

**Director-General's Environmental Assessment Requirements - How and Where Requirements have been addressed
(DGEAR for MP 06-0309, issued April 2008)**

Item	Environmental Assessment Requirement for Concept Plan	How Issues have been Addressed
GENERAL REQUIREMENTS:		
	CONCEPT PLAN APPLICATION	
1.	Executive summary	Each Volume includes an Executive Summary.
2.	An outline of the scope of the project, including:-	
	<ul style="list-style-type: none"> any development options 	<p>The 2004 zoning of the main part of the site for tourism and recreation uses was formulated after strategic planning on land use options. Kendall Grange masterplan also considered, albeit briefly, development options for the tourism zoned site (see Volume 1, Sections 1.3, 3.1, 6.19). Volume 1 Section 2.1 summarises regional and local context and site analysis and opportunities and constraints identified for the site, drawing from Part A of the Concept Plan document.</p> <p>The design evolution is summarised in the Concept Plan document (pg28-31). It presents how essential elements were identified, including creation of a destination, the mix of land uses including marina, and desirable broad urban design responses. It then illustrates how the project and design evolved, including what options were considered. It largely focuses on the land based built form outcomes.</p> <p>Development options associated with the marina size, siting, layout and design are outlined in Volume 2. Volume 2 generally outlines how marina demand study, coastal processes studies and other specialist inputs contributed to the marina layout and design options (see Section 2.5).</p>
	<ul style="list-style-type: none"> justification for the project taking into consideration any environmental impacts of the project, the suitability of the site and whether the project is in the public interest 	<p>Whilst all documents ultimately provide justification for the project taking into account site suitability and environmental impact, Volume 1 Section 8.0 provides a summary justification, and Volume 2 Section 2.5 and Section 8.0 provide justification for the marina component. It will be for the determining authority to determine whether the project is in the public interest.</p>
	<ul style="list-style-type: none"> outline of the staged implementation of the project 	<p>The Concept Plan includes a Staging Principle (Principle 19, pg 66). An essential element of the project is staging of the marina component. It provides for staging of marina berths over 4 stages, with each stage triggered for construction once 80% occupancy of the previous stage is taken up (see Volume 2, Sections 1.2, 2.3). This presents a responsible approach to the marina component - by designing and enabling impact assessment for an ultimate outcome, whilst staging release to match demand. Staging of the land based development, beyond the development identified to occur as part of the first stage of the marina, is not specified. Principle 19 identifies key principles to guide future staging decisions.</p>

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3.	A thorough site analysis, including the affected part of the waterway (Lake Macquarie), and a description of the existing environment and constraints mapping.	Context and Site Analysis has been thorough. Part A of the Concept Plan document summarises context and site analysis, descriptions of the existing environment and constraints/opportunities. Volume 1 Section 2.0 summarises features of the site and existing environment. Volume 2 Section 3.2 and 3.3 describes the site and provides an overview of the existing environment. These documents draw on specialist analysis and description included in the specialist technical reports and information (eg. site + lake surveys, tree surveys, visual, aquatic + terrestrial environment, acoustic, heritage, coastal processes, geotechnical etc).
4.	Consideration of all relevant statutory and non-statutory provisions, in particular relevant provisions arising from environmental planning instruments, State Environmental Planning Policies in particular SEPP 65 - Design Quality of Residential Flat Development, Regional Strategies (including draft Regional Strategies) and Development Control Plans (including <i>Lake Macquarie Estuary Management Plan</i> ; <i>Lake Macquarie Mooring Management Plan</i> ; <i>Lake Macquarie Foreshore Stabilisation and Rehabilitation Guidelines</i> ; and <i>Lake Macquarie Lifestyle 2020 Strategy</i>). Identify non-compliances and provide justification for any departures.	<p>Relevant statutory and non-statutory provisions have been identified, with the proposal considered against them, in Volume 1 Section 4.0 generally and Volume 2 Section 3.1. Some of the controls include detailed provisions designed to assess development application detail, and are not suited to assessing the broad nature of a Concept Plan. Broad consideration has been given to these controls and references to the need for future compliance of key ones have been noted within the Concept Plan document (such as SEPP 65, BASIX). SEPP 65 and the urban design principles has been considered by the Architects and incorporated into their analysis and design evolution as evident throughout the Concept Plan. A specific and detailed SEPP 65 analysis is not provided at this stage as it is more specific to the next level of design.</p> <p>Consideration has also been given to Lower Hunter Regional Strategy (see Appendix D) and Lake Macquarie Lifestyle 2020 and DCP 1 (see also Appendix L which supplements Vol 1 Section 4.0).</p> <p>Other policies referenced in this requirement, including the Estuary Management Plan, Mooring Management Plan and Foreshore Stabilisation and Rehabilitation Guidelines, have also been considered - refer Volume 2 Section 3.1.4.</p>
5.	Consideration of impacts, if any, on matters of national environmental significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> ;	<p>Volume 1 Section 4.4.1 provides a summary of the Commonwealth EP&BC Act 1999 objects and identifies that the Concept Plan does not impact on these matters and referral is not required.</p> <p>This position is based on technical assessment of matters of national environmental significance by both the terrestrial and aquatic ecology specialists.</p> <p>The Terrestrial Ecology Assessment Report included as Appendix S includes in Section 4.2 an assessment of impact relating to EPBC Act (drawing on summaries provided in Sections 4.1). It concludes that referral to the Minister is not necessary.</p> <p>The Aquatic Ecology Assessment Report included as Appendix R includes in Appendix A3.2 assessments under EPBC Significant Impact Guidelines for grey nurse shark, green and loggerhead turtles and dugong (drawing on summaries provided in Section 1.3, 4.5.1 and 4.5.2 of that report). It concludes that there is no need to refer the proposal to the Minister for the Environment.</p>

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6.	Consideration of the consistency of the project with the objects of the <i>Environmental Planning and Assessment Act 1979</i> .	Consideration of consistency of the Concept Plan with the objects of the EP&A Act 1979 is included in Volume 1 Section 4.3.2 .
7.	An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimize any potential impacts of the project.	<p>Volume 1 Section 6.0 provides an assessment of potential impacts and Volume 2 Section 5.0 provides a similar assessment specifically relating to the marina component.</p> <p>Volume 1 Section 7.0 provides a discussion on commitments associated with the Concept Plan project. It specifically summarises commitments contained within the Concept Plan document, and lists additional draft Statement of Commitments. Volume 2 Section 7.0 provides an outline for a draft Marina Environmental Management Plan that would be finalised during detailed design of the marina. It identifies mitigation controls for construction and mitigation controls for operation.</p>
8.	The plans and documents outlined in Attachment 2	<p>1. Existing Site Survey Sheets (A3 size) are included in Appendix D, which identify 'the site', provide areas + measurements, north point and levels. They do not include existing structures on site (as there are none) and do not show adjacent buildings + their private open space (as there are none in the immediate vicinity). A1 prints of these plans have also been separately supplied.</p> <p>2. An A3 plan showing the site boundaries overlaid onto an aerial photograph is included in Appendix A, and as figures throughout the documents. A range of aerial photos of the site are provided throughout Part A of the Concept Plan document, including regional, local and oblique aerials.</p> <p>3. A collection of site analysis plans and written information is included in Part A of the Concept Plan document. Of the matters listed in the scheduled requirements, it does not include footpath crossing levels and alignments or structures on neighboring properties including windows and the like, as these are not relevant. Given that utility services are being extended to the site boundaries as part of the adjoining residential estate, they are not shown on site analysis either, with just a notation that they are being extended to the site. Pages 23-25 of the Concept Plan provides summary analysis plans on features around the site and on the site, with extra detail on topography and tree canopy analysis.</p> <p>4. A collection of locality and context plans and written information is included in Part A of the Concept Plan. Page 11 includes information on the significant open space, parks and areas within the green network, Page 12 includes information on community facilities, shopping and employment areas, there are no significant heritage items or watercourses that have any contextual relationship to the site. The road pattern is shown graphically on Pages 10 & 16 (and page 18 for the developing adjoining residential estate), Page 13 describes limited off street pedestrian systems, Page 18 identifies new bus stop proposed in the adjoining residential estate to link into existing public transport routes. Pages 26</p>

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		<p>+ 27 of the Concept Plan provides a summary of constraints and opportunities revealed.</p> <p>5. The Environmental Assessments are provided as Volumes 1 and 2 plus Volume 3 (Appendices).</p> <p>6. A collection of Conceptual Architectural drawings are provided within Part B of the Concept Plan document, to illustrate general features including dwelling types (tourist or residential - see Principle 1), proposed public access and open space, pedestrian access through and within the site and landscaping (see Principles 4 + 9), proposed buildings heights and built form (see Principles 3 + 5), proposed setbacks + separations (see Principle 2), proposed FSR (see Principle 6) and proposed vehicle access + parking (see Principle 10). Note: no existing building envelopes or structures are shown as there are none.</p> <p>7. Other Plans (where relevant). It is deemed that a road network plan is not relevant within the site. Summaries of plans where relevant are included in Part B of the Concept Plan document, including: Site Open Space Network Plan (see Principles 4 + 9). Stormwater Concept Plan (see Principle 11, as supported by Stormwater Management Report + Plans included as Appendix W). Infrastructure Plans not provided, but Utilities Report included as Appendix AF. Landscape Concept Plan (see Principle 9, as supported by Landscape Concept Report + Plans included as Appendix AE). View Analysis (see Visual Catchment summary and plan on pg14 of Concept Plan document, see Photomontages pg 35 of Concept Plan document, see detailed Visual Assessment Report + Plans/Photomontages included as Appendix K). Flood Evacuation Plan (a Flood Mitigation Plan has been prepared see Principle 12 and Appendix W, an evacuation plan has not been prepared, Volume 2 p84, references a flood warning and preparation guideline is to be prepared - this can be incorporated into future project application approval requirements). Foreshore Open Space Plan (the site plan (Appendix D) identifies the location of easements over the foreshore land, and the nature of structures proposed in those easements are described in Principle 14 + 4), the Concept Plan does not propose any other walkways within the public open space zoned land. Water Cycle Management Plan (see Principle 11 and Appendix W). Waste Management is addressed generally within the documents, and a Waste Management Plan is listed to be prepared in the future (see Principle 13).</p> <p>8. Detailed Architectural Drawings for the marina are not supplied.</p> <p>9. Design drawings for the marina structures are included as Figures to Volume 2.</p> <p>10. A detailed Visual Impact Assessment is included in Appendix K.</p>

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		<p>11. The water based component of the marina has sought to be documented to a greater level of detail than Concept Plan (see Volume 2), and the Coastal Processes Study, Numerical Modeling Study, Breakwater Design Study and Aquatic Ecology Study have been included with that intent. Land based components of the marina have been documented, although in some instances not to final details (eg. fuel storage is referenced, but hazard analysis has been identified to be undertaken with future project applications, acoustic criteria are identified with details for compliance to be undertaken with future project applications).</p> <p>Specialist advice has been sought and incorporated as deemed necessary to respond to the Environmental Assessment requirements. That includes aquatic ecology, coastal processes, flora/fauna, landscaping, aboriginal archaeology, geotechnical, hydro-geological, stormwater/drainage and flood management, urban design/architectural, traffic + access, acid sulphate soils, town planning, visual, social and economic impact, hydrodynamic processes. Given this is a Concept Plan, specific BCA, disability access and greenhouse gas emission specialists have not been sourced. Contamination and European heritage has been comprehensively dealt with in past planning processes, with copies of relevant assessments included.</p>
9.	A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading	<p>The required signed statements have been provided.</p> <p>Refer Volume 1 Certification page 7 and Volume 2 Certification between pages ix & E1</p>
10.	A Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project	A Quantity Surveyors Certificate of Cost, confirming capital investment value of the project, has been attached to the application.
11.	An assessment of the key issues specified below and a table outlining how and where in the EA document these key issues and the above requirements have been addressed	All key issues specified below have been assessed within the EAR documentation. This table presents how and where they have been addressed.

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KEY ISSUES:		
	KEY ISSUES TO BE ADDRESSED IN THE CONCEPT PLAN APPLICATION Environmental Assessment:	
1.	Strategic Planning and Rezoning of the Site	
	<p>1.1 Justify the proposal with reference to relevant local, regional and state planning strategies including the draft Local Environmental Plan to amend the zoning of the land to permit residential development on the site. In that regard provide justification for any inconsistencies with these planning strategies.</p>	<p>Relevant local, regional and state planning strategies and controls have been identified, with the proposal assessed against them, in Volume 1 Section 4.0 generally. Some of the controls include detailed provisions designed to assess development application detail, and are not suited to assessing the broad nature of a Concept Plan. Broad consideration has been given to these controls and references to the need for future compliance of key ones have been noted within the Concept Plan document (such as SEPP 65, BASIX).</p> <p>Appendix L supplements Vol 1 Section 4.0, with further assessment relative to Lifestyle 2020, LM LEP 2004, LMCC DCP 1, as well as the NSW Coastal Policy and NSW Coastal Design Guidelines.</p> <p>Volume 1 Section 3.2.1 includes justification of the proposal with reference to the NSW State Plan and NSW Towards 2020 Tourism Masterplan.</p> <p>Volume 1 Section 6.1 provides a summary of the draft LEP amendment and Appendix D includes an assessment of that, with reference to relevant local, regional and state planning strategies. LMCC have a phased assessment process for LEP amendments, and a Phase 1 Strategic Overview report was prepared and assessed by Council in 2007. That report informed their decision to commence draft LEP amendment investigations. Whilst not included in CP documentation, that Strategic Overview report was reviewed in preparation of the Appendix D report. It included Tourism Strategic Overview and challenges facing the establishment of tourism and assessment against Lifestyle 2020.</p>
2.	Owner's Consent	
	<p>2.1 The proponent must provide evidence of land owner's consent to make application for all components of the proposal on Crown land, including the marina and helipad.</p>	<p>Attached to the application are all necessary Owners Consents, including Department of Lands for the Crown Land area of the Lake which forms part of the site and includes the marina and helipad area (correspondence dated 11 September 2008), and Trustees of the Hospitaller Brothers of St John of God for Lot 31, Pt Lot 32 and Pt Lot 33 DP 1117408 (by Power of Attorney). Detailed explanation of the Power of Attorney has been supplied in correspondence dated 24 October 2008.</p>

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3.	Design & Visual Amenity and Impacts	
	3.1 Provide a comprehensive Site Analysis identifying constraints and including landform features, levels, vegetation, heritage and other relevant environmental features.	A collection of site analysis plans and written information is included in Part A of the Concept Plan document . This includes information on landform features, levels, vegetation and heritage. See also Volume 1 Section 3.0 and Volume 2 Section 3.2 and 3.3 .

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	<p>3.2 Demonstrate the achievement of design excellence having regard to the significance of the site in relation to Lake Macquarie and its environs. Address impacts of the proposal on the amenity of the foreshore, overshadowing of open space and loss of views from public places and from existing approved development.</p>	<p>Design excellence is not defined in the DGR requirements and ultimately will in part be a subjective issue. Part B of the Concept Plan establishes a set of urban design guidelines to guide design excellence within future detailed applications. In addition, the provisions of SEPP 65 will guide future design excellence.</p> <p>Overshadowing diagrams have been submitted separately and illustrate that the proposed design guidelines (height, setbacks, built form) do not generate significant shadow impact on the 6(1) zoned lands.</p> <p>The amenity of the 6(1) zoned lands has been a primary consideration, with the intent to retain and enhance its natural amenity along the eastern and southern foreshore via excluding works other than landscaping/vegetation, by providing a setback to built form (and lower building heights on that edge) and by providing an alternative pedestrian system within the 6(2) lands. Principle 4 of the Concept Plan document outlines key public access principles taking into account amenity considerations, including requirements that future designs are to meet (for example, to ensure that future use of the foreshore as determined by Council is not precluded or compromised by marina structures, and controls are in place to manage the travel lift crossing). The amenity of the 6(1) zoned lands edging the unnamed shallow bay has been addressed primarily by excluding development from that area, with revegetation proposed. The interface of the hardstand area to the edges could create an amenity impact if future public access were to directly adjoin that edge. Should that be considered in the future and be possible relative to environmental constraints, designs for access would ideally be sited within and through vegetation (ie. vegetation on either side of access), if possible from environmental impact point of view.</p> <p>View from public places and from the existing approved development are considered in Appendix K (visual impact assessment). View opportunities from the approved residential estate through to the lake are essential design requirements included in Principle 2 and 4 of the Concept Plan document. Building heights included in Principle 3 have been established taking into account views from the Lake and residential areas across the Lake. Appendix W outlines best practice stormwater management (Water Sensitive Urban Design (WSUD)) and Volume 2 Section 2.3 describes design, management and licensing measures aimed at achieving design and performance excellence for the marina specifically.</p>

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	<p>3.3 Identify urban design guidelines that take into account the existing low density character of the locality and identify appropriate development parameters in relation to building heights (number of storeys and metres), foreshore setbacks, building separations, site coverage and floor space ratios based on careful analysis of the site's constraints and opportunities and the potential visual and environmental impacts.</p>	<p>Part B of the Concept Plan document identify a set of urban design guidelines and controls which are sought to form the Concept Plan approval. They identify parameters including buildings heights expressed in storeys and metres (see Principle 3), foreshore setbacks and building separations (see Principle 2), site coverage + floor space ratios (see Principle 6), as well as others.</p> <p>Evolution of these from site analysis, visual and environmental impact and constraints and opportunities are evident from the Concept Plan document, and are assessed in Volume 1 Section 6.2. See also assessment in Volume 1 Section 4.3.5 on these aspects relative to NSW Coastal Policy and discussion about relationship to existing low density character of the locality in different land use zonings. Volume 2 Section 2.3 describes design measures relating to WSUD, foreshore reserve allowance and access.</p>
	<p>3.4 Address visual impact in the context of adjoining and surrounding development in relation to setting, density, built form, building mass, and height as viewed from the public domain including Lake Macquarie and all publicly accessible foreshore locations. The visual impact of the marina including the pylons and helipad and all other associated structures must be addressed in the visual impact analysis. In that regard, a Visual Impact Analysis should include all significant vantage points from where the site can be viewed, both water and land based, and provide relevant mitigation measures.</p>	<p>A detailed Visual Impact Assessment is included in Appendix K. It considers visual impacts in the context of the site and the public domain, including the lake. It includes assessment of the marina. The Visual Impact specialists has been actively involved in analysis and design evolution to ensure that relevant mitigation measures have been incorporated.</p>
	<p>3.5 Use visual aids such as a scale model and photomontages to demonstrate visual impacts. Amelioration of visual impacts through design, use of appropriate colours and building materials, landscaping and buffer areas must be addressed.</p>	<p>Appendix K includes photomontages and the proponent has separately supplied a scale model. The Visual Impact specialist has been actively involved in analysis and design evolution to ensure relevant mitigation measures have been incorporated in design, building materials/colours and landscaping.</p>

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	<p>3.6 Demonstrate suitability of the proposal with the surrounding area in relation to potential character, height, bulk, scale, built form, amenity (including noise) and visual amenity having regard to <i>SEPP 71, NSW Coastal Policy 1997, Coastal Design Guidelines of NSW (2003)</i>, objectives of the 6(2) Tourism and Recreation zone and all relevant development control plans including <i>Lifestyle 2020 Strategy, DCP No. 1 - principles of Development, and Kendall Grange, Morisset Master Plan 2005</i>.</p>	<p>Regard has been given to these documents during evolution of the design which is presented within the Concept Plan document - SEPP 71, NSW Coastal Policy, Coastal Design Guidelines, 6(2) zone objectives, Lifestyle 2020, DCP No. 1, Kendall Grange Masterplan as summarised in Volume 1 Section 4.0, supported by Appendix L. See also Section 6.19 on Kendall Grange Masterplan.</p> <p>Additional assessment of character, height, bulk, scale and built form is included in Volume 1 Section 6.2,</p> <p>Assessment of visual amenity is included in Appendix K. Assessment of amenity relating to traffic is included in Appendix T. Assessment of amenity relating to noise is included in Appendix P.</p>
	<p>3.7 Address the landscape setting and retention of existing significant vegetation on the site. Demonstrate that any removal of vegetation on the site will have minimal visual impacts.</p>	<p>Visual impact assessment (Appendix K) describes the visual setting of the site. The site survey (Appendix D) identifies the majority of existing vegetation on site and in the adjacent foreshore and Volume 1 Section 2.9 summarises existing significant vegetation (terrestrial + aquatic).</p> <p>The ecological assessment (Appendix S) assesses retention and removal of significant vegetation on site (noting minimal works within the foreshore land) + proposes mitigation for minor removal of significant vegetation due to boat lift facility location. Principle 8 in the Concept Plan document provides for reinstatement and rehabilitation of vegetation.</p> <p>Principles 2 and 9 provides additional setbacks to ensure retention of cultural plantings around Bluff Point. Principle 2 identifies a requirement for further study to investigate ability to retain one or more of the three existing remnant forest red gum trees within the site.</p> <p>The Visual Impact assessment (Appendix K) has been undertaken with knowledge of any tree removal, which has been incorporated into visual assessments made.</p>
	<p>3.8 Provide details of residential unit types and future management of tourist accommodation and measures to ensure conflict between user groups does not occur.</p>	<p>Principle 1 of the Concept Plan document describes where tourist accommodation units and residential units are to be sited to minimise conflict between user groups. When the DGR were written, the physical separation of these unit types had not been decided.</p> <p>In addition to the physical separation, Principle 19 establishes the requirement for future applications to document subdivision, titling, operation and management of the development taking into account potential conflicts between user groups.</p>

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4.	Public Access	
	<p>4.1 Address existing and future opportunities for public access to and along the foreshore and future ownership and management of the foreshore reserve including any arrangements required by or of Lake Macquarie City Council.</p>	<p>The foreshore land has been identified for acquisition by Lake Macquarie City Council in LM LEP 2004, and negotiations on that acquisition commenced in 2004, and are continuing, separate to this Concept Plan. Lake Macquarie City Council will ultimately be the owner and manager of the reserve.</p> <p>Site Analysis and Opportunities and Constraints provided in the Part A of the Concept Plan document, and summarised in Volume 1 Section 2.0 and Section 6.3. includes commentary on existing and future opportunities for public access to and along the foreshore</p> <p>Whilst the land is zoned for open space + for acquisition, there is currently no formalised physical public access to or along the foreshore, and Council have yet to consider in detail future ideas on use or management of that. Future use of the foreshore for formalised pathways/activities may be at odds with its natural characteristics, including steep topography within the 6(1) lands around Bluff Point, presence of endangered ecological communities, presence of aboriginal registered sites and sensitivity and unlikely ability to design for full public access (eg. cycle, disabled) or easy maintenance access.</p> <p>Based on this analysis, the Concept Plan proposal incorporates public access features (boardwalk and connections back into the adjoining residential and public road system) located within the 6(2) zoned lands, which can act to replace the idea of formalised access in the reserve if desired, or at minimum, provide an alternative access that caters for all, is clear of environmental/topography constraints, and enables the foreshore edge to function as a natural foreshore edge (and will be constructed and maintained as part of the development). Principle 4 of the Concept Plan document incorporates the public access principles.</p> <p>Given that Council are yet to consider in detail use of the public open space zoned land that they will ultimately own and maintain, principles have been added whereby any structures within those lands (such as for marina) are to designed in a manner that does not preclude or compromise public access along the foreshore should Council choose to pursue this and undertake their own impact assessment.</p>

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	4.2 Address the views of the <i>Lake Macquarie Estuary and Coastal Management Committee</i> and the <i>Office of the Lake Macquarie and Catchment Co-ordinator</i> and the related <i>Lake Macquarie Project Management Committee</i> .	Volume 2 Section 4.1.3 outlines consultation with the Lake Macquarie Estuary and Coastal Management Committee and the Aquatic Services Committee, and Volume 2 generally addresses the views of those committees. The Office of the Lake Macquarie and Catchment Coordinator was contacted and responded outlining they would not be commenting.
	4.3 Assess the impacts on recreational amenity arising from the loss of public access to areas of the lake that are proposed for marina and helipad operations.	Volume 2 Section 5.11 assesses impacts on navigation and water based recreation. Figure 27 in Volume 2 provides comparative lake areas of the marina, Bardens Bay, and Lake Macquarie (south + north).
	4.4 Assess the impact on the Council foreshore reserved land and the impacts arising from reduced public access to the foreshore and the waterway.	See response to Item 3.2 and 4.1 above relating to Council reserve . It is not our view that public access to the foreshore is reduced by this proposal - the characteristics of the foreshore itself reduce desirability of physical access provision within the reserved lands, and the proposal seeks to provide an alternative for public access around the foreshore edge (whilst not impacting on its sensitive features) and adjoining the foreshore (such as village square) and to the foreshore (via pathway connections from the east), and controlled public access to the foreshore and waterway such as along the breakwater. Volume 2 Section 5.11.3, 5.10.3 considers public access and the waterway.
5.	Water Cycle Management	
	5.1 Address potential impacts on the water quality including stormwater management systems, surface water controls, management of slipways, hardstands and vessels, management of sewerage waste from vessels, fuel and chemical storage and management and spill management having regard to <i>State Groundwater, Rivers, Wetlands and Estuary Policies, Lake Macquarie Estuary Management Plan, Lake Macquarie Mooring Management Plan and Lake Macquarie Foreshore Stabilisation and Rehabilitation Guidelines</i> .	Volume 2 Section 2.3 provides a detailed description of the proposal, including repair and maintenance facility, fuel and other facilities, waste and waste management and stormwater. Volume 2 Sections 5.3, 5.4, 5.5 + 5.13 provide impact assessment including water quality + spill management, water cycle management, waste management and hazard assessment, supported by Appendix W . Combined these cover assessment of water quality impacts including stormwater management systems, surface water controls, management of the travel lift, hardstand area, workshop and vessels, sewerage waste management, fuel + chemical storage and spill management including measures to prevent + mitigate water quality impacts. Principle 11 of the Concept Plan document addresses water management, and includes requirement for a water quality monitoring program and Principle 14 includes the requirement for construction and operational management plans which will incorporate water quality management. Volume 2 and relevant specialist studies have had regard to the listed documents.

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	5.2 Address pollutant runoff loads from the site, treatment of waste, effluent disposal and sediment and erosion control. Demonstrate an acceptable level of water quality protection with respect to downstream receiving waters during and after construction.	Refer response to Item 5.1 above.
	5.3 Address changes in the hydrological regime of the catchment as a result of the project.	Volume 2 Section 5.4.3 specifically addresses this requirement (see also Appendix W).
	5.4 Provide a Water Management Plan and Site Water Balance incorporating on-site re-use of water; prevention of wet weather overflows of contaminated stormwater; segregation of contaminated water from non-contaminated water; spillage controls and bunding.	Appendix W includes a water management strategy and considers the issues raised in this requirement, which is summarised in Volume 2 Sections 5.3, 5.4, 5.5 + 5.13 . Volume 2 Section 2.3 includes detailed descriptions of stormwater, waste and other components of the proposal.
6.	Waste Management	
	6.1 Identify all potential sources of liquid wastes and non-liquid wastes as defined in the environmental guideline <i>Assessment, Classification and Management of Liquid and Non-Liquid Wastes (EPA 1999)</i> . The EA should identify any wastes that will be stored, separated or processed on the site and identify the procedures to be adopted to manage these wastes.	Volume 2 Section 2.3.14 describes the wastes expected to be produced by the development, and their classification and proposed management. Volume 2 Section 5.5 considers construction and operational waste in general terms. Volume 2 Section 5.3 considers spill management during construction and operation. Appendix W also considers waste management. Principle 13 of the Concept Plan document includes the requirement for Waste Management Plans to be prepared for construction and operational phases. Volume 2 Section 5.1.2 considers the reuse of excavated material as a result of construction.

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	<p>6.2 Identify strategies for the management of sewerage waste from vessels and other sections of the facility including pump-out facilities and holding tanks; connection to sewerage systems operated by Hunter Water Corporation or options for waste water treatment, including examination of re-use options; spill management and containment; and management of privately owned vessels at the marina.</p>	<p>Volume 2 Section 2.3.10 describes the proposed provision of fuel, sewage and bilge pump out facilities, including design precautions typical to minimise impacts on use of those facilities. It also outlines some of the management of use of these that would need to be included in a Marina Occupation License to provide necessary controls over vessels at the marina.</p> <p>Volume 2 Section 2.3.14 describes the wastes expected to be produced by the development, and their classification and proposed management, including for sewage pump out, and provision of facilities for transport into Hunter Water sewer system. Section 5.13 addresses hazard management.</p> <p>Volume 2 Sections 5.3, 5.4 + 5.5. assess impacts of the proposal relative to water quality and spill management, water cycle management and waste management.</p>
7.	Groundwater Protection	
	<p>7.1 Address the <i>NSW Groundwater Policy Framework Document - General, NSW Groundwater Quality Protection Policy and NSW Groundwater Dependent Ecosystem Policy</i>.</p>	<p>Volume 2 Section 3.1.1 addresses these policies, and is also addressed in Section 5.4.4 (and Appendix S). Section 5.3.2 also addresses dewatering anticipated and comments on groundwater, drawing on strategies to manage effects on groundwater quality from Appendix H.</p>
8.	Infrastructure and Utilities Provision	
	<p>8.1 Address existing capacity and requirements of the proposal for effluent disposal, water supply, electricity, waste disposal, telecommunications services and gas in consultation with relevant agencies. Identify and describe staging, if any, of infrastructure works.</p>	<p>Appendix AF includes a utility/infrastructure assessment report relative to sewerage, water, electricity, telecommunications and gas services, including consultations with agencies as deemed relevant. Staging of infrastructure works will be determined at project application stage.</p>

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	<p>8.2 Address developer contributions, and provide the likely scope of any planning agreement with Council/Government agencies. In particular the dedication of land zoned open space adjoining the foreshore to Council in accordance with <i>Lake Macquarie s94 Contributions Plan</i>.</p>	<p>No planning agreement is considered necessary or is proposed. The residential component of the project (75 apartments) will be subject to contributions in line with Council's city wide Section 94 contributions plan. The open space zoned land is identified for acquisition under LM LEP 2004 and negotiations for that acquisition commenced in 2004. It is not proposed to be dedicated as part of this proposal.</p>
	<p>8.4 Address the provision of infrastructure for social and community needs due to residential development, i.e. schools and health services, in consultation with relevant agencies.</p>	<p>The residential component of the project (75 apartments) is reasonably minor in the scheme of social and community infrastructure needs and planning for the Morisset Planning District. Appendix O provides a Social Impact Assessment that puts the residential component in perspective. The residential component will be subject to Council's relevant s94 residential charges from their city-wide section 94 plan.</p>
	<p>8.5 If applicable, provide details of the deed of agreement with the Roads and Traffic Authority for State Road infrastructure.</p>	<p>No deed of agreement is currently proposed with RTA for state road infrastructure.</p>
<p>9.</p>	<p>Noise Impact</p>	
	<p>9.1 A Noise Assessment Report, prepared by a qualified acoustic consultant, is required to investigate potential noise impacts to more sensitive tourist and residential uses on the site and in the vicinity during the construction phase of the proposal and from the general operation of the marina facility and road transport to and from the site. Where necessary outline details of noise amelioration measures for the marina complex</p>	<p>Appendix P includes an acoustic assessment report prepared by a qualified consultant. It investigates noise impacts to uses on site and in the vicinity, for construction phase as well as general operation of the site, and traffic to and from the site. It outlines potential noise amelioration measures, which would be further developed in future project applications and detailed design.</p>

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10.	Traffic and Access	
	10.1 Prepare a Traffic Impact Study in accordance with the RTA's <i>Guide to Traffic Generating Developments</i> . Identify the suitability of the existing road network to accommodate the development and the adequacy of on-site parking and servicing arrangements. Traffic analysis shall use SIDRA or similar traffic model and take into account relevant intersections including current and traffic growth projects for the life of the project, 95 th percentile back of queue lengths and delays and level of service on all legs. Provide an electronic copy of the traffic analysis/modeling in CD format.	A Traffic Assessment has been included in Appendix T , prepared in accordance with the listed guide. The existing road network is identified as suitable to accommodate the development, subject to some identified intersection upgrades, with SIDRA analysis undertaken incorporating the listed requirements (electronic modeling has also been provided). On site parking and servicing arrangements will be made adequate. Principle 10 of the Concept Plan document identifies the relevant external intersections, and incorporates measures for future project applications to comply with.
	10.2 Address <i>Draft SEPP 66 - Integration of Land Use and Transport</i> and DIPNR's <i>EIS Guidelines on Roads and Related Facilities</i> .	Volume 1 Section 4.3.3 includes a comprehensive commentary on draft SEPP 66. The traffic consultant has advised that the EIS Guidelines is not applicable.
	10.3 Identify needs (if any) to upgrade roads / junctions and improvement works to ameliorate any traffic inefficiency and safety impacts associated with the development where relevant. This should include identification of pedestrian movements and appropriate treatments.	The traffic assessment (Appendix T) identifies upgrade works, and components of those which relate to the development (see also Principle 10). Pedestrian movements are not expected to be generated substantially off site, with significant on-site pedestrian systems to be provided.
11.	Aboriginal and Cultural Heritage	
	11.1 Address the draft <i>Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation</i> (DEC, July 2005).	Appendix AD includes an archaeological assessment that has addressed the listed guidelines.

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	11.2 Identify whether the site has significance in relation to Aboriginal cultural heritage and identify appropriate measures to preserve any significance. This is to be undertaken by an appropriately qualified person in consultation with the local Aboriginal community.	Appendix AD identifies the aboriginal cultural heritage of the site and recommends measures to address that heritage. It has been undertaken by a qualified person and has included consultation with the local Aboriginal community. Principle 18 of the Concept Plan document incorporates recommended indigenous heritage management measures.
	11.3 Identify any items of European heritage significance and provide measures for conservation of such items.	Appendix AD provides a summary of European heritage assessment undertaken in earlier planning processes and identifies remnant items and recommends measures associated with those. Principle 18 of the Concept Plan document incorporates recommended European heritage management measures.
	11.4 Address impacts on World Heritage Areas, places listed on the National Heritage List and protected under the EPBC Act.	Appendix AD addresses this requirement simply by noting there are no relevant sites.
12.	Flora and Fauna	
	12.1 Assess potential impacts on threatened species, populations and endangered ecological communities in accordance with the draft <i>Guidelines for Threatened Species Assessment DEC DPI July 2005</i> .	Appendices R + S include ecological assessments, both which have had regard to the listed draft 2005 Guidelines
	12.2 Address measures for the conservation of flora and fauna and their habitats within the meaning of the <i>Threatened Species Conservation Act 1995</i> and the <i>Fisheries Management Act</i> , having regard to the <i>Draft Guidelines for Threatened Species Assessment (DEC & DPI July 2005)</i> . Address impacts on migratory species, RAMSAR wetlands and species listed under Section 18 and 18A of the EPBC Act.	Appendices R + S include ecological assessments, both which have had regard to the listed draft 2005 Guidelines, and addressed flora, fauna + their habitats under the relevant legislation. They include consideration of the EPBC Act.

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	12.3 Assess the impacts on flora and fauna in accordance with the <i>Lake Macquarie Flora and Fauna Survey Guidelines</i> .	Appendix S includes a terrestrial ecology assessment, which includes adherence to the listed flora and fauna survey guidelines.
13.	Natural Hazards	
	COASTAL PROCESSES 13.1 Address coastal hazards and the provisions of Coastline Management Manual. In particular consider impacts associated with wave and wind action, coastal erosion, sea level rise and more frequent and intense storms. Provide mitigation/prevention measures.	Appendix Y includes a Coastal Processes Study and Appendix AB a detailed Numerical Modeling Study of processes which consider impacts associated with wave and wind action, coastal erosion, sea level rise and storms. That is also considered in Appendix X (Breakwater Design) and Appendix W (Flooding Assessment), and within Volume 2 Section 3, 5 .
	13.2 Address consistency with <i>Rivers and Foreshores Improvements Act 1948, NSW Coastal Policy, NSW Wetlands Management Policy, NSW State Rivers and Estuaries Policy, and NSW Estuary Management Policy</i> .	Volume 1 Section 4.3.5. addresses the NSW Coastal Policy in some detail (also supported by Appendix L). Volume 2 Section 3.1.1. addresses the Water Management Act (which repealed the Rivers and Foreshores Improvements Act), the NSW Wetlands Management Policy, NSW State Rivers and Estuaries Policy and NSW Estuary Management Policy.
	CONTAMINATION 13.7 Identify any contamination on site and appropriate mitigation measures in accordance with the provisions of SEPP 55 - Remediation of Land.	Contamination assessment and remediation including audits of the site has occurred under previous planning processes and does not need to be re-visited for this proposal. A copy of the previous Validation Report and Site Audit Report are included in Appendices I + J . These were undertaken under the provisions of SEPP 55.
	ACID SULPHATE SOILS 13.8 Identify the presence and extent of acid sulfate soils on the site and, where relevant, recommend appropriate mitigation measures. The level of assessment shall be consistent with the <i>Acid Sulfate Soil Manual (NSW Acid Sulphate Soil Management Advisory Committee 1998)</i> . Address any site contamination and recommend appropriate mitigation measures.	Acid Sulphate Soils present or potentially present on site have been identified in Appendix H , and mitigation measures have been recommended (Acid Sulphate Management Plan), consistent with the listed publication. Site Contamination is addressed see Issue 13.7 above.

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	<p>GEOTECHNICAL</p> <p>13.9 Prepare a geotechnical assessment of the property to address potential impact of subsidence and future mining of coal resources in the area.</p>	<p>Consultation has occurred with the Mine Subsidence Board to address potential impact of subsidence and future mining of coal resources in the area. See Volume 1 Section 6.12.1, and written advice included within Appendix F.</p>
	<p>FLOODING</p> <p>13.10 Demonstrate the development is compatible with Council's relevant Flood Policy and in accordance with the guidelines contained in the <i>NSW Floodplain Development Manual (2005)</i>. Provide a Floodplain Risk Management Study addressing the potential impacts of flooding, taking into consideration the potential risks associated with sea level rise and changes to hydrological processes, potential shoreline recession and greater frequency and intensity of storms. These risks should be assessed on the impact from development on the flooding regime and impacts from flood on proposed development.</p>	<p>Appendix W includes a flood assessment and includes discussion against Council policies, and includes consideration of sea level rise. Volume 2 Section 3.3.8 and 5.2.2 assesses lake flooding impacts and the establishment of flood planning levels, which are also provided within Principle 12 of the Concept Plan document.</p>
14.	Marina Development and Potential Impacts	
	<p>14.1 Address the potential marina impacts:</p> <ul style="list-style-type: none"> Due to the marine structure and operations on the seabed, in particular on seagrass and benthic organisms including the shading effects of the structures proposed measures to prevent/mitigate impact (the design should minimize shading on the seagrass beds); 	<p>Appendix R provides an aquatic ecology description of seagrass beds and assessment of impacts on them and other organisms. Siting of the marina clear of main seagrass beds is the main prevention measure. The type of piling technique is also a mitigation measure, as well as the type of breakwater design (see Appendix X). The four marina arms are joined together to have a combined crossing of the fringing seagrass bed, plus there is crossing for breakwater and crossing for boat lift facility. The marina arm + breakwater crossing has been designed in consultation with the aquatic specialist to mitigate impact and shading in particular. Volume 2 Section 5.6 provides a summary assessment. Principle 14 of the Concept Plan document confirms siting and important design features to mitigate impact on seagrass and benthic organisms.</p>

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	<ul style="list-style-type: none"> Due to any structure located on the foreshore to interfere with the free movement of seagrass wrack along the foreshore, and on wave energy and the risk of deflection or refraction to other locations and proposed measures to prevent / mitigate impacts; 	<p>Volume 2 Section 5.2 addresses this issue. Appendix AB presents numerical modeling of wave reflections. Appendix X addresses the design of the breakwater specifically, and includes recommendations relating to wave attenuation, wave reflections, flushing/circulation and shoreline scour - with a specific recommendation for the landward end of the southern breakwater to allow water circulation. Appendix Y includes a Coastal Processes Study Appendix R Section 4.2.1. includes commentary on seagrass wrack movement in terms of impacts on seagrass habitats. Principle 14 of the Concept Plan document confirms key design features and also identifies the need for maintenance of the breakwater to prevent seagrass wrack accumulation.</p>
	<ul style="list-style-type: none"> Due to stormwater run-off on water quality and seagrass beds and proposed measures to prevent / mitigate impacts; 	<p>Volume 2 Section 5.4 includes assessment of water cycle management, including stormwater runoff on seagrass beds and water quality (see also Volume 2 Section 5.6). See also Appendix W for full stormwater report, and Appendix R for aquatic ecology review of stormwater management. Principle 11 of the Concept Plan document includes a summary of water management measures.</p>
	<ul style="list-style-type: none"> Due to marina operations and the increase in vessel numbers and usage levels on water quality, aquatic ecology, and recreational amenity; 	<p>Volume 2 Section 5.16 provides a cumulative impact comment on matters including water quality, aquatic ecology and boat activity. It cross references other relevant sections of Volume 2 and Appendices.</p>
	<ul style="list-style-type: none"> Due to management of travel lift, hardstand areas, workshop, vessels, management of sewerage waste from vessels, fuel and chemical storage and management and spill management on water quality and seagrass beds and proposed measures to prevent/mitigate impacts; 	<p>Volume 2 Sections 5.3, 5.4, 5.5 + 5.13 provide impact assessment including water quality + spill management, water cycle management, waste management and hazard assessment, supported by Appendix W. Combined these cover assessment of the travel lift, hardstand area, workshop, vessels, sewerage waste management, fuel + chemical storage and spill management, and impacts on water quality and seagrass beds including measures to prevent + mitigate.</p>
	<ul style="list-style-type: none"> On navigation and on existing swing-moorings on or in the immediate area if Bardens Bay; 	<p>Volume 2 Section 5.11 provides impact assessment on navigation and on existing swing moorings in the immediate area.</p>
	<ul style="list-style-type: none"> On air quality including dust generation during construction activities and boat maintenance and repairs; 	<p>Volume 2 Section 5.9 provides impact assessment on air quality, drawing from a specialist assessment included in Appendix Q.</p>
	<ul style="list-style-type: none"> Due to day berthing facilities for the general public; 	<p>Volume 2 Section 5.11.4 addresses general public day berthing</p>

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	<ul style="list-style-type: none"> Due to dredging activities including method to be used; dimension of area of works; nature of sediment; environmental safeguards; 	Dredging activities are not proposed
	<ul style="list-style-type: none"> Marine vegetation and include mapping and density distribution and measures to minimize harm to marine vegetation and details of compensatory habitat development to replace lost vegetation; 	Appendix R includes an aquatic ecology report which includes mapping of marine vegetation, and density and quality descriptions. The aquatic ecologists were iteratively involved in the design evolution of the marina, to ensure harm to marine vegetation is to be minimised. Section 4.2.1 of that report outlines that due to the small area of direct damage to seagrass, which does not fragment the seagrass bed, no mitigation is necessary.
	<ul style="list-style-type: none"> On fish species and their habitat; and 	Appendix R includes an aquatic ecology report which assesses impacts on fish and their habitat.
	<ul style="list-style-type: none"> On commercial, recreational or indigenous fishing activities. 	Volume 2 Section 5.11.3 provides impact assessment on fishing activities.
14.2	Justify the suitability of the site for a marina development including the extensive infrastructure (eg. Breakwalls) to accommodate the proposal in this location.	The Coastal Processes Study (Appendix Y) provides justification for a marina at the site. The need for a breakwater appropriately designed to limit impacts is not considered to significantly affect the suitability of the site for a marina development, given other factors that lend themselves to suitability including lake bed levels and no requirement for dredging, siting clear of major seagrass beds, the land based tourism zoning and its characteristics and its relative accessibility to population centres. General justification for suitability of the site for marina is included in Volume 2 Section 2.5.3 and Section 8.0
14.3	Address the cumulative impact on increased boating activities in the locality including the provision of appropriate boating infrastructure.	Volume 2 Sections 5.11 and 5.16 considers cumulative impacts including boat traffic.
14.4	Provide hydrographic survey and modeling details and the need for dredging both on-site and for access from other parts of the lake and ocean (via Swansea Channel) and the impacts and on-going maintenance issues.	<p>A hydrographic survey has been provided (see A3 version in Appendix E, and separately supplied A1 plots).</p> <p>The proposal does not require dredging on site or for access from other parts of the lake and ocean (confirmed within Volume 2, Section 2.3.15). As such there are no impacts or maintenance issues.</p>
14.5	Undertake an assessment of potential impacts of the marina development on hydrodynamic processes within Lake Macquarie and Bardens Bay including detailed hydrodynamic modeling undertaken to quantify potential impacts.	Volume 2 Section 5.2 includes assessment of impacts and hydrodynamic processes, including wave climate, elevated water levels, hydrodynamics of the lake (water movements) and sediment transport process. Numerical modeling investigations of water movement due to the effects of tide and wind are included in Appendix AB , with the Coastal Processes Study (Appendix Y) providing a summary of coastal processes at the site.

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	<p>14.6 Undertake an analysis of the need for marina facilities and consider other existing and proposed marina developments on Lake Macquarie and the suitability of the site for marina facilities.</p>	<p>Appendix Z includes a marina demand study conducted at the start of the design evolution process, and used as a baseline document to inform the proposal. It considered existing and other proposed marina developments on Lake Macquarie at the time it was prepared. Volume 2 Section 2.5.2 provides a summary relating to regional requirements for marinas (including recognition of data recently provided by LMCC on additional berths being sought by other marinas and a summary of demand predictions) and Section 5.14.2 provides a summary of the key findings.</p> <p>The suitability of the site for a marina is linked to its location relative to population catchments and accessibility, its location relative to land based tourism zoning and land availability/characteristics for land based components, services + compatible uses), its location relative to being clear of major seagrass beds, its location relative to having a seabed with appropriate depths to enable construction + operation without any dredging. These are identified within the Concept Plan document (see pg 9,10,13,21,23,24,27). Volume 2 Section 3.3 provides an overview of the environment of the marina site (water depths, water levels, water flows, wave climate, sediment movements, geotechnical conditions, sediment properties, water quality, aquatic ecology and others. Appendix Y includes a coastal processes study which indicates the site is well suited from a coastal processes perspective. Volume 2 Section 5.0 provides a detailed environmental assessment to demonstrate suitability of the siting and design of the marina against the areas characteristics. General justification for suitability of the site for marina is included in Volume 2 Section 2.5.3 and Section 8.0).</p>
	<p>14.7 Address the principles of Crown lands management under Section 11 Crown Lands Act 1989 and Part 3 - the land assessment provisions.</p>	<p>These principles and documents have been substantially addressed directly with the Department of Lands as part of the documentation required to commence the leasing process over Crown Land which produced their owners consent to lodgment of the EA. However, Volume 2 Section 3.1.1 and Section 8.0 also address the principles generally.</p>
	<p>14.8 Provide an economic feasibility report, prepared by an appropriately qualified consultant, addressing the proposed marina size and the tourism component.</p>	<p>Appendix AG includes a financial and economic feasibility assessment to comply with this requirement.</p>
<p>15.</p>	<p>Establishment of Helipad and Helicopter Noise Impacts</p>	

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	15.1 Address CASA's <i>Guideline for Establishment and Use of Helicopter Landing Sites (HLS)</i> , in particular the "Recommended Criteria for a Basic and Standard HLS".	Appendix AA addresses this CASA guideline in detail, and establishes design criteria for the helipad.
	15.2 A Noise Assessment Report, prepared by a qualified acoustic consultant is required to investigate potential noise impacts associated with the taking off, approaching and enroute of helicopters to the helipad. The report shall address potential impacts on residential areas and other noise sensitive locations/uses; fauna and their habitats in particular threatened species, populations, or ecological communities of fish or marine vegetation and their critical habitat.	An acoustic assessment is included in Appendix P . It investigates acoustic criteria and potential noise impacts associated with taking off, approaching and enroute of helicopters using the proposed helipad (see summary in Item 15.3 below). The report assesses the potential impact from helicopter noise on residential receivers (Sections 4.7. 5.6 and 6.7) and also reports on impacts to land fauna and aquatic flora and fauna (Sections 6.7.1 and 6.7.2).
	15.3 Identify all types of helicopters that are proposed to be used and include flight path, hours and frequency of operation, noise contours/levels, route, noise mitigation measures and/or acoustic treatments and need for such a facility. Best practice in the measurement and prevention/mitigation of noise impacts shall be adopted.	<p>The need for the helipad is to enhance access to the destination tourism site, in particular access from Sydney airport. Appendix AA discusses and recommends approach and departure paths (see Section 4.2.4). This design discussion and recommendations have been used as base information in the acoustic assessment.</p> <p>Appendix AA identifies a full range of helicopters that have been taken into account in designing the helipad, whilst the acoustic assessment (Appendix P) limits that range as a key acoustic mitigation measure. Principle 15 of the Concept Plan document lists the types of helicopters proposed, along with limited hours of helipad operation and limited number of movements (which together with limits on types of helicopters, are the primary acoustic mitigation measures). Appendix P includes the acoustic assessment, covering helicopters in the air and sitting on the helipad. The acoustic assessment identifies the relevant noise criteria (summarised in Section 4.7) and predicts in flight and on ground noise (Section 5.6). The assessment shows that the acoustic criteria is met.</p>

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16.	Energy Efficiency	
	16.1 Demonstrate intended compliance with the <i>Lake Macquarie Development Control Plan No. 1 - Volume 1 - Energy Efficiency for Residential and Commercial Buildings</i> and the <i>Lake Macquarie Greenhouse Action Plan</i> .	Volume 1 Section 6.15. Principle 17 of the Concept Plan document includes the requirement for compliance of relevant project components with BASIX and Section J, as the relevant legislative requirements relating to energy efficiency. It also includes an additional requirement for preparation of Greenhouse Gas Assessments with future Project Applications, with those assessments required to estimate emissions and outline any proposed emission reduction measures - which is an additional commitment than required by current legislation. The Lake Macquarie Greenhouse Action Plan is difficult to apply to this proposal, as it either applies to the Council's own operations, or identifies actions for the community/Council linked to energy efficiency or emission reductions, which are linked to overall city wide reduction targets.
	16.2 Identify how the proposal will reduce water usage and greenhouse gas emissions to satisfy BASIX targets.	Volume 1 Section 6.15. The Concept Plan simply identifies that the proposal will need to satisfy BASIX targets. Future project applications will identify how the targets will be met. Principle 17 of the Concept Plan document references this requirement.
CONSULTATION		
	You should undertake an appropriate and justified level of consultation with the following agencies during the preparation of the Environment Assessment:	
	A) Agencies or other authorities:	
	Commonwealth Department of Environment, Water, Heritage and the Arts;	Need for referral has been assessed by terrestrial + aquatic ecologists and deemed not to be triggered. As such, no consultation has been undertaken.
	Department of Water and Energy;	Consulted
	Department of Environment and Climate Change;	Consulted
	Department of Planning Hunter Regional Office, Newcastle;	Consulted
	Department of Primary Industries;	Consulted
	Department of Lands;	Consulted
	Heritage Council;	Consulted

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	Mine Subsidence Board;	Consulted
	New South Wales Aboriginal Land Council and Local Aboriginal land Council/s such as the Koombahtoo Local Aboriginal Land Council and other Aboriginal community groups including the Awabakal Descendants Traditional Owners Aboriginal Corporation;	Consulted
	NSW Road and Traffic Authority;	Consulted
	Commonwealth Civil Aviation Safety Authority;	Consulted
	Lake Macquarie City Council	Consulted
	NSW Maritime Authority; and	Consulted
	Hunter Water Board; and	Consulted
	Relevant energy supply authority.	Consulted
	B) Public:	
	Document all community consultation undertaken to date or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy. Consultation should include the <i>Lake Macquarie Estuary and Coastal Management Committee</i> , <i>Lake Macquarie Aquatic Services Committee</i> , <i>the Office of the Lake Macquarie and Catchment Coordinator</i> and the <i>Lake Macquarie Project Management Committee</i> and address any issues raised in stakeholder forums.	Consultation by the proponent is summarised in Volume 1 Section 5.0 and Volume 2 Section 1.6 + 4.0 .
	The consultation process and the issues raised should be described in the Environmental Assessment.	Consultation by the proponent is summarised in Volume 1 Section 5.0 and Volume 2 Section 1.6 + 4.0 .