a building is 70m. This is sufficient distance that in the unusual event of a fire on a vessel the building would not be affected. Fire hydrants will be provided at the head of each ramp down to the floating structure, and fire hose reels will be provided along the walkways and arms of the marina in accordance with the relevant Australian standards (refer to drawing DA05).
9.4	OHS risk.	2	The use and operation of the marina would be subject to the OHS rules, legislation and regulations as would apply to any work or residence. All OH&S requirements will be satisfied, and appropriate insurances would be in place.
9.5	Damage to the foreshore, seawalls, boats, gardens and floorboards of sailing clubs and boat sheds and minor injuries to sailors caused by the huge wash created by the large vessels. The main jetty would need to be anchored so it did not create shear forces from rivercat wash that would damage the seawall.	10	Damage to foreshore, seawalls, boats, gardens and floorboards of sailing clubs and boat sheds and minor injuries to sailors caused by wash would all be related to the energy contained within that wash. About 10x more wave energy would be delivered to the shoreline by the wash from a single fast ferry passing than by the wash from the largest vessel proposed to be berthed at the marina (E proportional to H ² T ²). Given that there are approximately 34,000 passings of fast ferries per year in the Parramatta River opposite Breakfast Point (GBAC report assumed 25,000 but comment on the EA from NSW Transport in Dec 2010 confirms 34,000), it is clear that the vessels to be berthed at the marina would not lead to the additional damage suggested here. The anchorage for the main jetty would be attended to as part of the detailed design. The existing seawalls at the site have been designed to withstand the forces arising from the Rivercat waves, all other vessel generated waves and wind waves generated in extreme conditions. The Rivercat waves contain significantly more energy than any other vessel generated waves at the site. The marina will attenuate the waves from all sources but will have only a limited attenuation of the Rivercat generated waves. With the marina in place the waves generated by vessels using the marina will be attenuated along with all other wind and vessel waves, such that the wave effects on the foreshore seawalls and other structures will be less than without the marina. In areas remote from the marina the effect of the waves generated by vessels moored in or using the marina will be minimal and small compared with all other vessel waves, in particular the effects of the Rivercat generated waves.

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9.6	Requirement to fuel moored vessels (no above or underground tanks), undertake repairs or re-rig them and to take provisions on board and later to unload vessels will create noise and odours.	7	There will be no refuelling facilities at the marina. Refuelling facilities already exist at Cabarita marina. There will be no maintenance facilities at the marina. All activities at the marina are controlled through the Marina Management Plan which addresses all noise and odour issues.
9.7	The safety and security of the area will be significantly changed by the installation of a large marina that operates on a 24 hours basis. The proposal includes no provision for any security when the manager's office is not staffed, including after hours on-site security especially in relation to party boats and enforcement of boating rules.	12	Party boats will not be allowed at the marina (refer to the Marina Management Plan). As set out in the Marina Management Plan, the marina manager or his representatives will be contactable 24 hours per day to address any security or public amenity matter which arises. The contact detail will be displayed at the landward end of the jetty.
9.8	The inaccessible and residential nature of the site makes it impractical as a commercial boating point.	5	The EA addresses the issues of demand, accessibility and interaction with the residential area surrounding the marina. The EA concludes that the site is suitable for a commercial marina.
9.9	A facility providing outdoor seating for 50 people is not defined as a 'kiosk'. Existing area is well catered for and if not, the kiosk should not contain any outdoor seating. Carriage of all the items for the marina and café by trolley would not be feasible.	4	There are many outdoor eating and food and drink facilities around the foreshore of Sydney Harbour and along the Parramatta River, which are remote from a car park, or are part of a marina; for example, the café at Chowder Bay, or the café at Cabarita Marina. The provision of outdoor seating is to enhance the foreshore experience for the public and users of the marina.
9.10	The seawall and surrounding pathways have a 3 t limit and could not take multiple emergency service vehicles such as fire engines. Construction and service vehicles would need to be weight limited.	2	The design of the foreshore path way and seawall are sufficient for ambulances and similar sized emergency vehicles suitable for evacuation. There will be fire hydrants at the landward end of the jetty and fire hose reels along each arm of the floating structure. During construction, all materials, plant and equipment will come to site by water.
9.11	A speed limit outside the marina will be implemented at the expense of other waterway users.	1	There will be no change to the current permissible vessel speeds along the Parramatta River. As with all marinas, for safety and to minimise the risk of accidents, vessel speeds are restricted in and close to the marina for vessels approaching the fairways within the marina.
9.12	As Conditions of Consent, we request the developer or Marina Operator to pay the Community \$90,000 pa towards the employment of a ranger to patrol the foreshore etc	1	An Operational Management Plan has been prepared for the marina. The need for a ranger to patrol the foreshore is not warranted and we are not aware of this requirement for any other existing commercial marina.
9.13	As Conditions of Consent, we request that the developer agrees to pay for the services of an independent environmental auditor to be employed by the Community Association to provide quarterly reports during construction phase	1	This is a matter for the Department of Planning
10. WASTE AND POLLUTION			
10.1	The marina will impact on the environment of the bay in terms of discharge of human and other waste, accidental leakage/discharge of fuel and other pollution from boats	31	The disposal of waste, actions to be taken in the unlikely event of a leak or breakage in a sewage pump line, actions to be taken in the event of an accident and expected behaviour of people, are addressed in the Marina Management Plan, together with the enforcement of those rules. Also it is not permitted to dispose of waste in the waters of Sydney Harbour and the Parramatta River. This is policed by NSW Maritime Authority. Waste management is provided in Section 3 of Operational Environmental Management Plan (OEMP) (AECOM, 30 September 2009).
10.2	A number of different pollutants including: stirring up of polluted bay sediments; noise pollution from patrons; visual pollution through marina coverage and pollution created by the vessels	9	These issues have all been addressed in other responses.
10.3	How will the marina and kiosk handle garbage, pollution, sewage and litter? This activity can only be carried out by use of the foreshore walkway as there is no other means of access from the marina to the car park.	19	Refer to section 11.11 - Waste Management in the EA.
10.4	It is impossible to imagine how the volume of waste generated by the marina and cafe could be removed via trolleys	1	A waste disposal contractor will be engaged to remove waste from the marina. The frequency of waste removal will be assessed by the contractor, with all solid waste being removed from the foreshore to the car park in small trolleys. The waste will be collected from the car park area using the usual suburban garbage trucks.
10.5	During the construction the temporary seawall will be opened regularly but no comment on how pollutants will be contained. Ballast will be placed /dropped on top of the blanket but no comment is made about the pollutants that may be 'squeezed out'.	2	The seawall will not be opened. This issue has been addressed in other responses.
10.6	There is no informed analysis of the overall pollution of the bay in relation to the parallel consideration between the development and operation of a marina and the established level of toxicity.	1	The effect of the marina construction and operation has been discussed in detail in the EA.
10.7	No proper amplification of sewers and drainage is proposed and little mention about water-borne rubbish washed down stormwater drains and thrown from boats. The bay's water quality is regularly at unsafe standards contributed partly by the illegal pumping of bilge water and sewerage from boats. Water flow studies and water quality monitoring should be	3	There will be no effect of the marina on stormwater drainage. There will be no need to amplify existing sewer lines as the sewage pump out system will be designed with a temporary holding tank which will enable the sewage to be pumped into the Sydney water sewage system at a rate and at a time the system is able to accommodate the sewage from the marina. This is usual.

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE												
	undertaken.														
10.8	Fishing activities will bring problems as currently experienced at Cabarita Wharf	3	Fishing from the marina will not be permitted and will be enforced by the manager of the marina.												
10.9	Petrol fumes from boats will drift into peoples homes	1	The closest vessel to a residence would be moored at a distance of at least 70m. There are no fuelling facilities as part of the Project Application. It is considered that an air quality impact assessment is not warranted.												
10.10	No consideration has been given to grey water discharge and pollution from washing hulls, rigging, generators, ice making machines and board maintenance. Most boats over 10 years of age do not have holding tanks or pump out systems with on board sewerage being dumped overboard. What kind of boat maintenance will there be?	3	The activities which will be permitted at the marina are set out in the marina management plan. Only small on board maintenance will be permitted. This will be controlled through the Marina Management Plan and enforced by the Marina Manager. The dumping of bilge water and sewage into the Parramatta River and Sydney Harbour is not permitted by any vessel using the River.												
11. MARINA LAYOUT AND DESIGN															
11.1	The scale of the marina is not compatible with the adjoining residential precincts	21	The Project is a positive contribution to the revitalisation of Kendall Bay, part of a former waterfront industrial precinct, the foreshores of which over the past decade have been transformed into a waterfront residential estate. In addressing the scale, size, environmental impacts of the marina and the suitability of the site, the specialist reports have demonstrated that any environmental impacts of the project can be suitably managed and mitigated.												
11.2	The size and scale of the marina.	19	Refer Item 11.1 above. Further, the proposal does not restrict the navigation channel for other waterway users or impact on the existing and future opportunities for public recreation.												
11.3	Consider a smaller marina, for example of approximately 40, 80 or 100 berth-size	10	In addressing the scale, size, environmental impacts of the marina and the suitability of the site, the specialist reports have demonstrated that any environmental impacts of the project can be suitably managed and mitigated.												
11.4	It is apparent that: some of existing demand for berths may be serviced by existing facilities; the total project growth in Sydney Harbour accounts for the entire supply of this facility and the proposed berth sizes do not appear to reflect the demand that is sought after (ie larger vessels 8-12m length would need larger facilities which are not provided); and the ratio underpinning demand is rejected.	4	<p>The demand study shows that there is a demand for the berths. The marina has been designed to accommodate vessels up to 25m with the facilities they require for being moored in a marina at Kendal Bay.</p> <p>The July 2009 Demand Study clearly demonstrates the extent of demand in NSW and the Inner West Sydney Marina catchment for the ownership of recreational vessels 8.0m and above in size being those sized vessels which create demand for on-water boat storage.</p> <p>The Study shows that for the Inner West Sydney Marina catchment area, registration of vessels 8.0m and above in length grew from 3,942 vessels in 2006 to 4,357 vessels in 2009. This is a total of 415 vessels mostly requiring on-water storage. Based on this average 3-year growth pattern it is reasonably forecast that vessel registrations will be approximately:</p> <ul style="list-style-type: none"> • June 2020 5,466 • June 2030 6,848 • June 2040 8,229 <p>Thus by June2020 a further 1,109 vessels are forecast to be registered to owners living in the Inner West Sydney Marina catchment most of which will create demand by the owners for modern marina berth storage – preferably within reasonable distance from the owners' residences.</p> <p>In the 10 years to June 2030 a further 1,382 vessels are anticipated to be registered to owners within the Inner West Sydney Marina catchment.</p> <p>Clearly demand for boat ownership is demonstrated and which brings with it the consequential demand for safe and secure on-water boat storage such as offered by a modern commercial marina at Kendall Bay.</p> <p>A 2010 study by NSW Maritime entitled "NSW Boat Ownership and Storage: Growth Forecasts to 2026" shows the projected increase in "larger vessels" in Sydney Harbour from 2009 to 2026. The "larger vessels" range used by NSW Maritime includes vessels over 6.0m in length.</p> <p>The NSW Maritime study shows the forecast growth in registered vessels for Sydney Harbour, from June 2009 to June 2026 to be:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>Year</u></th> <th><u>Registered Vessels</u></th> <th><u>Forecast Growth</u></th> </tr> </thead> <tbody> <tr> <td>• June 2009</td> <td>7,468</td> <td></td> </tr> <tr> <td>• June 2026</td> <td>8,891</td> <td>1,423 (Lower Base Scenario)</td> </tr> <tr> <td>• June 2026</td> <td>10,134</td> <td>2,666 (Higher Base Scenario)</td> </tr> </tbody> </table> <p>These growth forecasts by NSW Maritime are consistent with those of the Inner West Sydney Marina Demand Study.</p>	<u>Year</u>	<u>Registered Vessels</u>	<u>Forecast Growth</u>	• June 2009	7,468		• June 2026	8,891	1,423 (Lower Base Scenario)	• June 2026	10,134	2,666 (Higher Base Scenario)
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ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
11.5	The design of the marina would provide a substantial oversize ability for very large vessels; however the berth sizes are not yet determined.	1	The marina has been designed, laid out and dimensioned for the sizes of vessels specified in the EA and on the drawings. The sizes and numbers of boat have been determined based on the demand study. Any consent would limit the boat sizes to the hull lengths specified on the drawings.
11.6	If sailing craft are intended on the marina, there does not seem to be any rigging area allocated	1	The sailing craft which would be berthed in the marina would not require a rigging area.
11.7	The proposed jetty should be deleted	3	This is a matter for the Department of Planning in conjunction with Canada Bay Council and Sydney Ferries.
11.8	The project incorrectly extrapolates demand figures to justify its position. Commercial marinas carry large numbers of boats 'for sale' and 'boats for repair'. These numbers inflate the stated occupancy rates. The absence of 'sales and repairs' helps to explain the lower occupancy rates at existing private marinas. The applicant should be made to re-submit Occupancy figures nett of brokers and repairs leases. Over 78% of applications for a mooring are east of the Harbour Bridge indicating a very low desire for West Sydney storage.	1	<p>All marinas, commercial, club and residential, have vessels which are for sale from time to time irrespective of the marina having a resident broker. Many owners privately advertise their vessels for sale without using a broker, as can be observed by the publication Trade-A-Boat or web-site Boat Point. Whether or not a vessel is for sale it nevertheless requires on-water storage and thus the occupancy rates are valid. They clearly indicate the demand for marina berths.</p> <p>It should be noted that many owners sell their vessels to enable them to purchase another. Thus the demand for berthing does not change. Additionally on many occasions purchasers of vessels in a marina rent the same marina berth used by the vendor. Thus again the demand is constant.</p> <p>Boats held for repairs in commercial marinas are relatively few in number. Usually these vessels are moored at the older or smaller fixed wharf service marinas and those commercial boatsheds designed for boat repair services.</p> <p>It should be noted however that not all commercial marinas offer repair services. In Parramatta River for example, Birkenhead Point Marina and d'Albora Cabarita Point Marina do not have repair facilities yet both marinas retain very high occupancies throughout the year.</p> <p>Repair and maintenance services for vessels berthed at Inner West Sydney Marina on Parramatta River are readily available at River Quays Marina (adjoining Breakfast Point) Woolwich Marina, Sydney City Marina (Rozelle Bay), Gladesville Bridge Marina, and Sydney Ship Repair (Goat Island). There is another commercial repair facility at Meadowbank.</p> <p>The reason that there can sometimes be lower occupancy rates at "Residential Marinas" is exactly due to the terms and conditions which often restrict the use of a marina berth to only the owner of a residence. For example, the marina at Pulpit Point has 112 marina berths. Each berth is attached to one of the 100 or so Pulpit point residences and is not available for use by non-residents. Clearly however, not everyone wishes to own a vessel and thus the occupancy at the residential marina at Pulpit Point is less than 50%.</p> <p>The "high rate" area east of Sydney Harbour Bridge covers an area of waterways far greater than that in the "Medium Rate" area to the west of the Bridge. East of the Bridge takes in the Eastern Suburbs, the North Shore (Neutral Bay to Manly) and all of Middle Harbour (Balmoral to Killarney). These waterfront areas have a greater population than the waterfront areas west of the Bridge. They also have the highest density in Sydney for waterfront dwellings. It is thus to be expected that the demand for moorings in these areas would be greater than that west of the Bridge.</p> <p>The summary of NSW and Sydney Harbour Moorings, on page 20 of the Study, shows that for the 5-year period from June 2004 to June 2009, there has been no increase in the number of private mooring licences issued by NSW Maritime for Sydney Harbour. This is despite a growth in vessel registrations in NSW Maritime's Sydney Harbour Area of around 1,000 vessels in the same period.</p> <p>Reference to page 12 of the Study will show that NSW Maritime has a waiting list for 286 moorings west of Sydney Harbor Bridge. This is an increase of 55 moorings from 231 at September 2008. Of those 286 applicants for swing moorings, 193 are seeking moorings on the southern shoreline demonstrating a strong and unsatisfied demand for on-water boat storage on the southern shores west of Sydney Harbour.</p> <p>It should be noted here that owners of power vessels larger than 10 metres in length are generally reluctant to moor their vessels on swing moorings. As such they are unlikely to be a factor in the waiting list of 286 moorings at June 2009.</p> <p>Sydney Harbour vessel registrations have NOT decreased since 2004. In fact from June 2004 to June 2009, new registrations amounted to 946 vessels.</p> <p>This growth rate is however lower than the average growth rate for NSW for the same period.</p> <p>It is not unreasonable however to expect that if Sydney Harbour had adequate on-water vessel storage facilities then its rate of growth in boat registrations could be similar to the State average rate or even a higher than State average rate such as Newcastle and The Hunter Region has.</p> <p>The facts are:</p> <ul style="list-style-type: none"> All commercial and club marinas in Sydney Harbour are fully occupied for most of the year with many marinas having a waiting list for berths; Since the year 2000 (when some berths were introduced for the Sydney Olympics) to 2009, there has been virtually no new commercial marina berths introduced into Sydney Harbour; All NSW Maritime swing moorings in Sydney Harbour are occupied with a waiting list at June 2009 for moorings for 1,202 vessels; The number of NSW Maritime swing moorings in Sydney Harbour (around 4,850) has remained static for more than 15 years with no prospects for an increase in the number of moorings in Sydney Harbour

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE																					
			<p>These are the facts which dampen the desire for boat ownership in the Sydney Harbour area and consequently result in lower than State average growth rate in boat registrations.</p> <p>As stated in 7 above, the 2010 NSW Maritime report "NSW Boat Ownership and Storage: Growth Forecasts to 2026" states that "Sydney Harbour has the highest demand for on-water storage of any region in the state and very few avenues of expansion".</p>																					
11.9	Wind waves have been calculated using a 50 yr ARI as defined by AS3962 for the design of marinas. The standard provides no guidance for insitu capping. Given the consequences of the failure of the ISC it is considered more appropriate to assess the wave climate using at least a 100 year ARI or even a 200 year ARI.	1	<p>The design of the SPS is controlled by current speeds across the top of the SPS. The existing concept design allows for current speeds of 1.6 m/s and 2.2 m/s for the 300 and 400 thick blanket zones (Table 5.12).</p> <p>Maximum current speeds at the SPS induced by 50 year wind waves at Lowest Astronomical Tide would not exceed 0.83 m/s (From Fig 2 minimum depth over SPS at LAT 1m; refer also Table 5.6).</p> <p>Using the same wind wave hindcasting methodology described in Section 5.3.1, it is predicted that the 500 year Hs developed over the critical 1.5 km easterly fetch is 0.80 m with associated peak wave period of 2.4 s. This will induce a maximum horizontal current speed of less than 1.2 m/s at the bed in a water depth of 1 m (Stokes 2nd order calculation, CERC 1984, Section 7). Since the SPS is designed for minimum current speeds of 1.6 m/s, it follows that the concept design as proposed would readily accommodate wind wave induced loadings from in excess of a 500 year Average Recurrence Interval (ARI) wind wave event.</p>																					
11.10	Demand for Southern Shore moorings is lowest due to the inadequate protection offered from weather into southern shore Bays.	1	<p>This statement is incorrect. As stated above, there are 286 applications on the waiting list for moorings west of Sydney Harbour Bridge. Of that 286, there are 193 applications (67%) for moorings on the southern shores west of the Bridge.</p> <p>The June 2009 data from NSW Maritime shows the following examples of strong demand for moorings on exposed bays in Sydney Harbour's southern shores:-</p> <table border="1"> <thead> <tr> <th>Area</th> <th>Mooring Licences Issued</th> <th>Waiting List</th> </tr> </thead> <tbody> <tr> <td>Rushcutters Bay</td> <td>75</td> <td>56</td> </tr> <tr> <td>Double Bay</td> <td>203</td> <td>61</td> </tr> <tr> <td>Rose Bay</td> <td>138</td> <td>77</td> </tr> <tr> <td>Watsons Bay</td> <td>131</td> <td>65</td> </tr> <tr> <td>Birchgrove</td> <td>82</td> <td>31</td> </tr> <tr> <td>Drummoyne</td> <td>114</td> <td>18</td> </tr> </tbody> </table> <p>It is also noted from Table C, on page 12 of the Study, that of the 12 commercial marinas west of Sydney Harbour Bridge, with the exception of Woolwich Marina and Woodleys Marina, all are located on the southern shores the largest of which is Birkenhead Point Marina with 187 berths.</p>	Area	Mooring Licences Issued	Waiting List	Rushcutters Bay	75	56	Double Bay	203	61	Rose Bay	138	77	Watsons Bay	131	65	Birchgrove	82	31	Drummoyne	114	18
Area	Mooring Licences Issued	Waiting List																						
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11.11	About 80% of the moorings west of the Harbour Bridge are closer to the Harbour Bridge than Kendall Bay and hence more desirable as they have superior access to the Harbour and the ocean. Kendall Bay is West of the Harbour Bridge and on the Southern shoreline of the Parramatta River.	1	<p>To some boat owners there are many mooring locations in Sydney Harbour more desirable than Kendall Bay.</p> <p>Conversely Kendall Bay will be much more desirable to other boat owners than east Sydney Harbour as a consequence of their vessel mooring being relatively close to their residences.</p> <p>It should also be noted that many boat owners from regional NSW moor their vessels in Sydney Harbour at any location at which they can obtain a mooring.</p> <p>As stated in the Study, NSW Maritime has placed a ceiling on new moorings for Sydney Harbour and thus, with the continued forecast growth in boat ownership, the demand for on-water boat storage in Sydney Harbour can only be met by new berthing facilities such a Inner West Sydney Marina.</p> <p>There are also the moorings in Snails Bay, Birchgrove, Drummoyne, Gladesville, Five Dock Bay, Abbotsford, Hen and Chicken Bay, Cabarita, Majors Bay and Brays Bay as well as 10 marinas including the modern floating marinas of Birkenhead Point, Gladesville Bridge and d'Albora Cabarita Point.</p> <p>All of these locations (west of the Harbour Bridge and on the southern shores of Parramatta River) evidence strong demand for on-water boat storage.</p>																					
11.12	The latent demand calculations are based on a false premise. The actual latent demand is 2 not the 1,213 claimed.	1	<p>Why would the growth in boat ownership in the Sydney Harbour Area of NSW Maritime data be less than the overall average for the State of NSW?</p> <p>The answer is simply that on-water boat storage is just not available in Sydney Harbour to meet demand and as such is acting as a constraint to boat ownership. NSW Maritime is not issuing any new swing mooring licences. Additionally, there was little or no increase in marina berths in Sydney Harbour during the period of the Carr Government when a moratorium was imposed on marina development in Sydney Harbour.</p> <p>When commenting upon Sydney Harbour, the 2010 NSW Maritime report "NSW Boat Ownership and Storage: Growth Forecasts to 2026" states that "Sydney Harbour has the highest demand for on-water storage of any region in the state and very few avenues of expansion".</p> <p>The constraint to boat ownership in the Sydney Harbour Area is clearly due to lack of on-water storage for vessels and means that there is most likely to be a latent demand for boat ownership.</p> <p>To estimate what this "latent demand" might be, it is reasonable to use a comparison of known demand. In the case of the demand study for Inner West Sydney Marina,</p>																					

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
			<p>the average rate of growth in boat ownership for NSW as a whole over the 5 years (2004 to 2009) of 13.33% was adopted as a conservative growth rate.</p> <p>Reasonably the Newcastle and Hunter Region 5-year rate of growth of over 25% could have been adopted for the comparison. This would have resulted in a higher estimate of latent demand.</p>
11.13	The approximate "dead time" of travel from Kendall Bay to the Harbour Bridge will be about ½ hour for moderate speed vessels. This will prove a disincentive to boat owners.	1	<p>It is difficult to accept this opinion considering the existing on-water boat storage in the vicinity of Kendall Bay at June 2009 was for over 500 vessels as follows:</p> <ul style="list-style-type: none"> • Glades Bay 53 vessels • Morrison Bay 106 vessels • Kissing Point Bay 57 vessels • Meadowbank 20 vessels • Brays Bay 62 vessels • Majors Bay 20 vessels • Cabarita Point 14 vessels • Hen & Chicken Bay 69 vessels • Cabarita Point Marina 124 vessels
11.14	The proposal does not take account of the impact on demand if/when the Homebush Bay or the Berrys Bay marinas proceed.	1	<p>Extracts from the NSW Maritime's Homebush Bay West Master Plan document read:</p> <p>"Floating pontoons will be provided adjacent to the wet well and will provide berthing for a maximum of 50 boats. Berthing is provided only for short term use involved in operation of the dry stack facility, maintenance, refuelling and servicing activities and use associated with a boat brokerage.</p> <p>A day berthing structure will be provided within the Wentworth Point Parklands, within Homebush Bay. This facility will provide casual berthing for vessels utilising Wentworth Point Parkland and the maritime precinct".</p> <p>Consequently the 50 berths proposed for Homebush Bay are restricted to boat sales, repairs and servicing activities and for holding berths for the proposed dry-stack facility.</p> <p>The successful tenderer for the NSW Maritime site at Berrys Bay has not yet lodged any development application. The existing site, formerly operated as Woodleys Marina, has 40 fixed wharf type berths. The proposal by Meridien Marinas is to replace the old marina with a new floating marina with a capacity for 92 vessels.</p> <p>According to NSW Maritime's web-site, It is anticipated that Meridien will lodge its development application sometime in 2011 and that the new development will be operational by 2014.</p> <p>In the period 2010 to 2014 the 4-year growth in boat ownership and demand for berthing in Sydney Harbour will readily absorb the proposed increase of 52 berths at Berry Bay and thus will have little impact upon the demand for Inner West Sydney Marina.</p> <p>It is also noted that Woolwich Marina has recently increased its berths from 20 to 32 vessels. This was done by relinquishing some swing moorings and therefore has no impact upon the demand for on-water mooring.</p> <p>The road networks around Sydney Olympic Park were designed to accommodate transport of thousands of persons to major events at the Sydney Olympic Park and adjoining Sydney Showground.</p> <p>The marina at Kendall Bay will generate considerably less traffic movements per day than does the Breakfast Point IGA store in the Breakfast Point Market Place for which no upgrades to the road networks around Breakfast Point were required.</p> <p>The traffic in and around Breakfast Point has been discussed in the project Environmental Assessment.</p> <p>The question of the proposed NSW Maritime development of a marine precinct at Homebush Bay has been discussed at item 9 above. This is to be a marine service precinct in which the 50 proposed marina berths will not be available to meet general berthing demand from the community.</p>
12. ECONOMIC			
12.1	The value of dwellings in Breakfast Point will fall causing financial implications with the banks	5	<p>Since the approval of the Breakfast Point Masterplan 1999, a future marina has been disclosed to all purchasers within Breakfast Point by way of the disclosures in the Community Management Statement (which was disclosed in each contract for sale) and special conditions in the contract of sale.</p> <p>There have been over 1,200 properties sold at Breakfast Point, with the marina disclosure clauses in the contracts.</p> <p>If purchasers' did have substantive objections it is reasonable to assume that they assessed the pros and cons, and either decided not to purchase, or decided to go ahead with their purchase. For those who settled their purchase it is fair to say that they did not have a significant concern about the perceived "economic" implications, otherwise they would have sought to mitigate it or not proceed with their purchase.</p>

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12.2	The loss of views could impact on future sales of properties	1	View loss has been considered in the EA in the Visual Impact Assessment prepared by Richard Lamb and Associates.
13. AMENITY			
13.1	The quiet enjoyment and lifestyle of the residents and visitors of Breakfast Point now experience will be destroyed by the intrusion into the neighbourhood of a commercial activity seven days a week.	41	Ambient Surveys were conducted at Breakfast Point, Tennyson Point and Gladesville to determine existing ambient noise. These take into consideration the existing ('quiet nature') noise environment of the area. Operational design criteria were then set in accordance with the DECCW INP, based on the survey results. Operational scenarios were developed (which included boat engine noise and people talking etc) and assessed against the INP derived goals. Traffic noise (cars) was assessed against the DECCW's ECRTN. Compliance for operation was predicted for daytime, evening and night-time for the INP amenity and intrusive criteria. Traffic noise complies with the ECRTN. The sleep disturbance screening criteria indicated a potential for disturbance and this will be addressed in the Operational Management Plan and Statement of Commitments.
13.2	The close proximity of the marina to residential properties	20	The proximity of the marina and potential noise, visual and traffic impacts have been assessed and considered in the EA.
13.3	The large commercial marina will grossly affect our privacy and our security as our lawns end right at the edge of the current walkway.	1	Refer to comment at Item 13.2 A potential future marina was disclosed in all contracts for sale of properties at Breakfast Point.
13.4	Construction of a marina with a café on the doorstep of a residential area (no buffering effect of a road or land area) with associated noise created by the patrons and their guests at any time of the day or night. Construction of the marina will take place on private property	3	The proposed kiosk is to be located at the seaward end of the jetty, approximately 200m from the closest residence. The kiosk's hours of operation are 7.00 am to 6.00 pm seven days per week. In relation to access, refer to the response at Item 17.1.
13.5	Concerns regarding security and potential for people to walk across lawns and gardens and nears doors and windows which would then need to be locked.	1	There is already a well-utilised public foreshore walkway which exists between the private residential premises and the waterway area of the proposed marina.
14. PETITION AGAINST MARINA			
14.1	Petition 1 on behalf of owners of berths at Cabarita marina: reinstatement of the Groin structure a 'No Wash' zone; and/or a '4 Knot' zone in the immediate area of the marina.	8	This comment seems to relate to issues for Cabarita Marina, not the proposed Inner West Marina.
14.2	Petition 2 support of Mayors objections:	9	The issues raised in the Mayors objection are addressed adequately in this response table.
15. SUPPORT			
15.1	Will provide much needed facilities for boat owners including increasing number of imported vessels	13	Other commercial marinas in the vicinity (River Quays and Cabarita Marina) are at 100% and 94% occupancy (refer to the demand study in the EA, Volume 8, Appendix 11). Other commercial marinas near the Sydney CBD are between 88% and 100% occupancy. Having the regard for the demand for berths and the current occupancy levels the proposed marina at Kendall Bay will help satisfy the current and future demand for marina berths in Sydney Harbour.
15.2	Will enhance boating and foreshore access for all users	20	The marina jetty will allow enhanced experience along the waterfront at Breakfast Point. It will create a point of interest or an informal area for social gatherings which will enhance the sense of "community" in the locality. The general public will be provided with casual day berths to enhance their enjoyment of the Parramatta River and Sydney Harbour waterway.
15.3	The proposal incorporates a well accepted remediation system	3	The implementation of the proposed SPS will significantly reduce the risk of disturbance sediments in some 52,000m2 of the area covered by the RO, thus mitigating the release of identified contaminants into the water column which are currently being disturbed and would otherwise be allowed to be release into the water column.
15.4	The proposal has taken consideration of environmental, safety and public concerns	1	The EA has considered not only the environmental concerns of that part of Kendall Bay covered by the RO, but also navigational safety in and around the marina. The marina will provide benefit to the public and surrounding Community, not only by enhancing access to the waterfront and waterways, but also economically.
15.5	I will have no objection to the proposed marina if NSW Maritime imposes both a speed and wash restriction for the area between Meadowbank and the Gladesville Bridge	1	This is a matter for NSW Maritime.
15.6	When Breakfast Point first started a potential marina was the selling point.	8	Access to the harbour has been an integral part of the developer's vision for Breakfast Point which has included a waterfront activities precinct to allow residents of Breakfast Point and people of the Inner West greater access to the harbour via a proposed jetty and marina. This is reflected in the Masterplan design and the approvals of the Breakfast Point Masterplan 1999, 2002 and Concept Plan 2005. The proponent's intention to lodge an application for the approval of the construction of a marina in Kendall Bay has been disclosed to all purchasers within Breakfast Point by way of the disclosures in the Community Management Statement (which was disclosed in each contract for sale) and special conditions in each of the contracts of sale. There have been over 1,200 properties sold at Breakfast Point, with the marina disclosure clauses in the contracts. Many residents of Breakfast Point have bought into the development in anticipation that the marina may be built and that they may be able to enhance their lifestyle by being able to moor their boat in Kendall Bay and have direct access to the harbour..
15.7	I support the marina application at Breakfast Point	36	Refer above.

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15.8	The development represents operational, health and safety, and environmental best-practice and is aesthetically pleasing	5	Included in the EA is an OEMP (Volume 7, Appendix 10) and Marina Management Plan (Volume 10, Appendix 15). The marina will be managed and operated in accordance with these plans to ensure environmental benefit to Kendall Bay and the well being of the users of the marina and surrounding residents. The marina will be a point of interest on the waterfront walk and allow the public greater access to the Parramatta River and Sydney Harbour waterways.
15.9	The development will generate economic and employment opportunities	7	The marina will create employment in the area, not just by creating jobs for marina management and kiosk staff but also for other local businesses. As no major maintenance works will be allowed within the proposed marina you may expect local shipwright, sailmaking and maintenance businesses may benefit from the increased demand. Also local supermarkets, cafes and the like may benefit from the development.
15.10	The Marina will provide amenity of kiosk facilities over the water for the public to enjoy	8	Public access to the fixed jetty and the proposed kiosk may enhance the experience of the foreshore walk by allowing the public the ability to walk out onto the jetty, have a coffee or light snack and enjoy greater access to the harbour and its offerings.
15.11	The marina will provide social amenity and benefits to the local and wider communities	3	From the early days industrial activity has prevented public access to the harbour. The redevelopment of the Breakfast Point site predominately for residential purposes has brought great opportunity to change this. The people of the Inner West deserve recreational infrastructure, allowing access to the foreshore and the harbour, just like the rest of Sydney. Access to Sydney Harbour has been an integral part of the vision for Breakfast Point. The Masterplan 1999, 2002 includes waterfront activity area, including boating facilities, marina, waterfront walk etc.
15.12	The marina will add value to existing properties in the area	6	Breakfast Point Pty Ltd considers that a marina in Kendall Bay will provide additional facilities to the area that will enhance both financial value to surrounding residences and lifestyle.
15.13	The marina will add value and prestige to the Breakfast Point project and attract more people to live in the area	4	There have been over 1,200 properties sold at Breakfast Point, with the marina disclosure clauses in the contracts. Many residents of Breakfast Point have bought into the development in anticipation that the marina may be built and that they may be able to enhance their lifestyle by being able to moor their boat in Kendall Bay and have direct access to the Harbour
16. ECOLOGICAL			
16.1	There may be some potential impact during the construction and operational phases of the marina, in particular introducing non-indigenous species (both aquatic and terrestrial) such as vermin	7	The OEMP will be amended to contain guidelines for vessels which visit the marina from waters outside NSW. Such vessels will be required to report to the Marina Manager, who will undertake a risk assessment of the likelihood of introduced species.
16.2	During construction and operations, pollutants will resuspend and settle on top of the blanket with unknown impact on the aquatic environment	1	Any sediments that are suspended and re-settle will be the same as those that are currently on the seabed - hence there will be no change in impact to the aquatic environment. Any sediments that re-settle on top of the blanket will be dispersed within the first 12 months of operation of the marina. Impacts as described in Section 6 of the Sediment Management Report (AECOM, 16 October 2010) from those sediments on the environment will be negligible, and general conditions in terms of turbidity will be improved by orders of magnitude compared to present conditions.
16.3	The existing biota will be disturbed and probably killed, by the re-suspension of sediments, the increase in turbidity and the under water noise and vibrations by pile driving and construction vessels and marina operation. Food chains will be destroyed.	2	The assessment of impact on marine life acknowledged that bottom-dwelling organisms would be destroyed in the process of installing the geotextile fabric and armouring, and indicated that as cleaner, fine sediments accumulated over time in the spaces between the gravel armour, and new community would gradually develop on the sea bed (Section 4.3.1).
16.4	Spillages of sewage, fuels, motors and other oils and release of toxic anti-foul paints and will have an adverse impacts on the aquatic environment. No proper methods of enforcement are being suggested.	10	The Operational Environmental Management Plan can be amended to include further enforcement conditions if considered relevant. The marina will require an Environment Protection Licence (EPL) and will be subject to licensing and audits from DECCW.
16.5	No calculations have been made for the adverse impacts that shading from the marina will have on the marine environment	1	Shade calculations were not required because the impact assessment assumed that the few bottom-dwelling plants present would be destroyed as the geotextile blanket and armouring are installed. Species colonising the new bottom material would adapt to the available light conditions. The assessment also noted that the hard structures in the marina would provide surfaces on which algae would grow, in much the same manner as that observed in the nearby wharf piles at Cabarita Point.
16.6	Impact of the marina on marine life, moth species, amphibians and birdlife including noise from moored and moving boats	13	The assessment of impact on marine life included major components of the ecosystem present, including benthic (bottom-dwelling) organisms, fish, mobile fish and invertebrates, marine algae and plants and included assessment of potential impacts of noise (Section 4.3.4). The loss of benthic invertebrates under the SPS was described, as was the prediction that, over time benthic species would recolonise. Evidence from other marinas suggests that fish may be attracted to structures supporting the marina once they have developed marine growth on which fish can feed.
16.7	The stand of mangroves at the end of the bay already scoured out by the 2m wide stormwater drain, will be further impacted by boat wash	7	Moths are not considered marine organisms, and there are no marine amphibians. Impacts on bird life were assessed in separate specialist study. The floating marina will act as a breakwater against wind waves and boat generated waves, but not against the large proportion of wave energy associated with the movements of fast ferries. These waves simply pass under the floating marina. Based on marina usage advised by TLB (8/2/11) and wave energy calculation using Shore Protection Manual methods, GBAC assesses that craft from the marina will cause an increase in boat wave energy at the western shore, southern shore (mangrove zone) and eastern shore of <1%, <1% and <3% respectively. GBAC considers that the impact of these changes in boat wave energy at the shoreline of Kendall Bay to be small and not significant.
16.8	Research should be undertaken on the impact of resettlement of native birds along the foreshore before the current development is approved	1	The desktop assessment reviewed the potential avian impacts from the proposed development. The desktop review determined that this was not an important site for birds, nor was it likely to support significant populations of listed species, and therefore further dedicated studies were not warranted.
16.9	The proponent has not undertaken any localised studies with actual observations but has relied on some rudimentary sampling and desk studies. These studies are lacking and flora and fauna will be adversely impacted to a degree not suggested by the proponent. The desktop study by Aquenal did not result in the correct assemblage of bird species visiting the tidal mudflats in Kendall Bay. Three species of migratory birds visiting the mudflats are protected by Commonwealth legislation (EPBC Act) and this is not	2	The desktop review assessed relevant published information and databases. It is not clear in this comment which species are being referred to, however the database searches found that 13 Commonwealth listed and two State listed species could occur at or near the proposed development site. A further review of the Birds Australia survey location data determined that none were recorded within 1 km of the proposed development. The likely effect of the proposal on a range of species is discussed.

ISSUES	TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
<p>mentioned in the report. Two bird species visiting the mudflats are protected by NSW legislation but not mentioned in the report. Two others listed under the TSC Act are mentioned but not discussed further.</p> <p>16.10 The data provided in the report is insufficient to discuss the potential impact on birds. A proper field survey by an expert consultant needs to be carried out. Why did the applicant use Aquenal Pty Ltd as a consultant, given this consultant is based in Tasmania, has not visited the site and has no local knowledge of the area.</p>	2	<p>As the Aquenal report states, one of the aims of the desktop review was to determine whether a more detailed assessment of the potential impact to birds was required. Given that the desktop review revealed that the proposed development's location was not in an important site for birds, that there were no significant populations of priority species (those that are listed under relevant legislation) and that the area had undergone substantial modification from its natural state, significant impacts to avian species were unlikely and further assessments not warranted. As also stated in the report, all relevant databases were accessed and published bird survey data used to make this determination.</p>
<p>16.11 27 matters (17 impacts on aquatic diversity and 10 impacts on avian fauna) raised by Ann Goeth in the Breakfast Point Submission dated November 2010</p>	1	<p>17 comments relating to aquatic biodiversity</p> <p>1. The statement "Given that the organisms found by Cardno (2009) were generally not typical of the area and that there are extensive areas of these habitats in the estuary, these were not considered of significant ecological value" (page 71, vol.1) is not an adequate reflection of Cardno's findings. Tests of the statistical significance of the differences in numbers of infaunal taxa and animals are presented in Table 17 and tests of assemblages in Table 18 of the report on Aquatic Ecology Studies (see Appendix 4, vol. 3). It is considered good ecological practice to compare potential impact locations with multiple reference locations. The latter should be representative of the system as a whole and not affected by the disturbance of interest. None of the bays within the estuary are likely to have identical biotic and biotic conditions to the potential impact location and this is not a requirement of a reference location. Cardno acknowledges that greater survey effort may result in collection of more taxa, including threatened species, but points out that sampling effort is always limited by associated costs and timeframes. The sampling effort was greater in the proposed marina location than in the reference locations only with respect to infauna.</p> <p>2-4 The Remediation Order has been addressed in Section 2 of this table.</p> <p>3. Cardno discusses the potential impact of changes in the bioavailability of contaminants and the difficulties in predicting the scale of the impact (see Pages 16 and 17, volume 3).</p> <p>4. This matter has been addressed in Section 2 of this table.</p> <p>5. Cardno also suggested that boat owners be discouraged from <i>in-situ</i> cleaning of boat hulls that have been treated with copper paints and that they should be encouraged to switch to non-toxic anti-fouling paints (see pages vii and 22, vol.3).</p> <p>6. Cardno also suggested that a sewage pump- out facility should be located at the landward end of the jetty and that boat owners should be encouraged to remove oil from bilge water using bilge removal pads (see pages vii and 22, vol. 3).</p> <p>8. Cardno identified the possibility of accidental spillages from boats and suggested that they could be contained within floating booms and that spillages should be cleaned up as soon as possible (see pages vii and 22, vol. 3).</p> <p>9. Cardno also pointed out that the inadvertent spread of non-indigenous species could be reduced by prohibiting the cleaning of hulls and discharge of bilge water from boats moored at the marina and recommended that boat owners be encouraged to inspect their hulls, anchors, fishing gear and general boating equipment for pests (see pages viii and 23, vol.3).</p> <p>10. Cardno acknowledged that the installation of the geotextile blanket and basalt rock would result in loss of biota and pointed out the difficulties in predicting recolonisation (see page 14, vol. 3)</p> <p>11. Cardno pointed out that 28.9% of the total area of subtidal soft sediment within Kendall Bay would be lost as a result of the deployment of the geotextile blanket and that there are extensive areas of this habitat elsewhere in the estuarine section of the Parramatta River (see page 14, vol.3).</p> <p>12. Cardno pointed out that it has been estimated that the equivalent of about 1mm of fine sediment would be deposited in the mangrove habitat near the head of Kendall Bay (GbaCOASTAL (2009) (see page 16, vol. 3).</p> <p>13. No comment required.</p> <p>15-16. No comment required</p> <p>17. Cardno pointed out that beam trawling was also used in the sampling of epibenthic fauna in 1989 and 1996 and that differences in sampling gear and timing of surveys may have contributed to the dissimilarity in infaunal assemblages in 1996 and 2009 (see pages 5 and 25 of the Aquatic Ecology Studies report, respectively).</p>
<p>16.12 The issue of acid sulphate soils has not been dealt with sufficiently</p>	1	<p>Given that the works will not involve excavation of the sediments, acid sulphate soil management will not be an issue. It is noted that acid sulfate soils are generated when sediments are exposed to air.</p>
<p>16.13 The provision of novel habitat structures will not offset impacts on soft-bottom assemblages resulting from their introduction. Marine algae will be destroyed or overshadowed. The assessment did not account for seasonal changes of flora and fauna assemblages.</p>	1	<p>The assessment of impacts on marine habitats and biota specifically acknowledges that the provision of novel habitat will not offset the loss of soft-bottom assemblages (Section 4.4.2.2). Very few foliose marine algae exist in the footprint of the marina, probably due to high background turbidity in the area. New marina structures will provide more habitat for marine algae than currently exist at the site.</p> <p>Field investigations for the assessment did not include a seasonal comparison, however results were compared to similar samples taken from the same area in 1996, providing a longer-term analysis of the changes in marine communities through time (Section 3.4.2.5 Aquatic Ecology Studies Report).</p>
17. ACCESS		
<p>17.1 Marina users, visitors, managers, contractors and their servants or agents will have to traverse private property to gain access. The construction and operational plans incorrectly assume access over Community Association land.</p>	25	<p>The public are able to access the general area of the proposed marina due to the operation of: 1. the Open Access Ways forming part of the Community Property in the Breakfast Point Development (being Lot 1 DP 270347) (Land); and 2. the lease (Foreshore Lease) between the Council and Community Association DP 270347 over Council owned land (being Lot 501 DP 1052824) (Foreshore Lot); and 3, the Easement for Public Access registered on the Land. Further detail is provided by Corrs Chambers Westgarth lawyers in letter dated 11 February 2011 (a copy of this letter is included in Attachment 5)</p>
<p>17.2 Access and use of the foreshore walkway will be impeded during construction of marina and post development</p>	4	<p>All construction will be undertaken from the water. There will be a small area at the landward end of the jetty which will be temporarily barricaded but this will only extend say 3m landward of the seawall and will not impede public use of the foreshore.</p>
<p>17.3 Public access will not be increased via a coffee shop</p>	1	<p>Opportunities for the public to access the foreshore and waterways area are increased by:-</p> <ul style="list-style-type: none"> o the provision of pick up and drop off berths for the general boating public; o public access along the jetty (24/7) and throughout the marina (during normal business hours) <p>a kiosk and meeting place at the seaward end of the jetty for light refreshments.</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
17.4	The marina is located in the main waterway channel	1	The marina is located away from the main navigation channel along the Parramatta River. This is shown on drawing N01 in the EA and discussed in section 11.3 of the EA.
17.5	Public access to the waterway will be removed which contravenes the Sharing Sydney Harbour Policy	7	This statement is not correct.
17.6	The site is inaccessible and impractical for a commercial marina. The site is not easily accessible to the public from the landside nor are its dimensions adequate to meet the needs of the project or to avoid alienation of nearby public lands.	3	The EA discusses suitability of the site (including pedestrian and vehicular access, traffic generation and parking) and finds that the site is suitable for the proposed marina.
17.7	There is no road access and little land space to accommodate emergency needs and possible evacuations	7	The foreshore path way and seawall have been designed and constructed to accommodate ambulances and similar sized emergency vehicles suitable for evacuation. There will be fire hydrants at the landward end of the jetty and fire hose reels along each arm of the floating structure.
17.8	There should be a construction management plan	1	A Construction Management Plan has been provided in the EA - see Appendix 12.
17.9	The entrance to the marina be relocated to the southern end of Kendall Bay, off public land and away from residential development.	1	The location of the entrance to the marina is the closest point of access from the proposed car park and is considered the most appropriate point of access,
17.10	We request as Condition of Consent that public access to the jetty is restricted from 7am to 11pm daily	1	This is a matter for the Department of Planning. The proponent would accept this as a condition of any approval.
18. OTHER			
18.1	The proposal does not consider variants such as cultural, social, human geography, political perspectives and the whole environment	1	Section 75F(2) of the EP&A Act states:- <i>"When an application is made for the Minister's approval for a project, the Director-General is to prepare environmental assessment requirements having regard to any such relevant guidelines in respect of the project."</i> Section 75F(4) states:- <i>"In preparing the environmental assessment requirements, the Director-General is to consult relevant public authorities and have regard to the need for the requirements to assess any key issues raised by those public authorities."</i>
18.2	Lack of systemic methodology does not sufficiently manage the complexity of the proposal	1	The EA has adequately addressed the environmental assessment requirements contained in the DGRs. Section 75H of the EP&A Act provides:- <i>"After the environmental assessment has been accepted by the Director-General, the Director-General must, in accordance with any guidelines published by the Minister in the Gazette, make the environmental assessment publicly available for at least 30 days."</i> It is considered that the proposed methodology in the EA has adequately satisfied the DGRs and enabled the DG to publicly exhibit the EA.
18.3	Exhibition period is too short - need additional 3 months to consider/review documents	14	Refer to item 18.2 The EA was publicly exhibited for a period of 60 days. The public exhibition timeframe is a matter for the Department of Planning
18.4	The proposal offers no environmental benefit. Environmental impacts of the project cannot be suitably managed in particular contamination and remediation, aquatic flora, fauna and avian fauna, marina management plan, navigation, safety, hazards and risks	3	The environmental impacts of the proposal have been addressed in Section 11 of the EA and where relevant, appropriate mitigation measures have been recommended. These mitigation measures are carried through to the proponent's Statement of Commitments and form the basis of the Construction Management Plan and Operational Environmental Management Plan.
18.5	The proposal is an afterthought to the original vision and planning of Breakfast Point.	2	The marina formed an integral part of the of the developers original vision for Breakfast Point. The Breakfast Point Masterplans 1999 and 2002 and Concept Plan 2005 include for waterfront activities precinct and carparking for the marina Notwithstanding the above, the Breakfast Point Masterplan 2002 (D191/2002) was approved by the City of Canada Bay Council on 3 September 2002 and included approval of the "Silkstone Precinct", which proposed to accommodate a built element (of up to 5 storeys) and 100 public offstreet car parking spaces associated with a "future marina (subject to Waterways and Planning NSW Consent)." The Community Facilities projected in the 2002 plan included: Open Space and Recreation <i>Formal constructed open spaces and meeting places and recreation facilities are projected to be located in the Intensive Waterfront Area eg. Amphitheatre, market square associated with other waterfront activities, cafes, shops, commercial and land-based marina facilities. Subject to Waterways concurrence, waterfront skiff sailing and/or rowing facility is being considered on the waterfront in association with the Community Recreation Centre and a marina in association with the pier. The water based uses are beyond the master plan area.</i> <i>The master plan makes provision for the necessary land based support facilities eg parking and access for these facilities.</i>
18.6	The application should be deferred until after the next election	1	Therefore, whilst the water based uses were beyond the Masterplan area and subsequently the size and scale of any future marina was not detailed in the 2002 Masterplan, provision for the necessary land based support facilities was approved in the form of 100 car parking spaces expressly set aside for future marina car parking. This is a matter for the Department of Planning.
18.7	The previous studies are inadequate; conclusions drawn are inaccurate and therefore misleading and do not take into account those individuals who would be adversely affected.	1	It is not clear what the comment "previous studies" refers to.

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
18.8	The proposal does not consider alternative uses of Kendall Bay including the "do nothing" option	1	The "do nothing" option was considered at Section 9 of the EA.
18.9	Failure to address alternative areas for a marina	1	Expanding the existing marina (River Quays) at Mortlake was considered at Section 9 of the EA. The Owner of River Quays marina has informed the proponent that this marina will be decommissioned and developed for residential purposes.
18.10	The need to undertake a thorough scientific/technical/critical analysis of the Report	2	<p>Pursuant to section 23D(1)(b)(ii) and Schedule 3 of the Environmental Planning and Assessment Act 1979 and Part 16(B) of the Environmental Planning and Assessment Regulation 2000, the Minister for Planning has directed the Planning Assessment Commission to be constituted to assess the project application for the Kendall Bay Marina Project.</p> <p>The Commission comprises:</p> <ol style="list-style-type: none"> 1. Dr Neil Shepherd AM, chair 2. Mr John Court 3. Dr Graeme Batley <p>The Terms of Reference for the Commission are: To carry out a review of the Kendall Bay Marina Project and prepare a detailed Environmental Assessment report which advises on:</p> <ol style="list-style-type: none"> a) the suitability and long-term effectiveness of the proposed sediment protection system; b) the environmental impacts of the Project, and whether these impacts can be suitably managed or offset to ensure an acceptable level of environmental performance; and c) the issues raised in submissions; and <p>The Minister has also directed that public hearings be held for the project.</p>
18.11	Breakfast Point Pty Ltd have made significant donations to NSW Labor Party which can't be overlooked	1	We understand the hearings will commence on Wednesday 23 February 2011 at Concord Community Centre. A Political Donations Disclosure Statement was not required at the time of making the Part 3A Application. If required, any political donations will be disclosed.
18.12	The Environmental Assessment has not taken into account the residents of Breakfast Point.	1	Potential impacts on the residents of Breakfast Point including noise, visual, traffic and parking have been considered and assessed in the EA. The marina is disclosed in all contracts for sale of properties at Breakfast Point.
18.13	Developer employed an Environmental Auditor. Question of auditor's impartiality to the geotextile blanket	1	<p>The NSW site auditor scheme is administered by DECCW under Part 4 of the Contaminated Land Management Act 1997 (CLM Act). The scheme provides a pool of accredited 'site auditors' who can be engaged to review investigation, remediation and validation work conducted by contaminated land consultants. DECCW state:-</p> <p><i>"The aim of the scheme is to ensure the protection of the environment and human health through proper management of contaminated land, particularly during changes in land use. The scheme improves community access to competent technical advice on the investigation and remediation of contaminated land, and provides increased certainty in the 'sign-off' of contaminated land assessments and remediation.</i></p> <p><i>The assessment and remediation of contaminated sites is technically difficult because of the complex behaviour of chemicals in the environment and their myriad effects on ecosystems and human health. Expert review of a consultant's work helps to determine the reliance that can be placed on their assessment and/or remediation."</i></p> <p>Accredited site auditors can be engaged to independently review reports on assessment, remediation and validation actions to ensure that the consultant's methodology and interpretation of data are consistent with current regulations and guidelines endorsed by DECC</p>
18.14	What happened to the proposed Launch area?	1	Mr Andrew Kohlrusch is a site auditor accredited under the Contaminated Land Management Act 1997. The boat launching ramp and skiff considered in the Breakfast Point Masterplan 2002 is not included in the proposal due to the area being investigated by Jemena Pty Ltd for remediation.
18.15	The Environmental Assessment is incomplete and/or insufficient because it failed to consider/or sufficiently considered a range of issues and the conclusions are rejected (refer to Dr Pesce submission)	1	Refer to response at Item 18.2
18.16	The following claims in the Environmental Assessment are rejected: the proposal will make a positive contribution to the revitalisation of the bay; that environmental impacts are minimal and can be suitably managed and mitigated; the proposal is and promotes ecologically sustainable development, provides intergenerational equity and public benefits; and the project is justified based on demand.	1	The various specialist studies prepared to address the DGRs support these statements
18.17	The 2005 Concept Plan did not disclose a marina proposal and neither does the promotional and marketing material used by the proponent.	1	The Community Management Statement and the contracts for sale entered into between the developer and purchasers' contained disclosures regarding the wharf and the marina. The Community Management Statement has formed part of the contract for every property within the community scheme.
19. LEGAL			
19.1	Misdescription of the project site address (19-21 Tennyson Road). This occurred in MPA, NSW Maritime land owner's consent in the DG requirements and the EA.	2	Since the lodgement of the original 1999 Master Plan all development and project applications at Breakfast Point have been lodged and assessed using the site address being 19 – 21 Tennyson Road as this was the original address of the land now known as Breakfast Point.

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
19.2	NSW Maritime gave consent on 3 July 2008 to SK15B. This plan is different to the SK15B plan lodged with the Major Project application on 18 April 2007. The drawings show the Manager's office as extending over the seawall and land forming part of the Community Association parcel over which NSW Maritime has no authority.	2	Three drawings, SK15(G), SK16(C) and SK17(A) prepared by TLB Engineers were submitted to NSW Maritime seeking land owner's consent and approved on 3 July 2008. SK15(G) and SK16(C) show the managers office and the jetty up to the line of the seawall and not over it onto Community Association land. SK17(A) shows the jetty and managers office diagrammatically extending over the line of the seawall. The drawings submitted seeking Consent show the jetty up to the line of the seawall and not extending onto the Community Association Land. The development will not extend onto Community Association Land.
19.3	The marina encroaches onto private property and the marina users will use private property to get onto and off the marina. Drawing CMP03 shows the outer and inner boom/silt curtain fixed to temporary piles and attached to the Community Association seawall.	1	As noted above in section 5.2, the marina itself is not constructed on community property. The marina is constructed wholly within Kendall Bay (owned by Maritime Authority of NSW) and lot 53 (car park) and lot 55 (sea wall lot) which will be private property wholly owned by the marina operator. Any access required over community property or Council owned property is permitted by the Community Management Statement, easement for public access or under the provisions of the Foreshore Lease. The drawings will be amended to show the silt curtain and boom connected to temporary piles and anchor blocks at the seawall which do not apply load to the seawall and community land. The Construction Management Plan will be amended to reflect this amendment. With respect to access onto and off the marina, as noted above in section 5.4, marina users have the right as members of the public and visitors to the marina operator to access the marina over community property (lot 1 DP270347) and the Foreshore Lease Land (lot 501 DP1052824) given the open access ways and the provisions of the Foreshore Lease.
19.4	The application seeks to make use of open access ways and by doing so requires the consent of the Community Association. The public will lose confidence in the assessment system is approval is granted that allows a trespass onto land not owned by the proponent or NSW Maritime.	1	Consent of the Community Association is not required. To suggest otherwise would mean every visitor would have to seek consent. Under the Community Management Statement, Owners (being owners and occupiers of a lot), Occupiers (being lessees, licensees or other occupiers of a lot) and Permitted Persons (being a person on the community parcel with the express or implied consent of an Owner, Occupier, the Community Association or a subsidiary body) are entitled to use the open access ways. The proponent, as developer, is entitled to use the open access ways and other community property pursuant to the rights granted to it under the Community Management Statement (see section 5.9 above). Accordingly, the proponent, the marina owner, marina users and visitors have the right to use the open access ways to reach the general area of the marina.
19.5	The Community Association can impose restrictions on users and uses of Community Association property (Clause 17 of the CLM Act)	1	Noted- However, it is also noted that the Community Association has not sought to impose any restrictions in any way related to the marina proposal. The proponent understands that the intent of section 17 of the <i>Community Land Management Act</i> is to empower a community association to protect the essence or theme of the development and to restrict access to certain parts of community property for defined purposes. For example, to restrict community members from entering dangerous areas such as plant rooms. The intent is not to allow an association to restrict the movement of members of the association across lot 1 DP270347 (Community Property) simply because one group of people does not like what another group of people is lawfully doing.
19.6	By-law 91 "Foreshore Lot" - requires a change in the nature of the easement from public use to public and private commercial use and the consent of Council is required.	1	The marina is not being constructed on lot 501 DP1052824 (Foreshore Lot) and the Foreshore Lot itself is not being used for commercial purposes. As with the council roads through Concord and Mortlake, and the open access ways through Breakfast Point, the Foreshore Lot is only used for public access to cross from community property (lot 1 DP270347) (which is to the west of the Foreshore Lot) to the marina lot (lot 55) (which is to the east of the Foreshore Lot). Access rights for members of the Community Association and the public across the Foreshore Lot (including access across the land to and from any development or thing on the river side of the land) were approved by the City of Canada Bay Council in 2006 when it signed the lease for the Foreshore Lot. Accordingly, further consent of City of Canada Bay Council is not required in the present circumstances.
19.7	Lot 55 has an area of 145.9m2. It is 88.58m long with a width of 1.12m at its southern end and 2.11m at its northern end. Its average width is 1.65m. As such, Lot 55 is not capable of providing any practical ancillary storage or manoeuvring areas to the marina. This narrow lot to which the marina is attached is constrained by the foreshore walkway on its western side and the face of the seawall on its eastern side.	1	Please see the attached plan. Lot 55 adjoins lot 501 DP1052824 (Foreshore Lot) on the western side of Lot 55. Lot 55 is 88.58 meters long on its eastern boundary. The eastern boundary of lot 55 is the eastern face of the seawall. Lot 55 is a lot in stratum and has a depth of 1.5 meters down to the median high water line. The portion of the seawall comprising Lot 55 is private land owned by Breakfast Point Pty Limited and proposed to be transferred to the marina operator. This portion of the seawall is not owned by the Community Association, City of Canada Bay Council, NSW Maritime or any other statutory authority. Lot 55 is not proposed to be used for ancillary storage or maneuvering
20. HERITAGE			
20.1	The commercial marina will obstruct views from the heritage items listed in the Harbour REP (items 27, 28, 48, 49 and 50) and in turn, the views of the heritage items from Hunters Wharf, the houses north of Hunters Wharf and the apartments south of Hunters Wharf as built and to be built.	1	The proposed marina is consistent with the current outward views of these sites as well as the use of the Parramatta River as a means of transportation, sport and leisure. It is AECOM's opinion that the aesthetic significance of these items will not be adversely affected by the proposed marina.
20.2	The heritage conservation principles that underpin the Harbour REP are found in Clause 15 and have not been met (in particular subclause (a), (d) and (e))	1	AECOM assessment of the historic and Aboriginal heritage values of the proposed marina site and its relationship to existing historic and Aboriginal heritage items was conducted with due consideration to these core conservation principles.
20.3	There is no adequate consideration given to the historical and cultural characteristics of Kendall Bay and to its non-boat users; nor the "private" nature of the proposal. There is no proper regard to the historical and cultural record of the locality in particular the Aboriginal contact.	1	A detailed review of the European and/or Aboriginal history of the Kendall Bay area was outside of the scope of AECOM's assessment, which was commissioned in response to a requirement by the Director-General to address the heritage requirements of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005. It is AECOM's opinion that these requirements have been met.
21. PLANNING			

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
21.1	Clause 41 of the Harbour REP provides that development consent must not be granted over a strategic foreshore site unless there is a masterplan. The Regulation is silent about developments that are partly on a strategic site. A Masterplan should be prepared.	1	The land at Breakfast Point is identified in the <i>Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005</i> as a 'Strategic Foreshore Site.' Accordingly, development of the land at Breakfast Point is subject to the provisions of Clause 41 of the SREP. The Breakfast Point Masterplan 2002 and Concept Plan 2005, are the relevant Masterplans. Clause 41 does not apply to the waters of Kendall Bay.
21.2	The proposal does not meet the requirements of the Planning Principles for Harbour Catchment areas (in particular 13(a), (b), (c), (f) and (j))	1	<p>The implementation of the proposed Sediment Protection System will control and manage the mobilisation of contaminated sediments and improve the health of the aquatic environment which in turn has the ability to rehabilitate nearby wetlands.</p> <p>In relation to visual impacts, the development will be visible from the constructed western shoreline, foreshore walkway, medium to high density residential housing within Breakfast Point to the west and southwest on the former AGL industrial site and from the relatively natural southern shoreline consisting of intertidal beach and mangroves, Cabarita Park, Cabarita Rivercat Ferry Wharf and waters of Kendall Bay and Parramatta River.</p> <p>The Visual Impact Assessment prepared by Richard Lamb and Associates (refer Appendix 14.9 of the EA) defines the intrinsic scenic quality of the site and its surrounding context to be: <i>"...of a low to moderate rating."</i></p> <p>With regard to the greatest visual impacts of the Project, the Assessment concludes that in relation to the close range public and private domain viewing locations: <i>"...that there would be visual impacts in the range of medium, medium to high and high for close range public and private domain viewing locations which would be mostly due to the potential presence of the proposed marina in the foreground of the views from these viewing locations and the resultant change it would cause to the view compositions and visual character of those views....That impact is not considered to be such that the application ought to be refused."</i></p>
21.3	The project is not consistent with the aims and objectives of Zone W1. The proposal is directly inconsistent with the mandatory prohibitions in the W1 Zone eg tourist facilities, mooring pens, water based restaurants (otherwise called a kiosk).	1	<p>On statutory planning grounds, the Project is consistent with the Objectives of the W1 Maritime Waters zone in that the Project has demonstrated that <i>"...it is compatible with, and will not adversely affect the effective and efficient movement of, commercial shipping, public water transport and maritime industry operations"</i> and allows for <i>"equitable use of the waterway, including use by passive recreation craft."</i></p> <p>The proposed marina, kiosk, manager's office, amenities and associated facilities are defined as "commercial marina" and the ferry wharf as a "public water transport facility" (Clause 18). Both a commercial marina and public water transport facility are permissible with consent in the W1 Maritime Waters zone.</p>
21.4	The proposal does not satisfy the requirements of the EP&A Act s5 Aims and Objectives regarding the management and protection of the environment; promotes social, economic welfare and promote, protect the environment.	1	<p>It is considered that the proposal supports the Objects of the EP&A Act as follows:-</p> <ul style="list-style-type: none"> o The proposed SPS will control and manage the disturbance of contaminated sediments and assist in the rehabilitation and restoration of the nearby wetland; o The proposed development will maintain and improve public access to and along the foreshore and will improve public access to and from the waterways for recreational purposes; o The proposed development will promote equitable use of the waterway, including use by passive recreation craft; o The proposed development avoids conflict between the various uses in the waterways and along the foreshores; o the scale, form, design and siting of the development is consistent with the desired future character of the redeveloped former brownfield site ; o The cumulative impact of proposed development will not detract from the character of the waterways and adjoining foreshores; and
21.5	The proposal does not satisfy the requirements of the EP&A Act s79(1)(C) dealing with the "built" and "natural" environment. In particular with the impact arising from the architectural design of the apartments and houses along the foreshore and their proximity, the "bulk" attributable to the dimensions of the marina and its permanent nature. The site is not suitable for the purpose nor is it in the public interest and it lacks equity between boat users and non-boat users.	1	<p>The proposed development increases the number of boat storage facilities over the waterways responding to demonstrated demand for on-water boat storage</p> <p>Section 79C of the EP&A Act applies to Part 4 Development Assessment. This project has been declared a "Major Project" and is subject to the provisions and requirements of Part 3AA of the EP&A Act.</p> <p>Notwithstanding the above, the site is part of a former industrial site. The land component has undergone major brownfield redevelopment and now provides medium-high residential housing. The Project is a positive contribution to the revitalisation of Kendall Bay.</p>
22. CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)			
22.1	<p>Appendix 10 CEMP and OEMP prepared by AECOM dated 30/09/09 - Comments of Mr Rod Jeffery as contained in the Breakfast Point Resident Group submission dated 30 November 2010 (pages 66-80)</p> <p>CEMP</p> <p>1.2: Page 1.5 – Proponents own submission highlights the need to fully remediate the Bay. Covering the problem with the SPS does not eliminate the problem and does not permanently remediate the site. A basic question is why locate an intense boat movement Marina above such an environmentally sensitive area.</p> <p>1.2.1 Page 1.9 – some of the identified PAHs are classified as carcinogenic</p>	1	<p>Full remediation is not the intent of the proposal.</p> <p>Any remediation of sediments will be managed by Jemena under the direction of DECCW.</p> <p>The SPS is intended to prevent marina-related sediment impact in accordance with the DECCW Remediation Order. The navigation of the vessels using the marina will be managed such that they are maintained within the area of the SPS.</p> <p>Kendall Bay is a suitable location for a marina as it is a large area of open water with easy access to the main channel along the Parramatta river and located to satisfy the latent demand in western Sydney for marina berths.</p> <p>Noted. The proposed SPS addresses the objectives of the Remediation Order requirements.</p>

ISSUES	TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
<p>1.2.1 Page 2.1 – it is likely that further development of the area would increase the risk of harm and disturbance of the contaminants would mobilise contaminants and hence increase the risk of harm</p> <p>1.3 Page 2.9 – No definition of scale etc. Request copies of office and kiosk drawings.</p> <p>1.7 pg 4.1 – TLB must be on site during all construction activities to ensure compliance of CEMP, minimise risk, stop or hold work as necessary and act as a communication conduit with residents.</p> <p>1.7 Page 4.1 - 4.9 – No independent auditing of AECOM role.</p> <p>1.8 Page 6.1 – Obviously, contrary to the AECOM defined area limits. "management of the containment sediments must be beyond the footprint of the Marina and include the whole lease area (i.e., 57,000 vs. 20,000 m2) and adjacent potentially affected areas (e.g., Impractical as current proposal of around 20m unprotected. Bay floor deposits extending from seawall face)</p> <p>1.10 Page 6.9 – As major stakeholders on the impacts of non-compliance it follows that the Breakfast Point Residents Group and the BP Community Association should be promptly issued with revised CEMPs with any changes highlighted.</p> <p>2.3 Page 8.6 – 1. Monitoring of deeper water than "surface water" is necessary (e.g., especially just above Basalt layer")</p> <p>2. No conventional Quality Assurance (QA) "Stop" or "Hold" points are given for non compliant results (incredibly no "STOP" or "HOLD" points appear anywhere in the CEMP or OMP or CMP</p> <p>3. There is no reference to mandatory testing by National Association of Testing Authorities (NATA)</p> <p>3.1.1 Page 11.1 – Independent auditor "hands on" review is essential to ensure representative baseline data is recorded. Auditor must have authority to request/nominate further baseline testing. Additional monitoring also essential for below surface waters.</p> <p>3.1.2 Page 11.5 – Neither the AECOM words nor Figure F3 define that the silt curtains must extend to the Bay floor and seal at the floor level to be functional for their intended "containment" objective. No detailed section drawing or specification for this critical element is given. See attached extracts from USA paper "Silt Curtains as a Dredging Project Management Practice". AECOM are silent as to the environmental protection need to regularly inspect the silt curtains below water including confirmation of an effective floor seal.</p> <p>3.1.2 Page 11.9</p> <p>3.1.2.1 Page 12.1 – Drawing CMP03 (and others) show the outer and inner boom/silt curtain not only fixed to temporarily piles but also apparently to the existing Community Association seawall with notation "Fixing Point Above MHWM". See attached extracts from USA paper "Silt Curtains as a Dredging Project Management Practice". AECOM are silent as to the environmental protection need to regularly inspect the silt curtains below water including confirmation of an effective floor seal. "unauthorised use of others land and improvements"</p> <p>3.2.1 Page 13.2 – Both here and later in the CEMP there is no definition of the quality and grading of the Basalt rock.</p>		<p>The purpose of the SPS is to minimise and manage the disturbance of sediments in the marina area. The risk of harm within the marina area will be less than the surrounding uncapped sediments.</p> <p>Dimensioned drawings (DA100(C) and DA200(C) of the office and kiosk were included in the EA</p> <p>The proponent will ensure compliance with the CEMP and the appropriate personal will be on site during the construction of the marina and SPS.</p> <p>The Sediment Management Report, Sediment Investigation Report and CEMP all prepared by AECOM have been independently reviewed as part of the EA by a DECCW appointed auditor who will maintain an oversight role during implementation of the project.</p> <p>The CEMP will be amended to include the entire lease area (57,000m2)</p> <p>Any update or revision of the CEMP will be publicly available on the Department of Planning's website under the Major Project register.</p> <p>The CEMP allows for water sampling near river bed. The CEMP will be updated to include wording that is more specific to sampling above basalt layer. The CEMP will also include "Stop" and "Hold" points if no- compliant results are detected. All analytical testing will be undertaken by a NATA accredited laboratory and the CEMP will be amended to reflect this.</p> <p>The CEMP will be updated to include wording on auditing the process by independent auditor. The auditor will also have authority to request/nominate further baseline testing, as required.</p> <p>The silt curtains will be constructed following successful designs used for major contaminated sediment remediation projects eg Homebush Bay and the Hunter River Remediation Project. It is noted that no sediment dredging is proposed for this project, therefore such design are very conservative in the context of the placement of the SPS.</p> <p>The CEMP (Section 4.1) stipulates that <i>"the boom and silt curtain below the water will be inspected fortnightly by a diver, or more often if the condition of the boom and/or curtain is considered to have deteriorated, and in particular after an extreme storm event or extreme wave event....the underwater inspection will include a visual assessment of the drape of the curtain on the bed"</i>.</p> <p>Refer to Table 5.3 in GBAC report for further detail on boat waves.</p> <p>The current proposal includes some connections to Community Land.</p> <p>The drawings will be amended to show the silt curtain and boom connected to temporary piles and anchor blocks at the seawall which do not apply load to the seawall and community land. The Construction Management Plan will be amended to reflect this amendment.</p> <p>GBAC agrees that a clear specification is required for the basalt rock given its 100 year design life and its placement in estuarine environment. This is usually developed as part of the detailed design, and included in the Technical Specification for the works. Based on coastal engineering applications for basalt, GBAC would expect that the</p>

ISSUES	TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
<p>The longevity of the Basalt in this marine environment surely must be proven to be well in excess of 100 years. It is essential that rock/Basalt quality and durability tests are defined and then proven to comply by a NATA registered laboratory and further control to company by a NATA registered laboratory and further control testing be done progressively during construction. Independent or audit testing to that by quarry should be mandatory. A "hold" on all related activities should occur if a non-compliance is revealed.</p> <p>3.2.1 Page 13.6 – There is no reference to prior cleaning of the Bay floor to remove all obstructive and sharp objects which of course could damage the SPS. No investigation for this likely possibility and no contingency plan are documented by AECOM.</p> <p>3.2.1 Page 13.7 – There is no specification of the minimum insitu density of the Basalt, how it will be tested and how layer thickness will be tested.</p> <p>3.2.1 Page 14.1 – An ineffective floor seal will be created with an irregular Basalt layer which has only been dumped by the excavator. Furthermore the inner curtain will be dragged across the unprotected floor sediments and undoubtedly stir/release them into the water.</p> <p>3.2.2 Page 14.4 – No reference is given in 3.2.2 or elsewhere as to the methodology of withdrawing at least 13 temporary piles. Their removal will withdraw/suck up the contaminated sediments. A critical element or consideration of the CEMP has been omitted by AECOM</p> <p>3.2.3 Page 14.9 – See above</p> <p>3.3.2 Page 15.1 – Again no "stop" or "hold" QA demand for non-compliance (typical omission throughout the AECOM report)</p> <p>4.0 Page 17.1 – No immediate non compliance action. No contingency plan.</p> <p>4.2 Page 18.1 – Again no "stop" or "hold" points for non compliance. No contingency plan.</p> <p>Again no requirement for sampling to NATA endorsed procedures and testing in a NATA laboratory. Also no consideration of a CEMP plan for potential fresh water concentration in Kendall Bay south of Marina curtain due to two major stormwater pipe outlets to there and partial damming due to Marina silt curtain. (e.g. silt curtain can block with silt deposits). No consideration of this issue or monitoring of its potentially damaging effects to environment.</p> <p>5.3 Page 23.2 – The noise levels exceed those specified in the Heggies Report 10-5800-R1 dated 23 July 2009.</p> <p>5.3 Page 23.3 – Regarding "site entry requirements" The report is silent as the what or who will define those requirements.</p> <p>Table 5 Page 25 – No reference is given to land based deliveries or materials or work etc. This is an obvious Environmental Consideration and is omitted. A dilapidation report of all potentially affected Community Infrastructure is essential before works commence (e.g., all trafficked roads, waterfront walkway, seawall, etc, etc)</p> <p>6.0 Page 27.1, 7.1 Page 29.1 – No specific reference is made to environmental impacts on the adjacent residential areas except for dust and noise. No reference to traffic impacts, hindrance to public access areas OH&S etc. No direct link/action plan/response times regarding residents</p>		<p>specification for the basalt would include minimum rock density (nominally 2.6 t/m3) and minimum olivine content (nominally 10% by volume). All testing would be undertaken by a NATA registered laboratory. The rock shape would also be specified as rough and angular, and within specified elongation limits.</p> <p>The CEMP to be amended to include surveying of riverbed in advance of SPS placement for obstructions and sharp objects.</p> <p>The porosity of the SPS for concept design has been assumed as 60%. If the rock is rough and angular, then in GBAC's experience there is no need to be specifying and insitu density other than to require that when placed the rocks are wedged and locked together such that they are not free to move without disturbing adjacent rocks, and that there are no free rocks on the surface of the completed apron layer. The layer thickness will rely on pre-construction and post-construction hydrographic survey with suitable vertical tolerance without compromising minimum thickness requirements.</p> <p>The silt curtains will be constructed following successful designs used for major contaminated sediment remediation projects eg Homebush Bay and the Hunter River Remediation Project. It is noted that no sediment dredging is proposed for this project, therefore such design are very conservative in the context of the placement of the SPS.</p> <p>The CEMP will be amended to include the methodology for removal of the temporary piles.</p> <p>It is noted that visual monitoring and water quality testing during extraction of numerous piles during the demolition of the former AGL Coal loader wharf indicated that no significant water quality impacts were detected.</p> <p>Refer above.</p> <p>The CEMP will be amended to include a contingency plan for immediate action for non compliance.</p> <p>The CEMP will be amended to include contingency plan for immediate action for non compliance.</p> <p>The CEMP will be amended to include "Stop and "hold" points for non compliance. All testing will be conducted by a NATA accredited laboratory.</p> <p>The CEMP (Section 4.1) stipulates that "the boom and silt curtain below the water will be inspected fortnightly by a diver, or more often if the condition of the boom and/or curtain is considered to have deteriorated, and in particular after an extreme storm event or extreme wave event".</p> <p>In relation to construction noise the CEMP will be amended to align with the objectives of the DECCW Interim Construction Noise Guidelines of 2009.</p> <p>Any construction contract will include a Traffic Management Plan which defines access and site entry requirements.</p> <p>A Dilapidation Report could be prepared before construction commences. This could be a condition of any Project Approval.</p> <p>The CEMP will be amended to include notification of construction activities to the Breakfast Point Association stratas and relevant stakeholders and will give reference to a complaints handling process similar to that currently employed at Breakfast Point.</p>

ISSUES	TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
<p>complaints. No issuing action reports to residents for relevant complaints.</p> <p>7.1 Page 29.1 – No critical "stop" or "hold" points for major environmental non compliances or catastrophes. TLB as project Manager should be on site full time to immediately react to non-conformances</p> <p>7.3 Page 30.2 – Detention period of 3 years far too low for a project of substantial environmental risks. This may offer an offender an escape from legal liability given the slow speed of litigation. Dismisses possible future litigation essentials.</p> <p>8.0 Page 31.1 – Any audit of creditability should be done by a party of independent to the Contractor (e.g., at least by AECOM but desirably by another party given the many omissions in the CELM).</p> <p>10.1 Page 35.2 – The exclusion zone needs precise defining. It should not include any Community owned or managed land. The site is on / above water and the exclusion zone should be limited to the water area only.</p> <p>10.4 Page 36.7 – The specification of "designated area" is required.</p> <p>10.4 Page 40.4 – Definition of "barricaded area" location is necessary. It cannot be on Community owned land without the necessary (but unlikely) approval. No discussion regarding such approval for any land based activity (other than car parking) is referenced in the AECOM report. Activities related to the Marina site have no given right to use community land except where directly owned such as the proposed Car Park lot.</p> <p>12.6 Page 47.2 – This implies proposed works on Community Association land without any disclosure of what works, without notification whatsoever all without any Community approval. It is others private land in Community ownership that is involved.</p> <p>13.8 Page 52.6 – If a resident complaint occurs then (unless there is a track record of unfounded complaint from the individual) same day noise monitoring should be completed by an independent party e.g. HEGGIES and an immediate "stop that noise source" occur if there is a non compliance.</p> <p>13.10 Page 53.3 – There is no recognition of mangrove or ecological damage to water life if an excessively fresh water environment is created by the 3 major storm water discharges to the south end of Kendall Bay where the Marina silt curtain may create a salt/fresh water separation environment.</p> <p>Dwg CMP00 Page 65 – Neither of the reference drawings is included in any of the reports in Volume 7 and 8. The building layout etc is essential to assess and consider environmental impacts especially for the operation of the Marina. The building drawings and proposed staff levels are essential to assess the minimum car park requirements.</p> <p>Dwg CMP02 Page 67 – The SPS needs to extend to MHWM as reported by AECOM (reference 1.2.1 of Volume 7). The most critical zone for containments protection is omitted from the SPS design. This is a major environmental issue. The near shore zone is impacted by tidal variations, wave action, undoubtedly man movement (kayaks, small sailing vessels etc will use that area etc) and disturbance of floor bed is highly likely yet no protection provided. The URS environmental/contamination report to Jemena for Kendall Bay Remediation of "hot spots" (e.g., Dwg DA10) particularly highlight areas around the shore line (e.g., at end of old wharf) and elsewhere and hence the shoreline and close by is a very high risk area. AECOM have not</p>		<p>The CEMP will be amended to include "Stop and "hold" points for non compliance.</p> <p>The proponent considers that the period stated in the CEMP "for a minimum of three years from the date of completion of the project" is sufficient</p> <p>The Contractor's implementation of the CEMP will be audited by AECOM and the accredited site auditor.</p> <p>The exclusion zone does not include any Community Land.</p> <p>The CEMP will be amended to include a description of "designated area".</p> <p>The contractor will prepare a Construction Management Plan which will include drawings which specify the designated areas for site amenities. All construction activities (including any on Community Land) will be undertaken in accordance with the relevant terms and conditions of the Community Management Statement.</p> <p>All construction activities (including any on Community Land) will be undertaken in accordance with the relevant terms and conditions of the Community Management Statement.</p> <p>In relation to noise complaints the CEMP will be amended to align with the objectives of the DECCW Interim Construction Noise Guidelines of 2009.</p> <p>The silt curtain will not affect the movement of fresh water discharge from the stormwater outlets. The fresh/salt water separation environment will not change significantly when the silt curtain is implemented.</p> <p>The drawings of the Manager's office, Kiosk and associated facilities were included in the EA (Volume 2, Drawing Nos DA100C, DA200C prepared by Rose Architecture)</p> <p>The EA demonstrates significantly reduced levels to negligible levels of disturbance of sediments after the installation of the SPS. Presently ferry traffic results in the disturbance of approximately 15, 500 m3 of sediment over the footprint of the proposed blanket, or in the order of 18,600 tonnes of sediment per year of 2,200 kg of PAH contaminants (refer to Sediment Management Plan). Disturbance of sediments in the area between the blanket and seawall will continue to be dominated by ferry traffic. An estimated 450 tonnes of sediment disturbed per year, which equates to a reduction in resuspension from 2,200 kg of PAHs at present to 35 kg per year, once the blanket is in place. This is a significant improvement on current conditions in Kendall Bay, as ferry disturbance is reduced considerably, and any parallel disturbance by marina vessels is minor by comparison.</p>

ISSUES		TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
	recognised this as a hazard		
	Appendix C - Again no reference to a "stop work" or "hold" reaction if a non conformance occurs.		CEMP will be amended to include "Stop Work" and "Hold" reaction if non compliance occurs.
OPERATIONAL ENVIRONMENTAL MANAAGMENT PLAN (OEMP)			
	1.3.1 Page 2 – Dwg DA-01 and D10 show a wide strip from west edge of SPS (often in 20-25m width range) and the MWHM with no SPS. This is potentially high disturbance zone due to wave action. Also one can daily view Rivercat ferry induced waves roll down the foreshore from Breakfast Point, north of the proposed marina well south of the marina; also high winds affect the area together with tidal variations and proposed use of area for Kayaks, small vessels etc. (with almost certain falls and foot movement on sediments). The D.A. Vol. 6 report by GBAC confirm very high current speeds due to propeller action where the water is shallower (e.g. table 5.7) Further the URS contamination report identified the Hot Spots or contamination concentrations near the MWHM. Frequency remediation by removal were such as at the shore end of the non demolished wharf.		With the marina in place the effect of wind waves and most vessel generated waves, with the exception of the high speed ferries, will be attenuated by the marina and will be less than without the marina in place. The EA demonstrates significantly reduced levels to negligible levels of disturbance of sediments after the installation of the SPS. Presently ferry traffic results in the disturbance of approximately 15, 500 m3 of sediment over the footprint of the proposed blanket, or in the order of 18,600 tonnes of sediment per year of 2,200 kg of PAH contaminants (refer to Sediment Management Plan). Disturbance of sediments in the area between the blanket and seawall will continue to be dominated by ferry traffic. An estimated 450 tonnes of sediment disturbed per year, which equates to a reduction in resuspension from 2,200 kg of PAHs at present to 35 kg per year, once the blanket is in place. This is a significant improvement on current conditions in Kendall Bay, as ferry disturbance is reduced considerably, and any parallel disturbance by marina vessels is minor by comparison.
	1.3.1 Page 2 – Drawing DA01 refers to the kiosk etc. Dwg 100/Prelim 02A and Managers Office etc. Dwg 180/Prelim 03A (both by Rose Architectural Design		OEMP to be amended to include these drawings.
	1.3.1 Page 2.1 – The design life referred to is for the geotextile itself i.e. In isolation, as advised by the manufacturer or its agent. It is not a guarantee or warranty that the SPS i.e. Sediment Protection System of Elcomax 1200R overlaid by 300/400mm Basalt will fulfil its function of 100% containment of the floor contaminants. Such a guarantee needs to be endorsed by an unqualified guarantee by the designer of the SPS system and it the assurance of adequate Professional Indemnity which specifically covers the SPS application. The PI cover by be \$50, \$100, \$200 million? to cover the catastrophe of a failure of the SPS to contain the contaminants.		The relevant environment assessments support the proposed SPS. We are not aware of this requirement for an unqualified guarantee for any other Major Project Application. This is a matter for the DoP and DECCW.
	1.3.1 Page 2.1 – As discussed in our comments in the CEMP the long term (100 year? 200 year? Or more) durability of the Basalt needs proving by comprehensive NATA endorsed testing. For those who do not know, the Sydney project Quarries which were the major hard stone/blue stone/ quarry stone provider for Sydney's development throughout the 20th Century used "Dolerite" which is a comparable rock to "Basalt". The quarries ran out of appropriate rock due to similar looking but very much marginal quality Dolerite which rapidly broke down/degraded (i.e., within a few years) when used for engineering applications. Visual inspection by suitable experts could not necessarily identify the poor quality rock, it required a suite of chemical and other durability tests yet no such tests are proposed or defined nor considered for the Basalt Armour Layer. Also the section 1.3.1 wording says "graded basalt rock". No specification of the grading (i.e., particle size distribution is given). From a civil or geotechnical engineering aspect the definition of the necessary grading is essential.		GBAC agrees that a clear specification is required for the basalt rock given its 100 year design life and its placement in estuarine environment. This is usually developed as part of the detailed design, and included in the Technical Specification for the works. Based on coastal engineering applications for basalt, GBAC would expect that the specification for the basalt would include minimum rock density (nominally 2.6 t/m3) and minimum olivine content (nominally 10% by volume). All testing would be undertaken by a NATA registered laboratory. The rock shape would also be specified as rough and angular, and within specified elongation limits. The grading of the rock comprising the SPS would be specified as part of the detailed design. This grading would conform with the recommendations of the US Army Corp of Engineers as outlined in Hydraulic Design Criteria Sheet 712-1(Revised 9-70)
	The above discussed testing requirements are most conventional in civil and geotechnical engineering. For example an extensive and rigid set of tests is required by all competent road authorities (e.g., Councils, RTA etc) for road pavement layer materials. Such requirements also specify that all testing must be by independent NATA registered laboratories.		As part of the quality assurance for the project the characteristics if the basalt rock to be used in the project would be tested by NATA accredited laboratories for compliance with the project specification. Basalt which did not satisfy the specification would be rejected and not used. As is usual quality assurance documents will be available for inspection during the work, and on completion will be submitted to the relevant authorities .

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<p>1.5 Page29 – We agree with the quoted objective but claim that AECOM OEMP fails this objective in a number of ways. For example in Table 1 they define responsibility of a vessel owner but do not include a total ban on the use of anchors. Note the CEMP no anchors to be used by vessels during construction. This requirement is logical as anchors potentially destroy the functioning of the SPS. Apart from the OEMP omission of an operational demand that the marina users must never use anchors within the marina lease and the larger nominated contaminated area such a demand is impractical as:</p> <ul style="list-style-type: none"> - The boat crew may not know of the requirement - Visiting boats certainly would not know of the demand. - It cannot be realistically enforced/policed - If vessel motors fail or in high winds or if vessels are congested (e.g., waiting for entry/exit) there is an almost certainty that anchors would be used - To eliminate the use of anchors in critical circumstances raises major OH&S risks. <p>In reality anchors will be used and the SPS integrity put at serious risk on such occasions.</p>		<p>The use of anchors will not be permitted. This will be stated in the marina rules and on signage place on the marina. The OEMP will be amended to include for appropriate signage and instruction by the Marina Operator. The restriction on anchor usage is provided in Section 3.13 of the OEMP.</p> <p>Should an anchor be dropped in the unlikely event of an extreme OHS emergency then the procedure outlined in item 3.13 of the OEMP will be implemented. It is considered most unlikely that significant damage would occur to the SPS arising from anchors associated with marina craft.</p>
<p>1.6 Page 3.5 Table 1 – The use of the wording, regular monitoring, here and for many other issues is open to misinterpretation and/or abuse. An OEMP must specify that the maximum intervals that regular monitoring for as long as the marina is in operation (100 years-200 years??) and specify how it must be done. In the case of the SPS it would have to include diver inspections amongst other methods. A rigid inspection protocol must be defined. It is irresponsible to leave the decision to the builder or the proponent or the operator.</p>		<p>The OEMP to be amended to clearly define inspection protocol of SPS integrity.</p>
<p>1.7 Page 49 – The OEMP clearly fails this criterion especially with the lack of recognition of potential damage to the SPS by anchors plus the SPS not extending to the MHWM.</p>		<p>The restriction on anchor usage is provided in Section 3.13 of the OEMP. However, the OEMP will be amended to introduce the risk of anchor usage and potential damage to SPS earlier in the OEMP.</p> <p>The SPS is not proposed to be extended to the MHWM.</p>
<p>3.6 Page 11.5 – The AECOM wording only refers to boat maintenance/repair aspects. It neglects to consider or address the risk of land pollution due to numerous persons and golf buggies transiting the car park on community land and along the public waterfront walkway. In addition to the issue of alienation of public land. In addition to the issue of alienation of public land the risk of land pollution is obvious yet no control or regular clean up measures are considered or specified in the OEMP.</p>		<p>Apart from general rubbish (paper wrappers or accidentally spilled containers from people moving to and from the marina), it is not clear what other land pollution is being suggested. The type of "land pollution" would be cleaned up as part of the management of the marina.</p>
<p>3.7 Page 12.1 – The wording indicates the storage of such pollutants is acceptable (we submit this should be banned by the OEMP). In the alternative, if they must be stored then there is no marina drawing showing the bunded area with a roof in the DA application.</p>		<p>Should the storage of hazardous materials be required by the marina operations then they will be placed in appropriate containers in a bunded and roofed area. Drawing DA 02 will be updated to show a suitable area.</p>
<p>3.8 Page 12.9 – These types of waste bins and indeed waste bins for boat usage should be placed on the marina arms and not the public access main wharf. Indeed, all such bins should be 20 or 30m minimum from the seawall to prevent/limit improper use by land based persons and particularly to have waste storage with related dumping noise smell etc. well away from the Hunter Wharf residences</p>		<p>The Project Application Drawings will be amended to show appropriate locations for storage of bins.</p>
<p>3.8 Page 12.9 – Specific definition of location off bins is required. The seawall alignment is unacceptable as the Waterfront Walkway is dedicated for pedestrians and cycles. "Pick up on a weekly basis" means bins will be moved across Walkway regularly (OH&S risks!!) plus the pick up point (not defined) will cause excessive noise concentration very close to residences, without any OEMP consideration of this environmental issue. Also due to bins containing fish, food waste etc, it is necessary to remove waste almost daily to minimise smell, vermin and health problems. The regular</p>		<p>OEMP will be amended to ensure that solid waste bins are appropriately located to minimise impact to the residence. The Project Application Drawings will be amended to show appropriate locations for storage of bins.</p> <p>Section 11.11 of the EA addresses Waste Management. The management of waste remains as outlined at Section 11.11 with the exception of the deletion of "transferred by small vehicle" and replaced with "removed by wheelie bins."</p>

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waste bin movement for over 200m along public walkways is a major and alienation of public space.		
3.9 Page 13.5 – Any resident currently has 24 hour access to the police/and or council ranger for 'offensive noise'. The Marina operator should provide the same rapid noise complaint response as it is a 24hr facility		<p>The Marina Management Plan (Appendix 15, Volume 10) sets out strict guidelines for behaviour for marina berth holders. Complaints may be notified to the marina operator who will take follow up action in accordance with the Marina Management Plan.</p> <p>The jetty is accessible 24/7 for the public, emergency services and police to take action as necessary to deal with antisocial behaviour in accordance with current legislation.</p>
3.10 Page 13.7 – This proposal enforces concentration of Marina Vessel movement with obvious queuing/waiting because of numbers and resultant obstruction to adjacent Rivercat ferry regular pathway (OH&S, risks, delays to public passengers, disruption of Sydney Ferry timetables etc). Also the proposal causes extreme concentration of vessel movement to local SPS cross over point with no addition SPS design consideration for potential erosion of edge sediments etc.		<p>The marina has been designed to ensure that there is minimal impact on the scheduled ferry timetables. This is outlined in the EA Volume 1, section 11.3.2.</p> <p>The SPS design has been designed to extend beyond the Remediation Order area to enable for boat access. At any time there will be normally one vessel approaching or departing the marina. The areas nominated for approach and departure are in the deeper water where propeller wash effects are least. The edge detail has been developed with 500mm thick rock armour to account for the possibility of greater use.</p> <p>GBAC calculations show if applied thrust from a fast ferry is limited to 7% of the installed engine power (373 kW per Z drive), then the existing concept will accommodate the ferry prop wash. If applied thrust is raised to 18%, then the blanket where crossed by the ferry would need to incorporate a 400 mm thick design. If raised to 30%, then a 500 mm thick design would be needed. The controlling case for bed protection with the fast ferry is expected to be at higher tides when jets from the twin drive can coalesce at the bed. (The assessment developed here adopts 10 degree horiz and vert angles for jet dispersion and assumes a existing (pre SPS) bed level of RL-4m AHD). If existing bed level crossed by the future ferry is lower than RL-4, then the % thrusts from the ferry that can be tolerated will increase. Given the water depths that are potentially tracked by the fast ferries and their expected operating regimes through Kendall Bay, the outer eastern and northern edges of the SPS could be locally thickened to accommodate the propeller wash from fast ferries without compromising minimum required water depths within the marina. The effects of wave wash from the fast ferries is readily accommodated by the SPS concept design.</p>
3.11.1 pg 14.1 – The allowance of cleaning and maintenance will inevitably result in related materials entering the water. This is unacceptable as a general statement but in this environment much of the containments and refuse will almost certainly be transported to the Mangroves and beach end of Kendall Bay. Regular cleaning of flotsam and jetsam from the Mangroves is currently necessary and completed by "Waterways" and local residents but a further source of such materials is acceptable. Hence boat cleaning and most forms of boat maintenance at the Marina should be banned. In the alternative if they were to be approved then a Condition of Consent should be that the Marina Operator cleans up the Mangrove and southern bay Beach etc area on a 1 or 2 weekly basis or as more frequently required by monitoring (by others than the Marina Operator) and with adjacent residents having an input as to acceptable frequency of cleanups.		<p>The cleaning of vessels will be undertaken in accordance with the requirements of the EPA and best practice. Only fresh water wash down will be permitted with the use of biodegradable soaps which will be specified by the Marina. All contractors who clean vessels will be inducted by the Marina Manager prior to being allowed to clean a vessel. Their performance will be monitored and those who do not comply with the OEMP will not be allowed to clean vessels at the marina. Flotsam and jetsam come from numerous sources both water based and land based. The marina will have garbage containers with lids and will be managed to eliminate rubbish from the marina falling in the water and finding its way to the southern end of Kendall Bay. All requirements of the marina, including waste collection and disposal will be set out in the Marina Rules which will be signed and agreed to by all owners who moor their boats in the marina.</p>
3.12 pg 14.9 – The guidelines are sensible but who will clean up or enforce guidelines. A minimum requirement should be that a dedicated cleaner employed by the Marina Operator cleans all rubble, refuse, water etc each morning and evening. The cleaning should also include the section of Waterfront Walkway fronting the Marina lease extent and other marina user generated refuse (which may extend around the residences etc, etc)		<p>Marina operation staff will maintain in accordance with 3.12 of the OEMP.</p>
3.13 pg 15.3 – The OEMP for the first time makes some reference to the use of anchors etc. However no discussion or solution is given to the anchor risks we have raised in 1.5, page 2.19 discussions above.		<p>The use of anchors will not be permitted. This will be stated in the marina rules and on signage placed on the marina. The OEMP will be amended to include for appropriate signage and instruction by the Marina Operator. The restriction on anchor usage is provided in Section 3.13 of the OEMP.</p> <p>Should an anchor be dropped in the unlikely event of an extreme OHS emergency or by accident then the procedure outlined in item 3.13 of the OEMP will be implemented. It is considered most unlikely that significant damage would occur to the SPS arising from anchors associated with marina craft.</p>
3.14 pg 15.6 – Some motherhood or "wish list" issues are itemised in first three bullet points but description of how to meet these "wish lists" items is not given. AECOM fail to recognise that the OEMP is a "PLAN" not a wish list of items that may or may not be considered and implemented by undefined means.		<p>The resource efficiency opportunities will be incorporated in the detail design phase. The OEMP will then be amended to show how the items in the list will be met.</p>
3.15 pg 15.9 - The OEMP is absolutely correct in considering the possible need to decommission. If its decommissioning is due to financial failure of the venture or the need to remediate the sediment below the Marina there is no proposed cost security safeguard to the Breakfast Point residents, the tax payers of NSW or the NSW Government. The only prudent means of minimising this risk		<p>This is a matter for NSW Maritime, the DoP and DECCW.</p>

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<p>would be a monetary bond or security placed by the Proponent/Marina Operator with the NSW Government. The amount is for others to decide but obviously must be many \$ millions. Possibly a review of the need for an continued monetary security could occur if excellent performance of the SPS was confirmed by regular monitory over say a decade or more.</p>		
<p>4.1 pg 17.1 - OEMP criteria inspections are without doubt required by the proposal of "Quarterly Inspections" is very slack or unrealistic. Surely for many operational OEMP criteria there should be daily inspections while others such as the SPS condition could be more widespread. The OEMP "plan" should schedule the frequency for all environmental or other monitoring inspections rather than leave it to "trust the undefined third party"</p>		<p>The proponent considers quarterly auditing of the OEMP is reasonable in conjunction with ongoing management inspections by the operator.</p>
<p>4.2, pg 17.8 - The SPS is to the writer's knowledge an unproven/untested below water contamination containment method for the condition of shallow water tidal variations and the concentration of boats above. The proponent has been unable to example one similar contamination containment SPS where a marina boat concentration occurs above it. The SPS failure would be catastrophic in the context of continuing the operation of the Marina and worse regarding the environment. The proposed yearly inspections for the first five years are inadequate and irresponsible in the writer's opinion: at least 3 or 4 monthly inspections up till Marina is fully operational for a minimum of 12 months or so would be prudent. Possibly some adjustment could be made by progressive review if excellent performance as always confirmed. Regarding the AECOM proposed yearly SPS inspections if say progressive deterioration at higher risk locations had commenced at 1 month into any yearly inspection gap then it would be negligent and irrational to wait a further 11 months to discover that problem. A driver's inspection is only a visual inspection but as the Elcomax 1200R is advised as allowing sediment to migrate through its "pore" or "opening" size there is no OEMP monitoring method to assess this defect. Note the contaminants are not necessarily visible to a diver so another means of regular monitoring is essential.</p>		<p>The OEMP will be amended to show an increase in the frequency of inspections to quarterly basis for the first 12 months of operation followed by annual inspections for the following 5 years. After 6 years of operation a review of the performance of the SPS will be undertaken and a revised monitoring regime proposed if require. This will be done in consultation with the Site Auditor.</p>
<p>6.2 pg 21.3 – The OEMP is void of detail regarding this section, e.g., it says "Fire fighting equipment to be appropriately placed within the Marina". The obvious deficiencies are what equipment? At what locations or centres? What training? What regular validation? Without this basic information it is impossible to complete even a preliminary assessment of adequacy of the "Fire Fighting equipment and related response to events". The writers investigation of guidance as to Marina Fire Fighting Equipment found the NSW Fire Brigades do not have a detailed guideline document while the AS give little guidance. However the Queensland Fire and Rescue Service have a detailed "Guideline for Fire Safety Systems in Marinas" and the BPRG proposes that this should be the minimum standard for the proposed Marina. The Queensland proposals indicate the likely need for closely land based improvements and facilities which would be an alienation of the public space of the foreshore walkway. A similar lack of detail exists for "spill kits to be appropriate for the Operation"</p>		<p>Fire fighting equipment has been designed in accordance with AS3962 Guidelines for the design of marinas. Refer Volume 2, drawing DA 05- Marina Services plan. The OEMP includes for:</p> <ul style="list-style-type: none"> • Clear signs will be on display outlining spill clean-up procedures and emergency contact numbers; • Fire fighting equipment to be appropriately placed within the Marina; • Spill kits to be appropriate for the operation and kept stock with relevant absorbent and clean-up materials • the type of fire equipment and spill kits, training requirements and auditing.
<p>6.3.1 pg 22.3 – The wording implies that "hydraulic fluids, lubricants or fuel" may be transported across the land. This is unacceptable as such supplies possibly should be available at the Marina but delivered only to it by water transport. This is a major OH&S and "alienation of public space" issue that should be clarified and defined to allow the</p>		<p>The OEMP outlines and emergency response should hazardous or dangerous good, including hydraulic fluids, lubricants or fuels will be transported by land to the Marina. It does not contemplate that this will be a regular occurrence.</p>

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Breakfast Point residents to assess and respond. It is evident that volatile fluids are expected by AECOM to be regularly transported through the close by community area (sometimes within 4m)		
6.4 pg 22.1 – This claim of "repaired immediately" is in total conflict with Clause 4.2 which proposes only yearly inspections. It is obvious that from above water level it would be most difficult and probably impossible to know if damage to SPS occurred. Even diver inspection would be difficult due to the geotextile overlay of Basalt on sediment (which may occur after the damage event); the diver would have to be specifically trained and satisfy an independent auditor as to his competency. If say the damage was due to a large vessel anchor drag it may not be seen or known by the Marina Operator so he is unaware of the "hot spot" or risk area and hence the OEMP claim of "Damage to SPS will be repaired immediately" is nonsense (unless virtually weekly inspections occur)		This section of the OEMP relates to emergency procedures should an anchor or such a large item be dropped overboard which may potentially damage the SPS. It does not relate to the inspection regime.
7.2 pg 25.3 – The weak link in the proposed system is that many or all of the complaints or non compliances will be directed at the Marina Operator. Hence he has a conflict of interest and a possible incentive not to record or to inaccurately record issues. A means to reduce this risk is for the register to be a public accessible document in the Marina Managers office (and on a web site) so that any party reporting a complaint or non compliance can check its correct recording together with the accuracy of reporting as to remedial action. If the public are not satisfied then they should have a direct access to the overall responsible person in the NSW maritime. (How else can NSW Maritime know of unrecorded or favourably recorded issues???). Further as the marina will be a privately owned facility on public water this further reinforces the need to rapidly communicate to NSW Maritime as to any form of non compliance.		The approach is appropriate. The final mechanism for ensuring that the Community is aware of the steps taken by the Marina operator to rectify non compliance will be agreed with the relevant Authorities.
8.0 pg 27.1 – The words in this section clearly indicate that the AECOM, OEMP (as contained in Volume 7 of the DA Application) is the proposed final OEMP document but later audits during the marina operation may lead to modification of the OEMP. Hence the many critical comments in this review especially related to the common OEMP "absence of precise contingency plans" is not even considered by AECOM. Hence where we have notated "FDR, FMR" i.e., "Further details required for meaning full response or CDGR - Conflict with Director Generals Requirements" is most justified		The OEMP is a "living" document which will be updated from time to time to reflect the experiences at the site and to cover any omission found during site auditing of the OEMP.
pg 142 – 144 – This policy clearly allows sanding, scraping etc in preparation for painting. It is certain paint and dust flakes will enter the water. The concentration of 172 berths ensures substantial contamination from this cause. We propose such maintenance work should be banned at the Marina (e.g., go to River quays maintenance area 600m away) Also the policy is inadequate and reckless in not banning the use of anchors in the marina lease area or indeed within the whole area defined by the remediation order		No major maintenance or refurbishment activities will be allowed to be undertaken within the marina. Should this be required for any vessel then they are to be removed from the Marina for repair/maintenance at an appropriate facility designed for such work". The use of anchors will not be permitted. This will be stated in the marina rules and on signage place on the marina. The OEMP will be amended to include for appropriate signage and instruction by the Marina Operator. The restriction on anchor usage is provided in Section 3.13 of the OEMP.
Appendix C – The OEMP drawings show no provided bunded areas. One would expect these say 20 or 39m along all arms to encourage use rather than risk fuel and chemicals stored on boats!!		Should the storage of hazardous materials be required by the marina operations then they will be placed in appropriate containers in a bunded and roofed area. Drawing DA 02 will be updated to show a suitable area.
Appendix E – This register should be a public accessible document 24 hours per day as the facility is open 24 hours per day. Otherwise there is no Quality Assurance/Management Plan that a lodged complaint has been recorded/acted. The only parties who can meaningfully audit the Register is each of the complainant parties (if they		Item 7.2 of the OEMP provides an appropriate process for dealing with, recording and responding to complaints.

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22.2	1	
2.3 pg 3.5 - It is irresponsible for the critical quality (i.e., the testing) of the Basalt to be determined by the Developer, Marina Builder or quarry supplier. The conflicts of interest are obvious. Conventional civil engineering has the designer specify the necessary rock quality and durability tests, the frequency of tests and the need that testing be done by an independent NATA laboratory. The CMP fails to address any of these aspects		The technical specification for the SPS to be developed as part of the detailed design would include basalt rock material acceptance requirements - this is normal practice. This specification would involve NATA registered laboratory testing for basalt density and olivine content.
Appendix 12 - The A. Mathur et al paper is old (1993) which is unusual as we suspect Elcomax 1200R possibly did not exist at that date. However the paper quotes "the blanket.. Designs life of 100 years..." It is also correct that Geofabrics Australia in Appendix 12 claim a "design life of greater than 100 years when submerged in saline water below a rock cover. Polyester is resistant to biological and hydrocarbon attack". However the first question is whether 100 years is adequate; does the State Government or its agencies then accept it will accept the responsibility/bill for remediation after 100 years?? There is no warranty by Geofabrics Australia that the SPS will fully contain the contaminants for 100 years (Contaminants can pass through the void or pore size of Elcomax 1200R)!! Note the comments on polyester resistance appear to neglect the conclusions of the technical paper in Appendix 12. At page 1.9 it states ".. whereas polyester geotextiles show limited resistance to strong acids and alkalis" also "In contract to polyester, polypropylene fibres are made up on non-polar hydrocarbon chains which are relatively inert to chemical attack". We also note that most of the Mathur et al testing are for 26 weeks duration maximum which is well short (much less than 1%) of the required design life of Elcomax 1200R or the SPS system, but we say from the provided technical papers there is reason for doubt. Most particularly the guarantee or warranty should not be given or accepted from the product vendor (i.e., Geofabrics Australia) but should be provided by an established independent expert with appropriate PI insurance cover. The guarantee should be for the longevity of the whole SPS design. The writers' note the second Appendix 12 paper by GW Davis is dated 1986 which is again questioned in terms of current knowledge and the first date of Elcomax 1200R production. Again we hold that the guarantee/warranty must be by a current independent geotextile expert. Note the Davis paper under "Alkaline Resistance" states "in contrast to excellent acid resistance, polyester has somewhat limited resistance to alkaline as shown in Table6". The writer notes that in a recent (Nov 2010) advertisement by Geofabrics they public the results of a recent study carried out by Parsons Brickenoff on Published data for Geotextiles Commercially Available in Australia. The results advise for "BIDIM" brand supplied by Geofabrics Australia 46% of results 0-25% below published typical data. There was no specific reference to Elcomax 1200R but the results for Geofabrics (and more so, other suppliers who were tested) clearly indicate considerable doubts as to Vendor Published Information		GBAC can advise that a non-woven needle punched geotextile of lesser grade than that proposed for Kendall Bay was within the last 12 months accepted by Sydney Ports and placed under some 30,000 m2 of scour apron at the new container and tug berths for the Port Botany Expansion project. The design life for the scour apron at Port Botany is 100 years. The design of the apron at Port Botany recognises that the geotextile would not be replaced as part of the maintenance and repair strategy for the port. The application of Elcomax 1200R in respect of hydrodynamic and rock overburden loads at Kendall Bay would readily meet the strength and durability requirements considered and accepted at Port Botany. However, GBAC understands that the bed covered by the scour apron at Port Botany is not contaminated so other related chemical affects on geotextile durability need to be considered. These are being addressed separately by Geofabrics Pty Ltd for BBPL.
2.3 pg 3.6 - The writers fully endorse this proposal but there is a distinct risk the statement CMP may not be followed. We recommend that it be spelt out as a Condition of Consent and large signs quoting the same words be fixed in		Noted

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the proposed marina car park and at front of the Marina site when first entered from the land. This is a paramount issue regarding the protection of the environment OH&S of the public (pedestrians and cyclists) who regularly traffic the Waterfront Walkway. Access to the fixed wharf frontage should be secured and materials or equipment etc be prevented access by full time vetting. There should be a documented meaningful penalty for non compliance regarding this issue.		
2.4 pg 3.7 – There is a major omission of no reference to construction of stormwater pipes, and outlets/pit connections to Community stormwater drains. These are obviously required!		A stormwater concept plan for the marina carpark will be included in the Preferred Project Report. The proponent has the right to connect to the Community stormwater system under the terms and conditions of the Community Management Statement.
2.4 pg 4.3 – This methodology has the risk that along the edges of the Elcomax 1200R it is likely that there will be disturbance of the sediment.. This is possible as the sediments are described in reports as ""very soft" etc however there is the omission of no objective Geotechnical insitu strength testing. If a bucket full of basalt were dumped on the edge of the mat it is highly likely a local bearing capacity failure would occur in the unprotected sediment contaminants thrust into the water and migrate away.		A trial placement will be undertaken onsite to refine placement techniques so that the specified rock armour thickness is achieved and to minimise the risk of accidentally larger than specified quantities of rock armour being placed on the geotextile. The basalt shall be placed such that any localised higher than expected load is distributed throughout the geotextile to adjacent areas. A geotechnical assessment has been undertaken and determined that the settlement of the clays under the 100mm thick layer of sediment will be 5mm (refer to letter from Douglas Partners included in the EA as Appendix F to gbaCOASTAL report entitled Estuary Hydrodynamics and Physical Sedimentary Environment). The effect of an accidental higher than specified quantity of basalt on the bed is minimal. The effects of the placement of basalt on the bed and the release of contaminants have been assessed in the EA and in responses to other comments.
2.4 pg 4.8 – There is no CMP reference to or consideration of the most environmentally critical piling aspect which is the withdrawal of at least 13 proposed temporary piles (ie, 4 proposed for barge mooring and 9 for boom/silt curtain fixing). The withdrawal will lift sediment into the water above by both adhesion to the withdrawn pile and by suction. This unacceptable environmental impact also was not considered in the ECMP. It is a major omission and a major environmental risk and causes serious questions as to the competency of the ECMP or CMP.		The temporary piles will be removed in the same manner as applied during the demolition of the coal loading wharf. The piles will be removed using purpose built pile pulling equipment on a barge. Each pile was removed at a controlled slow rate to minimise sediment disturbance. The suction effect during pile removal prevented the release of sediments into the environment. These works were also conducted under the RO. The CEMP will be amended to include details on the pile removal process.
2.4 pg 5.8 – The contractor vehicles need not park on the Community Streets at any time. The current proponent (Breakfast Point Pty Ltd) parking provision for numerous buildings constructed in the past 7 years were to nominate and use their undeveloped sites for construction vehicle car parks. There are still many such sites available and this method should be adopted		Noted.
3.1 pg 6.9 – Again no consideration of the need to construct stormwater pipes etc in Community land		The PPR will include a stormwater concept plan for the carpark development lot. The connection of the carpark stormwater disposal system to the Breakfast Point stormwater system is allowed under the CMS.
5 pg 10.8 – The effective functioning of the two silt curtains demands that they have an effective cut off down to the SPS and hence they must seal at the variable and irregular floor level. The CMP and ECMP both provide no detail or section or description as to how this critical seal is achieved. To leave that decision to the contractor (and without any definitive guidelines) is most remiss and raises credibility questions. See attached extracts from USA paper "Silt Curtains as a Dredging Project Management Practice". This paper highlights the limitations of silt curtains. Note also that AECOM are silent as to the environmental protection need to regularly inspect the silt curtains below water including confirmation of an effective floor seal.		The silt curtains will be constructed following successful designs used for major contaminated sediment remediation projects eg Homebush Bay and the Hunter River Remediation Project. It is noted that no sediment dredging is proposed for this project, therefore such design are very conservative in the context of the placement of the SPS. The CEMP (Section 4.1) stipulates that <i>"the boom and silt curtain below the water will be inspected fortnightly by a diver, or more often if the condition of the boom and/or curtain is considered to have deteriorated, and in particular after an extreme storm event or extreme wave event....the underwater inspection will include a visual assessment of the drape of the curtain on the bed"</i> .
Appendix 12 (CMP01) – The top left corner of the drawing shows a large (about 70m) "Openable Section of Silt Curtain" and "Access Path for Barges, Construction vessels and Floating Structures." This proposed opening of the silt curtain to allow vessel access compromises or negates the objective of the curtain which is to contain the contaminated silt and sediment and prevent it passing through the curtain. There would be numerous openings of the curtain for vessel access as all materials and equipment are to arrive and depart by water. Furthermore for around half of each day		The openable section of the silt curtain is east of the area which is the subject of the Remediation order. The opening of the access could be timed to occur on a rising tide. Turbidity will be monitored inside and outside of the silt curtain and the silt curtain will only be opened when turbidity levels are acceptable.

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<p>there is an outrunning tide and hence water flow (and suspended silt and sediment and potentially contaminants) will flow into the open River. Hence at the very least no opening of the silt curtain should be permitted during an out flowing tide. Due to the frequent construction and materials supply vessel movement, wind etc one cannot logically see the open curtain functioning as a "containment curtain". In essence it will essentially act as an escape mechanism especially during outflowing tide.</p>		
<p>Appendix 12 (CMP01) – Drawing CMP01 shows 9 numbered "TP" which refers to "Temporary Piles" which together with the 4 minimum Temporary mooring piles for the Barge require extraction/withdrawal with the pull out adherence and suction of the contaminant sediment. The CMP and ECMP is silent regarding this major environmental hazard.</p>		<p>The temporary piles will be removed in the same manner as applied during the demolition of the coal loading wharf. The piles will be removed using purpose built pile pulling equipment on a barge. Each pile was removed at a controlled slow rate to minimise sediment disturbance. The suction effect during pile removal prevented the release of sediments into the environment. These works were also conducted under the RO. The CEMP will be amended to include details on the pile removal process.</p>
<p>Appendix 12 (CMP01) – The north west and south west ends of the silt curtain are shown as "Fixing Point Above MHWM". This would require fixing to land owned by and the responsibility of others (being the Breakfast Point Community Association). Their permission has not been sought to the writers' knowledge. Further even if it were approved a substantial security deposit for potential damage due to damage by the fixing or other causes should be provided to the Community Association. Such details should be embedded in a CMP.</p>		<p>The current proposal includes some connections to Community Land.</p> <p>The drawings will be amended to show the silt curtain and boom connected to temporary piles and anchor blocks at the seawall which do not apply load to the seawall and community land. The Construction Management Plan will be amended to reflect this amendment.</p>
<p>Appendix 12 (CMP01) - Drawing CMP01 (and many others) show the western limit of the SPS as often 10 to 20 metres or more from the MHWM. This is a major omission in the SPS design as it does not protect/contain the contaminated sediment in one of the most critical zones because:</p> <ol style="list-style-type: none"> 1. The Jemena proposed remediation (see drawing DA10) is substantially concentrated within the first 10 to 20 metres on the waterside of the MHWM. This essential highlights that this area is a likely "hot spot area". 2. There is continuous tidal variation in this area. 3. There is common Rivercat ferry (and other) wash which runs down the seawall water line from Breakfast Point to the south many times each day (i.e., wash disturbance of sediments) 4. It is inevitable that during construction there will be vessels and equipment in this area (e.g., fixing silt curtains, for wharf construction etc) 5. This strip is the proposed for completed Marina access and usage of kayaks, small sailing vessels etc, etc and hence has an increased risk of humans walking in the near shore shallow water (due to spills, training juniors, etc) 6. It is inevitable that Marina boats or their small tenders, dinghies etc will use this area (e.g., safe area for children to operate small power boats) <p>In the writers' opinion (and as stated in the ECMP by AECOM) the SPS should extend to the MHWM. This would require major consideration of issues such as:</p> <ol style="list-style-type: none"> a) Removal of the substantial debris visible (at low tide) in the area b) Potential change to the line of the MHWM due to the SPS thickness c) Damage to the toe of the seawall due to construction activities. <p>None of the above issues have been considered in the CMP.</p>		<p>GBAC have confirmed that the zone between the seawall and the SPS blanket ranges in width from 15m to 20m and is approximately 300m long. Once the SPS and marina is in place, minimal change in wave energy will occur (<1% at the western shoreline). The only potential for sediment mobilisation in this zone (which includes the 'hot spot') would be due to the passing of fast ferries, which is no change to the current conditions.</p>
<p>Appendix 12 (CMP02) - Additional silt curtain "Fixing Point above MHWM" shown and refer to comments above. Also drawing CMP03 shows additional fixing points for inner silt curtain.</p>		<p>The drawings will be amended to show the silt curtain and boom connected to temporary piles and anchor blocks at the seawall which do not apply load to the seawall and community land. The Construction Management Plan will be amended to reflect this amendment.</p>

ISSUES	TOTAL NO. OF TIMES RAISED	COMMENT / RESPONSE
<p>Appendix 12 - The Ameratunha et al paper is interesting from a Geotechnical aspect and a valid and functional application was tested. However the critical point is that this Brisbane application has no relationship to the containment of sediments, it was for an engineering foundation strengthening purpose. Also they used a "stitched" joining of the geotextile rather than an overlap as proposed for the IWM.</p>		<p>The placement of the geotextile will involve lapped joints, probably between stitched panels. Lapped jointing of geotextile is conventional practice for geotextile placement. For the Kendall Bay marina, due consideration would need to be given to the lap width. The selection of lap width is a detailed design consideration which requires geotechnical engineering input.</p> <p>The Port of Brisbane Case Study is relevant for two reasons:- it is a wave environment which is significantly higher energy than the wave environment in Kendall Bay and; it is for the retention of sediments in a similar way as the geotextile is being used in Kendall Bay. This demonstrates the mechanical durability and the effectiveness in containing sediments. The lap-jointing of geotextile is conventional practice. Other case studies have been provided in Attachment 4 to the Response to Agencies' submission, most relevant is the San Diego Bay Case Study.</p>
<p>22.3</p> <p>David Crane & Assoc. Submission regarding Appendix 10 CEMP - No contingency plans for non Compliance events. The report provides no 'Stop' or 'Hold' points when Non Compliances occur. Proposal is only for monitoring & testing of surface water yet whole water column demands regular testing. No independent auditor verification of AECOM & no independent audit of contractors monitoring or testing. The CELM proposal includes unauthorised fixing of ends of silt curtain to others land. No proposal for independent NATA Basalt durability tests to confirm it is 'fit for purpose'.</p>	<p>1</p>	<p>The proposed CEMP contains a monitoring program for the SPS.</p> <p>The CEMP allows for water sampling near river bed. The CEMP will be updated to include wording that is more specific to sampling above basalt layer. The CEMP will also include "Stop" and "Hold" points if no- compliant results are detected. All analytical testing will be undertaken by a NATA accredited laboratory and the CEMP will be amended to reflect this.</p> <p>The CEMP has been reviewed by the site auditor and is being reviewed by the DECCW as to its adequacy.</p> <p>The drawings will be amended to show the silt curtain and boom connected to temporary piles and anchor blocks at the seawall which do not apply load to the seawall and community land. The Construction Management Plan will be amended to reflect this amendment.</p> <p>Based on coastal engineering applications for basalt, GBAC would expect that the specification for the basalt would include minimum rock density (nominally 2.6 t/m3) and minimum olivine content (nominally 10% by volume). All testing would be undertaken by a NATA registered laboratory. The rock shape would also be specified as rough and angular, and within specified elongation limits.</p>